



10th International Aerosol Conference
September 2 - September 7, 2018
America's Center Convention Complex
St. Louis, Missouri, USA

Sunday

Sunday 8:30 AM - 10:10 AM **Tutorial Session 1**

- 8:30 **Introduction to Aerosols** Richard C. Flagan, *California Institute of Technology*
- 8:30 **Aerosol Optics: Fundamentals and Instrumentation** Hans Moosmüller, *Desert Research Institute*; Christopher Sorensen, *Kansas State University*
- 8:30 **Low Cost Sensors: The How of Performance Evaluation, Network Design, and Data Handling** Vasileios Papapostolou, *South Coast Air Quality Management District*; Brandon Feenstra, *South Coast Air Quality Management District*
- 8:30 **Estimating the Air Pollution Inhaled Dose Based on Heart Rate, Breathing Rate and Other Easily-measured Physiologic Parameters** Roby Greenwald, *Georgia State University*

Sunday 10:30 AM - 12:10 PM **Tutorial Session 2**

- 10:30 **Emerging and Future Aerosol Routes to Materials: An Industry Perspective** Toivo Kodas, *Cabot Corporation*
- 10:30 **Method Advances from CLOUD - Aerosol Measurement in Very Low Nanometer Regime** Urs Baltensperger, *Paul Scherrer Institut*; Paul M. Winkler, *University of Vienna*
- 10:30 **Techniques and Instrumentation for Bioaerosol Investigation: Molecular Biology and Real-Time Fluorescence-based Analyses** Jordan Peccia, *Yale University*; Alex Huffman, *University of Denver*
- 10:30 **Oxidation Flow Reactors: Principles and Best Practices for Applications in Aerosol Research** Jose-Luis Jimenez, *University of Colorado-Boulder*

Sunday 1:30 PM - 5:10 PM **Grand Challenge Workshop**

- 1:30 **Workshop gathering talented brains in the aerosol community to identify the grand challenges in aerosol science and technology and to create a vision and provide directions for the global aerosol community** Christopher Sorensen, *Kansas State University*; Richard Flagan, *California Institute of Technology*; David Pui, *University of Minnesota*; Junji Cao, *Chinese Academy of Sciences*; Yoshio Otani, *Kanazawa University*; Urs Baltensperger, *Paul Scherrer Institute*; Y.S. Mayya, *Indian Institute of Technology-Bombay*

Sunday 1:30 PM - 3:10 PM

Tutorial Session 3

- 1:30 **Hands-On Aerosol Instrumentation Design and Measurement - Group A** Total Carbon Analyzer, *Magee Scientific*; 1 nm SMPS, *TSI Inc.*; mSEMS Model 9404, *Brechtel Inc.*; Aerodynamic Aerosol Classifier, *Cambustion Inc.*; VSP-G1 Nanoparticle Generator, *VS Particle Inc.*; SPIN Instrument, *Droplet Measurement Technologies*
- 1:30 **Models for Simulating Atmospheric Aerosols** Nicole Riemer, *University of Illinois at Urbana-Champaign*
- 1:30 **Online Aerosol Mass Spectrometry** James Allan, *University of Manchester*
- 1:30 **Designing and Conducting Field Campaigns That Include Indoor Environments** Shelly L. Miller, *University of Colorado-Boulder*; Jeffrey A. Siegel, *University of Toronto*

Sunday 3:30 PM - 5:10 PM Tutorial Session 4

- 3:30 **Hands-On Aerosol Instrumentation Design and Measurement - Group B** ELPI+, *Dekati*; Nanoparticle System U-SMPS, *Palas GmbH*; Micro-Aethalometer, *Aethlabs*; NanoAerosol Generator Model 3250, *Kanomax*; Advanced Spectrometer 11-D and Hybrid Technology 1371, *Grimm Technologies*; A11 nano Condensation Nucleus Counter, *Airmodus*
- 3:30 **Microphysics and Chemistry of Droplet and Ice Nucleation** Daniel J. Cziczo, *Massachusetts Institute of Technology*
- 3:30 **Aerosols Over China: Properties, Composition, and Health Impacts** Min Hu, *Peking University*; Maosheng Yao, *Peking University*
- 3:30 **Quality Assurance of Atmospheric Aerosol Measurements: Recommendations on Aerosol Sampling and Conditioning & Calibration Procedures for Mobility Particle Size Spectrometers** Alfred Wiedensohler, *Leibniz Institute for Tropospheric Research (TROPOS)*

Monday

Monday 8:00 AM - 9:15 AM

Plenary I: AEESP Lecture - From Particle Counting to Aerosol Collection: Just Add Water

- 8:00 **Opening Ceremony** Pratim Biswas, *Conference Chair*; Mansoo Choi, *President, IARA*; Tyler Beck, *President, AAAR*; Mark Wrighton, *Chancellor, Washington University in St. Louis*
- 8:15 **From Particle Counting to Aerosol Collection: Just Add Water** Susanne Hering, *Aerosol Dynamics Inc.*

Moderator Tyler Beck, *Particle Instruments LLC*

Monday 9:15 AM - 3:45 PM Exhibits Open

Monday 9:15 AM - 9:45 AM Coffee Break

Monday 9:45 AM - 11:45 AM Session 1: Platform

Rebecca Schwantex and ManNin Chan, chairs

- 1AC.1 Understanding Missing Sources of Fine Particulate Organosulfur Compounds in the Atmosphere: Implications from Ambient Measurements and Laboratory Experiments.** MATTHIEU RIVA, Yuzhi Chen, Lindsay Yee, Hilary Green, Tianqu Cui, Nicole Olson, Nancy Ziyang, Karsten Baumann, Mike Fort, Eric Edgerton, Eladio Knipping, Stephanie L. Shaw, Sri Hapsari Budisulistiorini, Caitlin Rose, Zhenfa Zhang, Avram Gold, Barbara Turpin, William Vizuete, Igor O. Ribeiro, Santos e Oliveira, Cristine Machado, Sérgio Duvoisin Junior, Rodrigo A. F. de Souza, Eliane Gomes, et al., *University of North Carolina at Chapel Hill*
- 1AC.2 Importance of Sulfate Radical Anion Formation and Chemistry in Heterogeneous OH Oxidation of Organosulfates.** Kai Chung Kwong, Man Mei Chim, James F. Davies, Kevin Wilson, MAN NIN CHAN, *The Chinese University of Hong Kong*
- 1AC.3 α -Hydroxy Organosulfates and Nitroxy Organosulfates Derived from Monoterpenes: Stability and Ambient Presence.** Yuchen Wang, Rongbiao Tong, JIAN ZHEN YU, *Hong Kong University of Science & Technology*
- 1AC.4 Experimental Study of Condensed-Phase Reaction Kinetics of Secondary Organic Aerosols from Isoprene Epoxydiols.** YUZHONG CHEN, Matthieu Riva, Theran P. Riedel, Havala Pye, Nicole Olson, Ziyang Lei, Zhenfa Zhang, Avram Gold, William Vizuete, Barbara Turpin, Andrew Ault, Jason Surratt, *University of North Carolina at Chapel Hill*
- 1AC.5 Photochemical Multiphase Organonitrate Formation in Wet Particles Under Humid NO_x Conditions.** YONG LIM, Jihoon Seo, Jin Young Kim, Bong Kim, Barbara Turpin, *KIST*
- 1AC.6 Quantifying the Hydrolysis Rate of Daytime and Nighttime Organic Nitrates in Aerosol Water.** MASAYUKI TAKEUCHI, Thomas Berkemeier, Gamze Eris, Nga Lee Ng, *Georgia Institute of Technology*
- 1AC.7 Impact of NO_x on Secondary Organic Aerosol (SOA) Formation from α -pinene and β -pinene Photo-Oxidation: The Role of Organic Nitrates.** Iida Pullinen, SEBASTIAN H. SCHMITT, Mehrnaz Sarrafzadeh, Sungah Kang, Patrick Schlag, Stefanie Andres, Einhard Kleist, Thomas F. Mentel, Franz Rohrer, Monika Springer, Ralf Tillmann, Jürgen Wildt, Cheng Wu, Defeng Zhao, Andreas Wahner, Astrid Kiendler-Scharr, *Forschungszentrum Jülich*
- 1AC.8 The Impact of Aerosol Uptake of Organic Nitrates on Simulated Surface Ozone in CAM-Chem.** REBECCA SCHWANTES, Louisa Emmons, Simone Tilmes, John Orlando, Geoffrey Tyndall, *National Center for Atmospheric Research*

Mike Kleeman and Laura Fierce, chairs

- 1AM.1 Insights into Isoprene-Epoxydiol SOA Chemistry in Cloud Droplets using WRF-Chem and HI-SCALE Field Observations.** MANISHKUMAR SHRIVASTAVA, Alla Zelenyuk, David Bell, Jerome Fast, Joel A. Thornton, Dan Imre, Kaitlyn J. Suski, Larry Berg, John Shilling, Jiumeng Liu, Fan Mei, Jason Tomlinson, Jian Wang, *Pacific Northwest National Laboratory*
- 1AM.2 Long-term Trends in Simulated Ultrafine Particle Concentrations in California.** Xin Yu, Anikender Kumar, Melissa Venecek, Abhishek Dhiman, MICHAEL KLEEMAN, *University of California, Davis*
- 1AM.3 Physical and Model-based Characterization of NPF Events and Sensitivity of CN and CCN to Changes in Anthropogenic Emissions in the Midwestern United States.** Can Dong, Robert Bullard, Ashish Singh, Scott N. Spak, Hitoshi Matsui, CHARLES STANIER, *University of Iowa*
- 1AM.4 Mutual Information Method for Understanding Key Variables in Atmospheric New-Particle Formation.** MARTHA ARBAYANI ZAIDAN, Ville Haapasilta, Rishi Relan, Pauli Paasonen, Veli-Matti Kerminen, Heikki Junninen, Markku Kulmala, Adam S. Foster, *Helsinki University*
- 1AM.5 Efficient Wet Removal of Soluble Species through Deep Convection Simulated in Chemistry-Climate Models.** PENGFEI YU, Karl D. Froyd, Owen Toon, Charles Bardeen, Shang Liu, Ru-Shan Gao, Christina Williamson, Agnieszka Kupc, Charles Brock, Joshua P. Schwarz, Michael Mills, Simone Tilmes, Karen Rosenlof, Daniel Murphy, *NOAA ESRL and CIRES*

- 1AM.6 New Method to Modeling Heterogeneous Reaction of SO₂ during Haze in China.** SHUPING ZHANG, Jia Xing, 11:00 Biwu Chu, Hong He, Golam Sarwar, Kebin He, Yan Zhao, *RCEES, CAS, China*
- 1AM.7 Sparse-particle Methods for Simulation of Atmospheric Aerosol.** LAURA FIERCE, Robert McGraw, *Brookhaven National Laboratory*
11:15
- 1AM.8 Constraining Aerosol Processes with a Stability-Based Inverse Model.** DANA MCGUFFIN, Peter Adams, Erik B. Ydstie, *Carnegie Mellon University*
11:30

1CM CONTROL AND MITIGATION I

ROOM 264

Christine McCool and Lupita Montoya, chairs

- 1CM.1 Comparison of Different Neutralizing Methods by IPA on Electret Filter Media.** MIN TANG, Sheng-Chieh Chen, 9:45 Drew Thompson, David Y. H. Pui, *University of Minnesota*
- 1CM.2 Filtration of Liquid Aerosol on Fibrous Filters Modified with Silica Aerogel - Experimental and Modeling Study.** JAKUB GAC, Bartosz Nowak, Marta Bojarska, *Warsaw University of Technology*
10:00
- 1CM.3 Adsorption Characteristics of Sub-10nm Nanoparticles on Porous Materials.** ZIYI LI, Yingshu Liu, Chuen-Jinn Tsai, Yi Xing, Pei Lu, Likun Yin, Ralph Yang, *University of Science and Technology Beijing*
10:15
- 1CM.4 Filtration Performance of a Melt Electrospun Filter Material.** DAINIUS MARTUZEVICIUS, Dalia Buivydiene, Edvinas Krugly, Darius Ciuzas, Tadas Prasauskas, Linas Kliucininkas, *Kaunas University of Technology, Lithuania*
10:30
- 1CM.5 Filtration Performances Study of Porous Media Composing Protective Clothing Against Solid Aerosols.** LOÏC WINGERT, Ludovic Tuduri, Yves Cloutier, Stéphane Hallé, Ali Bahloul, Dominique Tessier, Jean-Luc Giraudel, Patricia Dolez, Pearl Yip, *IRSST/ETS*
10:45
- 1CM.6 Control of Cooking Oil Fume Emission by the Combination of an Ionic Air Purifier and Bed Filter Packed with Recycled Wastes.** Kuo-Pin Yu, Xuan-En Yang, Yen-Chi Chen, CHUN-HSUAN BAI, *National Yang-Ming University*
11:00
- 1CM.7 Combined Effect of Aerosol Concentration and Humidity on Laboratory Filter Loading Experiments.** QISHENG OU, David Y. H. Pui, *University of Minnesota*
11:15
- 1CM.8 Effect of Pore Structures on Filtration Performance of Diesel Particulate Filters Based on 3-D Simulation.** CHENG CHANG, Qisheng Ou, Yun Liang, David Y. H. Pui, *University of Minnesota*
11:30

1DU COMBUSTION-GENERATED AEROSOLS: THE DESIRABLE AND UNDESIRABLE I - SYNTHESIS

ROOM 263

Jochen Dreyer and Ben Kumfer, chairs

- 1DU.1 Optical and Electronic Properties of Flame-Synthesized Carbon Nanoparticles.** CHIARA SAGGESE, Ajay V. Singh, Lucy Kaye, Hai Wang, *Stanford University*
9:45
- 1DU.2 Graphene Nanosheets Produced via Controlled Detonation. Functionalities with Oxygen/Precursor Ratio.** ARJUN NEPAL, Justin Wright, Stefan Bossmann, Christopher Sorensen, *Kansas State University*
10:00
- 1DU.3 Particle Formation in Combustion Environments: Importance of Charge Distributions on Evolution of Aerosol Size Distributions.** YANG WANG, Girish Sharma, Michel Attoui, Pratim Biswas, *Washington University in St Louis*
10:15
- 1DU.4 Crystal Structure and Surface Composition of Coalescing Ag-Au Nano-Alloys by Molecular Dynamics Simulations.** EIRINI GOUDELII, Sotiris E. Pratsinis, *University of Minnesota*
10:30
- 1DU.5 Synthesis of Li_{1.2}Mn_{0.54}Ni_{0.13}Co_{0.13}O₂ via Low Temperature Flame Spray Pyrolysis.** JOSE MADERO, Kuan-Yu Shen, Jeremy Wojtak, Tianxiang Li, Richard Axelbaum, *Washington University in St. Louis*
10:45

- 1DU.6 Effects of Droplet Diameter and Flame Temperature on Nanoparticle Formation Mechanisms in Liquid Aerosol-Fed Non-Premixed Gas Flames.** CHRISTOPHER ABRAM, Maksim Mezhericher, Howard A Stone, Yiguang Ju, Princeton University
11:00
- 1DU.7 Pursuing Complex Materials Synthesis by Flame Spray Pyrolysis with Advanced Diagnostics.** JOSEPH LIBERA, Stephen Cotty, Theodore Krause, Robert Tranter, Jan Ilavsky, Karena Chapman, Gregory Krumdick, Argonne National Laboratory
11:15
- 1DU.8 Two-dimensional Diagnostic of Nanoparticle Formation and Transport in Complex Flames Using Phase-selective Laser-induced Breakdown Spectroscopy.** YIYANG ZHANG, Yihua Ren, Shuiqing Li, Stephen Tse, Tsinghua University
11:30

1IA INDOOR AEROSOLS I: CHEMISTRY & COMPOSITION ANALYSIS

ROOM 265/266

Donghyun Rim and Shelly Miller, chairs

- 1IA.1 Seasonal Variation in the Composition of Submicron Indoor Aerosols of Outdoor Origin.** Anita Avery, Michael Waring, PETER DECARLO, Drexel University
9:45
- 1IA.2 Chemically-Resolved Particle Mass Composition in a Swedish Residence Assessed by a Time-Of-Flight Aerosol Mass Spectrometer.** YULIYA OMELEKHINA, Axel C. Eriksson, Patrik Nilsson, Joakim Pagels, Aneta Wierzbicka, Lund University, Sweden
10:00
- 1IA.3 Evaluation of the Molecular Composition of Particle- and Gas-Phase Material in an Indoor Residential Environment using Positive Matrix Factorization.** CLAIRE FORTENBERRY, Michael Walker, Audrey Dang, Arun Loka, Gauri Date, Karolina Cysneiros de Carvalho, Glenn Morrison, Brent Williams, Washington University in St. Louis
10:15
- 1IA.4 Study of Particulate and Gas-phase Pollutants Emitted from Household and Personal Care Products Under Various Heating and Combustion Scenarios.** DONNA AUGUSTE, Shelly Miller, University of Colorado at Boulder
10:30
- 1IA.5 Characterization of Aerosols in the International Space Station.** MARIT MEYER, NASA Glenn Research Center
10:45
- 1IA.6 Indoor Fine and Ultrafine Aerosol Particles Exposure and Its Relationship to the Outdoor Concentrations in Private Homes.** Jiangyue Zhao, Birgit Wehner, Thomas Tuch, Kay Weinhold, Maik Merkel, Ulrich Franck, Wolfram Birmili, Anja Lüdecke, Tareq Hussein, Lina Wang, ALFRED WIEDENSOHLER, TROPOS
11:00
- 1IA.7 Heterogeneous Ozonolysis of Squalene Particles: Gas Phase Products Depend on Water Vapor Concentration.** CALEB ARATA, Nadja Heine, Pawel Misztal, Kevin Wilson, Allen H. Goldstein, University of California, Berkeley
11:15
- 1IA.8 Emission and Particle Size Distribution of Polycyclic Aromatic Hydrocarbons in Oil Fumes from Domestic Cooking.** YU-CHENG CHEN, Kai-Wei Ke, Chin-Yu Hsu, National Health Research Institutes, Taiwan
11:30

1IN UNRAVELING THE MANY FACETS OF ICE NUCLEATING PARTICLES AND THEIR INTERACTIONS WITH CLOUDS I

FERRARA THEATER

Ryan Sullivan and Heike Wex, chairs

- 1IN.1 Ice Nuclei and Their Impact on Clouds in Alaska.** GIJS DE BOER, Matthew Norgren, Jessie Creamean, Amy Solomon, Maximilian Maahn, Fan Mei, Hagen Telg, Allison McComiskey, CIRES/NOAA. INVITED.
9:45
- 1IN.2 Traces of Ice Nucleation Modes in Arctic Mixed-phase Clouds Simulated by a Habit Prediction Scheme.** TEMPEI HASHINO, Gijs de Boer, Hajime Okamoto, Greg Tripoli, Kyushu University. INVITED.
10:00
- 1IN.3 Variations in Ice Nucleating Particle Concentrations at Four Arctic Locations.** HEIKE WEX, Lin Huang, Hayley Hung, Rita Traversi, Rebecca J. Sheesley, Claire Elizabeth Moffett, Tate Edward Barrett, Rossana Bossi, Markus Hartmann, Xianda Gong, Frank Stratmann, Leibniz Institute for Tropospheric Research, Germany
10:15

- 1IN.4 The Concentrations, Spatial Distribution, and Compositions of Ice Nucleating Particles in and around Stratiform Clouds over the Southern Ocean.** PAUL DEMOTT, Christina McCluskey, Kathryn Moore, Thomas Hill, Ezra Levin, Cynthia Twohy, Lynn Russell, Darin Toohey, Bryan Rainwater, Greg McFarquhar, Alain Protat, Ruhi Humphries, Gerald Mace, Melita Keywood, Roger Marchand, Cory Wolff, Jeffrey Stith, Sonia Kreidenweis, *Colorado State University*
10:30
- 1IN.5 Laboratory Studies on Mechanisms Behind Bacterial Ice-Nucleation Activity.** Meilee Ling, Heike Wex, Sarah Grawe, Jonas Jakobsson, Susan Hartmann, Jakob Löndahl, Kai Finster, Thomas Boesen, TINA SANTL-TEMKIV, *Aarhus University, Denmark*. INVITED.
10:45
- 1IN.6 Field Collected and Synthesized Proteinaceous Material as Ice Nucleating Particles in Immersion Freezing.** NADINE BORDUAS-DEDEKIND, Robert O. David, Kristopher McNeill, Zamin Abdulali Kanji, *ETH Zürich*
11:00
- 1IN.7 The Importance of Biogenic Material to the Ice Nucleating Particle Concentration in a Coastal Tropical Site.** LUIS ANTONIO LADINO, Graciela Raga, Harry Alvarez-Ospina, Manuel Andino, Irma Rosas, Leticia Martinez, Eva Salinas, Javier Miranda, Zyanya Ramirez, Bernardo Figueroa, Erika Quintana, Luis Maldonado, Agustin Garcia, Cédric Chou, Victoria Irish, Allan Bertram, *Universidad Nacional Autónoma de México, Mexico City, Mexico*
11:15
- 1IN.8 Biogenic Macromolecules from Terrestrial and Marine Biospheres Acting as Ice Nucleating Particles.** DANIEL KNOFF, Joseph Charnawskas, Peter Aaron Alpert, Josephine Aller, Swarup China, Daniel Veghte, Daniel Bonanno, Alexander Laskin, Ryan Moffet, Mary Gilles, Jian Wang, *Stony Brook University*
11:30

1MD AEROSOLS IN MEDICINE I

ROOM 260

Philip Kuehl and Otmar Schmid, chairs

- 1MD.1 Verifying the Hygroscopic Particle Growth Model during the Time Relevant to Lung Inspiration.** PATRICK O'SHAUGHNESSY, Ralph Altmaier, Ross Walenga, Ching-Long Lin, *University of Iowa*
9:45
- 1MD.2 Regional Lung Deposition of Nebulized Hypertonic Saline for Trans-Nasal vs. Oral Inhalation in Healthy, Non-Smoking Adults.** WILLIAM BENNETT, Kirby Zeman, Landon Holbrook, Katie Howe, Jihong Wu, David Busick, Richard Boucher, Scott Donaldson, *University of North Carolina at Chapel Hill*
10:00
- 1MD.3 Improved Prediction Of Intersubject Variability In Extrathoracic Aerosol Deposition.** Conor A. Ruzycski, Michael Yang, Scott Tavernini, C. Paul Moore, Michelle L. Noga, Andrew R. Martin, Hak-Kim Chan, WARREN H. FINLAY, *University of Alberta*
10:15
- 1MD.4 Phenotyping of Chronic Obstructive Disease, COPD, from Deposition Fractions of Inhaled Nanoparticles.** JAKOB LÖNDAHL, Jonas Jakobsson, H Laura Aaltonen, Eeva Piitulainen, Per Wollmer, *Lund University, Sweden*
10:30
- 1MD.5 Validating CFD Predictions of Small Particle Aerosol Deposition in a Infant Nasal Airway Model.** KARL BASS, Susan Boc, Michael Hindle, Worth Longest, *Virginia Commonwealth University*
10:45
- 1MD.6 Intranasal and Tracheal Deposition of Dry Particles in 3D Physical Models of Rhesus Macaques.** JANA KESAVAN, Valerie J. Alstadt, Jerold Bottiger, Beth Laube, *US ARMY ECBC*
11:00
- 1MD.7 In Vitro Determination of Combivent and Spiriva Respimat Dose Delivery in Simulated Spontaneously Breathing Tracheostomy Patients.** RYM MEHRI, Abubakar Alatrash, Edgar A. Matida, Fiorenza Frank, *Carleton University, Ottawa, ON, Canada*
11:15
- 1MD.8 Human Nasal Olfactory Deposition of Inhaled Nanoparticles.** LIN TIAN, Yidan Shang, Jingliang Dong, Kiao Inthavong, Jiyuan Tu, *MIT University*
11:30

1OF OXIDATION FLOW REACTOR: DEVELOPMENT, CHARACTERIZATION, AND APPLICATION TO AEROSOLS I

ROOM 276

Qi Chen and Olli Sippula, chairs

- 1OF.1 Chlorine and Nitrate Radical Generation in Oxidation Flow Reactors.** ANDREW LAMBE, Jordan Krechmer, Ezra Wood, William Brune, Douglas Worsnop, *Aerodyne Research, Inc.*
9:45

- 10F.2 Organic Peroxy Chemistry in Oxidation Flow Reactors and Chambers and Their Atmospheric Relevance.** ZHE PENG, Julia Lee-Taylor, John Orlando, Geoffrey Tyndall, Jose-Luis Jimenez, *University of Colorado-Boulder*
10:00
- 10F.3 Modeling the Formation and Composition of Secondary Organic Aerosol in Oxidation Flow Reactors Using Simple and Detailed Chemistry and Thermodynamic Models.** Sailaja Eluri, Christopher Cappa, Beth Friedman, Delphine Farmer, SHANTANU JATHAR, *Colorado State University*
10:15
- 10F.4 Aging of Selected Particulate Organic Markers in Oxidation Flow Reactors.** LIN WANG, Mingyi Wang, Lei Yao, Hangfei Chen, Bowen Zhang, Xiaoyu Hu, *Fudan University*
10:30
- 10F.5 A Perspective on Developing "Wall-less" Oxidation Flow Reactors.** WILLIAM BRUNE, Andrew Lambe, *Pennsylvania State University*
10:45
- 10F.6 Characterizing Photochemical Environment in the Caltech PhotoOxidation Flow Tube Reactor (CPOT).** YUANLONG HUANG, Ran Zhao, John Seinfeld, *California Institute of Technology*
11:00
- 10F.7 Secondary Aerosol from Gas Emissions of Sage (SAGES): Characterizing SOA Production from Coastal Sage Scrub Plant Emissions under High and Low NO_x Conditions.** CELIA FAIOLA, Chinmoy Sarkar, Jordan Krechmer, Archit Mehra, Leah Williams, Fatemeh Khalaj, Manjula Canagaratna, Alex Guenther, Dasa Gu, Arin Boghoz, Angelo Calinga, John Jayne, Douglas Worsnop, Andrew Lambe, *University of California Irvine*
11:15
- 10F.8 Real-time and Off-line Applications of Oxidative Flow Reactor (OFR) for Chemical and Physical Characterization of Secondary Organic Aerosols (SOA).** YONG JIE LI, Pengfei Liu, Qi Chen, Yan Zheng, Xi Cheng, Keren Liao, Scot T. Martin, *University of Macau*
11:30

1RA REMOTE/REGIONAL ATMOSPHERIC AEROSOL I: MARINE ENVIRONMENT

ROOM 267

Rachel Chang and Joseph Woo, chairs

- 1RA.1 Measured Contributions to Cloud Condensation Nuclei from DMS and Sea Spray in the Marine Atmosphere.** 9:45 Kevin Sanchez, Chia-Li Chen, LYNN RUSSELL, Raghu Betha, Jun Liu, Derek Price, Paola Massoli, Luke Ziemba, Ewan Crosbie, Richard Moore, Markus Müller, Sven A. Schiller, Armin Wisthaler, Alex Lee, Patricia Quinn, Timothy Bates, Jack Porter, Thomas Bell, Eric Saltzmann, Robert D. Vaillancourt, Michael Behrenfeld, *Scripps Institution of Oceanography*
- 1RA.2 South African Biomass Burning Season Aerosols Observed over the Remote Southeast Atlantic Ocean on Ascension Island.** 10:00 Allison Aiken, Paquita Zuidema, Arthur J. Sedlacek, THOMAS WATSON, Stephen Springston, Connor Flynn, Chongai Kuang, Janek Uin, Manvendra Dubey, *Los Alamos National Lab*
- 1RA.3 Marine Boundary Layer Aerosol in Eastern North Atlantic: Seasonal Variations and the Key Controlling Processes.** 10:15 GUANGJIE ZHENG, Tamara Pinterich, Allison Aiken, Robert Bullard, Edward Luke, Pavlos Kollias, Chongai Kuang, Stephen Springston, Janek Uin, Thomas Watson, Rob Wood, Jian Wang, *Brookhaven National Laboratory*
- 1RA.4 Free Tropospheric Aerosol characteristics over the North Eastern Atlantic Ocean and Its Relationship to the Marine Boundary Layer.** 10:30 BIRGIT WEHNER, Karine Chevalier, Silvia Henning, Kay Weinhold, Oliver Welz, Claudio Mazzoleni, Paulo Fialho, Simeon Schum, Stefano Viviani, Greg Roberts, *Leibniz-Institute for Tropospheric Research*
- 1RA.5 Molecular and Physical Characteristics of Aerosol at a Remote Marine Free Troposphere Site: Implications for Atmospheric Aging.** 10:45 SIMEON SCHUM, Bo Zhang, Katja Dzepina, Swarup China, Paulo Fialho, Claudio Mazzoleni, Lynn Mazzoleni, *Michigan Technological University*
- 1RA.6 Aerosol Particle Size Distributions and Compositions over the Southern Ocean in the Austral Summer of 2017.** 11:00 TAKUMA MIYAKAWA, Fumikazu Taketani, Masayuki Takigawa, Chunmao Zhu, Kazuhiko Matsumoto, Yutaka Tobo, Momoka Yoshizue, Yugo Kanaya, *Japan Agency for Marine-Earth Science and Technology*
- 1RA.7 Seasonal Variability of Aerosol Optical and Physical Properties from the Eastern North Atlantic (ENA) Aerosol Observing System (AOS) during 2016 and 2017.** 11:15 FRANCESCA GALLO, Allison Aiken, Connor Flynn, Annette Koontz, Jian Wang, Guangjie Zheng, Stephen Springston, Chongai Kuang, Janek Uin, Eduardo Azevedo, Kim Nitschke, *Los Alamos National Lab*
- 1RA.8 Variations in Composition of Particles Sampled at Different Altitudes in the North Atlantic.** 11:30 Swarup China, Joseph Charnawskas, Daniel Bonanno, Johannes Weis, Ryan Moffet, Mary Gilles, Daniel Knopf, Jian Wang, Alexander Laskin, *Pacific Northwest National Laboratory*

Monday 11:45 AM - 1:15 PM
Lunch on Your Own

Monday 12:00 PM - 1:00 PM
Meet Aerosol Pioneers 1

Monday 12:00 PM - 1:00 PM
GAeF Board Meeting

Monday 1:15 PM - 3:15 PM
Session 2: Platform

2AC AEROSOL CHEMISTRY II - HIGHLY OXIDIZED MULTIFUNCTIONAL ORGANIC COMPOUNDS
ROOM 275

Lea Hildebrandt Ruiz and Mattieu Riva, chairs

- 2AC.1 Organic Aerosol from Chlorine-Initiated Oxidation of Hydrocarbons.** LEA HILDEBRANDT RUIZ, Dongyu S. Wang, 1:15 Surya Venkatesh Dhulipala, Sahil Bhandari, Catherine Masoud, Kanan Patel, *University of Texas at Austin*
- 2AC.2 Formation of Highly Oxidized Multifunctional Organic Compounds from Chlorine Atom Initiated Oxidation of α -pinene.** Yonghong Wang, MATTHIEU RIVA, Xie Hongbin, Liine Heikkinen, Simon Schallhart, Otso Peräkylä, Chao Yan, Markku Kulmala, Mikael Ehn, *University of Helsinki*
- 2AC.3 Probing the Role of Water in Criegee Chemistry Leading to High Molecular Weight Compounds on Aqueous Organic Surfaces.** LIJIE LI, Michael Hoffmann, Agustin Colussi, *California Institute of Technology*
- 2AC.4 There's No Place Like HOM: Modeling Peroxy Radical Chemistry to Understand HOM Yields.** MEREDITH SCHERVISH, Wayne Chuang, Neil Donahue, *Carnegie Mellon University*
- 2AC.5 Understanding the Fate of Highly Oxygenated Molecules in the Particle Phase Using an Extractive Electropray Ionization Time-of-Flight Mass Spectrometer (EESI-TOF).** VERONIKA POSPISILOVA, Felipe Lopez-Hilfiker, Claudia Mohr, Wei Huang, David Bell, Liine Heikkinen, Josef Dommen, Urs Baltensperger, Andre S.H. Prévôt, Jay G. Slowik, *Paul Scherrer Institute*
- 2AC.6 The Role of Highly Oxygenated Molecules in Determining the Composition of Ambient Ions in the Boreal Forest.** FEDERICO BIANCHI, Olga Garmash, Xucheng He, Chao Yan, Siddharth Iyer, Matti Rissanen, Matthieu Riva, Nina Sarnela, Tuukka Petäjä, Douglas Worsnop, Markku Kulmala, Mikael Ehn, Heikki Junninen, Ida Rosendhal, Risto Taipale, Zhengning Xu, *University of Helsinki*
- 2AC.7 The Fate of Highly Oxygenated Organic Molecules in Wet Acidic Aerosols.** LIINE HEIKKINEN, Matthieu Riva, Otso Peräkylä, Qiaozhi Zha, Simon Schallhart, Matti Rissanen, Tuukka Petäjä, Mikael Ehn, *University of Helsinki*
- 2AC.8 Constraining the Abundance of Oligomers in Monoterpene Secondary Organic Aerosol.** CHRISTOPHER KENSETH, Yuanlong Huang, Ran Zhao, Nathan Dalleska, Caleb Hethcox, Brian Stoltz, John Seinfeld, *California Institute of Technology*

2AP AEROSOL PHYSICS I
ROOM 274

Timothy Raymond and Florian Ditas, chairs

- 2AP.1 Observation of Nucleation Size Particles in the Amazon.** FLORIAN DITAS, Christopher Pöhlker, Henrique Barbosa, 1:15 Joel Brito, Samara Carbone, Xuguang Chi, Bruna A. Holanda, Isabella Hrahe de Angelis, Tobias Könemann, Jing Ming,

Mira L. Pöhlker, Maria Prass, Daniel Moran-Zuloaga, Marta Sá, Jorge Saturno, Hang Su, Jian Wang, David Walter, Stefan Wolff, Alessandro Araujo, Paulo Artaxo, Ulrich Pöschl, Meinrat O. Andreae, *Max Planck Institute for Chemistry, Mainz, Germany*

2AP.2 Investigation of Dependencies of the Condensation Behaviour on Automotive Exhaust Soot in Condensation Nuclei Counters. MARTIN KUPPER, Martin Kraft, Alexander Bergmann, *CTR Carinthian Tech Research, Villach, 9524, Austria*

2AP.3 Quantifying Initial Nanoparticle Growth of Organic and Inorganic Systems with the CLOUD Experiment. 1:45 DOMINIK STOLZENBURG, Lukas Fischer, Martin Heinritzi, Mario Simon, Katrianne Lehtipalo, Chao Yan, Lubna Dada, Paul M. Winkler, *University of Vienna*

2AP.4 Laboratory Study on the Impact of Organic Vapours on Water Uptake of Aerosols. DAWEI HU, David Topping, 2:00 Gordon McFiggans, *University of Manchester*

2AP.5 How Increased Ionization Can Boost Aerosol Growth to Cloud Condensation Nuclei. MARTIN BØDKER 2:15 ENGHOFF, Henrik Svensmark, Nir Joseph Shaviv, Jacob Svensmark, *Technical University of Denmark*

2AP.6 Ageing of Sea Spray Aerosols: Effects on Hygroscopicity and Cloud Droplet Activation. BERNADETTE ROSATI, 2:30 Sigurd Christiansen, Robert Lange, Andreas Massling, Merete Bilde, *Aarhus University*

2AP.7 A Unifying Identity for the Work of Cluster Formation in Heterogeneous and Homogeneous Nucleation Theory. ROBERT MCGRAW, Paul M. Winkler, Paul E. Wagner, *Brookhaven National Laboratory*

2AP.8 Controlling and Explaining the Formation of Bimodal Aerosol Distributions in Laboratory Studies. Phoebe 3:00 Belser, Hemanta Timsina, Dabrina Dutcher, TIM RAYMOND, *Bucknell University*

2CA CARBONACEOUS AEROSOL I: BLACK CARBON

ROOM 260

James Allan and Josh Apte, chairs

2CA.1 Understanding the Physical and Optical Properties of Black Carbon Aerosols at Delhi and Kanpur in Indo-Gangetic Plain. NAVANEETH M. THAMBAN, S.N. Tripathi, Shamjad P.M., *IIT Kanpur*

2CA.2 Influences of Primary Emission and Secondary Coating Formation on the Mixing State of Black Carbon-containing Particles. ALEX LEE, Chia-Li Chen, Jun Liu, Derek Price, Raghu Betha, Lynn Russell, Xiaolu Zhang, Christopher Cappa, *National University of Singapore*

2CA.3 Black Carbon Aerosol in a Clean Marine Environment. WALT WILLIAMS, Armin Sorooshian, Hafidi Jonsson, Richard 1:45 Flagan, John Seinfeld, Andrew Metcalf, *Clemson University*

2CA.4 Quantifying Black Carbon Light Absorption Enhancement with a Novel Statistical Approach. Cheng Wu, Dui 2:00 Wu, JIAN ZHEN YU, *Jinan University*

2CA.5 Impact of Diesel Container Truck Emissions on Carbonaceous Aerosols in a Unique Roadside Environment in Hong Kong. YEE KA WONG, Jian Zhen Yu, *Hong Kong University of Science and Technology*

2CA.6 Development of Size-resolved Black Carbon Particle Number Emission Inventory for Global Civil Aviation. 2:30 XIAOLE ZHANG, Xi Chen, Jing Wang, *ETH Zuerich*

2CA.7 Physico-chemical Characterization of Small-scale Gas Flaring. Alberto Baldelli, Ramin Dastanpour, Una Trivanovic, 2:45 Melina Jefferson, Jason S. Olfert, Alireza Moallemi, Kevin Thomson, Matthew Johnson, Olga Popovicheva, STEVEN ROGAK, *University of British Columbia*

2CA.8 Inter-Comparison of Techniques for the Measurement of Black Carbon from Biomass Burning: Influence of Optical and Chemical Properties. HANYANG LI, Kara D. Lamb, Joshua P. Schwarz, Vanessa Selimovic, Robert J. 3:00 Yokelson, Gavin McMeeking, Andrew May, *The Ohio State University*

2CM CONTROL AND MITIGATION II

ROOM 264

Marit Meyer and Min Tang, chairs

- 2CM.1 An Integrated Modeling and Optimized Operating Method for Electrostatic Precipitation Process of Particulate Matters.** YISHAN GUO, Yueqi Huang, Chenghang Zheng, Weiguo Weng, Yi Wang, Xiang Gao, *Zhejiang University, China*
1:15
- 2CM.2 Pollutant Emissions from Steelworks Equipped with Various Flue Gas Desulfurization Systems.** QING LI, Di Wu, Xiang Ding, Xianmang Xu, JianMin Chen, *Fudan University*
1:30
- 2CM.3 Sampling Efficiency of PM10 Inlets with Different Impaction Substrates.** THI-CUC LE, Krishna Kumar Shukla, Jung-Che Sung, Jia Feng, Ziyi Li, Chuen-Jinn Tsai, *National Chiao Tung University*
1:45
- 2CM.4 Performance of Compact Cyclones with Taper-Shaped Bodies.** PENG WANG, Di Liu, Da-Ren Chen, *Virginia Commonwealth University*
2:00
- 2CM.5 Application of Wet Phase Transition Agglomerator for Synergistic Removal of Fine Particles and Sulfur Trioxide from Stationary Source Flue Gas.** Houzhang Tan, Ruijie Cao, Renhui Ruan, Shengjie Bai, XUEBIN WANG, Yongle Du, Hexin Liu, *Xi'an Jiaotong University, China*
2:15
- 2CM.6 Evaluation of Particle Loading Performance of Two-stage Filtration System.** XINJIAO TIAN, Qisheng Ou, David Y. H. Pui, *University of Minnesota*
2:30
- 2CM.7 Experimental Single Effect Analysis of the Particle Retention Efficiency of a Gas Scrubber.** MICHAEL KLAUCK, Kathrin Trollmann, Jeffrey Kobalz, Robin de Winter, Hans-Josef Allelein, *Forschungszentrum Jülich GmbH*
2:45
- 2CM.8 Effects of Natural and Modified Attapulgite on the Emission of Ultrafine PM and Heavy Metals during Coal Combustion Process.** YISHU XU, Xiaowei Liu, Hao Wang, Yufeng Zhang, Minghou Xu, *Huazhong University of Science & Technology*
3:00

2IA INDOOR AEROSOLS II: SOURCE EMISSIONS & SENSING

ROOM 265/266

Maria Venice and Lupita Montoya, chairs

- 2IA.1 Impacts of E-Cigarettes Usage on the Air Quality of Vape Shop and Its Nearby Areas.** LIQIAO (VICKY) LI, Charlene Nguyen, Yan Lin, Yifang Zhu, *University of California, Los Angeles*
1:15
- 2IA.2 Indoor PM2.5 in an Urban Zone with Heavy Wood Smoke Pollution: The Case of Temuco, Chile.** HECTOR JORQUERA, Lupita Montoya, Francisco Barraza, *Pontificia Universidad Catolica de Chile*
1:30
- 2IA.3 Indoor Aerosols from Home Heating in the Navajo Nation: Sources, Health Effects, and Control.** LUPITA MONTOYA, Wyatt Champion, Paul A. Solomon, Kathleen Stewart, Perry Charley, *University of Colorado Boulder*
1:45
- 2IA.4 Accuracy of Sensors in Assessing Exposure to Traffic-Related Aerosols.** JENNIE COX, Seung-Hyun Cho, Sergey A. Grinshpun, James Ross, Steven Chillrud, Zheng Zhu, Roman Jandarov, Tiina Reponen, *University of Cincinnati*
2:00
- 2IA.5 Nanoparticle Resuspension from Surfaces and Resulting Exposures Due to the Use of Consumer Nanosprays in Homes.** RUIKANG HE, Jie Zhang, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
2:15
- 2IA.6 Health Detrimental SVOC Uptake by Infiltrating Ambient Particles Measured with Soot Particle Aerosol Mass Spectrometry.** AXEL C. ERIKSSON, Christina Andersen, Anette Kraus, Jacob Klenø Nøjgaard, Per Axel Clausen, Aneta Wierzbicka, Joakim Pagels, *Ergonomics and Aerosol Technology, Lund University, Sweden*
2:30
- 2IA.7 Managing Indoor Air Quality in ClimACT Schools.** Susana Marta Almeida, Patrice Blondeau, Vitor Manteigas, Joana Lage, Ana D'Espiney, Marina Almeida-Silva, Nuno Canha, VÂNIA MARTINS, Tiago Faria, Karla Gonçalves, José Luís Alexandre, Ricardo Chacartegui, Jesus Lizana, José António Becera, Ana Gamarra, Yolanda Lechon Perez, Amaia Fernandes, *C2TN, IST, Universidade de Lisboa, Portugal*
2:45
- 2IA.8 MakerSpaces: An Emerging Indoor Aerosol Exposure Source.** Anthony Ramos, Justin Keller, Tim Raymond, DABRINA DUTCHER, *Bucknell University*
3:00

2IM INSTRUMENTATION I - AEROSOL CHARGE & DETECTION

Rick Flagan and Donggeun Lee, chairs

- 2IM.1 Inversion of Scanning Electrical Mobility Spectrometer and SMPS Measurements.** RICHARD FLAGAN, Yuanlong Huang, Amanda Grantz, *California Institute of Technology*
1:15
- 2IM.2 Improving the Accuracy and Precision Of Sub-10 nm Atmospheric Nanoparticle Measurements with a New High Flow DMPS.** JUHA KANGASLUOMA, Lauri R. Ahonen, Tiia M. Laurila, Runlong Cai, Joonas Enroth, Stephany Mazon, Frans Korhonen, Pasi Aalto, Markku Kulmala, Michel Attoui, Tuukka Petäjä, *University of Helsinki*
1:30
- 2IM.3 Characterization of the Boosted 3776 Butanol TSI CPC in the Sub 2 nm Range. Activation of Sub 2nm Particles with Butanol.** MICHEL ATTOUI, *LISA Paris Est Creteil University France*
1:45
- 2IM.4 Penetration Efficiency of Sub-3 nm Particles in the Sampling Line of an Electrical Mobility Size Spectrometer.** YUEYUN FU, Mo Xue, Runlong Cai, Juha Kangasluoma, Jingkun Jiang, *Tsinghua University*
2:00
- 2IM.5 A Modified Real-Time Method to Measure Particle Geometric Surface Area with a Time Resolution of 1s.** LIPENG SU, Qisheng Ou, Leo N.Y. Cao, David Y. H. Pui, *University of Minnesota*
2:15
- 2IM.6 Aitken's Condensation Counter: Bringing History to Life.** DYLAN LEIGH-MANUELL, Suresh Dhaniyala, *Clarkson University*
2:30
- 2IM.7 Application of Size-Independent Charging of Nanoparticles for Improving DMA-Classification Performance.** Yoohyun Ock, Jeongeun Kim, Mansoo Choi, DONGGEUN LEE, *Pusan National University*
2:45
- 2IM.8 A Versatile Portable Exhaust Particle Sampling System to Extend Particle Number Measurements below 23 Nanometers.** MARKUS BAINSCHEB, Alexander Bergmann, Panu Karjalainen, Jorma Keskinen, Jonathan Andersson, Athanasios Mamakos, Tero Lähde, Christoph Haisch, Oriana Piacenza, Ananias Tomboulides, Zisimos Toumasatos, Leonidas Ntziachristos, Zissis Samaras, *Graz University of Technology*
3:00

2IN UNRAVELING THE MANY FACETS OF ICE NUCLEATING PARTICLES AND THEIR INTERACTIONS WITH CLOUDS II
FERRARA THEATER

Heike Wex and Yutaka Tobo, chairs

- 2IN.1 Ice Nucleating Particle Properties Relevant to Aerosol Cloud Interactions in the Himalaya Region.** Shweta Yadav, Rebecca Venezia, Ryan Paerl, MARKUS PETTERS, *North Carolina State University*. INVITED.
1:15
- 2IN.2 Influence of Heterogeneous Ice Nucleation of Sea Spray Aerosol on Southern Ocean Clouds.** CHRISTINA MCCLUSKEY, Paul DeMott, Thomas Hill, Kathryn Moore, Sonia Kreidenweis, Ruhi Humphries, Alain Protat, Greg McFarquhar, Susannah Burrows, Andrew Gettelman, *National Center for Atmospheric Research*. INVITED.
1:30
- 2IN.3 Surface Chemistry of Ice Nucleating Mineral Dust Particles.** ALEXEI KISELEV, Alice Keinert, Alexei Nefedov, Weijia Wang, Christof Woell, Thomas Leisner, *Karlsruhe Institute of Technology*. INVITED.
1:45
- 2IN.4 Mineral Dust Aerosol Measurements throughout the Global Free Troposphere and Implications for Cirrus Formation.** KARL D. FROYD, Daniel Murphy, Gregory Schill, Agnieszka Kupc, Christina Williamson, Charles Brock, Pengfei Yu, Karen Rosenlof, Huisheng Bian, Mian Chin, Peter Colarco, *NOAA ESRL and CIRES, University of Colorado Boulder*
2:00
- 2IN.5 Immersion Freezing Efficiency of Airborne Mineral Dust at Various Particle Size-classes.** NAAMA REICHER, Shira Raveh-Rubin, Yinon Rudich, *The Weizmann Institute of Science*
2:15
- 2IN.6 Effect of Mineralogy, Particle Size, and Composition on the Immersion Freezing Properties of Three Central American Volcanic Ashes.** LEIF JAHN, Daniel Williams, Michael Polen, William Fahy, Ryan Sullivan, *Carnegie Mellon University*
2:30
- 2IN.7 Ice-Nucleating Properties of Coal Fly Ash Particles in Cirrus Cloud Conditions.** NSIKANABASI UMO, Robert Wagner, Romy Ullrich, Kristina Höhler, Naruki Hiranuma, Amanda Lea-Langton, Harald Saathoff, Alexei Kiselev, Peter G. Weidler, Heike Wex, Sarah Grawe, Jenny M. Jones, Alan Williams, Benjamin Murray, Thomas Leisner, Ottmar Möhler, *Karlsruhe Institute of Technology*
2:45

2IN.8 Characteristics of Ice Nuclei in the North China based on Mountain Measurements. KAI BI, Xincheng Ma, Fei Wang, Yunbo Chen, Ping Tian, Quan Liu, Delong Zhao, Gavin McMeeking, Ezra Levin, *Beijing Weather Modification Office*

2MS MATERIALS SYNTHESIS I

ROOM 263

Lutz Mädler and Igor Rahinov, chairs

- 2MS.1 A Facile Aerosol-based Synthesis of Cu-Ce-O Hybrid Nanoparticles for Synergistic Catalysis of Methane Combustion.** DE-HAO TSAI, *National Tsing Hua University*
1:15
- 2MS.2 Measurements and Simulations of Nanomaterial Formation and Gas Phase Intermediates' Behavior in Buoyancy Opposed Flame Synthesis Reactor.** IGOR RAHINOV, Johannes Sellmann, Sebastian Kluge, Hans Juenger, Alexey Fomin, Matthieu Raphael Lalanne, Sergey Cheskis, Christof Schulz, Hartmut Wiggers, Andreas Kempf, Irenaeus Wlokas, *The Open University of Israel*
1:30
- 2MS.3 Synthesis of Crumpled Graphene Nanostructures Decorated with Multicomponent Metal Nanoparticles in a Flame-driven High Temperature Reducing Jet Reactor.** MOHAMMAD MOEIN MOHAMMADI, Santosh Srivatsa Gunturi, Shikuan Shao, Raymond Buchner, Mark Swihart, *University at Buffalo - SUNY*
1:45
- 2MS.4 Tailored Synthesis of Macroporous Pt/WO₃ Nanoaggregates via Flame Spray Pyrolysis and Their Photocatalytic Properties.** OGI TAKASHI, Ghana Rinaldi Febrigia, Tomoyuki Hirano, Kikuo Okuyama, *Department of Chemical Engineering, Hiroshima University*
2:00
- 2MS.5 Flame Aerosol Integrated Role-To-Role Lamination Technique for High Performance Battery Fabrication Procedure.** LUTZ MÄDLER, Michael Gockeln, Robert Kun, Suman Pokhrel, *University of Bremen, Faculty of Production Engineering*
2:15
- 2MS.6 High Throughput Screening of Precursor-Solvent Combinations for Flame Aerosol Chemistry to Design Phase Pure Li₄Ti₅O₁₂ Energy Storage Materials.** SUMAN POKHREL, Florian Meirhofer, Haipeng Li, Johannes Birkenstock, Michael Gockeln, Robert Kun, Lutz Mädler, *University of Bremen, Faculty of Production Engineering*
2:30
- 2MS.7 Electro spray Atomization and Deposition of Nanoparticle Suspensions Leading to Nanostructured Porous Coatings.** JOSE L CASTILLO, Santiago Martin, Daniel Rodriguez-Perez, Francisco J Higuera, Pedro L Garcia-Ybarra, *Universidad Nacional de Educacion a Distancia - UNED*
2:45
- 2MS.8 Aerosol Particle Restructuring: Molecular Dynamics of High Aspect Ratio Carbon Nanotubes.** NIKOLAOS KATERIS, Adam M Boies, *University of Cambridge*
3:00
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2RA REMOTE/REGIONAL ATMOSPHERIC AEROSOL II: REMOTE ENVIRONMENT

ROOM 267

Leiming Zhang and Shunsuke Nakao, chairs

- 2RA.1 Aerosol Enhancement in the Tropical Tropopause Layer Controlled by Deep Convection, In Situ Production, and Mixing.** SHANG LIU, Pengfei Yu, Troy Thornberry, Andrew Rollins, Yuyan Cui, Karen Rosenlof, Ru-Shan Gao, *University of Colorado, Boulder*
1:15
- 2RA.2 Physico-chemical Properties of Free Tropospheric Particles at the Remote Pico Mountain Observatory, in the Azores.** CLAUDIO MAZZOLENI, Lynn Mazzoleni, Paulo Fialho, Swarup China, Bo Zhang, Andrea Baccharini, Kaelan Anderson, Simeon Schum, *Michigan Technological University*
1:30
- 2RA.3 The Birthplace of Cloud Nuclei - A Global Perspective from the Atmospheric Tomography Mission.** CHRISTINA WILLIAMSON, Agnieszka Kupc, Anna Hodshire, Jack Kodros, Jeffrey R. Pierce, Pengfei Yu, Karl D. Froyd, Eric Ray, Frank Erdesz, Mathews Richardson, Thaopaul Bui, Charles Brock, *NOAA ESRL and CIRES, University of Colorado Boulder*
1:45
- 2RA.4 Measurements of Black Carbon Concentration and Aerosol Light Absorption during the Finokalia Aerosol Measurement Experiment (FAME-16).** ANTONIOS TASOGLOU, Kalliopi Florou, Evangelos Louvaris, Aikaterini Liangou, Georges Saliba, Spyros Pandis, *Carnegie Mellon University*
2:00

- 2RA.5 Blowing Snow Influences on Aerosol Composition: Insights from Bulk and Single Particle Measurements in Coastal Antarctica.** MICHAEL GIORDANO, Anita Avery, J. Doug Goetz, Lars Kalnajs, Kerri Pratt, Nathaniel May, Alex Lee, Peter DeCarlo, *Drexel University*
2:15
- 2RA.6 Arctic Aerosol Sources: Results of PMF on PM10 Collected at Ny Ålesund.** GIULIA CALZOLAI, Silvia Nava, Massimo Chiari, Franco Lucarelli, Fabio Giardi, Silvia Becagli, Rita Traversi, Mirko Severi, Laura Caiazzo, David Cappelletti, Stefano Crocchianti, *University of Florence and INFN Florence, Italy*
2:30
- 2RA.7 Global Long-range Transport and Lung Cancer Risk of Polycyclic Aromatic Hydrocarbons Shielded by Viscous Secondary Organic Aerosols.** MANISHKUMAR SHRIVASTAVA, Sijia Lou, Alla Zelenyuk, Richard Easter, Richard Corley, Brian Thrall, Philip Rasch, Jerome Fast, Staci L. Simonich, Huizhong Shen, Shu Tao, *Pacific Northwest National Laboratory*
2:45
- 2RA.8 Adsorption of Trace Atmospheric Gases in Atmospheric Boundary Layer by Dust Aerosol Particles Emitted from Arid Source Areas.** BORIS KRASOVITOV, Tov Elperin, Itzhak Katra, Andrew Fominykh, *Ben-Gurion University of the Negev, Israel*
3:00

Monday 3:15 PM - 3:45 PM
Coffee Break

Monday 3:45 PM - 5:15 PM
Session 3: Platform

3AC AEROSOL CHEMISTRY III - BROWN CARBON AND ABSORBING SPECIES
ROOM 275

Lelia Hawkins and Masao Gen, chairs

- 3AC.1 Not Fade Away: Photolytic Brown Carbon Formation in Aqueous Aerosol.** DAVID DE HAAN, Devoun Stewart, Tobin Gramyk, Alexia De Loera, Duncan Uglund, Christian Carmona, Antonio Rojas, *University of San Diego*
3:45
- 3AC.2 Enhanced Formation of Brown Carbon Particles at Low Relative Humidity.** Masao Gen, Dandan Huang, CHAK K. CHAN, *City University of Hong Kong*
4:00
- 3AC.3 Effect of Relative Humidity on Light Absorbing Secondary Organic Aerosol Formation.** NETHMI KASTHURIARACHCHI, Alex Lee, *National University of Singapore*
4:15
- 3AC.4 Marine Organics Alters Sea Spray Physicochemical and Radiative Properties.** Aditya Vaishya, JURGITA OVADNEVAITE, Darius Ceburnis, Colin O'Dowd, *National University of Ireland Galway, Ireland*
4:30
- 3AC.5 Impact of Springtime Southeast Asia Biomass Burning on a High-mountain Background Station in East Asia: Aerosol Composition and Light Extinction.** SHANTANU KUMAR PANI, Neng-Huei Lin, Chung-Te Lee, Ta-Chih Hsiao, Sheng-Hsiang Wang, *National Central University, Taiwan*
4:45
- 3AC.6 Evidence for Pyrazine-Based Chromophores in Cloudwater Mimics Containing Methylglyoxal and Ammonium Sulfate.** LELIA HAWKINS, Hannah G. Welsh, Matthew V. Alexander, *Harvey Mudd College*
5:00

3CM CONTROL AND MITIGATION III
ROOM 264

Herek Clack and Wei-Chung Su, chairs

- 3CM.1 Co-benefit of Carbon Dioxide and Air Pollutants Emission Reductions by the Air Pollution Prevention and Control Action Plan in the Beijing-Tianjin-Hebei Region of China.** ZHENYU LU, Jun Liu, Mindong Chen, Jianlin Hu, *Nanjing University of Information Science & Technology*
3:45

- 3CM.2 Aeolian Dust Deposition and Removal on Surrogate Surfaces with Implications in Solar Energy.** Benjamin Figgis, BING GUO, Wasim Javed, Said Ahzi, Yves Rémond, *Texas A&M University at Qatar*
4:00
- 3CM.3 Efficacy Assessment of Vegetative Environmental Buffer in Reducing Particulate Matter Emitted from Poultry Houses.** QI YAO, Zijiang Yang, Hong Li, Michael Buser, John Wanjura, Peter Downey, Chen Zhang, Collin Craige, Alba Torrents, Laura McConnell, Gregory Holt, Cathleen Hapeman, *University of Maryland, College Park*
4:15
- 3CM.4 Development of Hybrid Dust Collector Installed at the In-use Trains for Removing Aerosols in Underground Subway Tunnels.** Sang-Hee Woo, SEUNG-BOK LEE, Jong Bum Kim, Jae-In Lee, Gwi-Nam Bae, Moon Se Hwang, Hwa Hyun Yoon, Hong Ryang Jang, Eunserb An, *Korea Institute of Science and Technology*
4:30
- 3CM.5 The Effectiveness of Roadside Vegetation Barriers as a Near-Road Air Pollution Mitigation Strategy: A Comprehensive Evaluation of the Sensitivity to Leaf Area Density.** KHALED HASHAD, K. Max Zhang, Pradeep S. Prathibha, Jay R. Turner, Daniel Fleischer, *Cornell University*
4:45
- 3CM.6 Large Scale PM_{2.5} Cleaning System for Targeted Area with Several Square Kilometers.** SHENG-CHIEH CHEN, Min Tang, Qingfeng Cao, David Y. H. Pui, *University of Minnesota*
5:00
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3ED AEROSOL EDUCATION I

ROOM 267

Antti Lauri and Timothy Raymond, chairs

- 3ED.1 Teaching Practical Aerosol Science in the UK.** PAUL WILLIAMS, James Allan, Torsten Tritscher, *University of Manchester and NCAS*
3:45
- 3ED.2 Hands-On Aerosol Science and Technology Workshops in the Colorado Front Range.** SHANTANU JATHAR, John Volckens, Christian L'Orange, Nicholas Good, David Leith, Sherrie Elzey, Aaron Avenido, Tim Johnson, Andrea Tiwari, *Colorado State University*
4:00
- 3ED.3 The Earth's Climate and Human Health Taught through the Lens of Clean Cookstoves.** DEBORAH GROSS, Tsegaye Nega, *Carleton College*
4:15
- 3ED.4 Introduction to Aerosols Tutorials.** RICHARD FLAGAN, *California Institute of Technology*
4:30
- 3ED.5 Air Quality Board Game: A Cooperative Board Game to Play in Class.** SAMARA CARBONE, Guilherme Santa Cecília, Lucas Chiari Couver, Frederico Coelho, Jayder Pereira, Amanda Souza, Felipe Roberto Rodrigues, Felipe Jose Carbone, *Federal University of Uberlândia*
4:45
- 3ED.6 McDonnell Academy Energy and Environment Partnership (MAGEEP) Education Network: MAGENet.** BEDIA KARAKOÇAK, Tandeep Chadha, Jeff Yang, Orhan Yenigun, Prasad Modak, Pratim Biswas, *Washington University in St Louis*
5:00
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3IA INDOOR AEROSOLS III: AIR PURIFICATION & CASE STUDIES

ROOM 265/266

Jeff Sigel and Vânia Martins, chairs

- 3IA.1 Evaluation of Mobile Air Purifiers under Realistic Conditions.** STEFAN SCHUMACHER, Daniel Spiegelhoff, Miriam Küpper, Ute Schneiderwind, Hartmut Finger, Christof Asbach, *Institut für Energie- und Umwelttechnik e.V. (IUTA)*
3:45
- 3IA.2 Measurement of the Fractional Deposition Efficiency of Full Scale HVAC and HEPA Filters for Nanoparticles ≥ 4 nm.** CHRISTOF ASBACH, Tobias Schuldt, Frank Schmidt, Wolfgang Mölter-Siemens, Ana Maria Todea, *IUTA, Duisburg, Germany*
4:00
- 3IA.3 Quantitative Filter Forensics to Assess Indoor Exposures.** Raheleh Givehchi, Juan Pedro Maestre, Chenyang Bi, Kerry Kinney, Ying Xu, Dennis Wylie, Sharon Horner, JEFFREY SIEGEL, *University of Toronto*
4:15
- 3IA.4 Application of the Time-of-Wetness Model to Fungal Growth in Carpet Dust.** SARAH HAINES, Karen C. Dannemiller, *Ohio State University*
4:30

3IA.5 Measuring Size-Resolved Indoor Particle Concentrations in Single-Family Homes with Asthmatic Residents: A Chicago Field Study. PARHAM AZIMI, Brent Stephens, *Illinois Institute of Technology*
4:45

3IA.6 Estimates of Fine and Ultrafine Particle Removal Efficiency for Residential HVAC Filters Using In-Situ Size-Resolved Efficiency Measurements. TORKAN FAZLI, Brent Stephens, *Illinois Institute of Technology*
5:00

3IN UNRAVELING THE MANY FACETS OF ICE NUCLEATING PARTICLES AND THEIR INTERACTIONS WITH CLOUDS III

FERRARA THEATER

Yutaka Tobo and Ryan Sullivan, chairs

3IN.1 The Role of Ice Nucleating Particles in Convective Aggregation. HASSAN BEYDOUN, Corinna Hoose, *Karlsruhe Institute of Technology*. INVITED.
3:45

3IN.2 Molecular Perspective on Water Vapor Deposition onto Ice Surfaces. Daniel Schlessinger, Samuel J. Lowe, Xiangrui Kong, TINJA OLENIUS, Jan B. C. Pettersson, Ilona Riipinen, *Stockholm University*
4:00

3IN.3 Sensitivity of Ice Cloud Formation and Precipitation Initiation to Global Distribution and Abundance of Ice Nucleating Particles in E3SM. KAI ZHANG, Xiaohong Liu, Hui Wan, *Pacific Northwest National Laboratory*
4:15

3IN.4 Evaluation of Immersion Freezing Properties of Dark-Colored Particles under Mixed-Phase Cloud Conditions. YUTAKA TOBO, Nobuhiro Moteki, Kouji Adachi, Sho Ohata, Atsushi Yoshida, Makoto Koike, Yutaka Kondo, *National Institute of Polar Research*
4:30

3IN.5 The Development and Characterization of a "Store and Create" Microfluidic Device to Study Ice Nucleation Particles. THOMAS BRUBAKER, Michael Polen, Leif Jahn, Perry Cheng, Vinay Ekambaram, Shelley Anna, Ryan Sullivan, *Carnegie Mellon University*
4:45

3IN.6 Enhancement of the Heterogeneous Ice Nucleation by the Phase State Change of Organic Aerosols. YUE ZHANG, Martin Wolf, Leonid Nichman, Zhenfa Zhang, Avram Gold, John Jayne, Paul Davidovits, Douglas Worsnop, Jason Surratt, Timothy Onasch, Daniel Cziczo, *MIT; Aerodyne Research, Inc.; UNC Chapel Hill*
5:00

3MD AEROSOLS IN MEDICINE II

ROOM 260

Andrew Martin and William Bennett, chairs

3MD.1 Improving Single Particle Aerosol Mass Spectrometry (SPAMS) Inhalation Analytics Performance through Rapid Particle Tracking and Sizing. Martin Jetzer, Bradley Morrical, DAVID FERGENSON, Georgios Imanidis, *Novartis Pharma AG*
3:45

3MD.2 Directly Measuring the Rapid Evaporation/Growth of Metered Dose Inhaler/Dry Powder Inhaler/Nebulizer Formulations. ALLEN E. HADDRELL, David Lewis, Tanya Church, Jonathan P. Reid, *University of Bristol*
4:00

