

AAAR 35th Annual Conference
October 17 - October 21, 2016
Oregon Convention Center
Portland, Oregon, USA

Tuesday

Tuesday 8:00 AM - 9:15 AM
Plenary I

8:00 **Welcoming Remarks** Mark Swihart, *University at Buffalo (SUNY)*

8:05 **Friedlander Lecture: Nanocarbon in Flames: From Unwanted Particulate Emissions to Useful Materials** Hai Wang, *Stanford University*

Moderator Mark Swihart, *University at Buffalo (SUNY)*

9:00 **Friedlander Award Presentation** Charles Stanier, *University of Iowa*

Announcement of New AAAR Fellows and IARA Fellow Peter McMurry, *University of Minnesota*

Tuesday 9:00 AM - 4:00 PM
Exhibits Open

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

Tuesday 9:45 AM - 11:30 AM
Session 1: Platform

Harald Stark and Theodora Nah, chairs

- 1AC.1 Linking the Formation of Dimeric Compounds and Organic Peroxides in the α -pinene Ozonolysis System.** 9:45 RAN ZHAO, Yuanlong Huang, Christopher Kenseth, Kelvin Bates, Rebecca Schwantes, Paul Wennberg, John Seinfeld, *California Institute of Technology*
- 1AC.2 Influence of Seed Aerosol Surface Area and Oxidation Rate on Vapor-Wall Deposition and SOA Mass Yields: A case study with α -pinene Ozonolysis.** 10:00 THEODORA NAH, Renee McVay, Xuan Zhang, Christopher Boyd, John Seinfeld, Nga Lee Ng, *Georgia Institute of Technology*
- 1AC.3 Chemical Characterization of Secondary Organic Aerosol from Oxidation of Isoprene Hydroxyhydroperoxides.** 10:15 Matthieu Riva, Sri Hapsari Budisulistiorini, Yuzhi Chen, Zhenfa Zhang, Avram Gold, Joel A. Thornton, Manjula Canagaratna, JASON SURRETT, *University of North Carolina at Chapel Hill*
- 1AC.4 Thermal Decomposition of Organic Species from Biogenic Secondary Organic Aerosol in Thermal Desorption Instruments.** 10:30 HARALD STARK, Laxmi Narasimha Yatavelli, Samantha Thompson, Jordan Krechmer, Joel Kimmel, Brett Palm, Weiwei Hu, Patrick Hayes, Douglas Day, Pedro Campuzano-Jost, Manjula Canagaratna, John Jayne, Douglas Worsnop, Jose-Luis Jimenez, *CIRES, University of Colorado*
- 1AC.5 Highly Oxidized Multifunctional Compounds in Oxidation of Aromatics; a Step Forward in Understanding Urban SOA.** 10:45 OLGA GARMASH, Matti Rissanen, Oskari Kausiala, Iida Pullinen, Sebastian Schmitt, Thomas F Mentel, Astrid Kiendler-Scharr, Jürgen Wildt, Einhard Kleist, Mikko Sipilä, Markku Kulmala, Mikael Ehn, *University of Helsinki*
- 1AC.6 Enhancements in Secondary Organic Aerosol Formation in the Presence of Ambient or Directly Emitted Organic Particles.** 11:00 JIANHUAI YE, Paul Van Rooy, Cullen Adam H., David R. Cocker III, Arthur Chan, *University of Toronto*
- 1AC.7 Reaction Pathways, Kinetics, and Equilibria of Multifunctional Hydroperoxides in Secondary Organic Aerosol.** 11:15 DEMETRIOS PAGONIS, Paul Ziemann, *University of Colorado-Boulder*

1AP AEROSOL PHYSICS I
A 106

Steve Holler and Carlos Larriba, chairs

- 1AP.1 Properties of Caesium Hydroxide Clusters from Molecular Dynamics Simulations.**
9:45 JULIAN THOMPSON, Conor Galvin, Jonathan Barrett, Michael Rushton, Ian Ford,
University College London
- 1AP.2 A New Frontier of Ion Mobility Calculations; Coupling Molecular Dynamics to Kinetic Theory of Gases.** CARLOS LARRIBA-ANDALUZ, *IUPUI*
10:00
- 1AP.3 Reduced Representation of the Aerosol Mixing State through the Quadrature Method of Moments.** LAURA FIERCE, Robert McGraw, *Brookhaven National Laboratory*
10:15
- 1AP.4 Discontinuities in Hygroscopic Growth Below and Above Water Saturation for Laboratory Surrogates of Oligomers in Organic Atmospheric Aerosols.** NATASHA HODAS, Andreas Zuend, Katherine Schilling, Thomas Berkemeier, Manabu Shiraiwa, Richard Flagan, John Seinfeld, *California Institute of Technology*
10:30
- 1AP.5 Physical and Chemical Properties of 3-methyl-1,2,3-butanetricarboxylic Acid (MBTCA) Aerosol.** Evangelia Kostenidou, Eleni Karnezi, Rafal Szmigielski, SPYROS PANDIS, *Carnegie Mellon University, University of Patras*
10:45
- 1AP.6 Investigating the Phase Transitions of Lower Alkanes - Pentane, Hexane, and Heptane - in a Supersonic Laval Nozzle.** KEHINDE OGUNRONBI, Barbara Wyslouzil, *The Ohio State University*
11:00
- 1AP.7 Effect of Wall Shear Stress on Aerodynamic Particle Resuspension.** Patrick Fillingham, KALYAN KOTTAPALLI, Xiaolin Zhan, Igor Novosselov, Harikrishna Murali, *University of Washington*
11:15

1HR HEALTH RELATED AEROSOLS I
B 110-112

Patrick O'Shaughnessy and Haider Khwaja, chairs

- 1HR.1 Investigating the Links between Chemical Composition of Atmospheric Particulates and Adverse Health Effects.** DOMINIQUE YOUNG, Sonya Collier, Xiaolin Sun, Haiying Wei, Kent Pinkerton, Keith Bein, Qi Zhang, *University of California, Davis*
9:45
- 1HR.2 Oxidative Potential and Chemical Characteristics of Water-soluble PM_{2.5} Collected from Various Sites in South Korea.** LUCILLE JOANNA BORLAZA, Minhan Park, KwangYul Lee, HungSoo Joo, Tsatsral Batmunkh, Kihong Park, *Gwangju Institute of Science and Technology*
10:00

- 1HR.3 Relationship between Organic Aerosol Composition, In Vitro Oxidative Potential and In Vivo Airway Hypersensitivity.** Jianhuai Ye, Sepehr Salehi, Michelle North, Anjelica Portelli, Chung-Wai Chow, ARTHUR CHAN, *University of Toronto*
10:15
- 1HR.4 Ambient Size Distributions of Particulate Matter Oxidative Potential and Estimated Deposition in the Human Respiratory System.** TING FANG, Linghan Zeng, Vishal Verma, Rodney J. Weber, *Georgia Institute of Technology*
10:30
- 1HR.5 Generation of Reactive Oxygen Species Catalyzed by Mixtures of Atmospheric Humic Substances and Copper/Manganese: Evidence for the Importance of Metal-organic Interactions.** MANFEI LIN, Jian Zhen Yu, *Hong Kong University of Science & Technology*
10:45
- 1HR.6 Dose-dependent Intracellular Reactive Oxygen and Nitrogen Species Production from Particulate Matter Exposure: Comparison to Oxidative Potential and Chemical Composition.** WING-YIN TUET, Shierly Fok, Vishal Verma, Marlen Tagle Rodriguez, Anna Grosberg, Julie Champion, Nga Lee Ng, *Georgia Institute of Technology*
11:00
- 1HR.7 Methods for Quantifying the Total Oxidative Potential of Ambient Particles.** DONG GAO, Ting Fang, Vishal Verma, Rodney J. Weber, *Georgia Institute of Technology*
11:15

1IM INSTRUMENTATION AND METHODS I
B 113-114

Eben Cross and Lina Zheng, chairs

- 1IM.1 ARISense - Enabling Air Pollution Measurements with Low(er)-cost AQ Sensor Technologies.** EBEN CROSS, Gregory Magoon, Timothy Onasch, David Hagan, Jesse Kroll, Leah Williams, Gary Adamkiewicz, Ann Backus, Douglas Worsnop, John Jayne, *Aerodyne Research, Inc.*
9:45
- 1IM.2 Aerosol Elemental Analysis Using Atmospheric Glow Discharge Spectroscopy.** LINA ZHENG, Pramod Kulkarni, *Centers for Disease Control and Prevention, NIOSH*
10:00
- 1IM.3 Assessing the Accuracy and Reliability of Low-cost Particle Counters for Determining PM_{2.5} Loadings.** DAVID HAGAN, Jesse Kroll, *MIT*
10:15
- 1IM.4 Calibration of Portable and Personal PM_{2.5} Sensors.** DI LIU, Da-Ren Chen, *Virginia Commonwealth University*
10:30
- 1IM.5 Distributed Low-cost Wireless Particle Sensors: Optical Characterization.** JIAYU LI, Pratim Biswas, *Washington University in St Louis*
10:45

1IM.6 A Compact Electrical Particle Sizer for Wireless Sensor Network to Monitor Fine and Ultrafine Particles. Qiaoling Liu, DA-REN CHEN, *Virginia Commonwealth University*
11:00

1IM.7 Opto-Dielectrometric Sensors for Automated Control of Total Incombustible Content in Underground Coal Mines. OMID MAHDAVIPOUR, John Sabino, Timothy Mueller-Sim, Michael R. Shahan, Clara E. Seaman, Paul A. Solomon, Paul Wright, Richard White, Lara Gundel, Larry D. Patts, Igor Paprotny, *University of Illinois at Chicago*
11:15

1NM NANOPARTICLES AND MATERIALS SYNTHESIS I
B 115-116

Wei-Ning Wang and Jorma Jokiniemi, chairs

1NM.1 Aerosol Synthesis of Palladium Based Nanopowders and Nanoinks in a Flame-Driven High Temperature Reducing Jet Reactor. SHAILESH KONDA, Mohammad Moein Mohammadi, Raymond Buchner, Mark Swihart, *University at Buffalo - SUNY*
9:45

1NM.2 Atomically-dispersed Pd on Nanostructured Titania for NO Removal by Solar Light.
10:00 Kakeru Fujiwara, SOTIRIS E. PRATSINIS, *ETH Zurich*

1NM.3 Rapid Synthesis of Highly Porous Polymer Nanocrystals by Aerosol Routes. Zhuoran Gan, Xiang He, WEI-NING WANG, *Virginia Commonwealth University*
10:15

1NM.4 A Study of Hydrogen Assisted Spark Discharge for Generating Hydrogen Passivated Silicon Nanoparticles with High Crystallinity. DONGJOON LEE, Kiwoong Lee, Dae Seong Kim, Jong-Kwon Lee, Sei Jin Park, Mansoo Choi, *Global Frontier Center for Multiscale Energy Systems*
10:30

1NM.5 Synthesis and Photoelectrochemical Property of Monodisperse Hollow Metal Oxide Microspheres. HANEOL LEE, Youngku Sohn, WeonGyu Shin, *Chungnam National University*
10:45

1NM.6 Crumpling of Graphene-oxide by Evaporative Confinement in Nano-droplets using Electropray. SHALINEE KAVADIYA, Ramesh Raliya, Michael Schrock, Pratim Biswas, *Washington University in St. Louis*
11:00

1NM.7 Electrochemical Performance of Multi-Layer Graphene-Carbon Nanoflower Composite Synthesized by Aerosol Based Methods. Mirella Miettinen, Anna Lähde, Tiina Torvela, Tommi Karhunen, Juho Välikangas, Ulla Lassi, JORMA JOKINIEMI, *University of Eastern Finland, Kuopio, Finland*
11:15

Alex Lee and Scott Epstein, chairs

- 1UA.1 Seasonal and Regional Differences in the Chemical Composition of Ambient Aerosol from Fresno and Fontana, California.** CHIA-LI CHEN, Lynn Russell, Jun Liu, Derek Price, Raghu Betha, Kevin Sanchez, Sijie Chen, Jackie First, Alex K. Y. Lee, Xiaolu Zhang, Christopher Cappa, *Scripps Institution of Oceanography*
9:45
- 1UA.2 The Air Pollution at Rochester: Long-Term Trends.** FERESHTEH EMAMI, Mauro Masiol, Afshin Ommi, Philip K. Hopke, *Clarkson University*
10:00
- 1UA.3 Spatial Variation of Organic Aerosol and Source Identification of Temperature-resolved Carbon Fractions.** HUGH LI, Timothy Dallmann, Xiang Li, Peishi Gu, Albert A. Presto, *Carnegie Mellon University*
10:15
- 1UA.4 Online Measurement of Atmospheric Organic Aerosol Using a Novel Extractive Electrospray Ionization Time-of-Flight Mass Spectrometer (EESI-TOF).** Felipe Lopez-Hilfiker, Veronika Pospisilova, Giulia Stefenelli, Yandong Tong, Athanasia Vlachou, Urs Baltensperger, Andre Prévôt, JAY SLOWIK, *Paul Scherrer Institute*
10:30
- 1UA.5 Characterising an Intense PM Pollution Episode in March 2015 in France from Multi-site Approach and Near Real Time Data: Climatology, Variabilities, Geographical Origins and Model Evaluation.** JEAN-EUDES PETIT, Olivier Favez, Tanguy Amodeo, Frederik Meleux, Bertrand Bessagnet, Laurent Menut, Didier Grenier, Yann Pellan, Alexandre Ockler, Benoit Rocq, Valérie Gros, Jean Sciare, Eva Léoz-Garziandia, *Air Lorraine*
10:45
- 1UA.6 Investigation of Primary and Secondary Processes in the Formation of Oxy-PAHs and Nitro- PAHs in Paris (France) by Conjoining On-line and Off-line Measurements.** DEEPCHANDRA SRIVASTAVA, Olivier Favez, Nicolas Bonnaire, Emilie Perraudin, Valérie Gros, Eric Villenave, Alexandre Albinet, *INERIS/EPOC, Université Bordeaux, France*
11:00
- 1UA.7 Modeling of Gas Adsorption by Aerosol Plumes Emitted from Industrial Sources.** BORIS KRASOVITOV, Tov Elperin, Andrew Fominykh, Itzhak Katra, *Ben-Gurion University of the Negev, Israel*
11:15

Tuesday 1:00 PM - 3:00 PM
Session 2: Poster

Jason Surratt and Sergey Nizkorodov, chairs

- 2AC.1 Temperature-induced Variants in Secondary Organic Aerosol Formation from the Photo-oxidation of Fuel.** TERRY LATHEM, *Phillips 66*
- 2AC.2 Modeling the Impact of Biomass-Burning Aerosol on Urban Areas.** CHANTELE LONSDALE, Chris Brodowski, Matthew Alvarado, John Henderson, Jeffrey R. Pierce, John Lin, *AER*
- 2AC.3 Refractive Index of Secondary Organic Aerosols from Oxidation of alpha-pinene and 1-methyl-nathalene.** JUSTIN DINGLE, Stephen Zimmerman, Justin Min, Roya Bahreini, *University of California Riverside*
- 2AC.5 Dinitrogen Pentoxide Reactive Uptake and Chlorine Activation on Authentic Biomass Burning Aerosol: Implications for Reactive Nitrogen and Halogen Budgets.** LEXIE GOLDBERGER, Adam Ahern, Lydia Jahl, Ryan Sullivan, Joel A. Thornton, *University of Washington, Seattle, WA*
- 2AC.6 The Role of Morphology on the Rate and Products of Heterogeneous Oxidation of Organic Aerosol.** REBECCA SUGRUE, Christopher Lim, Martin Wolf, Daniel Cziczo, Jesse Kroll, *MIT*
- 2AC.7 How Do Atmospheric Mineral Dust Particles Promote the Formation of Sulfate?** JIYEON PARK, Myoseon Jang, *University of Florida*
- 2AC.8 Estimation of Polydispersed Aerosol Optical Properties during Smog and Asian Dust Events in Korea.** CHANG HOON JUNG, JiYi Lee, Yong Pyo Kim, *Kyungin Women's University*
- 2AC.9 Photooxidation Reactions of Polycyclic Aromatic Hydrocarbons in the Presence of Environmentally Relevant Metals.** JOHN HAYNES, Keith Miller, Brian Majestic, *University of Denver*
- 2AC.10 Lifetime Evaluation of Biomass Burning Markers in Low Temperature Conditions.** VIKRAM PRATAP, Shunsuke Nakao, *Clarkson University*
- 2AC.11 Gas and Particle Phase Products of the Reactions of 1-Alkenes with OH Radicals in the Presence of NO.** JULIA BAKKER-ARKEMA, Paul Ziemann, *University of Colorado*

- 2AC.12 Solidification of Organic Aerosol Particles Caused by Glyoxal +OH Radical Reactions.** ALYSSA ANDRETTA, David De Haan, *University of San Diego*
- 2AC.13 Formation of Secondary Brown Carbon in the Multiphase Simulation Chamber (CESAM) through Aldehyde and Amine-Initiated Maillard Reactions.** HANNAH G. WELSH, Raunak Pednekar, Elyse Pennington, Jason Casar, Lelia Hawkins, David De Haan, Aki Pajunoja, Jean-François Doussin, Mathieu Cazaunau, Edouard Pangui, Aline Gratien, Paola Formenti, Lorenzo Caponi, *Harvey Mudd College*
- 2AC.14 Characterization of Aerodyne Potential Aerosol Mass Oxidative Flow Reactor.** CHIRANJIVI BHATTARAI, Vera Samburova, Hans Moosmuller, Andrey Khlystov, *Desert Research Institute*
- 2AC.15 Addition of an SVOC/IVOC Trap for the Thermal Desorption Aerosol Gas Chromatograph (TAG) and Its Application in Studying the Phase-Partitioning of Key Molecular Tracers in Lab-Generated Biomass Burning Organic Aerosol.** CLAIRE FORTENBERRY, Michael Walker, Yaping Zhang, Dhruv Mitroo, Christopher Oxford, William Brune, Brent Williams, *Washington University in St Louis*
- 2AC.16 Effect of Functional Groups on Composition and Yields of SOA Formed from Reactions of VOCs with OH Radicals in the Presence of NO_x.** LUCAS ALGRIM, Paul Ziemann, *University of Colorado*
- 2AC.17 Characterization of the Aqueous Oxidation of Glyoxal and Methylglyoxal in the Presence of Salts Using a Quartz Crystal Microbalance.** Hannah Holst, Alvin Burrows, Maeve Ryan, CHRISTEN STROLLO, *CSBSJU*
- 2AC.18 Modeling the Secondary Organic Aerosol Formation of Mixed Biogenic Systems from Both Partitioning and Aerosol Phase Reactions.** ROSS BEARDSLEY, Myoseon Jang, *University of Florida*
- 2AC.19 Investigating Secondary Aerosol Formation from Agricultural Amines and Reduced Sulfur Compounds.** PAUL VAN ROOY, Kathleen Purvis-Roberts, Philip Silva, David R. Cocker III, *University of California, Riverside*
- 2AC.20 Exploring Potential Brown Carbon Chromophores with Mass Spectrometry and NMR.** PAIGE AIONA, Sergey Nizkorodov, Alexander Laskin, Julia Laskin, Peng Lin, *University of California, Irvine*
- 2AC.21 Epoxide Formation from Heterogeneous Oxidation of Polycyclic Aromatic Hydrocarbon with Gas-phase Ozone.** SHOUMING ZHOU, Leo Yeung, Scott Mabury, Jonathan Abbatt, *University of Toronto, Toronto, Canada*

- 2AC.22 Formation and Evolution of Molecular Products in alpha-Pinene Secondary Organic Aerosol.** XUAN ZHANG, Renee McVay, Dandan Huang, Nathan Dalleska, Bernard Aumont, Richard Flagan, John Seinfeld, *California Institute of Technology*
- 2AC.23 Direct Measurements to Compare the Surface and Bulk Properties of Mixed Component Aerosol Droplets: Simultaneous Surface Tension and Viscosity Measurements.** BRYAN R. BZDEK, Allen E. Haddrell, Young-Chul Song, David Topping, Jonathan P. Reid, *University of Bristol*
- 2AC.24 Aqueous-phase Photooxidation of Dimeric Compounds Arising from alpha-pinene.** RAN ZHAO, Dana Aljawhary, Alex K. Y. Lee, Jonathan Abbatt, *University of Toronto*
- 2AC.25 Comprehensive Modeling Study of Chemistry of Oxidation Flow Reactors.** ZHE PENG, Julia Lee-Taylor, Douglas Day, Amber Ortega, Brett Palm, Weiwei Hu, Harald Stark, Rui Li, Kostas Tsigaridis, Richard Valorso, Bernard Aumont, Sasha Madronich, William Brune, Jose-Luis Jimenez, *University of Colorado-Boulder*
- 2AC.26 The Effect of Different Atmospherically Relevant Salts and Salt Mixtures on Aqueous Phase Partitioning of Organic Vapors.** CHEN WANG, Ying Duan Lei, Frank Wania, *University of Toronto*
- 2AC.27 A Study of the Chemical Composition and Hygroscopicity of Chemically Aged Cooking Organic Aerosol.** Antonios Tasoglou, Yanwei Li, Evangelia Kostenidou, Peishi Gu, Leif Jahn, Kerrigan Cain, SPYROS PANDIS, *Carnegie Mellon University*
- 2AC.28 Thermodynamic Properties of Weakly Dissociating Organic Acids Found in Atmospheric Aerosols.** LUCY NANDY, Cari Dutcher, *University of Minnesota, Twin Cities*
- 2AC.29 Spatial and Seasonal Variations of Isoprene Secondary Organic Aerosol in China.** XIANG DING, Quan-Fu He, Ru-Qin Shen, Qing-Qing Yu, Yu-Qing Zhang, Xin-Ming Wang, *Guangzhou Institute of Geochemistry, CAS*
- 2AC.30 Experimental Characterization of Secondary Aerosol from D5 Cyclic Siloxane Oxidation.** NATHAN JANECEK, Nathan Bryngelson, Traci Lersch, Kristin Bunker, Gary Casuccio, William Brune, Charles Stanier, *University of Iowa*
- 2AC.31 Re-evaluating the Contribution of Sulfuric Acid in Atmospheric Nanoparticle Growth.** VILLE VAKKARI, Petri Tiitta, Kerneels Jaars, Philip Croteau, Johan Paul Beukes, Miroslav Josipovic, Veli-Matti Kerminen, Markku Kulmala, Andrew D. Venter, Pieter G. van Zyl, Douglas Worsnop, Lauri Laakso, *Finnish Meteorological Institute, Helsinki, Finland*

- 2AC.32 Limonene Ozonolysis: SOA Formation, Nucleation Threshold and Impact of Anthropogenic VOCs.** WAED AHMAD, Cecile Coeur, Arnaud Cuisset, Thomas Fagniez, Patrice Coddeville, Alexandre Tomas, *SAGE-DOUAI , LPCA-ULCO, UNIV LILLE, France*
- 2AC.33 Changes in CCN Solubility from Cloud Processing.** STEPHEN NOBLE, James Hudson, *Desert Research Institute*
- 2AC.34 Fine Particle pH and the Partitioning of Nitric Acid during Winter in the Northeastern United States.** HONGYU GUO, Amy P. Sullivan, Pedro Campuzano-Jost, Jason Schroder, Felipe Lopez-Hilfiker, Jack Dibb, Jose-Luis Jimenez, Joel A. Thornton, Steven S. Brown, Athanasios Nenes, Rodney J. Weber, *Georgia Institute of Technology*
- 2AC.35 Ageing at the Molecular Level of the Chemical Fingerprint of Emissions Generated by Wood Burning: A TAG –AMS Smog Chamber Study.** AMELIE BERTRAND, Giulia Stefenelli, Emily Bruns, Coty Jen, Simone Pieber, Brice Temime-Roussel, Jay Slowik, Andre Prévôt, Allen H. Goldstein, Imad El Haddad, Henri Wortham, Nicolas Marchand, *Aix-Marseille Université, CNRS, LCE FRE 3416*
- 2AC.36 Constraining Organic Aerosol Volatility from Evaporation Rate Measurements from Thermodenuders.** JAMES HITE, Rebecca Schwantes, Kelvin Bates, Tran Nguyen, Richard Flagan, John Seinfeld, Athanasios Nenes, *Georgia Institute of Technology*
- 2AC.37 Secondary Organic Aerosol Production from Pinanediol, a Semi-Volatile Precursor.** PENGLIN YE, Yunliang Zhao, Wayne Chuang, Neil Donahue, *Carnegie Mellon University*
- 2AC.38 Modeling Cr Speciation in Atmospheric Droplets.** MEHDI AMOUEI TORKMAHALLEH, Dinara Konakbayeva, Altyngul Zinetullina, Marios Fyrillas, *Nazarbayev University*
- 2AC.39 Incremental Secondary Organic Aerosol Formation in Controlled Reactivity Urban Atmospheres with and without Biogenic Influence.** MARY KACARAB, Lijie Li, William P. L. Carter, David R. Cocker III, *University of California, Riverside*
- 2AC.40 Accelerated Free Radical Chemistry and Enhanced Volatilization in the Heterogeneous Oxidation of Semisolid Organic Aerosol by OH Radicals.** AARON WIEGEL, Kevin Wilson, William Hinsberg, Frances Houle, *Lawrence Berkeley National Laboratory*
- 2AC.41 Petroleum Fuels and Biofuels: A Comparative Environmental Chamber Study of Nighttime Secondary Organic Aerosol Formation.** SHAOKAI GAO, *Phillips 66 Research Center*

