

American Association for Aerosol Research - Abstract Submission



AAAR 36th Annual Conference
October 16 - October 20, 2017
Raleigh Convention Center
Raleigh, North Carolina, USA

Tuesday

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

8:00 **Welcoming Remarks** Nicole Riemer, *University of Illinois at Urbana-Champaign*

8:05 **AEESP Lecture: Particle Resuspension: From Indoor and Outdoor Sources to the Human Receptor.** ANDREA FERRO, *Clarkson University*

Moderator Lara Gundel, *Lawrence Berkeley National Laboratory*

9:00 **Whitby Award and Liu Award Presentations** Charles Stanier, *University of Iowa*

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**

1AC AEROSOL CHEMISTRY I - BIOMASS BURNING AEROSOLS

305 A

Allen Goldstein and Lauren Fleming, chairs

1AC.1 Properties and Evolution of Biomass Burning Organic Aerosol from Wildfires in the Western U.S.. Shan Zhou, 9:45 Sonya Collier, Timothy Onasch, Daniel Jaffe, Lawrence Kleinman, Arthur J. Sedlacek, QI ZHANG, *University of California, Davis*

1AC.2 Molecular Characterization of Water-Soluble Organic Carbon (WSOC) from Biomass Burning of Wildland Fuels Using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry. Elena Kirillova, Vera Samburova, Chiranjivi Bhattarai, Deep Sengupta, Hans Moosmuller, Andrey Khlystov, LYNN MAZZOLENI, *Michigan Tech*

1AC.3 The Impact of Biomass Burning on Fine Aerosol Acidity, Water Content and Nitrogen Partitioning. Aikaterini Bougiatioti, Despina Paraskevopoulou, Iasonas Stavroulas, Stelios Myriokefalitakis, Nikos Daskalakis, Rodney J. Weber, Maria Kanakidou, Nikolaos Mihalopoulos, ATHANASIOS NENES, *Georgia Institute of Technology*

- 1AC.4 Chlorine Activation and Speciation during Nocturnal Processing of Authentic Biomass Burning Aerosol.** LYDIA JAHN, Lexie Goldberger, Adam Ahern, Joel A. Thornton, Ryan Sullivan, *Carnegie Mellon University*
10:30
- 1AC.5 Low Temperature Chemistry of Biomass Burning Markers.** VIKRAM PRATAP, Aditya Kiran Srikakulapu, Qijing Bian, Jeffrey R. Pierce, Philip K Hopke, Shunsuke Nakao, *Clarkson University*
10:45
- 1AC.6 Impact of Wildfire Emissions on Chloride and Bromide Depletion in Marine Aerosol Particles.** RACHEL BRAUN, Hossein Dadashazar, Alex MacDonald, Aldhaif Abdulamonam, Lindsay Maudlin, Ewan Crosbie, Mojtaba Aghdam, Ali Mardi, Armin Sorooshian, *University of Arizona*
11:00
- 1AC.7 Effects of Atmospheric Aging on Light Absorptivity and Oxidative Potential of Biomass Burning Organic Aerosols.** JENNY P.S. WONG, Nikolaos Mihalopoulos, Maria Tsaarakaki, Kolloipi Violaki, Maria Kanakidou, Athanasios Nenes, Rodney J. Weber, *Georgia Institute of Technology*
11:15

1AP AEROSOL PHYSICS I

305 B

William Heinson and Matthew Berg, chairs

- 1AP.1 Single Scattering Albedo of Homogeneous, Spherical Particles in the Small and Large Particle Limit.** HANS MOOSMULLER, Chris Sorensen, *Desert Research Institute*
9:45
- 1AP.2 Solving the Inverse Problem for Coarse-mode Aerosol Morphology.** MATTHEW BERG, Yuli W. Heinson, Osku Kemppinen, Stephen Holler, *Kansas State University*
10:00
- 1AP.3 Optical and Microphysical Properties of Aerosols Emitted from a Marine Engine Using Different Fuels and Engine Loads.** ROYA BAHREINI, Justin Dingle, Yu Jiang, Kent Johnson, Wayne Miller, Stephanie Gagne, Kevin Thomson, Tak Chan, Yue Lin, Heejung Jung, Xinze Peng, Paul Van Rooy, David R. Cocker III, Gavin McMeeking, Bob Cary, *University of California, Riverside*
10:15
- 1AP.4 Generic Numerical Solutions to Aerosol General Dynamic Equation for Constant Rate Aerosol Reactors.** Peter H. McMurry, CHENXI LI, *University of Minnesota*
10:30
- 1AP.5 Single Airborne Aerosol Particle Raman And Cavity Ringdown Spectroscopy.** CHUJI WANG, Zhiyong Gong, Yong-Le Pan, Gorden Videen, *Mississippi State University*
10:45
- 1AP.6 Measuring Interfacial Tensions and Viscosities of Aqueous Aerosol Droplet Systems with Microfluidics.** SHWETA NARAYAN, Archit Dani, Hallie Boyer, Cari Dutcher, *University of Minnesota*
11:00
- 1AP.7 Vapor Pressure Measurements Using Aerosols of Low-Volatile Materials.** MATTHEW B. HART, Vasanthi Sivaprakasam, Jay D. Eversole, *Naval Research Laboratory*
11:15