3MD.3 Biokinetics of Aerosolized Liposomal Ciclosporin a in Human Lung Cells in Vitro Using an Air-Liquid Cell Exposure System (Alice). OTMAR SCHMID, Corinne Jud, Yuki Umehara, Dominik Mueller, Albert Bucholski, Friedrich Gruber, Oliver Denk, Roman Egle, Alke Petri-Fink, Barbara Rothen-Rutishauser, *Helmholtz Zentrum Munchen, Comprehensive Pneumology Center*
4:15

3MD.4 Formulation Development and In Vivo Pharmacokinetics of Topotecan for Targeted Treatment of Lung Cancer. PHILIP KUEHL, Michael Burke, Ramesh Chand, Devon Dubose, June Liu, Mathewos Tessema, *Lovelace Biomedical, 2425 Ridgecrest Dr. SE, Albuquerque, NM*
4:30

3MD.5 Electro spray Functionalization of Titanium Dioxide Nanoparticles with Transferrin for Photodynamic Cancer Therapy. NATHAN REED, Ramesh Raliya, Rui Tang, Samuel Achilefu, Pratim Biswas, *Washington University in St. Louis*
4:45

3MD.6 Synthesis of Large-Pore Submicron Mesoporous Silica using Salt-Assisted Spray Pyrolysis Method for Controlled Release Drug Delivery. Masoom Shaban, Jalal Poostforooshan, Sarah Reiser, Michael Türk, ALFRED P. WEBER, *TU Clausthal*
5:00

Fiona Smail and Necip Uner, chairs

- 3MS.1 Using Aerosol Photoemission (Ape) for On-Line Process Monitoring of Gas-Phase Particle Modifications.**
3:45 JANNIS RÖHRBEIN, Alfred Weber, *Clausthal University of Technology*
- 3MS.2 Aerosol-assistant Synthesis of Sodium Tungsten Bronze Oxide for UV and IR Shielding.** HAO TU, Wei-Ning Wang, Da-Ren Chen, *Virginia Commonwealth University*
- 3MS.3 Electric Current-Induced Formation of Defects in Columnar TiO₂ Single Crystals under UV Irradiation for Enhanced CO₂ Photoreduction.** YAO NIE, Pratim Biswas, *Washington University in St. Louis*
- 3MS.4 Surface Enhanced Raman Scattering of Silicon Quantum Dots Generated by Laser Ablation.** Eisuke Okuchi, TAKAFUMI SETO, Mohamed Abd El-Aal, Makoto Hirasawa, *Kanazawa University*
- 3MS.5 Synthesis of Silicon Nanoparticles with Controlled Morphology from Silane Pyrolysis in a Helium Atmosphere and Its Relative Nucleation and Condensation Rates.** MIGUEL VAZQUEZ PUFLEAU, Martin Yamane, Pratim Biswas, Elijah Thimsen, *Washington University in St. Louis*
- 3MS.6 Kinetics of CNT Growth for Aerogelation in FC-CVD Synthesis.** FIONA SMAIL, Brian Graves, Adam M Boies, *University of Cambridge*
-

Zhe Peng and Celia Faiola, chairs

- 3OF.1 Using Oxidation Flow Reactors for Studying the Effect of SOA Aging on Optical Properties and Health Effects.** YINON RUDICH, *Weizmann Institute of Science*
- 3OF.2 Heterogeneous Oxidation of Brown Carbon Aerosol Diminishes Light Absorption.** BENJAMIN SUMLIN, Apoorva Pandey, Michael Walker, Robert Pattison, Brent Williams, Rajan K. Chakrabarty, *Washington University in St. Louis*
- 3OF.3 Ultraviolet and Visible Complex Refractive Indices of Secondary Organic Aerosol Produced by Photooxidation of β -pinene and Naphthalene in the Presence of Nitrogen Oxides.** QUANFU HE, Chunlin Li, Yinon Rudich, *Weizmann Institute of Science*
- 3OF.4 Formation and Aging of Secondary Organic Aerosol from Aromatic Compounds.** QI CHEN, Yong Jie Li, Xi Cheng, Yan Zheng, Keren Liao, Ying Liu, Tong Zhu, *Peking University*
- 3OF.5 A High Volume Laminar Flow Reactor to Investigate the Influence of Photochemical Aging on the Health-related Properties of Combustion Emission: Method Characterization and Utilization to Investigate Wood Combustion Emissions.** OLLI SIPPULA, Petri Tiitta, Mika Ihalainen, Pasi Yli-Pirilä, Anni Hartikainen, Tuukka Ihantola, Pasi Jalava, Ari Leskinen, Jarkko Tissari, Miika Kortelainen, Heikki Suhonen, Ralf Zimmermann, Maija-Riitta Hirvonen, Jorma Jokiniemi, *University of Eastern Finland, Kuopio, Finland*
- 3OF.6 Secondary Organic Aerosol Yield, Volatility, and Viscosity from Smog Chamber and Flow Reactor Experiments.** WYATT CHAMPION, Sarah Suda Petters, Nicholas Rothfuss, Markus Petters, Andrew Grieshop, *North Carolina State University*
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Melissa Galloway and Arthur Chan, chairs

- 3RA.1 Spatial and Seasonal Variation of Particulate Matter Concentration in Kharagpur-A Mid Sized Town in India.**
3:45 NEHA RANI, B.S Sastry, Kaushik Dey, *Indian Institute Of Technology Kharagpur*

- 3RA.2 Spatial Variation in Aerosol Chemical Composition and Source Contribution in Nepal from Aerosol Mass Spectrometry Measurements.** BENJAMIN WERDEN, Michael Giordano, J. Doug Goetz, Khadak Mahata, Narayan Babu Dhital, Nita Khanal, Amit Bhujel, Sagar Adhikari, Siva Praveen Puppala, Maheswar Rupakheti, Prakash Bhave, Robert J. Yokelson, Elizabeth Stone, Arnico Panday, Peter DeCarlo, *Drexel University*
4:00
- 3RA.3 Observation of New Particle Formation and Growth for Rural Southwestern New York State.** JOSEPH P. MARTO, James Schwab, Fangqun Yu, Gan Luo, *University at Albany, SUNY*
4:15
- 3RA.4 Understanding the High-Resolution Size Distribution of Organic Species over the Indo-Gangetic Plain.** NAVANEETH M. THAMBAN, S.N. Tripathi, Bhuvana Joshi, Donna Sueper, Manjula Canagaratna, *IIT Kanpur*
4:30
- 3RA.5 Aerosol Characteristics during Intense Crop Residue Burning: A Case Study Over Indo-Gangetic Plain.** NANDITA SINGH, Vishnu Murari, Rajesh Kumar Mall, R.S. Singh, Tirthankar Banerjee, *Institute of Environment and Sustainable Development, BHU*
4:45
- 3RA.6 One Year Vertically Resolved Optical Closure Study of Aerosol Properties at a Meteorological Tower in Western Europe.** Julia Perim Faria, ULRICH BUNDKE, Sebastian H. Schmitt, Thomas F. Mentel, Timothy Onasch, Andrew Freedman, Astrid Kiendler-Scharr, Andreas Petzold, *Forschungszentrum Jülich*
5:00

Monday 5:15 PM - 6:15 PM Working Group Meetings 1

- 5:15 **Atmospheric Aerosols** Room 260
- 5:15 **History of Aerosol Science** Room 263
- 5:15 **Control and Mitigation Technology** Room 264
- 5:15 **Indoor Aerosols and Aerosol Exposure** Room 265/266
- 5:15 **Instrumentation** Room 267

Monday 5:15 PM - 6:15 PM GAeF General Assembly

Monday 6:15 PM - 8:30 PM Session 4: Poster

4AC AEROSOL CHEMISTRY IV: POSTERS
EXHIBIT HALL 5

Andrew Ault and Tran Nguyen, chairs

- 4AC.1 Heterogeneous Reaction of Isoprene and Ozone on α -Al₂O₃ Particles Using Micro-FTIR Spectroscopy.** Hongyang Lian, Pang Shufeng, YUNHONG ZHANG, *Beijing Institute of Technology*
6:15
- 4AC.2 Methylthreonic, Methylerythronic, and Methyltartaric acids: Highly Oxygenated Markers for Isoprene Secondary Organic Aerosol Aging.** MOHAMMED JAOUI, Rafal Szmigielski, Nestorowicz Klara, A. Kolodziejczyk, K.J. Rudziński, W. Danikiewicz, Michael Lewandowski, Tad Kleindienst, *EPA/ORD/NERL*
6:15
- 4AC.3 The Effect of Temperature on Secondary Organic Aerosol Formation from Evaporated Fuels and Aromatic Compounds under Daytime and Nighttime Conditions.** JEFF BEAN, Shaokai Gao, Terry Lathem, *Phillips 66*
6:15
- 4AC.4 Characterization of Isoprene-derived Secondary Organic Aerosols at a Rural Site in North China Plain with Implications for Anthropogenic Pollution Effects.** JIANJUN LI, Gehui Wang, *Institute of Earth Environment, CAS*
6:15

- 4AC.5 IEPOX Uptake Changes Particle Morphology and Viscosity.** NICOLE OLSON, Ziying Lei, Rebecca Craig, Yue Zhang, Yuzhi Chen, Jason Surratt, Andrew Ault, *University of Michigan*
6:15
- 4AC.7 A Simplified Parameterization of Isoprene Epoxydiols Derived Secondary Organic Aerosol (IEPOX-SOA) for Global and Climate Models.** DUSEONG JO, Alma Hodzic, Louisa Emmons, Eloise Marais, Zhe Peng, Weiwei Hu, Pedro Campuzano-Jost, Jose-Luis Jimenez, *University of Colorado Boulder*
6:15
- 4AC.8 Compositional Analysis of Aerosols and Rain Water during Weak South-west Monsoon Period.** PRADHI RAJEEV, Prashant Rajput, Gyanesh Kumar Singh, Vikram Choudhary, Amit Kumar Singh, Tarun Gupta, *Indian Institute of Technology Kanpur*
6:15
- 4AC.9 A Multi-Season Investigation of Non-Combustion-Related Emissions of Gas-Phase Organic Compounds in Two Major U.S. Cities.** PEEYUSH KHARE, Jenna Ditto, Taekyu Joo, Nga Lee Ng, Drew Gentner, *Yale University*
6:15
- 4AC.10 Automated Organic Aerosol Measurement with Quartz Filter-based Thermal Desorption Gas Chromatography Mass Spectrometry (TAG).** HAIXIA REN, Mo Xue, Zhaojin An, Wei Zhou, Jingkun Jiang, *Tsinghua University, Beijing, 100084, China*
6:15
- 4AC.11 Size and Composition Dependent Seed Particle Growth by α -Pinene Ozonolysis.** JUSTIN KRASNOMOWITZ, Michael J. Apsokardu, Chris Stangl, Shanhu Lee, Murray Johnston, *University of Delaware*
6:15
- 4AC.12 Application of Spin Traps to Detect Reactive Intermediates and Reactive Oxygen Species in Secondary Organic Aerosol.** STEVEN J. CAMPBELL, Chiara Giorio, Peter J. Gallimore, Svetlana Stevanovic, Branka Miljevic, Steven Bottle, Zoran Ristovski, Markus Kalberer, *University of Cambridge*
6:15
- 4AC.13 The Effect of Gasoline Car Exhaust on the Photochemistry of α -Pinene.** EETU KARI, Liqing Hao, Sini Isokääntä, Arttu Ylisirniö, Ari Leskinen, Pasi Yli-Pirilä, Celia Faiola, Santtu Mikkonen, Annele Virtanen, *University of Eastern Finland*
6:15
- 4AC.14 Formation of Secondary Organic Aerosol from Photo-Oxidation of Benzene.** SEBASTIAN H. SCHMITT, Thomas F. Mentel, Jürgen Wildt, Einhard Kleist, Iida Pullinen, Ying Liu, Baolin Wang, Defeng Zhao, Astrid Kiendler-Scharr, *Forschungszentrum Jülich*
6:15
- 4AC.16 Characterization of Particulate Matter Sources in Summer Using High-Resolution Aerosol Mass Spectrometry in San Antonio.** FANGZHOU GUO, Benjamin Schulze, Alexander Bui, Henry Wallace, James Flynn, Matthew H. Erickson, Sergio Alvarez, Alex Kotsakis, Subin Yoon, Sascha Usenko, Rebecca J. Sheesley, Robert Griffin, *Rice University*
6:15
- 4AC.17 Hygroscopic Behaviours of Inorganic/Organic Mixtures Including Ammonium sulfate, Dicarboxylic Acid and Oligomer.** HICHEM BOUZIDI, Andreas Zuend, Jakub Ondráček, Jaroslav Schwarz, Vladimír Ždimal, *Institute of Chemical Process Fundamentals of the CAS*
6:15
- 4AC.18 Accelerated Chemistry in Microdroplets: Reaction of Aldehyde Functionalities in α -Pinene Secondary Organic Aerosol with a Derivatizing Agent.** YAO ZHANG, Murray Johnston, *University of Delaware*
6:15
- 4AC.19 Multiphase Product Distributions for Aqueous-phase Oxidation of Water-soluble Organic Compounds in Bulk Solution and Submicron Particles.** KEVIN NIHILL, Christopher Lim, James Rowe, Martin Breitenlechner, Alexander Zaytsev, Joshua L. Cox, Frank Keutsch, Jesse Kroll, *MIT*
6:15
- 4AC.20 Exploring the Autoxidation Mechanisms of Aromatic VOCs.** RUBY MARTEN, Mao Xiao, Lukas Fischer, Bernhard Mentler, Mario Simon, Martin Heinritzi, Olga Garmash, Christopher R. Hoyle, Andrea Baccharini, Chuan Ping Lee, Houssni Lamkaddam, Imad El Haddad, Josef Dommen, Urs Baltensperger, CLOUD Collaboration, *Paul Scherrer Institute*
6:15
- 4AC.21 PIXE Analysis of PM_{2.5} Atmospheric Aerosols in a Two Year Monitoring in Mexico City.** VALTER ARMANDO BARRERA, Raul Venancio Diaz, Javier Miranda, Giulia Calzolari, Silvia Nava, Martina Giannoni, Franco Lucarelli, *CONACYT- CIACYT/UASLP, Mexico*
6:15
- 4AC.22 Vertical Characterization of Highly Oxygenated Molecules (HOM) Below and Above a Boreal Forest Canopy.** QIAOZHI ZHA, Chao Yan, Heikki Junninen, Matthieu Riva, Juho Aalto, Lauriane Quéléver, Simon Schallhart, Lubna Dada, Liine Heikkinen, Otso Peräkylä, Jun Zou, Clemence Rose, Yonghong Wang, Ivan Mammarella, Timo Vesala, Douglas Worsnop, Gabriel Katul, Markku Kulmala, Tuukka Petäjä, Federico Bianchi, Mikael Ehn, *University of Helsinki*
6:15
- 4AC.23 Fine Particle pH in Urban Guangzhou, a Megacity of South China.** ZHISHENG ZHANG, Jun Tao, Leiming Zhang, Zejian Lin, *South China Institute of Environmental Sciences*
6:15
- 4AC.24 The Presence of Phenanthrene Oxidation Products in α -Pinene Secondary Organic Aerosol Particles.** AMBER KRAMER, Kaitlyn J. Suski, Alla Zelenyuk, Staci L. Simonich, *Oregon State University*
6:15

- 4AC.25 Clustering of Sulfuric Acid, Bisulfate Ion and Organonitrate C10H15O10N: Thermodynamics and Atmospheric Implications.** JASON HERB, Alexey Nadykto, Kirill Nazarenko, Nikolai Korobov, Fangqun Yu, *SUNY at Albany*
6:15
- 4AC.26 SOA Formation from Toluene Oxidation in the Presence of Nox: The Importance of Relative Humidity.** DAO HUANG, Yunle Chen, Masayuki Takeuchi, Taekyu Joo, Steve Kim, Gamze Eris, Nga Lee Ng, *Zhejiang University*
6:15
- 4AC.27 Modeling the Impact of Cookstove Emissions on Ambient Aerosol in Rural India.** BRIGITTE ROONEY, Kirk Smith, John Seinfeld, Ajay Pillarisetti, Rufus Edwards, Lauren Fleming, Sergey Nizkorodov, Tami Bond, Nicholas Lam, Sumit Sharma, Seema Kundu, Shaocai Yu, Pengfei Li, Kelvin Bates, Ran Zhao, *California Institute of Technology*
6:15
- 4AC.28 A Laboratory and Modeling Investigation on the Effects of Ammonia Uptake on SOA Composition and Its Potential Impacts on Air Quality.** JULIA MONTOYA-AGUILERA, Mallory Hinks, Jeremy Horne, Shupeng Zhu, Donald Dabdub, Sergey Nizkorodov, *University of California, Irvine*
6:15
- 4AC.29 Secondary Organic Aerosol Production from Healthy and Aphid-Stressed Scots Pine Biogenic Volatile Organic Compound Emissions in Different Oxidant Systems.** FATEMEH KHALAJ, Celia Faiola, Angela Buchholz, Eetu Kari, Arttu Ylisirniö, Minna Kivimäenpää, Jarmo Holopainen, Annele Virtanen, *University of California, Irvine*
6:15
- 4AC.30 Characteristics of PM_{2.5} and Gaseous Precursor in Urban and Background Areas in Korea.** TAEHYUN PARK, Jihee Ban, Seokwon Kang, Gyutae Park, Kyunghoon Kim, Min Seok Song, Seung Hwan Lee, Jannatul Maa, Hye Jung Shin, Jong Sung Park, Seung Myung Park, Jun Oh, Mindo Lee, Sang-Bo Lee, Jeong Soo Kim, Dong-Gil Yu, Taehyoung Lee, *Hankuk University of Foreign Studies, Yongin, South Korea*
6:15
- 4AC.31 Reactions between SO₂ and Organic Peroxides and Their Role as Atmospheric Sinks of Sulfur.** SHUNYAO WANG, Shouming Zhou, Ye Tao, Jianhuai Ye, Jian Zhen Yu, Jennifer G. Murphy, Jonathan Abbatt, Arthur W. H. Chan, *University of Toronto*
6:15
- 4AC.32 The Effect of Chemistry and Particle Total Surface Area on Loss Rate of Highly Oxidized Multifunctional Organic Molecules (HOMs).** IIDA PULLINEN, Jürgen Wildt, Einhard Kleist, Monika Springer, Cheng Wu, Stefanie Andres, Sebastian H. Schmitt, Andreas Wahner, Thomas F. Mentel, *University of Eastern Finland*
6:15
- 4AC.33 Secondary Organic Aerosol Formation from Methylfurans by Nitrate Radical Oxidation.** TAEKYU JOO, Masayuki Takeuchi, Matthew Alvarado, Nga Lee Ng, *Georgia Institute of Technology*
6:15
- 4AC.34 Soil Spreading of Organic Waste Products: Source of Secondary Organic Aerosols.** RALUCA CIURARU, Corentin Berger, Pauline Buysse, Yvain Carpentier, Céline Decuq, Cristian Focsa, Sophie Genermont, Sylvie Gosselin, Sabine Houot, Julien Kammer, Florence Lafouge, Benjamin Loubet, Nicolas Visez, Denis Petitprez, *INRA*
6:15
- 4AC.35 PRAPPE: Trace Element Interaction with Organic Compounds in Urban and Crustal PM.** JOSEPH SALAZAR, David Pfothhauer, Frank Leresche, Fernando Rosario-Ortiz, Michael Hannigan, Brian Majestic, *University of Denver*
6:15
- 4AC.36 Analysis of Gas-phase and Particulate Reaction Products from High-NO_x Photooxidation of n-dodecane: Influence of Temperature and Relative Humidity on Secondary Organic Aerosol Formation.** HOUSSNI LAMKADDAM, Aline Gratien, Edouard Pangui, Mathieu Cazaunau, Marc David, Jean-Michel Polienor, Murielle Jerome, Cécile Gaimoz, Bénédicte Picquet-Varrault, Jean-François Doussin, *LISA, Universités Paris-Est-Créteil et Paris Diderot*
6:15
- 4AC.38 Reactions between Small Atmospheric Carbonyls and Ammonium Sulfate.** MELISSA GALLOWAY, Daisy Grace, Melissa Sebold, Rachael Holappa, Jessica Ackendorf, *Lafayette College*
6:15
- 4AC.39 Molecular Insights from Ultrahigh Resolution Orbitrap Mass Spectrometry on Aqueous Phase Processing of Ambient Biomass Burning Emissions Influenced Po Valley Fog and Aerosol.** MATTHEW BREGE, Tyler Leverton, Stefania Gilardoni, Stefano Decesari, Marco Paglione, M. Cristina Facchini, Lynn Mazzoleni, *Michigan Technological University*
6:15
- 4AC.41 Effect of Aqueous-Phase Processing on Formation and Evaluation of the Organic Aerosol during Fog Processing in Kanpur, India.** ANIL KUMAR MANDARIYA, Tarun Gupta, S.N. Tripathi, *Indian Institute of Technology Kanpur*
6:15
- 4AC.42 Gas-Particle Partitioning of the Traffic-Emitted Semi-Volatile Organic Compounds Measured in Fort McHenry Road Tunnel.** CHIRANJIVI BHATTARAI, Andrey Khlystov, *Desert Research Institute*
6:15
- 4AC.43 Secondary Organic Aerosol and Organochloride Formation from Alkanes.** DONGYU S. WANG, Lea Hildebrandt Ruiz, *University of Texas at Austin*
6:15

- 4AC.44 Gas and Particle Phase Products of the Reaction of 1-Decanol with OH Radicals in the Presence of NO_x.** 6:15 ALLISON DAVIS, Xiaoxi Liu, Jose-Luis Jimenez, Paul Ziemann, *University of Colorado-Boulder*
- 4AC.45 Secondary Organic Aerosol Formation of OH and NO₃ Initiated Reactions of 1,3-Benzenediol.** ZACHARY 6:15 FINEWAX, Joost de Gouw, Paul Ziemann, *University of Colorado*
- 4AC.46 Clustering Process of Glyoxylic Acid Involving Gas-phase Hydration Reaction: Implications for the Atmospheric Models.** 6:15 Ling Liu, Oona Kupiainen-Määttä, XIUHUI ZHANG, *Beijing Institute of Technology*

4AE AEROSOL EXPOSURE I: POSTERS

EXHIBIT HALL 5

Timothy M. Raymond, chair

- 4AE.1 Reactive Oxygen Species (ROS) Activity Map Induced by PM_{2.5} in 10 Different Cities, China.** SHEXIA MA, 6:15 Yanshan Lv, Xiaoying Li, Yangyang Zhang, Xuejun Liu, Mei Zheng, *South China Institute of Environmental Sciences, MEP*
- 4AE.2 Indoor-Outdoor Particulate Relationship and Its Metal Bound Concentrations in Domestic Homes of 'World Heritage Site' Agra, India.** 6:15 HIMANSHI ROHRA, Ajay Taneja, *DR. B.R.A. University, Agra, India*
- 4AE.3 Effect of Particle Morphology on Performance of an Electrostatic Air-Liquid Interface Cell Exposure System.** 6:15 TA-CHIH HSIAO, Jing-Chi Lin, Hsiao-Chi Chuang, Tsun-Jen Cheng, *National Central University*
- 4AE.4 Determination of Inhalation Exposure due to the Use of Eyebrow Powders.** 6:15 HYEON-JU OH, Taewon T. Han, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 4AE.5 Personal Exposure Monitoring Using Integrated Sensors and Cloud Computing.** 6:15 SEPEHR MAKHSOUS, Angela Chavez, Igor Novosselov, Alexander Mamishev, *University of Washington*
- 4AE.6 Exposure to Polycyclic Aromatic Hydrocarbons (PAHs) in PM₁₀ at Urban Area of a Semi-Arid Region of India.** 6:15 AMIT MASIH, *St. Andrew's College, Gorakhpur, India*
- 4AE.7 Data Requirements for Mapping Long-Term Air Pollution with Mobile Short-Term Measurements.** 6:15 RIVKAH GARDNER-FROLICK, Joshua Apte, Kyle Messier, *University of Texas at Austin*
- 4AE.8 Impacts of E-Cigarettes Consumptions on the Air Quality of Vape Shop and Its Nearby Areas.** 6:15 LIQIAO (VICKY) LI, Charlene Nguyen, Yan Lin, Yifang Zhu, *University of California, Los Angeles*
- 4AE.9 Personal Exposure to Particulate Matter While Commuting.** 6:15 VÂNIA MARTINS, Susana Marta Almeida, Tiago Faria, Carolina Correia, Inês Cunha-Lopes, Nuno Canha, Evangelia Diapouli, Manos Manousakas, Konstantinos Eleftheriadis, *C2TN, IST, Universidade de Lisboa, Portugal*
- 4AE.13 Uptake of Tobacco Related Reduced Nitrogen Species to Aqueous Aerosols.** 6:15 PETER DECARLO, Anita Avery, Erin Katz, Michael Waring, *Drexel University*
- 4AE.14 Community-Level Spatial Mapping of Ultrafine Particle Number Concentration.** 6:15 PRADEEP S. PRATHIBHA, Ray Yeager, Aruni Bhatnagar, Jason S. Su, Jay R. Turner, *Washington University in St. Louis*
- 4AE.15 Exposure of Children to Particulate Matter and Chemical Elements in Urban Environment.** 6:15 Tiago Faria, Marina Almeida-Silva, VÂNIA MARTINS, Inês Cunha-Lopes, Carolina Correia, Catarina Galinha, Célia Alves, Susana Marta Almeida, *C2TN, IST, Universidade de Lisboa, Portugal*
- 4AE.16 Characterization of Nanoparticle Containing Formulations before and after Spraying on Textile Surfaces: The Influence of Surface Active Substances on Aerosol Formation Relevant for Inhalation.** 6:15 FRANK BIERKANDT, Sandra Wagener, Jutta Tentschert, Harald Jungnickel, Peter Laux, Andreas Luch, Lars Hillemann, Paul Bergelt, *Federal Institute for Risk Assessment (BfR)*

4AM AEROSOL MODELING II: POSTERS

EXHIBIT HALL 5

Jia Jiang and William Heinson, chairs

- 4AM.1 The Basics of Taylor Series Expansion Method of Moment for Brownian Coagulation.** MINGLIANG XIE, Huazhong University of Science and Technology
6:15
- 4AM.2 Effects of Airway Surface Roughness on Local Particle Deposition in Subject-Specific Tracheobronchial Trees.** YU FENG, Xiaole Chen, Jianan Zhao, Arvind Santhanakrishnan, *Oklahoma State University*
6:15
- 4AM.3 Development and Experimental Validation of Coupled Flow-Aerosol Dynamics Model for a Glowing Wire.** KUNAL GHOSH, S.N. Tripathi, Manish Joshi, Y.S. Mayya, Arshad Khan, B.K. Sapra, *IIT Kanpur*
6:15
- 4AM.4 Calculating Wet Deposition and Aerosol Sizes Sensitivities within a Lagrangian Particle Dispersion Code.** LI KAIBO, Xu Xuefeng, *China Academy Of Engineering Physics*
6:15
- 4AM.5 Effects of North California Wildfire in October 2017 on Air Quality and Human Health.** FENGLIN HAN, Hongliang Zhang, *Louisiana State University*
6:15
- 4AM.6 Coarse, Fine and Ultrafine Particles of Sub-urban Continental Aerosols.** DRAGANA ĐORĐEVIĆ, Jelena Đuričić-Milanković, Ana Pantelić, Srđan Petrović, Andrea Gambaro, *CEEC – ICTM, University of Belgrade*
6:15
- 4AM.7 Consideration of Wildfires as a Source of Airborne Mineral Dust - a Model Approach.** ROBERT WAGNER, Kerstin Schepanski, Michael Jähn, *Leibniz Institute for Tropospheric Research*
6:15
- 4AM.8 Predicting Atmospheric Gaseous and Particulate Phase PCDD/F Concentrations Using PM_{2.5} Data and Gas-Particle Partitioning Models of PCDD/Fs.** Rong Zhao, Kangping Cui, Weiwei Wang, Lin-Chi Wang, Ping Yan, WEN-JHY LEE, *National Cheng Kung University*
6:15
- 4AM.9 Taylor-series Expansion Method of Moments for Resolving Aerosol Dynamics.** MINGZHOU YU, Yueyan Liu, *China Jiliang University*
6:15
- 4AM.10 Towards a Coarse-Grained Model of Nano-Particle Agglomeration.** MILENA SMILJANIC, Andreas Kronenburg, Rudolf Weeber, Christian Holm, *University of Stuttgart*
6:15
- 4AM.11 High Resolution Chemical Transport Modeling of Ultrafine Particles over Pittsburgh.** SHAYAK SENGUPTA, Pablo Garcia, David Patoulias, Provat Saha, Wei Ma, Christopher Tessum, Iannis Kioutsoukias, Sean Qian, Spyros Pandis, Inês Azevedo, Peter Adams, *Carnegie Mellon University*
6:15
- 4AM.12 Simulation of SOA Formation of Monoalkyl-substituted Benzenes in the Presence of SO₂ under Different NO_x Levels Using the UNIPAR Model.** CHUFAN ZHOU, Myoseon Jang, *University of Florida*
6:15
- 4AM.13 Effect of Dispersion & Coagulation Parameters on the Survival Fraction of Aerosol Particles Released from Puffs and Plumes.** Tanmay Sarkar, S. Anand, Y.S. MAYYA, *BARC*
6:15
- 4AM.15 Aerosol Impaction under High Knudsen Number, High Mach Number Conditions for Applications in Additive Manufacturing.** CHENXI LI, Bernard Olson, Christopher Hogan Jr., *University of Minnesota*
6:15
- 4AM.17 Quantifying and Valuing the Role of UK Vegetation in the Removal of Particulate Matter.** EIKO NEMITZ, Laurence Jones, Massimo Vieno, Daniel Morton, Carnell Ed, Stefan Reis, Ian Dickie, Philip Cryle, Holland Mike, *Centre for Ecology and Hydrology*
6:15
- 4AM.18 Prediction of the Chamber Wall Process of Gaseous Semivolatile Organic Compounds Using a Linear Solvation Energy Relationship.** HUANHUAN JIANG, Myoseon Jang, Sanhee Han, *University of Florida*
6:15
- 4AM.19 3-D Numerical Study of Linear Slot Virtual Impactor.** WONYOUNG JEON, Hyunwoo Lee, Youngjin Seo, *Kumoh National Institute of Technology*
6:15
- 4AM.20 Numerical Investigation on Artificial Cloud Seeding as a Means of Precipitation Enhancement.** ALI AFZALIFAR, Juha Tonttila, Kudzotsa Kudzotsa, Tomi Raatikainen, Harri Kokkola, Sami Romakkaniemi, *Finnish Meteorological Institute*
6:15
- 4AM.21 A Simulation Tool to Understand the Chemistry of Hexavalent Chromium in Airborne PM at pH 5 and pH9.** MEHDI AMOUEI TORKMAHALLEH, Dinara Konakbayeva, Marios Fyrillas, Mirat Karibayev, *Chemical and Aerosol Research Team, Nazarbayev University*
6:15
- 4AM.23 Evolution of PM Components in Europe over the 1990-2010 Period in the Framework of the Eurodelta-Trends Exercise.** GIANCARLO CIARELLI, Augustin Colette, Matthias Beekmann, Mark Theobald, Peter Wind, Camilla Andersson, Florian Couvidat, Astrid Manders-Groot, Mihaela Mircea, Maria Teresa Pay, Valentin Raffort, Svetlana Tsyro, Kees Cuvelier, Mario Adani, Bertrand Bessagnet, Robert Bergstrom, Gino Briganti, Andrea Cappelletti, Massimo

D'isidoro, Hilde Fagerli, Yelva Roustan, Marta Vivanco, *LISA*

- 4AM.24 Comprehensive Organic Emission Profiles for Mobile Sources: Integration of VOC, IVOC, SVOC and Lower Volatility Organics.** QUANYANG LU, Yunliang Zhao, Albert Presto, Andrew May, Tim Gordon, Allen Robinson, *Carnegie Mellon University*
6:15
- 4AM.27 Urban Air Quality Modeling at High Spatial Resolutions.** PABLO GARCIA, Peter Adams, Spyros Pandis, *Carnegie Mellon University*
6:15
- 4AM.28 Coupled Gas and Particle Phase Modeling of Isoprene SOA Formation.** KELVIN BATES, Rebecca Schwantes, John Seinfeld, *California Institute of Technology*
6:15
- 4AM.29 Modeling the Effects of Central American Fire Emissions on Air Quality in Texas.** QIANJIN ZHENG, Min Zhong, *Texas A&M University-Kingsville*
6:15
- 4AM.30 Climate System Responses to the Interactions between Wildfires and Climate.** AOXING ZHANG, Yuhang Wang, Yufei Zou, *Georgia Institute of Technology*
6:15
- 4AM.31 Formation of Sulfate during Winter High Pollution Events in Beijing.** Peng Wang, Li Wu, QI YING, Jianlin Hu, Hongliang Zhang, *Texas A&M University*
6:15
- 4AM.33 Brownian Diffusion of Nano-Fibers.** LIN TIAN, Goodarz Ahmadi, Jiyuan Tu, *MIT University*
6:15

4AP AEROSOL PHYSICS II: POSTERS

EXHIBIT HALL 5

George Mulholland and Yensil Park, chairs

- 4AP.1 The Concentrations of Aerosol Surface Area in Fukue Island, Japan, Measured by Diffusion Charging Method.** MIHO KIRIYA, Tomoaki Okuda, Ayako Yoshino, Akinori Takami, Indra Chandra, Takafumi Seto, Koji Funato, Kozo Inoue, *Keio University*
6:15
- 4AP.2 Measurement of the Electrostatic Charging State of Ambient Aerosol Using a Parallel Electrode Plate Device.** KENTARO FUJIOKA, Keiichi Kurosowa, Takuto Yonemichi, Koji Fukagata, Tomoaki Okuda, *Keio University*
6:15
- 4AP.4 Dynamics of Molecular Ions under the Electrical Field.** TOMOYA TAMADATE, Takaaki Orii, Hidenori Higashi, Mikio Kumita, Yoshio Otani, Takafumi Seto, *Kanazawa University*
6:15
- 4AP.5 Effects of Dehydration Conditions on Particle Morphology and Activation Ratio of Inorganic Nanoparticles by a HT- DMA- APM / CCNC System.** TA-CHIH HSIAO, Po-Hsiang Huang, *National Central University*
6:15
- 4AP.6 Impact of Turbulence Parameters Influences on New Particle Formation Events in August Beijing.** HAO WU, Fang Zhang, Zhanqing Li, Peng Yan, Yuying Wang, Xiaoi Jin, Xinxin Fan, *Beijing Normal University*
6:15
- 4AP.7 Mathematical Modeling of Aerosol Formation from Binary Vapor Mixtures.** Ali Rostami, Sergey Fisenko, SERGEY N. MAXIMOFF, David Kane, Yezdi Pithawalla, Mohamed El-Shall, *Altria Client Services LLC*
6:15
- 4AP.8 Estimation of Atmospheric Columnar Organic Matter (OM) Mass Concentration from Remote Sensing Measurements.** YING ZHANG, Zhengqiang Li, Yang Lv, Yisong Xie, *Institute of Remote Sensing and Digital Earth, CAS*
6:15
- 4AP.10 Organic Aerosol Evolution from Wood Combustion Chamber during the Dilution Process.** QIJING BIAN, Ezra Levin, Taehyoung Lee, Jeffrey R. Pierce, Sonia Kreidenweis, *Colorado State University*
6:15
- 4AP.11 Time-dependent Robin Boundary Condition for Convective Diffusion Equations.** Panagiotis Neofytou, Marika Pilou, Christos Housiadas, YANNIS DROSSINOS, *European Commission, Joint Research Centre*
6:15
- 4AP.12 Comparison of the Particle Growth Rates at Three Background Stations in the Czech Republic.** Adéla Holubová Šmejkalová, HELENA PLACHÁ, Bitter Miroslav, Nadežda Zíková, Vladimír Ždímal, *Charles University*
6:15
- 4AP.13 Numerical Study of Nano-Aerosol Generation through Rayleigh Fission of a Charged Viscous Liquid Drop.** NEHA GAWANDE, Mohit Singh, Y.S. Mayya, R.M. Thakkar, *Indian Institute of Technology Bombay*
6:15
- 4AP.14 Diffraction, Shadows and Scattering in Electrodynamics: A New View.** Matthew Berg, CHRISTOPHER SORENSEN, *Kansas State University*
6:15

- 4AP.15 Physical and Optical Properties of Aerosols over Indo-Gangetic Basin.** ASHOK JANGID, Suresh Tiwari, Ranjit Kumar, *DEI, Dayalbagh, Agra*
6:15
- 4AP.17 Characteristics and Relative Humidity Dependence of the Condensational Growth of Secondary Organic Aerosol Particles in a Continuously Mixed Flow Reactor.** YUEMEI HAN, Jinghao Zhai, Chl e Verduyssen, Yiming Qin, Jianhui Ye, Scot T. Martin, *Harvard University*
6:15
- 4AP.18 Influence of Design Parameters and Operating Conditions on the Aerosol Produced by a Laskin Nozzle.** BENOIT SAGOT, Louise Chazalon, Lyes Ait Ali Yahia, *ESTACA*
6:15
- 4AP.19 Light Scattering Analysis of Irregularly Shaped Dust Particles: A Study Using 3-Dimensional Reconstructions from Focused Ion-Beam (FIB) Tomography and Q-Space Analysis.** DIANA ORTIZ-MONTALVO, Joseph Conny, *National Institute of Standards and Technology*
6:15
- 4AP.20 Physical Characterization of Tire Wear Particles Generated by Tire Simulator According to the Tread Wear Rate of Tires.** SEOKHWAN LEE, Gibaek Kim, *Korea Institute of Machinery and Materials*
6:15
- 4AP.21 Aerosol Self-Cleansing by Dry Deposition in the Amazon Dry Season.** FLORIAN DITAS, Christopher P hlker, Henrique Barbosa, Joel Brito, Samara Carbone, Xuguang Chi, Bruna A. Holanda, Isabella Hrabec de Angelis, Tobias K nemann, Jing Ming, Mira L. P hlker, Maria Prass, Daniel Moran-Zuloaga, Marta S , Jorge Saturno, Hang Su, Jian Wang, David Walter, Stefan Wolff, Alessandro Araujo, Paulo Artaxo, Ulrich P schl, Meinrat O. Andreae, *Max Planck Institute for Chemistry*
6:15
- 4AP.22 Aerosol Optical Property Measurements of European Background Aerosol under Clean and Polluted Conditions.** SEBASTIAN D SING, Birgit Wehner, Albert Ansmann, Holger Baars, Ralf K thner, Nan Ma, Thomas M ller, Patric Seifert, Holger Siebert, Gerald Spindler, Alfred Wiedensohler, Nicolas Bukowiecki, Joel Corbin, Martin Gysel, *Leibniz-Institute for Tropospheric Research*
6:15
- 4AP.24 Charge Size Distribution of Aerosol Nanoparticles Generated by Electrical Heating: Measurements and Theory.** MARIAM , Manish Joshi, Arshad Khan, B.K. Sapra, *Bhabha Atomic Research Centre, Mumbai*
6:15
- 4AP.25 Optical Properties and Chemical Constituents of Ambient Fine Particles in an Urban Environment of Korea.** JONGBAE HEO, Seungpyo Cheong, Hwajin Kim, *Seoul National University*
6:15
- 4AP.26 Coagulation of Polydisperse Primary Particles from Free Molecular to Transition Regime.** Georgios Kelesidis, EIRINI GOUDELI, *ETH Z rich*
6:15
- 4AP.27 Single Scattering Albedo of Homogeneous, Spherical Particles in the Transition Region.** HANS MOOSMULLER, Christopher Sorensen, *Desert Research Institute*
6:15
- 4AP.28 Fine Particle Formation in Corona Discharge.** VALERY ZAGAYNOV, *National Research Nuclear University MEPhI*
6:15
- 4AP.29 Temporal Variation of Particles Suspended (TSP, PM10 and PM2.5) and Composition Chemistry of PM10 in San Francisco de Campeche, M xico.** ALBERTO ANTONIO ESPINOSA GUZM N, Javier Reyes Trujeque, Javier Miranda, Juan Carlos Pineda SantaMar a, Ana Luisa Alarc n J menez, Mar a del Carmen Torres Barrera, Rodolfo Sosa Echever a, *Autonomous University of Campeche*
6:15

4CA CARBONACEOUS AEROSOL II: POSTERS

EXHIBIT HALL 5

Melissa Galloway and Elijah Schnitzler, chairs

- 4CA.1 Sources of PM2.5 Carbonaceous Aerosol in Riyadh, Saudi Arabia.** QIJING BIAN, Badr Alharbi, Mohammed M. Shareef, Tahir Husain, Mohammad J. Pasha, Samuel Atwood, Sonia Kreidenweis, *Colorado State University*
6:15
- 4CA.2 Hydroxyl and Nitrate Radical Aging of Organic Emissions from Wildfires.** SHANTANU JATHAR, Ali Akherati, Shiva Tarun, Liam Lewane, Abril Galang, Timothy Onasch, Scott Herndon, Joseph Roscioli, Tara Yacovitch, Edward Fortner, Philip Croteau, Wen Xu, Conner Daube, Berk Knighton, Benjamin Werden, Ezra Wood, Christopher Lim, David Hagan, Christopher Cappa, Jesse Kroll, Daniel S. Tkacik, Christopher Hennigan, Allen Robinson, *Colorado State University*
6:15
- 4CA.3 Trend of Elemental and Organic Carbon (EC/OC) Concentrations at the National Atmospheric Observatory Ko etice (Czech Republic) in 2009-2016.** MILAN VANA, Ad la Holubov  Šmejkalov , *Czech Hydrometeorological Institute*
6:15

- 4CA.4 Roadside Measurements of Black Carbon, PM_{2.5}, Particle Number and NO_x Vehicle Emission Factors in Brazil.** PATRICIA KRECL, Admir Créso Targino, Thiago Landi, Matthias Ketzl, *Federal University of Technology*
6:15
- 4CA.5 Sources of Brown Carbon in Urban Environments: Importance of Vehicular Emissions.** NETHMI KASTHURIARACHCHI, Max Adam, Yue Liang, Dong Zhang, Alex Lee, *National University of Singapore*
6:15
- 4CA.6 Over a Decade-long Trend of Concentrations of Ultrafine Particle and Carbonaceous Aerosols at a Traffic Intersection.** YUJI FUJITANI, Katsuyuki Takahashi, Akihiro Fushimi, Shuichi Hasegawa, Yoshinori Kondo, Kiyoshi Tanabe, Shinji Kobayashi, *National Institute for Environmental Studies*
6:15
- 4CA.8 Influence of Aerosol Sources on Atmospheric Black Carbon Absorption Enhancement in the Region of Paris, France.** YUNJIANG ZHANG, Olivier Favez, Francesco Canonaco, Dantong Liu, Jean-Eudes Petit, Tanguy Amodeo, Nicolas Bonnaire, Francois Truong, Jean Sciare, Andre S.H. Prévôt, Valerie Gros, Alexandre Albinet, *INERIS*
6:15
- 4CA.9 Gaseous and Speciated Particulate Emissions from the Open Burning of Wastes from Tree Pruning.** CÉLIA ALVES, Ana Vicente, Estela Vicente, Margarita Evtuygina, María Fernández-Amado, Purificación López-Mahía, *University of Aveiro*
6:15
- 4CA.10 Sources and Physicochemical Characteristics of Black Carbon Aerosol in the Southeastern Tibetan Plateau: Internal Mixing Enhances Light Absorption.** QIYUAN WANG, Junji Cao, Yongming Han, *Institute of Earth Environment, Chinese Academy of Sciences*
6:15
- 4CA.11 Characteristics of Pollutant Emissions from Typical Coastal and Riverine Ships in China.** XIANG DING, Qing Li, Di Wu, Jianfeng Sun, Xianmang Xu, JianMin Chen, *Fudan University*
6:15
- 4CA.12 Comprehensive Assessment of Carbonaceous PM_{2.5} in Malaysia during Haze Events Influenced by Indonesia Peatland Fire and Non-Haze Period.** KURITA HIROKI, Fujii Yusuke, Tohno Susumu, Saito Nozomi, Kamiya Yuta, Takayuki Kameda, Regina Hitzengerger, Haller Theresa, Ikeda Kazuhiro, Sakai Nobumitsu, Sulong Nor Azura, Mohd Talib Latif, Ohura Takeshi, *Kyoto University*
6:15
- 4CA.13 Contrasting Temporal and Spatial Variation of Atmospheric Carbonaceous Aerosols during a Year-Long Measurement in Central India.** SHAMSH PERVEZ, Rakesh Sahu, Suresh Tiwari, A.S. Panicker, Rajan K. Chakrabarty, Judith Chow, John Watson, Yasmeen F. Pervez, *Pandit Ravishankar Shukla University, Chhattisgarh, India*
6:15
- 4CA.16 Metrology for Light Absorption by Atmospheric Aerosols: The EMPIR Black Carbon Project.** Eija Asmi, Joel Corbin, Volker Ebert, Konstantinos Eleftheriadis, François Gaie-Levrel, Martin Gysel, Thomas Müller, Andreas Nowak, Konstantina Vasilatou, Ernest Weingartner, PAUL QUINCEY, *NPL*
6:15
- 4CA.17 Usefulness of Stable Carbon Isotope and Other Chemical Tracers to Distinguish between Primary and Secondary Carbonaceous Sources of PM_{2.5} Particles over a National Park in Central India.** SHILPI SAMIKSHA, Ramya Sunder Raman, *Indian Institute of Science Education and Research, Bhopal*
6:15
- 4CA.18 Source Apportionment of Fossil Fuel and Biomass Burning Black Carbon (Bc) in the Milan Metropolitan City and Boreggio Sub-Urban Area Contrasting Locations.** AMIRHOSEIN MOUSAVI, Mohammad Sowlat, Ario Ruprecht, Konstantinos Sioutas, *University of Southern California*
6:15
- 4CA.19 Wintertime PM_{2.5} in the Kathmandu Valley and Terai Region of Nepal.** MD. ROBIUL ISLAM, Nita Khanal, Khadak Mahata, Siva Praveen Puppala, Narayan Babu Dhital, Michael Giordano, Benjamin Werden, Anobha Gurung, Arnico Panday, Peter DeCarlo, Elizabeth Stone, *University of Iowa*
6:15
- 4CA.20 Measurement of Speciated Gaseous and Particulate Organic Nitrates in Urban Atlanta using FIGAERO-HR-ToF-I-CIMS.** MASAYUKI TAKEUCHI, Gamze Eris, Taekyu Joo, Yunle Chen, Weiqi Xu, Dao Huang, Gabriela Saavedra, Seongshik Kim, Dong Gao, Rodney J. Weber, Yele Sun, Michael Walker, Brent Williams, Jenna Ditto, Drew Gentner, David Tanner, Greg Huey, Nga Lee Ng, *Georgia Institute of Technology*
6:15
- 4CA.21 Measurements of Dry and Wet Black Carbon Deposition over a Grassland.** GAVIN MCMEEKING, Ethan Emerson, Joseph Katich, Joshua P. Schwarz, Delphine Farmer, *Handix Scientific*
6:15
- 4CA.24 Equivalent Black Carbon (EBC) Measurement at a Regional Background Site in Central Europe Using a Multiple Wavelength Aethalometer: Variability and Source Apportionment.** SALIOU MBENGUE, Norbert Serfozo, Jaroslav Schwarz, Nadežda Zíková, Adéla Holubová Šmejkalová, Ivan Holoubek, *Global Change Research Institute, CAS, Brno 60300, CZ*
6:15
- 4CA.25 Estimating Aerosol Light Absorption from Filter-based Spectrophotometer Measurements.** APOORVA PANDEY, Nishit Shetty, Rajan K. Chakrabarty, *Washington University in St Louis*
6:15

- 4CA.26 Brown Carbon Aerosol Observed in the Remote Atmosphere.** LINGHAN ZENG, Rodney J. Weber, Aoxing Zhang, Yuhang Wang, Eric Scheuer, Jack Dibb, Jose-Luis Jimenez, Pedro Campuzano-Jost, Joshua P. Schwarz, Kathryn McKain, Eric Apel, *Georgia Institute of Technology*
6:15
- 4CA.27 Fourier-transform Infrared Determination of Organic and Elemental Carbon: Anomalous Samples and What They Tell Us about Composition and Sources.** ANN DILLNER, Andrew Weakley, Bruno Debus, Satoshi Takahama, *University of California, Davis*
6:15
- 4CA.28 Particulate and Gas Phase Separation in Simultaneous Sampling of Combustion Byproducts: New Insights into Chemical Composition by Mass Spectrometric Analysis.** Jennifer Noble, Linhdan Ngo, Dumitru Duca, MARIN VOJKOVIC, Abd Raouf Ikhenazene, Cornelia Irimiea, Guillaume Lefevre, Alessandro Faccinnetto, Claire Pirim, Yvain Carpentier, Bertrand Chazallon, Nicholas Nuns, Jerome Yon, Eric Therssen, Cristian Focsa, *Université de Lille*
6:15
- 4CA.29 Apportionment of Black Carbon to Fossil Fuel and Biomass Burning Sources in the Lower Fraser Valley, British Columbia: Impact of 2017 Wildfires on Local Air Quality.** Robert Healy, Geoff Doerksen, UWAYEMI SOFOWOTE, Yushan Su, Jerzy Debosz, Michael Noble, Cheol H. Jeong, Jon M. Wang, Nathan Hilker, Greg J. Evans, Anthony Munoz, *Ontario Ministry of the Environment and Climate Change*
6:15
- 4CA.30 Source Apportionment and Variability of Submicron Organic Aerosol from Year-long Near Real-time Measurements Over an Urban Mediterranean Area.** Aikaterini Bougiatioti, IASONAS STAVROULAS, Despina Paraskevopoulou, Georgios Grivas, Pavlos Zarpas, Eleni Liakakou, Evangelos Gerasopoulos, Nikolaos Mihalopoulos, *National Observatory of Athens*
6:15
- 4CA.31 Impact of Organic Aerosol Partitioning on U.S. Particle Emission Factors.** BENJAMIN MURPHY, Christos Efstathiou, Havalala Pye, *United States Environmental Protection Agency*
6:15
- 4CA.32 Long-Term Assessment of Sunset OC/EC with Chemical Speciation Network Measurements.** STEVEN G. BROWN, Elizabeth Landis, Hilary Minor, Theresa O'Brien, Joann Rice, *Sonoma Technology, Inc*
6:15
- 4CA.34 Effects of Sugarcane Pre-Harvest Burning on Aerosol Optical Properties in the Cauca Valley, Colombia.** ANGELA VARGAS, Jennifer Marin, Lady Mateus, Nestor Rojas, Rodrigo Jimenez, German Ruega, *Universidad Nacional de Colombia*
6:15
- 4CA.35 Measuring the Physical Properties of Refractory Black Carbon off the Los Angeles Coast.** JOSEPH KO, Trevor Krasowsky, George Ban-Weiss, *University of Southern California*
6:15
- 4CA.36 Evaluating Inter-seasonal Urban Environment-mixed Black Carbon-induced Radiative Effects over Eastern India.** SHUBHA VERMA, Shantanu Pani, Sanhita Ghosh, Sauvik Santra, *Indian Institute of Technology Kharagpur*
6:15

4CM CONTROL AND MITIGATION IV: POSTERS

EXHIBIT HALL 5

Bing Guo and Caner Yurteri, chairs

- 4CM.2 Engineering Controls to Reduce Exposure to Respirable Crystalline Silica during Stone Countertop Grinding.** CHAOLONG QI, Alan Echt, *NIOSH*
6:15
- 4CM.3 Microwave-Assisted Catalytic Total Oxidation of Methyl Ethyl Ketone over Co₃O₄ Catalyst.** QUI NGUYEN VAN, Ha Than Quoc An, Thanh Nguyen Dinh, *Institute of Applied Materials Science - VAST*
6:15
- 4CM.4 Effect of RH Change on Pressure Drop of Loaded Cellulose Filter Media with Hygroscopic Deposits.** CHENXING PEI, Qisheng Ou, David Y. H. Pui, *University of Minnesota*
6:15
- 4CM.5 Enhancing the Efficiency of Flat-plate Electrostatic Precipitator by a Diffusion Charge Method.** Chih-Te Wang, Chang-Chin Chou, Yu-Chau Wang, Shui-Jen Chen, Ken-Hui Chang, WEN-YINN LIN, *Institute of Environmental Engineering and Management, NTUT*
6:15
- 4CM.6 Charge and Filtration Characteristics of Novel Porous Fibers.** Chih-Te Wang, Shao-Tai Lee, Jia-Hong Wang, Shi Jia-Xi, Chih-Chieh Chen, WEN-YINN LIN, *Institute of Environmental Engineering and Management, NTUT*
6:15
- 4CM.7 A Novel Technique for Testing Filter Media Using Monodisperse Aerosol as a Function of Aerodynamic Diameter.** Simon Payne, Martin Irwin, Tyler J. Johnson, JONATHAN SYMONDS, *Combustion*
6:15

- 4CM.9** **Improving the Accuracy of PM2.5 Sampling with Chilled Teflon Filter.** Krishna Kumar Shukla, Sneha Gautum, Te-Hsien Hsieh, Ziyi Li, Pei-Yun Shih, THI-CUC LE, Chuen-Jinn Tsai, *National Chiao Tung University, Taiwan*
6:15
- 4CM.10** **Improvement of Monitoring of Radioactive Aerosols of Ground-Level Air near Chernobyl NPP.** ALEXANDR KALYNOVSKIY, Victor Krasnov, Boris Ogorodnikov, *Institute NSP NPP, Ukraine*
6:15
- 4CM.11** **Reductions of PAH and Nitro-PAH Emissions from Diesel Engine by Using Micro-Emulsified Diesel-based Hydrous Glycerol Fuels.** SHENG-LUN LIN, Yen-Yi Lee, Fang-Ching Lee, Wen-Jhy Lee, *Cheng Shiu University, Taiwan*
6:15
- 4CM.12** **Preparation of Non-Woven PTFE Fibers Using Electrospinning.** HAN-BIN KIM, Ki Bong Lee, Myong-Hwa Lee, *Korea Institute of Industrial Technology, Korea University*
6:15
- 4CM.13** **Investigation of Charge Decay Degree in Electret Filters with Various Surface Charge Densities.** WOO JIN LEE, Jungho Hwang, Myong-Hwa Lee, *Korea Institute of Industrial Technology, Yonsei University*
6:15
- 4CM.14** **Regeneration Characteristics of Filter Bag Cartridges with Various Pleating Geometries.** JIN SIK KIM, Myong-Hwa Lee, *Korea Institute of Industrial Technology*
6:15
- 4CM.15** **Conversion of Sulfur Dioxide and Nitrogen Oxides to Particulate Matter.** MYONG-HWA LEE, Woo Jin Lee, Han-Bin Kim, Jin Sik Kim, *Korea Institute of Industrial Technology*
6:15
- 4CM.16** **Filtration Performance of Electret Filter Composed of Nano/Micron Fibers.** TOSHIKI MURAKAMI, Takafumi Seto, Yoshio Otani, *Kanazawa University*
6:15
- 4CM.17** **Fine Particle Emission from Power Plants and Their Contribution to Air Quality in Korea.** SUNGNAM CHUN, Suji Kang, Gayoung Lee, *Korea Electric Power Corporation Research Institute, Korea*
6:15

4DU COMBUSTION-GENERATED AEROSOLS: THE DESIRABLE AND UNDESIRABLE II: POSTERS

EXHIBIT HALL 5

- 4DU.3** **A Study on Pulverized Coal Combustion Using a Two-Stage Flat-Flame Burner with a Transition from a Reducing to Oxidizing Environment.** Adewale Adeosun, DISHANT KHATRI, Zhiwei Yang, Richard Axelbaum, *Washington University in St. Louis*
6:15
- 4DU.4** **Nanostructure as a Paradigm for Describing Carbon Structure and Interpreting Its Formation.** RANDY VANDER WAL, Madhu Singh, Joseph Abrahamson, Chethan Gaddam, Kuen Yehliu, Chung-Hsuan Huang, *Penn State University*
6:15
- 4DU.5** **Towards Establishing a Semi-Empirical Soot Formation Model for Strained, Non-Premixed, Oxygen-Enriched Flames.** PHILLIP R. JOHNSON, Rajan K. Chakrabarty, Benjamin M. Kumfer, *Washington University in St. Louis*
6:15
- 4DU.7** **Submicron Ash Formation in Advanced Pressurized Combustion System.** DISHANT KHATRI, Zhiwei Wang, Akshay Gopan, Adewale Adeosun, Richard Axelbaum, *Washington University in St. Louis*
6:15
- 4DU.8** **Employing Laser Pyrolysis to Generate Carbon Onion Particles and Its Application to Proton Exchange Membrane Fuel Cell.** JE HYEON YEON, Indae Choi, Sei Jin Park, Mansoo Choi, *Seoul National University, Seoul, Korea*
6:15

4ED AEROSOL EDUCATION II: POSTERS

EXHIBIT HALL 5

Timothy Raymond and Antti Lauri, chairs

- 4ED.1** **Incorporating Engineering Context into General Chemistry Laboratory for a more Contextually Relevant and Engaging Experience for Engineering Students.** CHANG YU WU, Kent Crippen, Lorelie Imperial, Corey Payne, Korolev Maria, Philip Brucat, *University of Florida*
6:15
- 4ED.2** **NGDE: A Simple, MATLAB-based Code for Solving the General Dynamic Equation.** JAMES CORSON, George Mulholland, Michael Zachariah, *University of Maryland*
6:15
- 4ED.3** **Aerosol Education with Community Citizens in Brandywine.** AKUA ASA-AWUKU, *University of Maryland*
6:15

- 4ED.4 Image Analysis on Particle Size Distribution and Particle Tracking by Python-programming.** CHIH-HSIANG CHIEN, Huanhuan Jiang, Wyndham Hudson, Bing Guo, Chang Yu Wu, Myoseon Jang, Paul Gader, *University of Florida*
6:15
- 4ED.5 Fundamentals of Air Pollution Engineering: A Free Online Resource for Aerosol Education.** RICHARD FLAGAN, John Seinfeld, *California Institute of Technology*
6:15
- 4ED.6 Combining Transferable Skills and Aerosol Science in Education.** ANTTI LAURI, Taina Ruuskanen, Laura Riuttanen, Hanna Vehkamäki, *University of Helsinki*
6:15
- 4ED.7 Low-cost Particulate Matter Sensors: Developing, Piloting and Disseminating Appropriate Educational Resources to Support Community Use.** Stefania Squizzato, Katrina Smith Korfmacher, Cait Fallone, Kathleen Gray, Dana Haine, John Prochaska, Diana Hernandez, Peggy Shephard, PHILIP K. HOPKE, *University of Rochester Medical Center*
6:15
- 4ED.8 A Software to Map the Time-lapse History of Global Air Pollutions (TH-GAPs).** MAOHUA PAN, Zechen Yu, Chang Yu Wu, Myoseon Jang, Paul Gader, *University of Florida*
6:15
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4IA INDOOR AEROSOLS IV: POSTERS

EXHIBIT HALL 5

Li Liu, chair

- 4IA.1 Quantification of the Impact of Cooking Processes on Indoor and Outdoor, Primary and Secondary Organic Aerosols and Volatile Organic Species.** IMAD EL HADDAD, Felix Klein, Andre S.H. Prévôt, Urs Baltensperger, *Paul Scherrer Institute*
6:15
- 4IA.2 Three-Stage Modelling of Indoor Aerosol Formation Caused by Reaction of Ozone with Volatile Organic Compounds Emitted from Air Fresheners.** Thai Phuong Vu, SEUNG-BOK LEE, Gwi-Nam Bae, *HoChiMinh University of Natural Resources and Environment*
6:15
- 4IA.3 Impact of Household Daily Activities on Indoor Air Quality.** Estela Vicente, Fernanda Oduber, Carlos Blanco-Alegre, Ana Isabel Calvo, Amaya Castro, Roberto Fraile, Teresa Nunes, CÉLIA ALVES, *University of Aveiro*
6:15
- 4IA.4 Reduction of Fine Particle Exposure for Bedrooms in Home According to Operating Conditions of an Air Purifier.** JUNHO JI, Gwang-Jae Lee, *EcoPictures Co., Ltd.*
6:15
- 4IA.5 Carbonaceous Particles and Gaseous Compounds in Kitchens and Outdoor Air of Different Homes.** CÉLIA ALVES, Ana Rita Oliveira, Teresa Nunes, Estela Vicente, Susana Marta Almeida, Mário Cerqueira, *University of Aveiro*
6:15
- 4IA.6 Aerosol Reduction Capability of an Air Purifier in the Real Living Room Environment.** CHANG GYU WOO, Hak-Joon Kim, Yong-Jin Kim, Bangwoo Han, *Korea Institute of Machinery and Materials*
6:15
- 4IA.7 Linking PM_{2.5} Indoor Air Quality and Emission Factors Measured during a Cookstove Intervention Trial in Rural India.** MOHAMMAD MAKSIMUL ISLAM, Roshan Wathore, Grishma Jain, Karthik Sethuraman, Hisham Zerriffi, Julian Marshall, Rob Bailis, Andrew Grieshop, *North Carolina State University*
6:15
- 4IA.8 Investigating Aerosol Emissions from Cooking Oils through a Controlled Chamber Experiment.** Sameer Patel, Itza Beltran, MARINA VANCE, *University of Colorado Boulder*
6:15
- 4IA.9 Particle Size Distribution of Indoor Aerosols, Natural and Artificial.** HYAM KHALAF, Mostafa Mostafa, Mikhail Zhukovsky, *Ural Federal University*
6:15
- 4IA.11 Aerosol Release during Mechanical Solicitation of TiO₂ Nano-Additived Paint.** CHARLES MOTZKUS, François Gaie-Levrel, Nicolas Feltin, Stéphane Delaby, *Scientific and Technical Center for Building (CSTB)*
6:15
- 4IA.12 The Impacts of Cooking on Indoor Air Quality in Passive Houses.** Ryan Militello-Hourigan, SHELLY MILLER, *University of Colorado Boulder*
6:15
- 4IA.13 Comparison of Physicochemical Properties and Toxicity of Particles Found Indoors and Outdoors in Occupied Residences – Measurement Methodology.** ANETA WIERZBICKA, Yuliya Omelekhina, Nicklas R. Jacobsen, Anne Thoustrup Saber, Erica Bloom, Patrik Nilsson, Axel C. Eriksson, Joakim Pagels, *Lund University*
6:15
- 4IA.14 Persistence of Wildfire-derived Pollutants in Indoor Environments.** LUKAS KOHL, Meng Meng, Joan de Vera, Bridget Bergquist, Colin A. Cooke, Sarah Hustins, Brian Jackson, Arthur W. H. Chan, *University of Toronto*
6:15

- 4IA.15 In-field Emission Measurements of Forced-draft Pellet and Traditional Wood and Charcoal Stoves in Rwanda.** WYATT CHAMPION, Andrew Grieshop, *North Carolina State University*
6:15
- 4IA.16 Exposure Assessment by Measuring Microbial DNA in House Dust using digital Polymerase Chain Reaction (dPCR).** ASHLEIGH BOPE, Samuel Cochran, David Kormos, Karen C. Dannemiller, *Ohio State University*
6:15
- 4IA.17 Observed Levels of Particle and Gas Phase Pollutant inside School Classrooms with Varying Air-Conditioning Systems.** SUPREME JAIN, Divyam Garg, Anubha Goel, *Indian Institute of Technology Kanpur*
6:15