- 2AC.42 Atmospheric Impacts of Hydraulic Fracturing: Aerosol Production from Flowback Fluid.** Jeffrey Bean, DONGYU WANG, Sahil Bhandari, Lea Hildebrandt Ruiz, *University of Texas at Austin*
- 2AC.43 Surface Properties of Organic-Inorganic and Organic-Inorganic-Surfactant Aerosol Droplets using Holographic Optical Tweezers.** BRYAN R. BZDEK, Hallie Boyer, Cari Dutcher, Jonathan P. Reid, *University of Bristol*
- 2AC.44 Effect of Photochemical Aging of 2-Methyltetrol on the Ambient Environment.** ALISON FANKHAUSER, V. Faye McNeill, *Columbia University*
- 2AC.45 Organic Aerosol Growth through Photosensitized VOC Oxidation.** MELISSA GALLOWAY, Michael Ippolito, Jessica Ackendorf, Rachel Barron, *Lafayette College*
- 2AC.46 The Role of MSA for New-particle Growth and the Cloud-albedo Aerosol Indirect Effect.** ANNA HODSHIRE, Betty Croft, Jeffrey R. Pierce, *Colorado State University*
- 2AC.47 Modeling the Production and Composition of Secondary Organic Aerosol from a Diesel Engine using Parameterized and Semi-Explicit Chemistry and Thermodynamic Models.** Sailaja Eluri, Christopher Cappa, Beth Friedman, Delphine Farmer, SHANTANU JATHAR, *Colorado State University*
- 2AC.48 Global Modeling of Secondary Organic Aerosol Production from Reaction of NO₃ Radical with Speciated Monoterpenes.** MAKOTO KELP, Havala Pye, Emily Fischer, Jared Brewer, Juliane L. Fry, *Reed College*
- 2AC.49 A Study on Potential SOA Mass Fraction from Vehicle Emission using HR-ToF-AMS Coupled with Potential Aerosol Mass Reactor.** GYUTAE PARK, Jihwan Son, Jounghwa Kim, Jeong Soo Kim, Sunmoon Kim, Taehyun Park, Pilho Kim, Seokwon Kang, Kyunghoon Kim, Jihee Ban, Kijae Sung, Ho-Jin Lim, Zaeem Bin Babar, Taehyoung Lee, *Hankuk University of Foreign Studies*
- 2AC.50 Particulate Matter (PM) Episodes at a Suburban Site in Hong Kong: Evolution of PM Characteristics and Role of Photochemistry in Secondary Aerosol Formation.** YIMING QIN, Yong Jie Li, Hao Wang, Berto Paul Yok Long Lee, Dan D. Huang, Chak K. Chan, *Hong Kong University of Science and Technology*
- 2AC.51 Effect of OH Induced Aging on the Volatility of alpha-Pinene Ozonolysis Secondary Organic Aerosol Particles.** KEI SATO, Satoshi Inomata, Yuji Fujitani, Yu Morino, Kiyoshi Tanabe, *National Institute for Environmental Studies*
- 2AC.52 Contribution of Water-Soluble "Brown Carbon" Organic Species to Light Absorption by Biomass-Burning Aerosols.** DEEP SENGUPTA, Vera Samburova, Chiranjivi

Bhattarai, Michealene laukea-Lum, Adam Watts, Hans Moosmuller, Andrey Khlystov,
Desert Research Institute

- 2AC.53 Modeling the Production of Secondary Organic Aerosol Material Via Photosensitized Reactions of Imidazole-2-carboxaldehyde.** WILLIAM TSUI, V. Faye McNeill, *Columbia University*
- 2AC.54 Computational Prediction of UV-Visible Absorbance Spectra of Carbonyl-Containing Aqueous Aerosol Mimics.** Mengjie Fan, Ziwei Dai, JOSEPH WOO, *Lafayette College*
- 2AC.55 Brown Carbon Formation from Aqueous-phase Syringol under Dark Conditions.** JIAN XU, V. Faye McNeill, *Columbia University*
- 2AC.56 The Effect of Hydrophobic Gas-phase Organics on Formation and Properties of Biogenic Secondary Organic Aerosol.** Alla Zelenyuk, David Bell, Jacqueline Wilson, Dan Imre, KAITLYN J. SUSKI, Josef Beranek, ManishKumar Shrivastava, *Pacific Northwest National Laboratory*
- 2AC.57 Explaining Changes in SOA Optical Properties by Evaluating Chemical Characteristics of Chamber-Derived SOA.** STEPHEN ZIMMERMAN, Justin Min, Justin Dingle, Roya Bahreini, *University of California, Riverside*
- 2AC.58 Modeling the Size Dependence of Particle Composition and Growth Rates.** MICHAEL APSOKARDU, Murray Johnston, *University of Delaware*

2AP AEROSOL PHYSICS II
EXHIBIT HALL A

Matthew Berg and Christine Loza, chairs

- 2AP.1 Ambient Aerosol Extinction in Great Smoky Mountains National Park.** TIM GORDON, Jim Renfro, Anthony Prenni, Gavin McMeeking, Ping Chen, *Handix Scientific*
- 2AP.3 Electric Field Directed Self-Assembly and Fragmentation of Dendritic Soot Structures as a Means for Amplifying Soot Detection.** DAVID BILBY, David Kubinski, Matti Maricq, *Ford Motor Company*
- 2AP.4 A General Method for Calculating the Rayleigh Scattering by an Arbitrary Shape.** JUSTIN MAUGHAN, Chris Sorensen, Amit Chakrabarti, *Kansas State University*

- 2AP.5 Measurements of the Volatility Distribution of Organic Aerosols Combining Thermodenuding and Isothermal Dilution.** Evangelos Louvaris, ELENI KARNEZI, Evangelia Kostenidou, Spyros Pandis, *FORTH/ICEHT, Patra, Greece*
- 2AP.6 Rebound Behavior of Nanoparticle-Agglomerates.** MANUEL GENSCHE, Alfred P. Weber, *TU Clausthal*
- 2AP.7 A Comparison of Morphological Differences in Aggregates Grown via Diffusion-Limited Aggregation and Percolation Schemes.** Thomas Hildebrand, WILLIAM HEINSON, Rajan Chakrabarty, *Washington University in St. Louis*
- 2AP.9 Optical Properties of Secondary Organic Aerosols from Oxidation of alpha-pinene, toluene, and 1-methylnaphthalene.** JUSTIN MIN, Stephen Zimmerman, Justin Dingle, Roya Bahreini, *University of California, Riverside*
- 2AP.10 Scattering Directionality Parameters of Fractal Black Carbon Aerosols.** APOORVA PANDEY, Rajan Chakrabarty, *Washington University in St. Louis*
- 2AP.11 Application of Combined Particle Charging Mechanism to Computational Fluid Dynamics.** RAVI SANKAR VADDI, Igor Novosselov, *University of Washington*
-

2CO COMBUSTION I
EXHIBIT HALL A

Steven Rogak, chair

- 2CO.1 Chemical Composition Analysis of Wood Pellets.** MOHAMMED RAHMAN, Philip K. Hopke, Lisa Rector, George Allen, *Clarkson University*
- 2CO.2 Physicochemical Properties and Toxicity of Fine Particles Produced from Pulverized Coal Combustion.** HUNGSOO JOO, Tsatsral Batmunkh, JiYi Lee, KwangYul Lee, Lucille Joanna Borlaza, Kihong Park, *Gwangju Institute of Science and Technology*
- 2CO.3 Measurement of the Volatility Distribution of Emission Factor of Diesel Automobile by Isothermal Dilution.** YUJI FUJITANI, Kei Sato, Kiyoshi Tanabe, Katsuyuki Takahashi, Jyunya Hoshi, *National Institute for Environmental Studies*
- 2CO.4 Air Quality Implications of Biomethane Combustion in Microturbines, Industrial Engines, and Home Appliances.** YIN LI, Jian Xue, Joshua Peppers, Christoph Moschet, Chris Alaimo, Peter Green, Norm Kado, Minji Kim, Christoph Vogel, Thomas Young, Michael Kleeman, *University of California, Davis*

2CO.6 An Analysis of Trace Metals in Car Emissions. JOSEPH SALAZAR, Benton Cartledge, Allen Robinson, Yunliang Zhao, Rawad Saleh, Greg Drozd, Allen H. Goldstein, Brian Majestic, *University of Denver*

2CO.7 Field Measurements of Solid-Fuel Cookstove Emissions from Uncontrolled Cooking Tests in China, Honduras, Uganda, and India. ROSE EILENBERG, Kelsey Billsback, Kristen Fedak, Michael Johnson, Jack Kodros, Eric Lipsky, Christian L'Orange, Jennifer Peel, Jeffrey R. Pierce, R. Subramanian, John Volckens, Allen Robinson, *Carnegie Mellon University*

2HR HEALTH RELATED AEROSOLS II

EXHIBIT HALL A

Lupita Montoya and Paul Solomon, chairs

2HR.1 Colloidal Probe Analysis of Cohesion Forces between Monodisperse, Monomorph Microparticles with Rough Surfaces. Alberto Baldelli, REINHARD VEHRING, *University of Alberta, Canada*

2HR.2 The NO_x Effect on the Chemical Composition And DTT Response of Water-soluble Secondary Organic Aerosols. HUANHUAN JIANG, Zechen Yu, Myoseon Jang, *University of Florida*

2HR.3 Hydrogen Peroxide Produced by Carbonaceous Particles in Physiologically Relevant Medium. Dan Hinz, Jeff Barnes, Clara Gutierrez, JUSTIN RODRIGUEZ, Juan Rodriguez, Anne Johansen, *Central Washington University*

2HR.4 Experimental and Computational Study of Reaerosolization of 1 to 5 micro-meter PSL Microspheres using Jet Impingement. JANA KESAVAN, Pamela Humphreys, Babak Nasr, Goodarz Ahmadi, Craig Knox, Erica Valdes, Vipin Rastogi, Suresh Dhaniyala, *US ARMY ECBC*

2HR.5 Diesel Exhaust Exposure and Lung Cancer: A Case Study in Data Access, Exposure Assessment, and Extended Analyses. Kenny Crump, Cynthia Van Landingham, ROGER MCCLELLAN, *Private Consultant*

2HR.6 Predicting Hygroscopic Particle Growth in Upper Human Airways. LAWRENCE LEBLANC, Ralph Altmaier, Ching-Long Lin, Patrick O'Shaughnessy, *University of Iowa*

2HR.7 Oxidative Potential of Coarse Particulate Matter (PM_{10-2.5}) and Its Relation to Water Solubility and Sources of Trace Elements and Metals in the Los Angeles Basin. FARIMAH SHIRMOHAMMADI, Sina Hasheminassab, Dongbin Wang, Arian Saffari,

James Schauer, Martin Shafer, Ralph J. Delfino, Constantinos Sioutas, *University of Southern California*

- 2HR.8 Chemical and Cellular Oxidant Production from Secondary Organic Aerosols (SOA) Generated from the Photooxidation of Volatile Organic Compounds.** WING-YIN TUET, Yunle Chen, Shierly Fok, Rodney J. Weber, Julie Champion, Nga Lee Ng, *Georgia Institute of Technology*
- 2HR.9 Screen Collection and Harvesting of Airborne Glass Fibers.** BON KI KU, G.J. Deye, Leonid Turkevich, *Centers for Disease Control and Prevention, NIOSH*
- 2HR.10 Improved in vitro Inhalation Toxicology Method for Nanoparticles and Combustion Emissions.** PASI, I JALAVA, Kari Kuuspallo, Mika Ihalainen, Oskari Uski, Tuukka Ihantola, Olli Sippula, Jarkko Tissari, Jorma Jokiniemi, Maija-Riitta Hirvonen, *University of Eastern Finland*
- 2HR.11 Evaluating the Effect of Altitude on Medium-High Resistance Dry Powder Inhalers.** Conor A. Ruzycki, Andrew R. Martin, Reinhard Vehring, WARREN H. FINLAY, *University of Alberta*
- 2HR.12 Characterizing Chemical Components of Particles in Thirdhand Tobacco Smoke.** XIAOCHEN TANG, Noelia Ramirez Gonzalez, Xavier Correig, Marion Russell, Lara Gundel, Hugo Destailats, *Lawrence Berkeley National Laboratory*
- 2HR.13 Investigation of Health Effects of Beijing's Air Using a Mouse Model.** XIANGYU ZHANG, Maosheng Yao, *Peking University*
- 2HR.14 Chemical and Toxicological Characteristics of Diesel Exhaust Particles.** MINHAN PARK, HungSoo Joo, KwangYul Lee, Lucille Joanna Borlaza, Heung-Bin Lim, Han-Jae Shin, JiYi Lee, Kihong Park, *Gwangju Institute of Science and Technology*
- 2HR.15 Increased Oxidative Potential of Fine Particulate Matter (PM_{2.5}) Measured On-road of Major Freeways of Los Angeles, CA.** FARIMAH SHIRMOHAMMADI, Dongbin Wang, Sina Hasheminassab, Vishal Verma, James Schauer, Martin Shafer, Constantinos Sioutas, *University of Southern California*
- 2HR.16 Do 16 PAHs Adequately Represent Atmospheric PAH Toxicity?** VERA SAMBUROVA, Barbara Zielinska, Eric Fujita, Andrey Khlystov, *Desert Research Institute*
- 2HR.17 Deposition of Multi-Walled Carbon Nanotube (MWCNT) Aerosols in Human Nasal, Oral, and Lung Airways.** WEI-CHUNG SU, Yung-Sung Cheng, Teh-Hsun Chen, *University of Texas Health Science Center at Houston*

- 2HR.18 Oxidative Potential and Chemical Characteristics of Water-soluble Particles Produced by Burning Rice Straw and Pine Wood.** LUCILLE JOANNA BORLAZA, Bhuwan Paudel, Arom Seo, KwangYul Lee, HungSoo Joo, Shila Maskey, Kihong Park, *Gwangju Institute of Science and Technology, South Korea*
- 2HR.19 Making Water-suspension of Hydrophobic Nanomaterial Powder Using Condensation-impaction Technique.** KENJIRO IIDA, Hiromu Sakurai, Kensei Ehara, Kazuhiro Yamamoto, Masashi Gamo, *AIST*
- 2HR.21 The Contribution of Organic Aerosol to the Reactive Oxygen Species Formation on Lung Lining Fluid Interface.** LIJIE LI, Shinichi Enami, Michael Hoffmann, Agustin Colussi, *California Institute of Technology*
- 2HR.22 Characterization of the Dust from Sawing Preservative-Treated Woods.** CHAOLONG QI, Alan Echt, *NIOSH*
- 2HR.23 Rethinking Dithiothreitol based PM Oxidative Potential – Measuring Antioxidant Consumption versus ROS Generation.** Qianshan Xiong, Runran Wang, Haoran Yu, VISHAL VERMA, *University of Illinois Urbana-Champaign*

2IM INSTRUMENTATION AND METHODS II
EXHIBIT HALL A

Modi Chen and Gregory Lewis, chairs

- 2IM.1 Performance Characterization of a Handheld Nebulizer.** TSUNG-HAN YANG, Ning Yu, Yu-Mei Kuo, Chih-Wei Lin, Sheng-Hsiu Huang, Chih-Chieh Chen, *National Taiwan University*
- 2IM.2 Influence of Solvent Residue from Aerosol Generation on Ion Properties and Aerosol Charging in a Soft X-ray Neutralizer.** XIAOTONG CHEN, Dongsun Yang, Runlong Cai, Qiang Zhang, Jun Zheng, Jingkun Jiang, *Tsinghua University*
- 2IM.3 Development of a Thoracic Personal Sampler System for Co-Sampling of Sulfuric Acid Mist and Sulfur Dioxide Gas.** CHIH-HSIANG CHIEN, Alexandros Theodore, Chang-Yu Wu, Yu-Mei Hsu, Brian Birky, *University of Florida*
- 2IM.4 The Optimization of Inkjet Operating Parameters for the Generation of Monodisperse Aerosol Particles.** HANEOL LEE, Youngsu Jung, Kibong Choi, WeonGyu Shin, *Chungnam National University*

- 2IM.5 Numerical Study on the Particle Trajectory inside an Optical Cavity with Direct Flow Configuration.** HANEOL LEE, Youngsu Jung, Kibong Choi, WeonGyu Shin, *Chungnam National University*
- 2IM.6 PM Badge: A Wearable, Low-Power, Cellular-Enabled, Direct-Read Mass MEMS PM_{2.5} Sensor.** DORSA FAHIMI, Omid Mahdavi pour, Paul A. Solomon, Lara Gundel, Richard White, Igor Paprotny, *University of Illinois at Chicago*
- 2IM.7 Laboratory Measurements of Total Suspended Organic Carbon: Technique Development and Application to Chamber Experiments.** JOSHUA MOSS, Jesse Kroll, *MIT*
- 2IM.8 Ambient and Laboratory Evaluation of a Low-Cost PM sensor.** KERRY KELLY, Chris Widmer, Jonathan Whitaker, Anthony Butterfield, *University of Utah*
- 2IM.9 Detection and Quantification of Organic Aerosol Species with Thermal Vaporization-Electron Impact Ionization in the Aerodyne Aerosol Mass Spectrometer.** WEN XU, Manjula Canagaratna, Philip Croteau, Andrew Lambe, Leah Williams, Lindsay Renbaum-Wolff, Timothy Onasch, John Jayne, Douglas Worsnop, *Aerodyne Research, Inc.*
- 2IM.10 Investigating Gaseous and Coarse, Fine and Ultrafine Particle Emissions from Advanced Biomass-Fueled Appliances Operating Under Different Operational Loads.** PATRICIA FRITZ, Brian P. Frank, Shida Tang, David Guerrieri, Marilyn Wurth, Thomas Wainman, Todd Crawford, Nathan Walz, Nicole Vitillo, Jake Lindberg, David Barnes, Thomas Giorgio, Gil H. LaDuke, Thomas Butcher, Rebecca Trojanowski, *New York State Dept. of Health*
- 2IM.12 Exploring the Applicability and Limitations of Selected Optical Scattering Instruments for PM Mass Measurement.** JIE ZHANG, Joseph P. Marto, James Schwab, *University at Albany, SUNY*
- 2IM.15 Using Dynamic Mesh to Investigate Deposition Pattern of NanoParticle Controlled by Electric-field.** ALI MOHAMADI NASRABADI, Jungho Hwang, *Yonsei University, Department of Mechanical Engineering*
- 2IM.16 Measuring Flame-generated Sub-3-nm Particle Size Distributions with a TSI 1-nm DMA and Nano Enhancer.** YANG WANG, Sherrie Elzey, Pratim Biswas, *Washington University in St Louis*
- 2IM.17 From Certified Regulatory PM Monitoring over Portable Measurements up to Studies in Airspace - Simultaneous Determination of PM Fractions, Particle Number and Particle Size Distribution in High Time Resolution Applying One and the Same**

Optical Measurement. KARSTEN PLETSCHER, Maximilian Weiss, Leander Mölter, *Palas GmbH*

- 2IM.18 Evaluation of the Alphasense Optical Particle Counter (OPC-N2) and the Grimm Portable Aerosol Spectrometer (PAS-1.108).** SINAN SOUSAN, Kirsten Koehler, Laura Hallett, Thomas Peters, *University of Iowa*
- 2IM.19 A New Direct Bromide Anion Chemical Ionization Mass Spectrometry (Br-CIMS) Technique for the Measurement of HO₂.** JAVIER SANCHEZ, Dexian Chen, David Tanner, Greg Huey, Nga Lee Ng, *Georgia Institute of Technology*
- 2IM.20 Two New Ambient Air Quality Monitoring Instruments for Fine and Ultra-Fine Airborne Particulates – Initial US Results.** DRITAN XHILLARI, Rudolph Jaeger, Max Urscheler, Daniel Bachman, Martin Blaustein, Gediminas Mainelis, *CH Technologies (USA)*
- 2IM.21 A New, Automated System for the Simultaneous Determination of Gaseous Ammonia and Particulate Ammonium.** MICHAEL BATTAGLIA JR., Julian Paige, Justin Thaggard, Christopher Hennigan, *University of Maryland, Baltimore County*
- 2IM.22 Application of Aerosol-LIBS (Laser Induced Breakdown Spectroscopy) for Real-time Detection of Contamination Particles in Semiconductor Manufacturing Process.** GIBAEK KIM, Kyoungtae Kim, Hyun Ok Maeng, Hae Bum Lee, Kihong Park, *Gwangju Institute of Science and Technology*
- 2IM.23 Aerosol Spark Emission Spectrometer.** LINA ZHENG, Pramod Kulkarni, M. Eileen Birch, *Centers for Disease Control and Prevention, NIOSH*
- 2IM.24 Development and Field Evaluation of an Online Monitor for Continuous Measurement of Metals in Coarse Particulate Matter.** MOHAMMAD SOWLAT, Dongbin Wang, Giulia Simonetti, Martin Shafer, James Schauer, Constantinos Sioutas, *University of Southern California*
- 2IM.25 A Compact “MAGIC” Water Condensation Particle Counter.** GREGORY LEWIS, Steven Spielman, Arantzazu Eiguren Fernandez, Susanne Hering, *Aerosol Dynamics Inc.*
- 2IM.26 Characterization of Marine Aerosol by the Novel Event Trigger (ET) Single Particle Mode of an Aerodyne Aerosol Mass Spectrometer during the NAAMES Campaign.** CHIA-LI CHEN, Derek Price, Raghu Betha, Maryam Lamjiri, Lynn Russell, Derek Coffman, James Johnson, Patricia Quinn, Timothy Bates, *Scripps Institution of Oceanography*

- 2IM.27 Low-cost Air Quality Monitoring: Characterizing the Real-time Affordable Multi-Pollutant (RAMP) Sensor Package.** R. SUBRAMANIAN, Misha Schurman, Bryan Tomko, Jason Gu, Albert A. Presto, Naomi Zimmerman, Srinivasa Prabhu, Rebecca Tanzer, *Carnegie Mellon University*
- 2IM.28 An Online Method to Characterize the Reversibility of Secondary Organic Aerosol Formed in Aerosol Liquid Water.** MARWA EL-SAYED, Christopher Hennigan, *University of Maryland, Baltimore County*
- 2IM.29 A Low-Cost Black Carbon Monitor for a Community Air Quality Network.** JULIEN CAUBEL, Troy Cados, Chelsea V. Preble, Annie Rosen, Thomas Kirchstetter, *University of California, Berkeley*
- 2IM.30 Development of a Powder Injection System to Inject Surrogate Material in Rocket Propellant Smoke Plumes.** ZAHRA CHAUDHRY, Andrea Brown, Felix Sage, Matthew Yeager, Benjamin Alvarez, Drewry Benjamin, Andrew Lennon, *JHU APL*
- 2IM.31 Alternative metrics for spatially and temporally resolved ambient particle monitoring.** LIEM PHAM, Heejung Jung, *University of California Riverside*
- 2IM.32 Control of Multiply-charging in Microplasma Aerosol Charger.** YUKI KIZU, Hiromu Sakurai, Hiroshi Seki, Hiroshi Okuda, Hidenori Higashi, Takafumi Seto, Yoshio Otani, *Kanazawa University*
- 2IM.33 Design and Collection Efficiency of A New Electrostatic Capillary Collector For Fine and Ultrafine Particulate Matter.** GAURAV MAHAMUNI, Byron Ockerman, Igor Novosselov, *University of Washington*
- 2IM.34 Continuous and Simultaneous Monitoring of PM Mass Concentration and Speciation with a Single Instrument.** MIZUNO YUSUKE, Aoyama Tomoki, Matsumoto Erika, ballot Jean-clair, *HORIBA, Ltd,*
- 2IM.35 Design and Optimization of a Compact Low-Cost Optical Particle Sizer.** TOMAS NJALSSON, Emily Roach, Igor Novosselov, *University of Washington*
- 2IM.36 Colloidal Nanoparticle Analysis using a LN-DMA-APM System.** VIVEK RAWAT, Seongho Jeon, Xiaoshuang Chen, Siqin He, Derek Oberreit, Christopher Hogan Jr., *University of Minnesota*
- 2IM.37 Detection and Quantification of Atmospheric Compounds with a Compact Selective Reagent Ionization - Mass Spectrometer (C-SRI-MS).** ROLAND SARDA-ESTEVE,

Dominique Baisnee, Sebastien Schramm, Geoffroy Chupin, Valérie Gros, Benjamin Loubet, Marc Peyraut, Christophe Bossuet, *CEA*

- 2IM.38 Miniature Electrostatic Precipitator for Gas Chromatography–Mass Spectrometry Aerosol Analysis.** JAY RUTHERFORD, Charles Corredor, Byron Ockerman, Igor Novosselov, Jonathan Posner, *University of Washington*
- 2IM.39 The Southeastern Aerosol Research and Characterization Network 1992-2016.** STEPHANIE SHAW, Eric Edgerton, John Jansen, *Electric Power Research Institute*
- 2IM.40 Low-income Single Family Home Air Tightness, Indoor Air Quality and Respiratory Health in Colorado during Fire Season.** PRATEEK SHRESTHA, Shelly Miller, Jamie Humphrey, John Adgate, Elizabeth Carlton, Elisabeth Root, *University of Colorado Boulder*
- 2IM.41 Development of a Low-cost Fluorescence Spectrometer for the Analysis of Primary Biological Aerosols.** BENJAMIN E. SWANSON, Donald R. Huffman, J. Alex Huffman, *University of Denver*
- 2IM.42 Advancing Field Measurements of Particle Emissions from Brick Kilns.** RYAN THOMPSON, Emily Floess, Cheryl Weyant, Tami Bond, Ellen Baum, Zach Merrin, Paul Francisco, Sameer Maithel, Ananthakrishnan Ravi, Sonal Kumar, Sagar Adhikari, Santosh Guatam, Uma Rajarathnam, Bidya Pradhan, P.S. Praveen, Sujan Shrestha, *Mountain Air Engineering*
- 2IM.43 Performance of Different Particle Wall-loss Correction Methods for Aging Experiments of Alpha-pinene SOA in a Smog Chamber.** Ningxin Wang, Neil Donahue, SPYROS PANDIS, *Carnegie Mellon University*
- 2IM.44 Measuring the Morphology and Density of Internally Mixed Black Carbon with SP2 and VTDMA: New Insight into the Absorption Enhancement of Black Carbon in the Atmosphere.** YUXUAN ZHANG, Qiang Zhang, Yafang Cheng, Hang Su, Simonas Kecorius, Zhibin Wang, Zhijun Wu, Min Hu, Tong Zhu, Alfred Wiedensohler, Kebin He, *Tsinghua University*
- 2IM.45 Feasibility Test of Cellulose Filter for Collection of Sulfuric Acid Mist.** CHUFAN ZHOU, Chih-Hsiang Chien, Alexandros Theodore, Chang-Yu Wu, Yu-Mei Hsu, Brian Birky, *University of Florida*

Wei-Ning Wang and Yang Wang, chairs

- 2NM.1 Rapid Green Assembly of Antimicrobial Nanobunches.** JEONG HOON BYEON, *Yeungnam University*
- 2NM.2 Aerosol-assisted Fabrication of Stable Perovskite Solar Cells at Ambient Conditions.** SHALINEE KAVADIYA, Su Huang, Pratim Biswas, *Washington University in St. Louis*
- 2NM.3 Fabrication of High-performance Multiscale Composite Cathode of Solid Oxide Fuel Cell (SOFC) via Aerosol-based Spray Deposition Methods.** SUNG SOO SHIN, Jeong Hun Kim, Ho Sung Noh, Guangmin Lee, Ji-Won Son, Hyoungchul Kim, Mansoo Choi, *Seoul National University*
- 2NM.6 Effect of Fuel Composition on Monomer Size in an Inverted Hydrocarbon Flame.** JUSTIN DAVIS, Yifei Guan, Igor Novosselov, *University of Washington*
- 2NM.7 Three-dimensional, Crumpled Graphene Oxide-based Nanocomposite Membranes for Water Treatments.** Yi Jiang, WEI-NING WANG, Di Liu, Yao Nie, Wenlu Li, Jiwei Wu, Fuzhong Zhang, Pratim Biswas, John Fortner, *Virginia Commonwealth University*
-

2UA URBAN AEROSOLS II
EXHIBIT HALL A

Charles Stanier, chair

- 2UA.1 Investigation of Wintertime Aerosol Chemistry Using Single Particle Mass Spectrometry.** RYAN COOK, Matthew Gunsch, Katheryn Kolesar, Kerri Pratt, *University of Michigan*
- 2UA.2 Investigation of Intra-City Variation of Organic Aerosol Concentration and Composition through a Mobile/Satellite Sites Sampling Platform.** PEISHI GU, Zhongju Li, Qing Ye, Naomi Zimmerman, Albert A. Presto, Allen Robinson, *Carnegie Mellon University*
- 2UA.3 Atmospheric Modeling of Cyclic Volatile Methyl Siloxanes.** NATHAN JANECEK, Charles Stanier, *University of Iowa*
- 2UA.4 Scaling-up Urban Infrastructure Change: Carbon, Air Quality, and Health Co-Benefits of Urban-Industrial Efficiency & Symbiosis in 640 Chinese Cities.** Anu Ramaswami, Kang Kang Tong, Andrew Fang, RAJ LAL, Ajay Nagpure, Yang Li, Yuajun Yu, Daqian Jiang, Armistead G. Russell, Lei Shi, Marian Chertow, Yangjun Wang, Shuxiao Wang, *Georgia Institute of Technology*

- 2UA.6 A Hybrid Sampling Network to Investigate Intracity Spatiotemporal Variation of Multiple Pollutants.** HUGH LI, Peishi Gu, Qing Ye, Naomi Zimmerman, R. Subramanian, Ellis Shipley Robinson, Joshua Apte, Allen Robinson, Albert A. Presto, *Carnegie Mellon University*
- 2UA.7 Characterization of Traffic Emissions Exposure Metrics in the Dorm Room Inhalation to Vehicle Emissions (DRIVE) Study.** JENNIFER L. MOUTINHO, Donghai Liang, Karoline Johnson, Rachel Golan, Chandresh Ladva, Roby Greenwald, Rodney J. Weber, Stefanie Ebelt Sarnat, Vishal Verma, Dean Jones, Jeremy Sarnat, Armistead G. Russell, *Georgia Institute of Technology*
- 2UA.8 Near-Road Spatial Distribution of Ultrafine Particles and Black Carbon across the Los Angeles Metropolitan Area.** ARIAN SAFFARI, Sina Hasheminassab, Farimah Shirmohammadi, Dongbin Wang, Mohammad Sowlat, Roel Vermeulen, Gerard Hoek, Rena Jones, Debra Silverman, Constantinos Sioutas, *University of Southern California*
- 2UA.9 Measurement of Emissions and Air Quality Near a Major Refinery.** Henry Wallace, Nancy Sanchez, Courtney L. Herring, Timothy M. VanReken, James Flynn, Matthew H. Erickson, Barry Lefer, ROBERT GRIFFIN, *Rice University*
- 2UA.10 Highly Time-resolved Urban Aerosol Characteristics during Springtime in Yangtze River Delta, China: Insights from Soot Particle Aerosol Mass Spectrometry.** JUNFENG WANG, Xinlei Ge, Yanfang Chen, Yafei Shen, Qi Zhang, Yele Sun, Jianzhong Xu, Yu Huan, Mindong Chen, *Nanjing University of Information Science and Technology*
- 2UA.11 An Annual Study of Chemical Composition and Source Apportionment of Ultrafine Particulate Matter (PM_{0.1}) in Three Major Cities in California.** JIAN XUE, Wei Xue, Michael Kleeman, *University of California, Davis*
- 2UA.12 Characterization of Criteria Air Pollutants in Beijing during 2014-2015.** HAO GUO, Yungang Wang, Hongliang Zhang, *Louisiana State University*
- 2UA.13 Assessment of Compact, Real-time PM_{2.5} and Ultrafine Particle Counting Instrumentation with a Spatially-distributed Network in Pittsburgh, Pennsylvania.** NAOMI ZIMMERMAN, Eric Lipsky, R. Subramanian, Allen Robinson, Albert A. Presto, *Carnegie Mellon University*
- 2UA.14 Ultrafine Particle Measurements at Schools Next to a Freeway in Las Vegas and in the Greater Salt Lake City Area.** STEVEN G. BROWN, Jennifer DeWinter, Paul Roberts, *Sonoma Technology, Inc*
- 2UA.15 Aerosol Optical Properties Measurements by CAPS Single Scattering Albedo Monitor: Comparisons between Summer and Winter in Beijing, China.** TINGTING

HAN, Weiqi Xu, Jian Zhao, Chen Chen, Qingqing Wang, Li Jie, Zifa Wang, Xingang Liu, Yele Sun, *Institute of Atmospheric Physics, Chinese Academy of Science*

2UA.16 Response of Aerosol Sources and Properties to Emission Controls: Results from Simultaneous Measurements at Ground level and 260 m in Beijing. Jian Zhao, Wei Du, Yingjie Zhang, Chen Chen, Weiqi Xu, Qingqing Wang, TINGTING HAN, Zifa Wang, Yele Sun, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*

2UA.17 Semi-Continuous Measurement and Characteristics of Water-Soluble Organic Carbon and Ions of PM_{2.5} Aerosol with PILS-TOC-IC in Baengnyeong Island during MAPS-Seoul 2016. TAEHYOUNG LEE, Seokwon Kang, Kyunghoon Kim, Gyutae Park, Jihee Ban, Dajeong Park, Min-Suk Bae, Mindo Lee, Hyejung Shin, Youngkyo Seo, Jinyoung Choi, Donghee Jung, Seokjun Seo, *Hankuk University of Foreign Studies*

2UA.18 Aircraft-based Aerosol Composition Measurements during MAPS-Seoul. TAEHYUN PARK, Jaebum Lee, Yongjae Lim, Junyoung Ahn, Jinsoo Park, Jinsoo Choi, Jongho Kim, Soobog Park, Taehyoung Lee, *Hankuk University of Foreign Studies*

2UA.19 The Effect of Sound Wall - Vegetation Combination Barriers on Pollution Dispersion from the Freeways. DILHARA RANASINGHE, Isis Frausto-Vicencio, Eon Lee, Yifang Zhu, Seyedmorteza Amini, Faraz Enayati Ahangar, Akula Venkatram, Steve Mara, Suzanne Paulson, *University of California, Los Angeles*

2UA.20 Particle Emission Properties during DPF Actice Regeneration. HIROYUKI YAMADA, Satoshi Inomata, Hiroshi Tanimoto, *National Traffic Safety and Environment Laboratory*

Tuesday 3:00 PM - 3:30 PM
Coffee Break

Tuesday 3:30 PM - 5:00 PM
Session 3: Platform

3AC AEROSOL CHEMISTRY III - OPTICAL PROPERTIES AND BROWN CARBON
A 105

Faye McNeill and Sri Hapsari Budisulistiorini, chairs

- 3AC.1 Optical Properties of Secondary Organic Aerosol from Cis-3-hexenol and Cis-3-hexenyl Acetate: Effect of Chemical Composition, Humidity and Phase.** REBECCA HARVEY, Adam Bateman, Shashank Jain, Yong Jie Li, Scot Martin, Giuseppe Petrucci, *University of Vermont*
3:30
- 3AC.2 Photolysis of Secondary Organic Aerosol Material in the Presence of Volatile Organic Compounds: The Role of Photosensitization.** KURTIS MALECHA, Sergey Nizkorodov, *University of California, Irvine*
3:45
- 3AC.3 Modeling Aqueous Organic Aerosol Chemistry: Photosensitizers and the Oxidizing Power of the Aqueous Phase.** V. FAYE MCNEILL, Wanyi Li, William Tsui, Alison Fankhauser, Nabil Khan, Kayane Dingilian, Hai-Lung Dai, Yi Rao, *Columbia University*
4:00
- 3AC.4 Chemical Characterization of Organic Aerosol Emitted from Combustion of Indonesian Peat and Biomass.** SRI HAPSARI BUDISULISTIORINI, Matthieu Riva, Michael Williams, Jing Chen, Masayuki Itoh, Haris Gunawan, Jason Surratt, Mikinori Kuwata, *Nanyang Technological University*
4:15
- 3AC.5 Aerosol Particle Browning and Production of Semivolatile, Light-Absorbing Species upon Exposure to Gas-Phase Methylglyoxal or Methylamine.** DAVID DE HAAN, Natalie Jimenez, Alexia De Loera, Paola Formenti, Mathieu Cazaunau, Aline Gratien, Jean-François Doussin, *University of San Diego*
4:30
- 3AC.6 Aqueous Phase Photo-oxidation of Nitroaromatic Compounds in Brown Carbon Aerosol.** RACHEL HEMS, Jonathan Abbatt, *University of Toronto, Canada*
4:45
-

3AP AEROSOL PHYSICS III
A 106

Rajan Chakrabarty and Cari Dutcher, chairs

- 3AP.1 Modelling and Experimental Evaluation of Aerosol Nanoparticle Photoionization in an Applied Electric Field.** Robert Nishida, ADAM M BOIES, Simone Hochgreb, *University of Cambridge, University of Minnesota*
3:30
- 3AP.2 Finite Element Analysis Simulations on the Photoacoustic Response of Aerosols with Water Coatings.** JAMES RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
3:45
- 3AP.3 Universal Description of Light Scattering by Atmospheric Ice Crystals.** YULI HEINSON, Justin Maughan, Ping Yang, Amit Chakrabarti, Jiachen Ding, Chris Sorensen, *Kansas State University*
4:00

3AP.4 Coagulation of Agglomerates with Polydisperse Primary Particles in the Free Molecular Regime. Eirini Goudeli, Maximilian L. Eggersdorfer, SOTIRIS E. PRATSINIS, *ETH Zurich*

3AP.5 Wind Tunnel Experiment of Bacillus Spores Resuspension. JING QIAN, Babak Nasr, Matthew Brown, Meilu He, Morgan Minyard, Andrea R. Ferro, Goodarz Ahmadi, Suresh Dhaniyala, *Clarkson University*

3AP.6 Aircraft Measurements Intercomparison during GoAmazon2014/5. FAN MEI, Micael Cecchini, Jian Wang, John Shilling, Jason Tomlinson, Jennifer Comstock, John Hubbe, Mikhail Pekour, Luiz Machado, Manfred Wendisch, Martin Zoeger, Bernadett Weinzierl, Scot Martin, Beat Schmid, *Pacific Northwest National Laboratory*

3HR HEALTH RELATED AEROSOLS III
B 110-112

Roby Greenwald and Maura Sheehan, chairs

3HR.1 Are We Done with Respiratory Deposition and Dosimetry of Inhaled Particles?
3:30 CHONG KIM, *USEPA*

3HR.2 A Novel Device for Cell Exposure at the Air-Liquid Interface. Mika Ihalainen, Pasi, I Jalava, Kari Kuusalo, Maija-Riitta Hirvonen, JORMA JOKINIEMI, *University of Eastern Finland, Kuopio, Finland*

3HR.3 Source Apportionment of the Redox Activity of Urban Quasi-ultrafine Particles (PM_{0.49}) in Thessaloniki Following the Increased Biomass Burning due to the Economic Crisis in Greece. Georgios Argyropoulos, Athanasios Besis, Dimitra Voutsas, Constantini Samara, Mohammad Sowlat, SINA HASHEMINASSAB, Constantinos Sioutas, *Aristotle University of Thessaloniki*

3HR.4 Single Living γ East PM_{2.5} Toxicity Sensor (SLEPTor) System. Kai Wei, Minghao Qiu, Rongfei Zhang, Liantong Zhou, Ting Zhang, Chunxiong Luo, MAOSHENG YAO, *Peking University*

3HR.5 Toxicogenomic Profiling to Assess the Biological Effects upon Exposure to Isoprene-Derived Secondary Organic Aerosol (SOA) in Human Lung Cells. YING-HSUAN LIN, Maiko Arashiro, Kenneth Sexton, Avram Gold, Ilona Jaspers, Rebecca Fry, Jason Surratt, *University of North Carolina at Chapel Hill*

3HR.6 Aerosol Based Gold Nanoparticles Delivery to Brain: A Non-Invasive Approach to Cross Blood Brain Barrier. RAMESH RALIYA, Debajit Saha, Tandeep Chadha, Baranidharan Raman, Pratim Biswas, *Washington University in St. Louis*

3IM INSTRUMENTATION AND METHODS III
B 113-114

Hans Moosmuller and Fengshan Liu, chairs

3IM.1 In-Situ Characterization of Aerosol Nanoparticles at Close-to-Ambient Concentrations by Small Angle X-Ray Scattering (SAXS). PAULUS S. BAUER, Heinz Amenitsch, Paul M. Winkler, *Universitaet Wien, Vienna, Austria*

3IM.2 Measurement of Dust Dispersity by Shadowgraphy Method—Direct Image Particle Analysis (DIPA). Seungkoo Kang, SHENG-CHIEH CHEN, Wing-Tak Lai, David Y. H. Pui, *University of Minnesota*

3IM.3 Optimizing a Photoacoustic Soot Sensor for the Measurement of Ultra-low Soot Concentrations in Exhaust from Combustion Engines. MICHAEL ARNDT, Wolfgang Schindler, Herbert Reingruber, Klaus Harms, Stefan Riedler, *AVL List GmbH*

3IM.4 Study of the Truncation Issue in the Cavity Attenuation Phase Shift PMSSA Monitor using Two Novel Approaches. FENGSHAN LIU, David Snelling, Kevin Thomson, Gregory Smallwood, *National Research Council Canada*

3IM.5 Measuring Light Absorption with Filter-based Instruments: Correction Schemes for Filter Artifacts. APOORVA PANDEY, Yu Yang, Rajan Chakrabarty, *Washington University in St Louis*

3IM.6 A New Concept for Aerosol Satellite Remote Sensing in the Twilight Zone. HANS MOOSMULLER, Michealene Iaukea-Lum, Jeffrey LaCombe, Eric Wang, *Desert Research Institute*

3NM NANOPARTICLES AND MATERIALS SYNTHESIS III
B 115-116

Steven Rogak and Christine Loza, chairs

3NM.1 Observation of Incipient Particle Formation during Flame Synthesis by Tandem Differential Mobility Analysis-Mass Spectrometry (DMA-MS). YANG WANG, Juha

Kangasluoma, Michel Attoui, Jiayi Fang, Heikki Junninen, Markku Kulmala, Tuukka Petäjä, Pratim Biswas, *Washington University in St Louis*

3NM.2 Characterization of Particle Release from Nanotechnology-enabled Clothing

3:45 **Products.** LEONARDO CALDERÓN, Letao Yang, Jin Young Shin, Kibum Lee, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

3NM.3 Multi-directional 3D Assembly with Charged Nano-aerosol. YONGJUN BAE, Hyesung

4:00 Cho, Mansoo Choi, *Seoul National University*

3NM.4 Apparel Selection for the International Space Station Based on the Emission of

4:15 **Airborne Particles and Lint.** LEONARDO CALDERÓN, Marit Meyer, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

3NM.5 Development of an Analytical Methodology for Measurement of Aerosol Debris

4:30 **Generated from Sanding of CNT Composite Materials.** TRACI LERSCH, Kristin Bunker, Gary Casuccio, Jonathan Kang, Lorenzo Cena, *RJ Lee Group, Inc.*

3NM.6 Nanoparticle Detection in Environmentally Relevant Matrices Using DMA-ICP-MS.

4:45 CHRISTINE LOZA, Charlie Chan, Mark Ellefson, Sue Wolf, Brian Mader, *3M Company*

3UA URBAN AEROSOLS III

B 117-119

Andrew Ault and Alla Zelenyuk, chairs

3UA.1 Chemical Compositions of Atmospheric Submicron Aerosol during New Particle

3:30 **Formation and Growth Events in Beijing.** XIAOXIAO LI, Runlong Cai, Dongsen Yang, Yueyun Fu, Jiming Hao, Jun Zheng, Jingkun Jiang, *Tsinghua University*

3UA.2 The “Parade Blue”: Effects of Short-term Emission Control on Aerosol Chemistry.

3:45 HAIYAN LI, Qiang Zhang, Fengkui Duan, Bo Zheng, Kebin He, *Tsinghua University*

3UA.3 Vertical Profiles of Air Pollutants in Urban Boundary Layer: Results from the

4:00 **Measurements on Beijing 325m Meteorological Tower in Severe Haze Episodes.** QINGQING WANG, Weiqi Xu, Wei Du, Chen Chen, Tingting Han, Dongsheng Ji, Zifa Wang, Yele Sun, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*

3UA.4 Characterization of Particle Number Size Distributions at Ground Level and 260 m on

4:15 **a Meteorological Tower in Beijing.** Wei Du, Jian Zhao, Yingjie Zhang, YELE SUN, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*

3UA.6 Spatial Variation of PM_{2.5} Chemical Composition in Roadside, Urban, and Suburban Environments in Hong Kong: Quantifying Source Contribution of Urban Traffic. JIAN ZHEN YU, X. H. Hilda Huang, *Hong Kong University of Science & Technology*

Tuesday 5:00 PM - 6:00 PM
Working Group Meetings 1

Tuesday 6:00 PM - 8:00 PM
Welcome Reception

Wednesday

Wednesday 8:00 AM - 9:15 AM
Plenary II

8:00 Optical Characterization of Atmospheric Aerosols: From Fundamental Electromagnetism to Satellite Missions Michael Mishchenko, *NASA Goddard Institute for Space Studies*

Moderator Christopher Sorensen, *Kansas State University*

9:00 Whitby Award and Liu Award Presentations Lynn Russell, *Scripps Institution of Oceanography, UCSD*

AS&T Outstanding Paper Award Presentation Warren Finlay, *University of Alberta*

Wednesday 9:00 AM - 5:00 PM
Exhibits Open

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

Wednesday 9:45 AM - 11:30 AM

Session 4: Platform

4AC AEROSOL CHEMISTRY IV - MULTIPHASE CHEMISTRY

A 105

Manabu Shiraiwa and Rodney Weber, chairs

- 4AC.1 Rethinking the Concept of pH in Atmospheric Particles.** MICHAEL BATTAGLIA JR.,
9:45 Christopher Hennigan, *University of Maryland, Baltimore County*
- 4AC.2 In Situ Observations of Organic Molecules at the Gas-Aerosol Interface.** V. FAYE
10:00 MCNEILL, Yajing Wu, Wanyi Li, Bolei Xu, Xia Li, Hannah Wang, Hai-Lung Dai, Yi Rao,
Columbia University
- 4AC.3 Formation of Reactive Oxygen Species by Secondary Organic Aerosols in Water.**
10:15 MANABU SHIRAIWA, Haijie Tong, Andrea Arangio, Thomas Berkemeier, William Brune,
Pascale Lakey, Ulrich Poeschl, Joanna Socorro, *MPIC*
- 4AC.4 The Role of Aerosol Water in Secondary Organic Aerosol Formation from Volatile
Organic Compounds.** JENNIFER FAUST, Jenny Wong, Alex K. Y. Lee, Jonathan Abbatt,
10:30 *University of Toronto, Canada*
- 4AC.5 Measuring pH of Atmospheric Aerosol Particle Microenvironments Using a Raman
Microspectroscopic Method.** REBECCA CRAIG, Andrew Ault, *University of Michigan*
10:45
- 4AC.6 Fine Particle pH.** RODNEY J. WEBER, Hongyu Guo, Aikaterini Bougiatioti, Nikolaos
11:00 Mihalopoulos, Athanasios Nenes, *Georgia Institute of Technology*
- 4AC.7 Formation of Organic Nitrogen in Aqueous Nanodroplets.** CHRIS STANGL, Murray
11:15 Johnston, *University of Delaware*

4AP AEROSOL PHYSICS IV

A 106

Matthew Berg and Cari Dutcher, chairs

- 4AP.1 Common Model Assumptions Increase Uncertainties in Describing Atmospheric New
Particle Formation.** TINJA OLENIUS, Jan Julin, Ilona Riipinen, *Stockholm University*
9:45

- 4AP.2 Quantitative Particle Sizing in the Cluster-particle Transition Region during new Particle Formation.** DOMINIK STOLZENBURG, Katrianne Lehtipalo, Robert Wagner, Paul M. Winkler, *University of Vienna*
10:00
- 4AP.3 Enhanced Growth Rates of Nanodroplets in the Free Molecular Regime.** YENSIL PARK, Shinobu Tanimura, Barbara Wyslouzil, *The Ohio State University*
10:15
- 4AP.4 Scaling Laws for Packing Density of Fractal Aggregates.** PAI LIU, William Heinson, Rajan Chakrabarty, *Washington University in St Louis*
10:30
- 4AP.5 Particle Resuspension from Substrates: Analysis of Time-Dependence on Removal Rates.** BABAK NASR, Jing Qian, Meilu He, Jana Kesavan, Minyard Morgan, Andrea R. Ferro, Goodarz Ahmadi, Suresh Dhaniyala, *Clarkson University*
10:45
- 4AP.6 Uncertainties in Particle Wall Loss Correction during Secondary Organic Aerosol Formation in Chamber Experiments.** RENEE MCVAY, Theodora Nah, Jeffrey R. Pierce, John Seinfeld, Nga Lee Ng, *California Institute of Technology*
11:00
- 4AP.7 Effect of Translational and Rotational Brownian Motions on the Drift Velocity of Non-Spherical Aerosol Particles.** CHARLES HAGWOOD, George Mulholland, *National Institute of Standards and Technology, Gaithersburg*
11:15
-

4CO COMBUSTION II
B 110-112

Naomi Zimmerman and Ville Vakkari, chairs

- 4CO.1 Secondary Organic Aerosol Formation in Biomass-Burning Plumes: Theoretical Analysis of Lab Studies.** Qijing Bian, Shantanu Jathar, John Kodros, Kelley Barsanti, Lindsay Hatch, Andrew May, SONIA KREIDENWEIS, Jeffrey R. Pierce, *Colorado State University*
9:45
- 4CO.2 Fast Secondary Aerosol Formation in Biomass Burning Plumes in Southern Africa.** VILLE VAKKARI, Johan Paul Beukes, Kerneels Jaars, Miroslav Josipovic, Andrew D. Venter, Pieter G. van Zyl, *Finnish Meteorological Institute, Helsinki, Finland*
10:00
- 4CO.3 Evolution of Organic Aerosol (OA) Composition Emitted from Residential Coal Combustion.** WEI ZHOU, Haixia Ren, Mo Xue, Jiming Hao, Jingkun Jiang, *Tsinghua University*
10:15
- 4CO.4 Photochemical Production of Secondary Organic Aerosol from a Non-road Diesel Engine: Influence of an Alternative Fuel and Emissions Control Systems.** SHANTANU
10:30

JATHAR, Beth Friedman, Abril Galang, Patrick Brophy, Delphine Farmer, John Volckens,
Colorado State University

- 4CO.5 Secondary Organic Aerosol Forming Potential from Emerging Light-Duty Gasoline**
10:45 **Direct Injection Vehicles.** PATRICK ROTH, Diep Vu, Jiacheng Yang, Tyler Berte, Thomas
D. Durbin, Georgios Karavalakis, Akua Asa-Awuku, *University of California, Riverside*
- 4CO.6 Phase-partitioned PAHs in Gasoline Direct Injection Engine Exhaust Sampled with an**
11:00 **Integrated Organic Gas and Particle Sampler.** NAOMI ZIMMERMAN, Pallavi Pant,
Cheol-Heon Jeong, Khaled Rais, Juana Delgado-Saborit, James S. Wallace, Jeff Brook,
Greg J. Evans, Krystal G. Pollitt, *University of Toronto*
- 4CO.7 Secondary Aerosol Formation Potential of Gasoline Vehicle Exhaust Under On-road**
11:15 **and Laboratory Conditions.** PAULI SIMONEN, Joni Kalliokoski, Panu Karjalainen, Miikka
Dal Maso, Topi Rönkkö, Sanna Saarikoski, Hilikka Timonen, Matthew Bloss, Athanasios
Dimaratos, Leonidas Ntziachristos, Jorma Keskinen, *Tampere University of Technology*

4HR HEALTH RELATED AEROSOLS IV
B 115-116

Jana Kesavan and Chong Kim, chairs

- 4HR.1 Association of Ambient Fine Particulate Air Pollution (PM_{2.5}) with Cardiopulmonary**
9:45 **Morbidity in Jeddah, Saudi Arabia.** HAIDER KHWAJA, Shedrack R Nayebare, Omar S.
Aburizaiza, Azhar Siddique, David Carpenter, Jahan Zeb, Abdullah J Aburizaiza, Cristian
Pantea, Mirza M. Hussain, *Wadsworth Center, University at Albany*
- 4HR.2 Air Pollution Exposures among Pregnant Women in a United States - Mexico Border**
10:00 **Town.** KIRSTEN KOEHLER, Jairus Pulczynski, Misti Levy-Zamora, Johnson Natalie, Ana
Rule, Josias Zietsman, *Johns Hopkins School of Public Health*
- 4HR.3 Chemical Composition, Environmental Impact and Health Implication of Primary and**
10:15 **Secondary Emissions of Gases and Particles from Residential Wood Burning.** IMAD EL
HADDAD, Giulia Stefenelli, Deepika Bhattu, Jun Zhou, Giancarlo Ciarelli, Emily Bruns,
Peter Zotter, Thomas Nussbaumer, Amelie Bertrand, Nicolas Marchand, Brice Temime-
Roussel, Sebnem Aksoyoglu, Jay Slowik, Urs Baltensperger, Andre Prévôt, Josef
Dommen, *Paul Scherrer Institute*
- 4HR.4 Biological Effects of Human and Murine Lung Cells Exposed to Combustion Aerosols**
10:30 **at the Air/Liquid-Interface: Investigation of Wood Combustion-, Ship- and Car**
Engine-Emissions. RALF ZIMMERMANN, Gunnar Dittmar, Tamara Kanashova, Jeroen
Buters, Sebastian Öder, Hanns Paur, Sonja Mülhopt, Marco Dilger, Carsten Weiss,