4IM INSTRUMENTATION II: POSTERS

EXHIBIT HALL 5

Ryan Sullivan and Allison Aiken, chairs

- 4IM.2 Application of Particle and Aerosol Technology to CMP (Chemical Mechanical Planarization) Process Optimization.** TAESUNG KIM, Chulmin Shin, Seokjun Hong, *Sungkyunkwan University*
6:15
- 4IM.3 Effect of O₂/N₂ Ratio on the Generation of Self-Charged Positive and Negative Sub 5 nm with a Glowing Wire.** MICHEL ATTOUI, LISA, *Université Paris Est Créteil France*
6:15
- 4IM.4 Wide Size Range Number Concentration Calibration with Low Uncertainties.** ANSSI JÄRVINEN, Jorma Keskinen, Jaakko Yli-Ojanperä, *Tampere University of Technology*
6:15
- 4IM.6 A Post-Correction Method to Improve the Accuracy of the Aerosol Particle Mass Analyzer.** BO-XI LIAO, Chuen-Jinn Tsai, *National Chiao Tung University*
6:15
- 4IM.8 A Numerical Model To Predict The Performance Of High Flow DMAs To Classify Sub-nm Aerosols.** HUANG ZHANG, Girish Sharma, Yang Wang, Shuiqing Li, Pratim Biswas, *Washington University in St Louis*
6:15
- 4IM.9 Calibration of Centrifugal Particle Mass Analyzers (CPMAs) Using a DMA-Tandem-CPMA Technique.** ZHEN LI, Jingkun Jiang, Da-Ren Chen, *Virginia Commonwealth University*
6:15
- 4IM.10 Characterization and Performance of the Caltech-ADI Portable Scanning Electrical Mobility Spectrometer.** STAVROS AMANATIDIS, Huajun Mai, Changhyuk Kim, Richard Flagan, Steven Spielman, Gregory Lewis, Susanne Hering, *California Institute of Technology*
6:15
- 4IM.11 Mobile Chasing Measurement of Black Carbon and Nitrogen Oxides Emissions from Heavy-duty Vehicles in China.** SHAOJUN ZHANG, Hui Wang, Ye Wu, K. Max Zhang, *Cornell University*
6:15
- 4IM.12 A PPWD-SDEP-IC System for Hourly Measurements of Ambient PM_{2.5} Inorganic Ions and Precursor Gases.** CHI-YU TIEN, Chao-Ting Hsu, Ssu-Yin Lai, Yung-Chen Chiang, Chuen-Jinn Tsai, *National Chiao Tung University*
6:15
- 4IM.13 Ultrahigh Resolution Orbitrap Elite Mass Spectrometry Reveals Unprecedented Molecular Detail in Atmospheric Aerosol.** LYNN MAZZOLENI, Simeon Schum, Matthew Brege, Tyler Leverton, Elizabeth Rose, Maryam Khaksari, *Michigan Technological University*
6:15
- 4IM.14 Particle Measurement Under High Pressure Conditions on a Combustor Test Rig.** Frank G. Bachman, TRISTAN REINISCH, Bill Silvis, Richard W. Frazee, Alexander Bergmann, *GE Aviation*
6:15
- 4IM.15 Evaluation and Sampling Efficiency of the Wet Dust Sampler (WDS) - a Water-based Method for Road Dust Sampling.** JOACIM LUNDBERG, Göran Blomqvist, Mats Gustafsson, Sara Janhäll, Ida Järlskog, *VTI*
6:15
- 4IM.16 Investigating Effects of Ambient Gas on the Ionization of Compounds by Secondary Electrospray Ionization Using Ultrahigh Resolution Mass Spectrometry.** JIAFA ZENG, Kai Wu, Rui Du, Yuling Zhang, Dandan Huang, Zhen Zhou, Xue Li, *Jinan University*
6:15
- 4IM.17 Charge Distribution Characterization of an Indirect Ionization Soft X-ray Operated under Various Test Gas Environments.** SIQIN HE, Derek Oberreit, *Kanomax FMT, Inc.*
6:15
- 4IM.19 Performance Study of the HR-ELPI+ Instrument.** Sampo Saari, ANSSI ARFFMAN, Juha Harra, Topi Rönkkö, Jorma Keskinen, *Tampere University of Technology*
6:15
- 4IM.20 A Shaker Fluidized-bed Atomizer (SFA) for Nanopowder Dispersion with Stable Aerosol Concentrations.** CHI-YU TIEN, Wen-Cheng Gong, Chuen-Jinn Tsai, *National Chiao Tung University*
6:15

- 4IM.21 Calibration of Condensation Particle Counters Against an Aerosol Electrometer Over a Wide Range of Sizes with Minimal Charge State Uncertainty.** JONATHAN SYMONDS, *Cambustion*
6:15
- 4IM.22 Study of HR-ELPI+ Data Inversion with Porous Collection Substrates.** ANSSI ARFFMAN, Ari Ukkonen, Anssi Järvinen, Sampo Saari, Esa Luntta, Ville Niemelä, *Dekati Ltd., Kangasala, Finland*
6:15
- 4IM.23 Comparison of the TSI 1-nm and Standard Scanning Mobility Particle Sizers during the Lake Michigan Ozone Study.** MEGAN CHRISTIANSEN, Charles Stanier, Sherrie Elzey, Nathan Janecek, Nathan Bryngelson, Maynard Havlicek, Andrea Tiwari, *University of Iowa*
6:15
- 4IM.24 Effect of Eccentricity on the Performance of a Cylindrical Differential Mobility Classifier.** THAMIR ALSHARIFI, Da-Ren Chen, *Virginia Commonwealth University*
6:15
- 4IM.25 Effect of Change in Sheath Air Humidity on Size Distribution Measurements by Scanning Mobility Particle Sizer.** B.K. SAPRA, Mariam , Manish Joshi, Arshad Khan, *Bhabha Atomic Research Centre, Mumbai*
6:15
- 4IM.26 SEMS Transfer Functions under Fast Sequential Scanning.** MARK KANAPARTHI, Suresh Dhaniyala, *Clarkson University*
6:15
- 4IM.27 Performance of Fundamental Functional Feature on DMA (2).** CHIRYO TSUNODA, *FES*
6:15
- 4IM.28 Performance of Fundamental Functional Feature on DMA (1).** CHIRYO TSUNODA, *FES*
6:15
- 4IM.29 A Compact, Battery-Operable, Dual-Channel, Water-Based Condensation Particle Counter.** SUSANNE HERING, Gregory Lewis, David Workman, *Aerosol Dynamics Inc.*
6:15
- 4IM.30 Selective Collection in Particle Harvesting.** MENG-DAWN CHENG, *Oak Ridge National Laboratory*
6:15
- 4IM.31 High Time Resolved Measurements of Ultrafine Particles, PM10, PM2.5, Nitric Oxides and Black Carbon at Berlin City.** MARKUS PESCH, Volker Ziegler, *Technical Director*
6:15
- 4IM.32 A Method for Testing the Accuracy of the Hourly-Averaged PM2.5 Mass Concentration by Automated Measuring Systems for Continuous Monitoring with Laboratory Generated Aerosols.** Yoshiko Murashima, HIROMU SAKURAI, *AIST*
6:15

4IN UNRAVELING THE MANY FACETS OF ICE NUCLEATING PARTICLES AND THEIR INTERACTIONS WITH CLOUDS IV: POSTERS
EXHIBIT HALL 5

Heike Wex and Yutaka Tobo, chairs

- 4IN.1 Understanding the Ice Nucleation Potential of Organic Sea Spray Aerosols.** MARTIN WOLF, Lily Dove, Allison Coe, Maria Zawadowicz, Keven Dooley, Sallie Chisholm, Daniel Cziczo, *Massachusetts Institute of Technology*
6:15
- 4IN.2 The Influence of Dust Mineralogy on Its Aerosol Suspension Freezing Behavior.** KRISTINA HÖHLER, Romy Ullrich, Thea Schiebel, Nadine Schittko, Barbara Dietel, Peter G. Weidler, Konrad Kandler, Ottmar Möhler, Thomas Leisner, *Karlsruhe Institute of Technology*
6:15
- 4IN.3 Isothermal Immersion Freezing Experiments Involving Mineral Dust: The Role of INP Surface Area.** ASSAF ZIPORI, Daniel Knopf, Yinon Rudich, *Weizmann Institute of Science*
6:15
- 4IN.4 Does Secondary Ice Processes in Mixed Phase Clouds More Important Than We Assume?** ASSAF ZIPORI, Naama Reicher, Yigal Erel, Daniel Rosenfeld, Amir Sandler, Daniel Knopf, Yinon Rudich, *Weizmann Institute of Science*
6:15
- 4IN.6 Nanoscale Ice-Nucleating Particles in Waterbodies in an Agricultural Area.** HEIKE WEX, Kathryn A. Knackstedt, Bruce Moffett, Susan Hartmann, Janine Fröhlich-Nowoisky, Thomas Hill, Sarah Grawe, Robert Michael McKay, *Institute for Tropospheric Research, Germany*
6:15
- 4IN.9 Single-Particle Mixing State and Mineralogy of North African Dust: A Comparison of Ambient Transported Dust with Laboratory Generated Proxies.** NICHOLAS MARSDEN, Romy Ullrich, Ottmar Möhler, Paul Williams, Michael Flynn, James Allan, Hugh Coe, *University of Manchester*
6:15
- 4IN.10 Cleaning up Our Act: Assessment of Background Freezing Caused by Impurities and Substrates and Strategies to Reduce These Interferences in Droplet Freezing Assays.** Michael Polen, Thomas Brubaker, Josh Somers, Perry Cheng, RYAN SULLIVAN, *Carnegie Mellon University*
6:15

- 4IN.11 Effects of Atmospheric Chemical Aging on Biomass Burning Aerosol Composition and Ice Nucleating Properties.** LYDIA JAHL, Michael Polen, Leif Jahn, Thomas Brubaker, Ryan Sullivan, *Carnegie Mellon University*
6:15
- 4IN.12 Responses of Mixed-Phase Cloud Condensates and Cloud Radiative Effects to Ice Nucleating Particle Distributions in DOE E3SM model.** YANG SHI, Xiaohong Liu, Mingxuan Wu, Kai Zhang, *University of Wyoming*
6:15
- 4IN.13 Activation of Intact Bacteria and Bacterial Fragments Mixed with Agar as Cloud Droplets and Ice Crystals in Cloud Chamber Experiments.** KAITLYN J. SUSKI, David Bell, Naruki Hiranuma, Ottmar Möhler, Dan Imre, Alla Zelenyuk, *Pacific Northwest National Laboratory*
6:15
- 4IN.14 Ice Nucleation Activity of Glassy Soil Organic Particles under Cirrus Conditions.** SWARUP CHINA, Daniel Veghte, Joseph Charnawskas, Johannes Weis, Kaitlyn J. Suski, Gourihar Kulkarni, Bingbing Wang, Peng Lin, Alla Zelenyuk, Mary Gilles, Daniel Knopf, Alexander Laskin, *Pacific Northwest National Laboratory*
6:15
- 4IN.15 Chemistry of Ice Nucleating Particles in Summertime Urban/Marine Conditions.** MARIA ZAWADOWICZ, Michael Roesch, Martin Wolf, Daniel Cziczko, *Massachusetts Institute of Technology*
6:15
- 4IN.16 Effect of Solutes on Ice Nucleation Efficiency of Feldspar.** JINGWEI YUN, Jon Davidson, Allan Bertram, *University of British Columbia*
6:15
- 4IN.18 Effect of Surface Geometry on Heterogeneous Ice Nucleation.** Olli Pakarinen, Golnaz Roudsari, EVGENI ZAPADINSKY, Hanna Vehkamäki, *University of Helsinki*
6:15
- 4IN.19 Adsorption Nucleation Theory for Ice Formation from the Vapour Phase.** ANDRÉ WELTI, Ana A. Piedehierro, Yrjö Viisanen, Annele Virtanen, Lise Deschutter, Outi Meinander, Ari Laaksonen, *Finnish Meteorological Institute*
6:15
- 4IN.20 A Microfluidic Ice Nucleating Particle Counter for Continuous Measurements.** Ali Mohammadi Nafchi, Gavin McMeeking, ANDREW METCALF, *Clemson University*
6:15
- 4IN.22 Probing the Identity of the Ice Nucleating Particles (INPs) in a Boreal Environment.** MIKHAIL PARAMONOV, Saskia Drossaert van Dusseldorp, Zamin Abdulali Kanji, *ETH Zürich*
6:15

4MD AEROSOLS IN MEDICINE III: POSTERS

EXHIBIT HALL 5

Andrew Martin and Philip Kuehl, chairs

- 4MD.1 Hyperthermic Intracavitary Nanoaerosol Therapy (HINAT) - a Promising Approach to Treat Peritonealcarcinomatosis.** Daniel Göhler, Stephan Große, LARS HILLEMANN, Alexander Bellendorf, Thomas A. Falkenstein, Mehdi Ouaiissi, Jürgen Zieren, Michael Stintz, Urs Giger-Pabst, *Technische Universität Dresden*
6:15
- 4MD.2 Analysis of Xenon Mass Transfer from Human Upper Airway to Systemic Regions using a Hybrid CFD-PBPK Model.** AHMADREZA HAGHNEGHAHDAR, Jianan Zhao, Max Kozak, Patrick Williamson, Yu Feng, *Oklahoma State University, Stillwater, OK, USA*
6:15
- 4MD.3 Aerosol Based Nanoscale Material Synthesis, Surface Engineering and Delivery to the Brain.** RAMESH RALIYA, Nathan Reed, Debajit Saha, Dezhuang Ye, Tandeep Chadha, Hong Chen, Barani Raman, Pratim Biswas, *Washington University in St. Louis*
6:15
- 4MD.4 Pores of Kohn: Forgotten Alveolar Structures and Potential Aerosol Generators?** MICHAEL OLDHAM, Owen Moss, *Altria Client Services LLC*
6:15
- 4MD.5 Characterization of Airspace Dimension Assessment with Nanoparticles (AiDA) on a Large Population and Relation to Anthropometry and Lung Function Parameters.** JONAS JAKOBSSON, H Laura Aaltonen, Hanna Nicklasson, Sandra Diaz, Per Wollmer, Jakob Löndahl, *Lund University*
6:15
- 4MD.6 Predicting Local and Systemic Distributions of Inhaled Budesonide Powders using In Vitro Experiments Combined with Numerical Modeling.** CONOR A. RUZYCKI, Brynn Murphy, Hafeez Nathoo, Warren H. Finlay, Andrew R. Martin, *University of Alberta*
6:15
- 4MD.7 Protein Aggregation Kinetics by Electrospray Differential Mobility Analysis.** KALEB DUELGE, Vince Hackley, Michael Zachariah, *University of Maryland, College Park*
6:15

- 4MD.8 Characterization of the Aerosol Flow, Sampling and Deposition in a Nose Only Exposure Chamber.** 6:15 FRANCESCO LUCCI, Wei Teck Tan, Subash Krishnan, Julia Hoeng, Patrick Vanscheeuwijck, Rudolph Jaeger, Arkadiusz Kuczaj, *Philip Morris International R&D*
- 4MD.9 Method for the Production of "Universal" Inhalation Powders for Dry Powder Inhalers.** 6:15 Janne Raula, DAVID BROWN, Esko Kauppinen, *Teicos Pharma*
- 4MD.10 Investigation of Single Particle Frictional Electrification with Polymer Plate.** 6:15 JIAWEI HU, Cai Liang, Lunbo Duan, Xiaoping Chen, Daoyin Liu, Changsui Zhao, *School of Energy and Environment, Southeast University*
- 4MD.11 Patient Specific Deposition Enhancement of Nasal Sprays in Ct-Derived Human Nasal Replicas.** 6:15 Landon Holbrook, ALYSSA BURKE, Saikat Basu, Elizabeth Monaghan, Julia Kimbell, William Bennett, *University of North Carolina at Chapel Hill*

4MS MATERIALS SYNTHESIS III: POSTERS

EXHIBIT HALL 5

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- 4MS.1 MOFs-based Hybrid Nanocomposites for Efficient Gas Capture and Conversion: A Charge Transfer Study.** 6:15 Xiang He, WEI-NING WANG, *Virginia Commonwealth University*
- 4MS.2 Fabrication of Iron Oxide Nanoparticles Deposited on Crumpled Graphene for Supercapacitor Applications.** 6:15 CHONGMIN LEE, Sun Kyung Kim, Ji-Hyuk Choi, Hankwon Chang, Hee Dong Jang, *Korea University of Science and Technology*
- 4MS.3 Femtoliter Droplet Cloud Evaporation in an Aerosol Reactor.** 6:15 Yuliya Khodyko, SERGEY FISENKO, Wei-Ning Wang, *Luikov Institute of Heat and Mass Transfer*
- 4MS.4 Engineered Chitosan and Aerosol Delivery Improve Plant Protection and Reduce Agrochemical Stress on Environment.** 6:15 Rampura Vishwanath Kumaraswamy, Sarita Kumari, Ram Chandra Choudhary, Shyam Sundar Sahrma, Ajay Pal, RAMESH RALIYA, Pratim Biswas, Vinod Saharan, *Maharana Pratap University of Agriculture and Technology, IN*
- 4MS.5 Detonation Graphene Production Scale Up.** 6:15 JUSTIN WRIGHT, Arjun Nepal, Stefan Bossmann, Christopher Sorensen, *Kansas State University*
- 4MS.6 The Study of the Role of Morphology and Functional Groups of Crumpled Graphene-based Materials to Determine their Specificity Towards Volatile Organic Compounds in Room-temperature Gas Sensing.** 6:15 KELSEY HADDAD, Siyuan An, Ahmed A. Abokifa, Barani Raman, Fortner John, Pratim Biswas, *Washington University in St. Louis*
- 4MS.7 Synthesis of Nanoparticle-embedded Composite Films by Plasma-enhanced CVD Process Using Gaseous and Particulate Raw Materials.** 6:15 MANABU SHIMADA, Masaru Kubo, Yuki Shigematsu, Izumo Shimada, *Hiroshima University*
- 4MS.8 Polymer and Metal Oxides Coating of Multiwalled Carbon Nanotubes by Spray-Assisted Plasma-Enhanced Chemical Vapor Deposition.** 6:15 LAKSHMIPURA RAMACHANDRAIAH HEMANTH, Keita Nishihara, Masaru Kubo, Manabu Shimada, K. Kusdianto, *Hiroshima University*
- 4MS.9 Effect of Loading Concentration on the Photocatalytic Activity of Ag-TiO₂ Nanocomposite Films Fabricated by One-Step Gas-Phase Deposition.** 6:15 DIANPING JIANG, K. Kusdianto, Masaru Kubo, Manabu Shimada, *Hiroshima University*
- 4MS.10 Generation of Iron Oxide Nanoparticles for Follow-up Exposure Studies by MOCVD.** 6:15 PAVEL MORAVEC, Jaroslav Schwarz, Petr Vodička, Jaroslav Kupčik, Jaroslav Švehla, *Institute of Chemical Process Fundamentals of the CAS, v.v.i*
- 4MS.11 Aerosol-assisted Synthesis of Materials for Application in Photovoltaics – TiO₂ + Perovskite Layers.** 6:15 ROBIN WHEELUS, Shalinee Kavadiya, Pratim Biswas, *Washington University in St. Louis*
- 4MS.12 Attachment Behavior and Aggregation Kinetics of Aerosol Synthesized Oxide Nanomaterials in Water.** 6:15 RAMESH RALIYA, Nathan Reed, Kwon Paul, Tiana Stussie, Patchaya Tobaramseekul, Deep Hathi, Patcharin Worathanakul, Samuel Achilefu, Monica Shokeen, Pratim Biswas, *Washington University in St. Louis*
- 4MS.13 Electro Spray Deposition as a Tool for Processing Energetic Polymer Composites.** 6:15 Haiyang Wang, MICHAEL ZACHARIAH, *University of Maryland, College Park*

- 4MS.14 Synthesis of CuO/WO₃ and Pt/WO₃ Nanocatalysts via Flame-Assisted Spray Pyrolysis and Their Photocatalytic Activity.** TOMOYUKI HIRANO, Ogi Takashi, Kikuo Okuyama, *Hiroshima University*
6:15
- 4MS.15 Gas-phase Synthesis of Gallium Arsenide Quantum Dots through Hydrogen-assisted Spark Discharge and Its Application.** KIWOONG LEE, Dongjoon Lee, Mansoo Choi, *Seoul National University, Seoul, Korea*
6:15
- 4MS.17 Production of Cauliflower-like Amphiphatic Copolymer Nanoparticles using Aerosol-Photopolymerization.** Masoom Shaban, Jalal Poostforooshan, ALFRED P. WEBER, *TU Clausthal*
6:15
- 4MS.18 Preparation of Nanospherical Mesoporous Carbon Nitride with High Surface Area using Aerosol Generated Mesoporous Silica and Its Application as a Photoinitiator for Aerosol-Photopolymerization.** JALAL POOSTFOROOSHAN, Masoom Shaban, Alfred P. Weber, *TU Clausthal*
6:15
- 4MS.19 Preparation of Core-Shell Nanoparticles by Aerosol-Polymerization Process.** JALAL POOSTFOROOSHAN, Masoom Shaban, Alfred P. Weber, *TU Clausthal*
6:15
- 4MS.20 Aerosol Gelation in a Buoyancy-Opposed Flame Reactor: Application to Material Synthesis.** PAI LIU, Yang Wang, Jiaxi Fang, Pratim Biswas, Rajan K. Chakrabarty, *Washington University in St Louis*
6:15
- 4MS.21 Highly Reproducible Large-Area Perovskite Solar Cells Fabricated with Megasonic Spray-Coating.** MINCHEOL PARK, Woohyung Cho, Mansoo Choi, *Seoul National University*
6:15
- 4MS.22 The Formation of Sulfur Trioxide over V₂O₅/TiO₂ Catalyst in SCR of NO_x with NH₃.** YURAN LI, Bin Wang, Jin Xiong, Tingyu Zhu, Shuai Zhang, *Institute of Process Eng., Chinese Academy of Sciences*
6:15
- 4MS.23 Particle Size Distribution and Concentration of Gold Colloidal Nanoparticles.** JAESEOK KIM, Min Jeong Kwak, *Korea Research Institute of Standards and Science*
6:15
- 4MS.24 Constitution Analysis of CNT Aerogel and Its Thermal Property Modification and Characterization.** ZHANG XIAO, Adam M Boies, *University of Cambridge*
6:15

4OF OXIDATION FLOW REACTOR: DEVELOPMENT, CHARACTERIZATION, AND APPLICATION TO AEROSOLS III: POSTERS
EXHIBIT HALL 5

William Brune and Andrew Lambe, chairs

- 4OF.1 A Review of Radical Chemistry in Oxidation Flow Reactors for Atmospheric Chemistry Research.** ZHE PENG, Jose-Luis Jimenez, *University of Colorado-Boulder*
6:15
- 4OF.2 Chemical Composition of Secondary Organic Aerosol Generated from Emissions of California Sage Plants Using a FIGAERO-ToF-CIMS.** ARCHIT MEHRA, Jordan Krechmer, Andrew Lambe, Chinmoy Sarkar, Leah Williams, Fatemeh Khalaj, James Allan, John Jayne, Hugh Coe, Douglas Worsnop, Celia Faiola, Manjula Canagaratna, *University of Manchester*
6:15
- 4OF.3 Secondary Organic Aerosol Formation and Aging in a Flow Reactor in the Forested Southeast US during SOAS.** WEIWEI HU, Brett Palm, Pedro Campuzano-Jost, Douglas Day, Suzane de Sá, Benjamin Ayres, Danielle C. Draper, Juliane L. Fry, Amber Ortega, Lina Hacker, Astrid Kiendler-Scharr, Aki Pajunoja, Annele Virtanen, Jordan Krechmer, Manjula Canagaratna, Samantha Thompson, Laxmi Narasimha Yatavelli, Harald Stark, Douglas Worsnop, Scot T. Martin, William Brune, Steven S. Brown, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*
6:15
- 4OF.4 Missing Ozone-Induced Potential Aerosol Formation in a Suburban Deciduous Forest near Tokyo.** TOMOKI NAKAYAMA, Yuuki Kuruma, Yutaka Matsumi, Yu Morino, Kei Sato, Hiroshi Tsurumaru, Sathiyamurthi Ramasamy, Yosuke Sakamoto, Shungo Kato, Yuzo Miyazaki, Tomoki Mochizuki, Kimitaka Kawamura, Yasuhiro Sadanaga, Yoshihiro Nakashima, Kazuhide Matsuda, Yoshizumi Kajii, *ISEE, Nagoya University*
6:15
- 4OF.5 Using a Mobile Laboratory Equipped with an Oxidative Flow Reactor to Study Oxidative Aging of In-use Motor Vehicle Emissions.** KEREN LIAO, Qi Chen, Yan Zheng, Ying Liu, Tong Zhu, *Peking University*
6:15
- 4OF.6 Evolution of the Complex Refractive Index of Secondary Organic Aerosols during Atmospheric Aging.** QUANFU HE, Nir Bluvshstein, Lior Segev, Daphne Meidan, Michel Flores, Steven S. Brown, William Brune, Yinon Rudich, *Weizmann Institute of Science*
6:15

- 40F.7 Investigation for the Formation of Secondary Aerosol from Passenger Vehicles by Fuel Types (Gasoline, Liquefied Petroleum Gas, and Diesel).** GYUTAE PARK, Sung-Woon Jung, Jounghwa Kim, Seok-Jun Seo, Sunmoon Kim, Kyunghoon Kim, Taekho Chung, Taehyun Park, Heekyoung Hong, Sunhee Moon, Seokwon Kang, Seung Hwan Lee, Min Seok Song, Jihee Ban, Dong-Gil Yu, Youdeog Hong, Taehyoung Lee, *Hankuk University of Foreign Studies*
6:15
- 40F.8 Comparison of Composition and Volatility of Soa Formed from Oxidation of α -Pinene and Scots Pine Emissions.** ARTTU YLISIRNIÖ, Angela Buchholz, Claudia Mohr, Andrew Lambe, Celia Faiola, Eetu Kari, Taina Yli-Juuti, Sergey Nizkorodov, Douglas Worsnop, Siegfried Schobesberger, Annele Virtanen, *University of Eastern Finland*
6:15
- 40F.9 Volatility Distribution of Primary Organic Aerosol from Food-Cooking Emissions and Its Evolution upon Oxidation.** MANPREET TAKHAR, Arthur W. H. Chan, *University of Toronto*
6:15
- 40F.10 Assessment of a Field Portable Oxidation Flow Reactor (OFR) Measurement System for Biofuel Emission Characterization in Remote and Rural Settings.** ADITYA SINHA, Andrew Grieshop, *North Carolina State University*
6:15
- 40F.11 Well Mixed, Ambient Conditions and Long Observation Times: Aging Experiments in a CSTR.** FRANZ FRIEBEL, Amewu Mensah, *ETH Zürich*
6:15

4RA REMOTE/REGIONAL ATMOSPHERIC AEROSOL IV: POSTERS

EXHIBIT HALL 5

Gabriel Isaacman-VanWertz and Rebecca Schwantes, chairs

- 4RA.1 Atmospheric Nanoparticle Dry Deposition Velocity.** PHILIPPE LAGUIONIE, Luc Solier, Denis Maro, Geoffrey Pellerin, Didier Hébert, Olivier Connan, Oumar-Telly Bah, *IRSN*
6:15
- 4RA.2 Observational Evidence of Downdraft Clouds Contributing to Daytime Elevated Nitrate Concentration in an Urban Atmosphere.** Jun Tao, Zhisheng Zhang, LEIMING ZHANG, Yunfei Wu, Junji Cao, Peng Cheng, Laiguo Chen, Renjian Zhang, *South China Institute of Environmental Sciences*
6:15
- 4RA.3 Aerosols Characterization in Upper Egypt; Urban and Rural Measurements.** MOSTAFA MOSTAFA, Hyam Khalaf, Mona Moustafa, Amer Mohamed, *Ural Federal University*
6:15
- 4RA.4 Vertical and Horizontal Distribution of Sub-micron Aerosol Chemical Composition and Physical Properties across Northern India, during the Pre-monsoon and Monsoon Seasons.** JAMES BROOKS, Hugh Coe, William Morgan, James Allan, Paul Williams, Dantong Liu, Jim Haywood, Cathryn Fox, Justin Langridge, Ellie Highwood, Suresh Babu, S.K. Satheesh, Andrew Turner, *University of Manchester*
6:15
- 4RA.5 Predicting Wildfire in United States Using Artificial Neural Network Technique.** KAIYU CHEN, Hao Guo, Hongliang Zhang, *Louisiana State University*
6:15
- 4RA.6 Investigation of the Morphology and Chemical Composition of Intra-Urban Atmospheric Particles: Case Study of Tehran, Iran.** Balal Oroji, Asghar Sadighzadeh, Eisa Solgi, HOSSEIN YOUSEFI, *Nuclear Science and Technology Research Institute, Iran*
6:15
- 4RA.7 Pollutant Measurements at Near Road and Background Sites.** OLIVER RATTIGAN, H. Dirk Felton, Brian P. Frank, *New York State Dept. of Environmental Conservation*
6:15
- 4RA.8 Source Apportionment and Associated Oxidative Potential of Ambient PM in Beirut during Saharan and Arabian Dust Events.** CHRISTOPHER LOVETT, Mohammad Sowlat, Najat A. Saliba, Alan Shihadeh, Constantinos Sioutas, *University of Southern California*
6:15
- 4RA.9 Characteristics of Nuclei Mode Atmospheric Aerosol Particles during a Large Scale Fire Event.** MANISH JOSHI, Mariam , Pallavi Khandare, Arshad Khan, B.K. Sagra, *Bhabha Atomic Research Centre, Mumbai*
6:15
- 4RA.10 Applications of Unmanned Aerial Systems in Atmospheric Environment Monitoring.** ZHONG-REN PENG, Xiaobin Li, Dongsheng Wang, Bai Li, *Shanghai Jiao Tong University*
6:15
- 4RA.11 High Temporal Resolution Analysis of Fine Particles Concentrations in 5D Virtual Space.** LIBOR HEJKRLÍK, Helena Plachá, Dáša Richterová, *Czech Hydrometeorological Institute*
6:15
- 4RA.12 Measurements and Analysis of Chemical Composition of Urban Aerosol during High Pollution Events at Guanzhong Plain, China.** Junji Cao, LIU HUIKUN, *Key Laboratory of Aerosol Chemistry and Physics, IEECAS*
6:15

- 4RA.13 Long Term Satellite Based Study on Aerosol and Trace Gases over the Capital City of Assam, Guwahati.** 6:15 JHUMA BISWAS, Papori Dahutia, *Pandu College, Guwahati, Assam, India*
- 4RA.14 Chemical Composition of PM_{2.5} in Zion, IL during the 2017 Lake Michigan Ozone Study.** 6:15 DAGEN HUGHES, Alissia Milani, Megan Christiansen, Dylan Millet, Timothy Bertram, Charles Stanier, Elizabeth Stone, *University of Iowa*
- 4RA.15 Ice Core Recorded Black Carbon Variations from Muztagh Ata Reveal Kuwait Fires and the Quantitative Evaluation of Source Contribution and Impacts on Glacier Melting.** 6:15 JIAMA ZHOU, Xuexi Tie, Shuyu Zhao, *Institute of Earth Environment, Chinese Academy of Sciences*
- 4RA.16 Seasonal Variations of Sahara Dust and Their Impact on the Air Quality over Western Ethiopia- First Cut Results.** 6:15 SATHEESH M K KUMAR, Amente Dereje Wakgari, *Department of Physics, Wollega University, Nekemte, Ethiopia*
- 4RA.17 Chemical Composition and Seasonal Variation of PM_{2.5} in Urban and Rural Regions of the Guanzhong Basin, Northwestern China.** 6:15 JIN LI, Gehui Wang, Jianjun Li, *Institute of Earth Environment, CAS*
- 4RA.18 Aerosol Characterization in Oujda (Morocco) for the Period 2011-2015.** 6:15 Ibtissam Marsli, MOHAMMED DIOURI, Abdelouahid Tahiri, Djamaledine Chaabane, *Atmospheric Physic, LME, University of Oujda, Morocco*
- 4RA.20 Aerosol Particle Dry Deposition Velocities above Grassland According to the Diameter and the Micrometeorological Parameters: The "V" Curve between 1.5 nm and 1 µm with Three Different Methods.** 6:15 GEOFFREY PELLERIN, Denis Maro, Evelyne Géhin, Philippe Laguionie, Olivier Connan, Didier Hébert, Luc Solier, *IRSN*
- 4RA.21 Spatial Distributions and Trends in Aerosol Optical Depth (AOD) from CERES-derived and AERONET-measured over South Asia.** 6:15 NEELESH LODHI, Naresh Kumar Soora, Sachchidanand Singh, *ICAR-IARI, New Delhi India*
- 4RA.22 Measurement of Particle Concentrations in Southern New Hampshire.** ANTHONY BARINELLI, Raymond J. Miller, Luke Parkhurst, Chelsea Bitter, Rudra Aryal, *Franklin Pierce University*
- 4RA.23 Use of Geostationary Satellite Data for AOD Retrieval over India for Air Quality Assessment.** 6:15 RASMA K., Ratish Menon, Harish Gadhavi, Virendra Sethi, *Centre for Environmental Science and Engineering, IIT Bombay*
- 4RA.24 Atmospheric Nanocluster Aerosol Emitted from Road Traffic.** 6:15 HEINO KUULUVAINEN, Topi Rönkkö, Panu Karjalainen, Jorma Keskinen, Risto Hillamo, Jarkko Niemi, Liisa Pirjola, Hilikka Timonen, Sanna Saarikoski, Erkka Saukko, Anssi Järvinen, Henna Silvennoinen, Antti Rostedt, Miska Olin, Jaakko Yli-Ojanperä, Pekka Nousiainen, Anu Kousa, Miikka Dal Maso, *Tampere University of Technology, Tampere, Finland*
- 4RA.25 Intensive Campaign Measurements in South of Romania.** 6:15 CRISTINA MARIN, Luminita Marmureanu, Simona Andrei, Livio Belegante, Alexandru Dandocsi, *National Institute of R&D for Optoelectronics, UPB*
- 4RA.27 Aerosol Optical Characteristics of Sub Saharan Area.** 6:15 Rajae Meziane, MOHAMMED DIOURI, *Atmospheric Physic, LME, University of Oujda, Morocco*
- 4RA.28 Aerosols Measurements Using an Elastic Lidar in Cubatao, Sao Paulo – Brazil.** 6:15 IZABEL DA S. ANDRADE, Elaine Cristina Araújo, Fernanda de M. Macedo, Renata F. da Costa, Eduardo Landulfo, Thais Correa, Maria Helena G.de A. Salani, Roberto Guardani, Maria Lucia G. Guardani, Marcia T. A. Marques, Daniel S. Lopes, *IPEN*
- 4RA.29 Single Scattering Albedo in Coastal Cities.** 6:15 Azhare El Khabbouti, MOHAMMED DIOURI, *Atmospheric Physic, LME, University of Oujda, Morocco*
- 4RA.30 Particulate and Gaseous Emissions from Brake Wear: The Eco-brake Project.** 6:15 FULVIO AMATO, Eleonora Conca, Mery Malandrino, Elio Padoan, Apostolos Salmatonidis, Florence Vivier, Agusti Sin, Jana Kukutschová, *Spanish National Research Council (CSIC)*

Monday 6:15 PM - 8:30 PM
Welcome Reception

Monday 6:15 PM - 8:30 PM
Historical Instrumentation Demo

Tuesday 8:00 AM - 9:15 AM

Plenary II: Friedlander Lecture - Industrialization of Fine-Particle-Based "Products by Process" to Enable Demanding Customer Applications

8:00 **Industrialization of Fine-Particle-Based "Products by Process" to Enable Demanding Customer Applications**
Yakov Kutsovsky, *Cabot Corporation*

Moderator Christine McCool, *3M*

Panelists Christine McCool, *3M*; Doug Worsnop, *Aerodyne Research*; Rich Axelbaum, *Washington University in St. Louis*

9:00 **IARA Int Aerosol Fellows, AAAR Fellows, Sinclair Award, AS&T Outstanding Paper & Reviewer Award** Murray Johnston, *University of Delaware*; David Pui, *University of Minnesota*; Jeff Collett, *Colorado State University*; Warren Finlay, *University of Alberta*

Tuesday 9:00 AM - 3:00 PM

Exhibits Open

Tuesday 9:15 AM - 9:45 AM

Coffee Break

Tuesday 9:45 AM - 11:45 AM

Session 5: Platform

5AC AEROSOL CHEMISTRY V - ATMOSPHERIC PH AND WATER EFFECTS

ROOM 275

Benjamin Nault and Shaojie Song, chairs

5AC.1 Global Survey of Submicron Aerosol Acidity (pH). BENJAMIN A. NAULT, Pedro Campuzano-Jost, Douglas Day, 9:45 Weiwei Hu, Brett Palm, Jason Schroder, Roya Bahreini, Joost de Gouw, Huisheng Bian, Jack Kodros, Simon Clegg, John Crounse, Jack Dibb, Paul Wennberg, Felipe Lopez-Hilfiker, Eloise Marais, Ann M. Middlebrook, J. Andrew Neuman, John Nowak, Jeffrey R. Pierce, James Roberts, Joel A. Thornton, Patrick Veres, Jose-Luis Jimenez, et al., *University of Colorado-Boulder*

5AC.2 Factors Affecting Thermodynamic Modeling of Aerosol pH. MICHAEL BATTAGLIA JR., Rodney J. Weber, Athanasios 10:00 Nenes, Christopher Hennigan, *University of Maryland, Baltimore County*

5AC.3 Aerosol Acidity in the Southeastern United States and Source Impacts on Fine Particle pH. YU QIAN, 10:15 Armistead G. Russell, *Georgia Institute of Technology*

5AC.4 RH Effect on the Oxidation of α -pinene and the Influence on New Particle Formation. XIAOXIAO LI, Sabrina 10:30 Chee, Jingkun Jiang, James Smith, *University of California, Irvine*

5AC.5 Competing Effects of Water Vapor and Aerosol Liquid Water on the Yield and Molecular Composition of 10:45 Secondary Organic Aerosols. LAUREN FLEMING, Julia Montoya-Aguilera, Wing-Sy DeRieux, Ying Li, Peng Lin, Alexander Laskin, Julia Laskin, Manabu Shiraiwa, Sergey Nizkorodov, *University of California, Irvine*

5AC.6 Insights into Aqueous-Phase Related Secondary Organic Aerosols via Mass Spectrometers in Winter in 11:00 Urban Beijing. JIAN ZHAO, Conghui Xie, Weiqi Xu, Wei Du, Qingqing Wang, Wei Zhou, Pingqing Fu, Douglas Worsnop, Zifa Wang, Yele Sun, *Institute of Atmospheric Physics, CAS*

5AC.7 Oxidation of Polycyclic Aromatic Hydrocarbons in Secondary Organic Aerosol Particles. AMBER KRAMER, 11:15 Kaitlyn J. Suski, Alla Zelenyuk, Staci L. Simonich, David Bell, *Oregon State University*

5AC.8 Fine Particle pH for Beijing Winter Haze as Inferred from Different Thermodynamic Equilibrium Models. 11:30 SHAOJIE SONG, Meng Gao, Weiqi Xu, Jingyuan Shao, Guoliang Shi, Shuxiao Wang, Yuxuan Wang, Yele Sun, Michael McElroy, *Harvard University*

5AM AEROSOL MODELING III

ROOM 260

Qi Ying and Shubha Verma, chairs

5AM.1 Linked Response of Aerosol Acidity and Ammonia to SO₂ and NO_x Emissions Reductions in the US. ABIOLA 9:45 LAWAL, Xinbei Guan, Cong Liu, Lucas Henneman, Vasudha Bhogineni, Rodney J. Weber, Athanasios Nenes, Armistead G. Russell, *Georgia Institute of Technology*

5AM.2 Improving SOA Formation in the Source-oriented WRF/Chem Model (SOWC) in Southeast US and the Air Quality and Climate Impacts. HONGLIANG ZHANG, Anikender Kumar, Michael Kleeman, *Louisiana State University*

5AM.3 Improved Prediction of Aerosol Optical and Chemical properties over the Indian Subcontinent from Constrained Aerosol Simulation. 10:15 Bharath Kumar, SHUBHA VERMA, Olivier Boucher, Rong Wang, *Indian Institute of Technology Kharagpur*

5AM.4 Important Role of Ammonia in New Particle Formation in the Earth's Atmosphere. FANGQUN YU, Alexey 10:30 Nadykto, Gan Luo, Jason Herb, James Schwab, Joseph P. Marto, Junying Sun, Xiaojing Shen, Kirill Nazarenko, Lyudmila Uvarova, *University at Albany*

5AM.5 Aqueous Formation of Low Volatile Organic Compounds using Coupled CMAQ-MCM-CAPRAM. QI YING, Jingyi 10:45 Li, Jianlin Hu, *Texas A&M University*

5AM.6 Parametrisation of the Multi-Component System: HOM+H₂SO₄+NH₃, Measured by the CERN CLOUD Experiment. 11:00 Simone Schuchmann, HAMISH GORDON, Ken Carslaw, Jasper Kirkby, CLOUD Collaboration, *CERN*

5AM.7 Application of Boosted Regression Trees Technique to Analyse Particle Number Count Concentrations [PNC] at the East Coast of Malaysia. 11:15 NOOR ZAITUN YAHAYA, Siew Moi Phang, Azizan Abu Samah, Intan Nabila Azman, Senior Lecturer, *Universiti Malaysia Terengganu, Malaysia*

5AM.8 Understanding Significant Variations of Particle Formation and Number Concentration from Surface to the Upper Troposphere over the Central Pacific Ocean. 11:30 GAN LUO, Fangqun Yu, Charles Brock, Agnieszka Kupc, Christina Williamson, *The State University of New York at Albany*

5AP AEROSOL PHYSICS III

ROOM 274

Cari Dutcher and Jenni Kontkanen, chairs

5AP.1 Understanding the Partitioning of Water and Secondary Organic Matter Using Optically Trapped Single Particles. 9:45 STEPHEN INGRAM, Young-Chul Song, David Topping, Simon O'Meara, Jonathan P. Reid, *University of Bristol*

5AP.2 Growth of Atmospheric Clusters by Organic Vapors: Resolving the Growth Mechanism. JENNI KONTKANEN, 10:00 Tinja Olenius, Markku Kulmala, Ilona Riipinen, *University of Helsinki*

5AP.3 Effect of Temperature on Evaporation of α -Pinene Secondary Organic Aerosol. ZIJUN LI, Angela Buchholz, Olli- 10:15 Pekka Tikkanen, Eetu Kari, Liqing Hao, Taina Yli-Juuti, Annele Virtanen, *University of Eastern Finland*

5AP.4 Effect of Particle Charge on Aerosol Dynamics in Teflon Environmental Chambers. SOPHIA CHARAN, Weimeng 10:30 Kong, Richard Flagan, John Seinfeld, *California Institute of Technology*

5AP.5 Formation and Evaporation Kinetics of Organic Aerosol from Oxidation of Precursor Mixtures by the Nitrate Radical. THOMAS BERKEMEIER, Masayuki Takeuchi, Gamze Eris, Michael Walker, Brent Williams, Nga Lee Ng, *Georgia Institute of Technology*

- 5AP.6 Air Ions – the Key in Understating Features in the Surface Atmospheric Electric Field in Relation to Aerosol Processes in the Lower Atmosphere.** XUEMENG CHEN, Susana Barbosa, Antti Mäkelä, Jussi Paatero, Veli-Matti Kerminen, Tuukka Petäjä, Markku Kulmala, *University of Helsinki, Finland*
11:00
- 5AP.7 Fragmentation of Ionised Atmospheric Clusters inside a Mass Spectrometer.** Monica Passananti, EVGENI ZAPADINSKY, Juha Kangasluoma, Nanna Myllys, Michel Attoui, Hanna Vehkamäki, *University of Helsinki*
11:15
- 5AP.8 Using Droplet Microfluidic Wells to Study Thermodynamics, Morphology, and Phase of Single Aqueous Aerosol Droplet Systems.** Lucy Nandy, CARI DUTCHER, *University of Minnesota, Twin Cities*
11:30

5CA CARBONACEOUS AEROSOL III: OPTICAL PROPERTIES

ROOM 265/266

Jason Olfert and Andrew Metcalf, chairs

- 5CA.1 Off-line Analysis of Cloud Water Samples compared to On-line Measurements of Below-Cloud Aerosol Composition: Inferring Cloud Processing Impacts on Organic Aerosol.** SARA LANCE, Jie Zhang, Amy Christiansen, Annmarie Carlton, Paul Casson, James Schwab, *ASRC, University at Albany, SUNY*
9:45
- 5CA.2 A Study on Light Absorbing Carbon Soot Particles and Their Speciation over Semiarid Region of Indo-Gangetic Basin.** PRATIMA GUPTA, Ashok Jangid, Ranjit Kumar, *DEI, Dayalbagh, Agra, India*
10:00
- 5CA.3 Temperature Matters More than Concentration: CCN-activation of Soot after Exposure to Ozone under Atmospheric Conditions.** FRANZ FRIEBEL, Amewu Mensah, *ETH Zürich*
10:15
- 5CA.4 Characterization Of Laser Derivatized Soot Nanostructure Towards Identifying Its Source.** MADHU SINGH, Randy Vander Wal, *The Pennsylvania State University*
10:30
- 5CA.5 Effects of Uneven Coating on the Absorption Enhancement of Soot Aggregates.** WILLIAM HEINSON, Rajan K. Chakrabarty, *Washington University in St. Louis*
10:45
- 5CA.6 Characterization of a Novel Miniature Inverted Burner for Soot Particle Generation.** Alireza Moallemi, Mohsen Kazemimanesh, JOEL CORBIN, Gregory Smallwood, Jason S. Olfert, Prem Lobo, *National Research Council Canada*
11:00
- 5CA.7 UV-visible Absorption Spectrum of Laboratory-generated Soot Particles.** Al Fischer, Taylor Helgestad, Lindsay Renbaum-Wolff, Andrew Lambe, Arthur J. Sedlacek, Christopher Cappa, Andrew Freedman, Timothy Onasch, Paul Davidovits, GEOFFREY SMITH, *University of Georgia*
11:15
- 5CA.8 Optical Properties and Radiative Forcing of Fractal-like Aggregates of Tar Balls from Wildfire Smoke Plumes.** JANARJAN BHANDARI, Swarup China, Giulia Giroto, Barbara Scarnato, Kyle Gorkowski, Allison Aiken, Manvendra Dubey, Claudio Mazzoleni, *Michigan Technological University*
11:30

5CD AEROSOLS AND HEALTH - CONNECTING THE DOTS I

ROOM 276

Ralf Zimmermann, chair

- 5CD.1 Synergy between Power Plant and Vehicle Emissions Produce Aerosols Linked to Adverse Cardiovascular Outcomes.** RODNEY J. WEBER, Jenny P.S. Wong, Athanasios Nenes, James Mulholland, Armistead G. Russell, Dongni Ye, Stefanie Ebel, Sarnat, *Georgia Institute of Technology*
9:45
- 5CD.2 Tissue-Delivered Dose – Not Exposure Concentration – Allows Conversion of Toxicological Studies into Acceptable Human Exposure Limits.** OTMAR SCHMID, *Helmholtz Zentrum München, Comprehensive Pneumology Center*
10:00
- 5CD.3 A Novel Weighted Sum Method to Measure Particle Geometric Surface Area in Real-Time.** LEO N.Y. CAO, David Y. H. Pui, *University of Minnesota*
10:15
- 5CD.4 Is the Particle Deposition in a Cell Exposure Facility Comparable to the Lungs?** ERWIN KARG, George A. Ferron, Sebastian Oeder, Ralf Zimmermann, *Helmholtz Zentrum München and Rostock University*
10:30

- 5CD.5 Optimization of DAVID Cell Exposure System for Toxicity Analysis of Nanoparticles at the Air-Liquid Interface.** TREVOR TILLY, Ryan Ward, Jiva Luthra, Sarah Robinson, Arantzazu Eiguren Fernandez, Saber Hussain, Tara Sabo-Attwood, John Lednicki, Chang Yu Wu, *University of Florida*
10:45
- 5CD.6 Oxidative Potential of Quinones in Simulated Epithelial Lining Fluid Alone and in Combination with Redox-Active Metals.** KARSTEN BAUMANN, Marco Wietzoreck, Jake Wilson, Pourya Shahpoury, Steven Lelieveld, Haijie Tong, Ulrich Pöschl, Gerhard Lammel, *Max Planck Institute for Chemistry*
11:00
- 5CD.8 A Semi-Automated System for Measuring the Reactive Oxygen Species (ROS) Catalyzed by Ambient Particulate Matter (PM) in a Dithiothreitol (DTT) Assay.** HAORAN YU, Joseph Puthussery, Vishal Verma, *University of Illinois Urbana-Champaign*
11:30

5CM CONTROL AND MITIGATION V

ROOM 264

Sheehan Maura and Min Zhong, chairs

- 5CM.1 Lower Order Representations of Evolving Particle Size Distributions for Rapid Gas-Particle Mass Transfer Simulations during Electrostatic Precipitation.** HEREK CLACK, *University of Michigan*
9:45
- 5CM.2 Development of Filter-free Particle Filtration Unit Utilizing Condensational Growth.** Taejune Park, Miji Lee, Juwon Pyo, DONGGEUN LEE, *Pusan National University*
10:00
- 5CM.3 A Corona Charger System for Improving Particle Filtration Efficiency of Flue Gas Scrubbers and Cyclones in Small Biomass-fired Boilers.** HEIKKI SUHONEN, Ari Laitinen, Miika Kortelainen, Arunas Mesceriakovas, Hanna Koponen, Petri Tiitta, Pasi Yli-Pirilä, Jorma Jokiniemi, Olli Sippula, *University of Eastern Finland, Kuopio, Finland*
10:15
- 5CM.4 Correlation Between Corona Current Distribution and Collection of Sulfuric Acid Aerosol in a Wet Electrostatic Precipitator.** YIFAN WANG, Chenghang Zheng, Xuefeng Zhang, Zhengda Yang, Yi Wang, Dawei Duan, Xiang Gao, *Zhejiang University*
10:30
- 5CM.5 Exploring the Methods of Enhancing the Particle Charge in ESP.** DAWEI DUAN, Chenghang Zheng, Qianyun Chang, Zhengda Yang, Yi Wang, Yifan Wang, Xiang Gao, *Zhejiang University*
10:45
- 5CM.6 Development of Electrodynamic Dust Shield Technology for Solar Energy Applications.** BING GUO, Wasim Javed, Benjamin Figgis, *Texas A&M University at Qatar*
11:00
- 5CM.7 Electro-scavenging of Airborne Particles by Electro Hydrodynamic Atomizer (EHDA) Generated Charged Droplets.** Arshad Khan, Sanjay Singh, B.K. Sapra, Y.S. MAYYA, *Bhabha Atomic Research Centre, Mumbai*
11:15
- 5CM.8 High-efficiency Particulate Removal by Photoionization Enhanced Electrostatic Precipitation.** TANDEEP CHADHA, Jiaxi Fang, Pratim Biswas, *Applied Particle Technology, LLC*
11:30

5IM INSTRUMENTATION III - SINGLE-PARTICLE TECHNIQUES, CHEMICAL ANALYSIS

FERRARA THEATER

Hallie Boyer and Kyle Gorkowski, chairs

- 5IM.1 Scattering Matrices of Single Levitated Particles.** ALEXANDRIA JOHNSON, Maria Zawadowicz, Sara Lance, Daniel Cziczko, *MIT*
9:45
- 5IM.2 Dual-Beam Optical Tweezers Development for Measuring the Dynamic Evolution of Aerosol Surface Tension and Viscosity.** Aidan Rafferty, KYLE GORKOWSKI, Thomas Preston, *McGill University*
10:00
- 5IM.3 Anatomy of Single Airborne Aerosol Particle Using Laser-trapped Submicron Position-resolved Temporal Raman Spectra.** Aimable Kalume, Chuji Wang, Joshua Santarpia, YONG-LE PAN, *U.S. Army Research Laboratory, Adelphi, MD*
10:15
- 5IM.4 Design and Application of Aerosol Optical Tweezers to Explore Temperature Effects on Phase Separation and Acidity of Organic Aerosol at Subzero Temperatures.** HALLIE BOYER, Kyle Gorkowski, Neil Donahue, Ryan Sullivan, *Carnegie Mellon University*
10:30

- 5IM.5 In-Situ Characterization of Aerosol Nanoparticles at Close-To-Ambient Conditions by Small Angle X-Ray Scattering (SAXS).** PAULUS S. BAUER, Heinz Amenitsch, Bernhard Baumgartner, Christian Rentenberger, Paul M. Winkler, *Universitaet Wien & VDSP, Vienna, Austria*
10:45
- 5IM.6 Aerosol Spark Emission Spectrometer (ASES) for the Measurement of Trace Metals Concentration in Particulate Emissions from the Combustion of Coal in a Household Heating and Cooking Stove.** NATHAN REED, Yixiang Zhang, Zhichao Li, Sameer Patel, Jiayu Li, Zehua Wang, Lina Zheng, Pramod Kulkarni, Pratim Biswas, *Washington University in St. Louis*
11:00
- 5IM.7 Measuring Functional Group Composition in Complex Environmental Samples: Infrared Photodissociation of Ions from Secondary Organic Aerosol.** Emma Walhout, Jonathan Martens, Giel Berden, Jos Oomens, Jesse Kroll, RACHEL O'BRIEN, *College of William and Mary*
11:15
- 5IM.8 Bounding Uncertainty in Functional Group Reconstruction of Organic Carbon and Organic Matter Concentrations in PM2.5 For the Improve Monitoring Network.** MATTEO REGGENTE, Ann Dillner, Satoshi Takahama, *EPFL*
11:30

5MS MATERIALS SYNTHESIS IV

ROOM 263

Randy Vander Wal and Jyrki Mäkelä, chairs

- 5MS.1 Spark Production of Internally Mixed Nanoparticles by Oscillating Sparks.** Jicheng Feng, Nabil Ramlawi, George Biskos, ANDREAS SCHMIDT-OTT, *TU Delft*
9:45
- 5MS.2 Scaling-up of Extractor-Free Electrohydrodynamic Emitter Arrays in Linear Configuration.** Nikolas Sochorakis, Jordi Grifoll, JOAN ROSELL-LLOMPART, *Universitat Rovira i Virgili*
10:00
- 5MS.3 Magnetic Nanoparticle Chain Formation in a Combined Electric and Magnetic Field.** CALLE PREGER, Knut Deppert, Maria E Messing, *Lund University*
10:15
- 5MS.4 3D Nano-Printing via Electric-Field Assisted Aerosol Lithography.** WOOIK JUNG, Yoon-ho Jung, Mansoo Choi, *Seoul National University*
10:30
- 5MS.5 Low Temperature Plasma Synthesis of Pure and Uniform III-V Semiconductor Nanoparticles from Bulk Metals.** NECIP BERKER UNER, Elijah Thimsen, *Washington University in St. Louis*
10:45
- 5MS.6 Easy On-demand Aerosol Doping Process to Fabricate Safer Antimicrobial Telluride Nanocomposites.** DAE HOON PARK, Milan Gautam, Sung Jae Park, Jungho Hwang, Jong Oh Kim, Jeong Hoon Byeon, *Yonsei University, Korea*
11:00
- 5MS.7 Plasma Synthesis of Mass-Produced CNT Materials.** BRIAN GRAVES, Jean de La Verpilliere, Simon Engelke, Fiona Smail, Michael De Volder, Adam M Boies, *University of Cambridge*
11:15
- 5MS.8 Nanographene Aerosol Production from Natural Gas by Microwave Plasma.** RANDY VANDER WAL, Arupananda Sengupta, Evan Musselman, Kurt Zeller, George Skoptsov, *The Pennsylvania State University*
11:30

5RA REMOTE/REGIONAL ATMOSPHERIC AEROSOL V: URBAN AEROSOL

ROOM 267

Yinon Rudich and Amy Sullivan, chairs

- 5RA.1 Urban Substrates: Atmospheric Particle-bound Radionuclide Traps - The Example of Beryllium-7.** PHILIPPE LAGUIONIE, Denis Maro, Luc Solier, Marianne Rozet, Didier Hébert, Pierre Rouspard, Olivier Connan, *IRSN*
9:45
- 5RA.3 Particle Emissions from Brakes – Sampling, Quantification and Characterization.** MICHAEL ARNDT, Athanasios Mamakos, Klaus Augsburg, David Hesse, Fekix Wenzel, *AVL List GmbH*
10:15
- 5RA.4 On-road Measurements of Secondary Aerosol and Size Dependent Number Emission Factors for Motorway Traffic Emissions across Europe Using a Mobile Laboratory Setup.** MIIKKA DAL MASO, Joni Heikkilä, Miska Olin, Pauli Simonen, Antti Rostedt, Erkka Saukko, Heino Kuuluvainen, Joni Kalliokoski, Outi Potila, Anssi Järvinen, Mikko Poikkimäki, Topi Rönkkö, Jorma Keskinen, *Tampere University of Technology, Tampere, Finland*
10:30

5RA.5 Phenomenology and Sources of Submicron Aerosol Particles in a Mediterranean Harbour. BENJAMIN CHAZEAU, Grégory Gille, Boualem Mesbah, Brice Temime-Roussel, Henri Wortham, Nicolas Marchand, *Aix-Marseille Université, CNRS, LCE FRE 3416*

5RA.6 PM2.5 and Its Chemical Composition in Sixteen Cities in Indonesia. MUHAYATUN SANTOSO, Diah Lestiani, Syukria Kurniawati, Endah Damastuti, Indah Kusmartini, Djoko Prakoso, Dyah Kumala Sari, Philip K. Hopke, Rita Mukhtar, et al., *Center for Applied Nuclear Science and Technology, BATAN*

5RA.7 The Extinction Coefficient of the Aerosol over the Denver Metropolitan Area: Comparison with a Historic Data Set. HELMUTH HORVATH, Paulus S. Bauer, *University of Vienna, Faculty of Physics, AEP*

5RA.8 Aerosol Chemical Composition Measurements from a Ship Campaign across the Mediterranean and Middle East during the Summer of 2017. JAMES BROOKS, Eoghan Darbyshire, Frank Drewnick, Stephan Borrmann, Hugh Coe, *University of Manchester*

Tuesday 11:45 AM - 1:15 PM
Lunch on Your Own

Tuesday 12:00 PM - 1:00 PM
Industry-Academia Partnership Forum

Tuesday 12:00 PM - 1:00 PM
IARA Board Meeting with Lunch

Tuesday 1:15 PM - 3:00 PM
Fuchs Awards, Lecture & Reception

1:15 **Fuchs Awards, Lecture & Reception** Urs Baltensperger, *Paul Scherrer Institute*

Tuesday 3:00 PM - 5:15 PM
Session 6: Platform

6AC AEROSOL CHEMISTRY VI - PHYSICAL CHEMISTRY OF AEROSOLS

ROOM 275

James Davies and Bryan Bzdek, chairs

6AC.1 Aerosol Droplets Exhibit Stable pH Gradient. Haoran Wei, Qishen Huang, Linsey Marr, PETER VIKESLAND, *Virginia Tech*

6AC.2 Exploring Acidity in 1-10 μm Sized Liquid-Liquid Phase Separated Aerosol Particles. REBECCA CRAIG, Andrew Ault, *University of Michigan*

6AC.3 An Integrated Approach to Connecting the Chemical and Physical Properties of Aerosol. JAMES F. DAVIES, Michael Jacobs, Kevin Wilson, *University of California, Riverside*

6AC.4 Molecularly Resolved Atmospheric Aerosol Processes Studied in Single Levitated Particles Using Electrodynamic Balance Mass Spectrometry. ADAM BIRDSALL, John Hensley, Paige Kotowitz, Andrew Huisman, Frank Keutsch, *Harvard University*

- 6AC.5 Dynamics of Liquid-Liquid Phase-Separation Using Spatial-Resolved Raman Spectroscopy of a Laser-Trapped Mixed Organic-Organic Aerosol Droplet.** AIMABLE KALUME, Chuji Wang, Joshua Santarpia, Patricio Piedra, Yong-Le Pan, *U.S. Army Research Laboratory*
4:00
- 6AC.6 Measurements and Modelling of Surfactant Coated Aerosol Particles.** BRYAN R. BZDEK, Jussi Malila, Nonne Prisle, Jonathan P. Reid, *University of Bristol*
4:15
- 6AC.7 Exploring Chemistry in Microdroplets in a Branched Quadrupole Trap.** MICHAEL JACOBS, James F. Davies, Ryan Davis, Lance Lee, Frances Houle, Kevin Wilson, *Lawrence Berkeley National Laboratory*
4:30
- 6AC.9 Validating a Surface Concentration Model.** Anthony Toribio, Nonne Prisle, ANTHONY S. WEXLER, *University of California, Davis*
5:00

6AE AEROSOL EXPOSURE II: OUTDOOR/INDOOR/PERSONAL EXPOSURE

ROOM 265/266

Yifang Zhu and Joshua Apte, chairs

- 6AE.1 Characterization of Air Pollutants in Delhi during 2017.** HAO GUO, Shovan Sahu, Sri Kota, Hongliang Zhang, *Louisiana State University*
3:00
- 6AE.2 Particulate Matter Concentrations from Urban Settings of Pakistan, China and Europe (UK).** IRFAN ZAINAB, Zulfiqar Ali, Zona Zaidi, Syed Turab Raza, Zaheer Ahmad Nasir, Ian Colbeck, Liu Weilong, *University of the Punjab, Lahore, 54590, Pakistan*
3:15
- 6AE.3 Secondhand Smoke Exposure during the Travel between United States and China: The Association with Urinary Biomarkers of Polycyclic Aromatic Hydrocarbons and Lipid Peroxidation.** Yan Lin, Xinghua Qiu, YIFANG ZHU, *University of California Los Angeles*
3:30
- 6AE.4 Vertical Variations in Outdoor Particulate Matter along the Height of a Tall Building in an Urban Environment.** PARHAM AZIMI, Haoran Zhao, Torkan Fazli, Dan Zhao, Afshin Faramarzi, Luke Leung, Brent Stephens, *Illinois Institute of Technology*
3:45
- 6AE.5 Assessment of Personal Exposure to Particulate Emissions in Urban Microenvironments.** Jie Rui Ngoh, Thi Minh Phuong Tran, RAJASEKHAR BALASUBRAMANIAN, *National University of Singapore*
4:00
- 6AE.6 Neighborhood-scale Spatial Variability of PM Mass and Number and Exposure Misclassification in an Eastern US City.** Hugh Li, Peishi Gu, Qing Ye, Naomi Zimmerman, Ellis Shipley Robinson, R. Subramanian, Joshua Apte, Allen Robinson, ALBERT A. PRESTO, *Carnegie Mellon University*
4:15
- 6AE.7 Early Lessons from New Air Pollution Exposure Science: High-resolution Mapping of Urban Air Quality using Google Street View Cars, Low-cost Samplers, and Aerosol Mass Spectrometry.** JOSHUA APTE, Kyle Messier, Sarah Chambliss, Michael Brauer, Julien Caubel, Shahzad Gani, Steven Hamburg, Thomas W. Kirchstetter, Julian Marshall, Brian LaFranchi, Melissa M. Lunden, Chelsea V. Preble, Albert A. Presto, Christopher Portier, Allen Robinson, Ellis Shipley Robinson, Rishabh Shah, Karin Tuxen-Bettman, Roel Vermeulen, Ramon Alvarez, *University of Texas at Austin*
4:30
- 6AE.8 Child Exposure to Indoor and Outdoor PM at Schools and Homes in the Lisbon Metropolitan Area, Portugal.** VÂNIA MARTINS, Susana Marta Almeida, Tiago Faria, Inês Cunha-Lopes, Carolina Correia, Nuno Canha, Evangelia Diapouli, Manos Manousakas, Konstantinos Eleftheriadis, *C2TN, IST, Universidade de Lisboa, Portugal*
4:45
- 6AE.9 Descriptive Characterization of Personal Exposure to Fine and Ultrafine Particle Among Inner-City Children with Asthma.** Ehsan Majd, KIRSTEN KOEHLER, Meredith McCormack, Nadia Hansel, *Johns Hopkins School of Public Health*
5:00

6AM AEROSOL MODELING IV

ROOM 260

Carlos Larriba Andaluz and Ranganathan Gopalakrishnan, chairs

- 6AM.1 A Computational Study of Electrostatic Focusing of Aerosol Nanoparticles Using A 3-Electrode Einzel Lens.** RAYHAN AHMED, Ranganathan Gopalakrishnan, *The University of Memphis*
3:00

- 6AM.2 A Binary Nucleation Model for Engineering Layered Drug Nanoparticles from Air Jet Atomization of Two-Solute Solutions.** Y.S. MAYYA, Chandra Venkataraman, *Indian Institute of Technology Bombay*
3:15
- 6AM.3 Numerical Model for the Aerosol Formation Process in an Electrically Heated Tobacco Product.** MARKUS NORDLUND, *Philip Morris Products S.A., Switzerland*
3:30
- 6AM.4 A Multiscale Model for Evolving Multispecies Aerosol Deposition and Absorption in the Human Lung.** Ravi Kannan, Z.J. Chen, ANDRZEJ PRZEKOWAS, Florian Martin, Julia Hoeng, Arkadiusz Kuczaj, *CFD Research Corporation*
3:45
- 6AM.5 Numerical Study of Flow Rate Effect on Hygroscopic Aerosol Transport and Deposition in a Basic Mouth-throat Airway with Realistic Wall Conditions.** XIAOLE CHEN, Clement Kleinstreuer, Yu Feng, Tong Lu, Baobin Sun, Wenqi Zhong, *Southeast University*
4:00
- 6AM.6 Understanding Particulate Matter Formation in CO₂ Capture Plants using Molecular Dynamics Simulation.** MEHDI AMOUEI TORKMAHALLEH, Mansurov Ulan, Dhawal Shah, *Chemical and Aerosol Research Team, Nazarbayev University*
4:15
- 6AM.7 Aerosol Formation and Growth in Amine-based CO₂ Scrubber: Experiments and Numerical Simulation.** DAVID I. A. DHANRAJ, Zhichao Li, Pratim Biswas, *Washington University in St. Louis*
4:30
- 6AM.8 A Field Dependent and Orientation Dependent Mobility Calculator: The Next Generation of Electrical Mobility Calculations.** Behram Kapadia, Tianyang Wu, CARLOS LARRIBA-ANDALUZ, *IUPUI*
4:45
- 6AM.9 One Year Comparison of SOA Markers Modelling and Measurements: Seasonality and Gas/Particle Partitioning Evaluation.** GRAZIA MARIA LANZAFAME, Deepchandra Srivastava, Florian Couvidat, Olivier Favez, Bertrand Bessagnet, Alexandre Albinet, *INERIS*
5:00

6CC CLOUDS AND CLIMATE I

ROOM 264

Jurgita Ovadnevaite and Akua Asa-Awuku, chairs

- 6CC.1 Modification of the Versatile Aerosol Concentration Enrichment Factor System (VACES) for Cloud Condensation Nuclei Concentrator Purposes.** CARMEN DAMETO DE ESPAÑA, Anna Wonaschuetz, Gerhard Steiner, Harald Schuh, Constantinos Sioutas, Regina Hitzzenberger, *University of Vienna*
3:00
- 6CC.2 Method to Retrieve Cloud Condensation Nuclei Number Concentrations Using Multiwavelength Raman Lidar.** WANGSHU TAN, Chengcai Li, Yingli Yu, Chunsheng Zhao, *Peking University*
3:15
- 6CC.3 CCN Activity of Secondary Organic Aerosol Largely Controlled by Molecular Weight.** JIAN WANG, John Shilling, Jiumeng Liu, Alla Zelenyuk, David Bell, Markus Petters, Ryan Thalman, Fan Mei, Rahul Zaveri, Guangjie Zheng, *Brookhaven National Laboratory*
3:30
- 6CC.4 A Model Intercomparison of CCN-Limited Tenuous Clouds in the High Arctic.** Robin Stevens, HAMISH GORDON, Katharina Loewe, Christopher Dearden, Antonios Dimitrelos, Anna Possner, Gesa Eirund, Tomi Raatikainen, Adrian Hill, Benjamin Shipway, Jonathan Wilkinson, Sami Romakkaniemi, Juha Tonttila, Ari Laaksonen, Hannele Korhonen, Paul Connolly, Ulrike Lohmann, Corinna Hoose, Annica Ekman, Ken Carslaw, Paul Field, *University of Leeds*
3:45
- 6CC.5 Marine Aerosol Cloud Activation.** JURGITA OVADNEVAITE, Kirsten Fossum, Darius Ceburnis, Colin O'Dowd, *National University of Ireland Galway, Ireland*
4:00
- 6CC.6 The Role of Aerosol-Radiative Forcing on the Monsoon Trough Oscillations.** RAJA BORAGAPU, Padmakumari B., R.S. Mahes Kumar, *Indian Institute of Tropical Meteorology (IITM), Pune, India*
4:15
- 6CC.7 Overview of Fog Water Chemistry in Namibia during the AEROCLO-sA Campaign.** Denise Napolitano, Stéphanie Rrossignol, Chiara Giorio, Roland Mushi, Gillian Maggs-Kölling, Barbara D'Anna, Bruno Coulomb, Jean-Luc Boudenne, Stuart J. Piketh, Andreas Namwoonde, Paola Formenti, Anne Monod, PIERRE HERCKES, *Arizona State University*
4:30
- 6CC.8 Coastal Aerosol and Fog Microphysics in Atlantic Canada.** RACHEL CHANG, Patrick Duplessis, Sean Hartery, Sonja Bhatia, Michael Wheeler, Annie Marie Macdonald, *Dalhousie University*
4:45

6CC.9 Single Particle Measurements of Size and Mixing State of Black Carbon Particles Combined with Simplified κ -Köhler Theory Explains Their Droplet Activation Behaviour Observed in Fog and Clouds. MARTIN GYSEL, Ghislain Motos, Julia Schmale, Joel Corbin, Marco Zanatta, Robin Modini, Urs Baltensperger, *Paul Scherrer Institute*

6CD AEROSOLS AND HEALTH - CONNECTING THE DOTS II

ROOM 276

Otmar Schmid and Vishal Verma, chairs

6CD.1 Lung Capacity of Traffic Wardens Affected by Vehicular Pollution in Lahore, Pakistan. SAIMA YAQUB SHELLY, 3:00 Husna Malik, Zulfiqar Ali, Farkhanda Manzoor, Sammuell Shahzad, Zaheer Ahmad Nasir, *Lahore College for Women University, 54600, Lahore, Pakistan*

6CD.2 Characterization of Electrophilic and Oxidative Potential of Atmospheric Carbonyls. JIN CHEN, Stacy Chen, 3:15 Cody Cullen, C.M. Sabbir Ahmed, Ying-Hsuan Lin, *University of California, Riverside*

6CD.3 Connecting the Dots in Nanotoxicology: From the Bio-Nano-Interface to Adverse Health Effects. Stefano 3:30 Poggio, David Power, Hender Lopez, VLADIMIR LOBASKIN, *School of Physics, University College Dublin*. INVITED.