Horst Harndorf, Benjamin Stengel, Karsten Hiller, Sean Sapcariu, Kelly BeruBe, Tobias Krebs, Thorsten Streibel, Erwin Karg, Martin Sklorz, Jürgen Orasche, Johannes Passig, Suchi Smita, Maija-Riitta Hirvonen, Olli Sippula, Jorma Jokiniemi, et al., *Helmholtz Zentrum München and Rostock University*

4HR.5 Premature Mortality in China Due to Exposure of Outdoor Fine Airborne Particulate
10:435 **Matter: Source Contributions and Responses to Concentration Reductions.** Jianlin Hu, Hongliang Zhang, QI YING, *Texas A&M University*

4HR.6 Effect of Inhalable Exposures on Cytokine Levels in Workers in Northern Colorado
11:00 **Dairies.** KIMBERLY ANDERSON, Joshua Schaeffer, John Mehaffy, Mary Bradford, Jessy Tryon, Amanda VanDyke, Stephen Reynolds, T. Renee Anthony, Darrah Sleeth, Christian L'Orange, John Volckens, *Colorado State University*

4HR.7 Characterization of Aerosol Filtration Properties of Neonatal Human Nasal Airways.
11:15 SCOTT TAVERNINI, Michelle L. Noga, Andrew R. Martin, Warren H. Finlay, *University of Alberta*

4IM INSTRUMENTATION AND METHODS IV
B 113-114

Xiaoliang Wang and Felipe Lopez-Hilfiker, chairs

4IM.1 Chemical Analysis of Various Laboratory-Generated Particles by Using a Newly
9:45 **Developed Single Particle Mass Spectrometer.** HEE-JOO CHO, Donggeun Lee, Kihong Park, *Gwangju Institute of Science and Technology, Gwangju, Korea*

4IM.2 Intercomparison of Capture and Standard Vaporizers in the Aerodyne Aerosol Mass
10:00 **Spectrometer (AMS).** WEIWEI HU, Pedro Campuzano-Jost, Douglas Day, Philip Croteau, Manjula Canagaratna, John Jayne, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*

4IM.3 Development of an Online Extractive Electrospray Ionization Time of Flight Mass
10:15 **Spectrometer (EESI-TOF): Application to Atmospheric Aerosol.** FELIPE LOPEZ-HILFIKER, Veronika Pospisilova, Josef Dommen, Andre Prévôt, Urs Baltensperger, Tofwerk, Jay Slowik, *Paul Scherrer Institute*

4IM.4 Deployment of a PM_{2.5}-capable Aerosol Chemical Speciation Monitor in Nanjing,
10:30 **China.** Yunjiang Zhang, Lili Tang, PHILIP CROTEAU, Hongliang Zhang, Ping Chen, Wen Xu, Leah Williams, Manjula Canagaratna, John Jayne, Douglas Worsnop, *NUIST / JSEM, China*

- 4IM.5 Quantitative Off-line Particulate Matter Composition Analysis with Thermal Desorption Mass Spectrometry.** XIAOLIANG WANG, Gustavo Riggio, Xufei Yang, Laxmi Narasimha Yatavelli, L.W. Antony Chen, Judith Chow, John Watson, *Desert Research Institute*
10:45
- 4IM.6 A Collision Cross Section versus Mass Two-Dimensional Space for Characterization of Atmospheric Organic Aerosol.** XUAN ZHANG, Jordan Krechmer, Stephan Graf, Wen Xu, Michael Cubison, Michael Groessl, John Jayne, Jose-Luis Jimenez, Douglas Worsnop, Manjula Canagaratna, *Aerodyne Research, Inc.*
11:00
- 4IM.7 On-line and Hyphenated Photoionization Mass Spectrometric Techniques for Gas and Particulate Phase Analysis: Investigation of Wood Combustion-, Ship- and Car Engine-Emissions.** Hendryk Czech, RALF ZIMMERMANN, Olli Sippula, Benjamin Stengel, Anne Ulbrich, Toni Miersch, Jürgen Orasche, Heikki Lamberg, Martin Sklorz, Thorsten Streibel, Horst Harndorf, Jorma Jokiniemi, *University of Rostock*
11:15
-

4UA URBAN AEROSOLS IV
B 117-119

Allen Robinson and Jay Slowik, chairs

- 4UA.1 Real-time Measurements of PM_{2.5}, Black Carbon, Sound and Traffic Dynamics Near a Major Highway.** SIVARAMAN BALACHANDRAN, Corey Jonathan, Ann Dillner, Farzan Oroumiyeh, Hui Ren, Harika Tadepally, *University of Cincinnati*
9:45
- 4UA.2 Characterizing the Near-road Submicron Aerosols Near a North Carolina Interstate Freeway: Summer Vs. Winter Observations.** PROVAT SAHA, Andrey Khlystov, Andrew Grieshop, *North Carolina State University*
10:00
- 4UA.3 Comprehensive Characterization of Vehicle Emissions in Ft. McHenry Tunnel.** ANDREY KHLYSTOV, David Campbell, Mark McDaniel, Chiranjivi Bhattarai, *Desert Research Institute*
10:15
- 4UA.4 High-time resolution VOC and Speciated Total Emissions for Diesel and Gasoline Vehicles: Implications for Future Fleet Emissions and Pollutant Formation.** GREG DROZD, Yunliang Zhao, Rawad Saleh, Georges Saliba, Bruce Frodin, Hector Maldonado, Satya Sardar, Allen Robinson, Allen H. Goldstein, *University of California, Berkeley*
10:30
- 4UA.5 SOA Formation from Tailpipe Emissions from On-road Gasoline Vehicles.** YUNLIANG ZHAO, Rawad Saleh, Georges Saliba, Greg Drozd, Hector Maldonado, Satya Sardar, Bruce Frodin, Allen H. Goldstein, Allen Robinson, *Carnegie Mellon University*
10:45

4UA.6 On-road, Near-road, and Urban Background Measurements of Traffic-related Pollutants in Metropolitan Toronto, Canada. CHEOL-HEON JEONG, Jon M. Wang, Nathan Hiker, Kerolyn Shairsingh, Dennis Herod, Tony Munoz, Greg J. Evans, *SOCAAR, University of Toronto*

4UA.7 Impact of Meteorology Datasets on Near Roadway Dispersion Model Estimates. 11:15 Fatema Parvez, KRISTINA WAGSTROM, *University of Connecticut*

Wednesday 1:00 PM - 3:00 PM

Session 5: Platform

5AC AEROSOL CHEMISTRY V - PARTICLE MORPHOLOGY AND PHASE EFFECTS

A 105

Yue Zhang and Andrew Metcalf, chairs

5AC.1 Dependence of Water Transport Kinetics, Reactive Uptake Coefficients and Effective Volatility of Semi-Volatile Organic Components on Organic Aerosol Viscosity. 1:00 JONATHAN P. REID, Frances Marshall, Young-Chul Song, Stephen Ingram, Allen E. Haddrell, David Topping, Jacqueline Hamilton, *University of Bristol*

5AC.2 Evaporation of Alpha-pinene SOA at Atmospherically Relevant Humidity Range. 1:15 TAINA YLI-JUUTI, Aki Pajunoja, Angela Buchholz, Olli-Pekka Tikkanen, Celia Faiola, Olli Väisänen, Hao Liqing, Eetu Kari, Otso Peräkylä, Olga Garmash, Manabu Shiraiwa, Mikael Ehn, Kari Lehtinen, Annele Virtanen, *University of Eastern Finland*

5AC.3 Surface Activity in Secondary Organic Aerosol Liquid Samples. ANDREW METCALF, 1:30 Cari Dutcher, *University of Minnesota, Twin Cities*

5AC.4 Glass Forming Properties of Secondary Organic Aerosol and Surrogates Examined by Thin Film Dielectric Relaxation Spectroscopy. YUE ZHANG, Andrew Lambe, Timothy Onasch, Wen Xu, Lindsay Renbaum-Wolff, William Brooks, Wade Robinson, Manjula Canagaratna, Paul Kebarian, Andrew Freedman, Shachi Katira, David Chandler, Paul Davidovits, John Jayne, Douglas Worsnop, Charles Kolb, *Boston College; Aerodyne Research, Inc.*

5AC.5 Interfacial Chemistry and Cloud Activation in Organic Aerosol. JAMES F. DAVIES, Chris 2:00 Ruehl, Kevin Wilson, *Lawrence Berkeley National Laboratory*

- 5AC.6 Effect of Heterogeneous Uptake of Ammonia on the Properties of Secondary Organic Aerosols Particles.** DAVID BELL, Alla Zelenyuk, Dan Imre, Scot Martin, *Pacific Northwest National Laboratory*
2:15
- 5AC.7 Anthropogenic Influence on Particle Rebound and Phase State in Amazonia.** Adam Bateman, Zhaoheng Gong, Antonio O. Manzi, Paulo Artaxo, Rodrigo A. F. Souza, SCOT MARTIN, *Harvard University*
2:30
- 5AC.8 Surface Tension Modeling of Multicomponent Atmospheric Aqueous Aerosols Using Competitive and Assisted Adsorption.** HALLIE BOYER, Cari Dutcher, *University of Minnesota*
2:45

5CO COMBUSTION III
B 110-112

Francesco Carbone and Ramin Dastanpour, chairs

- 5CO.1 Thermophoresis and Differential Mobility Analysis of Soot Nuclei Sampled from a Premixed Flame.** FRANCESCO CARBONE, Alessandro Gomez, *Yale University*
1:00
- 5CO.2 Variation of Mass Absorption Coefficient and Internal Structure of Laboratory Generated Soot Particles with Mass.** RAMIN DASTANPOUR, Steven Rogak, Ali Momenimovahed, Kevin Thomson, Jason S. Olfert, *University of British Columbia*
1:15
- 5CO.3 Comparison of the Mass-Specific Absorption Spectra of Graphenes to Soots.** JAMES RADNEY, Christopher Zangmeister, Rian You, Courtney Grimes, Jessica Young, Michael Zachariah, Russell Dickerson, *National Institute of Standards and Technology*
1:30
- 5CO.4 Speciated Aerosol Emission Factors and AMS Mass-Spectral Profiles of South Asian Combustion Sources.** J. DOUG GOETZ, Michael Giordano, Chelsea Stockwell, Ted Christian, Rashmi Maharjan, Sagar Adhikari, Prakash Bhave, P.S. Praveen, Arnico Panday, Thilina Jayarathne, Elizabeth Stone, Robert J. Yokelson, Peter DeCarlo, *Drexel University*
1:45
- 5CO.5 Integrating Laboratory and Field Measurements to Reduce Uncertainties in Cookstove Emissions Estimates.** KELSEY BILSBACK, Rose Eilenberg, Kristen Fedak, Michael Johnson, Jack Kodros, Eric Lipsky, Christian L'Orange, Jennifer Peel, Jeffrey R. Pierce, Allen Robinson, R. Subramanian, John Volckens, *Colorado State University*
2:00
- 5CO.6 Burning Organic Aerosol Composition: Influence of Residential Woodstoves Technology.** AMELIE BERTRAND, Giulia Stefanelli, Emily Bruns, Coty Jen, Simone Pieber, Brice Temime-Roussel, Jay Slowik, Andre Prévôt, Allen H. Goldstein, Imad El

Haddad, Henri Wortham, Nicolas Marchand, *Aix-Marseille Université, CNRS, LCE FRE 3416*

- 5CO.7 Characterizing a Two-Angle Light Scattering Instrument for Concentration and Size Measurement of Diesel Particulates with Intra-Cycle Time Resolution.** POOYAN KHEIRKHAH, Jeff Farnese, Patrick Kirchen, Steven Rogak, *University of British Columbia*
- 5CO.8 On the Limits of Current Predictive Tools for an Efficient Control of Emissions from Agricultural Waste Combustion.** Imara Ibarra, Gaizka Aragon, Enrique Rojas, David Sanz, Igor Gomez, Jesus Rodriguez-Maroto, CRISTINA GUTIERREZ-CANAS, *University of the Basque Country, SPAIN*

5IA INDOOR AEROSOLS I
A 106

Linsey Marr and Brandon Boor, chairs

- 5IA.1 Mixing and Sink Effects of Air Purifiers on Indoor PM2.5 Concentrations: A Pilot Study of 8 Residential Homes in Fresno, California.** KAI-CHUNG CHENG, Hye-Kyung Park, Afua O. Tetteh, Yan Zheng, Nicholas T. Ouellette, Kari C. Nadeau, Lynn M. Hildemann, *Stanford University*
- 5IA.2 An Integrative, Non-Invasive and Cost-Effective Study of Residents' Health, Indoor Air Quality and Infrastructure Defects.** NIRMALA THOMAS, Leonardo Calderón, Mengyang Guo, MaryAnn Sorensen-Allacci, Deborah Plotnik, Jennifer Senick, Jie Gong, Clinton J. Andrews, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 5IA.3 Effect of Ventilation Type and Air Change Rate on Particle Transport in Breathing Zone between Office Occupants.** FIROZA OMAR, Shamia Hoque, *Univ. of South Carolina*
- 5IA.4 Determinants of Particle Concentration in Social Housing in Toronto.** JEFFREY SIEGEL, Alireza Mahdavi, *University of Toronto*
- 5IA.5 Measuring Penetration Factors of Fine and Ultrafine Particles in Single Family Homes before and after Weatherization Retrofits.** HAORAN ZHAO, Brent Stephens, *Illinois Institute of Technology*
- 5IA.6 Real-Time Measurements of Fluorescent Biological Aerosol Particles in the Infant Near-Floor Microenvironment in a Child Development Laboratory School.** TIANREN WU, Brandon E. Boor, *Purdue University*

5IA.7 Update on Aerosol Sampling Experiment on the International Space Station. MARIT
2:30 MEYER, Gary Casuccio, *NASA Glenn Research Center*

**5IA.8 Spatial Mapping of Indoor Particulate Matter Concentrations Using Wireless Network
of Low-Cost Dust Sensors.** SAMEER PATEL, Jiayu Li, Apoorva Pandey, Rajan Chakrabarty,
2:45 Pratim Biswas, *Washington University in St Louis*

SIM INSTRUMENTATION AND METHODS V
B 113-114

Jian Wang and Chongai Kuang, chairs

**5IM.1 Mobility Spectrometer Inverted Drift Tube Design for Classification of
Submicrometric Sized Particles at Atmospheric Pressures.** MD MINAL NAHIN, Carlos
1:00 Larriba-Andaluz, *IUPUI*

5IM.2 Rapid Measurement of Particle Hygroscopicity. TAMARA PINTERICH, Steven Spielman,
1:15 Susanne Hering, Jian Wang, *Brookhaven National Laboratory*

**5IM.3 A New Laminar-Flow, Water-Based Condensation Particle Counter with near 1-nm
Detection.** SUSANNE HERING, Gregory Lewis, Steven Spielman, Arantzazu Eiguren
1:30 Fernandez, Nathan Kreisberg, Chongai Kuang, Michel Attoui, *Aerosol Dynamics Inc*

**5IM.4 Characterization of a Diethylene Glycol Condensation Particle Counter to Rapidly
Measure Sub 3 Nanometer Atmospheric Clusters through Pulse Height Analysis.**
1:45 CHONGAI KUANG, *Brookhaven National Laboratory*

5IM.5 SEMS Transfer Function Calculation for Fast Up- and Down-scan Operation. MARK
2:00 KANAPARTHI, Suresh Dhaniyala, *Clarkson University*

5IM.6 Scanning DMA Data Inversion. HUAJUN MAI, Rebecca Schwantes, Kelvin Bates,
2:15 Weimeng Kong, John Seinfeld, Richard Flagan, *California Institute of Technology*

**5IM.7 Transfer Function of a New DMA and Its Use with a DEG-CPC for SMPS
Measurements Starting at 1nm.** JACOB SCHECKMAN, Mark R. Stolzenburg, Michel
2:30 Attoui, Hee-Siew Han, Juergen Spielvogel, *TSI Incorporated*

**5IM.8 Testing Performance of a Scanning Mobility Particle Sizer System using Mobility
Classified Challenge Aerosols.** MARK R. STOLZENBURG, Peter H. McMurry, *University
2:45 of Minnesota*

Albert Presto and Robert Kotchenruther, chairs

- 5SA.1 AuRo-SoFi: The Gold Standard for Organic Aerosol Source Apportionment Using ACSM Data.** 1:00 ANDRE PRÉVÔT, Francesco Canonaco, Yuliya Sosedova, Kaspar Rudolf Daellenbach, Imad El Haddad, Carlo Bozzetti, Athanasia Vlachou, Jay Slowik, Urs Baltensperger, *Paul Scherrer Institute*
- 5SA.2 Quantitative Analysis of Long-term Source Contributions to the Organic Aerosol in Switzerland.** 1:15 KASPAR RUDOLF DAELLENBACH, Giulia Stefanelli, Imad El Haddad, Carlo Bozzetti, Athanasia Vlachou, Paula Fermo, Raquel Gonzalez, Andrea Piazzalunga, Christina Colombi, Francesco Canonaco, Jay Slowik, Urs Baltensperger, Andre Prévôt, *Paul Scherrer Institute*
- 5SA.3 Source Apportionment of Organic Aerosols in Paris (France) Using Offline-AMS Analysis and Validation of Factors through the Use of External Markers.** 1:30 DEEPCHANDRA SRIVASTAVA, Olivier Favez, Nicolas Bonnaire, Kaspar Rudolf Daellenbach, Benjamin Guy Jacques Chazeau, Andre Prévôt, Imad El Haddad, Emilie Perraudin, Valérie Gros, Eric Villenave, Alexandre Albinet, *INERIS/EPOC, Université Bordeaux, France*
- 5SA.4 Source Apportionment of Time and Size Resolved Ambient Particulate Matter Measured with a Drum Impactor at a European Air Pollution Hot Spot.** 1:45 Petra Pokorná, Jan Hovorka, Yongjing Zhao, Steven Cliff, Pentti Paatero, PHILIP K. HOPKE, *Clarkson University*
- 5SA.5 Using the Association with Nitrogen Dioxide to Apportion the Primary and Secondary Sources of Airborne Nitrated Polycyclic Aromatic Hydrocarbons (NPAHs).** 2:00 YAN LIN, Xinghua Qiu, Yifang Zhu, *University of California Los Angeles*
- 5SA.6 A Quantitative Assessment of Source Contributions to Fine Particulate Matter (PM_{2.5})-bound Polycyclic Aromatic Hydrocarbons (PAHs) and Their Nitrated and Hydroxylated Derivatives in Hong Kong.** 2:15 YIQIU MA, Yubo Cheng, Xinghua Qiu, Yan Lin, Jing Cao, Di Hu, *Hong Kong Baptist University*
- 5SA.7 Source Apportionment of Ambient Particle Number Concentrations in Central Los Angeles Using Positive Matrix Factorization (PMF).** 2:30 MOHAMMAD SOWLAT, Sina Hasheminassab, Constantinos Sioutas, *University of Southern California*
- 5SA.8 Organic Aerosol Sources Determined by Molecular Markers Observed during the St. Louis Air Quality Regional Study.** 2:45 MICHAEL WALKER, Yaping Zhang, Xiaochen Zuo, Raul

Martinez, Dhruv Mitroo, Munkhbayar Baasandorj, Lu Hu, Dylan Millet, Jay Turner, Brent Williams, *Washington University in St. Louis*

5UA URBAN AEROSOLS V

B 117-119

Michael Kleeman and Andrey Khlystov, chairs

- 5UA.1 In-use Heavy-duty Diesel Vehicle Emission Measurements Used to Investigate the Durability of Diesel Particulate Filters.** 1:00 MOLLY HAUGEN, Gary Bishop, Donald Stedman, *University of Denver*
- 5UA.2 Effects of Particle Filters and Selective Catalytic Reduction on In-Use Heavy-Duty Diesel Truck Emissions.** 1:15 CHELSEA V. PREBLE, Troy Cados, Robert Harley, Thomas Kirchstetter, *University of California, Berkeley*
- 5UA.3 Exposure to Outdoor Ultrafine Particles: Role of Traffic and Atmospheric New Particle Formation.** 1:30 SHAHZAD GANI, Kyle Messier, Joshua Apte, *University of Texas at Austin*
- 5UA.4 Understanding Ultrafine Particulate Emissions & Dispersion from Wastewater Treatment Processes in an Urban Environment.** 1:45 PEDRO PIQUERAS, Robiul Md Islam, Fengying Li, Jill Luo, Mark Matsumoto, Elizabeth Stone, Akua Asa-Awuku, *University of California, Riverside*
- 5UA.5 Role of Automobile Exhaust on the Photoreductive Solubilization of Atmospheric Iron.** 2:00 JOHN HAYNES, Eva Cutler, Brian Majestic, *University of Denver*
- 5UA.6 Deposition and Washoff of Atmospheric Trace Metals and Anions from Two Large Building Roofs.** 2:15 ALEXANDER JOHNSON, Cliff Davidson, *Syracuse University*
- 5UA.7 Uncovering an Unexpected Source of Atmospheric Lead Particle Hotspots in Delhi India.** 2:30 ANDREW AULT, Hongru Shen, Thomas Peters, Gary Casuccio, Traci Lersch, Roger R. West, Amit Kumar, Naresh Kumar, *University of Michigan*
- 5UA.8 Municipal Solid Waste Burning: Discoloring the Taj Mahal and Human Health Impacts in Agra.** 2:45 RAJ LAL, Ajay Nagpure, Lina Luo, Sachchida Tripathi, Anu Ramaswami, Michael Bergin, Armistead G. Russell, *Georgia Institute of Technology*

Wednesday 3:00 PM - 3:30 PM

Coffee Break

Wednesday 3:30 PM - 5:00 PM

Session 6: Platform

6AC AEROSOL CHEMISTRY VI - SOA FORMATION AND COMPOSITION 2

A 105

Kelley Barsanti and Provat Saha, chairs

6AC.1 Volatility and Particle-phase Hydrolysis of Alkyl Nitrates from Anthropogenic Alkanes

3:30 **and Alkenes.** DONGYU WANG, Alexander Bui, Sahil Bhandari, Jeffrey Bean, Surya Dhulipala, Henry Wallace, Robert Griffin, Lea Hildebrandt Ruiz, *University of Texas at Austin*

6AC.2 Evaluation of Anthropogenic Secondary Organic Aerosol Tracers. IBRAHIM AL-

3:45 NAIEMA, Elizabeth Stone, *University of Iowa*

6AC.3 Unified Method for Predicting Aerosol Formation and Composition from Aromatic

4:00 **Hydrocarbon under NOX Conditions in Urban Atmosphere.** LIJIE LI, Ping Tang, David R. Cocker III, Kelley Barsanti, *University of California, Riverside*

6AC.4 Measurement of Semivolatile and Intermediate-Volatility Organic Compounds

4:15 **(S/IVOC) with a Novel Thermal Desorption Electron Impact Mass Spectrometer.** JONATHAN FRANKLIN, Gabriel Isaacman-VanWertz, Jesse Kroll, *MIT*

6AC.5 On-line and Batch Lab Measurements of Primary and Photochemically Aged Biomass

4:30 **Cook-stove Emissions.** STEPHEN REECE, Aditya Sinha, Roshan Wathore, Andrew Grieshop, *North Carolina State University*

6AC.6 Known and Newly Identified Semi-Volatile Organic Compounds from Biomass

4:45 **Burning in Amazonia: Variability and Sources.** REBECCA WERNIS, Lindsay Yee, Gabriel Isaacman-VanWertz, Nathan Kreisberg, Suzane de Sá, Yingjun Liu, Scot Martin, Lizabeth Alexander, Brett Palm, Weiwei Hu, Pedro Campuzano-Jost, Douglas Day, Jose-Luis Jimenez, Paulo Artaxo, Juarez Viegas, Antonio O. Manzi, Rodrigo A. F. Souza, Susanne Hering, Allen H. Goldstein, *University of California, Berkeley*

6CC AEROSOLS CLOUDS AND CLIMATE I

B 110-112

Allison Aiken and Rawad Saleh, chairs

- 6CC.1 Brown Carbon Aerosol in Fresh and Aged Biomass Burning Emissions: Contribution of Individual Compounds.** ANDREY KHLYSTOV, Vera Samburova, Jessica Connolly, Chiranjivi Bhattarai, Deep Sengupta, Adam Watts, Hans Moosmuller, *Desert Research Institute*
3:30
- 6CC.2 Real Time Absorption Spectra of Smoke from Smoldering Combustion.** Rian You, James Radney, Michael Zachariah, CHRISTOPHER ZANGMEISTER, *National Institute of Standards and Technology*
3:45
- 6CC.3 Measurements of Black Carbon and Aerosol Absorption during Global Circumnavigation and Arctic Campaigns.** GRISA MOCNIK, Luka Drinovec, Primoz Vidmar, Grega Razorsek, Matevz Lenarcic, *Aerosol d.o.o., Slovenia*
4:00
- 6CC.4 Spectral Dependence of Black Carbon Aerosol Optical Properties and Implications for Direct Radiative Forcing.** RAJAN CHAKRABARTY, Yu Yang, Ian Arnold, Apoorva Pandey, William Heinson, *Washington University in St Louis*
4:15
- 6CC.5 Fractal Morphology of Black Carbon Aerosol Enhances Absorption in the Thermal Infrared Wavelengths.** WILLIAM HEINSON, Rajan Chakrabarty, *Washington University in St. Louis*
4:30
- 6CC.6 Two Wrongs Do Make a Right: The Interplay Between Assumed Morphology and the Direct Radiative Effect of Light-absorbing Organic Aerosol.** RAWAD SALEH, Allen Robinson, Neil Donahue, Peter Adams, *Carnegie Mellon University*
4:45

6IA INDOOR AEROSOLS II
A 106

Lynn Hildemann and Marina Vance, chairs

- 6IA.1 Characterization of Emissions from the Combustion of Solid Fuels Used for Heating in the Navajo Nation.** WYATT CHAMPION, Lea Connors, Lupita Montoya, *University of Colorado Boulder*
3:30
- 6IA.2 Impact of Environmental Tobacco Smoke on Membrane-Based Energy Recovery Ventilators.** ALEXANDER SYLVESTER, Amin Engarnevis, Ryan Huizing, Steven Rogak, Sheldon Green, *University of British Columbia*
3:45

6IA.3 PM2.5 Concentration inside Smoking and Non-smoking Hospitality Venues: Results from a Study Examining 20 Matched Pairs in Atlanta, Georgia. ROBY GREENWALD, Amanda Renée Gailey, Rodney Lyn, *Georgia State University*

6IA.4 Indoor Indirect Emissions from Smoking in a Summertime Classroom. ANITA AVERY, Michael Waring, Peter DeCarlo, *Drexel University*

6IA.5 Buildup Rate of Organic Film on Household Surfaces Estimated from Particle Production from the Heated Surfaces. LANCE WALLACE, Wayne Ott, Charles Weschler, Alvin Lai, *EPA - retired*

6IA.6 Evaluation of the Emissions Performance of Natural and Forced Draft Cookstoves in Rural Malawi (Field) and Laboratory Settings. Roshan Wathore, Kevin Mortimer, ANDREW GRIESHOP, *North Carolina State University*

6IM INSTRUMENTATION AND METHODS VI
B 113-114

Hiromu Sakurai and Arantzazu Eiguren-Fernandez, chairs

6IM.1 An On-line Monitor of the Oxidative Capacity of Airborne Particulate Matter (o-MOCA). ARANTZAZU EIGUREN FERNANDEZ, Nathan Kreisberg, Susanne Hering, *Aerosol Dynamics Inc*

6IM.2 Comparison of Aerosolization Devices for Colloidal Particles. SIQIN HE, Derek Oberreit, *Kanomax FMT, Inc.*

6IM.3 Aerosol Concentration Calibration and Controlled Delivery for 1 to 8 Micron. 4:00 VASANTHI SIVAPRAKASAM, Jay D. Eversole, David Silcott, Miles Owen, John E. Tucker, Jesse Linnell, Frank MacDonald, Anthony Woods, *Naval Research Laboratory*

6IM.4 Experimental Evaluation of Mass Measurement Accuracy of Two Commercial Aerosol Particle Mass Analyzers in Sub-100 nm Range. HIROMU SAKURAI, Yoshiko Murashima, *AIST*

6IM.5 Development of a Universal Aerosol Conditioning Device for Particle Measurement. 4:30 Kerry Chen, Charles Robert Koch, JASON S. OLFERT, *University of Alberta*

6IM.6 Application of Centrifugal Filter to Measurement of Aerosol Particle Size Distribution. 4:45 YUTAKA TANAKA, Kosuke Shimazu, Hyun-Jin Choi, Mikio Kumita, Takafumi Seto, Yoshio Otani, *Kanazawa University*

6SA SOURCE APPORTIONMENT II
B 115-116

Andre Prevot and Lelia Hawkins, chairs

- 6SA.1 The Relative Importance of Tailpipe and Non-tailpipe Emissions on the Oxidative Potential of Ambient Particles in Los Angeles, CA.** FARIMAH SHIRMOHAMMADI, Sina Hasheminassab, Dongbin Wang, James Schauer, Martin Shafer, Ralph J. Delfino, Constantinos Sioutas, *University of Southern California*
3:30
- 6SA.2 Source Apportionment Algorithm for an Urban Micro-environment Based on Sub-micrometer Particle Number Concentration, Equivalent Black Carbon and PM2.5 Mass Concentration Measurements.** RICARDO MORALES BETANCOURT, Boris Galvis, Sivaraman Balachandran, Julian David Gomez Tibaquirá, *Universidad de los Andes*
3:45
- 6SA.3 Seasonal Source Apportionment of Primary and Secondary Fine Particulate Matter in China Using a Source-oriented Air Quality Model.** JIANLIN HU, Qi Ying, Hongliang Zhang, *Nanjing University of Information Science & Technology*
4:00
- 6SA.4 Background PM2.5 Source Apportionment at Cheeka Peak Atmospheric Observatory in the Olympic Mountain Range.** ODELLE HADLEY, *Olympic Region Clean Air Agency*
4:15
- 6SA.5 Spatial Variability of Traffic-related PM2.5 Chemical Species and Sources: Comparison between Near-road and Background Environments in Metropolitan Toronto, Canada.** CHEOL-HEON JEONG, Jon M. Wang, Nathan Hiker, Jerzy Debosz, Uwayemi Sofowote, Tony Munoz, Dennis Herod, Ewa Dabek-Zlotorzynska, Greg J. Evans, *SOCAAR, University of Toronto*
4:30
- 6SA.6 A Hybrid Source-receptor Modeling Approach for Estimating Source Contributions to Trace Metals in Airborne Particulate Matter.** QI YING, Jianlin Hu, Hongliang Zhang, *Texas A&M University*
4:45
-

6UA URBAN AEROSOLS VI
B 117-119

Yele Sun and Kristina Wagstrom, chairs

- 6UA.1 Mapping Urban Air Quality in Oakland, CA with Google Street View Vehicles.** JOSHUA APTE, Kyle Messier, Shahzad Gani, Melissa M. Lunden, Roel Vermeulen, Christopher Portier, Steven Hamburg, *University of Texas at Austin*
3:30
- 6UA.2 Application of Google Street View Cars for Air Pollution Measurements at Community, Urban, and Regional Scales: Denver CO.** PAUL A. SOLOMON, Surender
3:45

Kaushik, Andrew Whitehill, Ashok K. Singh, Melissa M. Lunden, Nick Staubach, Alexandra Teste, Davida Herzl, *U.S. EPA, Office of Research and Development, Las Vegas, NV*

6UA.3 Three Dimensional Air Sampling in TAMUMAP: A Campus Collaborative for Urban Health. 4:00 SAMUEL BECK, Xingmao Ma, Juan Pedro Maestre, Yassin Hassan, Kerry Kinney, Maria D. King, *Texas A&M University*

6UA.4 Air Quality Impacts of Widespread Adoption of Cool Roofing Technology in the South Coast Air Basin: Ozone and PM_{2.5}. 4:15 SCOTT A. EPSTEIN, Sang-Mi Lee, Aaron Katzenstein, Salvatore Farina, Pouya Vahmani, George Ban-Weiss, Philip Fine, *South Coast Air Quality Management District*

6UA.5 Influence of Future Low Carbon Energy Scenarios on California Air Pollution and Health. 4:30 Christina Zapata, Christopher Yang, Sonia Yeh, MICHAEL KLEEMAN, *University of California Davis*

6UA.6 Clustering of Time-resolved Raman Spectra Measured Using an Aerosol Raman Spectrometer. 4:45 DAVID DOUGHTY, Steven Hill, *US Army Research Lab*

Wednesday 5:00 PM - 6:00 PM
Working Group Meetings 2

Wednesday 6:00 PM - 7:00 PM
Annual Business Meeting

Thursday

Thursday 8:00 AM - 9:15 AM
Plenary III

8:00 **Electronic Cigarettes: Evidence, Uncertainty and Policy** Jonathan Samet, *University of Southern California*

Moderator Anthony Wexler, *University of California - Davis*

9:00 **Sinclair Award Presentation, Mercer Award Announcement** Donald Dabdub, *University of California - Irvine*

Thursday 9:00 AM - 3:30 PM
Exhibits Open

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

Thursday 9:45 AM - 11:30 AM
Session 7: Platform

7BA BIOAEROSOLS I - AMBIENT BIOAEROSOL MONITORING
B 115-116

Mark Hernandez and Lindsay Marr, chairs

7BA.1 Red Tide Bioplume Assessment during BOAS Campaign: Understanding Bioaerosols
9:45 **Abundance and Cloud Lifecycle.** ARNALDO NEGRON-MARTY, Natasha DeLeon-Rodriguez, Natasha Hodas, Matthew Coggon, Kelvin Bates, Samantha M. Waters, Armin Sorooshian, Hafliði Jonsson, John Seinfeld, Richard Flagan, Kostas Konstantinidis, Athanasios Nenes, *Georgia Institute of Technology*

7BA.2 Cloud Condensation and Ice Nucleation Phenotypic Analyses of Taxonomically
10:00 **Diverse Bacteria Isolated from Rainwater.** SAMANTHA M. WATERS, Sara Purdue, Smruthi Karthikeyan, James Hite, Kostas Konstantinidis, Athanasios Nenes, *Georgia Institute of Technology*

7BA.3 Physical Chemistry of Biological Particles in Amazonia. SWARUP CHINA, Bingbing Wang, Johannes Weis, Libor Kovarik, Luciana Rizzo, Glauber Cirino, Paulo Artaxo, Mary Gilles, Alexander Laskin, *Pacific Northwest National Laboratory*

7BA.4 Sugar Polyol and Bioaerosol Concentration Variations Influenced by Rainy and Dry
10:30 **Periods in a Semi-Arid Rocky Mountain Pine Forest.** MARIE GOSSELIN, Chathurika Rathanyake, Ian Crawford, Christopher Pöhlker, Janine Frohlich-Nowoisky, Beatrice

Schmer, Guenter Engling, Martin Gallagher, Elizabeth Stone, Ulrich Poeschl, J. Alex Huffman, *University of Denver*

7BA.5 Outdoor Field Testing of a Passive Bioaerosol Sampler Based on Polarized, Ferroelectric Polymer Films. 10:45 JENNIFER THERKORN, Nirmala Thomas, Jerry Scheinbeim, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

7BA.6 Metagenomic Investigation of African Dust Events in Puerto Rico Across Multiple Years. 11:00 SAMANTHA M. WATERS, Sara Purdue, Natasha DeLeon-Rodriguez, Roy Armstrong, Yasmin Detres, Athanasios Nenes, Kostas Konstantinidis, *Georgia Institute of Technology*

7BA.7 Comparison of Evolving Fluorescence Signatures of Biological Particles Measured with an SPFS, UV APS, and WIBS as a Function of Aging in a Rotating Drum. 11:15 SEAN KINAHAN, Yong-Le Pan, Don Collins, Matthew Tezak, Keiko Salazar, Mark Coleman, Andres Sanchez, Joshua Santaripa, *Sandia National Laboratories*

7CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE I
A 106

Shantanu Jathar and Rajan Chakrabarty, chairs

7CA.1 Broadband Measurements of the Mass Absorption Coefficient of Soot. Lindsay 9:45 Renbaum-Wolff, Al Fischer, Taylor Helgestad, Andrew Lambe, Geoff Smith, Christopher Cappa, Arthur J. Sedlacek, Paul Davidovits, TIMOTHY ONASCH, Andrew Freedman, *Aerodyne Research, Inc.*

7CA.2 Effect of Thermal Denuding on Soot Aggregates Structure. JANARJAN BHANDARI, 10:00 Swarup China, Timothy Onasch, Lindsay Renbaum-Wolff, Paul Davidovits, Eben Cross, Adam Ahern, Manvendra Dubey, Claudio Mazzoleni, *Michigan Technological University*

7CA.3 Formation of Secondary Organic Coating on BC Particles and Its Impact on Mixing State of Carbonaceous Aerosol in the Urban Atmosphere. 10:15 ALEX K. Y. LEE, Raghu Betha, Chia-Li Chen, Jun Liu, Derek Price, Xiaolu Zhang, Jonathan Abbatt, Christopher Cappa, Lynn Russell, *University of Toronto*

7CA.4 Primary and Secondary Organic Functional Groups in Vehicle Emissions by Mobile Sources Testing. 10:30 LYNN RUSSELL, Fabian Hagen, Elizabeth Singh, Jun Liu, Yunliang Zhao, Rawad Saleh, Greg Drozd, Allen H. Goldstein, Allen Robinson, *Scripps Institution of Oceanography*

7CA.5 Distinct Seasonal Differences in Secondary Organic Aerosol Formation from In-situ Oxidation of Near-highway Air. PROVAT SAHA, Stephen Reece, Andrew Grieshop, North Carolina State University

7CA.6 Study of Vehicle-emitted Nonvolatile Particles in a Traffic Tunnel Using a Thermodenuder: Measurements and Modeling. XIANG LI, Yutong Guo, Timothy Dallmann, Satbir Singh, Albert A. Presto, Carnegie Mellon University

7CA.7 Climate Impact of Gasoline Direct Injection (GDI) Vehicles. GEORGES SALIBA, Rawad Saleh, Yunliang Zhao, Albert A. Presto, Andrew Lambe, Bruce Frodin, Satya Sardar, Hector Maldonado, Andrew May, Allen Robinson, Carnegie Mellon University

7CC AEROSOLS, CLOUDS, AND CLIMATE II
B 110-112

Luke Ziemba and Akua Asa-Awuku, chairs

7CC.1 Microphysics of Amazonian Aerosol under Background Conditions. JIAN WANG, Radek 9:45 Krejci, Scott Giangrande, Chongai Kuang, Henrique Barbosa, Joel Brito, Samara Carbone, Xuguang Chi, Jennifer Comstock, Florian Ditas, Jost Lavric, Hanna Manninen, Fan Mei, Daniel Moran-Zuloaga, Christopher Pöhlker, Mira Pöhlker, Jorge Saturno, Beat Schmid, Rodrigo A. F. Souza, Stephen Springston, Jason Tomlinson, Tami Toto, David Walter, Daniela Wimmer, et al., Brookhaven National Laboratory

7CC.2 Observations of the Marine Boundary Layer in the Remote North Atlantic: The Impact of Limited Nuclei on Cloud Properties. EWAN CROSBIE, Richard Moore, Luke Ziemba, Gao Chen, Johnathan Hair, Michael Shook, Kenneth Thornhill, Edward Winstead, Armin Wisthaler, Bruce Anderson, NASA

7CC.3 Seasonal Variation in Remote Marine Aerosol and Cloud Condensation Nuclei Relevant for Cloud Formation. RICHARD MOORE, Ewan Crosbie, Luke Ziemba, Timothy A. Berkoff, Gao Chen, Chelsea Corr, Johnathan Hair, Chris Hostetler, Michael Shook, Kenneth Thornhill, Edward Winstead, Bruce Anderson, NAAMES Science Team, NASA Langley Research Center

7CC.4 Revising the Hygroscopicity of Inorganic Sea Spray Aerosol. PAUL ZIEGER, Olli 10:30 Väisänen, Joel Corbin, Daniel Partridge, Sandra Bastelberger, Mehrnoush Mousavi-Fard, Caroline Leck, Evelyne Hamacher-Barth, Martin Gysel, Douglas Nilsson, Bernadette Rosati, Annele Virtanen, Ulrich Krieger, Ilona Riipinen, Matthew Salter, Stockholm University

7CC.5 What All Organic Aerosols Serving as Ice Nuclei Have in Common. SARAH BROOKS,
10:45 Kristen Collier, *Texas A&M University*

**7CC.6 Quantifying the Sources of Atmospheric Ice Nucleating Particles from Prescribed
Burns and Wildfires.** GREGORY SCHILL, Ezra Levin, Kaitlyn J. Suski, Paul DeMott, Sonia
11:00 Kreidenweis, *Colorado State University*

**7CC.7 Alteration of the Ice Nucleating Properties of Biological and Biomass Burning
Particles.** Michael Polen, Hassan Beydoun, Emily Lawlis, Leif Jahn, Lydia Jahl, RYAN
11:15 SULLIVAN, *Carnegie Mellon University*

7EC ELECTRONIC CIGARETTES I -- FORMULATION AND PARTICLE GENERATION
B 113-114

Kay Wanke and Anthony Wexler, chairs

7EC.1 Toxicant Production in the Electronic Cigarette Reaction Vessel. ROBERT STRONGIN,
9:45 David Peyton, James F. Pankow, Robert Jensen, Wentai Luo, Jorge Escobedo, Anna
Duell, James Salamanca, *Portland State University*

**7EC.2 Partition of Free Base and Protonated Nicotine in Electronic Cigarette Liquids and
Aerosols.** Ahmad El Hellani, Rachel El Hage, Rima Baalbaki, Rola Salman, Soha Talih,
10:00 Alan Shihadeh, NAJAT A. SALIBA, *American University of Beirut*

**7EC.3 Lab Studies to Determine Gas-to-Particle Partitioning of Emissions from Electronic
Cigarettes.** CLAIRE FORTENBERRY, Brent Williams, Raul Martinez, Walton Sumner,
10:15 Steven Brody, *Washington University in St Louis*

7EC.4 Analysis of Aerosol Size Distribution Measurement of Electronic Cigarettes Emissions.
10:30 VLADIMIR MIKHEEV, Marielle Brinkman, Alexander Ivanov, Sydney Gordon, Pamela I.
Clark, *Battelle Public Health Center for Tobacco Research*

**7EC.5 Thermodynamics and Transport Phenomena Governing Electronic Cigarette Aerosol
Emissions.** Soha Talih, Zainab Balhas, Rola Salman, Rachel El Hage, Nareg
10:45 Karaoghlanian, Ahmad El Hellani, Mohamad Baassiri, Ezzat Jaroudi, Thomas Eissenberg,
Najat A. Saliba, ALAN SHIHADDEH, *American University of Beirut*

7EC.6 An Exploration of the Factors Affecting E-Cigarette Particle Size Distributions. Jordan
11:00 Berger, Phoebe Belser, Mark Daley, Timothy Raymond, James Baish, DABRINA
DUTCHER, *Bucknell University*

7EC.7 Chemical Composition of the Aerosols Emitted from Heated-Tobacco Smoking
11:15 **Devices, Electronic Cigarettes and Regular Cigarettes.** ARIAN SAFFARI, Ario Ruprecht, Cinzia De Marco, Paolo Pozzi, Roberto Boffi, Dane Westerdahl, Sina Hasheminassab, Constantinos Sioutas, *University of Southern California*

7IM INSTRUMENTATION AND METHODS VII
B 117-119

William Herzog and Jordan Krechmer, chairs

7IM.1 Low Frequency Shift Macro-Raman Spectroscopy for Analysis of Non-uniform Multi-component Powders. Hui Wang, Lisa Williams, Susan Hoe, David Lechuga-Ballesteros, David Barona, REINHARD VEHRING, *University of Alberta*

7IM.2 Infrared Elastic Scattering Spectroscopy of Individual Aerosol Particles. WILLIAM 10:00 HERZOG, Jonathan Richardson, Brian Saar, David Wolinski, Jason Jong, Jay D. Eversole, *Lincoln Laboratory, Massachusetts Institute of Technology*

7IM.3 Using Aluminum Foil Impaction Substrates for Elemental Analysis of Airborne Particulate Matter Samples. WEI XUE, Jian Xue, Peter Green, Michael Kleeman, *University of California, Davis*

7IM.4 Development of a Real-time Aerosol Mass Distribution Instrument. MODI CHEN, 10:30 Francisco Romy, Lin Li, Amir Naqwi, Virgil Marple, *MSP Corporation*

7IM.5 A New Portable Dual Smog Chamber Facility with UV Lights for Field Studies. 10:45 CHRISTOS KALTSOLOUDIS, Evangelos Louvaris, Epameinondas Tsiligiannis, Evangelia Kostenidou, Spyros Pandis, *University of Patras, Patra, Greece*

7IM.6 Quantification of Gas-Wall Partitioning in Teflon Environmental Chambers and Its Effects on Gas-Wall Partitioning. JORDAN KRECHMER, Demetrios Pagonis, Paul Ziemann, Jose-Luis Jimenez, *University of Colorado-Boulder*

7IM.7 Controlled NO and NO₂ Production via O(1D)-N₂O Reactions for Use in Oxidation Flow Reactor Studies of SOA Formation Pathways. ANDREW LAMBE, Paola Massoli, John B. Nowak, Manjula Canagaratna, Conner Daube, Timothy Onasch, Lindsay Renbaum-Wolff, Gabriel Isaacman-VanWertz, Jesse Kroll, John Jayne, Paul Davidovits, Charles Kolb, Douglas Worsnop, William Brune, *Aerodyne Research, Inc.*

7NS EFFECTS OF NOX AND SO2 ON BVOC OXIDATION AND ORGANIC AEROSOL FORMATION I
A 105

Nga Lee Ng and Steve Brown, chairs

7NS.1 Oxidation of BVOCs and SOA Formation above and below a Forest Canopy. Benjamin Schulze, Henry Wallace, ROBERT GRIFFIN, *Rice University*

7NS.2 SOA from Nitrate Radical Oxidation of Monoterpenes: Effects of Temperature, Humidity, Photochemical Aging on Aerosol Mixing and Evaporation. NGA LEE NG, Christopher Boyd, Theodora Nah, Lu Xu, *Georgia Institute of Technology*

7NS.3 The Role of Emissions Controls on Aerosol pH over a Decade (2001-2011) in the United States. PETROS VASILAKOS, Armistead G. Russell, Athanasios Nenes, *Georgia Institute of Technology*

7NS.4 Molecular Characterization of Biogenic SOA Using Online Extractive Electrospray Ionization Mass Spectrometry: On the Fate of Condensed Phase ELVOC. FELIPE LOPEZ-HILFIKER, Veronika Pospisilova, Ugo Molteni, Mao Xiao, Josef Dommen, Andre Prévôt, Urs Baltensperger, Jay Slowik, *Paul Scherrer Institute*

7NS.5 Impact of Anthropogenic Pollutants on the Formation and Fate of Highly Oxidized Multifunctional Compounds (HOMs) Formed from the Ozonolysis of alpha-pinene. MATTHIEU RIVA, Otso Peräkylä, Lauriane Quéléver, Liine Heikkinen, Olga Garmash, Mikko Äijälä, Matti Rissanen, Mikael Ehn, *University of Helsinki*

7NS.6 New Particle Formation from BVOCs and Sulphuric acid in the CLOUD Chamber at Different Levels of NH₃ and NO_x. KATRIANNE LEHTIPALO, Chao Yan, Robert Wagner, Lubna Dada, Jenni Kontkanen, Tuomo Nieminen, Jonathan Duplissy, Hamish Gordon, Jasper Kirkby, Urs Baltensperger, Markku Kulmala, *University of Helsinki*

7NS.7 Interaction between SO₂ and Criegee Intermediates in Monoterpene Ozonolysis and Effects on Secondary Organic Aerosol Formation. JIANHUI YE, Arthur Chan, *University of Toronto*

Thursday 11:30 AM - 12:15 PM
Light Take-Away Lunch

Thursday 12:15 PM - 1:45 PM
Session 8: Poster

Albert Presto and Jeff Pierce, chairs

- 8AE.1 Understanding Children's Exposure to Trace Metals in Particulate Matter at Home.** JESSICA SAGONA, Stuart Shalat, Zuo Cheng Wang, Maya Ramagopal, Marta Hernandez, Kathleen Black, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 8AE.2 Aerosol Generation from Rapid Concrete Failure.** Eric Heichelheim, Mija Hubler, LUPITA MONTOYA, *University of Colorado Boulder*
- 8AE.3 Impact of Residential Heating to Temporal/Spatial Variability of Size-segregated Aerosol Mass and Number at the Urban Microscale Level.** JAN BENDL, Jan Hovorka, Tereza Bartonova, Vlasta Svecova, Cecilia Leoni, Miroslav Klán, Lubos Matejicek, *Charles University in Prague*
- 8AE.4 Aerosol Emission from Low-cost Metal and Thermoplastic 3-D Fabrication.** JUN WANG, Kevin O'Neill, Jose Muniz, Joshua Pearce, David L. Johnson, *University of Oklahoma*
- 8AE.5 Industry Originated Particles, 36 nm in Diameter, Highly Enriched with PAHs, Significantly Contribute to Human Exposure at a European Air Pollution Hot-spot.** JAN HOVORKA, Cecilia Leoni, Veronika Docekalova, Tomas Cajthaml, Sona Marvanova, *Charles University in Prague*
- 8AE.6 An Automated Microenvironmental Aerosol Sampler (AMAS) For Location/Activity Exposure Assessment.** CASEY QUINN, Dan Miller-Lionberg, Jaruwat Mettakoonpitak, John Mehaffy, Sheryl Magzamen, Charles Henry, John Volckens, *Colorado State University*
- 8AE.7 Development and Evaluation of an Ultrasonic Personal Aerosol Sampler (UPAS).** JOHN VOLCKENS, Casey Quinn, David Leith, John Mehaffy, Charles Henry, Dan Miller-Lionberg, *Colorado State University*
- 8AE.8 Indoor-Outdoor Relationship of PM And Health Risk Assessment.** Ruchi Sharma, RAJASEKHAR BALASUBRAMANIAN, *National University of Singapore*
- 8AE.9 Design and Evaluation of Micro-Well Collector for Personal Aerosol Exposure Monitor.** HE JIAYANG, Makhsous Sep, Igor Novosselov, *University of Washington*

- 8AE.10 Size-Selective Traceable Aerosol Particles to Assess Aerosol Transport in Field Tests.** CYNTHIA J. KAESER, George R. Farquar, Matthias Frank, A. Daniel Jones, Elizabeth K. Wheeler, *Lawrence Livermore National Laboratory*
- 8AE.11 Quantitative Analysis of Nanoparticle Size Distribution with Scanning Electron Microscope for Personal Exposure Measurement.** MAROMU YAMADA, Sheng-Chieh Chen, David Y. H. Pui, *University of Minnesota*
-