6CD.4 The Impacts of Dust Storm Particles on Human Lung Cells - an Analysis at the Single Cell Level. KARIN 3:45 ARDON-DRYER, Caroline Mock, Jose Reyes, Galit Lahav, *Department of Geosciences, Texas Tech University, Lubbock, TX*

6CD.5 Measuring the Real-Time Oxidative Potential of Ambient Particulate Matter Using an Online Mist Chamber System. JOSEPH PUTHUSSERY, Chen Zhang, Vishal Verma, *University of Illinois Urbana-Champaign*

6CD.6 Real-time Dosimetry for In-vitro Toxicological Studies of Engineered Nanoparticles (ENPs) at the Air-liquid Interface Using a Quartz Crystal Microbalance (QCM). Yaobo Ding, Patrick Weindl, Clara Wimmer, Paula Mayer, Tobias Krebs, OTMAR SCHMID, *Helmholtz Zentrum München, Germany*

6CD.7 Application of Air-Liquid-Interface (ALI) Based In-Vitro Exposure of Human or Murine Lung Cells and Validation by Selected Animal Exposure Tests in the Framework of the HICE Consortium to Investigate Fresh and Aged Combustion Aerosols. RALF ZIMMERMANN, Maija-Riitta Hirvonen, Jorma Jokiniemi, Gunnar Dittmar, Jeroen Buters, Hanns Rudolf Paur, Carsten Weiß, Bert Buchholz, Tamara Kanashova, Sebastian Oeder, Marco Dilger, Tobias Krebs, Sven Ehlert, Thorsten Streibel, Juergen Schnelle-Kreis, Martin Sklorz, Stefanie Kasurinen, Sebastiano di Bucchianico, Johannes Passig, Jürgen Orasche, Mikko Happonen, Hendryk Czech, Olli Sippula, Pasi Jalava, HICE Consortium, *Helmholtz Zentrum München and Rostock University*

6CD.8 Detection of Living Animal's Exhaled Breath Biomarker (dLABer) System. Haoxuan Chen, Xiangyu Zhang, 4:45 Xinyue Li, Jing Li, MAOSHENG YAO, *Peking University*

6CD.9 Near-Roadway Effects on Expression of Autism Spectrum Disorder-Related Phenotypes. KEITH BEIN, 5:00 Christopher Wallis, Xiao-San Luo, Elizabeth Berg, Michael Pride, Kelley Patten, Anthony Valenzuela, Eduardo Gonzalez, Jill Silverman, Pamela Lein, Anthony S. Wexler, *University of California Davis*

6IB INFECTIOUS BIOAEROSOL I

ROOM 274

Shanna Ratnesar-Shumate and Richard Thomas, chairs

6IB.1 Mechanistic Modeling of Pathogen Transmission. LYDIA BOUROUIBA, *Massachusetts Institute of Technology*. 3:00 KEYNOTE.

6IB.3 Aerosol Particle Emission and Super-emission during Human Speech. SIMA ASADI, Anthony S. Wexler, 3:30 Christopher Cappa, Nicole M. Bouvier, Santiago Barreda, William D. Ristenpart, *University of California Davis*

6IB.4 Novel Method for Identification of Airborne Transmission Using Molecular Epidemiology. Donald Milton, Daniel 3:45 J. Nasko, TODD TREANGEN, *University of Maryland*

6IB.5 Foot-and-Mouth Disease Aerosols: Past and Future Perspectives. CLAIRE COLENUTT, Noel Nelson, Emma Brown, 4:00 Simon Gubbins, *The Pirbright Institute*

- 6IB.6 Stability of Variant H1 Subtype Influenza Viruses in Aged Aerosols and Their Infectivity in the Ferret Model.**
4:15 JOANNA PULIT-PENALOZA, Jessica Belser, Terrence Tumpey, Taronna Maines, *Centers for Disease Control and Prevention*
- 6IB.7 Influenza Virus Maintains Infectivity in Droplets and Aerosols Independent of Relative Humidity.** Karen Kormuth, Kaisen Lin, Aaron Prussin II, Eric Vejerano, Andrea Tiwari, Steve Cox, Mike Myerburg, Seema Lakdawala, LINSEY MARR, *Virginia Tech*
- 6IB.8 Aerosol and Surface Sampling for a Novel H7N2 Influenza A Virus at a New York City Feline Quarantine Facility.** WILLIAM LINDSLEY, Françoise Blachere, Angela M. Weber, Donald Beezhold, Robert Thewlis, Kenneth R. Mead, John Noti, *National Institute for Occupational Safety and Health*
- 6IB.9 Exposure of Cynomolgus Macaques To Small Particle Aerosols Containing H5N1 Avian Influenza Triggers Rapid, Lethal Acute Respiratory Distress Syndrome.** DOUGLAS REED, Elizabeth Wonderlich, Katherine O' Malley, Jennifer Bowling, Amy Hartman, Jonathan Carney, Charles Scanga, Daniel Perez, Simon Barratt-Boyes, *University of Pittsburgh*
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6IM INSTRUMENTATION IV - MASS SPECTROMETRY

FERRARA THEATER

Rachel O'Brien and Markus Mueller, chairs

- 6IM.1 Detection of Polyaromatic Hydrocarbons, as Well as Positive and Negative Inorganic Ions from the Same, Individual Particle.** Johannes Passig, Julian Schade, Robert Irsig, Sven Ehlert, Martin Sklorz, RALF ZIMMERMANN, *Helmholtz Zentrum Munich and Rostock University*
3:00
- 6IM.2 Performance of a New VOCUS-PTRTOF for Detecting Volatile-, Semi-Volatile and Low-Volatile Organic Compounds.** PEKKA RANTALA, Matthieu Riva, Jordan Krechmer, Yanjun Zhang, Olga Garmash, Liine Heikkinen, Felipe Lopez-Hilfiker, Otso Peräkylä, Yonghong Wang, Mikael Ehn, *University of Helsinki*
3:15
- 6IM.3 Factors Affecting the Detection of Fine Particles by Secondary Nanoelectropray Ionization High Resolution Mass Spectrometry.** Dandan Jin, Anthony S. Wexler, Jiafa Zeng, Man Nin Chan, Zhen Zhou, Yong Jie Li, XUE LI, *Jinan University*
3:30
- 6IM.4 Mechanistic Insights into the Ionization of Airborne Nanoparticles via Droplet Assisted Ionization (DAI).** DEVAN E. KERECHAN, Michael J. Apsokardu, Murray Johnston, *University of Delaware*
3:45
- 6IM.5 Utilizing Bromide Chemical Ionization Technique in Detecting Oxidized Organic Compounds.** Xucheng He, YEE JUN THAM, Siddharth Iyer, Mikko Sipilä, Matti Rissanen, *University of Helsinki*
4:00
- 6IM.6 Chemical Composition of Atmospheric Ion Clusters Measured with the New ioniAPI-TOF.** Markus Leiminger, Paul Mutschlechner, Daniel Gunsch, Arttu Ylisirniö, Stefan Feil, Alfons Jordan, Siegfried Schobesberger, Armin Hansel, GERHARD STEINER, *University of Innsbruck*
4:15
- 6IM.7 Aerosol Chemistry Investigations by CHARON-PTR-ToF-MS.** MARKUS MUELLER, Joris Leglise, Tobias Otto, Todd Rogers, Armin Wisthaler, *IONICON Analytik GmbH., Innsbruck, Austria*
4:30
- 6IM.9 An Overview on Evaluation of the New Capture Vaporizer for Aerosol Mass Spectrometers (AMS).** WEIWEI HU, Pedro Campuzano-Jost, Douglas Day, Benjamin A. Nault, Taehyun Park, Taehyoung Lee, Aki Pajunoja, Annele Virtanen, Philip Croteau, Manjula Canagaratna, John Jayne, Douglas Worsnop, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*
5:00
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6MS MATERIALS SYNTHESIS V

ROOM 263

Adam Boies and Alfred Weber, chairs

- 6MS.1 Facile Synthesis of Magnetic Metal-Organic Framework Nanocomposites by Spray-Assisted Synthesis.** MASARU KUBO, Manabu Shimada, *Hiroshima University*
3:00
- 6MS.2 Dynamics of Carbon Nanotube Aerogel Formation.** Christian Hoecker, Bhalerao Ajinkya, Nikolaos Kateris, Jean de La Verpilliere, Brian Graves, ADAM M BOIES, *University of Cambridge, University of Minnesota*
3:15

- 6MS.3 Growth of Sub-5 nm Metal Nanoclusters in Polymer Melt Aerosol Droplets.** Yong Yang, Pankaj Ghildiyal, 3:30 MICHAEL ZACHARIAH, *University of Maryland, College Park*
- 6MS.4 Single Step Synthesis of N/Ti³⁺ Co-Doped TiO₂ Photocatalyst in a Flowing Microdroplet.** LIANG-YI LIN, 3:45 Shalinee Kavadiya, Yao Nie, Bedia Begum Karakocak, Pratim Biswas, *Washington University in St. Louis*
- 6MS.5 Aerosol-assisted Synthesis of a Stable Perovskite Absorber Layer for Application in Photovoltaics.** SHALINEE 4:00 KAVADIYA, Joseph Strzalka, Robin Wheelus, Pratim Biswas, *Washington University in St. Louis*
- 6MS.6 Exploring the Impacts of Drying Dynamics on Final Particle/Granule Morphology Using a New Droplet Chain Instrument.** JIM WALKER, Rachael E.H. Miles, Jonathan P. Reid, *University of Bristol* 4:15
- 6MS.7 Synthesis of Nanoscale Composite of Inorganic Elements And Aerosol Based Delivery for Improving Plant Nutrition.** RAMESH RALIYA, Pratim Biswas, *Washington University in St. Louis* 4:30
- 6MS.8 Polymer Coating of Inorganic Semiconductor Nanoparticles by Aerosol Approach.** Masoom Shaban, Jalal 4:45 Poostforooshan, ALFRED P. WEBER, *TU Clausthal*
- 6MS.9 High Throughput Synthesis of Aerosolized Poly(3,4-ethylenedioxythiophene) (PEDOT) Nanoparticles for Water Dispersible Colloids.** Lu Yang, Clayton Kacica, Shinjita Acharya, Yifan Diao, Luciano Santino, Hongmin Wang, 5:00 Pratim Biswas, JULIO D'ARCY, *Washington University in St. Louis*

6TT AEROSOL TRANSPORT AND TRANSFORMATION I

ROOM 267

Laura Fierce and Georges Saliba, chairs

- 6TT.1 Machine Learning to Predict the Global Distribution of Aerosol Mixing State Metrics.** Michael Hughes, Jack 3:00 Kodros, Jeffrey R. Pierce, Matthew West, NICOLE RIEMER, *University of Illinois at Urbana-Champaign*
- 6TT.2 Simulation of Heterogeneous Oxidation of SO₂ and NO_x in the Presence of Gobi Desert Dust Particles under Urban Environments.** ZECHEN YU, Myoseon Jang, *University of Florida* 3:15
- 6TT.3 Photochemical Model Estimated Fire Impacts on Aerosol Evaluated with Field Studies and Routine Data Sources.** KIRK BAKER, *United States Environmental Protection Agency* 3:30
- 6TT.4 Effects of Near-Source Coagulation of Biomass Burning Aerosols on Global Predictions of Aerosol Size Distributions and Implications for Aerosol Radiative Effects.** EMILY RAMNARINE, Jack Kodros, Jeffrey R. Pierce, 3:45 *Colorado State University*
- 6TT.5 Air Quality Impact of Distributed Combined Heat and Power Facilities.** BO YANG, K. Max Zhang, *Cornell University* 4:00
- 6TT.6 The Mixing State of Aerosol Particles in Asian Outflow Observed in the Spring of 2017.** CUIZHI SUN, Kouji 4:15 Adachi, Kentaro Misawa, Joe Hing Cho Cheung, Charles C.K. Chou, Nobuyuki Takegawa, *Tokyo Metropolitan University*
- 6TT.7 Between Two Oceans: Auckland's Urban Aerosol.** GUY COULSON, Gustavo Olivares, Sally Gray, Oliver Wilson, 4:30 *National Inst of Water & Atmospheric Research, New Zealand*
- 6TT.8 The Effect of Vegetation on the Deposition and Dispersion of Ultrafine Particles Carrying Different Charges.** 4:45 MING-YENG LIN, Gabriel Katul, Andrey Khlystov, Chia-Ren Chu, *National Cheng Kung University*
- 6TT.9 Improved Estimation of Organic Aerosol Volatility Distributions by Combining Thermodesorber and Isothermal Dilution Measurements.** KERRIGAN CAIN, Eleni Karnezi, Spyros Pandis, *Carnegie Mellon University* 5:00

Tuesday 5:15 PM - 6:15 PM Working Group Meetings 2

5:15

Aerosol Chemistry Room 260

- 5:15 **Aerosol Physics** Room 263
- 5:15 **Bioaerosols** Room 264
- 5:15 **Health Effects of Aerosols** Room 265/266
- 5:15 **Combustion and Materials** Room 267

Tuesday 6:15 PM - 8:30 PM
Session 7: Poster

7AC AEROSOL CHEMISTRY VII: POSTERS
EXHIBIT HALL 5

Andrew Ault and Tran Nguyen, chairs

- 7AC.1** **Hygroscopicity Dependent Upon Reaction Between Components in Internally Mixed Sodium Pyruvate and Ammonium Sulfate Aerosols.** Hui Yang, PANG SHUFENG, Yunhong Zhang, *Beijing Institute of Technology*
6:15
- 7AC.2** **Resolving the Factors Governing Particle Phase Photochemistry.** BRYAN R. BZDEK, Lara Lalemi, *University of Bristol*
6:15
- 7AC.4** **The Role of Solvent Environment on the Production of Imidazoles in Secondary Organic Aerosol Mimicking Solutions Containing Glyoxal and Ammonium Sulfate.** ANDREW BERKE, Tara Bhat, Emma Gubbins, Hunter Myers, Amanda Nwankwo, *Smith College*
6:15
- 7AC.5** **Investigating the Link between Molecular Mass, Volatility, and Optical Properties of Light-absorbing Organic Aerosols.** KHAIRALLAH ATWI, Zezhen Cheng, Rawad Saleh, *University of Georgia*
6:15
- 7AC.6** **Observations of Sulfate Aerosol Condensation in Flue Plumes from Coal-Fired Power Plants Equipped with WFGD.** JIANMIN CHEN, Xiang Ding, Di Wu, Xianmang Xu, Qing Li, *Fudan University*
6:15
- 7AC.7** **Daytime and Night-time Atmospheric Aging of Emissions from Combustion Related Sources by Electro spray Ionization Time-of-Flight Mass Spectrometry (EESI-TOF) in a Smog Chamber.** AMELIE BERTRAND, Bin Yuan, Giulia Stefanelli, Yandong Tong, Lu Qi, Liwei Wang, Felipe Lopez-Hilfiker, Sepideh Esmaeilrad, Urs Baltensperger, Imad El Haddad, Jay G. Slowik, Andre S.H. Prévôt, *Paul Scherrer Institute*
6:15
- 7AC.8** **Understanding the Selective Transfer of Carbohydrates from the Ocean to Sea Spray Aerosol.** ELIAS HASENECZ, Hansol Lee, Alexei Tivanski, Elizabeth Stone, *University of Iowa*
6:15
- 7AC.9** **Environmental Factors Affecting Humic-like Substance Production in Photoreactions of Polycyclic Aromatic Hydrocarbons.** JOHN HAYNES, Keith Miller, Brian Majestic, *University of Denver*
6:15
- 7AC.10** **Effects of Criegee Intermediate Scavenger on Secondary Organic Aerosol Formation during α -pinene Ozonolysis.** KEI SATO, Shinichi Enami, Sathiyamurthi Ramasamy, Satoshi Inomata, Takashi Imamura, *National Institute for Environmental Studies, Japan*
6:15
- 7AC.11** **The Predicted Impact of Organic Coatings on Isoprene-Derived Secondary Organic Aerosol Formation.** WILLIAM VIZUETE, Mutian Ma, Yue Zhang, Sri Hapsari Budisulistiorini, Havalala Pye, Jason Surratt, Yuzhi Chen, Ryan Schmedding, Sarah Farrell, *University of North Carolina at Chapel Hill*
6:15
- 7AC.12** **Impact of Ammonium Nitrate Aerosol Formation on Ozone Production in Urban and Rural New York State.** MATTHEW NINNEMAN, Sarah Lu, Pius Lee, Jeffery McQueen, James Schwab, *University at Albany, SUNY*
6:15
- 7AC.13** **Mixing State of Oxalic Acid Containing Particles in the Rural Area of Pearl River Delta, China.** CHUNLEI CHENG, Mei Li, Chak K. Chan, Haijie Tong, Zhen Zhou, *Jinan University*
6:15
- 7AC.14** **Fast Heterogeneous N₂O₅ Uptake and ClNO₂ Production in Summer in Urban Beijing, China.** WEI ZHOU, Jian Zhao, Bin Ouyang, Asan Bacak, Conghui Xie, Qingqing Wang, Junfeng Wang, Yuying Wang, Wei Du, Weiqi Xu, Archit Mehra, Stephen Worrall, Xinlei Ge, Penglin Ye, James Lee, Hugh Coe, Roderic Jones, Pingqing Fu, Zifa Wang, Douglas Worsnop, Yele Sun, *Institute of Atmospheric Physics*
6:15

- 7AC.15 Multivariate Statistical Analysis Methods as a Tool to Study Complex Mass Spectrometry Data Sets.** SINI ISOKÄNTÄ, Eetu Kari, Angela Buchholz, Annele Virtanen, Santtu Mikkonen, *University of Eastern Finland*
6:15
- 7AC.16 Molecular Diffusion Limitations Coupled with Aerosol Aging Initiated by Iron Citrate Photochemistry.** PABLO CORRAL ARROYO, Peter Aaron Alpert, Jing Dou, Beiping Luo, Ulrich Krieger, Markus Ammann, *Paul Scherrer Institut*
6:15
- 7AC.17 A Combination of a Cavity Ring Down Spectrometer and an Electrodynamic Quadrupole to Retrieve Physical and Optical Constants from Single Trapped Particles.** ANTONIO VALENZUELA, Jonathan P. Reid, Allen E. Haddrell, Bryan R. Bzdek, Rose Willoughby, Andrew J. Orr-Ewing, *University of Bristol*
6:15
- 7AC.18 Radiative Absorption by Light Absorbing Carbon: Uncertainty, Seasonal and Spatial Variation in a Typical Polluted City in Yangtze River Delta.** DONG CHEN, Yu Zhao, Ritao Lyu, Jie Zhang, *Nanjing University*
6:15
- 7AC.19 Chemical Composition Changes during Secondary Organic Aerosol Particle Evaporation.** ANGELA BUCHHOLZ, Arttu Ylisirniö, Claudia Mohr, Celia Faiola, Eetu Kari, Andrew Lambe, Zijun Li, Aki Pajunoja, Sergey Nizkorodov, Siegfried Schobesberger, Douglas Worsnop, Taina Yli-Juuti, Annele Virtanen, *University of Eastern Finland*
6:15
- 7AC.20 PRAPPE: Influence of Iron on the Photoaging of Particulate Matter in the Environment.** FRANK LERESCHE, Joseph Salazar, David Pfothenauer, Michael Hannigan, Brian Majestic, Fernando Rosario-Ortiz, *University of Colorado, Boulder*
6:15
- 7AC.22 The Condensed-phase Ozonolysis of an Unsaturated Triglyceride: Reaction Kinetics and Products.** ZILIN ZHOU, Shouming Zhou, Jonathan Abbatt, *University of Toronto, Canada*
6:15
- 7AC.23 Characterization of Aerosol Composition, Aerosol Acidity and Organic Acid Partitioning at an Agriculture-intensive Rural Southeastern U.S. Site.** Theodora Nah, Hongyu Guo, Amy P. Sullivan, Yunle Chen, David Tanner, Athanasios Nenes, Armistead G Russell, Nga Lee Ng, Greg Huey, RODNEY J. WEBER, *Georgia Institute of Technology*
6:15
- 7AC.24 N2O5 Reactive Uptake and Chlorine Activation during Nocturnal Processing of Authentic Biomass Burning Aerosol.** LYDIA JAHL, Lexie Goldberger, Joel A. Thornton, Ryan Sullivan, *Carnegie Mellon University*
6:15
- 7AC.25 High Abundance of Oxalic Acid in a Rural Atmosphere of Eastern Central India: Influence of Biomass Burning and Photochemical Processing.** DHANANJAY KUMAR DESHMUKH, Manas Kanti Deb, Kimitaka Kawamura, Dharmendra Kumar Singh, *Chubu University, Japan*
6:15
- 7AC.26 In-situ Surface Tension Measurements of Hanging Droplet Aerosol Mimics under Photooxidative Conditions.** Thomas Beier, JOSEPH WOO, *Lafayette College*
6:15
- 7AC.27 Assessment of the Influence of Cut-Off Shift Due to Particle Hygroscopic Growth on the Analysis of Its Chemical Composition.** YING CHEN, Oliver Wild, Yu Wang, Liang Ran, Monique Teich, Johannes Größ, Lina Wang, Gerald Spindler, Hartmut Herrmann, Dominik van Pinxteren, Gordon McFiggans, Alfred Wiedensohler, *Lancaster Uni. and TROPOS*
6:15
- 7AC.28 Size-Resolved Physicochemical Properties of Organic Salt Nanoparticles.** Sabrina Chee, Michael Lawler, Kelley Barsanti, Bryan Wong, JAMES SMITH, *University of California, Irvine*
6:15
- 7AC.29 Physical and Chemical Submicron Aerosols Properties and Their Link to Size-resolved Aerosol Hygroscopicity in Summer/Spring of Seoul, Korea.** NAJIN KIM, Minsu Park, Seong Soo Yum, Hye Jung Shin, Jong Sung Park, Joon Young Ahn, *Yonsei University*
6:15
- 7AC.30 Aerosol Acidity Measurement Using Colorimetry Coupled with a UV-Visible Micro-spectrometer and Its Application to Measurements of Organosulfates in Ambient Air.** SHIQI SUN, Myoseon Jang, *University of Florida*
6:15
- 7AC.31 Simultaneous Water Uptake and Size-resolved Bounce Measurement of Secondary Organic Aerosols.** DEVOUN STEWART, David De Haan, Richard Gardner, *University of San Diego*
6:15
- 7AC.32 Temporal Variability of Fine Particle Liquid Water Content over a National Park in Central India.** SAMRESH KUMAR, Ramya Sunder Raman, *Indian Institute of Science Education and Research, Bhopal*
6:15
- 7AC.33 Atmospheric Concentration of Polycyclic Aromatic Hydrocarbons (PAHs) and Nitro- PAHs, Their Temperature Dependence and Gas to Particle Partitioning at a Traffic site in Agra, India.** PUNEET KUMAR VERMA, Dinesh Sah, Rangu Venkata Satish, Neeraj Rastogi, K. Maharaj Kumari, Anita Lakhani, *Dayalbagh Educational Institute, Agra 282005, India*
6:15

- 7AC.34 New Methods for the Study of the Effects of NO_x on SOA Formation.** WEIHAN PENG, David R. Cocker III, 6:15 *University of California, Riverside*
- 7AC.35 Volatility and Chemical Characterization of Secondary Organic Aerosols Formed from Aqueous-Phase Oxidation.** SARAH SUDA PETERS, Barbara Turpin, *University of North Carolina at Chapel Hill*
- 7AC.36 Comparing Organic Speciation of Biomass Burning Aerosol Produced in Laboratory Burns and Prescribed Fires in the Field.** AUDREY DANG, Skyler Simon, Claire Fortenberry, Michael Walker, Christopher Oxford, Benjamin Sumlin, Jiayu Li, Jonathan Myers, Brent Williams, *Washington University in St. Louis*
- 7AC.37 Characterizing the Thermal Desorption Behavior of Hemiacetal and Acetal Oligomers.** MEGAN CLAFLIN, Paul Ziemann, *University of Colorado*
- 7AC.38 Gas-particle Partitioning and Temperature: Competition Between Vapor Pressure Dependence and Phase-state.** CHEN LE, Weihan Peng, Mary Kacarab, David R. Cocker III, *University of California, Riverside*
- 7AC.39 Exploration of Potentially Increasing SO₂ Oxidation in the Eastern United States.** BRET SCHICHTEL, Anthony Prenni, Jenny Hand, Scott Copeland, Kristi Gebhart, John Vimont, William Malm, Jeffrey Collett, *National Park Service*
- 7AC.41 Trends in Organic Aerosol Mass and Functional Group Composition in the SouthEastern Aerosol Research and Characterization (SEARCH) Network from 2008 to 2016.** ANN DILLNER, Alexandra Boris, Andrew Weakley, Bruno Debus, Eric Edgerton, Stephanie L. Shaw, Satoshi Takahama, *University of California, Davis*

7AE AEROSOL EXPOSURE III: POSTERS

EXHIBIT HALL 5

Jun Wang, chair

- 7AE.1 Investigation of Ground Level Aerosol (PM_{2.5}) with Different Mode of Transports in Dhaka, Bangladesh.** 6:15 AHMAD MAJUMDER, M.D. Hossain, Abdullah Nayeem, *Stamford University Bangladesh*
- 7AE.2 Health and Economic Effects of Wildfire in US.** KAIYU CHEN, Hao Guo, Hongliang Zhang, *Louisiana State University*
- 7AE.3 Quantifying the Impact of Wildfires on Air Quality and Human Health: the Case of Equatorial Asia.** 6:15 PAOLA CRIPPA, Stefano Castruccio, Mohd Talib Latif, M.S.M. Nadzir, D. Dominick, Mikinori Kuwata, Abhinav Thota, M.I. Mead, Christine Wiedinmyer, *University of Notre Dame*
- 7AE.4 Spatially-Resolved Comparison of Traffic and Cooking-Related PM₁ Emission in Urban Area and Their Threat to Public Health.** 6:15 Peishi Gu, Zhongju Li, Qing Ye, Ellis Shipley Robinson, Joshua Apte, Allen Robinson, ALBERT PRESTO, *Carnegie Mellon University*
- 7AE.5 Efficiency of Anti-Pollution Masks in Three Microenvironments.** 6:15 BORIS GALVIS, Camila Figueredo, Fabian Moreno, Jorge Pachon, *Universidad de La Salle*
- 7AE.6 Air Quality with Particulate Matter Assessment in Road Tunnels in China and Pakistan.** 6:15 ZONA ZAIDI, Zulfiqar Ali, Romaisa Qureshi, Irfan Zainab, Syed Turab Raza, Zaheer Ahmad Nasir, Ian Colbeck, Liu Weilong, *University of the Punjab, Lahore, 54590, Pakistan*
- 7AE.8 Emission of Particulate Matter, VOCs and PAHs from Different Asphalt Mixes.** 6:15 MENG XIU, Xianyu Wang, Jochen Mueller, Andrew Beecroft, Lidia Morawska, Phong Thai, *Queensland University of Technology*
- 7AE.9 Assessment of Exposure to Bioaerosols and Heavy Metals in a Material Recovery Facility in Central Taiwan.** 6:15 HUI-MING LIU, *Hungkuang University*
- 7AE.10 Exposure to Fine Particulate Matter and Black Carbon during Cycling: A Comparison between London and São Paulo.** 6:15 VERONIKA SASSEN BRAND, Prashant Kumar, Maria de Fatima Andrade, *University of Sao Paulo*

7AM AEROSOL MODELING V: POSTERS

EXHIBIT HALL 5

Kelvin Bates and Mingliang Xie, chairs

- 7AM.1 Atmospheric Relevance of Laboratory Experiments on Ion Composition Based on Ion Composition Simulation.** KALJU TAMME, Aare Luts, Urmas Hõrrak, Jaan Salm, Heikki Junninen, *University of Tartu*
6:15
- 7AM.2 Comparison of Different Aerosol Dynamics Models Based on Accuracy and Computational Time.** GIRISH SHARMA, Sukrant Dhawan, Zhichao Li, David I. A. Dhanraj, Pratim Biswas, *Washington University in St Louis*
6:15
- 7AM.3 Modeling On-road Fine and Ultrafine Particle Concentrations in Los Angeles.** Nu Yu, Shi Shu, Lu Zhang, Yan Lin, Jun Wu, YIFANG ZHU, *UCLA*
6:15
- 7AM.4 Overprediction of Fine Aerosol Nitrate by Chemical Transport Models: The Role of Nighttime Chemistry and Mixing.** Maria Zakoura, SPYROS PANDIS, *University of Patras*
6:15
- 7AM.6 Regional Climate and Air Quality Impacts of Particulate Emissions from Gasoline Direct-Injection (GDI) Vehicles.** SOROUGH ESMAEILI NEYESTANI, Rawad Saleh, *University of Georgia*
6:15
- 7AM.8 Diffusion Limitations and Shielding Effects in the Ozonolysis of Polycyclic Aromatic Hydrocarbons Embedded in Secondary Organic Aerosols.** BRIAN HWANG, Shouming Zhou, Pascale Lakey, Jonathan Abbott, Manabu Shiraiwa, *University of California, Irvine*
6:15
- 7AM.9 Addition of Charge Model to Coupled Flow-Aerosol Dynamics for Glowing Wire Conditions.** KUNAL GHOSH, S.N. Tripathi, Manish Joshi, Y.S. Mayya, Arshad Khan, B.K. Sapra, *IIT Kanpur*
6:15
- 7AM.10 Aerosol Nucleation Activated by Inducing Factors in Coal-Fired Flue Gas: A Simulation Study.** CHENGSI LIANG, Chenghang Zheng, Zhengda Yang, Yi Wang, Weiguo Weng, Xiang Gao, *Zhejiang University, China*
6:15
- 7AM.11 Carbon-, Oxygen-, and Size- Resolved Model to Simulate the Microphysics, Chemistry, and Thermodynamics of Biomass Burning Organic Aerosol.** ALI AKHERATI, Christopher Cappa, Jeffrey R. Pierce, Shantanu Jathar, *Colorado State University*
6:15
- 7AM.12 Estimation of Loss Rates from Chamber Experiment Data Using a Statistical Inverse Approach.** MATTHEW OZON, Aku Seppänen, Ari Leskinen, Jari Kaipio, Kari Lehtinen, *University of Eastern Finland*
6:15
- 7AM.13 The Effect of Fiber Polydispersity on Filtration Modeling.** SEUNGKOO KANG, Da-Ren Chen, David Y. H. Pui, *University of Minnesota*
6:15
- 7AM.14 Sensitivity of Sulfate In-cloud Chemistry and CCN Activation to pH Variability and Mixing State Using a Particle Resolved Model.** YU YAO, Nicole Riemer, Matt Dawson, *University of Illinois at Urbana-Champaign*
6:15
- 7AM.15 Quantifying Errors in CCN Concentration and Aerosol Optical Properties Caused by a Non-Interactive Coarse Mode Using a Particle-Resolved Aerosol Model.** JESSICA GASPARIK, Nicole Riemer, Jeffrey H. Curtis, *University of Illinois at Urbana-Champaign*
6:15
- 7AM.16 Soil NO_x Emissions and Particulate Nitrate Formation in California.** Abhishek Dhiman, Anikender Kumar, Maya Almaraz, Ian Faloon, Benjamin Houlton, MICHAEL KLEEMAN, *University of California, Davis*
6:15
- 7AM.17 Characterization of an Ultra-low Flow-rate Hydrocyclone.** HYUNWOO LEE, Youngjin Seo, *Kumoh national institute of technology*
6:15
- 7AM.18 Modeling the Dynamics of Fractal-Like Soot Aggregates Using the Specialized Aerosol Solver.** VICTOR GRYAZIN, Sergey Beresnev, *Ural Federal University, Ekaterinburg, Russia*
6:15
- 7AM.19 Regional-scale Impacts of Primary Ultrafine Particle Emissions in the United States.** BENJAMIN MURPHY, Francis Binkowski, Ekbordin Winijkul, Matthew Alvarado, *United States Environmental Protection Agency*
6:15
- 7AM.20 Developing the SAPRC Gas-Phase Chemical Mechanism and Chamber-Based SOA Parameterizations for Evaluating Biomass-Burning Derived SOA from Furan and Furan Derivatives.** JIA JIANG, William P. L. Carter, David R. Cocker III, Lindsay Hatch, Kelley Barsanti, *University of California, Riverside*
6:15

7AP AEROSOL PHYSICS IV: POSTERS

EXHIBIT HALL 5

Nishit Shetty and Justin Maughan, chairs

- 7AP.21 Evaluation and Comparison of Aerosol Properties at Two Background Sites in the Central Amazon Rainforest.** MARCO AURÉLIO FRANCO, Luciana Rizzo, Paulo Artaxo, *University of São Paulo*
6:15
- 7AP.22 Mass Accommodation and the Condensation Rate for Nanoclusters.** Huan Yang, Eirini Goudeli, CHRISTOPHER HOGAN JR., *University of Minnesota*
6:15
- 7AP.23 Exploring the Room Temperature Sensing Mechanism of SnO₂ Nano-Columns Synthesized by Aerosol Routes towards Volatile Organic Compounds: Theoretical Calculations Compared to Experimental Results.** AHMED A. ABOKIFA, Kelsey Haddad, John Fortner, Pratim Biswas, *Washington University in St Louis*
6:15
- 7AP.24 Nucleation and Growth of Iodic Particles in the CERN CLOUD Experiment.** XUCHENG HE, Lubna Dada, Siddharth Iyer, Hanna Manninen, Yee Jun Tham, Joao Almeida, Dexian Chen, Dominik Stolzenburg, Changhyuk Kim, Arttu Ylisirniö, Maija Peltola, Theodore Koenig, Henning Finkenzeller, Mario Simon, Andrea Baccharini, Richard Flagan, Neil Donahue, Siegfried Schobesberger, Katrianne Lehtipalo, Rainer Volkamer, Douglas Worsnop, Matti Rissanen, Markku Kulmala, Jasper Kirkby, Mikko Sipilä, *University of Helsinki*
6:15
- 7AP.26 Simulations of Light Scattering from Aligned and Randomly Oriented Polydisperse Aggregates for Determining Aggregate Shape.** GEORGE MULHOLLAND, James Corson, Michael Zachariah, *University of Maryland*
6:15
- 7AP.27 Spreading Ratios for Aqueous to Glassy Aerosol Particles Using Atomic Force Microscopy (AFM).** ZIYING LEI, Nicole Olson, Rebecca Craig, Andrew Ault, *University of Michigan*
6:15
- 7AP.28 Characterizing Mass-resolved Mixing State of Black Carbon in Beijing Using Morphology-Independent Measurement Method.** CHENJIE YU, Dantong Liu, Kurtis Broda, Rutambhara Joshi, Jason S. Olfert, Hugh Coe, James Allan, *University of Manchester*
6:15
- 7AP.29 New Insight Into Arctic Atmospheric Aerosol Formation.** LISA BECK, Clemence Rose, Ella-Maria Duplissy, Matthieu Riva, Federico Bianchi, Olga Garmash, Heikki Junninen, Clara Hoppe, Alexander Schulz, Viola Angelo, Vito Vitale, Mauro Mazzola, David Cappelletti, Markku Kulmala, Veli-Matti Kerminen, Mikko Sipilä, *University of Helsinki*
6:15
- 7AP.30 Contrasting Physical Properties of Black Carbon in Urban Beijing between Winter and Summer.** DANTONG LIU, Rutambhara Joshi, Chenjie Yu, James Allan, Hugh Coe, Michael Flynn, Junfeng Wang, Xinlei Ge, Yele Sun, Pingqing Fu, *University of Manchester*
6:15
- 7AP.31 Theory for the Glory. Extensions of the Surface Wave Mechanism.** CHEYNE WEIS, Christopher Sorensen, *Kansas State University*
6:15
- 7AP.32 Molecular Content of the Critical Clusters of Lower n-Alkanes: Experimental Characterization Using Mass Spectrometric Detection and Small Angle X-ray Scattering.** KEHINDE OGUNRONBI, Martina Lippe, Ruth Signorell, Barbara Wyslouzil, *The Ohio State University*
6:15
- 7AP.33 Errors in Nanoparticle Growth Rates Inferred from Measurements in Chemically Reacting Aerosol Systems.** CHENXI LI, Peter H. McMurry, *University of Minnesota*
6:15
- 7AP.34 Fractal Scaling of Soot Packing density Across Five Size Decades.** PAI LIU, William Heinson, Rajan K. Chakrabarty, *Washington University in St. Louis*
6:15
- 7AP.36 Can Nanodroplets Shatter?** YENSIL PARK, Kehinde Ogunronbi, Barbara Wyslouzil, *The Ohio State University*
6:15
- 7AP.37 Hybrid Fractality and Formation Mechanism of Aerosol Gels.** YULI W. HEINSON, William Heinson, Pai Liu, Rajan K. Chakrabarty, *Washington University in Saint Louis*
6:15
- 7AP.38 Relationships between Scattering Directionality Parameters for Fractal Black Carbon Aerosols.** APOORVA PANDEY, Rajan K. Chakrabarty, *Washington University in St Louis*
6:15
- 7AP.39 Urban Aerosol Size and Concentration: Characterization in a Light Industrial Area 2017/2018 Compared to 2005.** TORSTEN TRITSCHER, Thomas Krinke, Axel Zerrath, Oliver F. Bischof, *TSI GmbH*
6:15
- 7AP.40 Glass Forming Properties of Secondary Organic Aerosol Tracers and Surrogates Examined by Thin Film Dielectric Relaxation Spectroscopy.** YUE ZHANG, Shachi Katira, Jason Injae Jung, Peyton Spencer, Andrew Lee, Andrew Lambe, Wen Xu, Leonid Nichman, Manjula Canagaratna, Zhenfa Zhang, Avram Gold, John Jayne, Jason Surratt, Timothy Onasch, Douglas Worsnop, Paul Davidovits, David Chandler, Charles Kolb, *University of North Carolina at Chapel Hill*
6:15

Ranjit Kumar and Brian Damit, chairs

- 7BA.1 Microbial Population Structure in Aerosols from Near-ground during Fog-haze Days in Northern China.** 6:15 YUNPING HAN, Mengzhu Zhang, Lin Li, Junxin Liu, *Chinese Academy of Sciences*
- 7BA.3 SenseNet Bioaerosol Collector Development.** 6:15 DAVID ALBURTY, Zachary Packingham, Andrew Page, Steven Graham, Ann Packingham, *InnovaPrep LLC*
- 7BA.4 Optical Trapping-Raman Spectroscopy (OT-RS) for Concurrent Characterization and Monitoring of Physical and Chemical Properties of Single Airborne Particles.** 6:15 ZHIYONG GONG, Yong-Le Pan, Gorden Videen, Chuji Wang, *Mississippi State University*
- 7BA.6 Two-Step Laser Desorption/Ionization Mass Spectrometry of Individual Microorganisms by Single Particle Aerosol Mass Spectrometry (SPAMS).** 6:15 DAVID FERGENSON, Sean Kinahan, Joshua Santarpia, *Livermore Instruments Inc.*
- 7BA.7 Pathogenic Bioaerosol Detection in Under 30 Minutes.** 6:15 Robert Ferguson, Corinne Whitby, Dumbrell Alex, IAN COLBECK, *University of Essex, Colchester, CO4 3SQ, UK*
- 7BA.8 Liquid Air Sampler Bias on Bacterial Biodiversity.** 6:15 JOANIE LEMIEUX, Marc Veillette, Nathalie Turgeon, Caroline Duchaine, *CRIUCPQ, Université Laval*
- 7BA.10 Improvement of Cell Extraction from Filters after Bioaerosol Sampling.** 6:15 INKEN SCHULZE-HESSING, Dierk Pöther, Udo Jäckel, *Federal Institute for Occupational Safety and Health*
- 7BA.11 Development and Optimization of the Electrostatic Precipitator with Superhydrophobic Surface (EPSS) Mark III for Collection of Bioaerosols.** 6:15 TAEWON HAN, Nirmala Thomas, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 7BA.12 Development of Wet-cyclone System for Highly Enriched, Continuous and Automated Bioaerosol Sampling in Real Time.** 6:15 YUSUNG CHO, Seung Chan Hong, Ki Joon Heo, Jae Hee Jung, *Korea Institute of Science and Technology*
- 7BA.13 Droplet Microfluidics Based Detector for Bioaerosols.** 6:15 BRIAN DAMIT, *Johns Hopkins University Applied Physics Laboratory*
- 7BA.14 Continuous Bioaerosol Sampling Using the Super-hydrophilic Silica Coated Wet-cyclone System.** 6:15 YUSUNG CHO, Ki Joon Heo, Byoung Uk Lee, Jae Hee Jung, *Korea Institute of Science and Technology*
- 7BA.15 Carbon Stable Isotope Probing Demonstrates Growth of Airborne Methanotrophs.** 6:15 VALDIS KRUMINS, Kevin Dillon, Donna Fennell, *Rutgers, The State University of New Jersey*
- 7BA.16 Comparative Assessment of Conventional, Fluorometric and Molecular Biomarkers of Airborne Microbial Activity during Condensation Capture and Direct Filtration.** 6:15 MARINA NIETO-CABALLERO, Patricia Keady, Nicole Savage, Mark T. Hernandez, *University of Colorado Boulder*
- 7BA.17 Development of an Immunoassay for Detection of the Nitrated Form of Allergenic Ragweed Protein (nAmb a 1).** 6:15 COURTNEY SEFFENSE, J. Alex Huffman, *University of Denver, CO*
- 7BA.19 Effects of Temperature and Water Condensation on the Sampling of Infectious Influenza H1N1 Virus Aerosol through Water-based Condensational Growth.** 6:15 MAOHUA PAN, Leah Carol, Aneal Mamane, John Lednicky, Arantzazu Eiguren Fernandez, Susanne Hering, Hugh Fan, Chang Yu Wu, *University of Florida*
- 7BA.20 Efficiency of a Biotrickling Filter to Reduce Bioaerosol Emissions from Pig Buildings.** 6:15 JONATHAN M. VYSKOCIL, Valérie Létourneau, Matthieu Girard, Ariane Lévesque, Caroline Duchaine, *Université Laval*
- 7BA.22 A Further Investigation of Non-thermal Plasma Inactivation of Airborne Viruses Using a Newly Designed Coaxial Plasma Discharge.** 6:15 TIAN XIA, My Yang, Ian Marabella, Abby Kleinheksel, Eric Monsu Lee, Bernard Olson, Darrick Zarling, Montserrat Torremorell, Herek Clack, *University of Michigan*
- 7BA.24 Investigation of Oxidation Effect in Inactivation by an Electrostatic Precipitator with Humidifier.** 6:15 YAZAWA, Munehiro Shiraisi, Akinori Zukeran, Risei Wada, Jun Sawai, *Kanagawa Institute of Technology*

7BA.25 Performance of Silver, Zinc and Iron Nanoparticles Doped Cotton Filters against Airborne E. coli to Minimize Bio-aerosol Exposure. Attarad Ali, Maohua Pan, TREVOR TILLY, Muhammad Zia, Chang Yu Wu, *Quaid-i-Azam University Pakistan, UF Gainesville USA*

7BA.26 Development of a Novel Biomimetic Platform for Simulating Human Respiratory Infections. David Drewry, Brian Damit, FELIX SAGE, Julia Patrone, *Johns Hopkins University Applied Physics Laboratory*

7CB COMBUSTION I: POSTERS

EXHIBIT HALL 5

Naomi Zimmerman, chair

7CB.1 Chemical Characterization of Combustion Aerosols Related to Wood Combustion and Internal Combustion Engines. THORSTEN STREIBEL, Hendryk Czech, Jürgen Orasche, Toni Miersch, Martin Sklorz, Johannes Passig, Olli Sippula, Jorma Jokiniemi, Benjamin Stengel, Bert Buchholz, Ralf Zimmermann, *University of Rostock and Helmholtz Zentrum Munich, Germany*

7CB.3 Water Sorption Phenomenon on Aerosols Emitted during a Fire: Determination of the influencing Physico-Chemical Parameters. LAURA LINTIS, Alexis Coppalle, François-Xavier Ouf, Cécile Vallières, *Université de Lorraine/IRSN*

7CB.4 Real World Emission Factors of Fine Aerosol and Carbonaceous Constituents from On-Road Transport in India. JAI PRAKASH, Dilip Ganguly, Gazala Habib, *Indian Institute of Technology Delhi*

7CB.5 Chemical Characterization of Biomass Burning Sources Using Targeted and Untargeted Approaches. CAMILLE NOBLET, François Lestremau, Jean-Luc Besombes, Olivier Favez, Serge Collet, Alexandre Albinet, *INERIS*

7CB.6 Waste Burning Tracers in Residential Wood Combustion Area in Estonia. HANNA LII KUPRI, Marek Maasikmets, Riin Rebane, Erik Teinemaa, Viktoria Voronova, *Estonian Environmental Research Centre*

7CB.7 Toxicological and Chemical Characteristics of Fine Particles from Burning of Crop Residues in China. KIN-FAI HO, Jian Sun, Haiyan Ni, Jie Tian, Yongming Han, Junji Cao, Hsiao-Chi Chuang, *The Chinese University of Hong Kong*

7CB.8 Particulate Emissions from Residential Biomass Hydronic Heaters. Patricia Fritz, Brian P. Frank, NICOLE VITILLO, Marilyn Wurth, Jake Lindberg, Shida Tang, Dave Guerrieri, Thomas Wainman, Gil H. LaDuke, Todd Crawford, Nathan Walz, *New York State Dept. of Health*

7CB.9 In-field Emission Measurements of Common Incomplete Combustion Sources in Africa. DAVID PFOTENHAUER, Evan Coffey, Didier Muvandimwe, Christine Wiedinmyer, Rex Alirigia, Ricardo Piedrahita, Desmond Agao, Ernest Kanyomse, Abraham Oduro, Michael Hannigan, *University of Colorado, Boulder*

7CB.11 Chemical Characterization of Particles Emitted from Engine Operated by Natural Gas and Propane. SANNA SAARIKOSKI, Jenni Alanen, Hannu Vesala, Rasmus Pettinen, Mia Isotalo, Sampsa Martikainen, Matthew Bloss, Minna Aurela, Teuvo Maunula, Kauko Kallinen, Jan Torrkulla, Hilikka Timonen, Topi Rönkkö, Kati Lehtoranta, *Finnish Meteorological Institute*

7CB.12 Properties of Carbon Particles Generated by Methane Decarbonization in Oxygen Deficient Gas Streams. Mohammad Javad Afroughi, Farjad Falahati, Larry W. Kostiuik, JASON S. OLFERT, *University of Alberta*

7CB.13 A nvPM Formation and Oxidation Semi-Empirical Model for Gas Turbines in Commercial Aviation. Joseph Abrahamson, RANDY VANDER WAL, *Penn State University*

7CB.14 CAAFCER: Particle Number Emission Factors from In-Flight Aircraft Fueled with Jet A1 and Biofuel Mixtures. STEVEN TRAN, Jason S. Olfert, Anthony Brown, Fred J. Ghatala, *University of Alberta*

7CB.15 PM_{2.5} and Its Carbon Components Emitted from a Diesel Engine Generator Fueled with Waste Cooking Oil-based Biodiesel Blends. Jen-Hsiung Tsai, SHUI-JEN CHEN, Chia-Chin Wu, Kuo-Lin Huang, Jia-Twu Lee, Wen-Yinn Lin, Chih-Chung Lin, *National Pingtung University of Science and Technology*

7CB.16 PM_{2.5}-bound Metal Emission from a Diesel Engine Generator Fueled with Biodiesel Converted from Used Cooking Oil. Jen-Hsiung Tsai, SHUI-JEN CHEN, Chi-Ying Hsieh, Cheng-Hung Tsai, Wen-Yinn Lin, Kuo-Lin Huang, Chih-Chung Lin, *National Pingtung University of Science and Technology*

- 7CB.17 Origin of Soluble Iron from Low-emitting Automobile Exhaust.** JOSEPH SALAZAR, Benton Cartledge, Lynn Russell, Allen Robinson, Greg Drozd, Allen H. Goldstein, Brian Majestic, *University of Denver*
6:15
- 7CB.18 On-Line Measurements of Selenium Emissions from an Operating Coal Fired Power Plant.** Edward Fortner, Joseph Roscioli, Jordan Krechmer, Manjula Canagaratna, Scott Herndon, JOHN JAYNE, *Aerodyne Research, Inc.*
6:15
- 7CB.19 Collection Characteristic of Diesel Nano-Particles in an Electrostatic Precipitator: Experiment Using Residual Fuel Oil and Light Fuel Oil.** HIDETOSHI SAWANO, Akinori Zukeran, Yasumoto Koji, *Kanagawa Institute of Technology*
6:15
- 7CB.20 Sizing Sub-10 nm Particles from Engine Emissions.** JOONAS VANHANEN, Jenni Alanen, Kati Lehtoranta, Sanna Saarikoski, Minna Väkevä, Topi Rönkkö, *Airmodus Ltd.*
6:15

7CC CLOUDS AND CLIMATE II: POSTERS

EXHIBIT HALL 5

Gannet Hallar and Hamish Gordon, chairs

- 7CC.1 Hygroscopicity Measurements near Cloud Indicate Aerosol-Cloud Processing without Interrupting Ambient Measurements.** STEPHEN NOBLE, James Hudson, *Desert Research Institute*
6:15
- 7CC.2 Ccn Characteristics Observed at a High Altitude Site in Western Ghats.** ARSHITHA ANAND K.A., R.S. Maheskumar, *Banaras Hindu University.*
6:15
- 7CC.3 CCN Activity and Particle Growth of Aging Diesel Exhaust Particles.** Humphrey Chukwuto, FRANK BOWMAN, *University of North Dakota*
6:15
- 7CC.4 Characteristics of Cloud Condensation Nuclei in an Urban Region of Central Taiwan.** TA-CHIH HSIAO, Wei-Jen Hsieh, Neng-Huei Lin, Chun-Chiang Kuo, *National Central University*
6:15
- 7CC.5 Large Indirect Radiative Effects of Smoke in the South-east Atlantic.** HAMISH GORDON, Paul Field, Ken Carslaw, *University of Leeds*
6:15
- 7CC.6 Cloud Effects on the Aitken and Accumulation Modes.** JAMES HUDSON, Stephen Noble, *Desert Research Institute*
6:15
- 7CC.7 Cloud and Aerosol Optical Analysis for Temperate Zona.** Ibtissam Marsli, MOHAMMED DIOURI, Djamaledine Chaabane, *Atmospheric Physic, LME, University of Oujda, Morocco*
6:15
- 7CC.8 Presence of Photosynthetic Microorganisms in Clouds.** KEVIN DILLON, Pierre Amato, Martine Sancelme, Valdis Krumins, Anne Marie Delort, Donna Fennell, *Rutgers, The State University of New Jersey*
6:15
- 7CC.9 Hazardous Ice Cloud Avoidance Using Airborne LiDAR Remote Sensors.** RICHARD STONE, Justin Fisher, *Sigma Space Corporation*
6:15
- 7CC.10 The Cloud Feedback on the Heating Rate of Black Carbon and Brown Carbon.** FERRERO LUCA, Grisa Mocnik, Gregorič Asta, Cogliati Sergio, Colombo Roberto, Rizzi Cristiana, Di Liberto Luca, Barnaba Francesca, Gobbi Gian Paolo, Bolzacchini Ezio, *GEMMA Centre, DISAT, University of Milano-Bicocca*
6:15
- 7CC.11 Characterization of Phase Changes in Clouds Using Hyper-spectral LIF-LIDAR.** OFIR SHOSHANIM, Adva Baratz, *Israel Institute for Biological Research (IIBR)*
6:15
- 7CC.13 Aerosol-Cloud Measurements during the NASA NAAMES Campaign: Summary of Data and Cloud Droplet Sensitivities.** RICHARD MOORE, Ewan Crosbie, Luke Ziemba, Mary Kacarab, Athanasios Nenes, Gao Chen, Johnathan Hair, Chris Hostetler, Claire Robinson, Michael Shook, Kenneth Thornhill, Edward Winstead, Bruce Anderson, *NASA*
6:15
- 7CC.14 New Particle Formation Impacting Cloud Condensation Nuclei Concentration.** ANNA GANNET HALLAR, Lauren Zuromski, Ian McCubbin, Douglas Lowenthal, *University of Utah*
6:15

7CD AEROSOLS AND HEALTH - CONNECTING THE DOTS III: POSTERS

EXHIBIT HALL 5

Otmar Schmid and Vishal Verma, chairs

- 7CD.1 Oxidative Potential of Ambient Aerosols: First Measurement over Santiago Metropolitan Area.** Carolona Molina, Vishal Verma, Victor Vargas, LEIVA G. MANUEL A., *Facultad de Ciencias, Universidad de Chile*
6:15
- 7CD.2 Intranasal Airway Deposition of Dry Particles in Physical Models of Children and Adults during Inspiratory Flow Rates Representing Rest, Light, Moderate and Heavy Activity.** Jana Kesavan, VALERIE J. ALSTADT, Jerold Bottiger, Keith Sedberry, Beth Laube, *US ARMY ECBC*
6:15
- 7CD.4 Investigating the Effects of Cookstove Emissions on Ocular and Cancer Cells.** BEDIA KARAKOCAK, Sameer Patel, Nathan Ravi, Pratim Biswas, *Washington University in St Louis*
6:15
- 7CD.5 Reactive Oxygen Species of Ambient Water-soluble PM_{2.5} in the North and Northwestern China: Contrasts in Concentration and Sources.** YAQING ZHOU, Rujin Huang, Junji Cao, *Key Laboratory of Aerosol Chemistry and Physics, IEECAS*
6:15
- 7CD.6 A New Risk Grouping Concept for High Aspect Ratio Materials - The Fibre Dustiness Test by Vibro-Fluidization.** ELISABETH HEUNISCH, Dirk Broßell, Volker Bachmann, Nico Dziurawitz, Carmen Thim, Daniela Wenzlaff, John Schumann, Kerstin Kämpf, Asmus Meyer-Plath, Sabine Plitzko, *Federal Institute for Occupational Safety and Health (BAuA)*
6:15
- 7CD.7 Oxidative Potential of Ambient Fine Aerosol during Intense Biomass Burning over the Indo-Gangetic Plain-India.** ANIL PATEL, Rangu Venkata Satish, Atinderpal Singh, Darshan Singh, Neeraj Rastogi, *Physical Research Laboratory, Ahmedabad, India*
6:15
- 7CD.8 Identification of Toxicity Parameters Associated with Combustion Produced PM_{2.5} Surface Chemistry and Particle Structure by in Vitro Assays.** RANDY VANDER WAL, Madhu Singh, Patricia Silveyra, Joshua Muscat, *The Pennsylvania State University*
6:15
- 7CD.9 Near-Roadway Effects on the Progression of Alzheimer's Disease.** KEITH BEIN, Christopher Wallis, Xiao-San Luo, Kelley Patten, Anthony Valenzuela, Elizabeth Berg, Jill Silverman, Pamela Lein, Anthony S. Wexler, *University of California Davis*
6:15
- 7CD.10 Evidence of Atmospheric Secondary Transformation of Transition Metals and Impact on Particle Oxidative Potential.** ZHI NING, *City University of Hong Kong*
6:15
- 7CD.11 Generating Biodiesel and Fossil Diesel Exhaust Particles with Varied Physico-Chemical Properties for Toxicological Studies.** LOUISE GREN, Vilhelm B. Malmberg, Pravesh C. Shukla, Sam Shamun, Christina Isaxon, Per Axel Clausen, Martin Tunér, Ulla Vogel, Joakim Pagels, *Ergonomics and Aerosol Technology, Lund University, Sweden*
6:15
- 7CD.12 Toxicity Testing in Human Airway Epithelial Cells for Particulate Emissions Resulting from Alternative Fuels.** C.M. SABBIR AHMED, Jin Chen, Jiacheng Yang, Cody Cullen, Georgios Karavalakis, Ying-Hsuan Lin, *University of California, Riverside*
6:15
- 7CD.13 Reactive Oxygen Species Generation by Particle Size-dependent Transition Metal Ions using a Kinetic Multi-layer Model in the Epithelial Lining Fluid.** TING FANG, Pascale Lakey, Rodney J. Weber, Manabu Shiraiwa, *University of California, Irvine*
6:15
- 7CD.14 Spatial and Seasonal Patterns in the Oxidative Burden of Ambient Particulate Matter in Urban Centres.** ALISON TRAUB, Cheol H. Jeong, Cuilian Fang, Maryam Shekarrizfard, Ryan Kulka, Hongyu You, Marianne Hatzopoulou, Scott Weichenthal, Greg J. Evans, *SOCAR, University of Toronto*
6:15
- 7CD.15 Non-additive Effects of the Mixture of Metals and Organic Compounds to Mammalian Cell Cytotoxicity of Particulate Matter (PM).** YIXIANG WANG, Michael Plewa, Vishal Verma, *University of Illinois at Urbana-Champaign*
6:15
- 7CD.16 Toxicity Evaluation of Secondary Organic Aerosol on Human Lung Cells.** PRATITI HOME CHOWDHURY, Tanya Lasitza Male, Quanfu He, Michal Pardo, Yinon Rudich, *Weizmann Institute of Science*
6:15
- 7CD.17 Simultaneous Measurements of Lung Deposited Surface Area, Particle Number Concentration, Particle Size, and Black Carbon Concentration to Characterize Near-roadway and Biomass Source Emissions.** MARILYN WURTH, Brian P. Frank, Gil H. LaDuke, Oliver Rattigan, H. Dirk Felton, Jake Lindberg, Nicole Vitillo, Patricia Fritz, Thomas Wainman, *New York State Dept. of Environmental Conservation*
6:15
- 7CD.18 Oxidative Potential and Cellular Oxidant Production from Biomass Burning Aerosol.** Wing-Yin Tuet, Nilmara de Oliveira Alves, Shierly Fok, Dong Gao, Paulo Artaxo, Perola Vasconcellos, Julie Champion, Rodney J. Weber, NGA LEE NG, *Georgia Institute of Technology*
6:15