8BA BIOAEROSOLS II - POSTERS
EXHIBIT HALL A

Mark Hernandez, chair

- 8BA.1 Assessing the Biological Threat Posed by Suicide Bombers.** Jerry Cabalo, KATELYNN STAFFORD, *Excet, Inc/Edgewood Chemical Biological Center*
- 8BA.2 Droplet Microfluidics Detector for Bioaerosols.** BRIAN DAMIT, *Johns Hopkins University Applied Physics Laboratory*
- 8BA.4 Capture Efficiency of Filters Against Airborne Pig Pathogen Models in an ASHRAE Standard 52.2 Test Duct.** VALÉRIE LÉTOURNEAU, Marie-Aude Ricard, Jean-Gabriel Turgeon, Laura Batista, Caroline Duchaine, *Université Laval, Canada*
- 8BA.5 Microbial Ice Nucleators Scavenged from the Atmosphere During Simulated Rain Events.** Regina Hanlon, Craig Powers, Kevin Failor, Boris Vinatzer, DAVID SCHMALE, *Virginia Tech*
- 8BA.6 Fluorescence and Sizing Properties of Individual Particles Associated with Dust and Non-Dust Events, Contrasting Cyprus and Barbados.** NICOLE SAVAGE, Christopher Pöhlker, Jean Sciare, J. Alex Huffman, *University of Denver, CO*
- 8BA.7 Understanding the Link between Meteorology and Speciated Abundance of Bioaerosols in an Urban Environment: A Comparison between Flow Cytometry and Real-Time Autofluorescence Measurements.** ARNALDO NEGRON-MARTY, Natasha DeLeon-Rodriguez, Samantha M. Waters, Luke Ziemba, Bruce Anderson, Michael Bergin, Kostas Konstantinidis, Athanasios Nenes, *Georgia Institute of Technology*
- 8BA.8 Making the "Invisible" Visible: Aerosol Collection into a Liquid followed by Concentration of the Sample for Rapid Microbiological Methods.** DAVID ALBURTY, Michael Hornback, Andrew Page, Ann Pakingham, *InnovaPrep LLC*

- 8BA.9 Spectral Intensity Bioaerosol Sensor (SIBS): Description and Updated Initial Characterization of a Novel Commercial Instrument for Spectrally-Resolved Fluorescence Measurements of Individual Particles.** NICOLE SAVAGE, Tobias Könemann, Gary Granger, Gavin McMeeking, Hang Su, Petya Yordanova, Roman Frohlich, Ulrich Poeschl, Christopher Pöhlker, J. Alex Huffman, *University of Denver, CO*
- 8BA.10 Investigation of Possible Transmission of Infectious Diseases via Contaminated Cell Phones.** CAIJIA XU, Maosheng Yao, *Peking University*
- 8BA.11 Fine Variability of Pollens, Fungal Spores and Bacteria during Spring 2016 in Cyprus Island.** DOMINIQUE BAISNEE, Roland Sarda-Esteve, Francois Fenaille, Minh Thang Le, Jean Sciare, Iasonas Stavroulas, Michel Thibaudon, Marc Peyraut, Christophe Bossuet, *CEA*
- 8BA.12 Comparison of RNA Analyses with Plaque Assays for Evaluating Virus Aerosol Collection Efficiency.** Xiao Jiang, Maohua Pan, Susanne Hering, John Lednický, CHANG-YU WU, Hugh Fan, *University of Florida*
- 8BA.13 Analysis of Optical Properties of Nitrated Proteins Potentially Relevant to the Atmosphere.** BENJAMIN E. SWANSON, Kyle Pierce, Amani Alhalwani, Emma Biesada, Anna Dondero, Marie Gosselin, Nicole Savage, J. Alex Huffman, *University of Denver*
- 8BA.14 Airborne Inactivation of Enveloped and Non-enveloped Viruses by a Packed Bed Non-thermal Plasma.** TIAN XIA, Abby Kleinheksel, Eric Monsu Lee, Zhong Qiao, Krista Wigginton, Herek Clack, *University of Michigan*

8CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE II
EXHIBIT HALL A

Chris Hennigan, chair

- 8CA.1 Comparison of Concentration of Carbonyl Compounds in Two Periods (2012-2013 vs 2014-2015) in Tijuana Airshed B.C..** DEISY SUGEY TOLEDO ARANGURE, Guillermo Rodríguez-Ventura, Ernesto Velez-Lopez, Alejandro Gomez, Jesus Guerrero-García, Mariela Ruiz, Bernabe Adolfo Ochoa Morimoto, Yazmin Adilenne Montoya Camacho, Alejandra Jaramillo Bernal, Melvis Vega Garcia, Fernando Ruiz Patiño, *Universidad Autonoma de Baja California, Tijuana, Mexico*
- 8CA.2 Reduction of Fe(III) by Soot.** Hector Casique, Ashleen Reddy, Casey Neumann, ANNE JOHANSEN, *Central Washington University*

- 8CA.3 Isolation and Quantification of Black Carbon to Study Climate Impacts.** ALLISON AIKEN, Manvendra Dubey, Rahul Zaveri, John Shilling, Alla Zelenyuk, Claudio Mazzoleni, Gavin McMeeking, Ezra Levin, Paul DeMott, Sonia Kreidenweis, *Los Alamos National Lab*
- 8CA.4 Indonesian Peatland Fires Contribution to Haze Pollution over Singapore in 2015.** SRI HAPSARI BUDISULISTIORINI, Matthieu Riva, Michael Williams, Takuma Miyakawa, Jing Chen, Jason Surratt, Mikinori Kuwata, *Nanyang Technological University*
- 8CA.5 Analysis into the Microphysical Properties and Behaviour of Black Carbon Aerosol.** JAMES BROOKS, *University of Manchester*
- 8CA.6 Effects of Secondary Organic Aerosol coating on the Morphological Properties of Soot Aggregates from Three Sources.** KAISER LEUNG, Elijah G. Schnitzler, Wolfgang Jaeger, Jason S. Olfert, *University of Alberta*
- 8CA.7 CARES 2010: Diurnal Variation in the Mixing State of Black Carbon Aerosols in Sacramento, CA.** R. SUBRAMANIAN, Janarjan Bhandari, Noopur Sharma, Swarup China, Claudio Mazzoleni, Rahul Zaveri, Adam Ahern, *Carnegie Mellon University*
- 8CA.8 Black and Brown Carbon at Duke Forest, A Biogenic Environment Impacted by Urban Influence.** R. SUBRAMANIAN, Antonios Tasoglou, Spyros Pandis, Andrey Khlystov, *Carnegie Mellon University*
- 8CA.9 The Effect of Aging on Brown Carbon Optical Properties Emitted from Biomass Pyrolysis.** MARIAM FAWAZ, Benjamin Brem, Tami Bond, *University of Illinois at Urbana Champaign*
- 8CA.11 Chemical Characterization of Water Soluble Organic Matter in Rural and Contrasting Urban Environments in the Southeastern United States.** LU XU, Hongyu Guo, Rodney J. Weber, Nga Lee Ng, *Georgia Institute of Technology*
- 8CA.12 Chemical Characterization of Atmospheric Semivolatile Organic Compounds in the Greater Toronto Area.** MANPREET TAKHAR, Mohammad Asif Iqbal, Arthur Chan, *University of Toronto*
- 8CA.13 Sources and Evolution of Wintertime Organic Aerosol in the Northeastern US.** JASON SCHRODER, Pedro Campuzano-Jost, Douglas Day, Nicola Blake, Alan Hills, Rebecca Hornbrook, Eric Apel, Andrew Weinheimer, Teresa Campos, Viral Shah, Kelsey Larson, Jaegle Lyatt, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*
- 8CA.14 Secondary Organic Carbon (SOC) Estimation Using Several Indirect Techniques and the Evaluation of Their Uncertainties.** DEEPCHANDRA SRIVASTAVA, Olivier Favez,

Nicolas Bonnaire, Emilie Perraudin, Valérie Gros, Eric Villenave, Alexandre Albinet, *INERIS/EPOC, Université Bordeaux, France*

- 8CA.15 Near-source Evolution of Black Carbon Mixing States: Three-dimensional Source-oriented Model Evaluation.** ALESHKA CARRION-MATTA, Bo Yang, Hitoshi Matsui, K. Max Zhang, *Cornell University*
- 8CA.16 A Two-Year Study of Carbonaceous Aerosols in Ambient PM_{2.5} at a Regional Background Site for Western Yangtze River Delta, China.** DONG CHEN, Hongfei Cui, Yu Zhao, *Nanjing University*
- 8CA.17 Characterization of Time-Resolved Atmospheric Aerosol Using an Automated Raman Spectrometer and a Multi-wavelength Aethelometer.** STEVEN HILL, David Doughty, Alan Wetmore, Deryck James, *US Army Research Lab*
- 8CA.18 The Aerosol Radiative Effects and Global Burden of Mortality from Uncontrolled Combustion of Domestic Waste.** JOHN KODROS, Bonne Ford, David Ridley, Rachel Cucinotta, Christine Wiedinmyer, Ryan Gan, Sheryl Magzamen, Jeffrey R. Pierce, *Colorado State University*
- 8CA.19 Molecular Composition of Biomass Burning Aerosol from Household Cookstoves in Rural Haryana, India.** Lauren Fleming, SERGEY NIZKORODOV, Donald Blake, Robert Weltman, Rufus Edwards, Peng Lin, Alexander Laskin, Julia Laskin, Kirk Smith, Narendra Arora, Sneha Gautam, Ankit Yadav, *University of California, Irvine*
- 8CA.20 Light Absorbing Organic Carbon Aerosol Emissions from Cookstoves in India.** APOORVA PANDEY, Sameer Patel, Pratim Biswas, Shams Pervez, Judith Chow, John Watson, Rajan Chakrabarty, *Washington University in St Louis*
- 8CA.21 Fractal Scaling of Coated Soot Aggregates.** WILLIAM HEINSON, Rajan Chakrabarty, *Washington University in St. Louis*
- 8CA.22 Mass-specific Extinction and Absorption Spectra of Particles from Kerosene-fueled Simple Wick Lamps.** CHRISTOPHER ZANGMEISTER, James Radney, Courtney Grimes, Jessica Young, Rian You, Russell Dickerson, Michael Zachariah, *National Institute of Standards and Technology*
- 8CA.23 Evaluation of the Absorption Ångström Exponents for Traffic and Wood Burning in the Aethelometer Based Source Apportionment Using Radiocarbon Measurements of Ambient Aerosol.** ANDRE PRÉVÔT, Peter Zotter, Hanna Herich, Martin Gysel, Imad El Haddad, Yanlin Zhang, Grisa Mocnik, Christoph Hueglin, Urs Baltensperger, Soenke Szidat, *Paul Scherrer Institute*

- 8CA.24 Fourier-Transform Infrared Determination of Organic and Elemental Carbon in the Chemical Speciation Network by Partial Least-Squares: The Importance of Spectra Pretreatment on Factor Interpretation.** ANDREW WEAKLEY, Ann Dillner, Satoshi Takahama, *University of California, Davis*
- 8CA.25 Spatial and Temporal Trends of Aerosol and Precipitation Chemistry at Four Sites in South Korea, 1997-2015.** BEOMCHEOL SHIN, Jo Wan Cha, Sang-bum Ryoo, *NIMS, KMA*
- 8CA.26 Water-soluble PM2.5 Composition and Particle Water Content During Wintertime in Fresno, California: Results from DISCOVER-AQ 2013.** CAROLINE PARWORTH, Dominique Young, Hwajin Kim, Sonya Collier, Qi Zhang, *University of California, Davis*
- 8CA.27 Trends of Macronutrients in Fractionated Particulate Matter in Rooster House.** NANH LOVANH, John Loughrin, Philip Silva, *USDA-ARS*
- 8CA.28 Seasonal Variation and Characteristics of Carbonaceous Aerosol in PM2.5 of the Background Atmosphere in Korea.** JIYI LEE, Jong Sik Lee, Yu Woon Jang, Eun Sil Kim, Yong Pyo Kim, Chang Hoon Jung, *Chosun University*
- 8CA.29 Property of Black Carbon Particles Measured by a Laser-Induced Incandescence Technique in the Spring at Noto Peninsula, Japan.** FUMIKAZU TAKETANI, Yugo Kanaya, Tomoki Nakayama, Sayako Ueda, Yutaka Matsumi, Yasuhiro Sadanaga, Yoko Iwamoto, Atsushi Matsuki, *JAMSTEC*

8CC AEROSOLS, CLOUDS, AND CLIMATE III
EXHIBIT HALL A

Sarah Brooks, chair

- 8CC.1 Sensitivity of Cloud-Albedo Aerosol Indirect Effect on Assumed Aerosol Size Distribution Shape.** JOHN KODROS, Jeffrey R. Pierce, *Colorado State University*
- 8CC.3 Impact of Climate Change on Summertime Ozone and Fine Particulate Matter in China.** JIANLIN HU, Zhan Zhao, Qi Ying, Hongliang Zhang, *Nanjing University of Information Science & Technology*
- 8CC.4 Aerosol Formation and Growth Associated with Hurricane Intensification: Observations from Hurricanes Edouard and Cristobal in 2014.** LUKE ZIEMBA, Michael Shook, Andreas Beyersdorf, Richard Moore, Kenneth Thornhill, Edward Winstead, Bruce Anderson, *NASA*

- 8CC.5 Black Carbon, Aerosol Water, Mixing States and CCN.** Diep Vu, Shaokai Gao, Tyler Berte, Desiree Smith, Mary Kacarab, AKUA ASA-AWUKU, *University of California, Riverside*
- 8CC.6 Probing the Source of Ice Nucleating Particles in Sea Spray Aerosol.** PAUL DEMOTT, Christina S. McCluskey, Thomas Hill, Francesca Malfatti, Kimberly Prather, Alain Protat, Sonia Kreidenweis, Ruby Leung, *Colorado State University*
- 8CC.7 Bimodal CCN and Cloud Microphysics.** James Hudson, Stephen Noble, *Desert Research Institute*
- 8CC.8 Volatility of Material Coating Black Carbon Particles at Duke Forest, an Anthropogenically-influenced Forest Site in Southeastern USA.** ANDREY KHLYSTOV, R. Subramanian, *Desert Research Institute*
- 8CC.9 The Partial Scattering Cross Section and Efficiency.** JUSTIN MAUGHAN, Chris Sorensen, Amit Chakrabarti, *Kansas State University*
- 8CC.11 Design and Testing of the NASA Axial Cyclone Cloud-water Collector (AC3).** EWAN CROSBIE, Luke Ziemba, Andreas Beyersdorf, Chelsea Corr, Richard Moore, Michael Shook, Kenneth Thornhill, Edward Winstead, Jeffrey Collett, Bruce Anderson, *NASA*
- 8CC.12 Universal Description of Light Scattering by Irregularly Shaped Particles.** YULI HEINSON, Justin Maughan, William Heinson, Amit Chakrabarti, Chris Sorensen, *Kansas State University*
- 8CC.13 A General Description of the Angular Distribution of Light Scattered by Particles of Arbitrary Shape.** CHRIS SORENSEN, Yuli Heinson, Justin Maughan, William Heinson, Amit Chakrabarti, *Kansas State University*
- 8CC.14 Use of Machine Learning and Particle-resolved Simulations to Predict Global Distributions of Aerosol Mixing State Metrics.** MICHAEL HUGHES, Jack Kodros, Jeffrey R. Pierce, Matthew West, Nicole Riemer, *University of Illinois at Urbana-Champaign*
- 8CC.15 Investigating Visibility Loss Caused by Fog within an Environmentally Controlled Chamber.** ANDRES SANCHEZ, Gabriel Birch, Crystal Glen, Matthew Tezak, Steven Storch, Gabriel Lucero, *Sandia National Laboratories*
- 8CC.16 Determination of the 3nm Particle Formation Rates at Puijo (Finland) Site Using an Analytical Formula Linking “Real” and “Apparent” Formation Rates.** ELHAM BARANIZADEH, Tuomo Nieminen, Tuukka Petäjä, Markku Kulmala, Taina Yli-Juuti, Kari Lehtinen, *PhD candidate*

8CC.17 Hygroscopicity of Sub 30nm SOA Particles during CLOUD 10. ANGELA BUCHHOLZ, Pasi Miettinen, Aki Pajunoja, Olli Väisänen, Hao Wang, Arttu Ylisirniö, Annele Virtanen, *University of Eastern Finland*

8CC.18 Changes in Precipitating Snow Chemistry with Location and Elevation in the California Sierra Nevada. JESSICA AXSON, Jessie Creamean, Amy Bondy, Rebecca Craig, Nathaniel May, Hongru Shen, Michael Weber, Kerri Pratt, Andrew Ault, *University of Michigan, Ann Arbor MI*

8CC.19 How Uncertainty in Field Measurements of Ice Nucleating Particles Influences Modeled Cloud Forcing. SARVESH GARIMELLA, Daniel Rothenberg, Chien Wang, Daniel Cziczo, *MIT*

8CC.20 Climate Implications of Coal Fly Ash Particles Due to Ice Cloud Formation. SARVESH GARIMELLA, Daniel Rothenberg, Martin Wolf, Maria Zawadowicz, Costa Christopoulos, Karl D. Froyd, Yi-wen Huang, Daniel Murphy, Chien Wang, Daniel Cziczo, *MIT*

8CC.21 Physical and Optical Aerosol Properties of Aged Biomass Burning Events at the Mt. Bachelor Observatory. JAMES LAING, Dan Jaffe, Jon Hee, *University of Washington, Bothell, WA, USA*

8CM CONTROL AND MITIGATION TECHNOLOGY I
EXHIBIT HALL A

Emanuele Cauda and Herek Clack, chairs

8CM.1 HVAC Filter Loading Characterization by Ammonium Sulfate and Ammonium Nitrate Sub-micron Particles. CHENXING PEI, Qisheng Ou, David Y. H. Pui, *University of Minnesota*

8CM.3 Filtration Area of a Pleated Filter Bag Determined by Filter Cleaning Characteristics. MYONG-HWA LEE, Jeong-Uk Kim, Hyun-Jin Choi, Jungho Hwang, *KITECH*

8CM.4 Effects of Various Mitigation Measures in Reducing Fine and Ultrafine Particle Concentrations inside Taxi Vehicles. NU YU, Shi Shu, Yan Lin, Yifang Zhu, *University of California Los Angeles*

8CM.5 Advanced Emission Reduction Devices and Particle Number Emissions: Knowledge from a California On-road HD-truck Testing. TIANYANG WANG, David Quiros, Arvind Thiruvengadam, Shaohua Hu, Tao Huai, Yifang Zhu, *University of California, Los Angeles*

8CM.6 Are Aftertreatment Systems on Diesel Engines an Atmospheric Source of Isocyanic Acid? SHANTANU JATHAR, Christopher Heppding, Michael Link, Ali Akherati, Michael Kleeman, Delphine Farmer, *Colorado State University*

8EC ELECTRONIC CIGARETTES II
EXHIBIT HALL A

Anthony Wexler and Kay Wanke, chairs

8EC.1 The Impact of Device Settings and Vaping Patterns on the Size Distribution of Particles Generated from Electronic Cigarettes. QINGYU MENG, Yeongkwon Son, Gediminas Mainelis, *Rutgers School of Public Health*

8EC.2 Developing High-Throughput Screening Approaches for E-liquids and Flavor Constituents. M. FLORI SASSANO, Eric Davis, Sarah Sizer, Shernita Lewis, Robert Tarran, *University of North Carolina at Chapel Hill*

8EC.3 Aldehyde Emissions from Electronic Cigarettes: Relation to Atomizer Age, Product Manufacturing Variability, and Intra-puff Particle Generation Intermittency. Mohamad Baassiri, Rola Salman, Soha Talih, Nareg Karaoghlanian, ALAN SHIHADDEH, *American University of Beirut*

8EC.4 Are Sweet Flavored Electronic Cigarettes a Source of Furans? Sarah Soussy, Ahmad El Hellani, Rima Baalbaki, Rola Salman, Alan Shihadeh, NAJAT A. SALIBA, *American University of Beirut*

8EC.5 Metal Concentrations in Mainstream Aerosols from Electronic Cigarettes. TONGKE ZHAO, Shane S Que Hee, Qiuju Guo, Yifang Zhu, *University of California, Los Angeles*

8EC.6 Banana Pudding Flavored E-liquid Alters Cell Proliferation and Ca²⁺ Signaling in Lung Epithelia. TEMPERANCE ROWELL, Robert Tarran, *University of North Carolina at Chapel Hill*

8EC.8 Chemical Characterization of Submicron Particulate Matter and Vapors Derived from E-Cigarette Usage. RACHEL LONG, Ilona Jaspers, Phillip Clapp, Barbara Turpin, Jason Surratt, *University of North Carolina at Chapel Hill*

8IA INDOOR AEROSOLS III
EXHIBIT HALL A

Lupita Montoya and Shelly Miller, chairs

- 8IA.1 Experimental Investigation of the Transport of Surrogate Indoor Bioaerosols from Simulated Human Respiratory Activities and Control by HVAC Filtration in an Unoccupied Apartment Unit.** STEPHANIE KUNKEL, Parham Azimi, Haoran Zhao, Brent Stephens, *Illinois Institute of Technology*
- 8IA.2 Using Virtual Impactor for Classification of Submicron-Sized Indoor Bioaerosols.** ALI MOHAMADI NASRABADI, Ji-Woon Park, Hyung Sun Kim, Jang-Seop Han, Junho Hyun, Dongeun Yong, Jungho Hwang, *Yonsei University, Department of Mechanical Engineering*
- 8IA.3 Effect of Relative Humidity on Resuspension of Indoor Allergen Particles.** PARICHEHR SALIMIFARD, Donghyun Rim, James Freihaut, *The Pennsylvania State University*
- 8IA.4 Building-Integrated Low-Cost Optical Particle Counters: Conceptual Framework and Field Measurements in an Occupied Office and Air Handling Unit.** BRANDON E. BOOR, Donghyun Rim, *Purdue University*
- 8IA.5 Performance of Four Consumer-Grade Air Pollution Measurement Devices.** SYDONIA MANIBUSAN, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 8IA.6 Rapid Oxidation of Skin Oil by Ozone.** SHOUMING ZHOU, Matthew Forbes, Yasmine Katrib, Jonathan Abbatt, *University of Toronto, Toronto, Canada*
- 8IA.7 Effect of Diurnal Sunlight and Shading Patterns on Indoor Air Flow and on Human Exposure to Fine Particulates.** Yan Zheng, KAI-CHUNG CHENG, Wayne Ott, Lynn M. Hildemann, *Stanford University*
- 8IA.8 Kinetic Studies of the Heterogeneous Surface Reactions of Indoor Organic Films with Hydroxyl Radical.** RAMINA ALWARDA, Shouming Zhou, Jonathan Abbatt, *University of Toronto, Toronto, Canada*
- 8IA.9 Application of ISO 14644-1 to Evaluate the Impact of Materials and Devices on Clean Room Class Ratings or to Evaluate Respiratory Device Airstreams.** ELLIOTT HORNER, Scott Steady, Mark Reardon, Benjamine Britt, Scott Lawrence, *UL Environment*
- 8IA.10 Mixing and Distribution of a Point Source Pollutant in a Chamber with Two Airflow Conditions.** MATTHEW VANNUCCI, *U.C. Berkeley, Civil and Environmental Engineering Dept*
- 8IA.11 Microbial Activity and Phthalate Degradation in Carpet.** KAREN C. DANNEMILLER, Charles Weschler, Jordan Peccia, *Ohio State University*

8IA.12 Characterization of Fouling with Hygroscopic and Non-hygroscopic Aerosols in Composite Polymer Membranes for Water Vapor Transport Applications. AMIN ENGARNEVIS, Ryan Huizing, Sheldon Green, Steven Rogak, *University of British Columbia*

8IA.13 Using a Portable Air Cleaner to Improve Residential Indoor Air Quality in Chongqing, China. QINGYU MENG, Han Wang, Jing Zhang, Runming Yao, Zhihua Fan, Baizhan Li, Howard Kipen, *Rutgers School of Public Health*

8IA.16 Aerosol Emissions of 3d Printers in a Chamber Study and Real Indoor Environments. MARINA VANCE, Valerie Pegues, Schuyler Van Montfrans, Andrea Tiwari, Linsey Marr, *University of Colorado Boulder*

8NS EFFECTS OF NOX AND SO2 ON BVOC OXIDATION AND ORGANIC AEROSOL FORMATION II
EXHIBIT HALL A

Manish Shrivastava, chair

8NS.1 Molecular Characterization of Alkyl nitrates in Atmospheric Aerosol by Ion Mobility Mass Spectrometry. XUAN ZHANG, Wen Xu, Andrew Lambe, Michael Cubison, Michael Groessl, Stephan Graf, John Jayne, Douglas Worsnop, Manjula Canagaratna, *Aerodyne Research Inc.*

8NS.2 How does a 10 fold Pulse Increase of Aircraft-Related NO_x Impact Global Concentrations of O₃ and Secondary Organic Aerosol (SOA)? NIMA AFSHAR-MOHAJER, Barron Henderson, *University of Florida*

8NS.3 Fragmentation Patterns of Organosulfur Compounds in HR-ToF-AMS. YUNLE CHEN, Lu Xu, Elizabeth Stone, Timothy Humphry, Nga Lee Ng, *Georgia Institute of Technology*

8NS.4 Observations of Particle-phase NO_y and SO_x Species during Nanoparticle Growth Events at CLOUD10. DANIELLE C. DRAPER, Michael J. Lawler, James N. Smith, *National Center for Atmospheric Research*

8NS.5 Effects of Aerosol-Phase and Bulk Aqueous-Phase Browning in Aldehyde Reactions with SO₂. BENJAMIN JOYCE, David De Haan, *University of San Diego*

8NS.6 Observation of Biogenic Secondary Organic Aerosols in the Atmosphere of a Mountain Site in Central China: Temperature and Relative Humidity Effects. JIANJUN LI, Gehui Wang, *Institute of Earth Environment, Chinese Academy of Sciences*

- 8NS.7 Modeling Biogenic Secondary Organic Aerosol (BSOA) with CMAQ: A Case Study of the SOAS Campaign.** Momei Qin, PETROS VASILAKOS, Christopher Boyd, Nga Lee Ng, Armistead G. Russell, Athanasios Nenes, *Georgia Institute of Technology*
- 8NS.8 The Role of Hydrocarbons in the Oxidation of SO₂ in Oil Sand Regions.** NEDA AMIRI, Ann-Lise Norman, *University of Calgary*
- 8NS.9 Semi-Continuous VOC Measurements in the SEARCH Network.** KARSTEN BAUMANN, Eric Edgerton, Stephanie Shaw, John Jansen, *Atmospheric Research & Analysis*
- 8NS.10 Impacts of Oxidation Processes on Complex Refractive Index of SOA Generated from Isoprene.** TOMOKI NAKAYAMA, Kei Sato, Takashi Imamura, Yutaka Matsumi, *ISEE, Nagoya University*
-

8RR REMOTE AND REGIONAL AEROSOLS I
EXHIBIT HALL A

Roya Bahreini, chair

- 8RR.1 Chemical Characteristics of PM in Coastal and Urban Environments.** KWANGYUL LEE, Jiyeon Park, Min-Suk Bae, Kihong Park, *Gwangju Institute of Science and Technology, Korea*
- 8RR.2 Evaluation of Gas and Particle Concentrations of Water Soluble Inorganic Compounds by a Semi-continuous Monitor for Aerosols and Gases in Ambient Air (MARGA).** XI CHEN, John Walker, *US Environmental Protection Agency*
- 8RR.3 Size-Segregated of Trace Elements Contents in Sub-urban Aerosols of Central Balkan Region.** Jelena Đuričić-Milanković, Ivan Anđelković, Ana Pantelić, Srđan Petrović, Andrea Gambaro, DRAGANA ĐORĐEVIĆ, *ICTM - University of Belgrade*
- 8RR.4 Observed Ambient Gas-particle Partitioning of Tracers for Biogenic Oxidation.** GABRIEL ISAACMAN-VANWERTZ, Lindsay Yee, Nathan Kreisberg, Rebecca Wernis, Joshua Moss, Susanne Hering, Suzane de Sá, Scot Martin, Lizabeth Alexander, Brett Palm, Weiwei Hu, Pedro Campuzano-Jost, Douglas Day, Jose-Luis Jimenez, Matthieu Riva, Jason Surratt, Juarez Viegas, Antonio O. Manzi, Eric Edgerton, Karsten Baumann, Rodrigo A. F. Souza, Paulo Artaxo, Allen H. Goldstein, *University of California at Berkeley, Berkeley, CA, USA*
- 8RR.5 Mobile Monitoring of PM_{2.5} and Black Carbon in Rural Washington During Winter 2015.** KELSEY GIBBS, Megan Baker, Jill Schulte, Anne Johansen, *Central Washington University*

- 8RR.6 Assessment of Two Field-Deployed Portable Air Quality Monitoring Enclosures in Rochester, NY.** JOSEPH P. MARTO, Jie Zhang, James Schwab, Margaret J. Schwab, *University at Albany, SUNY*
- 8RR.7 Particle Size Distributions in and Exhausted from a Poultry House.** PHILIP SILVA, Nanh Lovanh, *USDA-ARS*
- 8RR.8 On the Applicability of Aerosol Optical Depth Retrievals as a Proxy for Surface Particulate Matter in India.** Karen Xia, DANIEL WESTERVELT, *Columbia University*
- 8RR.10 Catching the Freshwater Wave: Lake Spray Aerosol Production, Size, and Chemical Composition in the Lab and Field.** ANDREW AULT, Nathaniel May, Jessica Axson, Isabel Colon-Bernal, Alexa Watson, Kerri Pratt, *University of Michigan*
- 8RR.11 Light Scattering and Absorption of the Individual PM₁ Chemical Components in the Central Amazonian Basin at ATTO Tower.** SAMARA CARBONE, Luciana Rizzo, Joel Brito, Nga Lee Ng, Lu Xu, Jorge Saturno, Christopher Pöhlker, Bruna Holanda, Meinrat O Andreae, Henrique Barbosa, Paulo Artaxo, *University of Sao Paulo*
- 8RR.12 Decrease in Acid Rain Over 25-Year Study at Paradise, Mt. Rainier National Park.** ASHLEEN REDDY, Jeff Barnes, Naomi Beebe, Rebecca Lofgren, Barbara Samora, Anne Johansen, *Central Washington University*
- 8RR.13 Long Term Profile of PM_{2.5} at Egbert Ontario Monitored by the Canadian Air and Precipitation Monitoring Network (CAPMoN).** KULBIR BANWAIT, Nancy Lance, *Environment and Climate Change Canada*
- 8RR.14 Power Generation Projections in Support of PM_{2.5} State-Implementation-Planning.** ALEXANDER COHAN, Mark Janssen, *Lake Michigan Air Directors Consortium*

8SA SOURCE APPORTIONMENT III
EXHIBIT HALL A

Hongliang Zhang, chair

- 8SA.1 ZeFir: A New Igor Tool for Wind and Trajectory Analyses.** JEAN-EUDES PETIT, Olivier Favez, Alexandre Albinet, Francesco Canonaco, *Air Lorraine*
- 8SA.2 Impacts of Power Generation on Air Quality in China.** JIANLIN HU, Lin Huang, Mindong Chen, Gang He, Hongliang Zhang, *Louisiana State University*

- 8SA.3 Source Apportionment of PM_{2.5} in Baton Rouge, Louisiana.** FENGLIN HAN, Hongliang Zhang, *Louisiana State University*
- 8SA.4 Apportionment of Urban Aerosol Sources in Chongqing (China) using Synergistic On-line Techniques.** YANG CHEN, *Chinese Academy of Sciences*
- 8SA.6 Resolving Chemical Contributions to Atmospheric Brown Carbon with the Aerodyne Aerosol Chemical Speciation Monitor.** LELIA HAWKINS, Raunak Pednekar, Jason Casar, *Harvey Mudd College*
- 8SA.7 Source Apportionment of PM_{2.5} Using the Receptor Models in Island Area and Metropolitan Area, Korea.** INJO HWANG, Seung-Muk Yi, *Daegu University*
- 8SA.8 Source Apportionment of PM_{2.5} at Multiple Northwest U.S. Sites: Using Chemically Speciated PM_{2.5} to Assess Regional Winter Wood Smoke Impacts from Residential Wood Combustion.** ROBERT KOTCHENRUTHER, *U.S. EPA*
- 8SA.9 Source Apportionment of PM_{2.5} in New York City: Chemical Speciated Mass Concentration vs. Particle Number Concentration.** MAURO MASIOL, Philip K. Hopke, H. Dirk Felton, Brian P. Frank, Oliver Rattigan, Marilyn Wurth, Gil H. LaDuke, *Clarkson University*
- 8SA.10 Source Apportionment of PAHs in the Vicinity of Industrial Activities: PMF-based Approach from Long-term Filter Data.** EMMANUEL JANTZEM, Jean-Eudes Petit, Alexandre Ockler, Jean-Pierre Schmitt, *Air Lorraine*
- 8SA.11 Identifying PM_{2.5} and PM_{0.1} Sources and Estimating Their Health Impacts in the San Francisco Bay Area.** XIN YU, Melissa Venecek, Michael Kleeman, *University of California, Davis*
- 8SA.12 Semivolatile and Nonvolatile Particulate Matter Emissions from a Light-Duty Diesel Engine and the Effects of Biodiesel.** YUAN CHENG, Shao-Meng Li, John Liggio, Katherine Hayden, Yuemei Han, Tak Chan, Marie-Josée Poitras, *Environment and Climate Change Canada*

8SP SINGLE AEROSOL PARTICLE STUDIES I
EXHIBIT HALL A

Yongle Pan, chair

- 8SP.1 The Role of Aerosols in Degrading Solar Panels: Exploring the Dependency of Size and Absorptivity.** PATRICIO PIEDRA, Hans Moosmuller, *Desert Research Institute*

- 8SP.2 An Algorithm to Derive Particle Size Changes from Full size Distribution Measurements.** CHIRANJIVI BHATTARAI, Andrey Khlystov, *Desert Research Institute*
- 8SP.3 Investigating the Evolution of Coatings on Black Carbon at Rapid Time Scales.** TREVOR KRASOWSKY, Scott Fruin, Constantinos Sioutas, George Ban-Weiss, *University of Southern California*
- 8SP.4 Characterization of Aerosols by Forward Light Scattering.** PAUL LANE, Matthew B. Hart, Brian Saar, Jay D. Eversole, *Naval Research Laboratory*
- 8SP.5 Single Particle Characterization of Carbonaceous Aerosol using Soot-Particle Aerosol Mass Spectrometer (SP-AMS).** ALEX K. Y. LEE, Megan Willis, Jonathan Abbatt, *University of Toronto*
- 8SP.6 Ultrafine Particles Size Distribution, Single Aerosol Particle Morphology and Chemical Composition in Urban Air.** CECILIA LEONI, Jan Hovorka, Miroslav Klán, Jan Bendl, Sona Marvanova, *Charles University in Prague*
- 8SP.8 A Molecular Dynamics Simulation based Analysis of Atmospheric Droplets Containing Chromium.** MEHDI AMOUEI TORKMAHALLEH, Bekbol Aldamzharov, Assel Bukayeva, Dhawal Shah, *Nazarbayev University*
- 8SP.9 Classification of Airborne Particulates Using Multispectral Light Scattering Imaging.** STEPHEN HOLLER, Stephen Fuerstenau, Charles Skelsey, *Fordham University*
- 8SP.10 Condensational Growth Kinetics of Spheres and N-mers.** Amruthesh Thirumalaiswamy, WILLIAM HEINSON, Rajan Chakrabarty, *Washington University in St. Louis*
- 8SP.11 Fluorescence Calibration Method for Single-particle Aerosol Fluorescence Instruments.** ELLIS SHIPLEY ROBINSON, Ru-Shan Gao, Joshua P. Schwarz, David Fahey, Anne Perring, *CU-CIRES - NOAA ESRL*

Thursday 1:45 PM - 3:00 PM
Session 9: Platform

9BA BIOAEROSOLS III - ADVANCES IN BIOAEROSOL COLLECTION
B 115-116

Joshua Santarpia and Gedi Mainelis, chairs

- 9BA.1 Design and Development of a Self-Contained Personal Electrostatic Bioaerosol Sampler (PEBS).** TAEWON HAN, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
1:45
- 9BA.2 Size Amplification and Viability Preservation of Aerosolized Virus by Batch Adiabatic-expansion for Size Intensification by Condensation (BASIC).** HAORAN YU, Chang-Yu Wu, Nima Afshar-Mohajer, John Lednicky, Hugh Fan, Alexandros Theodore, Liming Dong, *University of Florida*
2:00
- 9BA.3 Gentle Sampler of Submicron Airborne Viruses via Electrostatic Forces.** SEONGKYEOL HONG, Chang-Ho Han, Jaesung Jang, *Ulsan National Institute of Science and Technology, Korea*
2:15
- 9BA.4 Advanced Exhaled Breath Aerosol (EBA) Collection Using Cryogenic Impaction.** SOMAYEH YOUSSEFI, Gregory Lewis, Susanne Hering, Sheryl Ehrman, Donald Milton, *University of Maryland School of Public Health*
2:30
- 9BA.5 Combined Processes of Aerosol-to-Hydrosol Sampling and ATP Bioluminescence Assay for Real-time Bioaerosol Monitoring.** JI-WOON PARK, Hyeong Rae Kim, Jungho Hwang, *Yonsei University, Korea*
2:45
-

9CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE III
A 106

Andy Freedman and R Subramanian, chairs

- 9CA.1 Comprehensive Characterization of Fine Particulate Matter from Southeastern United States: Implications for Composition, Origins, and Atmospheric Processing of Organic Aerosol.** HAOFEI ZHANG, Lindsay Yee, David Worton, Gabriel Isaacman-VanWertz, Nathan Kreisberg, Steven Spielman, Susanne Hering, Allen H. Goldstein, *University of California, Berkeley*
1:45
- 9CA.2 Seasonal Characterization of SOA Formed through the Uptake of Water-Soluble Gases to Aerosol Liquid Water (aqSOA).** MARWA EL-SAYED, Christopher Hennigan, *University of Maryland, Baltimore County*
2:00
- 9CA.3 Water Solubility of Primary and Secondary Organic Aerosols in an Urban Atmosphere in Hong Kong.** Bin Yu Kuang, Peng Lin, X. H. Hilda Huang, Yee Ka Wong, JIAN ZHEN YU, *Hong Kong University of Science and Technology*
2:15

9CA.4 Sources and Characteristics of Carbonaceous Aerosol with High-time Resolution Measurement in Beijing, China. MEI ZHENG, Caiqing Yan, Yue Liu, Xiaoying Li, Jinting Yu, Bob Cary, Anthony D.A. Hansen, *Peking University*

9CA.5 Coupled AMS and Radiocarbon Analysis of Organic Aerosols for a Yearly Cycle in Magadino. ATHANASIA VLACHOU, Kaspar Rudolf Daellenbach, Carlo Bozzetti, Francesco Canonaco, Gary Salazar, Konstantinos Agrios, Soenke Szidat, Urs Baltensperger, Imad El Haddad, Andre Prévôt, *Paul Scherrer Institute*

9CC AEROSOLS, CLOUDS, AND CLIMATE IV
B 110-112

Nicole Riemer and Martin Gysel, chairs

9CC.1 Measured and Modelled Cloud Droplet Activation of Aerosol Particles at the High-Alpine Research Station Jungfraujoch. MARTIN GYSEL, Christopher R. Hoyle, Clare S. Webster, Harald E. Rieder, Athanasios Nenes, Emanuel Hammer, Erik Herrmann, Nicolas Bukowiecki, Ernest Weingartner, Martin Steinbacher, Urs Baltensperger, *Paul Scherrer Institute*

9CC.2 How Do Secondary Organic Aerosols Influence Cloud Condensation Nuclei? Insights from a Global Model Employing Detailed Aerosol Microphysics. Peter Adams, MARGUERITE COLASURDO MARKS, *Carnegie Mellon University*

9CC.3 Modeling the Relative Contributions of Secondary Ice Formation Processes to Ice Crystal Number Concentrations within Mixed-Phase Clouds. Sylvia Sullivan, Corinna Hoose, ATHANASIOS NENES, *Georgia Institute of Technology*

9CC.4 The First Global Picture of Observation-Based Estimate on Continental Boundary Layer New Particle Formation. TUOMO NIEMINEN, Veli-Matti Kerminen, Tuukka Petäjä, Markku Kulmala, *University of Eastern Finland*

9CC.5 Aerosol, Cloud, and Precipitation Responses to Northern Hemisphere Aerosol Emissions Reductions in Three Climate Models. DANIEL WESTERVELT, Arlene Fiore, Gustavo Correa, Andrew Conley, Jean-François Lamarque, Drew Shindell, *Columbia University Lamont-Doherty Earth Observatory*

9EC ELECTRONIC CIGARETTES III -- EXPOSURE AND DOSE
B 113-114

Anthony Wexler and Priscilla Callahan-Lyon, chairs

- 9EC.1 Temporal and Spatial Variations of Ultrafine Particles and PM2.5 of Secondhand Electronic Cigarette Aerosols.** Tongke Zhao, Che-Husan (Sherry) Lin, Qiuju Guo, YIFANG ZHU, *University of California Los Angeles*
1:45
- 9EC.2 What Factors Influence Electronic Cigarette Nicotine Yield and Delivery?** THOMAS EISSENBERG, *Virginia Commonwealth University*
2:00
- 9EC.3 Electronic Cigarette Aerosol Characteristics as a Function of User Preferences.** JONATHAN THORNBURG, Seung-Hyun Cho, *RTI International*
2:15
- 9EC.4 Computational Analysis of Inhaled Aerosol Deposition from E-Cigarettes for the Assessment of Potential Health Effects.** YU FENG, Kwai L. Wong, Clement Kleinstreuer, *Oklahoma State University*
2:30
- 9EC.5 The Application of Real-Time Monitoring Techniques to Estimate the Inhaled Dose of Volatile and Semivolatile Organic Toxicants from Vaping e-Cigarettes.** MARIELLE BRINKMAN, Sydney Gordon, Stephanie S. Buehler, Samera Hamad, Courtney A. Granville, *Battelle Public Health Center for Tobacco Research*
2:45
-

9NS EFFECTS OF NOX AND SO2 ON BVOC OXIDATION AND ORGANIC AEROSOL FORMATION III
A 105

Robert Griffin and Lu Xu, chairs

- 9NS.1 Effects of Atmospheric Conditions on the Composition of Secondary Organic Aerosol Formed from the Oxidation of Isoprene and Monoterpenes.** MEGAN CLAFLIN, Paul Ziemann, *University of Colorado*
1:45
- 9NS.2 Determinants of Isoprene SOA Yields from Recent Comprehensive Chamber Studies.** KELVIN BATES, Rebecca Schwantes, Tran Nguyen, Richard Flagan, John Seinfeld, *California Institute of Technology*
2:00
- 9NS.3 Measurements and Modeling of Isoprene Photooxidation Products: The Role of Oligomeric Material and Particle Phase Reactions.** EMMA D'AMBRO, Felipe Lopez-Hilfiker, Claudia Mohr, Cassandra Gaston, Ben Lee, Jiumeng Liu, John Shilling, Rahul Zaveri, Avram Gold, Zhenfa Zhang, Jason Surratt, Joel A. Thornton, *University of Washington*
2:15
- 9NS.4 Effect of Atmospherically-Relevant Organic Coatings, Humidity, and Aerosol Acidity on Multiphase Chemistry of Isoprene Epoxydiols.** ALLA ZELENYUK, Matthieu Riva, David Bell, Anne Maria Hansen, Greg Drozd, Zhenfa Zhang, Avram Gold, Dan Imre, Jason Surratt, Marianne Glasius, *Pacific Northwest National Laboratory*
2:30

9NS.5 Implications of Anthropogenic-Biogenic Interactions Related to NO_x and Sulfate on SOA Formation. 2:45 MANISHKUMAR SHRIVASTAVA, John Shilling, Jerome Fast, Joseph Ching, Rahul Zaveri, Richard Easter, Alla Zelenyuk, Chun Zhao, Ying Liu, Joel Brito, Larry Berg, Shantanu Jathar, V. Faye McNeill, Joel A. Thornton, Henrique Barbosa, Helber Gomes, Rita Ynoue, Paulo Artaxo, Suzane de Sá, Alex Guenther, Lindsay Yee, Scot Martin, Allen H. Goldstein, Gabriel Isaacman-VanWertz, et al., *Pacific Northwest National Laboratory*

9SP SINGLE AEROSOL PARTICLE STUDIES II
B 117-119

Jian Wang and Joshua Santarpia, chairs

9SP.1 Optical Levitation of a Nanodiamond and Its Applications in Sensing. 1:45 Thai Hoang, Jonghoon Ahn, Jaehoon Bang, TONGCANG LI, *Purdue University*

9SP.2 Light Pushing or Pulling of Absorbing Airborne Particles. 2:00 CHUJI WANG, Zhiyong Gong, Yong-Le Pan, Gorden Videen, *Mississippi State University*

9SP.3 Optical Pulling of Single Aerosol Particles over a Meter-Long Distance Using a Single Laser Beam. 2:15 Adam Hart, Joshua Mangum, YONG-QING LI, *East Carolina University, Department of Physics*

9SP.4 Light Scattering Retrievals Using Agglomerated Debris Particles. 2:30 GORDEN VIDEEN, Evgenij Zubko, Yuriy Shkuratov, Alex Yuffa, *US Army Research Lab*

9SP.5 Light Scattering Studies of Single Particle Optically Induced Plasma Explosions. 2:45 CHRIS SORENSEN, Jeff Powell, *Kansas State University*

Thursday 3:00 PM - 3:30 PM

Coffee Break

Thursday 3:30 PM - 5:00 PM

Session 10: Platform

10BA BIOAEROSOLS IV - CHARACTERIZATION AND CONTROL
B 115-116

Kerry Kinney and Alex Huffman, chairs

- 10BA.1 Collection of Airborne Influenza Virus in a Student Health Care Center through Water-Based Condensation Growth.** MAOHUA PAN, Julia Loeb, Tania Bonny, Xiao Jiang, John Lednicky, Arantzazu Eiguren Fernandez, Susanne Hering, Hugh Fan, Chang-Yu Wu, *University of Florida*
3:30
- 10BA.2 Aerosolization of Ebola Virus Surrogates in Wastewater Systems.** KAISEN LIN, Mari Lee, Amy Pruden, Linsey Marr, *Virginia Tech*
3:45
- 10BA.3 Laboratory Scale Pig Buildings: A Controlled Environment to Develop Reduction Strategies for Airborne Contaminants.** JONATHAN PILOTE, Valérie Létourneau, Ariane Lévesque, Matthieu Girard, Stéphane Godbout, Stéphane.P Lemay, Caroline Duchaine, *CRIUCPQ, Université Laval*
4:00
- 10BA.4 Separation and Purification of Bacteria from Similar Size Distribution of Polystyrene Latex Particle.** ALI MOHAMADI NASRABADI, Jang-Seop Han, Milad Massoudi Farid, Sang Gu Lee, Jungho Hwang, *Yonsei University, Department of Mechanical Engineering*
4:15
- 10BA.5 Vacuum Ultraviolet Photocatalysis for the Inactivation of Ozone and MS2 Bacteriophage Aerosols on Palladium Deposited TiO₂ Catalyst.** JEONGHYUN KIM, Jaesung Jang, *Ulsan National Institute of Science and Technology, Korea*
4:30
- 10BA.6 Tracking the Movement of Microbial Aerosols from Aquatic Systems with High-speed Video.** RENEE PIETSCH, Craig Powers, David Schmale, Sunghwan Jung, Shane Ross, *Virginia Tech*
4:45

10CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE IV
A 106

Jason Olfert and Provat Saha , chairs

- 10CA.1 Real-time Measurements of PM_{2.5}, Black Carbon and Brown Carbon In Residential Woodsmoke Plumes.** BO YANG, Aleshka Carrion-Matta, Geng Chen, Jiajun Gu, George Allen, James Schwab, H. Dirk Felton, K. Max Zhang, *Cornell University*
3:30
- 10CA.2 Online Analysis of Secondary Organic Aerosol Emissions from a Flexi-Fuel Gasoline Engine Operated with Gasoline-Ethanol Blends.** JORMA JOKINIEMI, Mika Ihalainen, Petri Tiitta, Miika Kortelainen, Martin Sklorz, Benjamin Stengel, Laarnie Müller, Stefan Stanglmaier, Vesta Kohlmeier, Gert Jakobi, Pasi Yli-Pirilä, Anni Hartikainen, Thorsten
3:45

Streibel, Ralf Zimmermann, Olli Sippula, *University of Eastern Finland, Kuopio, Finland*

10CA.3 The Role of Chemical Aging Reactions and the Production of Extremely Low Volatility Organic Compounds on Ultrafine Particle Concentrations over Europe.
4:00

David Patoulias, Christos Fountoukis, Jan Julin, Ilona Riipinen, SPYROS PANDIS, *Carnegie Mellon University*

10CA.4 SOA Formation from OFR Oxidation of Rural and Urban Ambient Air Suggests Widespread Importance of S/IVOC Precursors. BRETT PALM, Amber Ortega, Weiwei Hu, Douglas Day, Pedro Campuzano-Jost, William Brune, Lisa Kaser, Thomas Karl, Hansel Armin, James Hunter, Eben Cross, Jesse Kroll, Martin Graus, Carsten Warneke, Jessica Gilman, Joost de Gouw, Suzane de Sá, Lizabeth Alexander, Scot Martin, Roger Seco, Jeong-Hoo Park, Alex Guenther, Saewung Kim, Jose-Luis Jimenez, et al., *CIRES, University of Colorado*

10CA.5 Simulating the Combined Effect of Volatility, Multigenerational Chemistry, Unspeciated Precursors and Vapor Wall-Losses on Ambient Organic Aerosol in 3-D Air Quality Model. ALI AKHERATI, Christopher Cappa, Michael Kleeman, Shantanu Jathar, *Colorado State University*

10CA.6 Drying-Induced Evaporation of Secondary Organic Aerosols during Summer. Marwa El-Sayed, Dziedzorm Amenumey, CHRISTOPHER HENNIGAN, *University of Maryland, Baltimore County*

10CC AEROSOLS, CLOUDS, AND CLIMATE V
B 110-112

Jian Wang and Richard More, chairs

10CC.1 Effects of Surfactants on the Hygroscopicity and CCN Activity of Aerosols. Hemanta Timsina, Dabrina Dutcher, TIMOTHY RAYMOND, *Bucknell University*

10CC.2 Chemistry, Morphology, and Cloud Activation: Chemical Composition Measurements of α -pinene SOA at Low Temperature with a FIGAERO-CIMS. CLAUDIA MOHR, Harald Saathoff, Aki Pajunoja, Annele Virtanen, Wei Huang, Xiaoli Shen, Robert Wagner, Yvette Gramlich, *Karlsruhe Institute of Technology*

10CC.3 Gas Phase Vapors Play a Critical Role in Cloud Condensation Nuclei Activation. 4:00 ASHLEY VIZENOR, Akua Asa-Awuku, *University of California, Riverside*

10CC.4 Does Aerosol Chemistry Affect Droplet Kinetics? EMMANUEL FOFIE, Ashley Vizenor, 4:15 Akua Asa-Awuku, *University of California, Riverside*

10CC.5 Springtime Secondary Particle Formation and Its Contribution to CCN in the Northeastern US. FANGQUN YU, Gan Luo, James Schwab, G. Garland Lala, Kenneth Demerjian, *University at Albany, SUNY*

10CC.6 Particle-Resolved Modeling of In-Cloud Chemistry. Matt Dawson, NICOLE RIEMER, 4:45 Donald Dabdub, *University of Illinois at Urbana-Champaign*

10EC ELECTRONIC CIGARETTES IV -- HEALTH EFFECTS
B 113-114

Priscilla Callahan-Lyon and Kay Wanke, chairs

10EC.1 Harms and Risks of Nicotine: Implications for Electronic Cigarette Use. NEAL 3:30 BENOWITZ, Gideon St. Helen, *University of California San Francisco*

10EC.2 Electronic Cigarettes and Cardiovascular Disease Risk. DANIEL CONKLIN, Aruni 3:45 Bhatnagar, *American Heart Association*

10EC.3 The Effects of E-cigarettes on Innate Defense in the Lung. ROBERT TARRAN, 4:00 *University of North Carolina at Chapel Hill*

10EC.4 Cancer and Non-Cancer Risk from E-Cigarette Aerosol Toxicant Exposure. SAMERA 4:15 HAMAD, Stephanie S. Buehler, Vladimir Mikheev, Pamela I. Clark, Courtney A. Granville, *Battelle Public Health Center for Tobacco Research*