- 7CD.19 ROS-Generating Capacity of Particulate Matter over two Cities in Eastern Mediterranean.** DESPINA PARASKEVOPOULOU, Irini Tsiodra, Aikaterini Bougiatioti, Athanasios Nenes, Nikolaos Mihalopoulos, *National Observatory of Athens*
6:15
- 7CD.20 Surface Area Is the Biologically Most Relevant Dose Metric for Particle-Induced Inflammation in the Lung.** OTMAR SCHMID, Kristina B. Knudsen, Sarah Søs Poulsen, Yaobo Ding, Rambabu Atluri, Kirsten Kling, Anne T Saber, Nicklas R. Jacobsen, Keld A. Jensen, Håkan Wallin, Tobias Stoeger, Ulla Vogel, *Helmholtz Zentrum Munchen, Comprehensive Pneumology Center*
6:15
- 7CD.21 Biofuels: Largest Global Lung-cancer Risk in the 21st Century.** SIJIA LOU, ManishKumar Shrivastava, Alla Zelenyuk, Richard Easter, Philip Rasch, Jerome Fast, Staci L. Simonich, Huizhong Shen, Brian Thrall, Shu Tao, *Pacific Northwest National Laboratory*
6:15

7CM CONTROL AND MITIGATION VI: POSTERS

EXHIBIT HALL 5

Parham Azimi and Parichehr Salimifard, chairs

- 7CM.2 Effect of Dust Loading on Cleaning of Solar Panels by Electrostatics.** JOSHUA UDWARDY, Jennifer Chesnutt, Bing Guo, Chang Yu Wu, *University of Florida*
6:15
- 7CM.4 Collection Performance of Nanofiber/Microfiber Mixed Air Filter Prepared by Wet Paper Processing.** Youichi Omori, TIANYI GU, Li Bao, Yoshio Otani, Takafumi Seto, *Kanazawa University*
6:15
- 7CM.5 Development and Performance Evaluation of Venturi Scrubber for Dust & Gases at Vertical Shaft Limekiln Industry.** PRASHIK MANWATKAR, Padma Rao, Anirban Middey, Ashish Patil, *CSIR-NEERI*
6:15
- 7CM.6 Control of Particles in the Pulsed Plasma Reactor for SO_x Removal.** CHANG GYU WOO, Hak-Joon Kim, Yong-Jin Kim, Bangwoo Han, *Korea Institute of Machinery and Materials*
6:15
- 7CM.7 Numerical Investigations on the Effectiveness of Urban-scale SALSCS under Idealized Atmospheric Conditions by Using a Large-eddy Simulation Model.** QINGFENG CAO, Lian Shen, Sheng-Chieh Chen, David Y. H. Pui, *University of Minnesota*
6:15
- 7CM.8 Mist Removal Performance of a Novel Electrostatic Mist Eliminator Combined with a Flue Gas Desulfurization Process in a Coal-fired Power Plant.** Hak-Joon Kim, Kim Jin-Seon, Kim Myungjoon, Bangwoo Han, Chang Gyu Woo, YONG-JIN KIM, Lee Sangrin, *Korea Institute of Machinery and Materials*
6:15
- 7CM.9 Filtration Performance and Particle Loading Characteristics of Various Beaded Nanofiber Filter Media.** SEONG KIM, H. Young Chung, David Y. H. Pui, *University of Minnesota*
6:15
- 7CM.10 Electrostatic Precipitation of Ultrafine Particles in the Corrosive Gas Condition with a Novel Ion Injection Type Charger.** Hak-Joon Kim, YONG-JIN KIM, Bangwoo Han, Chang Gyu Woo, Jong-Pil Yoon, *Korea Institute of Machinery and Materials*
6:15

7ES AEROSOLS IN EARTH SYSTEM I: POSTERS

EXHIBIT HALL 5

Michael Giordano and Sagar Rathod, chairs

- 7ES.2 Air Pollution and Control: Past, Present and Future.** SHUNXIANG HUANG, *Institute of Chemical Defense*
6:15
- 7ES.3 Scattering and Absorption Properties of Aerosols in Amazonia Using Remote Sensing (AERONET) and in situ Measurements.** FERNANDO MORAIS, Eduardo Landulfo, Paulo Artaxo, *University of Sao Paulo*
6:15
- 7ES.6 Aerosol Size Distributions over the Indo-Gangetic Plains Just Prior to the Onset of SW-Monsoon.** MUKUNDA M GOGOI, Suresh Babu, S.K. Satheesh, Krishna K Moorthy, *Vikram Sarabhai Space Centre*
6:15
- 7ES.9 Mineralogically-Speciatiated and Size-Resolved Global Combustion-Iron Emission Inventory.** SAGAR RATHOD, Tami Bond, *University of Illinois at Urbana Champaign*
6:15

- 7ES.10 Evaluation of Six Years of Aerosol Chemical Speciation Monitor Data from the ARM Southern Great Plains Site.** THOMAS WATSON, *Brookhaven National Laboratory*
6:15
- 7ES.11 Aerosol-Induced Changes to Cloud Radiative Forcing over Indian Subcontinent.** ABIN THOMAS, Vijay Kanawade, Chandan Sarangi, S.N. Tripathi, Srilakshmi Sunkara, *University of Hyderabad*
6:15
- 7ES.12 Investigation of Concentration Variability, Sources and Atmospheric Transformations of Short-lived Climate Pollutants (SLCPs) at the Rural-site of Indo-Gangetic Plain (IGP), India.** Jai Prakash, Harsh Raj Mishra, Atul Kumar, Bhilok Chand, Mattias Hallquist, Gazala Habib, Geetam Tiwari, Jan B. C. Pettersson, Johan Boman, Håkan Pleijel, RAVI KANT PATHAK, *University of Gothenburg, Sweden*
6:15
- 7ES.13 Hygroscopicity and Mixing State of Fine Aerosols in the South Eastern Mediterranean Sea and around the Arabian Peninsula during the AQABA Campaign.** SPYRIDON BEZANTAKOS, Konstantinos Barmounis, Michael Pikridas, George Biskos, *The Cyprus Institute, Nicosia, Cyprus*
6:15
- 7ES.15 Correlations between PM_{2.5} Concentration and Local Meteorological Conditions with Focus on Statistical Models to Retrieve Long Term PM_{2.5} Proxy Data: A Case Study in Chengdu, China.** LEI LUO, Xinying Tang, Pengping Wu, Ling Wang, *Institute of Plateau Meteorology, CMA, Chengdu*
6:15
- 7ES.16 Spatial and Temporal Variation Aspects of Aerosol Black Carbon Concentration over India.** RAVI RANJAN KUMAR, Vijay Kumar Soni, Sateesh M., M.K. Jain, Sanjay Bist, Siddhartha Singh, *India Meteorological Department*
6:15
- 7ES.17 Declining Dust over the Indian Sub-Continent: Signature of a Changing Regional Climate.** Velu Vinoj, S.K. PANDEY, Kiranmayi Landu, Suresh Babu, *IIT Bhubaneswar*
6:15

7IA INDOOR AEROSOLS V: POSTERS

EXHIBIT HALL 5

Hongliang Zhang, chair

- 7IA.1 Diurnal Variation of Particle Mass Concentration at Underground Subway Tunnel near the Platform.** Sang-Hee Woo, Jong Bum Kim, GWI-NAM BAE, Moon Se Hwang, Hwa Hyun Yoon, *Korea Institute of Science and Technology, Seoul, Korea*
6:15
- 7IA.2 Generation Characteristics of Nanoparticles Emitted under Subway Cabin in Operation.** YONGIL LEE, Kyomin Choi, Wonseog Jung, Taesung Kim, Duckshin Park, *Korea Railroad Research Institute*
6:15
- 7IA.3 Indoor Black Carbon and Particle Number Concentrations at Two Intercity Bus Terminals in Taipei City.** YU-HSIANG CHENG, An-Chi Li, *Ming Chi University of Technology*
6:15
- 7IA.4 Assessment of Indoor Air Quality in a Beauty Salon.** Estela Vicente, Carlos Blanco-Alegre, Fernanda Oduber, Ana Isabel Calvo, Amaya Castro, Roberto Fraile, Mário Cerqueira, Teresa Nunes, CÉLIA ALVES, *University of Aveiro*
6:15
- 7IA.5 The Impact of Tobacco Heating System on the IAQ in a Night Club Environment.** DAINIUS MARTUZEVICIUS, Marija Meišutovič-Akhtarjeva, Tadas Prasauskas, Darius Ciužas, Karolina Keraitytė, Violeta Kaunelienė, *Kaunas University of Technology, Lithuania*
6:15
- 7IA.9 A New Computer Model for the Simulation of Secondary Organic Aerosol Formation from Stir-frying Additives Using Aspen Plus.** MEHDI AMOUEI TORKMAHALLEH, Fariza Aldemkhan, *Chemical and Aerosol Research Team, Nazarbayev University*
6:15
- 7IA.10 Atmospheric Particulate Matter: A Threat to the Health of Raffaello.** PAOLA FERMO, Valeria Comite, Silvana De Iuliis, Carlo Giglioni, Stefania Gilardoni, Davide Gulotta, Francesca Migliorini, Lucia Toniolo, *University of Milan, Italy*
6:15
- 7IA.11 Effect of a Two-Stage Type Electrostatic Precipitator on Collection Efficiency and Ozone Concentration.** KOJI YASUMOTO, Hidetoshi Sawano, Kohei Ito, Akinori Zukeran, *Kanagawa Institute of Technology*
6:15

7IB INFECTIOUS BIOAEROSOL II: POSTERS

EXHIBIT HALL 5

Mara Otero-Fernandez and Jeremy Boydston, chairs

- 7IB.1 Potential for Long-Distance Atmospheric Transmission of Influenza Virus.** LINSEY MARR, Pei-Shih Chen, Virginia Tech
6:15
- 7IB.3 Inactivation of Aerosolized Bacillus Anthracis Spores in the Vicinity of a Flame: Simulation Study.** WORRAWIT NAKPAN, Michael Yermakov, Reshmi Indugula, Tiina Reponen, Sergey A. Grinshpun, University of Cincinnati
6:15
- 7IB.4 The Effect of Humidity on the Viability of Aerosolised Bacterial Agents.** EMMA KEYSER, Carwyn Davies, DSTL
6:15
- 7IB.5 Development of an Inhalational Francisella Tularensis Exposure Therapeutic Model in New Zealand White Rabbits.** ROY BARNEWALL, Chrs Cirimotich, Susan Reed, Kristin Patton, Heather Northup, Amber Lindsay, Phyllis Herr-Calomeni, Brian Miller, Gloria Sivko, Battelle, Columbus Ohio
6:15
- 7IB.7 Insights into the Phenotypic and Virulence Differences Observed in Two Lineages of Burkholderia pseudomallei 1026b.** GREGORY WILLIAMS, Jeremy Boydston, John Yeager, David Dawson, Ryan Bartlett, Angelo Scorpio, Paul Dabisch, Ian Gut, NBACC
6:15
- 7IB.8 Influence of HVAC Operation on the Dissemination Pattern of Aerosolized Simulant Pathogen Particles in a Clinical Bio-Containment Unit.** David Drewry, JENNIFER THERKORN, Thomas Pilholski, Gregory Bova, Kathryn Shaw-Saliba, Lauren Sauer, Brian Garibaldi, Johns Hopkins University Applied Physics Laboratory
6:15
- 7IB.9 Disease Progression in African Green Monkeys Exposed to Small Particle Aerosolized Nipah Virus.** MATTHEW LACKEMEYER, Lucy Cong, Michael Holbrook, Kyle Bohannon, Peter Jahrling, NIAID
6:15
- 7IB.10 Host Transcriptomic Responses Predict Disease Severity in Nonhuman Primates Exposed to Small or Large Particle Aerosols Containing Burkholderia pseudomallei.** JEREMY BOYDSTON, Adrian Caciula, Paul Dabisch, Xiaoyu Che, John Yeager, Jill Taylor, Gregory Williams, Ian Lipkin, Michael Hevey, Angela Rasmussen, BNBI / DHS NBACC
6:15
- 7IB.11 Evaluation of Ozone Efficiency to Reduce Airborne Virus Concentration in Ventilation Ducts.** NATHALIE TURGEON, Jean-Gabriel Turgeon, Jonathan M. Vyskocil, Caroline Duchaine, CRIUCPQ, Université Laval
6:15
- 7IB.12 Preliminary Evaluation of Commercial Bioaerosol Sampling Equipment in the Collection of Viable Aerosols of Clostridium difficile.** CASEY COOPER, Kathleen Aithinne, David L. Johnson, University of Oklahoma
6:15
- 7IB.14 Identification of Toxic Mold Genes in Aerosolized Stachybotrys.** Rhapsody Dearing, Qi Yao, Parisa Moghaddam-Taaheri, Amy Karlsson, AKUA ASA-AWUKU, University of Maryland, College Park
6:15
- 7IB.15 Surveillance and Detection of Influenza Viruses in Live Poultry Markets in Kunshan, China.** Xinye Wang, EMILY BAILEY, William Lindsley, Gregory Gray, Duke University
6:15
- 7IB.16 Concentration Profile of Influenza Virus in Day Care Centers.** YU-CHUAN YEN, Yi-Lian Lee, Pei-Shih Chen, Kaohsiung Medical University
6:15
- 7IB.17 Designed Micro-particles for Targeted Delivery of Anti-Tubercular Drugs.** CHETHANI ATHUKORALA, Hema Priyamvada, Shantanu Sur, Suresh Dhaniyala, Clarkson University
6:15
- 7IB.18 Antibiotic Resistance Genes Spread via Exhaled Breath.** YUNHAO ZHENG, Jing Li, Xinyue Li, Maosheng Yao, Peking University
6:15
- 7IB.19 Viability of Aerosolized Murine Noroviruses in Experimental Setup.** MALIN ALSVED, Anders Widell, Mats Bohgard, Patrik Medstrand, Jakob Löndahl, Lund University, Sweden
6:15
- 7IB.20 Development of an Inhalational Animal Model of Q Fever.** SARA RUIZ, Aysegul Nalca, US Army Medical Research Institute of Infectious Diseases
6:15
- 7IB.21 B. anthracis Spore Persistence Following Aerosol Challenge in New Zealand White Rabbits.** SARA RUIZ, Aysegul Nalca, US Army Medical Research Institute of Infectious Diseases
6:15
- 7IB.22 Strategies for the Deployment of a Bioaerosol Air Sampling Network Following a Wide Area Attack.** JONATHAN THORNBURG, Paul Mobley, Jean Kim, Prakash Doraiswamy, Timothy Boe, John Archer, M. Worth Calfee, Leroy Mickelsen, Sang Don Lee, RTI International
6:15
- 7IB.23 Aerosol Sampler Selection Impacts Quantification of Viable Burkholderia Pseudomallei.** JILL TAYLOR, Michael Schuit, Paul Dabisch, BNBI / DHS NBACC
6:15

- 7IB.24 Modeling the Aerobiologic Transmission of Tuberculosis: Aerosol Studies using the Nonhuman Primate.**
6:15 RACHEL REDMANN, Stephanie Killeen, Nadia Golden, Deepak Kaushal, Chad J. Roy, *Tulane University*
- 7IB.25 Characterization of Aerosolized Middle East Respiratory Syndrome Coronavirus Infection in African Green Monkey Model.** Allison Totura, Virginia Livingston, Ondraya Frick, David Dyer, AYSEGUL NALCA, *USAMRIID*
- 7IB.26 Downstream Effects of Ameobic Co-culture on B. pseudomallei.** SARA RUIZ, Katie Beck, Aysegul Nalca, *US Army Medical Research Institute of Infectious Diseases*

7IM INSTRUMENTATION V: POSTERS

EXHIBIT HALL 5

Allison Aiken and Ryan Sullivan, chairs

- 7IM.2 Signal Detection for the Measurement of Aerosol Scattering Coefficients with an Integrating Nephelometer.** HANS MOOSMULLER, Herbert Schloesser, *Desert Research Institute*
- 7IM.3 Enabling Long-Term Operation of a Motion-Tolerant, Water-Based Condensation Particle Counter.** STEVEN SPIELMAN, Gregory Lewis, Nathan Kreisberg, Susanne Hering, *Aerosol Dynamics Inc.*
- 7IM.4 Numerical Simulation of a Parallel-plate Separator for PM_{2.5}.** TAKUTO YONEMICHI, Koji Fukagata, Kentaro Fujioka, Tomoaki Okuda, *Keio University*
- 7IM.5 Measurement of Effective Density of Submicron-sized Ambient Aerosols Using a Lab-made Single Stage Low-pressure Impactor with Scanning Mobility Particle Sizer.** JANG-SEOP HAN, Junho Hyun, Jungho Hwang, *Yonsei University, Korea*
- 7IM.6 Calibration of Particle Number Concentration by Mobility-based Particle Size Distribution Instruments with Metrological Traceability.** YOSHIKO MURASHIMA, Hiromu Sakurai, *AIST*
- 7IM.7 Measurement of Continuous PM and Black Carbon in a Wood Stove Dilution Tunnel.** GEORGE ALLEN, Lisa Rector, *NESCAUM*
- 7IM.9 Characterization of a Dimer Preparation Method for Nanoscale Aerosol.** NICHOLAS ROTHFUSS, Sarah Suda Petters, Markus Petters, *North Carolina State University*
- 7IM.10 Direct Measurement of Dust Concentration by Shadowgraphy Method—Direct Image Particle Analysis (DIPA).** SHENG-CHIEH CHEN, Seungkoo Kang, Wing-Tak Lai, David Y. H. Pui, *Virginia Commonwealth University*
- 7IM.11 FTIR Method for Continuous Real Time Aerosol Characterization for In-vivo Studies.** WEI TECK TAN, Subash Krishnan, Patrick Vanscheeuwijck, *Philip Morris International Research Laboratories Pte Ltd*
- 7IM.12 Correlating SMPS Size Distribution to spICP-MS Size Distribution for Flame Synthesized Titanium Dioxide Nanoparticles.** NATHAN REED, Sanmathi Chavalmane, Ramesh Raliya, Sungyoon Jung, Pratim Biswas, *Washington University in St. Louis*
- 7IM.13 Can Ozone Be Used as a Calibrant for Photoacoustic Spectrophotometers?** AL FISCHER, Geoffrey Smith, *University of Georgia*
- 7IM.14 Particle Detection Using the Dual-vaporizer Configuration of the Soot Particle Aerosol Mass Spectrometer.** ANITA AVERY, Edward Fortner, Leah Williams, Wade Robinson, Timothy Onasch, *Aerodyne Research, Inc.*
- 7IM.15 Development of Caltech Scanning-mode Nano Radial Differential Mobility Analyzer System and Its Application to Nucleation Study at the CLOUD Experiment.** CHANGHYUK KIM, Huajun Mai, Wilton Mui, Stavros Amanatidis, Dominik Stolzenburg, Richard Flagan, CLOUD Collaboration, *California Institute of Technology*
- 7IM.16 Rational Design a Dilution Sampler for Probing Nanoparticles in Flames.** ZUWEI XU, Jianlong Wan, Zhijing Su, Haibo Zhao, *Huazhong University of Science and Technology*
- 7IM.17 Near Real-Time Measurement of Crystalline Silica Aerosol Concentration Using Raman Spectroscopy.** LINA ZHENG, Pramod Kulkarni, M. Eileen Birch, Kevin Ashley, Shijun Wei, *Centers for Disease Control and Prevention, NIOSH*

- 7IM.18 Analysis of Crystalline Silica Aerosol Using Quantum Cascade Laser-based Infrared Spectroscopy.** SHIJUN WEI, Pramod Kulkarni, Lina Zheng, Kevin Ashley, *Centers for Disease Control and Prevention, NIOSH*
6:15
- 7IM.19 Characterization of Polarity Distribution of Organic Aerosol via HPLC Coupled with Fast Aerosol Size Distribution Measurements.** Vikram Pratap, Yuanyuan Zhang, SHUNSUKE NAKAO, *Clarkson University*
6:15
- 7IM.20 A Gas-Inlet Design for Aircraft Sampling.** DA YANG, Suresh Dhaniyala, Meilu He, *Clarkson University*
6:15
- 7IM.21 Roadmap For Statistical Calibration Model Development and Maintenance: Prediction of Organic and Elemental Carbon Composition in PM2.5 with Infrared Spectroscopy.** SATOSHI TAKAHAMA, Matteo Reggente, Adele Kuzmiakova, Ann Dillner, Andrew Weakley, Bruno Debus, *EPFL*
6:15
- 7IM.22 Diffusion Chargers for the Measurement of Particle Number Concentration according to the European Regulation.** Barouch Giechaskiel, YANNIS DROSSINOS, *European Commission, Joint Research Centre*
6:15
- 7IM.23 Comparison between ACSM and AMS at an Urban Site in Atlanta, GA: The Use of Capture Vaporizer and PM2.5 Inlet.** TAEKYU JOO, Weiqi Xu, Masayuki Takeuchi, Gamze Eris, Yunle Chen, Dao Huang, Gabriela Saavedra, Seongshik Kim, Dong Gao, Rodney J. Weber, Yele Sun, Philip Croteau, John Jayne, Nga Lee Ng, *Georgia Institute of Technology*
6:15
- 7IM.24 Method for Chemical Analysis of Nano-Aerosol Particles – Gas-to-Particle Transitions of Highly Oxygenated Organic Molecules.** ANDREA C. WAGNER, Andreas Kürten, Martin Heinritzi, Mario Simon, Joachim Curtius, *Goethe University Frankfurt*
6:15
- 7IM.25 Development of a Laser-Induced Breakdown Spectroscopy (LIBS) System with Timed Ablation for a Single Particle Detection at a Low Concentration.** HYUNOK MAENG, Hoseung Chae, Heesung Lee, Gibaek Kim, Haebum Lee, Kyoungtae Kim, Jihyun Kwak, Gangnam Cho, Kihong Park, *Gwangju Institute of Science and Technology*
6:15
- 7IM.26 Application of Laser Induced Breakdown Spectroscopy for Real Time Detection of Contamination Particles During Industrial Manufacturing.** HAEBUM LEE, Hyunok Maeng, Gibaek Kim, Kyoungtae Kim, Nohhyeon Kwak, Kyungjoo Kim, Kihong Park, *Gwangju Institute of Science and Technology*
6:15
- 7IM.27 Development and Field-Testing of Two Aerosol Instruments on an Unmanned Aerial Vehicle.** Osku Kemppinen, Ryan Mersmann, Matthew Berg, Gavin McMeeking, TIM GORDON, *Handix Scientific*
6:15
- 7IM.28 Development and Evaluation of Dry Powder Aerosol Generator with Nozzle and Magnetic Stirrer for Inhalation Toxicity Testing of Nanomaterials.** GUN-HO LEE, Kang-Ho Ahn, *Hanyang University, R. of Korea*
6:15
- 7IM.29 Direct Sampling of Sub- μm Atmospheric Particulate Organic Matter at Sub-ng m⁻³ Mass Concentrations by Proton-Transfer-Reaction Mass Spectrometry.** MARKUS MUELLER, Andreas Klinger, Gregor Mayramhof, Joris Leglise, Todd Rogers, Armin Wisthaler, *IONICON Analytik GmbH., Innsbruck, Austria*
6:15
- 7IM.30 Laboratory Testing of Gas Exchange Efficiency in a Cylindrical Counter Flow Denuder.** HAGINO HIROYUKI, *Japan Automobile Research Institute (JARI)*
6:15
- 7IM.31 Direct Measurement of Trace Multi-Elemental Aerosols using Inductively Coupled Plasma Time-of-Flight Mass Spectrometry and X-ray Fluorescence Spectroscopy.** HAGINO HIROYUKI, Martin Tanner, Olga Borovinskaya, Toshihide Hikita, Akio Shimono, Kohei Nishiguchi, Yusuke Mizuno, *Japan Automobile Research Institute (JARI)*
6:15
- 7IM.32 Control of Number Concentration of Aerosol Nanoparticles Generated by Nanospray Drying.** MASAKI SAKAMOTO, Fumitaka Ichihara, Takafumi Seto, Yoshio Otani, *Kanazawa University*
6:15
- 7IM.33 Application of Centrifugal Filter to Measurement of Aerosol Size Distribution.** RYO OZAWA, Yoshio Otani, Takafumi Seto, *Kanazawa University*
6:15
- 7IM.34 Difference in the Sampling Artifacts During Aerosol Collection between Cyclone and Filter.** DAIKI SHISHIDO, Tomoaki Okuda, *Keio University*
6:15
- 7IM.35 Particle Measurement of Coal-Fired Power Plant Exhaust from the Stack Using Dilution Probe.** CHANG GYU WOO, Hak-Joon Kim, Bangwoo Han, Yong-Jin Kim, Suji Kang, Sungnam Chun, *Korea Institute of Machinery and Materials*
6:15

Gediminas Mainelis and Shunsuke Nakao, chairs

- 7LC.1 CitySpace Air Sensor Network: Application of High-Time Resolution Data from a Network of Low-Cost Air Sensor Technology to Examine Urban Air Pollution.** STEPHEN FEINBERG, Ron Williams, Gayle Hagler, Judy Low, Larry Smith, Ryan Brown, Daniel Garver, Michael Davis, Michael Morton, Joe Schaefer, John Campbell, Tim McArthur, *ORISE/ORD-US EPA, RTP, NC*
6:15
- 7LC.2 Field Performance Evaluation of Four Low-Cost Particulate Matter Sensors.** ANDREA CLEMENTS, Manu Srivastava, Teri Conner, Joann Rice, Bruce Habel, Stephen Reece, Ron Williams, *U.S. EPA Office of Research and Development*
6:15
- 7LC.3 Deposition Characteristics of Bioaerosols: Towards Black Silicon-Based MEMS Bioaerosol Detection.** UGUR SOYSAL, Evelyne Géhin, Frédéric Marty, Emmanuelle Algré, Charles Motzkus, *Université Paris-Est, CERTES*
6:15
- 7LC.4 Portable Digital Holography Instrument for In-situ Coarse-mode Aerosol Imaging.** OSKU KEMPPINEN, Matthew Berg, Yuli W. Heinson, Stephen Holler, *Kansas State University*
6:15
- 7LC.5 EPA's Village Green Sensor-Based Air Monitoring Stations: Long-term Performance of PM_{2.5} Sensors.** TERI CONNER, Sue Kimbrough, Ron Williams, Brad Johns, John White, Gayle Hagler, *US EPA - ORD, RTP, NC*
6:15
- 7LC.6 Evaluation of a Multi-wavelength Black Carbon Sensor.** AMARA HOLDER, Brannon Seay, Sue Kimbrough, Johanna Aurell, Steven Blair, Jeff Blair, *U.S. EPA*
6:15
- 7LC.7 A Device Development for Measuring Atmospheric Columnar Integrated Air Pollution.** Hardik Gajjar, DAYA KAUL, *Pandit Deendayal Petroleum University*
6:15
- 7LC.8 Smart Air Quality Network, the Measurement Network for the Future.** VOLKER ZIEGLER, Markus Pesch, Matthias Budde, Michael Beigl, Till Riedel, Johannes Riesterer, Klaus Schäfer, Stefan Emeis, Duick Young, Josef Cyrus, Juergen Schnelle-Kreis, Andreas Philipp, Erik Petersen, Johanna Redelstein, Hans Grimm, Stefan Hinterreiter, Thomas Gratza, *GRIMM Aerosol Technik Ainring GmbH & CO.KG, Germany*
6:15
- 7LC.9 Application of Consumer-grade Sensors to Study the Effect of Heatwaves on Indoor Air Quality.** RUIKANG HE, Gediminas Mainelis, Ioanna Tsoulou, Sanjeevi Thirumurugesan, Brian Morgan, Stephania Gonzalez, Deborah Plotnik, Jennifer Senick, Clinton J. Andrews, *Rutgers, The State University of New Jersey*
6:15
- 7LC.10 In-Situ Spectroscopic Analysis of PM Chemical Composition in a Low-Cost Particle Collector.** HE JIAYANG, Byron Ockerman, Igor Novosselov, *University of Washington*
6:15
- 7LC.11 A Study Using Open-face Passive Samplers to Measure PM Concentration.** ZHONG-MIN WANG, Yixin Zhou, Fraser Gaspar, Bradman Asa, Ryuzaburo Kamiya, *California Department of Public Health*
6:15
- 7LC.12 An Electric Impaction Sensor for Detecting PM_{2.5}.** CHEN TZU-MING, Hsu Jung-Nan, Fan-Lun Chen, Shuenn-Chin Chang, *Industrial Technology Research Institute*
6:15
- 7LC.13 Challenges in Low-Cost Sensor Calibration: A Case Study on Deployment of Sulfur Dioxide Electrochemical Sensors in an Urban Environment.** REBECCA TANZER, Carl Malings, R. Subramanian, Albert Presto, *Carnegie Mellon University*
6:15
- 7LC.14 Investigating the Performance of a Low-Cost PM Monitor (Dylos) against Dusttrak DRX for Different Indoor and Outdoor PM Sources.** MEHDI AMOUEI TORKMAHALLEH, Obaidullah Mohiuddin, Fatemeh Mohammaddezhashibi, Madina Obaidullah, Hamed Sharifi, *Chemical and Aerosol Research Team, Nazarbayev University*
6:15
- 7LC.15 CFD Analysis of Flow and Particle Behavior in the Performance Evaluation Chamber System for PM Sensor.** SUNG-MIN SHIM, Jae-ho Cho, Hyeok Chung, Ki-tai Kang, *Aerosol Research & Technology Plus*
6:15
- 7LC.16 Toward a More Reliable Optical Smoke Detector: Scattering Matrix Analysis of Fire and Non-fire Aerosol for Classification.** QIXING ZHANG, Jia Liu, Jie Luo, Feng Wang, Jinjun Wang, Yongming Zhang, *University of Science and Technology of China*
6:15
- 7LC.17 The Development of Low-Cost Particle Sensor for Air Quality Monitoring.** JINHONG AHN, *Innociple Co., Ltd.*
6:15
- 7LC.18 Using Commercially Available Low-Cost Monitors to Estimate the Hourly Spatial Variability of Particulate Matter Concentrations across a Metropolitan Area.** MAURO MASIOL, Stefania Squizzato, David C. Chalupa, Andrea R. Ferro, David Q. Rich, Philip K. Hopke, *University of Rochester Medical Center*
6:15

- 7LC.19 Measurements of Atmospheric Aerosol Vertical Distribution Using Multi-Rotors Unmanned Aerial Vehicle (UAV) and Portable Aerosol Instruments.** ZHIJUN WU, Yishu Zhu, Yong-Hee Park, Kang-Ho An, Min Hu, *Peking University, Beijing, China*
6:15
- 7LC.20 A Guideline for the Application of the Shinyei PPD24NS Low-Cost Dust Sensor for Air Quality Monitoring.** Michael Canu, BORIS GALVIS, Ricardo Morales Betancourt, Omar Ramirez, Malika Madelin, *Universidad De La Salle, Colombia*
6:15
- 7LC.21 Continuous Field Calibration of Low-Cost PM2.5 Sensor Networks.** Kyle Alberti, GEOFF HENSHAW, Georgia Miskell, Hamesh Patel, Jonathan Taylor, David Williams, *Aeroqual Ltd*
6:15
- 7LC.22 Application of Low-Cost Sensors for the Monitoring of Air Quality by Bicycle.** ERICK KILL, Paulo Saldiva, Luiz Pereira, *University of São Paulo*
6:15
- 7LC.24 Fine-scale Spatio-temporal Variation in Particulate Matter in a Small Wood-burning Town Revealed by a Network of Continuous Low-cost Sensors.** Ian Longley, Gustavo Olivares, Sam Edwards, GUY COULSON, *National Inst of Water and Atmospheric Research, New Zealand*
6:15
- 7LC.25 Theoretical Analysis of a High-Pass Electrical Mobility Filter.** NIC SURAWSKI, Spyros Bezantakos, Konstantinos Barmponis, Andreas Schmidt-Ott, George Biskos, *University of Technology Sydney*
6:15
- 7LC.27 The Performance Evaluation System of Low-Cost Air Quality Sensors in Taiwan.** Yen-Ting Li, CHIA-WEI CHANG, Yi-Cyun Yang, Jiunn-Haur Shaw, Yeuh-Bin Wang, *Industrial Technology Research Institute*
6:15

7MG AIR QUALITY IN MEGACITIES: FROM SOURCES TO CONTROL I: POSTERS

EXHIBIT HALL 5

Amara Holder and Hector Jorquera, chairs

- 7MG.1 Study of the PM2.5 Growth Processes in Two Key Regions of China.** Jinjin Sun, Mingjie Liang, JIANLIN HU, Qi Ying, Hongliang Zhang, *Nanjing University of Information Science & Technology*
6:15
- 7MG.2 Mercury Stable Isotope Compositions of PM2.5 in Chinese Cities.** HONGMEI XU, Ruoyu Sun, Junji Cao, *Xi'an Jiaotong University*
6:15
- 7MG.3 Size-segregated Chemical Components of Aerosol Particles in Hefei, China.** ANNA LI, *Laboratory of Atmospheric Physico-Chemistry, Anhui Institute*
6:15
- 7MG.4 Primary Sources and Secondary Formation of Organic Aerosols in Diadema, São Paulo, Brazil.** DJACINTO MONTEIRO DOS SANTOS, Luciana Rizzo, Patrick Schlag, Samara Carbone, Paulo Artaxo, *University of São Paulo*
6:15
- 7MG.5 Contributions of the N2O5 Heterogeneous Hydrolysis Reaction to the Nitrate Formation in the North China Plain (NCP) During Wintertime: A Case Study.** LANG LIU, Guohui Li, *Institute of Earth Environment, Chinese Academy of Sciences*
6:15
- 7MG.6 Lahore Smog – Componential Analysis, Causes and Effects.** ZULFIQAR ALI, Irfan Zainab, Zona Zaidi, Komel Ahmad, Syed Turab Raza, Saira Khan, Rida Ahmad, Khadija Aziz, Mubashir Ahmad, Sidra Safdar, Zaheer Ahmad Nasir, Ian Colbeck, Nimra Afzal, *University of the Punjab, Lahore, 54590, Pakistan*
6:15
- 7MG.7 Characteristics of Atmospheric Ammonia and Its Relationship with Vehicle Emissions in Shanghai.** Ruyi Wang, XINGNAN YE, *Fudan University*
6:15
- 7MG.8 Secondary Organic Aerosol Production over Seoul, South Korea, during KORUS-AQ.** BENJAMIN A. NAULT, Pedro Campuzano-Jost, Douglas Day, Jason Schroder, Bruce Anderson, Andreas Beyersdorf, Donald Blake, William Brune, John Crouse, Ronald Cohen, Joost de Gouw, Jack Dibb, Josh DiGangi, Glenn Diskin, Alan Fried, Greg Huey, Christoph Knote, Kara D. Lamb, Taehyoung Lee, Sally Pusede, Joshua P. Schwarz, Paul Wennberg, Armin Wisthaler, Jose-Luis Jimenez, et al., *University of Colorado-Boulder*
6:15
- 7MG.9 Influence of Diwali Fireworks on Air Quality and Aerosol Optical Properties over a Mega City Delhi.** SATEESH M., Vijay Kumar Soni, Raju P.V.S., *India Meteorological Department*
6:15
- 7MG.10 Characteristics and Formation Mechanism of Nitrate during Haze Events in Beijing.** QINGCHENG XU, Shuxiao Wang, Yang Hua, Jiming Hao, *Tsinghua University*
6:15

- 7MG.11 Effects of Aqueous-phase and Photochemical Chemistry on Winter Haze Formation and Evolution in Beijing, China.** TAO MA, Fengkui Duan, Hiroshi Furutani, Michisato Toyoda, Takashi Kimoto, Lidan Zhu, Yongliang Ma, Kebin He, *Tsinghua University*
6:15
- 7MG.12 Determination of the Emission Sources of Particulate Matter in Queretaro (Mexico).** SARA ERIKA OLIVARES, Dara Salcedo, Harry Alvarez-Ospina, Carina Aguillon-Vazques, *National University of Mexico*
6:15
- 7MG.13 First Measurements from Smear Beijing Station: New Particle Formation in Urban Beijing and Source Apportionment of Atmospheric Pollutants.** CHAO YAN, Juha Kangasluoma, Federico Bianchi, Tommy Chan, Biwu Chu, Lubna Dada, Kaspar Rudolf Dällenbach, Yueyun Fu, Xucheng He, Liine Heikkinen, Heikki Junninen, Yiliang Liu, Yiqun Lu, Qingxin Ma, Pekka Rantala, Yonghong Wang, Gan Yang, Rujin Yin, Ying Zhou, Joni Kujansuu, Tuukka Petäjä, Yongchun Liu, Lin Wang, Jingkun Jiang, Markku Kulmala, *University of Helsinki/BUCT*
6:15
- 7MG.15 Black Carbon Source Apportionment In Delhi during Winter.** UMESH C. DUMKA, Suresh Tiwari, D.G. Kaskaoutis, S.D. Attri, Vijay Kumar Soni, P.D. Safai, Narendra Singh, N. Mihalopoulos, *ARIES Nainital*
6:15
- 7MG.16 Chemical Properties of PM 2.5 and Their Potential Source in Urban Background of Delhi, India.** MANOJ KUMAR, Fasiur Rahman, Divesh Bhatia, Gazala Habib, *IIT Delhi*
6:15
- 7MG.17 Implementation Effect and Countermeasures of the "Air Pollution Prevention and Control Action Plan".** WENKANG GAO, Guiqian Tang, Mengtian Cheng, Dongsheng Ji, Zirui Liu, Tao Song, Liang Li, Junke Zhang, Yuesi Wang, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*
6:15
- 7MG.18 Individual Exposure of PM2.5 and Health Risk Assessment of Heavy Metals in Nanchong Traffic Police.** GUO JIALING, Li Youping, *China West Normal University, Nanchong, Sichuan*
6:15
- 7MG.20 Aerosol Sources and Processes in Winter in Beijing: Insights from Aerosol Mass Spectrometry.** YELE SUN, Zifa Wang, Pingqing Fu, Qingqing Wang, Wei Du, Weiqi Xu, Jian Zhao, Wei Zhou, *Institute of Atmospheric Physics, CAS*
6:15
- 7MG.21 Evaluating Effects of Stubble Burning in Punjab and Haryana on the Air Quality of Delhi and National Capital Region.** RAKESH KUMAR, Sanjeev Goyal, Gulia Sunil, Hemant Bherwani, *NEERI*
6:15
- 7MG.22 Characteristics of Submicron Aerosols in Summer of Beijing: Particle Size, Density, Hygroscopicity, and Mixing State.** SONG GUO, Min Hu, Dongjie Shang, Zhuofei Du, Jing Zheng, Renyi Zhang, *Peking University*
6:15
- 7MG.24 The Influence of Gaseous Pollutants and Particulate Matter Concentration on New Particle Formation in Beijing.** RUJING YIN, Yiqun Lu, Chao Yan, Juha Kangasluoma, Tommy Chan, Biwu Chu, Chenjuan Deng, Yueyun Fu, Xucheng He, Yiliang Liu, Xiaohui Qiao, Pekka Rantala, Yonghong Wang, Mo Xue, Gan Yang, Ying Zhou, Joni Kujansuu, Tuukka Petäjä, Yongchun Liu, Lin Wang, Jingkun Jiang, Markku Kulmala, *Tsinghua University*
6:15
- 7MG.25 Gaseous Nitrated Phenols as a Potential Source of OH Radicals in Beijing.** XI CHENG, Qi Chen, Ying Liu, Tong Zhu, *Peking University*
6:15
- 7MG.26 Sources and Transformations to Atmospheric Aerosols in Winter: A Carbon and Nitrogen Isotopic Study in Beijing.** QIAN YU, Mo Xue, Di Wu, Lei Duan, Jingkun Jiang, Shuxiao Wang, *Tsinghua University*
6:15

7MS MATERIALS SYNTHESIS VI: POSTERS

EXHIBIT HALL 5

- 7MS.1 Production of Homogeneous Particles by Controlled Neutralization of Electrospays.** Antonio Carrasco-Munoz, Elena Barbero-Colmenar, Eszter Bodnar, Jordi Grifoll, JOAN ROSELL-LLOMPART, *Universitat Rovira i Virgili*
6:15
- 7MS.2 Ultrafast Conversion of Ag Nanoagglomerates into Ag₂S Nanodots via Photoionization of Ag in Thiol Droplets.** Bijay Kumar Poudel, Kyung-Oh Doh, JEONG HOON BYEON, *Yeungnam University*
6:15
- 7MS.3 Fabrication of Graphene Encapsulated Silicon Composites from Graphene Oxides and Waste Silicon Sludge for Lithium Ion Batteries.** HEE DONG JANG, Sun Kyung Kim, Hankwon Chang, *Korea Institute of Geoscience & Mineral Resources*
6:15
- 7MS.4 Aerosol Chemical Vapor Deposition of Nanostructured Thin Films for Lithium-Ion Battery Negative Electrodes.** CLAYTON KACICA, Louis Wang, Tandeep Chadha, Pratim Biswas, *Washington University in St Louis*
6:15
- 7MS.5 Stability and Control of the Electro spray Cone-Jet Mode.** Gabriel Garcia-Soriano, Santiago Martin, Jose L Castillo, PEDRO L GARCIA-YBARRA, *Universidad Nacional de Educacion a Distancia - UNED*
6:15

- 7MS.6 Novel Aerosol Method for the Fabrication of Si-MWCNT-C Composite Spheres as Anode Materials for Lithium Ion Battery.** HANKWON CHANG, Chan Mi Kim, Sun Kyung Kim, Dae Sup Kil, Hee Dong Jang, *Korea Institute of Geoscience and Mineral Resources*
6:15
- 7MS.7 Copper Nanoparticle-based Films Fabricated by Spark Discharge Deposition for Surface-Enhanced Raman Spectroscopy.** MOHAMED ABD EL-AAL, Takafumi Seto, Yoshio Otani, *Kanazawa University*
6:15
- 7MS.8 Using Aerosol-based Analytical Methods for the Synthesis of Functional Nanomaterial Colloids.** DE-HAO TSAI, *National Tsing Hua University*
6:15
- 7MS.9 Size-Controlled Synthesis of Pd Doped TiO₂ Catalyst in a Flame Aerosol Reactor (FLAR) for Oxygen Removal from Carbon Dioxide Enriched Combustion Exhaust Gases.** SUNGYOON JUNG, Pratim Biswas, *Washington University in St Louis*
6:15
- 7MS.10 Investigation of the Role of Charging on the Particle Growth during Combustion in Spray Flame Aerosol Reactor.** SUKRANT DHAWAN, Girish Sharma, Pratim Biswas, *Washington University in St Louis*
6:15
- 7MS.11 Aerosol-assisted Synthesis of a Columnar TiO₂ Electron Transport Layer for Application in Photovoltaics.** ROBIN WHEELUS, Shaline Kavadiya, Pratim Biswas, *Washington University in St. Louis*
6:15
- 7MS.12 Controlling the Structure and Morphology of Functional Nanoporous Films Fabricated by Direct Deposition of Nanoparticles from Liquid Flame Spray (LFS).** JYRKI M. MÄKELÄ, Janne Haapanen, Paxton Juuti, Miika Sorvali, Markus Nikka, Elham Baniadam, *Tampere University of Technology, Tampere, Finland*
6:15

7TT AEROSOL TRANSPORT AND TRANSFORMATION II: POSTERS

EXHIBIT HALL 5

Kerrigan Cain and Emily Ramnarine, chairs

- 7TT.1 Modelling Biomass Burning Plumes: The Impacts of Dilution, Chemistry, and Coagulation on the Size Distribution and Resulting Direct and Indirect Effects.** ANNA HODSHIRE, Qijing Bian, Shantanu Jathar, Sonia Kreidenweis, Jeffrey R. Pierce, *Colorado State University*
6:15
- 7TT.2 Spatial and Temporal Characteristics of Taklimakan Desert Dust and Its Air Quality Influence Using the WRF/CMAQ Model System.** WENYE DENG, Jiaerheng Ahati, Xue Qiao, Xinjie Yuan, Kui Deng, Jing He, Weiyan Lin, Jing Yang, Jie Zhu, Weixin Du, Hongliang Zhang, *Xinjiang Academy of Environmental Protection Science*
6:15
- 7TT.3 The Impact of Wet Deposition on Long-Range Aerosol Transport Arriving at the Maldives.** JUTTA KESTI, John Backman, Eija Asmi, Ewan O'Connor, Orjan Gustafsson, Krishnakant Budhavant, *Finnish Meteorological Institute*
6:15
- 7TT.4 Comparison of PM-Bound Polycyclic Aromatic Hydrocarbons and Nitropolycyclic Aromatic Hydrocarbons in Urban Air in the WHO's Western Pacific Regions.** KAZUICHI HAYAKAWA, Ning Tang, Edward Nagato, *Kanazawa University*
6:15
- 7TT.5 Seasonal Variations of Mass Concentration and Chemical Composition of Fine Particulate Matter in a High-Elevation Subtropical Forest in East Asia – Impact of Anthropogenic and Biogenic Emissions.** CELINE SIU LAN LEE, Charles C.K. Chou, Chien-Cheng Jung, Joe Hing Cho Cheung, Chao-Yang Tsai, *RCEC, Academia Sinica, Taiwan, R.O.C.*
6:15
- 7TT.6 Investigation of Spatial and Temporal Variations in Aerosol Mixing State Using a Particle-Resolved Regional Aerosol Model.** JEFFREY H. CURTIS, Nicole Riemer, Matthew West, *University of Illinois at Urbana-Champaign*
6:15
- 7TT.7 Assessment of the Possible Radioactive Particles Flux from the Surface in the Territory of the Russian Federation.** VILTORIA BYCHKOVA, Dmitriy Pripachkin, *IBRAE RAN, Russian Federation*
6:15
- 7TT.8 Transboundary Transport of Anthropogenic Sulfur in PM_{2.5} at a Coastal Site in the Sea of Japan during 2013 to 2016.** YAYOI INOMATA, *Kanazawa University*
6:15
- 7TT.10 Aerosol Size Distributions in Lower Atmospheric Boundary Layer above Coal Strip Mine by Airborne Measurements.** JAN HOVORKA, Miroslav Klán, Milos Zapletal, Jana Esterlova, Jan Bendl, Filip Kobrcek, Petr Marecek, *Charles University in Prague*
6:15

- 7TT.11 A Near-Global Analysis of In-Situ Profiles of Seasalt Aerosol.** STEVEN HOWELL, Steffen Freitag, Nikolai Smirnow, 6:15 *University of Hawaii*
- 7TT.12 The Topography Contribution to the Influence of the Atmospheric Boundary Layer at High Altitude Stations.** Martine Collaud Coen, Elisabeth Andrews, Dominique Ruffieux, FRANCISCO NAVAS-GUZMÁN, *Federal Office of Meteorology and Climatology*
- 7TT.13 Airborne Investigation of the Vertical Layering and Transport Processes of Aerosol Particles in the Marine Boundary Layer and the Free Troposphere over the Atlantic Ocean.** BIRGIT WEHNER, Silvia Henning, Felix Lauermaun, Janine Lueckerath, Greg Roberts, Kai-Erik Szodry, Holger Siebert, *Leibniz-Institute for Tropospheric Research*
- 7TT.14 Mobile Aerosol Measurement in Areas Around Coal-Fired Power Plants.** SUJI KANG, Sungnam Chun, Gayoung Lee, Jinpyo Hong, *Korea Electric Power Corporation Research Institute, Korea*
- 7TT.15 The Sahara Desert Dust Contribution in the Central Amazonia Determined with in situ Measurements in the ATTO Tower and in the ZF2 Reserve and Remote Sensing Use.** RAYNER SANTOS, Paulo Artaxo, *National Institute of Research of the Amazon*

Tuesday 6:15 PM - 8:30 PM
Exhibitor Reception

Tuesday 6:15 PM - 8:30 PM
Historical Instrumentation Demo

Wednesday

Wednesday 8:00 AM - 9:15 AM
Plenary III: High Sectorially Resolved Inventories to Evaluate Air Quality Trends in China

8:00 **High Sectorially Resolved Inventories to Evaluate Air Quality Trends in China** Shu Tao, *Peking University*

Moderator Lupita Montoya, *University of Colorado-Boulder*

9:00 **Smoluchowski Award, Schmauss Award, Kenneth T. Whitby Award** Alfred Weber, *Technical University Clausthal, Germany*; Jeff Collett, *Colorado State University*

Wednesday 9:00 AM - 12:00 PM
Exhibits Open

Wednesday 9:15 AM - 9:45 AM
Coffee Break

Wednesday 9:45 AM - 12:00 PM
Session 8: Platform

8AC AEROSOL CHEMISTRY VIII - SECONDARY ORGANIC AEROSOLS: METHODS/INSTRUMENTS
ROOM 275

Gabriel Isaacman-Van Wertz and David Bell, chairs

- 8AC.1** **Formula vs. Structure: Impacts of Isomers on Interpretation, Calibration, and Parameterization of Atmospheric Mass Spectrometric Data.** 9:45 GABRIEL ISAACMAN-VANWERTZ, Bernard Aumont, Manjula Canagaratna, Paola Massoli, John Nowak, Jordan Krechmer, Rachel O'Brien, Jesse Kroll, Douglas Worsnop, *Virginia Tech*
- 8AC.2** **Molecular Markers and Thermal Decomposition of Biogenic Secondary Organic Aerosol: Insight from Lab and Field Observations by Thermal Desorption – Gas Chromatography – Mass Spectrometry.** 10:00 MICHAEL WALKER, Riley Martell, Audrey Dang, Raul Martinez, David Hagan, Thomas Berkemeier, Masayuki Takeuchi, Gamze Eris, Nga Lee Ng, Brent Williams, *Washington University in St. Louis*
- 8AC.3** **Making Quantitative Measurements in Environmental Chamber Studies of VOC Oxidation and SOA Formation: Evaluating and Accounting for Potential Sources of Error.** 10:15 JULIA BAKKER-ARKEMA, Paul Ziemann, *University of Colorado*
- 8AC.4** **Probing the Molecular Composition of Model Systems and Secondary Organic Aerosol during Evaporation.** 10:30 DAVID BELL, Veronika Pospisilova, Amelie Bertrand, Houssni Lamkaddam, Chuan Ping Lee, Ruby Marten, Jay G. Slowik, Andre S.H. Prévôt, Urs Baltensperger, Imad El Haddad, Josef Dommen, *Paul Scherrer Institute*
- 8AC.5** **Gas-to-Particle Partitioning of Major Oxidation Products from Monoterpenes and Real Plant Emissions as Measured by Three Novel Aerosol Chemical Characterization Techniques.** 10:45 Georgios Gkatzelis, THORSTEN HOHAUS, Ralf Tillmann, Iulia Gensch, Markus Mueller, Philipp Eichler, Xu Kang-Ming, Patrick Schlag, Sebastian H. Schmitt, Yu Zhujun, Rupert Holzinger, Armin Wisthaler, Astrid Kiendler-Scharr, *Forschungszentrum Juelich GmbH, Germany*
- 8AC.6** **Real-time Measurements of Gas/Particle Partitioning of Semivolatile Organic Compounds into Different Probe Particles in a Teflon Chamber.** 11:00 XIAOXI LIU, Douglas Day, Jordan Krechmer, Paul Ziemann, Jose-Luis Jimenez, *University of Colorado Boulder*
- 8AC.7** **Development of a Method for the Measurement of the Henry's Law Constant Distribution of Atmospheric Organic Aerosol.** 11:15 AIKATERINI LIANGOU, Kerrigan Cain, Petro Uruci, Antonios Tasoglou, Spyros Pandis, *University of Patras, Patras, Greece*
- 8AC.8** **Laboratory Evaluation of Organic Aerosol Chemical Composition Measurements Obtained from High-Resolution Mass Spectrometers with Different Soft Ionization Schemes.** 11:30 JORDAN KRECHMER, Andrew Lambe, Felipe Lopez-Hilfiker, John Jayne, Douglas Worsnop, Manjula Canagaratna, *Aerodyne Research, Inc.*
- 8AC.9** **Use of Continuous Measurements of the Growth Rate of Particles Inside Captive Aerosol Chambers to Study the Properties and Sources of the Species Responsible for Their Growth.** 11:45 DON COLLINS, Cassandra Milan, Jordan McCormick, Sean Kinahan, Joshua Santarpia, James Flynn, Matthew H. Erickson, Robert Griffin, Henry Wallace, Alexander Bui, *Texas A&M University*

8AE AEROSOL EXPOSURE IV: MONITORING & SOURCE APPORTIONMENT

ROOM 265/266

Andrea Ferro and Cheol-Heon Jeong, chairs

- 8AE.1** **Characterization of the Potential Exposure of Vulnerable Communities to Traffic-related Air Pollutants in Urban Microenvironments.** 9:45 CHEOL H. JEONG, James M. Johnson, Cuilian Fang, Peter Murphy, Jon M. Wang, Kerolyn Shairsingh, Barbara Lachapelle, Christopher Morgan, Greg J. Evans, *SOCAAR, University of Toronto*
- 8AE.2** **Fine Particulate and Black Carbon Exposure for Users of a Bus Rapid Transit System: Role of Vehicle Age and Impact of Fleet Renewal.** 10:00 RICARDO MORALES BETANCOURT, Boris Galvis, Juan Manuel Rincón, Maria Alejandra Rincón, Yadert Contreras Barbosa, *Universidad de los Andes*
- 8AE.3** **Comparing Real-Time In-Cabin/Outdoor Particulate and CO Concentrations during Car Commutes along Freeway and Non-Freeway Roads, and Whilst Idling at Traffic Lights, in Saint Louis, MO.** 10:15 ANNA LEAVEY, Nathan Reed, Sameer Patel, Kevin Bradley, Pramod Kulkarni, Pratim Biswas, *Washington University in St Louis*
- 8AE.4** **Exploring the Socio-Economic Inequalities in the Exposure to Air Pollutants during Commuting by Different Travel Modes.** 10:30 IOAR RIVAS, Prashant Kumar, Alex Hagen-Zanker, *University of Surrey*
- 8AE.5** **Quantifying High-resolution Spatial Variations and Local Source Impacts of Urban Ultrafine Particle Exposure.** 10:45 PROVAT SAHA, Naomi Zimmerman, Luke Snell, Joshua Apte, Allen Robinson, Albert A. Presto, *Carnegie Mellon University*

- 8AE.6 The Fresh Air Wristband: Measuring Personal Environmental Exposures Using a Wearable Air Pollutant Monitor.** ELIZABETH LIN, Sarah Esenther, Fareeha Irfan, Massimiliano Mascelloni, Krystal Godri Pollitt, *University of Massachusetts Amherst*
11:00
- 8AE.7 Evaluation of Portable Instruments for Measuring Nanoparticles Exposure and Respirator Performance under Simulated Workplace Conditions.** ZIQING ZHUANG, Evanly Vo, Matthew Horvatin, *NIOSH*
11:15
- 8AE.8 Characterization and Quantification of Hexavalent Chromium and Other Air Toxic Metals in Communities Surrounding Metal Processing Facilities.** EDWARD FORTNER, Paola Massoli, Tara Yacovitch, Scott Herndon, Andrey Khlystov, David Campbell, John Jayne, *Aerodyne Research, Inc.*
11:30
- 8AE.9 Detail Characterization of Aerosol Physical Properties of Mainstream and Sidestream Cigarette Smoke.** TA-CHIH HSIAO, Ying-Jyun Chen, Hsiao-Chi Chuang, Chin-Sheng Tang, *National Central University*
11:45
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8AM AEROSOL MODELING VI

ROOM 260

Patricio Piedra and Girish Sharma, chairs

- 8AM.1 Developing Model Surrogates for Monoterpenes to Improve Predictions of Secondary Organic Aerosol.** ISAAC AFREH, Bernard Aumont, Marie Camredon, Richard Valorso, Kelley Barsanti, *University of California, Riverside*
9:45
- 8AM.2 Growth Kinetics and Size Distribution Evolution of Viscous Secondary Organic Aerosol.** RAHUL ZAVERI, John Shilling, Alla Zelenyuk, Jiumeng Liu, David Bell, Emma L. D'Ambro, Cassandra Gaston, Joel A. Thornton, Alexander Laskin, Peng Lin, Jacqueline Wilson, Richard Easter, Jian Wang, Allan Bertram, Scot T. Martin, John Seinfeld, Douglas Worsnop, *Pacific Northwest National Laboratory*
10:00
- 8AM.3 A Finite-Element Method (FEM) Study on the Deposition of Non-spherical Graphite Particles in High Temperature Gas-cooled Reactor (HGTR).** ZHU FANG, Yiyang Zhang, Mingzhe Wei, Xinxin Wu, *Tsinghua University*
10:15
- 8AM.4 Modelling the Evaporative Behaviour of Secondary Organic Aerosol Formed from α -pinene.** YU MORINO, Kei Sato, Shantanu Jathar, Kiyoshi Tanabe, Satoshi Inomata, Yuji Fujitani, Christopher Cappa, *morino.yu@nies.go.jp*
10:30
- 8AM.5 Causal Models as a Tool for Analyzing Dependence Structure of Variables in Combustion Aging Data.** VILLE LEINONEN, Olli Sippula, Petri Tiitta, Ari Leskinen, Juha Karvanen, Annele Virtanen, Santtu Mikkonen, *University of Eastern Finland*
10:45
- 8AM.6 Monte Carlo Simulations of Particle Production and Processing: The Role of Evaporation and the Applied Nucleation Theories.** GREGOR KOTALCZYK, Ivan Skenderovic, Frank Einar Kruis, *University Duisburg-Essen*
11:00
- 8AM.7 Estimation of Nucleation and Condensation Rates From Size Distribution Measurements Using Statistical Inverse Methodology.** MATTHEW OZON, Aku Seppänen, Anton Laakso, Jari Kaipio, Kari Lehtinen, *University of Eastern Finland*
11:15
- 8AM.8 Equilibration Timescale of Atmospheric Secondary Organic Aerosol Partitioning under a Wide Range of Temperature and Relative Humidity.** YING LI, Manabu Shiraiwa, *University of California Irvine*
11:30
- 8AM.9 Advancements in Aerosol Thermodynamics for Large-Scale Applications – Bridging the Gap between Structure and Volatility-Based Models.** KYLE GORKOWSKI, Andreas Zuend, *McGill University*
11:45
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8CB COMBUSTION II

ROOM 263

Rawad Saleh and Patrick Roth, chairs

- 8CB.1 Gasoline Aromatic and Oxygen Content Impact on Formation of Secondary Aerosols from a GDI Vehicle.** PATRICK ROTH, Jiacheng Yang, Ayla Moretti, Thomas D. Durbin, David R. Cocker III, Akua Asa-Awuku, Georgios Karavalakis, *University of California, Riverside*
9:45

- 8CB.2 Effect of Fuel Properties on Diesel Engine Exhaust PM Physicochemical Characteristics.** LI XINLING, *Shanghai Jiao Tong University*
10:00
- 8CB.3 Effect of Fuel Oxygen Content on Morphology and Nanostructure Characteristics of Diesel Particulate Matter.** PUNEET VERMA, Mohammad Jafari, Edmund Pickering, Yi Guo, Svetlana Stevanovic, Richard Brown, Zoran Ristovski, *QUT, Australia*
10:15
- 8CB.4 Nanoparticle Emissions from a Gas Engine – Effects of Gas and Lubricant Oil Composition.** MIA ISOTALO, Jenni Alanen, Joonas Vanhanen, Sampsa Martikainen, Hannu Vesala, Rasmus Pettinen, Sanna Saarikoski, Minna Aurela, Pauli Simonen, Mika Kettunen, Minna Väkevä, Hilikka Timonen, Kati Lehtoranta, Jorma Keskinen, Topi Rönkkö, *Tampere University of Technology*
10:30
- 8CB.5 Effect of High-Speed Driving Conditions on SOA Formation Potential from GDI Vehicle.** NIINA KUITTINEN, Stephen Zimmerman, Weihang Peng, Cavan McCaffery, Patrick Roth, Pauli Simonen, Jorma Keskinen, Topi Rönkkö, Roya Bahreini, David R. Cocker III, Georgios Karavalakis, *Tampere University of Technology*
10:45
- 8CB.6 Modeling Particle Emission Formation in Wildland Fires.** ALEXANDER JOSEPHSON, Troy Holland, Rod Linn, *Los Alamos National Laboratory*
11:00
- 8CB.7 Comparing On-Road and Laboratory Measurements of Primary Emissions and Secondary Aerosol Formation Potential of Individual Light-Duty Vehicles.** Pauli Simonen, Joni Kalliokoski, Panu Karjalainen, MIIKKA DAL MASO, Topi Rönkkö, Sanna Saarikoski, Minna Aurela, Matthew Bloss, Hilikka Timonen, Georgios Triantafyllopoulos, Athanasios Dimaratos, Leonidas Ntziachristos, Zissis Samaras, Jorma Keskinen, *Tampere University of Technology*
11:15
- 8CB.8 Towards Monitoring Automobile Ultra-fine Particle Emissions: Size-dependent Chemical Composition.** CRISTIAN FOCSA, Dumitru Duca, Jennifer Noble, Yvain Carpentier, Marin Vojkovic, Andreas Manz, Matthias Lyska, Roman Grzeszik, Torsten Tritscher, Juergen Spielvogel, Marcus Rieker, *Université de Lille*
11:30
- 8CB.9 A Comparison of Partial Flow to Full Flow Dilution Tunnel Sampling for Engine Exhaust PM Measurement.** MATTI MARICQ, *Ford Motor Company*
11:45

8ES AEROSOLS IN EARTH SYSTEM II

ROOM 267

Luke Ziemba and Jian Wang, chairs

- 8ES.1 Changes in Direct Radiative Forcing due to Differences in Marine Aerosol Size Distributions during NAAMES Field Campaigns.** GEORGES SALIBA, Raghu Betha, Savannah Lewis, Chia-Li Chen, Lynn Russell, Timothy Bates, Patricia Quinn, *Scripps Institution of Oceanography*
9:45
- 8ES.2 The Global Distribution of Sea Salt Aerosol and Its Removal Mechanism.** DANIEL MURPHY, Karl D. Froyd, Huisheng Bian, Charles Brock, Maximilian Dollner, Agnieszka Kupc, Bernadett Weinzierl, Christina Williamson, Pengfei Yu, *NOAA ESRL*
10:00
- 8ES.3 Characterization of Haboob Dust Storms in Phoenix, AZ.** PIERRE HERCKES, Denise Napolitano, Aurelie Marcotte, Jershon Eagar, Matthew Fraser, *Arizona State University*
10:15
- 8ES.4 The Size Distribution and Physical Characteristics of Surface Material in Iceland.** MARY K. BUTWIN, Melissa A. Pfeffer, Throstur Thorsteinsson, Sibylle von Löwis, *University of Iceland*
10:30
- 8ES.6 Single Particle Measurements from Winter Fog Events in the Indo-Gangetic Plain.** MICHAEL GIORDANO, Benjamin Werden, Khadak Mahata, Narayan Babu Dhital, Nita Khanal, Amit Bhujel, Sagar Adhikari, Siva Praveen Puppala, Arnico Panday, Peter DeCarlo, *Drexel University*
11:00
- 8ES.7 Estimation of Snow Albedo Reduction due to Deposition of Light Absorbing Aerosols Using a Monte Carlo Radiative Transfer Model.** DEEP SENGUPTA, Lan Gao, Eric Wilcox, Nicholas D Beres, Chiranjivi Bhattarai, Vera Samburova, Adam Watts, Andrey Khlystov, Hans Moosmuller, *Desert Research Institute*
11:15
- 8ES.8 Elemental Carbon Observations over Canada (2006-2015): Constraining on Regional Emissions in North America.** LIN HUANG, Tak Chan, Knut von Salzen, Richard Leaitch, Sangeeta Sharma, Wendy Zhang, Darrell Ernst, Junhua Zhang, Michael Moran, Jeff Brook, Anne Marie Macdonald, Michael Wheeler, *Environment & Climate Change Canada, ASTD, Toronto, Canada*
11:30

8ES.9 Aerosol Light Absorption at Different Altitudes in the European Arctic, Svalbard: The Effect of Boundary Layer Height. Vasileios Stathopoulos, Mauro Mazzola, Christos Matsoukas, KONSTANTINOS ELEFThERiADiS, NCSR Demokritos, Athens, Greece

8IB INFECTIOUS BIOAEROSOL III

ROOM 264

Paul Dabisch and Lindsey Marr, chairs

8IB.1 Melioidosis from Aerosolization of the Environmental Bacterium Burkholderia Pseudomallei. BART CURRIE, 9:45 *Menzies School of Health Research & Royal Darwin Hosp., AU. KEYNOTE.*

8IB.3 Aerodynamic Particle Size Affects Infectivity and Lethality, but not Disease Timecourse, in a Nonhuman Primate Model of Inhalational Melioidosis. JEREMY BOYDSTON, John Yeager, Artemas Herzog, Jill Taylor, David Dawson, Angelo Scorpio, Paul Dabisch, *BNBI / DHS NBACC*

8IB.4 Pulmonary Delivery of Ceftazidime for the Treatment of Melioidosis in a Murine Model. SARA RUIZ, Larry Bowen, Mark Bailey, Cory Berkland, *USAMRIID*

8IB.5 Defining Pathogen Transmission Risks during Aerosol Generating Procedures in Healthcare Settings. Jiayu Li, 10:45 Carrie O'neil, Ramesh Raliya, Yang Wang, Anna Leavey, Meghan Wallace, Carey-Ann Burnham, Adrianus Boon, HILARY BABCOCK, Pratim Biswas, *Washington University in St Louis*

8IB.6 Overview of Tuberculosis Transmission by Aerosol. CHAD J. ROY, *Tulane University*
11:00

8IB.7 Capture and Characterization of Exhaled Bio-aerosols from Tuberculosis (TB) Patients. ROBIN WOOD, Carl 11:15 Morrow, Benjamin Patterson, Wayne Bryden, Charles Call, David Silcott, Catherine Fenselau, D. Chen, R. Dinkele, S. Gessner, Digby Warner, *IDM, University of Cape Town*

8IB.8 Exploring the Fundamentals of Biological Decay and Survival in Aerosol Droplets with a New In Vitro Technology. MARA OTERO-FERNANDEZ, Allen E. Haddrell, Jonathan P. Reid, Richard Thomas, *University of Bristol*
11:30

8IB.9 Studying Survival of Aerosolised Bacteria Using Poly(methyl) Methacrylate Microthreads. ANDREW SCOTT, 11:45 Carwyn Davies, Emma Keyser, *Dstl*

8IM INSTRUMENTATION VI - SPECTROSCOPY, OPTICAL TECHNIQUES

ROOM 276

Geoff Smith and Clara Seaman, chairs

8IM.1 Overview of the First In-situ Intercomparison of Aerosol Photoacoustic Spectrometers. CHRISTOPHER 9:45 ZANGMEISTER, James Radney, *National Institute of Standards and Technology*

8IM.2 MultiPAS-IV: A Portable, Four-wavelength Photoacoustic Spectrometer for Ambient Aerosol Absorption. 10:00 GEOFFREY SMITH, Al Fischer, *University of Georgia*

8IM.3 Counting Efficiency Evaluation of Optical Particle Counters in Micrometer Range by Using Inkjet Aerosol Generator. KENJIRO IIDA, Hiromu Sakurai, *AIST*
10:15

8IM.4 A Single-pass RGB Differential Photoacoustic Spectrometer for Aerosol Absorption Measurement. ZHENHONG 10:30 YU, Gregory Magoon, William Brown, James Assif, Richard Miake-Lye, *Aerodyne Research, Inc.*

8IM.5 Experimental Determination of Aerosol Growth Kinetics via Simultaneous Measurement of Constant Angle Mie Scattering Pattern at Two Different Wavelengths. MIGUEL VAZQUEZ-PUFLEAU, Paul M. Winkler, *Universitaet Wien, Vienna, Austria*
10:45

8IM.6 Morphology and Comparisons of BC Mass Concentrations Measured by LII, CAPS, and PAX of PM Emitted from a Grand Cherokee and a Ford F-150 under Different Drive Cycles. FENGSHAN LIU, Fadi Araji, Greg Rideout, Prem Lobo, Gregory Smallwood, *National Research Council Canada*
11:00

- 8IM.7 Determination of the Effect of Lens Fouling of the CAS-POL for the Measurement of Airborne Float Coal Dust.**
11:15 CLARA E. SEAMAN, Michael R. Shahan, *National Institute for Occupational Safety and Health*
- 8IM.8 Data Inversion Methods to Determine Sub-3 nm Particle Size Distributions Using the Particle Size Magnifier.**
11:30 RUNLONG CAI, Dongsun Yang, Lauri R. Ahonen, Linlin Shi, Frans Korhonen, Yan Ma, Tuukka Petäjä, Jun Zheng, Juha Kangasluoma, Jingkun Jiang, *Tsinghua University*
- 8IM.9 Effects of Multiple Scattering by Fresh Soot Aerosols on Open-Path Optical Diagnostics of Atmospheric Plumes.** BRADLEY CONRAD, Matthew Johnson, Jeremy Thornock, *Carleton University*
11:45

8LC LOW-COST AND PORTABLE SENSORS II

FERRARA THEATER

Kang-Ho Ahn and Christof Asbach, chairs

- 8LC.1 Calibration and Long-Term Performance Evaluation of Low-Cost Sensors for Gas and Fine Particulate Mass Monitoring with RAMPs.** CARL MALINGS, Rebecca Tanzer, Provat Saha, Aja Ellis, Rose Eilenberg, Aliaksei Haurlyiuk, Srinivasa Prabhu Nehru Kumar, Naomi Zimmerman, Levent Burak Kara, Albert Presto, R. Subramanian, *Carnegie Mellon University*
9:45
- 8LC.2 One Year Spatial and Temporal Variability of PM in a Southern California Community using an Air Quality Sensors Network.** BRANDON FEENSTRA, Vasileios Papapostolou, Ross Cheung, Andrea Polidori, *South Coast Air Quality Management District*
10:00
- 8LC.3 Field Validation of a Low-Cost Integrated PM_{2.5} and Aerosol Optical Depth Monitor.** ERIC WENDT, Jessica Tryner, Christian L'Orange, Bonne Ford, Casey Quinn, John Mehaffy, Jeffrey R. Pierce, Shantanu Jathar, Dan Miller-Lionberg, John Volckens, *Colorado State University*
10:15
- 8LC.4 Using an Electrostatic Sensor to Measure Real Time PM Levels in Engine Exhaust.** MATTI MARICQ, David Bilby, *Ford Motor Company*
10:30
- 8LC.5 New Test Method for the Low Cost Dust Sensors.** KANG-HO AHN, Yong-Hee Park, Woo-Young Kim, Hee-Sang Kim, *Hanyang University, R. of Korea*
10:45
- 8LC.6 Possibilities and Limitations of Low-cost PM Sensors.** CHRISTOF ASBACH, Michael Spreitzer, Michael Bässler, Thorsten Schultze, Jörg Lindermann, Heinz Kaminski, Bryan Hellack, Ana Maria Todea, *IUTA, Duisburg, Germany*
11:00
- 8LC.7 Field Calibration of 50 AQMESH Air Quality Sensors.** Jacob Swanson, TRES WUERFFEL, Monika Vadali, *Minnesota State University, Mankato*
11:15
- 8LC.8 Improving Quantification Methods for Long-term (24-36 mo.) Low-cost Air Quality Sensor System Deployments.** EBEN CROSS, David Hagan, Leah Williams, Jesse Kroll, John Jayne, *Aerodyne Research, Inc.*
11:30
- 8LC.9 Assessing Ambient Levels and Personal Exposures in Baltimore: The SEARCH Project.** MISTI ZAMORA, Kirsten Koehler, Fulizi Xiong, Drew Gentner, Branko Kerkez, *Johns Hopkins Bloomberg School of Public Health*
11:45

8MG AIR QUALITY I+E117N MEGACITIES: FROM SOURCES TO CONTROL II - SOURCES

ROOM 274

Lupita Montoya and Fatima Andrade, chairs

- 8MG.1 Sources and Impacts of Megacities Emissions from Local to Global Scales: Challenges and Opportunities for Mitigation.** LUISA MOLINA, *Molina Center for Energy and Environment*
9:45
- 8MG.2 Fine Particles Sources in São Paulo: Evolution of Sources Identification for the Last 30 Years.** MARIA DE FATIMA ANDRADE, Regina Maura Miranda, Luis Mendes Santos, Yann Marien, *University of Sao Paulo*
10:00
- 8MG.3 Spatio-Temporal Trends and Source Apportionment of Fossil Fuel and Biomass Burning Black Carbon (Bc) in the Los Angeles Basin.** AMIRHOSEIN MOUSAVI, Mohammad Sowlat, Sina Hasheminassab, Andrea Polidori, Constantinos Sioutas, *University of Southern California*
10:15

- 8MG.4 Source Apportionment of High Resolution Aerosol Trace Elements in Beijing, China.** P. RAI, Markus Furger, Jay G. Slowik, Francesco Canonaco, Rujin Huang, Junji Cao, Urs Baltensperger, Andre S.H. Prévôt, *Paul Scherrer Institute*
10:30
- 8MG.5 Assessment of PM Exposures during Commute in Megacity of Karachi, Pakistan.** Kamran Khan, HAIDER KHWAJA, Sumayya Saied, Azhar Siddique, Saiyada Masood, Mirza M. Hussain, *University of Karachi*
10:45
- 8MG.6 Submicron Aerosol Composition in the World's Most Polluted Megacity: The Delhi Aerosol Supersite Campaign.** SHAHZAD GANI, Sahil Bhandari, Sarah Seraj, Dongyu S. Wang, Kanan Patel, Prashant Soni, Zainab Arub, Gazala Habib, Lea Hildebrandt Ruiz, Joshua Apte, *University of Texas at Austin*
11:00
- 8MG.7 On Particle-Bound Polycyclic Aromatic Hydrocarbons (PPAH) and Links to Gaseous Emissions in Mexico City.** LUIS ANTONIO LADINO, Graciela Raga, Darrel Baumgardner, *Universidad Nacional Autónoma de México, Mexico City, Mexico*
11:15
- 8MG.8 Chemical Composition of Ambient PM_{2.5} and PM₁₀ for an Industrial City, Ghaziabad, India.** LOVLEEN GUPTA, Ramya Sunder Raman, Gazala Habib, *IIT Delhi*
11:30
- 8MG.9 Aerosol Fluxes above Beijing.** EIKO NEMITZ, Ben Langford, Chiara Di Marco, Neil Mullinger, Yele Sun, Jian Zhao, Pingqing Fu, *Centre for Ecology and Hydrology*
11:45

Wednesday 12:00 PM - 1:00 PM
Lunch on Your Own

Wednesday 12:00 PM - 1:00 PM
Early Career Event with Pizza

Wednesday 11:30 AM - 12:30 PM
European Aerosol Assembly Board Meeting with Lunch

Wednesday 1:00 PM - 4:30 PM
Technical Tours

Wednesday 5:00 PM - 9:00 PM
Fun Tours

Wednesday 6:00 PM - 9:00 PM
University Reunions

Wednesday 6:00 PM - 9:00 PM
Evening with Industry (TSI / Kanomax / MAGEE / Palas / Handix (AirModus))

Thursday

Thursday 8:00 AM - 9:15 AM
Plenary IV: Improvement of Inhalation Toxicity Testing for Nanomaterials and Compliance Monitoring for Ambient PM

8:00 **Improvement of Inhalation Toxicity Testing for Nanomaterials and Compliance Monitoring for Ambient PM** Jun Kanno, *Japan Bioassay Research Center*; Chuen-Jinn Tsai, *National Chiao-Tung University*

Moderator Chak K. Chan, *City University of Hong Kong*

9:00 **Mercer Award, Friedlander Dissertation Award, GAeF PhD Award** Jeff Collett, *Colorado State University*; Birgit Wehner, *Leibniz Institute for Tropospheric Research, Leipzig, Germany*

Thursday 9:00 AM - 3:45 PM
Exhibits Open

Thursday 9:15 AM - 9:45 AM
Coffee Break

Thursday 9:45 AM - 11:45 AM
Session 9: Platform

9AC AEROSOL CHEMISTRY IX - SECONDARY ORGANIC AEROSOLS: PHASE AND PHASE SEPARATIONS
ROOM 275

Claudia Mohr and Yue Zhang, chairs

- 9AC.1 Liquid-Liquid Phase Separation in Organic Aerosol Particles Investigated by Environmental X-Ray Microscopy.** 9:45 Jan-David Förster, Christopher Pöhlker, Haijie Tong, Markus Ammann, Florian Ditas, Jörg Raabe, Ulrich Pöschl, David Walter, Benjamin Watts, MEINRAT O. ANDREA, *Max Planck Institute for Chemistry*
- 9AC.2 Connecting Phase Separations in Ambient Secondary Organic Aerosol and Ammonium Sulfate Particles to Relative Humidity and Temperature.** 10:00 ANDREW AULT, Amy Bondy, Sydney Niles, Peter Peterson, Little Josie, Rashad Pace, Ryan Moffet, Rachel O'Brien, Bingbing Wang, Alexander Laskin, *University of Michigan*
- 9AC.3 Measurements of Acid and Organic Partitioning between Phase-separated SOA/Aqueous Phases.** 10:15 BENJAMIN DEMING, Paul Ziemann, *University of Colorado*
- 9AC.4 Uptake of Dicarboxylic Acid Molecules by α -Pinene Secondary Organic Material and Implications for the Role of Particle Phase State and Relative Humidity.** 10:30 YUEMEI HAN, Jianhuai Ye, Zhaoheng Gong, Pengfei Liu, Suzane de Sá, Karena McKinney, Scot T. Martin, *Harvard University*
- 9AC.5 The Effects of Aerosol-Phase State and Chemical Composition on Multiphase Chemistry Leading to Isoprene-Derived Secondary Organic Aerosol Formation.** 10:45 YUE ZHANG, Yuzhi Chen, Andrew Lambe, Nicole Olson, Ziying Lei, Rebecca Craig, Manjula Canagaratna, Jordan Krechmer, Zhenfa Zhang, Avram Gold, Timothy Onasch, John Jayne, Douglas Worsnop, Cassandra Gaston, Joel A. Thornton, William Vizuete, Andrew Ault, Jason Surratt, *Boston College; Aerodyne Research, Inc.*
- 9AC.6 Refining Equilibrium Partitioning: Detailed Chemical Composition, Viscosity and Diffusion Measurements.** 11:00 KELLY PEREIRA, Alfie Mayhew, Grazia Rovelli, Young-Chul Song, Aleksandra Marsh, Stephen Ingram, Simon O'Meara, David Topping, Jonathan P. Reid, Jacqueline F. Hamilton, *University of York*
- 9AC.7 Chemical Composition and Implications for Viscosity of SOA at Low Temperature.** 11:15 CLAUDIA MOHR, Wei Huang, Cheng Wu, Yvette Gramlich, Harald Saathoff, Aki Pajunoja, Annele Virtanen, *Stockholm University*
- 9AC.8 Secondary Organic Aerosol (SOA) Phase State-Relevant Properties: Evaluation of Impacts in the Southern Great Plains Using CMAQ.** 11:30 ANNAMARIE CARLTON, Ying Li, Manabu Shiraiwa, James Smith, Sergey Nizkorodov, Marc Carreras-Sospedra, Donald Dabdub, *University of California, Irvine*

9AM AEROSOL MODELING VII
ROOM 260

Matt Berg and Pai Liu, chairs

- 9AM.1 Estimation of Human Exposure to Near Road Emission Sources Using a Hybrid Modeling Framework.** Fatema Parvez, KRISTINA WAGSTROM, *University of Connecticut*
9:45
- 9AM.2 Dynamic Health Risk Mapping and Predictive Modelling of the Impact of Meteorological Fluctuations on Air Pollution in Yangtze River Delta.** JIE YANG, *University of Nottingham Ningbo China*
10:00
- 9AM.3 Modelling the Effects of Natural and Anthropogenic Sources of Aerosols on Weather.** PAUL MAKAR, Wanmin Gong, Craig A. Stroud, Ayodeji Akingunola, Balbir Pabla, Jack Chen, Radenko Pavlovic, Michael Moran, Chris McLinden, Junhua Zhang, Jason Milbrandt, David Sills, Katherine Hayden, Shao-Meng Li, Philip Cheung, Qiong Zheng, *Environment and Climate Change Canada*
10:15
- 9AM.4 Forecasting Smoke Transport and Its Impact on Weather in High-Resolution (3km) HRRR-Smoke Model over the US.** RAVAN AHMADOV, Eric James, Georg Grell, Curtis Alexander, Steven Albers, Ivan Csiszar, Marina Tsidulko, Rick Graw, Stuart McKeen, Shobha Kondragunta, Gabriel Pereira, Brad Pierce, Saulo Freitas, *CU CIRES- NOAA ESRL*
10:30
- 9AM.5 Characterizing the Climate Impacts of Brown Carbon over California.** ANIKENDER KUMAR, Michael Kleeman, Christopher Cappa, Lynn Russell, *University of California, Davis*
10:45
- 9AM.6 Simulations for Estimating Dynamic Shape Factors of Aerosol Aggregates.** Aniket Talele, Y.S. MAYYA, Jyoti Seth, *Indian Institute of Technology Bombay*
11:00
- 9AM.7 Impact of the Assumptions of Soot Nanostructure and Aggregation on Particle Sizing Using Time-Resolved Laser-Induced Incandescence.** MADHU SINGH, Randy Vander Wal, *The Pennsylvania State University*
11:15
- 9AM.8 How to Make Organic Molecules for New Particle Formation in Atmospheric Models: Recipes from the CERN CLOUD Experiment.** HAMISH GORDON, Simone Schuchmann, Roy Lee III Mauldin, Matti Rissanen, Chao Yan, Lukas Fischer, Mario Simon, Martin Heinritzi, Ken Carslaw, CLOUD Collaboration, *University of Leeds*
11:30

9AP AEROSOL PHYSICS V

ROOM 263

Chuji Wang and Mohit Singh, chairs

- 9AP.1 Experimental Study of the In-Cloud Electroscavenging.** ALEXIS DEPEE, Pascal Lemaitre, Anne Mathieu, Marie Monier, Andrea Flossmann, *French Radioprotection and Nuclear Safety Institute*
9:45
- 9AP.2 Approximation to the Diffraction Limit of Three Dimensional Shapes Using the Scaling Approach.** JUSTIN MAUGHAN, Christopher Sorensen, *Kansas State University*
10:00
- 9AP.3 Characterization of Droplets Injected into Hyperbaric Atmospheres by the Flow Blurring® Mechanism.** LUIS MODESTO-LÓPEZ, Alfonso Gañán-Calvo, *University of Seville*
10:15
- 9AP.4 Capillary Oscillations in the Transient Mode of Flow Focusing: Comparison Between Experimental Measurements and Numerical Results.** VICTORIEN MAMET, Michel Matton, Stéphane Gasser, Patrick Namy, Jean-Marc Dedulle, *LMGP - Grenoble INP / UGA, DBV Technologies*
10:30
- 9AP.5 "Particle Formation" vs. "Particle Growth": Robust Metric for Determining the Onset of Condensational Growth of Nanoparticles.** TINJA OLENIUS, Dominik Stolzenburg, Lukas Pichelstorfer, Paul M. Winkler, Kari Lehtinen, Iлона Riipinen, *Stockholm University*
10:45
- 9AP.6 Characterizing the Homogeneous Nucleation of Carbon Dioxide in a Supersonic Laval Nozzle.** KAYANE DINGILIAN, Yensil Park, Barbara Wyslouzil, *The Ohio State University*
11:00
- 9AP.7 Heterogeneous Nucleation onto Monoatomic Ions and the Role of Stable Pre-nucleation Clusters.** Christian Tauber, Paul E. Wagner, Paul M. Winkler, Christopher Hogan Jr., ANNE MAISSER, *University of Vienna*
11:15
- 9AP.8 Original Approach for Determining Surface Binding Energy of Particle-adsorbed PAHs Using L2MS Signal Decay.** MARIN VOJKOVIC, Dumitru Duca, Yvain Carpentier, Michael Ziskind, Alessandro Faccinnetto, Cristian Focsa, *Université de Lille*
11:30
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9BA BIOAEROSOLS II RESEARCH CHALLENGES

ROOM 264

Jana Kesevan and Maesheng Yao, chairs

- 9BA.1 Bioaerosol Transmission: Experimental Replication of Natural Processes.** RICHARD THOMAS, *Dstl*
9:45
- 9BA.2 BioAerosol Generation Methods.** JAY D. EVERSOLE, Cathy S. Scotto, *Naval Research Laboratory*
10:00
- 9BA.3 Understanding the Principles of Bioaerosol Sampling.** GEDIMINAS MAINELIS, *Rutgers, The State University of New Jersey*
10:15
- 9BA.4 Laboratory Systems for Biological Aerosol Experimentation and Testing.** JOSHUA SANTARPIA, Shanna Ratnesar-Shumate, *Sandia National Laboratories*
10:30
- 9BA.5 Bioaerosol Sampling in Field surveys.** TIINA REPONEN, *University of Cincinnati*
10:45
- 9BA.6 Factors Influencing Interpretation of Laser-Induced Fluorescence (LIF) Instruments for Bioaerosol Measurement.** J. ALEX HUFFMAN, *University of Denver, CO*
11:00
- 9BA.7 Aerosol Dosimetry and Extrapolation between Species.** MICHAEL OLDHAM, *Altria Client Services LLC*
11:15
- 9BA.8 Conducting Inhalation Exposures Using Bioaerosols; Infectious Microorganisms and Toxins: Concepts and Lessons Learned.** ROY BARNEWALL, *Battelle, Columbus Ohio*
11:30
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9CA CARBONACEOUS AEROSOL IV: BROWN CARBON

ROOM 267

Rawad Saleh and Hallie Boyer, chairs

- 9CA.1 Aerosol Optical Properties and Climate Implications of Emissions from Traditional and Improved Cookstoves.** GEORGES SALIBA, R. Subramanian, Kelsey Bilsback, Christian L'Orange, John Volckens, Michael Johnson, Allen Robinson, *Carnegie Mellon University*
9:45
- 9CA.2 Light Absorption by Carbonaceous Aerosol Emissions from Biomass Cookstoves in India.** APOORVA PANDEY, Sameer Patel, Pratim Biswas, Shamsh Pervez, Rajan K. Chakrabarty, *Washington University in St Louis*
10:00
- 9CA.3 Estimation of Brown Carbon in PM2.5 Samples from Long-term Networks.** XIAOLIANG WANG, Judith Chow, Brandon Daub, Steven Gronstal, L.W. Antony Chen, Mark Green, John Watson, *Desert Research Institute*
10:15
- 9CA.4 Pinning Down the Highly Variable Light-absorption Properties of Brown Carbon.** RAWAD SALEH, Zezhen Cheng, Khairallah Atwi, *University of Georgia*
10:30
- 9CA.5 Comprehensive Chemical Characterization of Brown Carbon Aerosols.** Peng Lin, Lauren Fleming, Ying Li, Wing-Sy DeRieux, Julia Laskin, Manabu Shiraiwa, Sergey Nizkorodov, ALEXANDER LASKIN, *Purdue University*
10:45
- 9CA.6 Brown Carbon at Three Platforms during the Actris-2 Experiment in Summertime in the Po Valley (Italy).** STEFANIA GILARDONI, Angela Marinoni, Francesca Volpi, Douglas Orsini, Paolo Cristofanelli, Davide Putero, Matteo Rinaldi, Marco Paglione, Imad El Haddad, Minna Aurela, Julija Pauraitė, Vidmantas Ulevicius, Dimitri Bacco, Vanes Poluzzi, Paolo Bonasoni, *ISAC-CNR*
11:00
- 9CA.7 Field Measurements of Black and Brown Carbon Optical Properties from the 2017 Wildfire Season.** KATIE FOSTER, Rudra Pokhrel, Matthew Burkhart, Shane Murphy, *University of Wyoming*
11:15
- 9CA.8 Light Absorption by Organic Aerosol from Combustion and Pyrolysis of Fir in Southern China.** RANRAN ZHAO, Yongming Zhang, Feng Wang, Qixing Zhang, *University of Science and Technology of China*
11:30
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9IM INSTRUMENTATION VII - PARTICLE COUNTING & SIZING

ROOM 276

Siqin He and Chongai Kuang, chairs

- 9IM.1 Modification of a Fine Condensation Particle Counter to Rapidly Measure Sub 3 Nanometer Atmospheric Clusters through Pulse Height Analysis.** CHONGAI KUANG, *Brookhaven National Laboratory*
9:45
- 9IM.2 Calibration and Ambient Measurements of Sub-3 nm Aerosols.** HELINA LIPP, Eduard Tamm, Kalju Tamme, Kaupo Komsaare, Urmas Hörrak, Heikki Junninen, *University of Tartu*
10:00
- 9IM.3 Comparison of Non-Radioactive Bipolar Charge Conditioners for Particle Ionization.** SIQIN HE, Derek Oberreit, *Kanomax FMT, Inc.*
10:15
- 9IM.4 Improving Airborne Nanoparticle and Cluster Detection with the Butanol Based Laminar Flow Condensation Nuclei Counters Grimm 5.403 and 5.412.** GERHARD STEINER, Manuel Orzan, Ina Nagler, Elena Petrakakis, Mirela Selimovic, Christian Tauber, Frank Tettich, *University of Vienna*
10:30
- 9IM.5 A Long-Term Stable High-Temperature Condensation Particle Counter for Application on Raw Automotive Exhausts.** MARTIN KUPPER, Michael Kügler, Alexander Bergmann, Martin Kraft, *CTR Carinthian Tech Research, Villach, 9524, Austria*
10:45
- 9IM.6 Measurement of Aircraft Engine Soot Emissions using the ESCOM (Engine Soot Compliance Monitor).** Timothy Onasch, Richard Miake-Lye, Fred Bacon, Philip Croteau, William Brown, ANDREW FREEDMAN, *Aerodyne Research, Inc.*
11:00
- 9IM.7 Experimental Results of a Novel Inverted Drift Tube with Diffusion Auto-Correction for the Characterization of sub 100nm Nanoparticles.** XI CHEN, Md Minal Nahin, Carlos Larriba-Andaluz, *IUPUI*
11:15
- 9IM.8 Refinements of a Water-Based Condensation Particle Counter for Detection near 1 nm.** Gregory Lewis, Steven Spielman, SUSANNE HERING, *Aerosol Dynamics Inc.*
11:30
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9LC LOW-COST AND PORTABLE SENSORS III

FERRARA THEATER

Sarah Chambliss and Albert Presto, chairs

- 9LC.1 Towards High-Resolution Air Pollution Mapping: Fusing Mobile PM Measurements with Data from a Dense Low-Cost Sensor Network.** SARAH CHAMBLISS, Kyle Messier, Chelsea V. Preble, Julien Caubel, Ramon Alvarez, Brian LaFranchi, Melissa M. Lunden, Thomas W. Kirchstetter, Joshua Apte, *University of Texas at Austin*
9:45
- 9LC.2 Development of the Scientific Payload for UAS Observation.** FAN MEI, Jason Tomlinson, Albert Mendoza, Matt Newburn, Lexie Goldberger, Peter Carroll, Mikhail Pekour, Beat Schmid, *Pacific Northwest National Laboratory*
10:00
- 9LC.3 Towards Improved PM_{2.5} Measurements Using a Low-cost Multi-sensor System.** NUERAILI KUERBANJIANG, Meilu He, Suresh Dhaniyala, *Clarkson University*
10:15
- 9LC.4 Field Deployment Experience of Low Cost Smart City Air Pollution Monitoring Network.** YU-TING CHEN, Chien-Wei Huang, Yeuh-Bin Wang, Shuenn-Chin Chang, Lung-Chi Lin, Chih-Ming Pao, Seng-Yong Lau, *Autotronic Enterprise Co., Ltd.*
10:30
- 9LC.5 Spatial Modeling of PM_{2.5} Concentrations Measured by a Low-Cost Sensor Network: Comparison of Linear and Machine-Learning Enabled Land Use Models.** SAKSHI JAIN, Naomi Zimmerman, Albert Presto, *Carnegie Mellon University*
10:45
- 9LC.6 Low-cost Sensor Calibration, Application, and Modification for Size Distribution and Refractive Index Measurements.** JIAYU LI, Jiaxi Fang, Tandeep Chadha, Benjamin Sumlin, Rajan K. Chakrabarty, Pratim Biswas, *Washington University in St Louis*
11:00
- 9LC.7 Determination of the Size-Resolved Sampling Efficiency for a Commodity (AirBeam) PM_{2.5} Ambient Aerosol Sensor at a Background U.S. Continental Site.** CHARLES STANIER, Nathan Janecek, Nathan Bryngelson, Megan Christiansen, *University of Iowa*
11:15
- 9LC.8 Ambient and Laboratory Performance Assessment of Plantower PMS Low-Cost Particulate Matter Sensors.** TOFIGH SAYAHI, Kerry Kelly, *University of Utah*
11:30
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Luisa Molina and Amara Holder, chairs

- 9MG.1 Secondary Organic Aerosol Formation from Urban Sources: Current Understanding and New Results from WINTER in the NE US.** JOSE-LUIS JIMENEZ, Jason Schroder, Patrick Hayes, Joost de Gouw, Viral Shah, Lyatt Jaegle, Pedro Campuzano-Jost, Douglas Day, Benjamin A. Nault, *University of Colorado-Boulder*
9:45
- 9MG.2 Airborne Fine Particulate Matter in the Subway System of the Megacity of São Paulo.** ADMIR CRÉSO TARGINO, Patricia Krecl, Julián Felipe Segura, *Federal University of Technology*
10:00
- 9MG.3 The Impact of Mixing State and Size-resolved Hygroscopicity of Urban Aerosols on CCN Activity in Seoul, Korea.** NAJIN KIM, Minsu Park, Seong Soo Yum, Hye Jung Shin, Jong Sung Park, Joon Young Ahn, *Yonsei University*
10:15
- 9MG.4 Seasonal Characterization of Organic Nitrogen in Atmospheric Aerosols Using High Resolution Aerosol Mass Spectrometry in Beijing, China.** WEIQI XU, Yele Sun, Qingqing Wang, Wei Du, Jian Zhao, Xinlei Ge, Tingting Han, Yingjie Zhang, Wei Zhou, Jie Li, Pingqing Fu, Zifa Wang, Douglas Worsnop, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*
10:30
- 9MG.5 Investigation of Organic Aerosol in Delhi, India, using an Extractive Electrospray Ionization Time-of-Flight Mass Spectrometer (EESI-LTOF).** Varun Kumar, Deepika Bhattu, Yandong Tong, Veronika Pospisilova, Giulia Stafenelli, Amelie Bertrand, Roberto Cassotto, Rangu Venkata Satish, Pawan Vats, Urs Baltensperger, Dilip Ganguly, Neeraj Rastogi, S.N. Tripathi, Andre S.H. Prévôt, JAY G. SLOWIK, *Paul Scherrer Institute*
10:45
- 9MG.6 Gradients in Concentration and Composition of Sub-Micron PM in a Coastal American City: Downtown Street Canyon Dominates a Large Area Emission Source in Port of Oakland CA.** RISHABH SHAH, Ellis Shipley Robinson, Peishi Gu, Joshua Apte, Albert Presto, *Carnegie Mellon University*
11:00
- 9MG.7 PM1 Chemical Characterization in 2015, South of Mexico City, with an Aerosol Chemical Speciation Monitor.** DARA SALCEDO, Harry Alvarez-Ospina, Oscar Peralta, Telma Castro, *National University of Mexico*
11:15
- 9MG.8 Exploring the Chemical Composition of Gas and Aerosol Phase Measurements from FIGAERO-ToF-CIMS in Beijing Using Positive Matrix Factorisation.** ARCHIT MEHRA, Manjula Canagaratna, Stephen Worrall, Asan Bacak, Thomas Bannan, Michael Priestley, James Lee, Freya Squires, James Hopkins, Rachel Dunmore, Jacqueline F. Hamilton, Eloise Slater, Lisa Whalley, Yele Sun, Pingqing Fu, James Allan, Carl Percival, John Jayne, Douglas Worsnop, Hugh Coe, *University of Manchester*
11:30

Thomas Peters and Nima A-Mohajer, chairs

- 9WA.1 Towards Better Particle Characterization in Industrial Workplaces.** TORUNN ERVIK, Stephan Weinbruch, Dag Gunnar Ellingsen, Yngvar Thomassen, Balázs Berlinger, *National Institute of Occupational Health, Norway*
9:45
- 9WA.2 A Novel Approach for Investigating Workplace Ultrafine Particles Respiratory Deposition.** WEI-CHUNG SU, Yi Chen, *University of Texas Health Science Center at Houston*
10:00
- 9WA.3 Effective Density Determination For Workplace Real-Time Monitoring of Ultrafine Aerosols Using An ELPI+.** LOÏC WINGERT, Yves Cloutier, *IRSST/ETS*
10:15
- 9WA.4 Physical and Chemical Properties of Particulate Matter in a Chinese Electrolytic Zinc Manufacturing Facility.** ZIZHEN MA, Xu Huang, Fuyuan Xu, Ge Zhang, Linhua Jiang, Jingkun Jiang, Lei Duan, Ning Duan, *Tsinghua University*
10:30
- 9WA.5 Exposure of Home Healthcare Workers to Aerosolized Medications: Two-Phase Simulation Study.** SERGEY A. GRINSHPUN, Yousef Elmashae, Katie Ollier, Maija Leppänen, Michael Yermakov, Tiina Reponen, *University of Cincinnati*
10:45
- 9WA.6 Sources of Particulate Matter in Mines and Mining Environments.** Hilikka Timonen, Joel Kuula, Anssi Arffman, Jenni Alanen, Kimmo Teinilä, Matthew Bloss, Minna Aurela, Laura Salo, Risto Hillamo, Sampo Saari, Pedro Oyola, Felipe Reyes, Yeanice Vasquez, Jorma Keskinen, Topi Rönkkö, Eija Asmi, SANNA SAARIKOSKI, *Finnish Meteorological Institute*
11:00

9WA.7 Emission and Oxidative Potential of Particulates from Alternating Current Tungsten Inert Gas Welding on Aluminum. JUN WANG, Shalayne Sims, Jacob Bartels, Marcio Bezerra, *University of Oklahoma*
11:15

9WA.8 Characterization of Nanometer-Sized Oil Mist Generated in Metal Machining Process. MORIAKI IWASAKI, Kojiro Hirai, Kanta Fukumori, Hidenori Higashi, Takafumi Seto, *Kanazawa University*
11:30

Thursday 11:45 AM - 1:15 PM
Session 10: Poster

10AC AEROSOL CHEMISTRY X: POSTERS

EXHIBIT HALL 5

Andrew Ault and Tran Nguyen, chairs

10AC.1 Formation and Growth of Aerosol from Agricultural Emissions. PHILIP SILVA, *USDA - Agricultural Research Service*
11:45

10AC.2 Observations of Biogenic New Particle Formation over a Boreal Fen. HEIKKI JUNNINEN, Lauri R. Ahonen, Federico Bianchi, Lauriane Quéléver, Simon Schallhart, Hanna Manninen, Katri Leino, Janne Lampilahti, Stephany Mazon, Jenni Kontkanen, Pavel Alekseychik, Janne Levula, Ivan Mammarella, Timo Vesala, Tuukka Petäjä, Markku Kulmala, *University of Tartu*
11:45

10AC.4 The Impact of Multiphase Chemistry on Nanoparticle Growth and Composition. MICHAEL J. APSOKARDU, Murray Johnston, *University of Delaware*
11:45

10AC.5 Formation of Secondary Aerosol and Growth of New Particles in the Ambient Atmosphere: An Experimental Study Using a Dual Smog Chamber System. SPIRO JORGA, Christos Kaltsonoudis, Spyros Pandis, *Carnegie Mellon University*
11:45

10AC.6 Investigation of New Particle Formation from Aromatic Hydrocarbons: Impact of OH and NO_x on Highly Oxidized Multifunctional Compounds. HOUSSNI LAMKADDAM, Mao Xiao, Christopher R. Hoyle, Lubna Dada, Mingyi Wang, Dominik Stolzenburg, Lukas Fischer, Andrea Baccarini, Chuan Ping Lee, Ruby Marten, Imad El Haddad, Josef Dommen, Urs Baltensperger, CLOUD Collaboration, *Paul Scherrer Institute*
11:45

10AC.7 Recent Advances in Understanding on the Relation between Ion Composition and Ion-induced Nucleation in the Boreal Forest in Southern Finland. CHAO YAN, Clemence Rose, Lubna Dada, Federico Bianchi, Siegfried Schobesberger, Heikki Junninen, Katrianne Lehtipalo, Wei Nie, Tuija Jokinen, Nina Sarnela, Yonghong Wang, Qiaozhi Zha, Olga Garmash, Mikko Sipilä, Tuukka Petäjä, Veli-Matti Kerminen, Mikael Ehn, Markku Kulmala, *University of Helsinki, Finland*
11:45

10AC.8 SALTENA Campaign: A Comprehensive Study of New Particle Formation (NPF) at Mt. Chacaltaya (5240m A.S.L.) in South America. QIAOZHI ZHA, Diego Aliaga, Otso Peräkylä, Yee Jun Tham, Xuemeng Chen, Joonas Enroth, Liine Heikkinen, Katrianne Lehtipalo, Juha Kangasluoma, Mikael Ehn, Mikko Sipilä, Tuukka Petäjä, Markku Kulmala, Claudia Mohr, Federico Bianchi, *University of Helsinki*
11:45

10AC.9 Temperature and UV Light Affect HOM Chemistry and Biogenic New Particle Formation. MARIO SIMON, Lubna Dada, Martin Heinritzi, Lukas Fischer, Dominik Stolzenburg, Xucheng He, Chao Yan, Andrea C. Wagner, Andreas Kürten, Jasper Kirkby, Joachim Curtius, *Goethe University Frankfurt*
11:45

10AC.10 Investigation of Multicomponent New Particle Formation under Urban Atmospheric Conditions in the CLOUD Chamber. MAO XIAO, Christopher R. Hoyle, Lubna Dada, Mingyi Wang, Dominik Stolzenburg, Lukas Fischer, Andrea Baccarini, Chuan Ping Lee, Houssni Lamkaddam, Ruby Marten, Imad El Haddad, Josef Dommen, Urs Baltensperger, CLOUD Collaboration, *Paul Scherrer Institute*
11:45

10AC.11 Interactions between Aerosol Compositions and Liquid Water Content during Beijing's Haze Episodes at Different Seasons. XIAOXIAO LI, Wei Zhou, Jiming Hao, Jingkun Jiang, *Tsinghua University*
11:45

10AC.12 Laboratory Investigations of SOA Photolysis. MARIA ZAWADOWICZ, John Shilling, *Pacific Northwest National Lab*
11:45

- 10AC.13 Explaining Atmospheric Particle Growth by Organic Vapors of Biogenic and Anthropogenic Origin.** 11:45 CLAUDIA MOHR, Taina Yli-Juuti, Joel A. Thornton, Felipe Lopez-Hilfiker, Anna Lutz, Arto Heitto, Juan Hong, Neil Donahue, Ilona Riipinen, Wei Huang, Cheng Wu, Federico Bianchi, Qiaozhi Zha, Diego Aliaga, Liine Heikkinen, Markku Kulmala, Marcos Andrade, *Stockholm University*
- 10AC.14 Impact of Ammonia on Atmospheric (H₂SO₄)_n(HSO₄⁻) Ions: Thermochemistry and Implications for New Particle Formation.** 11:45 ALEXEY NADYKTO, Jason Herb, Kirill Nazarenko, Fangqun Yu, *Moscow State University of Technology; SUNY at Albany*
- 10AC.15 Effects of Temperature on Nucleated Particles from α -Pinene Ozonolysis Measured by a FIGAERO-Chemical Ionization Mass Spectrometer.** 11:45 QING YE, Mingyi Wang, Victoria Hofbauer, Dexian Chen, Jasper Kirkby, Neil Donahue, CLOUD Collaboration, *Carnegie Mellon University*
- 10AC.16 Tracking Carbon during the Formation of Secondary Organic Aerosol from Alkane Oxidation.** 11:45 JOSHUA MOSS, Abigail Koss, Jesse Kroll, *MIT*
- 10AC.17 The Role of Iodine Emission in the Atmospheric Aerosol Formation.** 11:45 RAVI KUMAR, *Multanimal Modi College, Modinagar-201204 (U.P.), India*

10AP AEROSOL PHYSICS VI: POSTERS

EXHIBIT HALL 5

Apoorva Pandey and Chuji Wang, chairs

- 10AP.1 Photopolarimetric Light Scattering to Place Constraints on Dust Properties.** 11:45 GORDEN VIDEEN, Evgenij Zubko, *US Army Research Lab*
- 10AP.2 Dependence of Heterogeneous Nucleation of N-Butanol Vapor on Temperature and Humidity for improved detection of Nanoparticles.** 11:45 CHRISTIAN TAUBER, Gerhard Steiner, Paul M. Winkler, *University of Vienna*
- 10AP.3 Measurement of the Size Distribution of Stable Clusters during Silane Pyrolysis in a Helium Atmosphere.** 11:45 MIGUEL VAZQUEZ PUFLEAU, Yang Wang, Elijah Thimsen, Pratim Biswas, *Washington University in St. Louis*
- 10AP.4 Enhanced Raman Spectroscopy of Individual Aerosol Particles.** 11:45 VASANTHI SIVAPRAKASAM, Matthew B. Hart, Jay D. Eversole, *Naval Research Laboratory*
- 10AP.5 Interpreting the Kinetics of Ballistic-to-Diffusive Transition Using Directional Statistics.** 11:45 PAI LIU, William Heinson, Benjamin Sumlin, Rajan K. Chakrabarty, *Washington University in St. Louis*
- 10AP.6 Experimental Studies on the Charge Distribution of Aerosol Particles from a Fluidized Bed Aerosol Generator.** 11:45 QUN ZHOU, Cai Liang, Lunbo Duan, Xiaoping Chen, Daoyin Liu, Changsui Zhao, *School of Energy and Environment, Southeast University*
- 10AP.7 The Hygroscopicity of Particles That Carry Differing Charges and Their Impact on Tandem Differential Mobility Analyzer Measurements of Biomass Burning Aerosol.** 11:45 CHRISTOPHER OXFORD, Rajan K. Chakrabarty, Brent Williams, *Washington University in St. Louis*
- 10AP.9 Using Electron Tomography to Better Characterize the Fractal Morphology of Aerosol Aggregates.** 11:45 CHENCHONG ZHANG, Pai Liu, William Heinson, Qing Li, Jingkun Jiang, Rajan K. Chakrabarty, *Washington University in St. Louis*
- 10AP.10 Mobility of Nanofiber, Nanorod and Non-spherical Nano-agglomerates in Gases.** 11:45 LIN TIAN, Goodarz Ahmadi, Jiyuan Tu, *MIT University*

10BA BIOAEROSOLS III SOURCES AND FATE: POSTERS

EXHIBIT HALL 5

Michael Schuit and Tobias Koneman, chairs

- 10BA.1 Measuring Changes in Bioaerosol Fluorescence over Time with the WIBS.** 11:45 ELIZABETH CORSON, Jonathan Eshbaugh, *JHU/APL*

- 10BA.3 Bacterial and Fungal Aerosol Emissions from Different Land Types.** XINYUE LI, Maosheng Yao, *Peking University*
11:45
- 10BA.4 Atmosphere Bioaerosols in Different Micro- Environments of Megacity of Lagos, Nigeria: Relationship between Ambient Concentrations, Volatile Organic Compounds and Weather Parameters.** EMMANUEL OLUMAYEDE, Chukwebe Ojiodu, *Federal University Oye - Ekiti*
11:45
- 10BA.5 A Clinic Table to Prevent Aerosol Transmission Based on Wind Curtain.** HUA QIAN, Jin Ye, Jichen Ji, Xiaohong Zheng, *Southeast University*
11:45
- 10BA.6 Bioaerosols Abundance Variability through Cloud Decks across Multiple Environments during BOAS Campaign.** ARNALDO NEGRON-MARTY, Natasha De Leon-Rodriguez, Natasha Hodas, Matthew Coggon, Kelvin Bates, Armin Sorooshian, Hafliði Jonsson, John Seinfeld, Richard Flagan, Kostas Konstantinidis, Athanasios Nenes, *Georgia Institute of Technology*
11:45
- 10BA.7 Long-Range Transport of Biogenic Aerosols Monitored at the Cape Verde Atmospheric Observatory (CVAO) from 2015 to 2016.** DOUGLAS MORRISON, Martin Gallagher, David Topping, Ian Crawford, Michael Flynn, Katie Read, Paul Kaye, Virginia Foot, *University of Manchester*
11:45
- 10BA.8 A Study on Biological Constituents of PM1 over Semiarid Region of Indo-Gangetic Basin.** ROHINI SINGH, Ranjit Kumar, *DEI, Dayalbagh, Agra, India*
11:45
- 10BA.10 Modulation and Resilience of the Metabolome of Pseudomonas graminis, a Cloud Bacterium, Facing H2O2 Atmospheric Stress.** Nolwenn Wirgot, Marie Lagree, Mounir Traikia, Cyril Jousse, Isabelle Canet, Martine Sancelme, Pierre Amato, Ludovic Besaury, Bernard Lyan, ANNE MARIE DELORT, *Université Clermont Auvergne*
11:45
- 10BA.11 Impact of Composting Recycled Manure Solids on Bioaerosols in Dairy Farms.** KARINE DUQUETTE-LOZEAU, Joanie Lemieux, Valérie Létourneau, Sébastien Fournel, Caroline Côté, Stéphane Godbout, Caroline Duchaine, *CRIUCPQ, Université Laval, Canada*
11:45
- 10BA.12 Influence of Occupant Characteristics on Indoor Microbiome.** DAHAE SEONG, Shamia Hoque, *USC*
11:45
- 10BA.13 Ice Nuclei Activity of Fungal Spores Collected in the Metropolitan Area of São Paulo, Brazil.** ANA PAULA MENDES EMYGDIO, Dulcilena de Matos Castro Silva, Ricardo Matheus Pires, Fabio Luiz Teixeira Goncalves, Maria de Fatima Andrade, *University of Sao Paulo*
11:45
- 10BA.14 Investigation of Bioaerosol Charge Levels Indoors Using the Rutgers Electrostatic Passive Sampler (REPS).** SYDONIA MANIBUSAN, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
11:45
- 10BA.16 The Effects of Alpha-pinene and Toluene in the Presence of UV, Ozone, and Humidity on Bioaerosols in a Laboratory Rotating Drum.** SEAN KINAHAN, Don Collins, Yong-Le Pan, Aimable Kalume, Matthew Tezak, Keiko Salazar, Gabriel Lucero, Steven Storch, Cathryn Reyna, Joshua Santarpia, *Sandia National Laboratories*
11:45
- 10BA.17 Spore Aerosol Viability Dependence on Radiation Exposure.** MATTHEW B. HART, Jozsef Czege, Cathy S. Scotto, Jana Kesavan, Vipin Rastogi, Frank Handler, Jay D. Eversole, *Naval Research Laboratory*
11:45
- 10BA.18 Spatial and Longitudinal Influences on Accurately Predicting a Microbiome "Biofingerprint".** ANDREW HOISINGTON, Christopher Stamper, Katherine Bates, Christopher Lowry, *Air Force Institute of Technology*
11:45
- 10BA.20 Aerosolization of Biological Aerosols: Principles and Pitfalls.** GEDIMINAS MAINELIS, Huajun Zhen, Taewon Han, *Rutgers, The State University of New Jersey*
11:45
- 10BA.21 Surgical Smoke: A Literature Review.** CATHERINE ALMQUIST, *Miami University*
11:45
- 10BA.23 Bioaerosol Characterisation in the Transportation Environment.** IAN COLBECK, Nikoletta Grydaki, Corinne Whitby, *University of Essex, Colchester, CO4 3SQ, UK*
11:45
- 10BA.24 Optimize Aerosolized Generation and Characterization of Bacterial Spores.** KAVINDRA KUMARAGAMA, Jing Qian, Shane Rogers, Shantanu Sur, Suresh Dhaniyala, *Clarkson University, Potsdam, NY, USA*
11:45
- 10BA.25 Variability of PM and Bioaerosols at Diverse Indoor and Outdoor Locations in a Southern Tropical Indian Region.** HEMA PRIYAMVADA, Priyanka C., Raj Kamal Singh, Akila M., Ravikrishna R., Sachin S. Gunthe, *Clarkson University*
11:45

Cheol Jeong and Yongjie Li, chairs

- 10CA.1** **A Differential Photoacoustic Spectroscopic (DPAS) Technique for Aerosol Light Absorption Measurement in the Presence of Light-absorbing Gaseous Species.** ZHENHONG YU, Gregory Magoon, William Brown, James Assif, Richard Miake-Lye, David Liscinsky, *Aerodyne Research, Inc.*
11:45
- 10CA.2** **Laboratory-Generated Coated Soot Aerosols with Tunable Physical, Chemical and Optical Properties Using a Cast Generator and a Portable Micro Smog Chamber.** Michaela N. Ess, Alejandro Keller, Adam Kimak, Heinz Burtscher, KONSTANTINA VASILATOU, *METAS*
11:45
- 10CA.3** **The Density, Morphology, and Internal Structure of Biomass Burning Brown Carbon Aerosol.** BENJAMIN SUMLIN, Christopher Oxford, Bongjin Seo, Robert Pattison, Brent Williams, Rajan K. Chakrabarty, *Washington University in St. Louis*
11:45
- 10CA.5** **The Effect of Potassium Chloride Addition on the Characteristics of Nascent Soot during Ethylene Pyrolysis.** Mengda Wang, JUNYU MEI, Quanxi Tang, Xiaoqing You, *Tsinghua University*
11:45
- 10CA.6** **Spectral Measurements of Mass Absorption Cross-Section of Flare-Generated Black Carbon.** BRADLEY CONRAD, Melina Jefferson, Brian Crosland, Matthew Johnson, *Carleton University*
11:45
- 10CA.7** **Temperature Effects on Carbonaceous Particle Formation during Ethylene Pyrolysis in a Laminar Flow Reactor.** JUNYU MEI, Mengda Wang, Xiaoqing You, Chung K. Law, *Tsinghua University*
11:45
- 10CA.8** **Use of Electron Tomography to Analyze the Actual Primary Particles Distribution and Agglomerate Morphology of Soot.** Alberto Baldelli, STEVEN ROGAK, Una Trivanovic, *University of British Columbia*
11:45
- 10CA.10** **Quantitative Comparison of Correction Algorithms Applied Filter-Based Black Carbon Measurements during the FIREX Campaign.** HANYANG LI, Gavin McMeeking, Andrew May, *The Ohio State University*
11:45
- 10CA.11** **Influence of Aging on Mass Absorption Coefficient and Single Scattering Albedo of SOA: Oxidation vs. Organo-nitrate Formation.** STEPHEN ZIMMERMAN, Justin Dingle, Alexander Frie, Justin Min, Roya Bahreini, *University of California, Riverside*
11:45
- 10CA.12** **UV-Vis-IR Spectral Complex Refractive Indices and Optical Properties of Brown Carbon Aerosol from Biomass Burning.** YULI W. HEINSON, Benjamin Sumlin, Nishit Shetty, Apoorva Pandey, Brent Williams, Rajan K. Chakrabarty, *Washington University in Saint Louis*
11:45
- 10CA.13** **Fractal Morphology of Black Carbon Aerosol Enhances Absorption on the Thermal Infrared Wavelengths.** WILLIAM HEINSON, Rajan K. Chakrabarty, *Washington University in St. Louis*
11:45
- 10CA.14** **A New Method for the Determination of BC Mass Concentration from Light Absorption.** YINGLI YU, Chunsheng Zhao, Wangshu Tan, *Peking University*
11:45
- 10CA.15** **Effects of Thermodenuding on the Morphology and Optical Properties of Soot.** NISHIT SHETTY, Apoorva Pandey, Yuli W. Heinson, Rajan K. Chakrabarty, *Washington University in St. Louis*
11:45

10CB COMBUSTION III: POSTERS

R. Subramanian, chair

- 10CB.1** **Investigating the Effect of Varying Ethanol Content and Driving Conditions on FFV-GDI Vehicle Emissions with the Addition of an Anthropogenic Surrogate.** PATRICK ROTH, Jiacheng Yang, Ayla Moretti, Thomas D. Durbin, David R. Cocker III, Georgios Karavalakis, Akua Asa-Awuku, *University of California, Riverside*
11:45
- 10CB.4** **Effects of Adding Gaseous Fuels on the Pollutant Emissions from a Diesel Engine.** LIN-CHI WANG, Wen-Jhy Lee, Hsi-Hsien Yang, Jau-Huai Lu, *Cheng Shiu University*
11:45
- 10CB.5** **Characteristics of Particulate Matter and Particle-bound Metal Emissions from a Diesel Engine Generator Fueled with Waste Cooking Oil-based Biodiesel Blended with Butanol and Acetone.** Jen-Hsiung Tsai, Jia-Twu Lee, Ciao-Jhen Guo, Kuo-Lin Huang, Sheng-Lun Lin, SHUI-JEN CHEN, *National Pingtung University of Science and Technology*
11:45

- 10CB.7 Combustion Conditions Leading to Primary Brown Carbon Emissions in Diesel Exhaust and Biomass Combustion.** Vilhelm B. Malmberg, Axel C. Eriksson, Sandra Török, Christina Andersen, Louise Gren, Christoffer Boman, Robert Lindgren, Kirsten Kling, Sam Shamun, Martin Tunér, Yilong Zhang, Shawn Kook, Per-Erik Bengtsson, JOAKIM PAGELS, *Lund University, Sweden*
11:45
- 10CB.9 In-Situ Estimation of Non-Regulated Pollutant Emission Factors in Urban Area With Fleet Composition Characterization.** SIMON MARTINET, Yao Liu, Liliane Jean-Soro, Mathieu Goriaux, *IFSTTAR*
11:45
- 10CB.10 Secondary Organic Aerosol Formation Potential of Next-Generation Biofuels.** BRANDON KING, Platt Ben, Liam Lewane, Pothier Matson, Delphine Farmer, McCormick Robert, Thornton Matthew, Ratcliff Matthew, Shantanu Jathar, *Colorado State University*
11:45
- 10CB.12 Large Eddy Simulations of Staged Pressurized Oxy-Combustion.** FATMA KARAISMAIL, Akshay Gopan, Richard Axelbaum, Ismail Celik, Benjamin M. Kumfer, *Washington University in St. Louis*
11:45
- 10CB.13 Self-explosion of Lower Alkanes and Alcohols Fine Droplet at the End of Evaporation.** Enomoto Hiroshi, Teraoka Yoshikazu, Hieda Noboru, Ota Yoshihide, UESAWA TOMOKI, *Kanazawa University*
11:45
- 10CB.14 Deconvolution of Nanoparticle Size Distributions Measured in Combustion Processes.** HARTMUT MÄTZING, Werner Baumann, Andrei Bologa, Alexandra Loukou, Nadine Teuscher, Petros Vlavakis, Hans-Joachim Gehrman, Hanns Rudolf Paur, Dimosthenis Trimis, Dieter Stapf, *KIT, Karlsruhe, Germany*
11:45
- 10CB.15 Effect of Soot and Radiation Models in Prediction of Pollutant Formation from Practical Combustion Scenarios.** KHALED MOSHARRAF MUKUT, Somesh Roy, Sebastian Ferreyro Fernandez, Daniel Haworth, Michael Modest, *Marquette University*
11:45
- 10CB.16 Structure and Size of Carbon nano-Particles Generated in Laminar Premixed Flames.** MARIO COMMODO, Gianluigi De Falco, Patrizia Minutolo, Andrea D'Anna, *IRC-CNR, Napoli, Italy*
11:45
- 10CB.17 Effect of Acetone-Butanol-Ethanol (ABE) Addition to Diesel on the Soot Formation and Soot Reactivity.** JIANFEI LUO, Yongming Zhang, Qixing Zhang, *University of Science and Technology of China*
11:45
- 10CB.18 Investigating the Dependence of Light-absorption Properties of Combustion Carbonaceous Aerosols on Combustion Conditions.** ZEZHEN CHENG, Khairallah Atwi, Daniel Tarquinio, Rawad Saleh, *University of Georgia*
11:45
- 10CB.19 Characterization of a New MiniCAST Generator (Model 5201 Type BC) Offering Both Diffusion and Premixed Flame Option.** MICHAELA N. ESS, Konstantina Vasilatou, *METAS*
11:45
- 10CB.20 Prevention of Back Corona Discharge Luminescence in an Electrostatic Precipitator Using Asymmetrical Rectangular AC Voltage.** TOMOYA MITSUI, Koji Yasumoto, Akinori Zukeran, Takashi Nakano, Koyu Tsubouchi, Takashi Ogawa, *Kanagawa Institute of Technology*
11:45
- 10CB.21 Numerical Analysis of Electric Field Distribution in Wire-to-plate Type Electrostatic Precipitator.** KOHEI ITO, Akinori Zukeran, Yoshihiro Kawada, Tomohiro Taoka, Kenji Shibata, *Kanagawa Institute of Technology*
11:45
- 10CB.22 Investigation of Power Absorption on Combustion of Carbon Black Using Microwave.** SOMA TOGUCHI, Akinori Zukeran, Hiroyuki Toyozumi, Takashi Inui, *Kanagawa Institute of Technology*
11:45
- 10CB.23 Development of Diesel PM Combustion Reactor using Plasma Assisted Catalysis.** HITOMI KAWAKAMI, Takashi Inui, Hideyuki Nishida, Hirotaka Miyasita, Yoshiyasu Ehara, *Fuji Electric Co.*
11:45
- 10CB.24 Particle Behavior Analysis of Re-entrainment Phenomenon in Electrostatic Precipitator.** YOSHIYASU EHARA, Hirotaka Miyasita, Satoshi Kokubu, Hitomi Kawakami, Takashi Inui, Hideyuki Nishida, *Tokyo City University*
11:45
- 10CB.25 Identification of Packaging Waste and Catalytical Soot Removal Powder Tracers in Masonry Heaters using Ash and Filter Analyses.** MAREK MAASIKMETS, Hanna Lii Kupri, Alar Konist, Erik Teinmaa, *Estonian Environmental Research Centre*
11:45
- 10CB.26 Application of Fisher Ratio and Principal Component Analysis for Identification of Unique Features in Complex Combustion-Emission Samples.** CHRISTOS STAMATIS, Lindsay Hatch, William Lichtenberg, Georgios Karavalakis, Patrick Roth, Jiacheng Yang, Kelley Barsanti, *University of California, Riverside*
11:45

- 10DU.1 Early Stage Sub-Micron Particle Formation during Pulverized Coal Combustion in Two-Stage Flat Flame Burner.** DISHANT KHATRI, Adewale Adeosun, Akshay Gopan, Zhiwei Wang, Richard Axelbaum, *Washington University in St. Louis*
11:45
- 10DU.2 Coal Carbonisation for Control of Emissions from Cook Stoves.** Darpan Das, Suryendu Dutta, Upendra Bhandarkar, VIRENDRA SETHI, *IIT Bombay*
11:45
- 10DU.3 Operating Characteristics of Residential Wood Heaters for Emission Measurement.** REBECCA TROJANOWSKI, Thomas Butcher, George Wei, Yusuf Celebi, Jake Lindberg, *Brookhaven National Laboratory*
11:45
- 10DU.4 Semi-Volatile Organic Compounds in Fresh and Laboratory-Aged Biomass Burning Aerosols.** DEEP SENGUPTA, Vera Samburova, Chiranjivi Bhattarai, Michealene Iaukea-Lum, Adam Watts, Hans Moosmuller, Andrey Khlystov, *Desert Research Institute*
11:45
- 10DU.5 Chemical Composition of Cookstove Emissions: Laboratory Tests and Real-World Use of Traditional and Improved Stoves.** ALEXANDRA LAI, Ming Shan, Sierra Clark, Ellison Carter, Kun Ni, Hongjiang Niu, Xudong Yang, Jill Baumgartner, James Schauer, *University of Wisconsin-Madison*
11:45
- 10DU.6 An Investigation of the Optical Properties of Particulate Matter Emitted by Residential Biomass Hydronic Heaters.** JAKE LINDBERG, Patricia Fritz, Nicole Vitillo, Brian P. Frank, David Guerrieri, Marilyn Wurth, Gil H. LaDuke, Shida Tang, Thomas Wainman, Nathan Walz, Todd Crawford, *New York State Dept. of Health*
11:45

10HA HEALTH RELATED AEROSOLS I: POSTERS

EXHIBIT HALL 5

Ting Fang and Kamaljeet Kaur, chairs

- 10HA.1 Chemical Analysis and DTT Assay of Powder Form of Atmospheric Particles Collected by Cyclone.** YOSHIHIRO TERUI, Daiki Shishido, Aoi Kanemaru, Tsubomi Sato, Tomoaki Okuda, *Keio University*
11:45
- 10HA.2 Aerosolization and Characterization of Cellulose Nanomaterials.** BON KI KU, M. Eileen Birch, G.J. Deye, *Centers for Disease Control and Prevention, NIOSH*
11:45
- 10HA.3 Inflammatory Effects of Fine Aerosols Generated from Rapid Concrete Failure.** LUPITA MONTOYA, Harish Gadde, Wyatt Champion, Ning Li, Mija Hubler, *University of Colorado Boulder*
11:45
- 10HA.4 The Particle Size Distribution Measurements of Aerosol Generated by Common Inhalers and Nebulisers.** ONDREJ MISIK, Frantisek Lizal, Miloslav Belka, Jakub Elcner, Jan Jedelsky, Jan Tuhovcak, Miroslav Jicha, *Brno University of Technology*
11:45
- 10HA.5 Characterization of Airborne Fibrous Particle Deposition on Screens with Different Configurations.** BON KI KU, G.J. Deye, *Centers for Disease Control and Prevention, NIOSH*
11:45
- 10HA.6 A Pilot Study of Air Quality in Puerto Rico after Hurricane María.** NIRMALA THOMAS, Leonardo Calderón, Shahnaz Alimokhtari-V, Samuel Barreto Rios, Benjamin Bolaños-Rosero, Carlos M. Rodríguez-Minguela, Mayra Roubert, Clifford Weisel, Brian Buckley, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
11:45
- 10HA.7 Comparison of PAHs Levels and Health Risks in China, India and the United States.** FENGLIN HAN, Jie Zhang, Qi Ying, Jianlin Hu, Sri Kota, Hongliang Zhang, *Louisiana State University*
11:45
- 10HA.8 Pollution Characteristics and Health Risk Assessment of Heavy Metals in Particulate Matter in Changchun, Northeast China.** LI NA, Sun Siyue, Han Weizheng, Kang Chunyu, *Jilin Jianzhu University, China*
11:45
- 10HA.9 Physico-Chemical Characterization of Particles and Volatile Organic Compounds Emitted by Electronic Cigarettes and Heat-Not-Burn Products, Compared to a Reference Tobacco Cigarette.** ARI SETYAN, Tobias Bühner, Florence Leuzinger, Woranan Netkueakul, Michael Patrick, Jing Wang, *ETH Zürich / Empa, Switzerland*
11:45
- 10HA.10 Aerosol Characterization of High-powered Electronic Nicotine Delivery Systems (ENDS).** SUVAJYOTI GUHA, Seyed Ahmad Reza Dibaji, Samanthi Wickramasekara, Berk Oktem, Matthew R. Myers, *U.S. Food and Drug Administration, CDRH*
11:45
- 10HA.11 Characterization of Spray Aerosols Generated from Particle-Free Solutions and Nano-Particle Containing Suspensions (Nanoaers).** LARS HILLEMANN, Paul Bergelt, Frank Bierkandt, Sandra Wagener, Jutta Tentschert, Emilia Visileanu, Hannes Hinterbichler, Helfried Steiner, Günther Brenn, Felipe Goni de Cerio, Joseph D. Brain, Michael Stintz, *Technische Universität Dresden*
11:45

- 10HA.12 Characterization of Heterogeneous Oxidation Products of Polycyclic Aromatic Hydrocarbons Using Online Mass Spectrometry.** JAMES ROWE, Christopher Lim, Jesse Kroll, *MIT*
11:45
- 10HA.16 Flavors, Nicotine, E-Liquid Composition and Coil Temperature Impacts Size Distribution of Electronic Cigarette-Emitted Particles.** ARIANE LECHASSEUR, Simon Altmejd, Nathalie Turgeon, David Brunet, Caroline Duchaine, Mathieu Morissette, *Quebec Heart and Lung Institute - Université Laval*
11:45
- 10HA.18 A Study of Aerosol Concentration and Composition on Cardiovascular Illness at a Semi Urban Site in Delhi.** NISAR ALI BAIG, Mohammad Yawar, Kashish Jain, Sagnik Dey, Sandeep Singh, Deepti Kailath, Gazala Habib, *IIT-DELHI*
11:45
- 10HA.20 Laboratory Investigation of Oxidation Products from Ozonolysis of Electronic Nicotine Delivery Systems (ENDS) Emissions.** CLAIRE FORTENBERRY, Michelle Molina, Walton Sumner, Brent Williams, *Washington University in St. Louis*
11:45
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10IM INSTRUMENTATION VIII: POSTERS