10EC.5 Key Parameters Affecting E-cigarette Emissions and Their Impacts on Indoor Exposures and Health Effects. Mohamad Sleiman, Jennifer Logue, V. Nahuel Montesinos, Marta Litter, Marion Russell, Lara Gundel, HUGO DESTAILLATS, *Lawrence Berkeley National Laboratory*

10EC.6 E-cigarettes: FDA Regulation and Research. PRISCILLA CALLAHAN-LYON, *FDA Center* 4:45 *for Tobacco Products*

10NS EFFECTS OF NOX AND SO2 ON BVOC OXIDATION AND ORGANIC AEROSOL FORMATION IV
A 105

Allen H. Goldstein and Felipe Lopez-Hilfiker, chairs

- 10NS.1 Real-time Characterization of Isoprene Epoxydiols-derived Secondary Organic Aerosol (IEPOX-SOA) in Eastern China.** YUNJIANG ZHANG, Lili Tang, Yele Sun, Olivier Favez, Francesco Canonaco, Dantong Liu, John Jayne, Zhuang Wang, Philip Croteau, Alexandre Albinet, Manjula Canagaratna, Hongcang Zhou, Andre Prévôt, Douglas Worsnop, *NUIST / JSEM, China & INERIS / LSCE, France*
- 10NS.2 Enhanced Formation of Isoprene-derived Organic Aerosol in Sulfur-rich Power Plant Plumes during Southeast Nexus (SENEX).** LU XU, Ann M. Middlebrook, Jin Liao, Joost de Gouw, Hongyu Guo, Rodney J. Weber, Athanasios Nenes, Felipe Lopez-Hilfiker, Ben H. Lee, Joel A. Thornton, Charles Brock, J. Andrew Neuman, John B. Nowak, Ilana Pollack, Andre Welti, Martin Graus, Carsten Warneke, Nga Lee Ng, *Georgia Institute of Technology*
- 10NS.3 SOA Derived from Isoprene Epoxydiols: Insights into Formation, Aging and Distribution over the Continental US from the DC3 and SEAC4RS Campaigns.** PEDRO CAMPUZANO-JOST, Brett Palm, Weiwei Hu, Douglas Day, Amber Ortega, Jose-Luis Jimenez, Jin Liao, Karl D. Froyd, Ilana Pollack, Jeff Peischl, Thomas Ryerson, Jason St. Clair, John Crouse, Paul Wennberg, Tomas Mikoviny, Armin Wisthaler, Luke Ziemba, Bruce Anderson, Simone Meinardi, Donald Blake, *CIRES, University of Colorado, Boulder*
- 10NS.4 Influence of Anthropogenic Emissions on the Production of Organic Particulate Matter from Isoprene Epoxydiols in Central Amazonia.** SUZANE DE SÁ, Brett Palm, Pedro Campuzano-Jost, Douglas Day, Weiwei Hu, Jose-Luis Jimenez, Matt Newburn, Lizabeth Alexander, Gabriel Isaacman-VanWertz, Lindsay Yee, Allen H. Goldstein, Joel Brito, Samara Carbone, Paulo Artaxo, Stephen Springston, Rodrigo A. F. Souza, Antonio O. Manzi, Scot Martin, *Harvard University*
- 10NS.5 Evaluating Anthropogenic Influence on Isoprene Oxidation during SOAS 2013 and GoAmazon2014/5.** Lindsay Yee, GABRIEL ISAACMAN-VANWERTZ, Rebecca Wernis, Nathan Kreisberg, Susanne Hering, Suzane de Sá, Scot Martin, Lizabeth Alexander, Brett Palm, Weiwei Hu, Pedro Campuzano-Jost, Douglas Day, Jose-Luis Jimenez, Anne Maria Hansen, Mads Bering, Marianne Glasius, Matthieu Riva, Jason Surratt, Juarez Viegas, Antonio O. Manzi, Eric Edgerton, Karsten Baumann, Rodrigo A. F. Souza, Paulo Artaxo, Allen H. Goldstein, *University of California, Berkeley*
- 10NS.6 Long Lifetime of Ambient Isoprene Epoxydiols-Derived Secondary Organic Aerosol (IEPOX-SOA) against OH Oxidation and Evaporation.** WEIWEI HU, Brett Palm, Douglas Day, Pedro Campuzano-Jost, Jordan Krechmer, Zhe Peng, Suzane de Sá, Scot Martin, Lizabeth Alexander, Karsten Baumann, Lina Hacker, Astrid Kiendler-Scharr, Abigail Koss, Joost de Gouw, Allen H. Goldstein, Roger Seco, Steve Sjostedt, Jeong-

Hoo Park, Alex Guenther, Saewung Kim, Francesco Canonaco, Andre Prévôt, William Brune, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*

10SP SINGLE AEROSOL PARTICLE STUDIES III

B 117-119

Yongle Pan and Stephen Holler, chairs

**10SP.1 Direct Measurements of Time-Dependent Optical Extinction Cross-Sections of Single
3:30 Aerosol Particles.** JONATHAN P. REID, Michael I. Cotterell, Rose Willoughby, Hongze Lin, Andrew J. Orr-Ewing, *University of Bristol*

**10SP.2 Optical Trap and Laser Spectroscopy for Characterizing Single Airborne Aerosol
3:45 Particles.** YONG-LE PAN, Chuji Wang, Joshua Santarpia, *US Army Research Lab.*

**10SP.3 3-D Reconstruction of Individual Ambient Dust Particles to Study Variation in
4:00 Aerosol Optical Properties.** DIANA ORTIZ-MONTALVO, Joseph Conny, Robert Willis, *National Institute of Standards and Technology*

10SP.4 Aerosol Studies Using a Linear Electrodynamic Quadrupole. MATTHEW B. HART,
4:15 Vasanthi Sivaprakasam, Paul Lane, Jozsef Czege, Jay D. Eversole, *Naval Research Laboratory*

10SP.5 Multidimensional Characterization of Individual Aerosols Particles. ALLA ZELENYUK,
4:30 Dan Imre, David Bell, Jacqueline Wilson, Josef Beranek, *Pacific Northwest National Laboratory*

**10SP.6 Phase Separation, Morphology, and Diffusivity of alpha-Pinene Secondary Organic
4:45 Matter Determined using Optical Tweezers.** KYLE GORKOWSKI, Neil Donahue, Ryan Sullivan, *Carnegie Mellon University*

Friday

Friday 8:00 AM - 9:15 AM

Plenary IV

8:00 AEESP Lecture: Fire Aerosols: Exceptionally Common Christine Wiedinmyer, *National Center for Atmospheric Research*

Moderator Nga Lee (Sally) Ng, *Georgia Tech*

9:00 **Student Poster Competition Award Presentation** Kelley Barsanti and J. Alex Huffman,
University of California - Riverside and University of Denver

9:10 **Concluding Remarks and Preview for 2017** Mark Swihart and Nicole Riemer, *University at Buffalo (SUNY) and University of Illinois at Urbana-Champaign*

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

Friday 9:45 AM - 11:00 AM
Session 11: Platform

11AC AEROSOL CHEMISTRY VII - SOA FORMATION AND COMPOSITION 3
A 105

Gabriel Isaacman-Van Wertz and Leah Williams, chairs

11AC.1 Comprehensive Measurements of Gas- and Particle-phase Organic Carbon Formed in the Multigenerational Oxidation of Biogenic Hydrocarbons. GABRIEL ISAACMAN-VANWERTZ, Jonathan Franklin, Rachel O'Brien, Christopher Lim, Paola Massoli, Andrew Lambe, John B. Nowak, Timothy Onasch, Manjula Canagaratna, Joseph Roscioli, Scott Herndon, John Jayne, Douglas Worsnop, Luping Su, Daniel Knopf, Pawel Misztal, Caleb Arata, Allen H. Goldstein, Jesse Kroll, *MIT*

11AC.2 Constraining Ambient Organic Aerosol Chemical Aging Rates Using the Pegasos Campaign Measurements. ELENI KARNEZI, Benjamin Murphy, Spyros Pandis, *Carnegie Mellon University*

11AC.3 Characterization of Multiple ACSMs Using Laboratory Secondary Organic Aerosol Generated with a Potential Aerosol Mass Oxidation Flow Reactor. LEAH WILLIAMS, Andrew Lambe, Philip Croteau, John Jayne, E. Freney, Tanguy Amodeo, Michael Cubison, Julia Schmale, Hilka Timonen, Laurent Poulain, Iasonas Stavroulas, Axel Eriksson, Stina Ausmeel, Francois Truong, Yunjiang Zhang, Alexandre Marpillat, Vincent Crenn, Emmanuel Tison, Véronique Riffault, Olivier Favez, Valérie Gros, Douglas Worsnop, *Aerodyne Research, Inc.*

11AC.4 Secondary Organic Aerosol (SOA) and Ozone Formation from Photo-Oxidation of Unburned Whole Gasoline and Diesel. WEIHUA LI, Chia-Li Chen, Lijie Li, Mary Kacarab, David R. Cocker III, *University of California, Riverside*

11AC.5 Impact of Ammonia on Dynamics of Anthropogenic SOA Formation and Composition. MALLORY HINKS, Julia Montoya, Sergey Nizkorodov, Jeremy Horne, Donald Dabdub, *University of California, Irvine*

11AE AEROSOL EXPOSURE II

B 110-112

Jing Wang and Jessica Asxson, chairs

11AE.1 A Study of the Deficiencies of a DPM Personal Sampler Which Uses Impaction Size Selective Separation. EMANUELE CAUDA, Maura Sheehan, *NIOSH*

11AE.2 A Validated Sectional Aerosol Model Applied to Deposition in the Human Upper Airways. EDO FREDERIX, Arkadiusz Kuczaj, Markus Nordlund, Bernard Geurts, *University of Twente, The Netherlands*

11AE.3 Wood Smoke Exposure as Measured by Low-cost Air Quality Monitors. Nadezda Zikova, Thomas Twomey, PHILIP K. HOPKE, David C. Chalupa, David Rich, Andrea R. Ferro, *Clarkson University*

11AE.4 Is Smoke on Your Mind?: Using Social Media to Improve Estimates of Smoke Exposure. Bonne Ford, Moira Burke, William Lassman, Gabriele Pfister, JEFFREY R. PIERCE, *Colorado State University*

11AE.5 Intra-urban Spatial and Temporal Variations in Fine Particle Number, Mass Concentration, and Size Distributions. ALBERT A. PRESTO, Naomi Zimmerman, Hugh Li, Peishi Gu, R. Subramanian, Allen Robinson, Joshua Apte, *Carnegie Mellon University*

11CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE V

A 106

Kelley Barsanti and Tim Onasch, chairs

11CA.1 Aerosol Emissions from Western U.S. Wildfires and Correlation with Combustion Efficiency. SONYA COLLIER, Shan Zhou, Timothy Onasch, Dan Jaffe, Lawrence Kleinman, Arthur J. Sedlacek, Nicole Briggs, Jon Hee, Edward Fortner, John Shilling, Douglas Worsnop, Robert J. Yokelson, Caroline Parworth, Xinlei Ge, Jianzhong Xu,

Zachary Butterfield, Duli Chand, Manvendra Dubey, Mikhail Pekour, Stephen Springston, Qi Zhang, *University of California, Davis*

- 11CA.2 Chemical Composition and Optical Properties of Wildland and Agricultural Biomass Burning Particles Measured Downwind during the BBOP Study.** TIMOTHY ONASCH, John Shilling, Joda Wormhoudt, Arthur J. Sedlacek, Edward Fortner, Mikhail Pekour, Duli Chand, Shan Zhou, Sonya Collier, Qi Zhang, Lawrence Kleinman, Douglas Worsnop, Robert J. Yokelson, Kouji Adachi, Peter Buseck, Andrew Freedman, Leah Williams, *Aerodyne Research, Inc.*
- 11CA.3 Influence of Wildfires on Aerosol Chemistry in the Western US and Insights into Atmospheric Aging of Biomass Burning Organic Aerosol: Results from BBOP.** SHAN ZHOU, Sonya Collier, Dan Jaffe, Nicole Briggs, Jon Hee, Arthur J. Sedlacek, Lawrence Kleinman, Qi Zhang, *University of California, Davis*
- 11CA.4 Airborne-Based Levoglucosan Measurements and the Role of Biomass Burning during the WINTER Campaign.** AMY P. SULLIVAN, Hongyu Guo, Rodney J. Weber, *Colorado State University*
- 11CA.5 Identifying the Main Sources of Brown Carbon in the Atmosphere.** IMAD EL HADDAD, Nivedita Kumar, Joel Corbin, Kaspar Rudolf Daellenbach, Dario Massabò, Emily Bruns, Athanasia Vlachou, Carlo Bozzetti, Jay Slowik, Paolo Prati, Urs Baltensperger, Jean-Luc Jaffrezo, Luka Drinovec, Grisa Mocnik, Martin Gysel, Andre Prévôt, *Paul Scherrer Institute*

11CM CONTROL AND MITIGATION TECHNOLOGY II
B 113-114

Emanuele Cauda and Herek Clack, chairs

- 11CM.1 Ash Loading Behavior on Sintered Metal Fiber Filter Media at Elevated Temperature.** QISHENG OU, Matti Maricq, David Y. H. Pui, *University of Minnesota*
- 11CM.2 Evaluation of Low-Cost Materials for VOC Removal in Nail Salons.** AARON LAMPLUGH, Sankaranarayanan Ravichandran, Shelly Miller, Lupita Montoya, *University of Colorado Boulder*
- 11CM.3 A Comparison of Respirable Welding Fume Aerosol Exposure Reduction by Low-cost and Commercial Local Exhaust Ventilations.** JUN WANG, Heng Wang, Marcio Bezerra, *University of Oklahoma*

11CM.4 Particulate Hexavalent Chromium, Aerosol Size Distribution, and Respiratory Deposition of Pulsed Metal Inert Gas Welding Fume. JUN WANG, Marcio Bezerra, Heng Wang, James Regens, *University of Oklahoma*

11CM.5 Investigation of Breathing Frequency and Inhalation Flow Rate on the Performance of Respirator Filter Medium. QIANG WANG, Laleh Golshahi, Da-Ren Chen, *Virginia Commonwealth University*

11RR REMOTE AND REGIONAL AEROSOLS II
B 115-116

Peter DeCarlo and Nathaniel May, chairs

11RR.1 Airborne Soil Organic Particles Generated by Precipitation. Bingbing Wang, Tristan Harder, Stephen Kelly, Dominique Piens, Swarup China, Libor Kovarik, Keiluweit Marco, Arey Bruce, Mary Gilles, ALEXANDER LASKIN, *Pacific Northwest National Laboratory*

11RR.2 New Particle Source Identification in Antarctica – Results from the ZODIAC Field Campaign. Michael Giordano, Lars Kalnajs, Anita Avery, J. Doug Goetz, Sean Davis, Terry Deshler, Anondo Mukherjee, Andrew Slater, PETER DECARLO, *Drexel University*

11RR.3 Airborne Observations of Aerosol Composition in the Summertime Arctic. MEGAN WILLIS, Julia Burkart, Jennie L. Thomas, Franziska Kollner, Johannes Schneider, Heiko Bozem, Peter M. Hoor, Amir A. Aliabadi, Hannes Schulz, Andreas Herber, W. Richard Leaitch, Jonathan Abbatt, *University of Toronto, Toronto, Canada*

11RR.4 Arctic Ocean and Prudhoe Bay Influences on Arctic Aerosol Chemistry. Matthew Gunsch, Rachel Kirpes, Tate Barrett, Claire Moffett, Rebecca Sheesley, KERRI PRATT, *University of Michigan*

11RR.5 State-of-the-art New Particle Formation Research at the High-Altitude Site Jungfraujoch. ERIK HERRMANN, Federico Bianchi, Jasmin Tröstl, Carla Frege, Ugo Molteni, Stephan Henne, Nicolas Bukowiecki, Martin Gysel, Ernest Weingartner, Josef Dommen, Urs Baltensperger, *Paul Scherrer Institute*

11SP SINGLE AEROSOL PARTICLE STUDIES IV
B 117-119

Chuji Wang and Kevin Aptowicz, chairs

- 11SP.1 Changes in the Single Particle Fluorescence of Biological Particles Exposed to Outdoor Environments and Their Relationship to the Atmospheric Chemistry.**
9:45 JOSHUA SANTARPIA, Sean Kinahan, Andres Sanchez, Don Collins, Yong-Le Pan, Steven Hill, Shanna Ratnesar-Shumate, Thomas Hawkyard, *Sandia National Laboratories*
- 11SP.2 Mixing of Secondary Organic Aerosols from Terpenes: Effects of Relative Humidity, Temperature and Oxidation State.** QING YE, Mary Alice Upshur, Ellis Shipley Robinson, Regan Thomson, Ryan Sullivan, Franz Geiger, Neil Donahue, *Carnegie Mellon University*
- 11SP.3 Comparison of Nanosecond and Femtosecond Laser Ablation in Single Particle Mass Spectrometry.** RAMAKRISHNA RAMISETTY, Ahmed AbdElMonem, Xiaoli Shen, Harald Saathoff, Thomas Leisner, Claudia Mohr, *Karlsruhe Institute of Technology*
- 11SP.4 Two-Color Digital Holography: Simultaneous Particle Imaging and Scattering Pattern Measurement.** MATTHEW BERG, *Mississippi State University*
- 11SP.5 Analysis of the Formation Process of Crystalline Microparticles from Evaporation of Monodisperse Solution Droplets.** Alberto Baldelli, REINHARD VEHRING, *University of Alberta*

Friday 11:15 AM - 12:30 PM
Session 12: Platform

12AC AEROSOL CHEMISTRY VIII
A 105

Murray Johnston and Shanhu Lee, chairs

- 12AC.1 Role of Sub-2 nm Particles in New Particle Formation.** SHANHU LEE, *University of Alabama in Huntsville*
11:15
- 12AC.2 Nanoparticle Growth Measurements in a Flow Tube Reactor.** MURRAY JOHNSTON, Chris Stangl, Justin Krasnomowitz, Andrew J. Horan, Michael Apsokardu, *University of Delaware*
11:30
- 12AC.3 Composition and Volatility of the Aerosol Products of Reactions of Catechol, an Important Biomass Burning Emission, with Hydroxyl and Nitrate Radicals.** ZACHARY FINEWAX, Paul Ziemann, Joost de Gouw, *University of Colorado*
11:45

12AC.4 Rapid Autoxidation of Squalene Aerosol by Hydroxyl Radicals Forms Multifunctional Hydroxyperoxides. NADJA HEINE, Kevin Wilson, *Lawrence Berkeley National Laboratory*

12AC.5 Advances in Computational Tools For Functional Group Analysis of Organic Aerosols. SATOSHI TAKAHAMA, Matteo Reggente, Giulia Ruggeri, Adele Kuzmiakova, Fabian Bernhard, Barron Henderson, Ann Dillner, *EPFL*

12AE AEROSOL EXPOSURE III
B 110-112

Jun Wang and Casey Quinn, chairs

12AE.1 Does it Blend? Combining Observations and Model Output to Determine Health Implications of Wildfire Smoke Exposure. WILLIAM LASSMAN, Bonne Ford, Ryan Gan, Gabriele Pfister, Sheryl Magzamen, John Volckens, Emily Fischer, Jeffrey R. Pierce, *Colorado State University*

12AE.2 Examining Nanoparticle Oral Exposure Using a Multi-Vessel Gastrointestinal Apparatus. JESSICA AXSON, Andrew Ault, Justin Keeney, Sun Chenxi, Ingrid Bergin, Martin Philbert, Andrew Maynard, *University of Michigan, Ann Arbor MI*

12AE.3 Prediction of Delivery of SOA to Air-Liquid Interface Cells in Vitro Using Electrostatic Precipitator. ZECHEN YU, Myoseon Jang, Huanhuan Jiang, Tara Sabo-Attwood, Sarah Robinson, *University of Florida*

12AE.4 Establishment and Characterization of a Mouse Chamber for Investigating Health Effects. XINZE PENG, David R. Cocker III, David Lo, Emma Aronson, *University of California, Riverside*

12AE.5 Weathering and Heating of a Carbon Nanotube/Epoxy Composites and the Impact on Particle Release and Toxicity. Lukas Schlagenhauf, Bahareh Kianfar, Tina Buerki-Thurnherr, Yu-Ying Kuo, Yeon Kyoung Bahk, Adrian Wichser, Frank Nüesch, Peter Wick, JING WANG, *ETH Zurich/Empa*

12CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE VI
A 106

Sonya Collier and Amy Sullivan, chairs

- 12CA.1 Molecular Chemistry of Brown Carbon (BrC) in Biomass Burning Aerosols.** PENG LIN, 11:15 Julia Laskin, Sergey Nizkorodov, Alexander Laskin, Nir Bluvshstein, Yinon Rudich, *Pacific Northwest National Laboratory*
- 12CA.2 Evolution of Optical Properties of Brown Carbon Aerosols as a Function of Atmospheric Aging.** BENJAMIN SUMLIN, Robert Pattison, Rajan Chakrabarty, 11:30 *Washington University in St Louis*
- 12CA.3 How the Characterization and Model Representation of Biomass Burning Emissions Affect SOA Predictions.** KELLEY BARSANTI, Lindsay Hatch, Brian K. Lamb, Christine Wiedinmyer, Robert J. Yokelson, Serena H. Chung, *University of California, Riverside* 11:45
- 12CA.4 Free Tropospheric Brown Carbon: Radiative Impact and Sources.** YUZHONG ZHANG, 12:00 Haviland Forrister, Yuhang Wang, Athanasios Nenes, Rodney J. Weber, *Georgia Institute of Technology*
- 12CA.5 Molecular Characterization of Brown Carbon in Fine Particulate Matter in China.** 12:15 CAIQING YAN, Yury Desyaterik, Jeffrey Collett, Mei Zheng, *Peking University*
-

12CM CONTROL AND MITIGATION TECHNOLOGY III
B 113-114

Herek Clack and Emanuele Cauda, chairs

- 12CM.1 Enhancement of Nanoparticle Removal for HVAC and Indoor Air Cleaner Filters by Adding Nanofibers.** SHENG-CHIEH CHEN, Min Tang, David Y. H. Pui, *University of Minnesota* 11:15
- 12CM.2 Modeling Concentrations of Ultrafine Particles and Volatile Organic Compounds Resulting from Emissions from Desktop 3D-Printers with Multiple Filaments in an Office Space.** PARHAM AZIMI, Torkan Fazli, Brent Stephens, *Illinois Institute of Technology* 11:30
- 12CM.3 Identifying Regimes of Mercury Adsorption Enhancement and Inhibition within Electric Utility ESPs.** HEREK CLACK, *University of Michigan* 11:45
- 12CM.4 Effect of Slip Flow on the Filtration Performance of Nanofiber Filter.** HYUN-JIN CHOI, Toshiyuki Fujimoto, Li Bao, Yuki Inui, Takafumi Seto, Yoshio Otani, *Kanazawa University* 12:00

12CM.5 Atmospheric Simulation within the WRF Model for SALSCS Evaluation. QINGFENG
12:15 CAO, Lian Shen, David Y. H. Pui, *University of Minnesota*

12RR REMOTE AND REGIONAL AEROSOLS III
B 115-116

Anne Johansen and Andrew Ault, chairs

12RR.1 Laboratory Studies of Freshwater Aerosol Production. NATHANIEL MAY, Jessica
11:15 Axson, Peter Tirella, Andrew Ault, Kerri Pratt, *University of Michigan*

**12RR.2 Metal Composition and Source Identification of Particulate Matter around a
Shrinking, Saline Lake (Salton Sea) via Pb Isotope and Metal Ratio Analysis.**
11:30 ALEXANDER FRIE, Justin Dingle, Samantha Ying, Roya Bahreini, *University of California
Riverside*

12RR.3 Regionally Specific Saharan Dust Transport. Carmen Lamancusa, KRISTINA
11:45 WAGSTROM, *University of Connecticut*

12RR.4 Study of Ambient Aerosol in Riverside, California. HEEJUNG JUNG, Yue Lin, Roya
12:00 Bahreini, Akua Asa-Awuku, Kihong Park, Seung-Bok Lee, Gwi Nam Bae, *University of
California, Riverside*

**12RR.5 Transboundary Health Impacts of Transported Global Air Pollution and International
Trade.** Qiang Zhang, Xujia Jiang, Dan Tong, STEVEN DAVIS, Hongyan Zhao, Guannan
12:15 Geng, Tong Feng, Bo Zheng, Zifeng Lu, David Streets, Jintai Lin, Ruijing Ni, Dabo Guan,
Michael Brauer, Randall Martin, Hong Huo, Zhu Liu, Da Pan, Haidong Kan, Kebin He,
University of California, Irvine

12SP SINGLE AEROSOL PARTICLE STUDIES V
B 117-119

Gorden Videen and Matthew Berg, chairs

12SP.1 Raman Spectroscopy of Aerosol and Vapor Chemical Warfare Agents. ERIK
11:15 EMMONS, Francis D'Amico, Gary Kilper, Steven Christesen, Aime Goad, David
Sickenberger, Jeys Thomas, Roshan Aggarwal, Mitesh Amin, Michelle Clark, Lewis
Farrar, Bradford Perkins, *U.S. Army Edgewood Chemical Biological Center*

12SP.2 Investigation of Enhanced Raman Spectroscopy of Aerosol Particles. VASANTHI
11:30 SIVAPRAKASAM, Matthew B. Hart, Jay D. Eversole, *Naval Research Laboratory*

12SP.3 Single-Particle Morphology from Two-Dimensional Autocorrelation of Angularly-Resolved Light Scattering. KEVIN APTOWICZ, Daniel Landgraf, Jason Zallie, Gorden Videen, Steven Hill, Ronald Pinnick, Yong-Le Pan, *West Chester University*

12SP.4 Optical Configurations for Photophoretic Trap of Single Airborne Particles in Air. 12:00 ZHIYONG GONG, Yong-Le Pan, Chuji Wang, *Mississippi State University*

12SP.5 Single Nanoparticle Characterization with a Laser Induced Plasma. ANDREW J. HORAN, Justin Krasnomowitz, Murray Johnston, *University of Delaware*