EXHIBIT HALL 5

Ryan Sullivan and Allison Aiken, chairs

- 10IM.1 Using Comsol Multiphysics as a Tool to Predict Aerosol Deposition Spot Size of an Electrostatic Precipitator (ESP).** CALLE PREGGER, Robert T Hallberg, Martin H Magnusson, *Lund University*
11:45
- 10IM.2 Evaluation of an Improved CPMA-Electrometer Reference Mass System in Measuring Black Carbon Particles.** JOEL CORBIN, Alireza Moallemi, Jason S. Olfert, Fengshan Liu, Kevin Thomson, Gregory Smallwood, Prem Lobo, *National Research Council Canada*
11:45
- 10IM.3 Ozone and Absorbing Aerosol Measurements by Ultraviolet Total Ozone Unit (TOU) of FY-3A/B/C.** HOUMAO WANG, *National Space Science Center, Chinese Academy of Sciences*
11:45
- 10IM.4 Aerosol Deposition in the Sampling Train of PM CEMS.** Yu-Mei Kuo, Shi-Bo Wang, Chih-Wei Lin, Sheng-Hsiu Huang, Hsien-Shiow Tsai, CHIH-CHIEH CHEN, *National Taiwan University*
11:45
- 10IM.5 Performance Comparison of Field Portable Instruments to the Scanning Mobility Particle Sizer Using Monodispersed and Polydispersed Sodium Chloride Aerosols.** EVANLY VO, Matthew Horvatin, Ziqing Zhuang, *NIOSH*
11:45
- 10IM.6 Aerosol Metrology for Atmospheric Science and Air Quality: The AEROMET Project.** PAUL QUINCEY, Konstantina Vasilatou, Alfred Wiedensohler, Stefan Seeger, Luca Boarino, Petr Klapetek, Kai Dirscherl, Francisco Moreno, Peter Pedersen, Thomas Pedersen, Matjaz Zitnik, Jeanne Malet, Jenny Rissler, Szabina Torok, Markus Fiebig, Maria Ochsenkuehn-Petropoulou, Luca Stabile, Michele Laus, Armin Gross, Burkhard Beckhoff, *NPL*
11:45
- 10IM.7 Aerosol Charge Conditioning and the Characterization of a New Soft X-ray Charger.** FREDERIK WEIS, Mara Pfeffinger, Maximilian Weiss, *Palas GmbH*
11:45
- 10IM.8 Use of Mobile Air Quality Measurements to Investigate Highly Spatially Resolved Particulate Matter Concentrations in Houston.** BLAKE ACTKINSON, Henry Wallace, Robert Griffin, Katie Moore, Ramon Alvarez, Grace Lewis, Elena Craft, Kyle Messier, David Miller, Joshua Apte, *Rice University*
11:45
- 10IM.9 Using a Differential Mobility Analyzer and an Electrostatic Precipitator in Tandem for Determining Physicochemical Properties of Airborne Particles.** SPYRIDON BEZANTAKOS, Maria Katergi, George Biskos, *The Cyprus Institute, Nicosia, Cyprus*
11:45
- 10IM.10 Validation and Calibration of Particle Sizers with Test Aerosols.** TORSTEN TRITSCHER, Thomas Krinke, Andrea Tiwari, Juergen Spielvogel, Francisco Romay, Stephan Große, Andreas Rudolph, Oliver F. Bischof, *TSI GmbH*
11:45
- 10IM.11 Application of New Butanol-based CPCs to City Air Monitoring and Comparative Instrument Characterization.** Andrea Tiwari, Jacob Scheckman, Aaron Avenido, Juergen Spielvogel, AXEL ZERRATH, *TSI Incorporated*
11:45
- 10IM.12 Methods to Minimize Diffusion Losses for sub-3nm SMPS Measurements.** JACOB SCHECKMAN, Modi Chen, Hee-Siew Han, Juergen Spielvogel, *TSI Incorporated*
11:45

- 10IM.13** **Fourteen Orders of Magnitude of Organic Volatility in One Instrument: The Comprehensive Thermal Desorption Aerosol Gas Chromatograph (cTAG).** REBECCA WERNIS, Nathan Kreisberg, Susanne Hering, Allen H. Goldstein, *University of California, Berkeley*
11:45
- 10IM.14** **Investigating Catalytic Stripper Based System for Measurement of Sub-23 nm Particles from Vehicle Engine Exhaust.** MOSTAFIZUR RAHMAN, Adam M Boies, *University of Cambridge*
11:45
- 10IM.15** **Study on CPC Time Response – Modelling and Measurements.** JOONAS ENROTH, Juha Kangasluoma, Frans Korhonen, Joonas Vanhanen, Michel Attoui, Tuukka Petäjä, *University of Helsinki*
11:45
- 10IM.16** **Experimental and Theoretical Evaluation of Air-Microfluidic MEMS PM Sensing Technologies.** IGOR PAPROTNY, Dorsa Fahimi, Omid Mahdavi pour, Mandana Hajizadehmotlagh, *University of Illinois at Chicago*
11:45

10LC LOW-COST AND PORTABLE SENSORS IV: POSTERS

EXHIBIT HALL 5

Jonathan Thornburg and Arthur Chan, chairs

- 10LC.1** **The Impact of Ambient Conditions on the Performance of a Low-cost Air Quality Sensor Package (Koala).** XIAOTING LIU, Rohan Jayaratne, Phong Thai, Matthew Dunbabin, Lidia Morawska, *Queensland University of Technology*
11:45
- 10LC.2** **The National Plan of Environmental Internet of Things Using Widespread Air Quality Sensors in Taiwan.** CHIA-PEI CHEN, Yeuh-Bin Wang, Fan-Lun Chen, Kun-Hsing Liu, Bo-Chieh Yang, Shuenn-Chin Chang, *Taiwan Environmental Protection Administration*
11:45
- 10LC.3** **Design and Optimisation of Low-cost Air Quality Sensor Package (KOALA).** XIAOTING LIU, Matthew Dunbabin, Bryce Christensen, Rohan Jayaratne, Phong Thai, Lidia Morawska, *Queensland University of Technology*
11:45
- 10LC.4** **Evaluating Performance of Low-Cost Optical Particle Counters in Sensing Bioaerosols; an Experimental Chamber Study.** PARICHEHR SALIMIFARD, Donghyun Rim, James Freihaut, *The Pennsylvania State University*
11:45
- 10LC.5** **Evaluation of the Performance of a Lightweight, 3D Printed SMPS.** KONSTANTINOS BARMPOUNIS, Anne Maisser, George Biskos, *AK LemonLabs Ltd.*
11:45
- 10LC.6** **Fluorescence Analysis of Combustion Particulate Matter on Solid State Substrate.** GAURAV MAHAMUNI, Gregory Korshin, Igor Novosselov, *University of Washington*
11:45
- 10LC.7** **Evaluation of Low-Cost Particle Sensors for Ambient Air Quality Monitoring.** NUERAILI KUERBANJIANG, Meilu He, Suresh Dhaniyala, *Clarkson University*
11:45
- 10LC.8** **AQ & U: A Layered Framework for Integrating Sensor Data of Variable Quality and for Engaging Citizens about PM_{2.5} Exposure.** KERRY KELLY, Pierre-Emanuel Gaillardon, Miriah Meyer, Ross Whitaker, Anthony Butterfield, Pascal Goffin, Tom Becnel, Amir Biglari, Tofigh Sayahi, *University of Utah*
11:45
- 10LC.9** **Ambient Air Quality and Carbon Monoxide Exposure Among School Children in Cap Haïtien, Haiti.** AUDREY DANG, Eben Cross, Melissa Chapnick, Lora Iannotti, Joseph Steensma, Jay R. Turner, Brent Williams, *Washington University in St. Louis*
11:45
- 10LC.10** **A Low-Cost Unipolar Charger for Charged Particle Measurements.** MEILU HE, Suresh Dhaniyala, *Clarkson University*
11:45
- 10LC.11** **Indicating Black Carbon Exposure with a Smartphone App Using Image Analysis.** Gang Chen, Mengxuan Cai, Bruce Urch, Frances Silverman, Yushan Su, ARTHUR W. H. CHAN, *University of Toronto*
11:45
- 10LC.12** **Evaluation of Wearable Low-Cost Particulate Matter Sensors.** Ryan Chartier, JONATHAN THORNBURG, *RTI International*
11:45
- 10LC.13** **Evaluating the Transferability of Low-Cost Sensor Calibration between Different Regions and Spatial and Temporal Variation in Air Quality in Hartford, CT.** Kyle Terracciano, Fatema Parvez, Carl Malings, Rebecca Tanzer, R. Subramanian, KRISTINA WAGSTROM, *University of Connecticut*
11:45
- 10LC.14** **Comparison Experiment of Low Cost Sensors for Aerosol and Gasses at Dem Athens.** Prodomos Fetfatzis, Stergios Vratolis, Evangelia Diapouli, KONSTANTINOS ELEFTHERIADIS, *NCSR Demokritos, Athens, Greece*
11:45

- 10LC.15** **Toward the Development of a Portable Single-Particle Fluorescence Spectrometer for Inexpensive Analysis of Bioparticles Collected on a Substrate.** BENJAMIN E. SWANSON, Donald R. Huffman, J. Alex Huffman, *University of Denver, CO*
11:45
- 10LC.16** **Open-source Aerosol Modelling: Electrical Charging and Transport with Applications in Low-cost Sensing.** ROBERT NISHIDA, Nene Yamasaki, Adam M Boies, Simone Hochgreb, *University of Cambridge*
11:45
- 10LC.18** **Taking Ambient Air Monitoring to the Next Level - Multiple Applications with the Fidas® Technology for Fine and Ultrafine Particles Measurements.** FREDERIK WEISS, Stefan Hoge Kamp, Leander Mölter, Maximilian Weiss, *Palas GmbH*
11:45
- 10LC.19** **Using Low-Cost Particulate Matter Sensors to Monitor Photovoltaic Panel Soiling.** SARAH TOTH, Michael Hannigan, Marina Vance, Michael Deceglie, Leonardo Micheli, Matthew Muller, *University of Colorado Boulder*
11:45
- 10LC.20** **Seasonal Concentrations of PM_{2.5} and PM₁₀ in Borovoye, Kazakhstan Using Low-Cost and Well-Reference PM Monitors.** MEHDI AMOUEI TORKMAHALLEH, Aigerim Jaxybayeva, Soudabeh Gorjinezhad, *Chemical and Aerosol Research Team, Nazarbayev University*
11:45

10MG AIR QUALITY IN MEGACITIES: FROM SOURCES TO CONTROL IV: POSTERS

EXHIBIT HALL 5

Phil Hopke and Lupita Montoya, chairs

- 10MG.2** **Trends in Particulate Matter Concentrations in Different Parts of Bangladesh.** Munjurul Hannan Khan, MD. MASUD RANA, *Clean Air and Sustainable Environment Project*
11:45
- 10MG.3** **Aerosol Chemistry at an Urban Site of Delhi: During Winter Fog Campaign.** DEEWAN S. BISHT, Atul K. Srivastava, Sachin Ghude, Dilip Chate, P.D. Safai, P. Rao, R. Kulkarni, Suresh Tiwari, *Indian Institute of Tropical Meteorology*
11:45
- 10MG.5** **Comprehensive Analysis of Carbonaceous Gases and Particles in Beijing, 2016.** SHUO YANG, Kebin He, Fengkui Duan, *Tsinghua University*
11:45
- 10MG.6** **Source Apportionment of Absorbing Aerosols (Soot Particles) in Delhi, India during a Highly Polluted Period (Wintertime).** SURESH TIWARI, Rajan K. Chakrabarty, Umesh C. Dumka, Atul K. Srivastava, Deewan S. Bisht, Philip K. Hopke, *Indian Institute of Tropical Meteorology*
11:45
- 10MG.8** **Air Quality Status in India: Chemical Characterization and Source Interpretation of a Few Major Cities.** RANJIT KUMAR, *DEI, Dayalbagh, Agra*
11:45
- 10MG.9** **New Particle Formation and Severe Haze Events in Beijing, China.** ROHAN JAYARATNE, Buddhi Pushpawela, Lidia Morawska, Hui Li, Jian Gao, *Queensland University of Technology, Brisbane, Australia*
11:45
- 10MG.12** **Concentrations and Fluxes of Black Carbon in Beijing Using Single Particle Soot Photometry Measurements.** RUTAMBHARA JOSHI, Dantong Liu, James Allan, Hugh Coe, Michael Flynn, Ben Langford, Eiko Nemitz, Neil Mullinger, Freya Squires, Adam Vaughan, James Lee, Yele Sun, Pingqing Fu, Simone Kotthaus, *University of Manchester*
11:45
- 10MG.13** **Exposure Profiles and Related Health Risks of Benzene Toluene and Xylene at Two Different Microenvironments of a Terai Region in North India.** AMIT MASIH, *St. Andrew's College, Gorakhpur, India*
11:45
- 10MG.14** **Formation and Characteristics of Secondary Aerosols in an Industrialized Environment during Cold Seasons.** Yangzhou Wu, XINLEI GE, Junfeng Wang, Mindong Chen, *Nanjing University of Information Science and Technology*
11:45
- 10MG.15** **Study of Influence of Rain on Ambient PM in Indian Cities.** SWETHA PENDYALA, Sreekanth Bojjagani, Rakesh Kumar, Virendra Sethi, *IIT Bombay*
11:45
- 10MG.16** **Variations of PM_{2.5} Chemical Components and Its Source Apportionment during Winter Season from 2013 to 2017 in Beijing of China.** HEZHONG TIAN, Panyang Shao, Huanjia Liu, Bobo Wu, Weizhao Liang, Shuhan Liu, *School of Environment, Beijing Normal University*
11:45
- 10MG.17** **Winter Time Aerosol Size Distribution Study Across Three Sites in Delhi.** Suneeti Mishra, S.N. TRIPATHI, Deepika Bhattu, Varun Kumar, Suresh Tiwari, Atul K. Srivastava, Deewan S. Bisht, *IIT Kanpur*
11:45

- 10MG.18 Ambient Particle Formation and Growth in Mexico City.** LUCIA CAUDILLO, Dara Salcedo, Oscar Peralta, Telma Castro, *National University of Mexico*
11:45
- 10MG.20 Composition and Characteristics of NR-PM1 Using HR-TOF-AMS over a Big Urban City of Western India.** ATINDERPAL SINGH, Rangu Venkata Satish, Neeraj Rastogi, *Physical Research Laboratory, Ahmedabad, India*
11:45
- 10MG.21 Investigating the PM2.5 and PM10 Concentrations over the Atmosphere of Iran and Its Major Cities Using Satellite Observations.** Zhuldyz Darynova, Hamed Sharifi, Soudabeh Gorjinezhad, MEHDI AMOUEI TORKMAHALLEH, *Chemical and Aerosol Research Team, Nazarbayev University*
11:45

10RA REMOTE/REGIONAL ATMOSPHERIC AEROSOL VI: POSTERS

EXHIBIT HALL 5

Alex Lee and Jianhuai Ye, chairs

- 10RA.1 Aerosol Optical Absorption Properties at a High Mountain Site in the Western Mediterranean.** Jose Nicolás, Nuria Galindo, Ramón Castañer, Eduardo Yubero, Javier Crespo, Carlos Pastor, FRANCO LUCARELLI, Giulia Calzolai, Silvia Nava, *Miguel Hernández University, Elche, Spain*
11:45
- 10RA.2 Sources for Atmospheric Aerosol at Oliktok Point, Alaska.** JANEK UIN, Gunnar Senum, Stephen Springston, *Brookhaven National Laboratory*
11:45
- 10RA.3 Airborne Atmospheric Aerosol Measurement System.** YONG-HEE PARK, Kang-Ho Ahn, *Hanyang University, R. of Korea*
11:45
- 10RA.5 Comparison of Desert Aerosol Optical Characteristics of Ouarzazate (Morocco) and Seville (New Mexico).** Abdelouahid Tahiri, MOHAMMED DIOURI, Jamal Barkani, *Atmospheric Physic, LME, University of Oujda, Morocco*
11:45
- 10RA.6 Short-interval Aerosol Water-soluble Inorganic Ions Observed under the Influence of Upslope Wind, Transported Biosmoke, and Fog at Mountain Lulin, Taiwan.** CHUNG-TE LEE, Wei-Ren Chen, Shih-Yu Chang, Charles C.K. Chou, Neng-Huei Lin, *National Central University, Taiwan*
11:45
- 10RA.7 Organic Nitrogen in Aerosols at a Forest Site in Southern Appalachia.** XI CHEN, Mingjie Xie, Michael Hays, Eric Edgerton, Donna Schwede, John Walker, *US Environmental Protection Agency*
11:45
- 10RA.8 Simulation of Marine Aerosols over the East China Sea Using WRF/CMAQ Modeling System.** Mingjie Kang, PENGFEI WANG, Pingqing Fu, Hongliang Zhang, *Louisiana State University*
11:45
- 10RA.9 Concentrations and Fluxes of Water Soluble Inorganic Aerosol Components above Tropical Rainforest.** Robbie Ramsay, Chiara Di Marco, Mathew Heal, Matthias Sörgel, Meinrat O. Andreae, Paulo Artaxo, Alex Araujo, Marta Sá, EIKO NEMITZ, *Centre for Ecology and Hydrology*
11:45
- 10RA.10 Characterization of Aerosol Size Distributions and Optical Properties in the Canadian High Arctic using Surface and Columnar Observations.** PATRICK HAYES, Samantha Tremblay, Norman O'Neill, Jai Chaubey, AboEl-Fetouh Yasmin, Rachel Chang, Felicia Kolonjari, Sangeeta Sharma, Richard Leaitch, Pierre Fogal, *Université de Montréal*
11:45
- 10RA.11 Chemical Composition of Ultrafine Particles in the Amazon Basin During GoAmazon2014/5.** HAYLEY GLICKER, James Smith, Scot T. Martin, Suzane de Sá, *University of California, Irvine*
11:45
- 10RA.12 Ambient Fine Particle Trace Elements over Van Vihar National Park, Bhopal, India and an Assessment of Associated Potential Health Risks.** JAYANT NIRMALKAR, Samresh Kumar, Ramya Sunder Raman, *Indian Institute of Science Education and Research Bhopal*
11:45
- 10RA.13 Measurement of Aerosol Flux Using UAV in Goseong, South Korea.** Hee-Sang Kim, KANG-HO AHN, Hee-Ram Eun, Yong-Hee Park, Woo-Young Kim, *Hanyang University, R. of Korea*
11:45
- 10RA.15 Single Particle Analysis of Samples Collected During the Actris-2 Field Campaign at the Mt. Cimone Station.** TYLER CAPEK, Swarup China, Daniel Veghte, Angela Marinoni, Douglas Orsini, Claudio Mazzoleni, *Michigan Technological University*
11:45
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Alexander Frie and Célia Alves, chairs

- 10SA.1** **Use of Specific Primary and Secondary Organic Markers for PM Source Apportionment Based on Positive Matrix Factorization (PMF).** Deepchandra Srivastava, Olivier Favez, Emilie Perraudin, Jean-Luc Besombes, Franco Lucarelli, Laurent Alleman, Grazia Maria Lanzafame, Sophie Tomaz, Jean-Luc Jaffrezo, Benjamin Golly, Nicolas Bonnaire, Valerie Gros, Eric Villenave, ALEXANDRE ALBINET, *INERIS*
- 10SA.3** **Physicochemical Characteristics and Source Apportionment of PM_{2.5} in an Inland City of Baoji, China.** ZHOU BIANHONG, Li Meijuan, Fang Ni, Zhang Zhangquan, Liu Suixin, *Baoji University of Arts and Sciences*
- 10SA.4** **Assessing the PM_{2.5} Imbalance between a Far and Near-Road Location: High Temporal Frequency Source Apportionment and the Role of Black Carbon.** UWAYEMI SOFOWOTE, Robert Healy, Yushan Su, Jerzy Debosz, Michael Noble, Anthony Munoz, Cheol H. Jeong, Jon M. Wang, Nathan Hilker, Greg J. Evans, Philip K. Hopke, *EMRB, Ontario Ministry of the Environment and Climate Change*
- 10SA.5** **An Improved Approach to Resolve Sources of Organic Aerosol by Combining Offline and Online Ambient Measurements.** DEEPCHANDRA SRIVASTAVA, Olivier Favez, Jean-Eudes Petit, Yunjiang Zhang, Uwayemi Sofowote, Philip K. Hopke, Nicolas Bonnaire, Emilie Perraudin, Valerie Gros, Eric Villenave, Alexandre Albinet, *INERIS*
- 10SA.6** **Particulate matter in the Northwest of the Iberian Peninsula: A one-year study.** Fernanda Oduber, Carlos Blanco-Alegre, Ana Isabel Calvo, Amaya Castro, Roberto Fraile, Teresa Nunes, CÉLIA ALVES, *University of Aveiro*
- 10SA.7** **Source Apportionment of PM_{2.5} Using Hourly Measurements of Elemental Tracers and Major Constituents in an Urban Environment: Investigation of Time Resolution Influence.** QIONGQIONG WANG, Liping Qiao, Min Zhou, Shuhui Zhu, Stephen Griffith, Li Li, Jian Zhen Yu, *Hong Kong University of Science & Technology*
- 10SA.8** **Emission Characteristics of PM_{2.5} and Trace Gases from Household Wood Burning in Guanzhong Plain, Northwest China.** YONG ZHANG, Jie Tian, Junji Cao, Wenjie Wang, Haiyan Ni, Suixin Liu, Zhenxing Shen, *Institute of Earth Environment, Chinese Academy of Sciences*
- 10SA.9** **Application of Positive Matrix Factorisation to the Source Identification of P_{cdd}/F_s in Urban Air, South Korea.** EUNHWA JANG, Taewuk Jeong, Nana Yoon, Seungryul Jeong, *Busan Metropolitan Institute of Health and Environment*
- 10SA.10** **Influence of Future Emission Reductions on Source Apportionment of Organic Aerosol in the Houston Region.** BONYOUNG KOO, Alan Dunker, Greg Yarwood, *Ramboll*
- 10SA.11** **Impacts of Hazardous Metals and PAHs in the Ambient Air from Local and Regional Sources and Exceeded Cancer Risks in Taipei city.** CHIN-YU HSU, Shih-Min Wang, Tzu-Ting Yang, Jyh-Larng Chen, Hung-Che Chiang, Yuh-Shen Wu, Yu-Cheng Chen, *National Health Research Institutes, Taiwan*
- 10SA.12** **Long-Term Field Observations of Aerosol Chemical Composition in the Boreal Forest.** LIINE HEIKKINEN, Mikko Äijälä, Matthieu Riva, Krista Luoma, Tuukka Petäjä, Douglas Worsnop, Mikael Ehn, *University of Helsinki*
- 10SA.13** **Impact of Environmental Policies and the Economy on Changes in Criteria Air pollutants Concentrations and Particulate Matter Compositions in New York State during 2005-2016.** Stefania Squizzato, Mauro Masiol, David Q. Rich, PHILIP K. HOPKE, *University of Rochester, Rochester, 14642, NY, USA*
- 10SA.15** **Comparison of Ambient Aerosol Sources at Rural and Suburban Background Sites in Central Europe.** OTAKAR MAKEŠ, Petr Vodička, Jaroslav Schwarz, Vladimír Ždímal, *Institute of Chemical Process Fundamentals of the CAS, v.v.i*
- 10SA.16** **Seasonal Variations in Source Apportionment of the Redox Activity of Urban Fine Particulate Matter in Athens, Greece.** SINA TAGHVAEE, Mohammad Sowlat, Christopher Lovett, Konstantinos Eleftheriadis, Evangelia Diapouli, Manos Manousakas, Constantinos Sioutas, *University of Southern California*
- 10SA.17** **PM_{2.5} Source Apportionment Using a Hybrid Environmental Receptor Model.** LUNG-WEN ANTONY CHEN, Junji Cao, *University of Nevada, Las Vegas*
- 10SA.18** **Impact of Emissions from Ports of Los Angeles and Long Beach on the Oxidative Potential of Ambient PM_{0.25} Measured across the Los Angeles County.** AMIRHOSEIN MOUSAVI, Mohammad Sowlat, Farimah Shirmohammadi, Sina Hasheminassab, Andrea Polidori, Martin Shafer, James Schauer, Constantinos Sioutas, *University of Southern California*

- 10SA.19 Strontium and Lead Stable Isotopes as Tracers of PM2.5 in Northern India.** RACHEL YORK-MARINI, Swati Sharma, Gazala Habib, Brian Majestic, *University of Denver*
11:45
- 10SA.20 Temporal Variability of Submicron Organic Aerosol PMF Factor Mass Spectra During the Houston Aerosol Characterization and Health Experiment.** NANCY SANCHEZ, Henry Wallace, Benjamin Schulze, Rivkah Gardner-Frolick, James Flynn, Barry Lefer, Robert Griffin, *Rice University*
11:45
- 10SA.21 Investigation of Seasonal Sources of Secondary Organic Aerosol in Switzerland Using Extractive Electro spray Ionization Time-Of-Flight Mass Spectrometry (EESI-TOF).** GIULIA STEFENELLI, Veronika Pospisilova, Felipe Lopez-Hilfiker, Kaspar Rudolf Dällenbach, Martin Rigler, Christoph Hueglin, Yandong Tong, Urs Baltensperger, Andre S.H. Prévôt, Jay G. Slowik, *Paul Scherrer Institut*
11:45
- 10SA.22 Assessment of Residential Wood Combustion Influences on Air Quality in a Suburban Area From Eastern Europe.** LUMINITA MARMUREANU, Cristina Marin, Alexandru Dandocsi, Simona Andrei, *National Institute of R&D for Optoelectronics*
11:45
- 10SA.24 Estimation and Sources of Cloud Water SO4 and NO3 Aerosols from Rainwater over High Altitude Station.** YANG LIAN, P.S.P. Rao, G. Pandithurai, *IITM, Pune*
11:45
- 10SA.25 Long-term Characterization and Source Apportionment of Carbonaceous Aerosols over Five Sites in Northern India.** DEEPIKA BHATTU, Jay G. Slowik, Francesco Canonaco, Imad EI Haddad, S.B. Tiwari, Purushottam Kumar, Shashi Tiwari, Rangu Venkata Satish, Neeraj Rastogi, Atul K. Srivastava, Deewan S. Bisht, Suresh Tiwari, Dilip Ganguly, S.N. Tripathi, Urs Baltensperger, Andre S.H. Prévôt, *Paul Scherrer Institute*
11:45
- 10SA.26 Responses of Aerosol Mass Spectra to Temperature Related Tree Stress.** KRISTINA PLAUSKAITE, Julija Pauraite, Steigvile Bycenkiene, Algirdas Augustaitis, Vitas Marozas, Gintautas Mozgeris, Vidmantas Ulevicius, *SRI Center for Physical Sciences and Technology*
11:45
- 10SA.27 Influence of Traffic Emissions on Chemical Composition of Particles in Helsinki, Finland.** MINNA AURELA, Kimmo Teinilä, Sanna Saarikoski, Jarkko Niemi, Harri Portin, Pasi Aalto, Liisa Pirjola, Hilikka Timonen, *Finnish Meteorological Institute*
11:45
- 10SA.28 Regional Air Pollution Transport and Its Influence to Pollution Hot Spot in the Czech Republic.** Jana Kozáková, Petr Vodička, Petra Pokorná, Lucie Ondráčková, Jakub Ondráček, Jan Hovorka, Kamil Křůmal, Pavel Mikuška, Pavel Moravec, JAROSLAV SCHWARZ, *Institute of Chemical Process Fundamentals of the CAS, v.v.i*
11:45
- 10SA.29 Analysis of Particulate Atmospheric Matter Samples Collected with High Time Resolution: Some Examples of Recent Applications.** FRANCO LUCARELLI, Giulia Calzolai, Massimo Chiari, Silvia Nava, Roy M. Harrison, Zongbo Shi, Di Liu, Bill Bloss, Van Tuan Vu, *University of Florence and INFN Florence, Italy*
11:45
- 10SA.30 Contribution of Primary and Secondary Particles to Mode-Segregated Aerosol Particle Number Concentrations in Four European Cities.** IOAR RIVAS, Cristina Reche, David Beddows, David Green, Leena Järvi, Christoph Hueglin, Hilikka Timonen, Gary W. Fuller, Jarkko Niemi, Markku Kulmala, Roy M. Harrison, Andrés Alastuey, Xavier Querol, Frank J. Kelly, *King's College London*
11:45
- 10SA.31 Advanced Receptor Models as a Tool to Improve the Knowledge of Aerosol Emission Sources at a Hot-Spot Pollution Site (Milan – Italy).** ROBERTA VECCHI, Vera Bernardoni, Alessandro Bigi, Giulia Calzolai, Miriam Elser, Paola Fermo, Alice Forello, Franco Lucarelli, Dario Massabò, Silvia Nava, Andrea Piazzalunga, Rosaria Erika Pileci, Paolo Prati, Sara Valentini, Gianluigi Valli, *University of Milan & INFN-Milan (Italy)*
11:45

10TO AEROSOL TOXICOLOGY I: POSTERS

EXHIBIT HALL 5

Ting Fang and Kamaljeet Kaur, chairs

- 10TO.2 Partitioned Particulate Data and Health Risk Quantification of Metal Content in Mixed Residential Areas of Northern India.** AJAY TANEJA, *DR. B.R.A. University, Agra, India*
11:45
- 10TO.3 Size-resolved Endotoxin and Toxicity of Ambient Particles in Beijing and Switzerland.** YANG YUE, Haoxuan Chen, Ari Setyan, Miriam Elser, Maria Dietrich, Jing Li, Ting Zhang, Xiangyu Zhang, Yunhao Zheng, Jing Wang, Maosheng Yao, *Peking University*
11:45

- 10TO.4** **Differential Toxicities of Airborne Fine Particulate Matter from Various Sources: A New Health Index for Monitoring Health Effects.** MINHAN PARK, Hungsoo Joo, Kwangyul Lee, Myoseon Jang, Sang Don Kim, Injeong Kim, Lucille Joanna Borlaza, Heung-Bin Lim, Han-Jae Shin, Kyu Hyuck Chung, Yoon-Hyeong Choi, Sun Gu Park, Min-Suk Bae, Ji Yi Lee, Hangyul Song, Eunbi Lee, Enrique Cosep, Wajih Ur Rehman, Daeun Kim, Kihong Park, *GIST*
11:45
- 10TO.5** **Characteristics and Health Impacts of Particulate Matters Emitted from A Typical Container Ship.** DI WU, Qing Li, Xiang Ding, Jianfeng Sun, JianMin Chen, *Fudan University*
11:45
- 10TO.6** **Impact of Vehicular Load on Toxicity Potential of Ambient Air by the Road-side in Northern Indian City.** SHUBHAM RATHI, Anubha Goel, *Indian Institute of Technology Kanpur*
11:45
- 10TO.7** **Toxicity of Particles Generated from a Consumer Fused Deposition Modeling 3d Printer Using Animal, Cellular and Acellular Models.** QIAN ZHANG, Michal Pardo, Jenny P.S. Wong, Aika Davis, Marilyn Black, Yinon Rudich, Rodney J. Weber, *Georgia Institute of Technology*
11:45
- 10TO.8** **In Vivo Toxicity of Soot Can Be Predicted from Both Surface Area Dose and in Vitro Assays.** OTMAR SCHMID, Tobias Stoeger, *Helmholtz Zentrum Munchen, Comprehensive Pneumology Center*
11:45
- 10TO.9** **Novel Atmospheric Sampling Method for Determination of 10 Carbonyls in Electronic Cigarette Aerosols Using LC-MS/MS.** PHILIP KUEHL, Yongquan Lai, Larry Mallis, Jacob McDonald, Yue Zhou, Steven Belinsky, *Lovelace Biomedical, 2425 Ridgecrest Dr. SE, Albuquerque, NM*
11:45
- 10TO.10** **Reducing Toxicity of Welding Fume Particles by Amorphous Silica Encapsulation.** RYAN WARD, Trevor Tilly, Sarah Robinson, Arantzazu Eiguren Fernandez, Tara Sabo-Attwood, Chang Yu Wu, *University of Florida*
11:45

10WA WORKPLACE AEROSOL II: POSTERS

EXHIBIT HALL 5

Jun Wang and Chih-Hsiang Chien, chairs

- 10WA.2** **Investigation of the Feasibility of Workplace On-Site Ultrafine Particle Respiratory Deposition Measurement.** YI CHEN, Wei-Chung Su, *University of Texas Health Science Center at Houston*
11:45
- 10WA.3** **Release of Respirable Fibrous Dusts during Abrasive Machining and Fatigue Testing of Carbon-Fiber Composites.** DAPHNE BÄGER, Nico Dziurawitz, Judith Neuhoff, Barbara Simonow, Carmen Thim, Dominic Kehren, Daniela Wenzlaff, Asmus Meyer-Plath, Sabine Plitzko, *Federal Institute for Occupational Safety and Health (BAuA)*
11:45
- 10WA.4** **Concentration Levels of Airborne Nanoparticles in Taconite Processing.** NIMA AFSHAR-MOHAJER, Rebecca Foos, Karl Braun, John Volckens, Gurumurthy Ramachandran, *Johns Hopkins School of Public Health*
11:45
- 10WA.5** **An Experiment on Energy Consumption in an Indoor Water Spray Humidification Type Cleanroom with One Fluid Nozzles.** Su-Bin Park, Won-Il Song, KYUNG-HOON YOO, Ji-Seok Yang, Deog-Yong Song, Oh-Myoung Kwon, Jungho Hwang, *Korea Institute of Industrial Technology*
11:45
- 10WA.6** **An Experiment on Energy Consumption in a High-Tech Electronics Industry Cleanroom with Dual Free-Cooling Heat Source.** Su-Bin Park, Won-Il Song, KYUNG-HOON YOO, Ji-Seok Yang, Deog-Yong Song, Jungho Hwang, *Korea Institute of Industrial Technology*
11:45
- 10WA.7** **Link the Oxidation Level between Gaseous and Particulates Compounds: A Study on Nitrogen-enriched Stainless Steel Welding and Cutting.** JUN WANG, Marcio Bezerra, Jhy-Charm Soo, Shizhen He, Jacob Bartels, *University of Oklahoma*
11:45
- 10WA.8** **Measurements of the Physicochemical Properties of Nanoparticles Produced via Thermal Plasma Spraying Processes in a Precision Machining Workplace.** Spyridon Bezantakos, Apostolos Salmatonidis, Mar Viana, GEORGE BISKOS, *Université du Littoral Côte d'Opale, Dunkerque, France*
11:45

Thursday 11:45 AM - 1:15 PM

Boxed Lunch

Thursday 11:45 AM - 1:15 PM

Historical Instrumentation Demo

Thursday 1:15 PM - 3:15 PM
Session 11: Platform

11AC AEROSOL CHEMISTRY XI - SECONDARY ORGANIC AEROSOLS: AQUEOUS REACTIONS AND FORMATION

ROOM 275

Alla Zelenyuk and Martin Breitenlechner, chairs

- 11AC.1 Fog Processing of Aerosols Studied using HR-ToF-AMS and a Size Resolved CCN Counter.** JAMES SCHWAB, Jie Zhang, Joseph P. Marto, Sara Lance, Yele Sun, *University at Albany, SUNY*
1:15
- 11AC.2 Burst of Hydroxyl Radicals in Newly-Formed Cloud Drops.** SUZANNE E. PAULSON, Xiaobi Kuang, Jie Rou Chen, David Gonzalez, Peter J. Gallimore, John Scott, *UCLA*
1:30
- 11AC.3 Chemical Characterization and Source Apportionment of PM_{2.5} Aerosols in the Capital City "New Delhi" of India.** S.N. TRIPATHI, Deepika Bhattu, Navaneeth M. Thamban, Vipul Lalchandani, Suneeti Mishra, Purushottam Kumar, Shashi Tiwari, Nidhi Tripathi, L.K. Sahu, S.B. Tiwari, Rangu Venkata Satish, Neeraj Rastogi, Atul K. Srivastava, Deewan S. Bisht, Suresh Tiwari, R. Sutaria, M. Mohan, Dilip Ganguly, Sudipta Ghosh, Pawan Vats, A. Tobler, Varun Kumar, P. Rai, Veronika Pospisilova, Giulia Stefenelli, *IIT Kanpur*
1:45
- 11AC.4 Observed Below-cloud Aerosol Chemical and Physical Properties on Whiteface Mountain, New York during August 2017.** JIE ZHANG, Sara Lance, Richard Brandt, Joseph P. Marto, Matthew Ninneman, James Schwab, *University at Albany, SUNY*
2:00
- 11AC.5 Formation of Secondary Organic Aerosol (SOA) during Winter in the Eastern United States.** MARWA EL-SAYED, Christopher Hennigan, *University of Maryland, Baltimore County*
2:15
- 11AC.7 Simulating Secondary Organic Aerosol Formation in Cloudwater and Aerosols Using GAMMA 5.1.** WILLIAM TSUI, Joseph Woo, V. Faye McNeill, *Columbia University*
2:45
- 11AC.8 Direct Observations of the Formation of Isoprene-derived Secondary Organic Aerosol in Ambient Cloud Droplets.** ALLA ZELENYUK, David Bell, ManishKumar Shrivastava, Jerome Fast, Joel A. Thornton, Dan Imre, Kaitlyn J. Suski, Larry Berg, John Shilling, Jiumeng Liu, Fan Mei, Jason Tomlinson, Jian Wang, *Pacific Northwest National Laboratory*
3:00

11AP AEROSOL PHYSICS VII

ROOM 265/266

Hans Moosmuller and Fengshan Liu, chairs

- 11AP.1 Single Scattering Albedo of Agglomerated Debris Particles and Homogeneous Spheres: A Comparison.** HANS MOOSMULLER, Evgenij Zubko, *Desert Research Institute*
1:15
- 11AP.2 Comparing Refractive Index Retrievals of Size- and Mass-Selected Particles to Full Distribution Measurements: A Metrology Perspective.** JAMES RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
1:30
- 11AP.3 Modification of Aerosol Properties Due to Relative Humidity.** DANIELLE EL HAJJ, Suzanne Crumeyrolle, Marie Choël, Isabelle Chiapello, *Université de Lille*
1:45
- 11AP.4 Elastic and Inelastic Scattering of Laser-Trapped Particles: Optically Characterizing Trace Aerosols.** PATRICIO PIEDRA, Aimable Kalume, Yong-Le Pan, Gorden Videen, *U.S. Army Research Laboratory*
2:00
- 11AP.5 A Novel Mie Theory Inversion Technique for Retrieving the Complex Refractive Index from Optical Measurements.** BENJAMIN SUMLIN, William Heinson, Rajan K. Chakrabarty, *Washington University in St. Louis*
2:15

11AP.6 Towards Statistical Analysis of Aerosol Hygroscopic Properties Using Raman Lidar Measurements.

2:30 FRANCISCO NAVAS-GUZMÁN, Giovanni Martucci, Maxime Hervo, Martine Collaud Coen, Bertrand Calpini, Valentin Simeonov, Alexander Haefele, *Federal Office of Meteorology and Climatology, MeteoSwiss*

11AP.7 Chemical and Optical Properties of Volcanic Ashes: Laboratory Measurements and Remote Sensing Applications.

2:45 ALEXANDRE DEGUINE, Denis Petitprez, Lieven Clarisse, Hervé Herbin, *Université de Lille*

11AP.8 Single Airborne Particle Studies Using Optical Trapping and Manipulations: What We Have and What We Have Not.

3:00 CHUJI WANG, Zhiyong Gong, Gorden Videen, Yong-Le Pan, *Mississippi State University*

11BA BIOAEROSOLS IV BIOAEROSOLS IN THE ENVIRONMENT

ROOM 264

Caroline Duchaine and Akeisha Owens, chairs

11BA.1 Environmental Factors Affecting Biological Aerosols in Houston, TX. JOSHUA SANTARPIA, Sean Kinahan, Don Collins, Yong-Le Pan, Aimable Kalume, Matthew Tezak, Gabriel Lucero, Steven Storch, Cathryn Reyna, Danielle Rivera, Kevin Crown, *Sandia National Laboratories*

11BA.2 H2O2 Modulates the Energetic Metabolism of the Cloud Microbiome. ANNE MARIE DELORT, Nolwenn Wirgot, Virginie Vinatier, Martine Sancelme, Laurent Deguillaume, *Université Clermont Auvergne*

11BA.3 Revisiting Historical Trials Data on Aerosol Ingress into Buildings and Dispersion. SIMON PARKER, Suzie Abbs, Simon Batchelor, Richard Beedham, Steven Herring, Patrick Rosenvinge, *DSTL, UK*

11BA.4 Indoor-Outdoor (I/O) Exchange of Bioaerosols at Various Ventilation Modes. JURATE VIRKUTYTE, Christine Uebel, Kelechi Isiugo, Michael Benjamin, Andrew Maier, Mark T. Hernandez, Sergey A. Grinshpun, Tiina Reponen, *University of Cincinnati*

11BA.5 Rapid Bioaerosol Exposure Risk Analysis in Typical Indoor Environments. MINFEI WANG, Haoxuan Chen, Maosheng Yao, *Peking University*

11BA.6 UV Intensity Calculated in Approximations of Clusters of Bacteria and Bacterial Spores for Predicting Viability. STEVEN HILL, Dan Mackowski, Frank Handler, Jana Kesavan, Adam Driks, David Doughty, *US Army Research Lab*

11BA.7 Real-time Characterization of Airborne Bacteria Using Optofluidic Surface-Enhanced Raman Spectroscopy (SERS) Platform. JAE HEE JUNG, Jungan Choi, *Korea Institute of Science and Technology*

11BA.8 Molecular Genetic Staining Techniques for Bioaerosol Analysis in the Amazon Rainforest. MARIA PRASS, Florian Ditas, Isabella Hrabec de Angelis, Bruna A. Holanda, Oliver Lauer, Ovid Krüger, Bettina Weber, Paulo Artaxo, Eckhard Thines, Bernhard M. Fuchs, Meinrat O. Andreae, Ulrich Pöschl, Christopher Pöhler, *Max Planck Institute for Chemistry, Mainz, Germany*

11CA CARBONACEOUS AEROSOL VI: BIOMASS BURNING

ROOM 267

Kristina Wagstrom and Stefania Gilardoni, chairs

11CA.1 The Ubiquity of Biomass Burning Particles in the Remote Troposphere. GREGORY SCHILL, Karl D. Froyd, Daniel Murphy, Agnieszka Kupc, Christina Williamson, Charles Brock, Huisheng Bian, Mian Chin, Peter Colarco, *NOAA ESRL and CIRES, University of Colorado Boulder*

11CA.2 Physical, Chemical, and Optical Properties of Aged Smoke Aerosols and Impacts on Boundary Layer Clouds over the South Atlantic during CLARIFY. JONATHAN TAYLOR, Huihui Wu, Ian Crawford, Keith Bower, James Allan, Dantong Liu, Michael Flynn, Paul Williams, James Dorsey, Tom Choularton, Justin Langridge, Cathryn Fox, Michael I. Cotterell, Nicholas Davies, Kate Szpek, Hugh Coe, Jim Haywood, *University of Manchester*

11CA.3 Use of Electron Tomography to Analyze the Actual Primary Particles Distribution and Agglomerate Morphology of Soot. Alberto Baldelli, STEVEN ROGAK, Una Trivanovic, *University of British Columbia*

- 11CA.4 Evaluation of Relative Humidity Impacts on Biomass Burning Aerosol Particle Viscosity and Volatility using a Tandem Differential Mobility Analyzer.** CHRISTOPHER OXFORD, Rajan K. Chakrabarty, Brent Williams, *Washington University in St. Louis*
2:00
- 11CA.5 High-temperature DMA Analysis of Wood Combustion Originated Particles.** Heikki Lamberg, OLLI SIPPULA, Jorma Joutsensaari, Mika Ihalainen, Jarkko Tissari, Anna Lähde, Jorma Jokiniemi, *University of Eastern Finland*
2:15
- 11CA.6 Speciated Molecular Emission Factors and Volatilities of Biomass Burning Aerosols from Western US Forest Fuels.** COTY JEN, Lindsay Hatch, Nathan Kreisberg, Christos Stamatis, Vanessa Selimovic, Robert J. Yokelson, Kelley Barsanti, Allen H. Goldstein, *University of California, Berkeley*
2:30
- 11CA.7 Photochemical Aging of Light-Absorbing Biomass Burning Aerosol Selected by Volatility.** ELIJAH SCHNITZLER, Rachel Hems, Jonathan Abbatt, *University of Toronto, Toronto, Canada*
2:45

11CB COMBUSTION IV

ROOM 263

Steve Rogak and Cristian Fosca, chairs

- 11CB.1 Interpretation of UV-Visible Absorption Measurements of Flame-synthesized Carbon Nanoparticles by Molecular Modeling.** DONGPING CHEN, Hai Wang, *Beijing Institute of Technology*
1:15
- 11CB.2 Polyaromatic Hydrocarbon Dimerization Rates: Results from ReaxFF Molecular Dynamics.** EIRINI GOUELI, Christopher Hogan Jr., *University of Minnesota*
1:30
- 11CB.3 Laboratory Flames under Investigation: Identifying Trends in Combustion When Mass spectrometry Meets Statistical Analysis.** Cornelia Irimiea, Alessandro Faccinotto, Xavier Mercier, Ismael Kenneth Ortega Colomer, Eric Therssen, CRISTIAN FOCSA, *ONERA*
1:45
- 11CB.4 Size, Effective Density, Volatility, Morphology, and Internal Structure of Soot Particles Generated from Large-Scale Turbulent Diffusion Flames.** MOHSEN KAZEMIMANESH, Ramin Dastanpour, Alberto Baldelli, Melina Jefferson, Alireza Moallemi, Kevin Thomson, Matthew Johnson, Steven Rogak, Jason S. Olfert, *University of Alberta*
2:00
- 11CB.5 Thermophoretic Collection of Soot Samples Taken from within a Co-Flow Diffusion Flame.** JOCHEN A.H. DREYER, Maurin Salamanca, Jethro Akroyd, Sebastian Mosbach, Markus Kraft, *University of Cambridge*
2:15
- 11CB.6 Soot Nucleation and Chemical Evolution during Combustion.** K. Olof Johansson, Farid El Gabaly, Paul Schrader, Matthew Campbell, HOPE MICHELSEN, *Sandia National Labs*
2:30
- 11CB.7 Direct On-line Measurement Of Soot Oxidation Reactivity.** REINHARD NIESSNER, Alexander Rinkenburger, Christoph Haisch, *Technical University of Munich, Germany*
2:45
- 11CB.8 Flame Generated Soot Nuclei: The Asymmetries in Collision Charging evidenced by High-Resolution (API-TOF) Mass Spectrometry.** FRANCESCO CARBONE, Manjula Canagaratna, Andrew Lambe, John Jayne, Douglas Worsnop, Alessandro Gomez, *Yale University*
3:00

11HA HEALTH RELATED AEROSOLS II

ROOM 260

Kerry Kelly and Vishal Verma, chairs

- 11HA.1 Online Analysis of Volatile Organic Gases Released from Bronchial Cells upon Aerosol Deposition as a Diagnostic Tool for Metabolic Processes.** LAURE-ESTELLE CASSAGNES, Zaira Leni, Alexander Håland, Liang Zhu, David Bell, Urs Baltensperger, Imad El Haddad, Armin Wisthaler, Marianne Geiser, Josef Dommen, *Paul Scherrer Institute*
1:15
- 11HA.2 Deposition of Length-classified Glass Fibers in a Replica of Human Airways.** FRANTISEK LIZAL, Miloslav Belka, Jakub Elcner, Jan Jedelsky, Ondrej Misik, Jan Tuhovcak, Miroslav Jicha, *Brno University of Technology*
1:30

- 11HA.3 Atmospheric Evolution of Biomass Burning Organic Aerosol: Implications to Oxidative Potential.** JENNY P.S. 1:45 WONG, Maria Tsagaraki, Irini Tsiodra, Nikolaos Mihalopoulos, Kolloipi Violaki, Maria Kanakidou, Athanasios Nenes, Rodney J. Weber, *Georgia Institute of Technology*
- 11HA.4 Development of a Physiologically Relevant On-Line Chemical Assay to Quantify Aerosol Oxidative Potential.** STEVEN J. CAMPBELL, Daniel Lienhard, Battist Utinger, Angharad Stell, Suzanne E. Paulson, Markus Kalberer, *University of Cambridge*
- 11HA.5 Lipopolysaccharide-mediated PM2.5 Dose-dependent Inflammatory Effects.** FANGXIA SHEN, Fobang Liu, 2:15 Xiangyu Zhang, Jing Li, Kira Ziegler, Ting Zhang, Tianle Zhu, Manabu Shiraiwa, Haijie Tong, Maosheng Yao, Ulrich Pöschl, Kurt Lucas, *Beihang University*
- 11HA.6 Waterpipe Tobacco Smoke Toxicity: The Impact of Pipe Height and Hose Characteristics.** KAREN K. BERND, 2:30 Hannah Stadler, Jenna Reed, Alexander Dawes, Emilie Uffman, Mary Catherine Thomson, Cindy DeForest Hauser, *Davidson College*
- 11HA.8 Use of Cleaning Sprays: Respiratory and Musculoskeletal Human Health Effects Studied in an Exposure Chamber.** KARIN LOVÉN, Jörn Nielsen, Eva Assarsson, Pia Tallving, Monica Kåredal, Aneta Wierzbicka, Camilla 3:00 Dahlqvist, Catarina Nordander, Yiyi Xu, Anders Gudmundsson, Christina Isaxon, *Ergonomics and Aerosol Technology, Lund University, Sweden*

11IM INSTRUMENTATION IX - CHEMICAL ANALYSIS, CHAMBER METHODS
ROOM 276

Amy Sullivan and Weiming Kong, chairs

- 11IM.1 A New Chamber for Studying Aerosol Formation and Aging in Clouds.** DON COLLINS, Cassandra Milan, Geoffrey 1:15 Roest, Jacob Escobedo, Ariana Castillo, Kate Godfrey, *Texas A&M University*
- 11IM.2 Estimating Secondary Organic Aerosol Yield from Size Distribution Measurements in Chamber Experiments.** WEIMENG KONG, Sophia Charan, Yuanlong Huang, Huajun Mai, John Seinfeld, Richard Flagan, 1:30 *California Institute of Technology*
- 11IM.3 Effects of Gas-Wall Partitioning in Tubing and Instrumentation on Gas-phase, Aerosol, and Potential Aerosol Measurements.** Demetrios Pagonis, Benjamin Deming, Xiaoxi Liu, Ranajit Talukdar, James Roberts, Jordan 1:45 Krechmer, Brett Palm, Joost de Gouw, Paul Ziemann, JOSE-LUIS JIMENEZ, *University of Colorado-Boulder*
- 11IM.4 Measuring Thermodesorber Efficacy for Model Black Carbon Systems with Non-Absorbing Coatings.** JAMES 2:00 RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
- 11IM.5 A Novel Method for Multi-component Continuous Real-time Aerosol Monitoring Using FTIR Spectroscopy for In-vivo Studies.** WEI TECK TAN, Subash Krishnan, Patrick Vanscheeuwijck, *Philip Morris International Research Laboratories Pte Ltd*
- 11IM.6 Characterization of Thermal Dissociation Cavity Attenuated Phase Shift Spectroscopy (TD-CAPS) for Total Gas-Phase and Particle-Phase Alkyl Nitrates and Peroxy Nitrates Measurements.** GAMZE ERIS, Masayuki 2:30 Takeuchi, Ezra Wood, David Tanner, Greg Huey, Nga Lee Ng, *Georgia Institute of Technology*
- 11IM.7 A Quantitative Method to Measure and Speciate Amines in Ambient Aerosol Samples.** AMY P. SULLIVAN, 2:45 Katherine Benedict, Jeffrey Collett, *Colorado State University*
- 11IM.8 Analysis of Solutions by Fourier Transform Infrared Spectroscopy by Electrospray Film Deposition.** ANDREA 3:00 ARANGIO, Christophe Delval, Giulia Ruggeri, Satoshi Takahama, *EPFL*

11LC LOW-COST AND PORTABLE SENSORS V
FERRARA THEATER

Andrea Ferro and Sergey A. Grinshpun, chairs

- 11LC.1 Residential PM Measured in 50 Homes Using Low-cost Monitors over Two Heating Seasons in Rochester, NY.** Gursumeeran Satsangi, Mauro Masiol, Nadežda Zíková, David C. Chalupa, David Q. Rich, Philip K. Hopke, ANDREA 1:15 R. FERRO, *Clarkson University*

- 11LC.2 Results from the Citizen-Enabled Aerosol Measurements for Satellites (CEAMS) Pilot Campaign in Northern Colorado.** Bonne Ford, Jeffrey R. Pierce, Eric Wendt, Marilee Long, Shantanu Jathar, Jessica Tryner, Casey Quinn, Lizette Van Zyl, John Mehaffy, Christian L'Orange, Dan Miller-Lionberg, JOHN VOLCKENS, *Colorado State University*
1:30
- 11LC.3 Prevalence and Timing of Indoor PM Emission Events Observed in a Small Cohort of Homes Using Low-Cost Dust Sensors.** Ian Longley, Gustavo Olivares, Ayushi Kachhara, Sam Edwards, GUY COULSON, *National Inst of Water and Atmospheric Research, New Zealand*
1:45
- 11LC.4 Low-cost Sensing of Aerosol Active Surface Area by Direct Ultraviolet Photoionization.** ROBERT NISHIDA, Tyler J. Johnson, Adam M Boies, John Saffell, Simone Hochgreb, *University of Cambridge*
2:00
- 11LC.5 Mapping Occupational Hazards with a Multi-Hazard Monitor Network in a Heavy-Vehicle Manufacturing Facility.** CHRISTOPHER ZUIDEMA, Sinan Sousan, Nima Afshar-Mohajer, Larissa Stebounova, Alyson Gray, Laura Hallett, Xiaoxing Liu, Marcus Tatum, Mitch Fitzpatrick, Oliver Stroh, Campbell Summer, Geb Thomas, Thomas Peters, Kirsten Koehler, *Johns Hopkins School of Public Health*
2:15
- 11LC.6 Low-Cost Particle Sensor for Monitoring Real-Time Protection of Respirators.** BINGBING WU, Maija Leppänen, Jonathan Corey, Michael Yermakov, Yan Liu, Sergey A. Grinshpun, *University of Cincinnati*
2:30
- 11LC.7 Deployment of Low-cost Sensors to Assess the Impacts of Portable Air Filtration on Indoor PM_{2.5} and Associated Personal Exposure.** KAROLINE JOHNSON, Christina Norris, Tongshu Zheng, Michael Bergin, James Schauer, Junfeng Zhang, Yinping Zhang, *Duke University*
2:45
- 11LC.8 Air Quality Monitoring in the San Juan Metro Area in the Aftermath of Hurricane Maria Using Lower-Cost RAMP Monitors.** ELVIS TORRES-DELGADO, R. Subramanian, Aja Ellis, Carl Malings, Rebecca Tanzer, Maité Morales-Medina, Felipe Rivera-Adorno, Darrel Baumgardner, Albert Presto, Stephan Borrmann, Roberto Rondanelli, Mirko Del Hoyo, Rémi Losno, Olga L. Mayol-Bracero, *University of Puerto Rico*
3:00

11MG AIR QUALITY IN MEGACITIES: FROM SOURCES TO CONTROL V: CHARACTERIZATION OF PRIMARY AND SECONDARY AEROSOLS II

ROOM 274

Hector Jorquera and Nestor Rojas, chairs

- 11MG.1 Quantification of the Rapid Photochemical Secondary Organic Aerosol Production Observed across Megacities around the World.** BENJAMIN A. NAULT, Pedro Campuzano-Jost, Douglas Day, Jason Schroder, Donald Blake, Manjula Canagaratna, Joost de Gouw, Jessica Gilman, Tom Hanisco, Greg Huey, B. Thomas Jobson, Bill Kuster, Barry Lefer, Jin Liao, Ilana Pollack, Jeff Peischi, James Roberts, Thomas Ryerson, Alan Fried, Bernhard Rappenglueck, Jochen Stutz, Petter Weibring, Frank Flocke, Jose-Luis Jimenez, et al., *University of Colorado-Boulder*
1:15
- 11MG.2 New Insights into Sources of Organic Aerosol in PM_{2.5} in a Polluted Urban Environment.** YAN ZHENG, Qi Chen, Yaowei Li, Xi Cheng, Ying Liu, Tong Zhu, John Jayne, Douglas Worsnop, *Peking University*
1:30
- 11MG.3 Brown Carbon Aerosol in Urban Xi'an, Northwest China: The Composition and Light Absorption Properties.** RUJIN HUANG, Lu Yang, Junji Cao, *Institute of Earth and Envir., Chinese Academy of Sciences*
1:45
- 11MG.4 A Comparison between Satellite Observations and Ground Measurements for Fine Particulate Matter in Karachi, Pakistan.** Zhuldyz Darynova, MEHDI AMOUEI TORKMAHALLEH, Haider Khwaja, *Chemical and Aerosol Research Team, Nazarbayev University*
2:00
- 11MG.5 Chemical and Optical Characteristics of PM_{2.5} at an Urban Site in Gwangju during Spring 2016.** JIHYO CHONG, Kwangyul Lee, Tsatsral Batmunkh, Hee-Joo Cho, Hungsoo Joo, Min-Suk Bae, Kihong Park, *Gwangju Institute of Science and Technology*
2:15
- 11MG.6 Particle Concentration and Particle Size Distribution in an Urban and an Agricultural Sites in Colombia.** LADY MATEUS, Angela Vargas, Jennifer Marin, Nestor Rojas, German Ruega, Rodrigo Jimenez, *Universidad Nacional de Colombia*
2:30
- 11MG.7 Atmospheric New Particle Formation from Sulfuric Acid and Amines in a Chinese Megacity.** Lei Yao, Olga Garmash, Federico Bianchi, Jun Zheng, Chao Yan, Jenni Kontkanen, Heikki Junninen, Stephany Mazon, Mikael Ehn, Pauli Paasonen, Mikko Sipilä, Mingyi Wang, Xinke Wang, Shan Xiao, Hangfei Chen, Yiqun Lu, Bowen Zhang, Dongfang Wang, QingYan Fu, Fuhai Geng, Li Li, Hongli Wang, Liping Qiao, LIN WANG, et al., *Fudan University*
2:45

11MG.8 Submicron Aerosol at a Receptor Site in New Delhi: Interpreting Sources and Their Origin. SAHIL
3:00 BHANDARI, Shahzad Gani, Dongyu S. Wang, Kanan Patel, Sarah Seraj, Prashant Soni, Zainab Arub, Gazala Habib,
Joshua Apte, Lea Hildebrandt Ruiz, *University of Texas at Austin*

Thursday 3:15 PM - 3:45 PM
Coffee Break

Thursday 3:45 PM - 4:30 PM
Grand Challenge Summary

3:45 **Workshop organizers present results to all conferees who wish to attend and get feedback for the final report**
Christopher Sorensen, *Kansas State University*; Richard Flagan, *California Institute of Technology*; David Pui, *University of Minnesota*; Junji Cao, *Chinese Academy of Sciences*; Yoshio Otani, *Kanazawa University*; Urs Baltensperger, *Paul Scherrer Institute*; Y.S. Mayya, *Indian Institute of Technology-Bombay*

Thursday 4:30 PM - 5:30 PM
Meet Aerosol Pioneers 2

Thursday 4:30 PM - 5:30 PM
Working Group Chairs 2019 Technical Program Meeting

Thursday 5:30 PM - 6:30 PM
AAAR Business Meeting

Thursday 6:30 PM - 10:00 PM
IAC Banquet

Friday

Friday 8:00 AM - 9:15 AM
Plenary V: On the Thermodynamics and Kinetics of Atmospheric Aerosol Formation

8:00 **On the Thermodynamics and Kinetics of Atmospheric Aerosol Formation** Ilona Riipinen, *Stockholm University*

Moderator Nicole Riemer, *University of Illinois at Urbana-Champaign*

9:00 **Fissan-Pui-TSI Award, Student Poster Competition Awards, Fine Particle Art Prizes** Pratim Biswas, *Washington University in St. Louis*; Andy Grieshop/Shunsuke Nakao, *North Carolina State University/Clarkson University*; Marit Meyer, *NASA*

9:10 **Concluding Remarks and Preview for 2019** Pratim Biswas, *Washington University in St. Louis*; Sally Ng, *Georgia Institute of Technology*

Friday 9:15 AM - 9:45 AM
Coffee Break

Friday 9:45 AM - 11:45 AM

Session 12: Platform

12AC AEROSOL CHEMISTRY XII - CHEMISTRY IN THE FIELD

ROOM 275

Sarah Styler and Alex Lee, chairs

- 12AC.1 Distribution of Organic Aerosols (OA) during the NASA ATmospheric Tomography (ATom) Campaigns: Chemical Removal and Aging as a Function of Photochemical Age.** JOSE-LUIS JIMENEZ, Pedro Campuzano-Jost, Benjamin A. Nault, Jason Schroder, Douglas Day, Joseph Katich, Joshua P. Schwarz, Nicola Blake, Donald Blake, Bruce Daube, Roisin Commane, Steven Wofsy, Eric Ray, Katherine Travis, Colette Heald, Simone Tilmes, Alma Hodzic, Huisheng Bian, Peter Colarco, Mian Chin, Anna Hodshire, Jack Kodros, Jeffrey R. Pierce, *University of Colorado-Boulder*
9:45
- 12AC.2 Effects of Temperature on Nucleated Particles from α -Pinene Ozonolysis Measured by a FIGAERO-Chemical Ionization Mass Spectrometer.** QING YE, Mingyi Wang, Victoria Hofbauer, Dexian Chen, Jasper Kirkby, Neil Donahue, CLOUD Collaboration, *Carnegie Mellon University*
10:00
- 12AC.3 The Role of Biological Particles in the Amazon Rainforest.** SWARUP CHINA, Susannah Burrows, Marje Prank, Daniel Veghte, Bingbing Wang, Johannes Weis, Natalie Mahowald, Daniel Knopf, Mary Gilles, Alexander Laskin, *Pacific Northwest National Laboratory*
10:15
- 12AC.4 Photochemical Aging and Transformation of Dissolved Organic Matter in Atmospheric Aqueous Phase.** QI ZHANG, Lu Yu, Wenqing Jiang, *University of California, Davis*
10:30
- 12AC.5 An Anthropogenic Source of Organo-nitrate from Alberta Oil Sands Emissions.** ALEX LEE, Max Adam, John Liggio, Shao-Meng Li, Megan Willis, Jonathan Abbatt, Travis Tokarek, Charles Odame-Ankrah, Jennifer Huo, Hans Osthoff, Kevin Strawbridge, Jeff Brook, *National University of Singapore*
10:45
- 12AC.6 A Multi-Site Chemical Characterization of Organic Aerosol Demonstrates Extensive Variability in Molecular-Level Composition.** DREW GENTNER, Jenna Ditto, Emily Barnes, Peeyush Khare, Taekyu Joo, Masayuki Takeuchi, Gamze Eris, Nga Lee Ng, Alexander Bui, Robert Griffin, *Yale University*
11:00
- 12AC.7 Chemistry and Photochemistry at the Surface of Tomorrow's Urban Particulate Matter.** SARAH STYLER, Maya Abou-Ghanem, Stephanie Schneider, Zhihao Chen, Ming Lyu, Brett Wickware, Jonathan Abbatt, Patrick Milner, Arthur Duarte de Marins Costa, Jeffery Kwasny, *University of Alberta*
11:15
- 12AC.8 The Role of Criegee Intermediates in Secondary Sulfate Aerosols Formation in Nocturnal Power-Plant Plumes in South Eastern USA.** Daphne Meidan, Steven S. Brown, YINON RUDICH, *Weizmann Institute of Science*
11:30

12AP AEROSOL PHYSICS VIII

ROOM 265/266

Christopher Sorensen and Rajan Chakrabarty, chairs

- 12AP.1 Scaling Laws for Light Absorption by Atmospheric Black Carbon Aerosol.** RAJAN K. CHAKRABARTY, William Heinson, *Washington University in St. Louis*
9:45
- 12AP.2 Properties and Mixing State of Refractory Black Carbon over the Amazon Basin.** BRUNA A. HOLANDA, Christopher Pöhlker, Henrique Barbosa, Joel Brito, Samara Carbone, Yafang Cheng, Florian Ditas, Jeannine Ditas, Thomas Klimach, Christoph Knote, Luiz Machado, Jing Ming, Daniel Moran-Zuloaga, Mira L. Pöhlker, Maria Prass, Jorge Saturno, Hang Su, David Walter, Qiaoqiao Wang, Paulo Artaxo, Ulrich Pöschl, Meinrat O. Andreae, *Max Planck Institute for Chemistry, Mainz, Germany*
10:00
- 12AP.3 Morphology and Mobility Diameter of Carbonaceous Aerosols during Agglomeration and Surface Growth.** EIRINI GOUDEL, Georgios Kelesidis, Sotiris E. Pratsinis, *University of Minnesota*
10:15
- 12AP.4 The Effect of Electric Field Induced Alignment on the Electrical Mobility of Fractal Aggregates.** JAMES CORSON, George Mulholland, Michael Zachariah, *University of Maryland*
10:30

- 12AP.5 Light Scattering and Absorption by Fractal Aggregates Including Soot.** CHRISTOPHER SORENSEN, Jerome Yon, Fengshan Liu, Justin Maughan, William Heinson, Matthew Berg, *Kansas State University*
10:45
- 12AP.6 Sensitivity of Bare Black Carbon MAC and AAE to Morphological Parameters, Primary Particle Polydispersity, and Refractive Index in the Visible and Near-Infrared.** FENGSHAN LIU, Jerome Yon, José Morán, Andrés Fuentes, Joel Corbin, Prem Lobo, Gregory Smallwood, *National Research Council Canada*
11:00
- 12AP.7 Fragmentation of Synthetic Fractal-like Agglomerates via Random Binary Scission.** Lorenzo Isella, Anastasios D. Melas, Margaritis Kostoglou, YANNIS DROSSINOS, *European Commission, Joint Research Centre*
11:15
- 12AP.8 Spatio-Temporal Variability of Aerosol Physical and Optical Properties from Mobile In-Situ Measurements in the Po Valley (Italy) during Summertime.** MICHELE BERTÓ, Rosaria Erika Pileci, Robin Modini, Stefania Gilardoni, Angela Marinoni, Douglas Orsini, Matteo Rinaldi, Martin Gysel, *Paul Scherrer Institute*
11:30

12BA BIOAEROSOLS V BIOAEROSOL MICROBIAL DIVERSITY

ROOM 264

Maria de Fatima Andrade and Alex Huffman, chairs

- 12BA.1 Indoor and Outdoor Concentrations of Airborne Microbes (Bacteria and Fungal Spores) in a Hot Desert Environment.** BALINT ALFOLDY, Lubna Ali, Mariem Safi, Mohamed Kotb, Nahla Eltai, Jeffrey Obbard, *Qatar University*
9:45
- 12BA.2 Variation of Microbial Community and Activity in PM_{2.5} in Beijing, China.** RUI DU, Weishan Ren, Pengrui Du, Hanlin Chen, Sujian Zhang, *University of Chinese Academy of Sciences*
10:00
- 12BA.3 Presence and Variability of Bioaerosols in Three Multi-Apartment Residential Buildings with Different Energy Efficiency in the Northeastern US.** NIRMALA THOMAS, Leonardo Calderón, Brian Pavilonis, Zuocheng Wang, Youyou Xiong, MaryAnn Sorensen-Allacci, Deborah Plotnik, Jennifer Senick, Jie Gong, Uta Krogmann, Clinton J. Andrews, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
10:15
- 12BA.4 Online Bioaerosol and Dust Measurements during the Aqaba Research Cruise around the Arabian Peninsula.** TOBIAS KÖNEMANN, Nicole Savage, Charlotte Beall, Emilio Rodriguez-Caballero, Florian Ditas, Marcel Dorf, Hartwig Harder, Jos Lelieveld, David Walter, Bettina Weber, Petya Yordanova, Meinrat O. Andreae, J. Alex Huffman, Ulrich Pöschl, Christopher Pöhlker, *Max Planck Institute for Chemistry*
10:30
- 12BA.5 A Newly Developed, Inexpensive Single-Particle Fluorescence Spectrometer: Characterization and Application to Pollen Analysis.** BENJAMIN E. SWANSON, Sam Scherer, Samir Rezgui, Donald R. Huffman, J. Alex Huffman, *University of Denver, CO*
10:45
- 12BA.6 Computational Airflow Modeling Based Pathogen Tracking at Food Processing Facilities.** Alexander Zuniga, Alejandro Castillo, Zahra Mohammad, Juan Pedro Maestre, Kerry Kinney, Ronald Lacey, MARIA KING, *Texas A&M University*
11:00
- 12BA.7 Historic and Unpublished Data on Biological Ice Nuclei: Terrestrial and Marine.** RUSSELL SCHNELL, *National Oceanic and Atmospheric Administration*
11:15
- 12BA.8 Bioaerosol Investigation: New Experimental Activity in Chambre, an Atmospheric Simulation Chamber.** SILVIA G. DANELLI, Dario Massabò, Elena Gatta, Franco Parodi, Antonio Comite, Gianluca Corno, Camilla Costa, Andrea Di Cesare, Maddalena Oliva, Luigi Vezzulli, Paolo Prati, *University of Genoa and INFN Genoa, Italy*
11:30

12CB COMBUSTION V

ROOM 263

Andrew Grieshop and Naomi Zimmerman, chairs

- 12CB.1 High-Temperature Sampling and Characterization of Corrosion-Relevant Particles in Waste Incineration Plants.** STEFAN SCHUMACHER, Jörg Lindermann, Burkhard Stahlmecke, Dirk Jarzyna, Amit Khot, Till van der Zwaag, Hermann Nordsieck, Jens Harpeng, Ragnar Warnecke, Christof Asbach, *Institut für Energie- und Umwelttechnik e.V. (IUTA)*
9:45

- 12CB.2 Ultrafine Particle Emissions from the Combustion of Natural Gas, Biogas, and Biomethane.** Jian Xue, Yin Li, Joshua Peppers, Peter Green, Thomas Young, MICHAEL KLEEMAN, *University of California, Davis*
10:00
- 12CB.3 Time-resolved Monitoring of Primary Intermediate/Semi-volatile Organic Species during Coal Combustion in a Representative Household Stove in Northern China.** SIYI CAI, Liang Zhu, Shuxiao Wang, Armin Wisthaler, Jiming Hao, *Tsinghua University*
10:15
- 12CB.4 Emission Factors of PM_{2.5} and Its Climate Relevant Constituents from Cooking Processes in Traditional Mud Stoves in the Villages of North India.** Annada Padhi, Gazala Habib, JAI PRAKASH, *IIT Delhi*
10:30
- 12CB.5 Emission Factors and Optical Properties of Health and Climate Relevant Pollutants Measured in a Multi-year Cookstove Intervention Study in Rural India.** MOHAMMAD MAKSIMUL ISLAM, Roshan Wathore, Grishma Jain, Karthik Sethuraman, Hisham Zerriffi, Julian Marshall, Rob Bailis, Andrew Grieshop, *North Carolina State University*
10:45
- 12CB.6 Field Measurements of Solid-Fuel Cookstove Emissions from Uncontrolled Cooking in China, Honduras, Uganda, and India.** ROSE EILENBERG, Kelsey Bilsback, Michael Johnson, Jack Kodros, Eric Lipsky, Christian L'Orange, Jeffrey R. Pierce, R. Subramanian, John Volckens, Allen Robinson, *Carnegie Mellon University*
11:00
- 12CB.7 Characterizing Emissions from Diverse Domestic Biofuel Uses in Rural Malawi.** ASHLEY BITTNER, Eric Lipsky, Mohammad Maksimul Islam, Andrew Grieshop, *North Carolina State University*
11:15
- 12CB.8 Interpreting Emissions from Biomass Cookstoves and Wood Stoves Using a Simple Pyrolysis Model.** Christina Andersen, Robert Lindgren, Ricardo Carvalho, Vilhelm B. Malmborg, Erik Ahlberg, Natxo Garcia-López, John Falk, Axel C. Eriksson, Thomas Kristensen, Birgitta Svenningsson, Christoffer Boman, JOAKIM PAGELS, *Lund University, Sweden*
11:30

12IM INSTRUMENTATION X - AEROSOL SAMPLING & ANALYSIS

ROOM 276

David Doughty and Jonathan Symonds, chairs

- 12IM.1 A New Tandem Differential Mobility Analyzer Inversion Routine That Allows Sampling of the Entire Size Distribution in Hygroscopicity Experiments.** CHRISTOPHER OXFORD, Brent Williams, *Washington University in St. Louis*
9:45
- 12IM.2 Automated Raman Spectroscopy of Ambient and Laboratory-generated Aerosols.** DAVID DOUGHTY, Steven Hill, *US Army Research Lab*
10:00
- 12IM.3 Developing a Large Surrogate Surface to Measure Dry Deposition of Atmospheric Aerosols.** ALEXANDER JOHNSON, Cliff Davidson, *Syracuse University*
10:15
- 12IM.4 High Speed Imaging of Rayleigh Breakup of Charged Droplets Levitated in an Electrodynamic Balance.** Mohit Singh, Neha Gawande, Y.S. MAYYA, R.M. Thaokar, *Indian Institute of Technology Bombay*
10:30
- 12IM.5 Development of an in Vitro Exposure System Enabled to Track Biological Impacts of Aerosol on Human Lung Cells in Real-Time.** NIMA AFSHAR-MOHAJER, Lakshmana Chandrala, Kristine Nishida, Venkataramana Sidhaye, Joseph Katz, Kirsten Koehler, *Johns Hopkins School of Public Health*
10:45
- 12IM.6 Rapid Measurement of Sub-micrometer Aerosol Size Distribution Using a Fast Integrated Mobility Spectrometer.** YANG WANG, Tamara Pinterich, Jian Wang, *Brookhaven National Laboratory*
11:00
- 12IM.7 Uniformity of Particle Concentration after Mixing Aerosol Flows.** David Walker, Tyler J. Johnson, Robert Nishida, JONATHAN SYMONDS, Kingsley Reavell, *Cambustion*
11:15
- 12IM.8 M-WINS Inlet for Continuous PM_{2.5} Sampling.** THI-CUC LE, Jung-Che Sung, Krishna Kumar Shukla, Chuen-Jinn Tsai, *National Chiao Tung University*
11:30

12LC LOW-COST AND PORTABLE SENSORS VI

FERRARA THEATER

Jingkun Jiang and R. Subramanian, chairs

- 12LC.1 Source Apportionment of Particulate Matter Using Low-Cost Particle Sensors with Co-Located Reference Measurements.** DAVID HAGAN, Jesse Kroll, Eben Cross, Joshua Apte, Shahzad Gani, Lea Hildebrandt Ruiz, Sahil Bhandari, Gazala Habib, *MIT*
9:45
- 12LC.2 A Low-cost Sensor Network to Improve Air Quality Management: A Case Study in Jining, China.** XIAOHUI QIAO, Qiang Zhang, Fenglin Liu, Ying Long, Jingkun Jiang, *Tsinghua University*
10:00
- 12LC.3 Development and Application of a New Palm-Sized Optical PM2.5 Sensor.** TOMOKI NAKAYAMA, Yutaka Matsumi, *ISEE, Nagoya University*
10:15
- 12LC.4 Spatial and Temporal Variability of Air Quality in Pittsburgh, Pennsylvania with a 50-Node RAMP Network.** R. SUBRAMANIAN, Carl Malings, Rebecca Tanzer, Aliaksei Hauryliuk, Provat Saha, Aja Ellis, Rose Eilenberg, Srinivasa P.N. Kumar, Naomi Zimmerman, Allen Robinson, Albert A. Presto, *Carnegie Mellon University*
10:30
- 12LC.5 City Wide Mobile Air Sensor Network (MASEN) in Hong Kong for Evidence Based Air Quality Management.** ZHI NING, Fenhuan Yang, Dane Westerdahl, *City University of Hong Kong*
10:45
- 12LC.6 Long-term Performance Evaluation of Commercial Low-Cost PM2.5 Sensors in Houston, Texas.** H. LANGLEY DEWITT, Bradley Flowers, Will Ollison, Walt Crow, *American Petroleum Institute*
11:00
- 12LC.7 A Community Network of 100 Low-Cost Black Carbon Sensors.** CHELSEA V. PREBLE, Julien Caubel, Troy Cados, Joshua Apte, Thomas W. Kirchstetter, *University of California, Berkeley*
11:15
- 12LC.8 Cloud-based Application to Manage Data from Distributed Air Quality Sensors Networks.** BRANDON FEENSTRA, Ross Cheung, Vasileios Papapostolou, Andrea Polidori, *South Coast Air Quality Management District*
11:30
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12MG AIR QUALITY IN MEGACITIES: FROM SOURCES TO CONTROL VI: IMPACTS

ROOM 274

Phil Hopke and Gufran Beig, chairs

- 12MG.1 Challenges of Air Quality Monitoring and Forecasting in Different Mega City Environments.** G. BEIG, *IITM, Pune, India*
9:45
- 12MG.2 Contributions to Disease Burden from Major Sources of Air Pollution in India.** Michael Brauer, Aaron Cohen, KATHERINE WALKER, Richard T. Burnett, Joseph Frostad, Qiao Ma, Randall V. Martin, Shuxiao Wang, Chandra Venkataraman, HEI GBD-MAPS Working Group, *Health Effects Institute*
10:00
- 12MG.3 Correlation between PM2.5 and Particle Number Concentrations in Four Major Cities: Toronto, Los Angeles, Helsinki and London.** ALMA LORELEI DE JESUS, Md Mahmudur Rahman, Mandana Mazaheri, Luke Knibbs, Helen Thompson, Greg J. Evans, Cheol H. Jeong, Markku Kulmala, Tuukka Petäjä, Krista Luoma, Hilka Timonen, Jarkko Niemi, Roy M. Harrison, David Beddows, Constantinos Sioutas, Mohammad Sowlat, Lidia Morawska, *Queensland University of Technology*
10:15
- 12MG.4 Characterization of Polycyclic Aromatic Hydrocarbons (PAHs) in Fine Particulate Matter (PM2.5) in Urban New York.** HAIDER A KHWAJA, Zafar Aminov, Wen Yuan, Mirza M. Hussain, Shannon Foote, *Wadsworth Center, University at Albany*
10:30
- 12MG.5 Relative Importance of Emissions from Ships, Locomotives, and Freeways in the Communities near Ports of Los Angeles and Long Beach and Their Impact on the Air Quality of Los Angeles Basin.** AMIRHOSEIN MOUSAVI, Mohammad Sowlat, Sina Hasheminassab, Olga Pikelnaya, Andrea Polidori, George Ban-Weiss, Constantinos Sioutas, *University of Southern California*
10:45
- 12MG.6 Comprehensively Assessing the Drivers of Future Air Quality in California.** SHUPENG ZHU, Michael MacKinnon, James V. Soukup, Donald Dabdub, *University of California, Irvine*
11:00
- 12MG.7 Ambient Air Quality in Dhaka Bangladesh over Two Decades: Impacts of Policy on Air Quality.** Bilkis Begum, PHILIP K. HOPKE, *Atomic Energy Centre, Dhaka*
11:15
- 12MG.8 Insights into PM2.5 Chemical Composition and Sources in Beijing Using an Extractive Electrospray Ionisation Long-Time-Of-Flight Mass Spectrometer (EESI-LTOF).** YANDONG TONG, Veronika Pospisilova, Lu Qi, Giulia Stefanelli, Varun Kumar, Urs Baltensperger, Junji Cao, Rujin Huang, Andre S.H. Prévôt, Jay G. Slowik, *Paul Scherrer Institute*
11:30

12RA REMOTE/REGIONAL ATMOSPHERIC AEROSOL VII: REGIONAL AEROSOL

ROOM 260

Roya Bahreini and Lijie Li, chairs

- 12RA.1 Evaluation of the Second IMPROVE Equation.** ANTHONY PRENNI, Jenny Hand, William Malm, Scott Copeland, Bret Schichtel, *National Park Service*
9:45
- 12RA.2 Measured In-situ Mineral Dust Absorption Spectra.** CHRISTOPHER ZANGMEISTER, James Radney, *National Institute of Standards and Technology*
10:00
- 12RA.3 Towards Properly Decoding Trends in Wet Deposition of Inorganic Ions Related to Emissions and Climate Drivers.** Xiaohong Yao, LEIMING ZHANG, *Environment and Climate Change Canada*
10:15
- 12RA.4 Aerosol Liquid Water Driven by Anthropogenic Inorganic Salts: Implying Its Key Role in the Haze Formation over North China Plain.** ZHIJUN WU, Yu Wang, Keding Lu, Song Guo, Limin Zeng, Yuanhang Zhang, Min Hu, *Peking University, China*
10:30
- 12RA.5 Coarse Aerosol Mass at Remote Sites across the United States.** JENNY HAND, Bret Schichtel, Thomas Gill, *Colorado State University*
10:45
- 12RA.6 Heterogeneity in the Concentration Distribution of Semi-Volatile Organic Compounds in the Surface Boundary Layer over the Tropical Forest in Central Amazonia.** JIANHUAI YE, Patrícia C. Guimarães, Carla E. Batista, Igor O. Ribeiro, Adan Medeiros, Matthew Stewart, Yaowei Li, Matheus A. Tomoto, Daniel Wang, Dasa Gu, Rafael L. Oliveira, Sérgio Duvoisin Junior, Karena McKinney, Alex Guenther, Rodrigo A. F. de Souza, Scot T. Martin, *Harvard University*
11:00
- 12RA.7 Seasonal Changes in Organic Aerosol Composition in Ulaanbaatar, Mongolia.** SKYLER SIMON, Audrey Dang, Brent Williams, Jay R. Turner, *Washington University in St. Louis*
11:15
- 12RA.8 Fine Particulate Mass Scattering Efficiency and Refractive Index in the Central Amazonian Basin (ATTO station).** SAMARA CARBONE, Guilherme Santa Cecília, Luciana Rizzo, Joel Brito, Nga Lee Ng, Lu Xu, Jorge Saturno, Bruna A. Holanda, Florian Ditas, Christopher Pöhlker, Meinrat O. Andreae, Paulo Artaxo, *Federal University of Uberlândia*
11:30
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12SA SOURCE APPORTIONMENT II

ROOM 267

Laurent Poulain and Ben De Foy, chairs

- 12SA.1 High Resolution Analysis of Vehicle-related Organic Aerosols Observed at a Roadside Site in Hong Kong with the Application of TAG-ToF-MS.** HAI GUO, Xiaopu Lyu, Wen Xu, John Jayne, Nathan Kreisberg, Allen H. Goldstein, Susanne Hering, Chak K. Chan, Xiangdong Li, Kin-Fai Ho, Douglas Worsnop, *Hong Kong Polytechnic University*
9:45
- 12SA.2 A European-wide Intercomparison for Source Apportionment with Receptor and Chemical Transport Models.** CLAUDIO BELIS, Denise Pernigotti, Guido Pirovano, FAIRMODE WG3 Community, *European Commission - Joint Research Centre*
10:00
- 12SA.3 A Global Scale Source Apportionment Scheme for Particulate Matter using the GEOS-Chem Global Atmospheric Chemistry Model.** CARMEN LAMANCUSA, Kristina Wagstrom, *University of Connecticut*
10:15
- 12SA.4 Excitation Emission Matrix Fluorescence Spectroscopy for Aerosol Source Identification.** JAY RUTHERFORD, Neal Dawson-Elli, Igor Novosselov, Edmund Seto, Jonathan Posner, *University of Washington*
10:30
- 12SA.5 Fingerprinting Pre-monsoon Fine Aerosol Sources over Central Indo-Gangetic Plain.** MANISH KUMAR, V.K. Sarma, R.S. Singh, Tirthankar Banerjee, *Banaras Hindu University*
10:45

- 12SA.6 Real Time Source Quantification of Secondary Organic Aerosol in Zurich Using Extractive Electrospray Ionization Time-Of-Flight Mass Spectrometry (EESI-TOF).** LU QI, Giulia Stefenelli, Veronika Pospisilova, Yandong Tong, Christoph Hueglin, Martin Rigler, Xinlei Ge, Mindong Chen, Urs Baltensperger, Andre S.H. Prévôt, Jay G. Slowik, *Paul Scherrer Institute*
- 12SA.7 Impact of a Shrinking Saline Lake (Salton Sea) on Regional Dust Deposition and Composition.** ALEXANDER FRIE, Alexis Garrison, Mia Maltz, Jon Botthoff, Steve Bates, Timothy Lyons, Emma Aronson, Roya Bahreini, *University of California Riverside*
- 12SA.8 Positive Matrix Factorization of SEM Based Individual Particle Results from the Middle East: A Comparison of Data Sets from Kuwait Collected during Two Time Periods.** Johann Engelbrecht, GARY CASUCCIO, Traci Lersch, *RJ Lee Group, Inc.*

Friday 11:45 AM - 1:15 PM
Lunch on Your Own

Friday 12:00 PM - 1:00 PM
Meet Aerosol Pioneers 3

Friday 1:15 PM - 3:15 PM
Session 13: Platform

13AC AEROSOL CHEMISTRY XIII - NEW PARTICLE FORMATION AND GROWTH
ROOM 275

Andrewas Kuerten and Federico Bianchi, chairs

- 13AC.1 Biogenic New Particle Formation: From Pristine to Polluted Environments.** LUBNA DADA, Martin Heinritzi, Mario Simon, Chao Yan, Dominik Stolzenburg, Katrianne Lehtipalo, Markku Kulmala, Jasper Kirkby, CLOUD Collaboration, *University of Helsinki*
- 13AC.2 The Birth of Haze: Molecular Understanding of New Particle Formation in Beijing.** YING ZHOU, Chao Yan, Juha Kangasluoma, Yonghong Wang, Federico Bianchi, Tommy Chan, Biwu Chu, Lubna Dada, Kaspar Rudolf Dällenbach, Yueyun Fu, Xucheng He, Liine Heikkinen, Yiliang Liu, Yiqun Lu, Qingxin Ma, Pekka Rantala, Gan Yang, Rujin Yin, Joni Kujansuu, Tuukka Petäjä, Yongchun Liu, Lin Wang, Jingkun Jiang, Markku Kulmala, *Beijing University of Chemical Technology*
- 13AC.3 Chemistry of New Particle Growth During Spring Time in the Seoul Metropolitan Area, Korea.** HWAJIN KIM, Qi Zhang, *Korea Institute of Science and Technology*
- 13AC.4 Molecular Understanding of the Suppression of Organic Nucleation by Isoprene.** Martin Heinritzi, Lubna Dada, Mario Simon, Dominik Stolzenburg, Lukas Fischer, Andrea C. Wagner, ANDREAS KÜRTEEN, Jasper Kirkby, Joachim Curtius, *Goethe University Frankfurt*
- 13AC.5 Impact of SO₂ on Particle Formation and Growth from α -Pinene Ozonolysis.** CHRIS STANGL, Justin Krasnomowitz, Murray Johnston, Shanhu Lee, *University of Delaware*
- 13AC.6 Mechanisms That Control the Contribution of Aromatic Highly Oxidized Multifunctional Compounds (Homs) to Initial Particle Growth in the Atmosphere.** MINGYI WANG, Dexian Chen, Mao Xiao, Victoria Hofbauer, Penglin Ye, Alexander Lucas Vogel, Qing Ye, Roy Lee III Mauldin, Neil Donahue, *Center for Atmospheric Particle Studies, Carnegie Mellon Uni*
- 13AC.7 Thermodynamics of Neutral Ternary (H₂SO₄-H₂O-NH₃) New Particle Formation Derived from CLOUD Chamber Measurements.** ANDREAS KÜRTEEN, *Goethe University, Frankfurt*
- 13AC.8 Free Tropospheric New Particle Formation Observation from High Altitude Sites around the Globe.** FEDERICO BIANCHI, Claudia Mohr, Diego Aliaga, Qiaozhi Zha, Xuemeng Chen, Otso Peräkylä, Joonas Enroth, Yee Jun Tham, Liine Heikkinen, Fernando Velarde, Juha Kangasluoma, Angela Marinoni, Stefania Gilardoni, Mikael Ehn,

13AP AEROSOL PHYSICS IX

ROOM 265/266

William Heinson and Benjamin Sumlin, chairs

- 13AP.1 On the Inherent Measurement Uncertainty of Miniaturized PM Sensors.** PAUL MAIERHOFER, Georg Röhrer, 1:15 Alexander Bergmann, *Graz University of Technology*
- 13AP.2 How Uncertainties in Measurements and Choice of Regression Method Affect Inference from Data.** SANTTU MIKKONEN, Mikko Pitkänen, Tuomo Nieminen, Antti Lipponen, Antti Arola, Kari Lehtinen, *University of Eastern Finland* 1:30
- 13AP.3 Filtration Efficiency and Discharging Behavior of Electret Filters.** STEFAN SCHUMACHER, Rama Rao Jasti, Maximilian Kerner, Kilian Schmidt, Albert Hellmann, Sergiy Antonyuk, Christof Asbach, *Institut für Energie- und Umwelttechnik e.V. (IUTA)* 1:45
- 13AP.4 The Experimental Research on the Effect of Humidity on Fly-ash Collision Behaviour with Planar Surface.** XUE LI, Ming Dong, Sufen Li, *Dalian University of Technology* 2:00
- 13AP.5 Investigation of Collisional Growth Rate of Titania Nanoparticles at High Flame Temperatures Through Molecular Dynamics Simulations.** GIRISH SHARMA, Rajan K. Chakrabarty, Pratim Biswas, *Washington University in St Louis* 2:15
- 13AP.6 Effect of Time on Particle Resuspension from Substrates: Wind-tunnel Experiment and Analysis.** Babak Nasr, JING QIAN, Morgan Minyard, Andrea R. Ferro, Goodarz Ahmadi, Suresh Dhaniyala, *Clarkson University* 2:30
- 13AP.7 Characteristics of Tire Wear Particles Generated by Tire Simulator under Various Driving Conditions.** GIBAEK KIM, Seokhwan Lee, *Korea Institute of Machinery and Materials* 2:45
- 13AP.8 New Insight into the Kinetics of Particle Resuspension Process.** Jessica Gisele Benito, Rodolfo Omar Uñac, Irene Ippolito, ANA MARÍA VIDALES, *INFAP-CONICET, Universidad Nacional de San Luis* 3:00
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13BA BIOAEROSOLS VI BIOAEROSOL CONTAMINATION

ROOM 264

Simon Parker and Justin Taylor, chairs

- 13BA.1 Characterisation of Bioaerosols from Six Pig Farms Utilising Culture and Culture-Independent Methodologies.** JOHN KERR WHITE, Jeppe Lund Nielsen, Anne Mette Madsen, *Aalborg University* 1:15
- 13BA.2 Size Distributions and Transport of Pathogenic Bioaerosol from Wastewater Treatment Plants.** LIJIE LI, Xiao Huang, Hongliang Zhang, Michael Hoffmann, *California Institute of Technology* 1:30
- 13BA.3 Determining Distribution of Infectious Viruses in Aerosol Particles Using Water-Based Condensational Growth Technology.** MAOHUA PAN, Leah Carol, John Lednický, Arantzazu Eiguren Fernandez, Susanne Hering, Hugh Fan, Chang Yu Wu, *University of Florida* 1:45
- 13BA.4 Reduction Strategies for Airborne Contaminants in Pre-Commercial Pig Buildings.** VALÉRIE LÉTOURNEAU, Ariane Lévesque, Matthieu Girard, Stéphane Godbout, Stéphane.P Lemay, Caroline Duchaine, *IUCPQ-U.Laval, Canada* 2:00
- 13BA.5 Bioaerosols Emissions from Open Waste Dumpsites: A case study of Olusosun Open Waste Dumpsite, Lagos Nigeria.** GODWIN AKPEIMEH, Louise Fletcher, Barbara Evans, *Member IPHEE, University of Leeds* 2:15
- 13BA.6 Systematic Characterization of the Wideband Integrated Bioaerosol Sensor (WIBS), Including Fluorescence Thresholding and Clustering Analysis Strategies.** NICOLE SAVAGE, Christine Krentz, Tobias Könnemann, Taewon Han, Gediminas Mainelis, Christopher Pöhlker, J. Alex Huffman, *University of Denver, now at Aerosol Devices* 2:30

13BA.7 Using Single Particle Fluorescence to Characterise Bioaerosols Emissions from Green Waste Composting.

2:45 ZAHEER AHMAD NASIR, Sean Tyrrel, *Cranfield University, MK43 0AL, UK*

13BA.8 Identification and Atmospheric Abundance of Primary Biological Aerosol Particles. Maria Zawadowicz, Karl D.

3:00 Froyd, Daniel Murphy, Dominick Spracklen, Colette Heald, Peter Buseck, DANIEL CZICZO, *MIT*

13CA CARBONACEOUS AEROSOL VII: BIOMASS BURNING AND ORGANIC AEROSOL

ROOM 276

Kelley Barsanti and Naomi Zimmerman, chairs

13CA.1 Chemical Characterization of Biomass Burning Aerosols: Can We Reduce the Complexity of Primary Aerosol Emissions? ALESSANDRO FRANCHIN, Ann M. Middlebrook, Gabriela Adler, Matthew Coggon, Joost de Gouw, Jessica

1:15 Gilman, Abigail Koss, Jesse Kroll, Kara D. Lamb, Christopher Lim, James Roberts, Joshua P. Schwarz, Kanako Sekimoto, Vanessa Selimovic, Chelsea Stockwell, Nick Wagner, Carsten Warneke, Rebecca Washenfelder, Caroline Womack, Robert J. Yokelson, Bin Yuan, *CU CIRES - NOAA ESRL*

13CA.2 Chemical Composition of Biomass Burning Particles Measured with a Soot Particle Aerosol Mass Spectrometer Downwind during the BBOP Study. TIMOTHY ONASCH, Anita Avery, John Shilling, Joda Wormhoudt,

1:30 Arthur J. Sedlacek, Edward Fortner, Mikhail Pekour, Shan Zhou, Sonya Collier, Qi Zhang, Lawrence Kleinman, Ernie R. Lewis, Andrew Freedman, Leah Williams, *Aerodyne Research, Inc.*

13CA.3 The Effect of Hydrophobic Glassy Organic Material on the Cloud Condensation Nuclei Activity of Internally Mixed Particles with Different Particle Morphologies. Ankit Tandon, Nicholas Rothfuss, MARKUS PETTERS, *North Carolina State University*

1:45

13CA.4 Quantification of Fossil and Non-Fossil SOA from Combined 14C/AMS-PMF Analysis for the SOAS Field Campaign. SOENKE SZIDAT, Matthias Vonwiller, Gary Salazar, Weiwei Hu, Jose-Luis Jimenez, Eric Edgerton, Stephanie

2:00 L. Shaw, Andre S.H. Prévôt, *University of Bern*

13CA.5 Discrepancies Between the Volatility Distributions of OA in the Ambient Atmosphere and the Laboratory.

2:15 Eleni Karnezi, Evangelos Louvaris, Evangelia Kostenidou, Kalliopi Florou, Kerrigan Cain, SPYROS PANDIS, *Carnegie Mellon University, University of Patras*

13CA.6 Prediction of Atmospheric Organic Aerosol Concentrations From Carbonyl Absorption in the Mid-Infrared.

2:30 Matteo Reggente, Robin Modini, Giulia Ruggeri, SATOSHI TAKAHAMA, Andrew Weakley, Alexandra Boris, Ann Dillner, Provat Saha, Andrew Grieshop, Christoph Hueglin, Christoph Pöhlker, Meinrat O. Andreae, Samara Carbone, Paulo Artaxo, *EPFL*

13CA.7 Optical Properties of Biomass Burning Carbonaceous Aerosol from Controlled Laboratory Burns and Ambient Wildfires. DIAN ROMONOSKY, Samantha Gomez, Jared Lam, Christian Carrico, Allison Aiken, Petr Chylek,

2:45 Thom Rahn, Manvendra Dubey, *Los Alamos National Lab*

13CA.8 Estimates of Radiative Forcing by Carbonaceous Aerosols over Northern India. A.S. Panicker, R. Aditi, G.

3:00 BEIG, K. Ali, *IITM, Pune, India*

13CB COMBUSTION VI

ROOM 263

Joel Corbin and Ranjit Kumar, chairs

13CB.1 A Study on Emission Characteristics of Indian and Chinese Coal. RANJIT KUMAR, He Jing, Pratim Biswas, *DEI,*

1:15 *Daya*

13CB.2 Does Coal Combustion Emit Siloxane? ZHAOJIN AN, Wei Zhou, Haixia Ren, Mo Xue, Jianguo Deng, Jingkun Jiang,

1:30 *Tsinghua University*

13CB.3 Effects of Pressure and Coal Seams on the Characteristics of Coal Fly Ash and Submicrometer Particle Size Distribution. ZEHUA WANG, Zhichao Li, Shuhua Ma, Shili Zheng, Pratim Biswas, *Washington University in St Louis*

1:45

- 13CB.4 Black Carbon Emissions Using Marine Fuels: An Instrument Comparison and Emissions Characterization.** 2:00 STEPHANIE GAGNE, Brigitte Behrends, Ali Momenimovahed, Kevin Thomson, Gert Jakobi, Volker Wichmann, *National Research Council Canada*
- 13CB.5 Infrared-Absorbing Carbonaceous Tar Can Dominate Light Absorption in Heavy-Fuel-Oil PM.** JOEL CORBIN, 2:15 Hendryk Czech, Dario Massabò, Carlo Mennucci, Francesco Buatier de Mongeot, Gert Jakobi, Fengshan Liu, Prem Lobo, Amewu Mensah, Jürgen Orasche, Simone Pieber, Benjamin Stengel, Li-Lin Tay, Marco Zanatta, Ralf Zimmermann, Andre S.H. Prévôt, Imad El Haddad, Martin Gysel, *Paul Scherrer Institute*
- 13CB.6 Jet Engine Exhaust at the Airport – HRTEM and XPS Analyses.** RANDY VANDER WAL, Chung-Hsuan Huang, *Penn State University* 2:30
- 13CB.7 Aircraft Particle Emission from Sustainable Alternative Fuels: Results from Ground Measurements during the NASA/DLR Flight Campaigns ECLIF and ND-MAX.** TOBIAS SCHRIPP, Prem Lobo, Joel Corbin, Gregory Smallwood, Ewan Crosbie, Claire Robinson, Michael Shook, Patrick Oßwald, Markus Köhler, *DLR* 2:45
- 13CB.8 Variation in Aircraft Engine Aerosol Emissions with Altitude During the NASA ACCESS Campaign.** RICHARD 3:00 MOORE, Kenneth Thornhill, Edward Winstead, Bernadett Weinzierl, Daniel Sauer, Hans Schlager, Claire Robinson, Michael Shook, Luke Ziemba, Bruce Anderson, *NASA*

13IM INSTRUMENTATION XI

FERRARA THEATER

Modi Chen and Tyler Johnson, chairs

- 13IM.1 Real-time QCM MOUDI for Ambient Aerosol Monitoring.** MODI CHEN, Francisco Romy, Robert Anderson, H. Dirk 1:15 Felton, *TSI Incorporated*
- 13IM.2 Dry Dispersion of Cohesive Powders for Continuous Aerosol Generation in the Sub-micron Size Range.** 1:30 Lekhnath Pokharel, Prashant Parajuli, Li Li, Ewe Jiun Chng, RANGANATHAN GOPALAKRISHNAN, *The University of Memphis*
- 13IM.3 Significantly Improving the Operation and Information Yield of Sensor-Type Instrument Densmo by Introduction of a Scanning Mode.** PAXTON JUUTI, Antti Rostedt, Jyrki M. Mäkelä, Jorma Keskinen, *Tampere University of Technology, Tampere, Finland* 1:45
- 13IM.4 High Resolution Online Measurement of Aerodynamic Diameters Using the Differential Aerodynamic Particle Sizer (DAPS).** DENNIS KIESLER, Thore Rosenberger, Frank Einar Kruis, *University Duisburg-Essen* 2:00
- 13IM.5 Aerosol Charging with a Piezoelectric Plasma Generator.** Mario Anton Schriefl, ALEXANDER BERGMANN, 2:15 Alexander Melischnig, Markus Puff, *Graz University of Technology*
- 13IM.6 Aerosol Charger Characterization using the Aerodynamic Aerosol Classifier.** TYLER J. JOHNSON, Robert 2:30 Nishida, Martin Irwin, Jonathan Symonds, Jason S. Olfert, Adam M Boies, *University of Cambridge*
- 13IM.7 Differential Diffusion Analyzer.** ANSSI ARFFMAN, Paxton Juuti, Juha Harra, Jorma Keskinen, *Tampere University of Technology, Tampere, Finland* 2:45
- 13IM.8 Performance Comparison of Corona-based Wire-plate and Needle-mesh Aerosol Chargers.** XIAOTONG CHEN, 3:00 Qiaoling Liu, Jingkun Jiang, Da-Ren Chen, *Tsinghua University*

13MG AIR QUALITY IN MEGACITIES: FROM SOURCES TO CONTROL VII: CONTROLS

ROOM 274

Lupita Montoya and Min Hu, chairs

- 13MG.1 Air Quality in the Megacity of Beijing: From Sources to Control.** MIN HU, Dongjie Shang, Yao Xiao, Jing Zheng, 1:15 Song Guo, Zhijun Wu, Keding Lu, Limin Zeng, Sihua Lu, Shaodong Xie, Yuanhang Zhang, *Peking University, Beijing, China*

- 13MG.2 How Much Emission Reduction is Needed to Meet Ambient PM_{2.5} Standards in the Cities of Sichuan Basin?**
1:30 XUE QIAO, Wenye Deng, Hao Guo, Ya Tang, Jianlin Hu, Qi Ying, Hongliang Zhang, *Sichuan University; Louisiana State University*
- 13MG.3 Improved Air Pollution Control Incentive Measures and Regulations in the South Coast Air Basin with an Holistic Energy and Emissions Model.** SCOTT A. EPSTEIN, Marc Carreras-Sospedra, Xinqiu Zhang, Sang-Mi Lee, *South Coast Air Quality Management District*
- 13MG.4 Quantifying Feedbacks between Pollution, Radiation and Boundary Layer Dynamics in Beijing.** JESSICA SLATER, Gordon McFiggans, Hugh Coe, Sami Romakkaniemi, Juha Tonttila, Paul Connolly, David Topping, Pingqing Fu, Yele Sun, Simone Kotthaus, Zhijun Wu, *University of Manchester*
- 13MG.5 Dirty Jets: Observations of Ultrafine Particle Plumes from Landing Aircraft at Boston Logan Airport and a Data Science Approach to Identify the Culprits.** Scott Hersey, Allen Downey, Caz Nichols, EBEN CROSS, *Franklin W. Olin College of Engineering*
- 13MG.6 Effects of Diesel Truck Regulations on Environmental Justice in a Major Freight Corridor in California.**
2:30 REGAN PATTERSON, Robert Harley, *University of California, Berkeley*
- 13MG.7 Air Pollution in Latin American Cities.** Hector Jorquera, LUPITA MONTOYA, Nestor Rojas, *University of Colorado Boulder*
- 13MG.8 Seasonality of Air Pollution in Bogota: From Regional Biomass Burning Transport to Local Sources.**
3:00 RICARDO MORALES BETANCOURT, Luis Carlos Belalcazar, Juan Felipe Mendez, Maria Paula Perez-Peña, Yadert Contreras Barbosa, Juan Pablo Ayala, *Universidad de los Andes*

13SA SOURCE APPORTIONMENT III

ROOM 267

Sunni Ivey and Jay Rutherford, chairs

- 13SA.1 Source Apportionment of Brown Carbon Absorption by Coupling Ultraviolet-Visible Spectroscopy with Aerosol Mass Spectrometry.** VAIOS MOSCHOS, Nivedita Kumar, Kaspar Rudolf Dällenbach, Urs Baltensperger, Andre S.H. Prévôt, Imad El Haddad, *Paul Scherrer Institute / ETH Zurich*
- 13SA.2 Wintertime Study of Ambient Aerosols (PM₁ and PM_{2.5}): Insights to Source Characterization and Atmospheric Transformation.** GYANESH KUMAR SINGH, Prashant Rajput, Pradhi Rajeev, Dharmendra Kumar Singh, Amit Kumar Singh, Debajyoti Paul, Tarun Gupta, *Indian Institute of Technology Kanpur*
- 13SA.3 Carbonaceous Organic Aerosol Composition and Sources in the Baltic.** ATHANASIA VLACHOU, A. Tobler, Houssni Lamkaddam, Carlo Bozzetti, Kaspar Rudolf Dällenbach, Gary Salazar, Soenke Szidat, Urs Baltensperger, Imad El Haddad, Andre S.H. Prévôt, *Paul Scherrer Institute*
- 13SA.4 Sulfuric Acid and Nanocluster Aerosol Measured in an Urban Street Canyon of Helsinki, Finland.** MISKA OLIN, Riina Hietikko, Minna Aurela, Heino Kuuluvainen, Niina Kuittinen, Mia Isotalo, Hilikka Timonen, Jarkko Niemi, Topi Rönkkö, Miikka Dal Maso, *Tampere University of Technology*
- 13SA.5 Identification of the Chemically Distinct Groups of Atlantic Aerosol Particles from 53°N to 53°S.** SHAN HUANG, Laurent Poulain, Wolfram Birmili, Zhijun Wu, Hartmut Herrmann, Alfred Wiedensohler, *Jinan University*
- 13SA.6 Source Apportionment of Organic Particulate Matter at the Phillips 66 Research Center in Bartlesville, Oklahoma.** SHAOKAI GAO, *Phillips 66 Research Center*
- 13SA.7 Multi-Year Source Apportionment of Highly-Time Resolved Carbonaceous Aerosol in the Region of Paris, France.** YUNJIANG ZHANG, Olivier Favez, Francesco Canonaco, Jean-Eudes Petit, Tanguy Amodeo, Francois Truong, Jean Sciare, Andre S.H. Prévôt, Valerie Gros, Alexandre Albinet, *INERIS*
- 13SA.8 Chemical Characterization of Secondary Organic Aerosol (SOA) in a Transitional Season of Biogenic VOC Emission.** YUNLE CHEN, Theodora Nah, David Tanner, Masayuki Takeuchi, Hongyu Guo, Amy P. Sullivan, Lu Xu, Rodney J. Weber, Greg Huey, Nga Lee Ng, *Georgia Institute of Technology*

13TO AEROSOL TOXICOLOGY II

Michal Padro and Chih-Hsiang Chien, chairs

- 13TO.1 Effect of Combustion Particle Size on Pathologically Important Responses in Lung Cells.** KAMALJEET KAUR, 1:15 Raziye Mohammadpour, Isabel C. Jaramillo, Robert Paine, Chris Reilly, Hamid Ghandehari, Kerry Kelly, *University of Utah*
- 13TO.2 Identification of the Factors Responsible for the Health Effects of Atmospheric Fine Particles by Cyclone Collection Method and Exposure Experiments.** TOMOAKI OKUDA, 1:30 Hirohisa Takano, Akiko Honda, Shuichi Hasegawa, Takayuki Kameda, Susumu Tohno, Toshinori Onishi, Michitaka Tanaka, Masahiko Hayashi, Keiichiro Hara, Chiharu Nishita, Daiki Shishido, Yoshihiro Terui, Tsubomi Sato, Kozo Inoue, *Keio University*
- 13TO.3 Personal and Ambient Exposure of Fine Particulate Matter and Its In-Vitro Effect on Lung Cell Line: A Study for Metro City Delhi.** ANANYA DAS, 1:45 Nisar Ali Baig, Arun Kumar, Vivekanandan Perumal, Gazala Habib, *IIT Delhi*
- 13TO.4 Seasonal Variations in Fine Particle Composition from Beijing Prompt Oxidative Stress Response In Vivo and In Vitro.** MICHAL PARDO, 2:00 Fanfan Xu, Xinghua Qiu, Tong Zhu, Yinon Rudich, *Weizmann institute of science, Israel*
- 13TO.5 Airborne Nanoparticle Release and Toxicological Risk from Metal Oxide-coated Textiles: Toward a Multi-scale Safe-by-design Approach.** Paride Mantecca, 2:15 Kaja Kasemets, Archana Deokar, Ilana Perelshtein, Aharon Gedanken, Yeon Kyoung Bahk, Bahareh Kianfar, JING WANG, *ETHZ/Empa*
- 13TO.6 Inhibition of Sub-Chronic Toxicity of Halloysite Nanotubes Aerosol by Enhancing Autophagy in Vivo and in Vitro.** RUI RONG, 2:30 Yongming Zhang, Qixing Zhang, *University of Science and Technology of China*
- 13TO.7 Development of a Computerized Nose-Only Inhalation Chamber for Nanotoxicology Study.** WEI-HSUAN 2:45 CHEN, Ming-Yeng Lin, Chih-Ching Chang, *National Cheng Kung University*
- 13TO.8 Characterization of an High-Efficiency Electrostatic Precipitator Regarding Particle Size, Aerosols Flow and Particle Concentration.** HARALD WIEGAND, 3:00 Jörg Meyer, Gerhard Kasper, *KIT, Germany*

**Friday 3:15 PM - 3:30 PM
Coffee Break****Friday 3:30 PM - 5:00 PM
Session 14: Platform**

14AC AEROSOL CHEMISTRY XIV - BIOMASS BURNING AND SEA SPRAY AEROSOL ORGANICS

ROOM 275

Amanda Frossard and Sophie Tomaz, chairs

- 14AC.1 Characterizing Potential Aqueous Secondary Organic Aerosol Formation from Biomass Burning Emissions during 2016 FIREX Campaign.** SOPHIE TOMAZ, 3:30 Tianqu Cui, Yuzhi Chen, Kenneth Sexton, James Roberts, Carsten Warneke, Robert J. Yokelson, Jason Surratt, Barbara Turpin, *University of North Carolina at Chapel Hill*
- 14AC.2 Modeling Secondary Organic Aerosol (SOA) Formation from Biomass Burning in the Euro-Mediterranean Region during the Summer 2007.** MARWA MAJDI, 3:45 Karine Sartelet, Florian Couvidat, Grazia Maria Lanzafame, Mounir Chrit, Solene Turquety, Youngseob Kim, Bertrand Bessagnet, Alexandre Albinet, *CEREA, Ecole des Ponts ParisTech- EdF R&D, France*
- 14AC.3 Characterizing Chemical Composition and Evolution of Brown Carbon Organic Aerosol from Primary and Photochemically-Aged Biomass Burning Emissions during 2016 FIREX Campaign.** TIANQU CUI, 4:00 Sophie Tomaz, Zhexi Zeng, Yuzhi Chen, Shiva Tarun, Kenneth Sexton, Shantanu Jathar, Jason Surratt, Barbara Turpin, *University of North Carolina at Chapel Hill*

- 14AC.4 Aromatic Volatile and Intermediate Volatility Compound Oxidation with Hydroxyl and Nitrate Radicals: Night-time SOA Formation from Residential Solid Fuel Burning Emissions.** SIMONE PIEBER, Urs Baltensperger, Amelie Bertrand, Joel Corbin, Josef Dommen, Rujin Huang, Felix Klein, Nicolas Marchand, Ugo Molteni, Haiyan Ni, Jay G. Slowik, Brice Temime-Roussel, Christoph Zuth, Andre S.H. Prévôt, *Paul Scherrer Institute*
4:15
- 14AC.5 Hydroxyl and Nitrate Radical Oxidation of Agricultural Reduced Sulfur Compounds in the Presence of Amines.** PAUL VAN ROOY, Kathleen Purvis-Roberts, Philip Silva, David R. Cocker III, *University of California, Riverside*
4:30
- 14AC.6 Characterization of Surface-Active Organics in Seawater and Primary Marine Aerosol Particles.** AMANDA FROSSARD, Tret Burdette, Whitney Hudson, *University of Georgia*
4:45

14AP AEROSOL PHYSICS X

ROOM 265/266

Chris Hogan and Huang Zhang, chairs

- 14AP.1 The Kinetics of Aerosol Gelation.** PAI LIU, William Heinson, Rajan K. Chakrabarty, *Washington University in St. Louis*
3:30
- 14AP.2 Measurement of the Dynamics of Inertial, Rigid Nylon Fibers in Isotropic Air Turbulence.** SOFIA KUPERMAN, Lilach Sabban, René van Hout, *Technion – Israel Institute of Technology*
3:45
- 14AP.3 Experimental Verification of Transition Regime Aggregation Theories.** Xiaoshuang Chen, Souvik Ghosh, David Buckley, R. Mohan Sankaran, CHRISTOPHER HOGAN JR., *University of Minnesota*
4:00
- 14AP.4 Entropy Evolution of a Coagulating Aerosol.** ADAM M BOIES, Nihal El Fahim, *University of Cambridge*
4:15
- 14AP.5 A Closed Form Expression for the Collision Kernel to Describe Attractive Coulombic Interactions and a Framework for Generalization to Arbitrary Attractive Potentials.** Harjindar Singh Chahl, RANGANATHAN GOPALAKRISHNAN, *The University of Memphis*
4:30
- 14AP.6 Investigation of the Contact Force Model of a Micrometer-sized Particle Impacting on a Wetted-surface.** HUANG ZHANG, Qianfeng Liu, Yiyang Zhang, Shuiqing Li, Pratim Biswas, *Washington University in St Louis*
4:45

14BA BIOAEROSOLS VII BIOAEROSOL MEASUREMENT

ROOM 264

Jae Hee Jung and Tiffany Mott, chairs

- 14BA.1 Capture and Inactivation of Bio-aerosols using ZnO Nanofibers.** ACHARIYA SURIYAWONG, Sukanya Munthum, Varong Pavarajarn, *Faculty of Engineering, Chulalongkorn University, Thailand*
3:30
- 14BA.2 Technical Considerations for Device Mediated Airborne Nontuberculous Mycobacteria (NTM) Infections.** SUVAJYOTI GUHA, Jon Weeks, Katharine Segars, Wolloscheck David, Ryan Fung, Delya Delavary, Kelly Bauer, Elaine Mayhall, Nicole Gillette, *U.S. Food and Drug Administration, CDRH*
3:45
- 14BA.3 Antibiotic Resistant Bacteria (ARB) and Antibiotic Resistance Genes (ARGs) in Air Media.** JING LI, Maosheng Yao, *Peking University*
4:00
- 14BA.5 Aerosolization of Palytoxin in Nose-only Aerosol System.** AYSEGUL NALCA, Ondraya Frick, Virginia Livingston, David Dyer, Larry Bowen, Mark Poli, *US Army Medical Research Institute of Infectious Diseases*
4:30
- 14BA.6 Use of GREATpa System for Online Detection of Airborne Endotoxin.** HAOXUAN CHEN, Maosheng Yao, *Peking University*
4:45

14CA CARBONACEOUS AEROSOL VIII: FIELD MEASUREMENTS

ROOM 276

Thorsten Hohaus and Ari Setyan, chairs

- 14CA.1 Optical and Thermal Measurements and Source Apportionment of TC, BC, OC, EC and CM with High Time-resolution and Comparison to Aerosol Mass Spectrometry.** MARTIN RIGLER, Irena Jezek, Drinovec Luka, Janja Tursic, Kranjc Irena, Glojek Kristina, Jean-Philippe Putaud, Valerie Gros, Olivier Favez, David Green, Athanasia Vlachou, Christoph Hueglin, Yandong Tong, Giulia Stefenelli, Jay G. Slowik, Andre S.H. Prévôt, Anthony D.A Hansen, Grisa Mocnik, *Aerosol d.o.o.*
3:30
- 14CA.2 Long-term High Temporal Resolution Measurements of Carbonaceous Aerosol at a Suburban Station, in Athens, Greece – Assessment of Secondary Organic Aerosol Formation.** Evangelia Diapouli, Stergios Vratolis, Athina-Cerise Kalogridis, Prodromos Fetfatzis, Maria Gini, KONSTANTINOS ELEFThERIADIS, *NCSR Demokritos, Athens, Greece*
3:45
- 14CA.3 The MWA Model as a Tool for Carbonaceous Aerosols Apportionment and as an Input for the Improvement of TOT Measurements.** DARIO MASSABÒ, Vera Bernardoni, Rosaria Erika Pileci, Silvia G. Danelli, Lorenzo Caponi, Gianluigi Valli, Roberta Vecchi, Paolo Prati, *University of Genoa and INFN Genoa, Italy*
4:00
- 14CA.4 Long-Term, Continuous Aethelometer Monitoring Data Reveal Unexpected Black Carbon and Brown Carbon Sources.** K. MAX ZHANG, George Allen, Philip K. Hopke, James Schwab, Oliver Rattigan, H. Dirk Felton, *Cornell University*
4:15
- 14CA.5 Characteristics of Carbonaceous Aerosols at Two Major Cities Located in the Indo-Gangetic Basin.** ATAR SINGH PIPAL, Ajay Taneja, Suresh Tiwari, *Dr. B. R. Ambedkar University, Agra, India*
4:30
- 14CA.6 Characteristics and Origins of Carbonaceous Aerosols at an Urban Site of Qatar Peninsula.** WASIM JAVED, Bing Guo, Minas Iakovides, Qi Ying, Euripides G. Stephanou, *Texas A&M University at Qatar*
4:45

14DU COMBUSTION-GENERATED AEROSOLS: THE DESIRABLE AND UNDESIRABLE IV - BIOMASS AND COAL COMBUSTION
ROOM 263

Changfu You and Zhiwei Yang, chairs

- 14DU.1 Understanding Early Stage Processes during Pulverized Coal Combustion in a Two-stage Flat Flame Burner.** DISHANT KHATRI, Adewale Adeosun, Akshay Gopan, Zhiwei Wang, Richard Axelbaum, *Washington University in St. Louis*
3:30
- 14DU.2 Excessive Air Pollution from Carbon-Neutral Fuels.** Chunshui Lin, Colin O'Dowd, Darius Ceburnis, JURGITA OVADNEVAITE, *National University of Ireland Galway, Ireland*
3:45
- 14DU.3 Emission Behaviors of PM10 during Combustion of Pre-Treated Straw and Co-Combustion with Pulverized Coal.** WENYU WANG, Chang Wen, Ying Zhou, Changkang Li, Minghou Xu, *Huazhong University of Science and Technology, China*
4:00
- 14DU.4 Comparison of Charge Fraction and Electrostatic Precipitation of Fly Ash from Combustion of India, US and China Coal Seams.** ZHICHAO LI, Pratim Biswas, *Washington University in St Louis*
4:15
- 14DU.5 The Effects of Pressure on Alkali and Alkali Earth Metals in Particle Matter Generated from a Lab-Scale POFBC.** JIA WANG, Lunbo Duan, Yuanqiang Duan, Xuebin Wang, Yong Yan, *Southeast University, China*
4:30
- 14DU.6 Numerical Study on Evaporation of Inherent Minerals during Combustion of a Char Particle.** SIBO QU, Haiming Wang, Changfu You, *Tsinghua University, China*
4:45

14HA HEALTH RELATED AEROSOLS III
ROOM 260

Krystal Godri Pollitt and Ramesh Raliya, chairs

- 14HA.1 Diesel Engine Exhaust Particles: Science, Regulations and Technological Developments Leading to Cleaner Emissions.** ROGER MCCLELLAN, *Private Consultant*
3:30

- 14HA.2 Cyclic Siloxane Oxidation over North America: Quantifying the Strength, Properties, and Lung Cytotoxicity of Widespread Silicon from Personal Care Products.** Nathan Janecek, Benjamin King, Rachel Marek, Andrea Adamcakova-Dodd, Traci Lersch, Kristin Bunker, Gary Casuccio, Kaj Hansen, William Brune, Peter Thorne, Keri Hornbuckle, Jennifer Fiegel, CHARLES STANIER, *University of Iowa*
3:45
- 14HA.3 Daytime and Nighttime Particulate Matter Toxicity in an Urban City.** TING ZHANG, Maosheng Yao, *Peking University*
4:00
- 14HA.4 Spatial and Temporal Variability in Chemical Composition of Fine Particulate Matter and Human Health Impact Assessment for the Megacity of Karachi, Pakistan.** Lurie Kelly, HAIDER KHWAJA, Shedrack Nayebare, Zafar Fatmi, David Carpenter, Daniel Malashock, Azhar Siddique, Kamran Khan, Mirza M. Hussain, Fida Khatib, *Wadsworth center, University at Albany*
4:15
- 14HA.5 Relationship between Aerosol Composition and Sources and Their Oxidative Potential in Central Europe.** KASPAR RUDOLF DÄLLENBACH, Gaëlle Uzu, Ivan Kourtchev, Laure-Estelle Cassagnes, Alexander Lucas Vogel, Giulia Stefanelli, Athanasia Vlachou, Jay G. Slowik, Jean-Luc Jaffrezo, Markus Kalberer, Josef Dommen, Urs Baltensperger, Imad El Haddad, Andre S.H. Prévôt, *Paul Scherrer Institute / University of Helsinki*
4:30
- 14HA.6 In Vitro Toxicity of PM Collected at Different Sites in Switzerland: Correlation between Chemical Composition and Toxicity.** LAURE-ESTELLE CASSAGNES, Zaira Leni, Kaspar Rudolf Dällenbach, Gaëlle Uzu, Andre S.H. Prévôt, Urs Baltensperger, Jean-Luc Jaffrezo, Imad El Haddad, Marianne Geiser, Josef Dommen, *Paul Scherrer Institute*
4:45

14LC LOW-COST AND PORTABLE SENSORS VII

FERRARA THEATER

R. Subramanian and John Volckens, chairs

- 14LC.1 Extracting Air Quality from Photographs.** Batsal Pudasaini, Joseph Skufca, Sumona Mondal, Natasha Banerjee, Jan Scrimgeour, Mark Kanaparathi, SURESH DHANIYALA, *Clarkson University*
3:30
- 14LC.2 Airbox: A Participatory Ecosystem for pm2.5 Monitoring.** LING-JYH CHEN, Shih-Chun Lung, Sachit Mahajan, Hsin-Hung Hsieh, Jin-Wei Liu, *Academia Sinica*
3:45
- 14LC.3 Evaluation of a Low-Cost Personal Sampler for Assessing Respirable Dust Exposure in Taconite Mining.** REBECCA FOOS, Nima Afshar-Mohajer, Karl Braun, Gurumurthy Ramachandran, John Volckens, *Colorado State University*
4:00
- 14LC.4 A Novel Method Based on Light Scattering for Distinguishing Water and Fly-ash Aerosols in Industrial Stack Emission.** Satyanarayanan Seshadri, VIPUL DOGRA, *Indian Institute of Technology, Madras*
4:15
- 14LC.5 Intelligent PM2.5 Sensor Network Experience in Taiwan's Campus and Industrial Park.** HSUNLING BAI, Chungsyng Lu, Shie-Yuan Wang, Wen-Chih Peng, Chun-Chia Hsu, Sihyu Liou, Chienchiao Hung, Yen-Chi Huang, Peiyu Lu, Wei So Sun, *National Chiao Tung University*
4:30
- 14LC.6 Using Low-Cost Sensors (RAMPs) to Evaluate the Spatial and Temporal Variation of Fine Particulate Matter Concentration within Environmental Justice Communities Surrounding Large Industrial Facilities.** REBECCA TANZER, Carl Malings, Allen Robinson, R. Subramanian, Albert Presto, *Carnegie Mellon University*
4:45

14RA REMOTE/REGIONAL ATMOSPHERIC AEROSOL VIII: NEW PARTICLE FORMATION

ROOM 274

Sarah Styler and Coty Jen, chairs

- 14RA.1 Temporal Distribution of New Particle Formation Events in Brisbane, Australia.** BUDDHI PUSHPAWELA, Rohan Jayaratne, Lidia Morawska, *Queensland University of Technology, Brisbane, Australia*
3:30
- 14RA.2 New Particle Formation and Sub-10nm Size Distribution Measurements in Paphos, Cyprus, during the A-LIFE Field Experiment.** SOPHIA BRILKE, Nikolaus Fölker, Konrad Kandler, Nan Ma, Thomas Müller, Anne Philipp, Thomas Ryerson, Petra Seibert, Bernadett Weinzierl, Paul M. Winkler, *University of Vienna*
3:45

14RA.3 Identification of New Particle Formation Events with Deep Learning. Jorma Joutsensaari, MATTHEW OZON, 4:00 Tuomo Nieminen, Santtu Mikkonen, Timo Lähivaara, Stefano Decesari, M. Cristina Facchini, Ari Laaksonen, Kari Lehtinen, *University of Eastern Finland*

14RA.4 Long-term Trends in Particle Number Size-distributions and New Particle Formation Observed at San Pietro Capofiume, Italy. TUOMO NIEMINEN, Jorma Joutsensaari, Ville Leinonen, Santtu Mikkonen, Taina Yli-Juuti, 4:15 Pasi Miettinen, Annele Virtanen, Kari Lehtinen, Ari Laaksonen, Stefano Decesari, Leone Tarozzi, M. Cristina Facchini, *University of Eastern Finland*

14RA.5 Measuring Light Absorption by Organic Aerosols: Correction Factors for Solvent Extraction Based Photometry Techniques. NISHIT SHETTY, Apoorva Pandey, Wei Min Hao, Rajan K. Chakrabarty, *Washington University in St. Louis* 4:30

14RA.6 Aerial Observation of Atmospheric Nanoparticles in Fukue Island, Japan. KWANGYUL LEE, Indra Chandra, 4:45 Yayoi Inomata, Yoshio Otani, Masahiko Hayashi, Akinori Takami, Takafumi Seto, *Kanazawa University*

14SA SOURCE APPORTIONMENT IV

ROOM 267

Shannon Capps and Yunle Chen, chairs

14SA.1 Going Deeper on the Characterization of the Biogenic SOA by Combining On-line and Off-line Approaches during F-BEACH 2014. LAURENT POULAIN, Anke Mutzel, Monique Teich, Nadja Triesch, Andreas Held, Stefanie 3:30 Richters, Dominik van Pinxteren, Yoshiteru Iinuma, Martin Brüggemann, Alfred Wiedensohler, Hartmut Herrmann, *Leibniz Institute for Tropospheric Research*

14SA.2 Chemical Characterization and Source Contribution to PM2.5 Organic Fraction in Neighboring Towns of Bogota, Colombia. Felipe Villamil, Irene Rosas, James Schauer, NESTOR ROJAS, *Universidad Nacional de Colombia* 3:45

14SA.3 Comprehensive Analysis of PM2.5 in Toronto: Composition, Sources, and Health Effects. CHEOL H. JEONG, 4:00 Alison Traub, Angela Huang, Jon M. Wang, Nathan Hilker, Anthony Munoz, Ewa Dabek-Zlotorzynska, Dennis Herod, Scott Weichenthal, Greg J. Evans, *SOCAAR, University of Toronto*

14SA.4 Source Apportionment, Wind Transport and Atmospheric Transformation of Carbonaceous Aerosol in the San Joaquin Valley, California. BENJAMIN DE FOY, Michael Olson, Alexandra Lai, Min-Suk Bae, Qingyang Liu, 4:15 Matthew Skiles, James Schauer, *St. Louis University*

14SA.5 Ambient PM2.5 Source Apportionment: a Case Study of Tehran. SINA TAGHVAEE, Mohammad Sowlat, 4:30 Amirhosein Mousavi, Mohammad Sadegh Hassanvand, Masud Yunesian, Kazem Naddafi, Constantinos Sioutas, *University of Southern California*

14SA.6 Comparison of PM2.5 Chemical Composition and Sources at a Rural Background Site in Central Europe between the Years 1993/1994/1995 and 2009/2010: Effect of Legislative Regulations and Economic Growth on the Air Quality. PETRA POKORNÁ, Jaroslav Schwarz, Radek Krejci, Erik Swietlicki, Vladimír Havránek, Vladimír 4:45 Ždímal, *Institute of Chemical Process Fundamentals CAS*