1BA BIOAEROSOLS I - AMBIENT BIOAEROSOLS

306 A

Howard Walls and Maria King, chairs

- 1BA.1 Vertical Distributions of Bioaerosol Over the Eastern U.S..** ANNE PERRING, Ellis Shipley Robinson, Shang Liu, Joshua P. Schwarz, Ru-Shan Gao, *NOAA ESRL*
9:45
- 1BA.2 Biosurfactants Produced by Cloud Micro-Organisms: Potential Impact on Cloud Droplet Formation.** ANNE-MARIE DELORT, Isabelle Canet, Pascal Renard, Martine Sancelme, Laurent Deguillaume, Nolwenn Wirgot, *Université Clermont Auvergne, France*
10:00
- 1BA.3 Observations of Fluorescent Aerosol and Ice Nucleating Particle Concentrations during Wintertime at a Pacific Coastal Site.** MARKUS PETERS, Hans Taylor, Thomas Hill, Paul DeMott, Samuel Atwood, Christina S. McCluskey, Sonia Kreidenweis, Nicholas Rothfuss, Kimberly Prather, Gavin Cornwell, Andrew Martin, *North Carolina State University*
10:15

- 1BA.4 Bioaerosols in the Eastern Mediterranean: Seasonal Variability and Nutrient Supply.** ARNALDO NEGRON-10:30 MARTY, Chara Almpiani, Giorgos Kouvarakis, Iordanis Magiopoulos, Paraskevi Pitta, Kostas Konstantinidis, Maria Kanakidou, Nikolaos Mihalopoulos, Athanasios Nenes, *Georgia Institute of Technology*
- 1BA.5 Fluorescent Biological Aerosol Particle Emissions Caused by Human Activities.** YILIN TIAN, Yingjun Liu, Pawel 10:45 Misztal, Jianyin Xiong, Caleb Arata, Allen H. Goldstein, William Nazaroff, *University of California, Berkeley*
- 1BA.6 Diversity and Ice Nucleation Activity of Microorganisms collected with a Small Unmanned Aircraft System (sUAS) in France and the United States.** Regina Hanlon, Craig Powers, Celia Jimenez-Sanchez, Cindy E. Morris, 11:00 DAVID SCHMALE, *Virginia Tech*
- 1BA.7 Atmospheric Sampling of Microorganisms above a Freshwater Lake with an Unmanned Surface Vehicle (USV).** CRAIG POWERS, Regina Hanlon, Linsey Marr, David Schmale, *Virginia Tech* 11:15

1IA INDOOR AEROSOLS I - INDOOR-OUTDOOR AEROSOLS

306 B

Marina Vance and Yifang Zhu, chairs

- 1IA.1 The Failure (and Promise) of Residential Filtration.** JEFFREY SIEGEL, *University of Toronto* 9:45
- 1IA.2 Assessment of Indoor Air Quality in Low-Income Residential Homes of Colorado during Wildfire Seasons.** 10:00 PRATEEK SHRESTHA, Shelly Miller, *University of Colorado Boulder*
- 1IA.3 The Application of Low-cost Air Quality Sensors to Monitor Portable Air Filtration Device Performance and Personal Exposure in Beijing, China.** KAROLINE JOHNSON, Michael Bergin, Christina Norris, Junfeng Zhang, Yinping 10:15 Zhang, James Schauer, *Duke University*
- 1IA.4 The Role of Outdoor Atmospheric Pollutants on Secondary Organic Aerosol in Indoor Environments.** MICHAEL 10:30 WALKER, Claire Fortenberry, Arun Loka, Audrey Dang, Gauri Date, Karolina Cysneiros de Carvalho, Glenn Morrison, Brent Williams, *Washington University in St. Louis*
- 1IA.5 Aerosol-Phase Effects of Occupants in a Wintertime Classroom.** ANITA AVERY, Michael Waring, Peter DeCarlo, 10:45 *Drexel University*
- 1IA.6 Time-resolved Exposure Level to Heavy Metal Aerosols at the Underground Platform of a Subway Station in Seoul, Korea.** SEUNG-BOK LEE, Chang Hyeok Kim, Hyungjin Lim, Jihoon Seo, Jin Young Kim, Gwi Nam Bae, *Korea 11:00 Institute of Science and Technology*
- 1IA.7 Aerosol Sampling Experiment on the International Space Station Part I: Overview and Findings.** MARIT 11:15 MEYER, Gary Casuccio, *NASA Glenn Research Center*

1IM INSTRUMENTATION AND METHODS I - PARTICLE DETECTION

301 A

Chongai Kuang and Mary Kacarab, chairs

- 1IM.1 Laboratory Characterization of the Exhale Breath Collector (EBC) for High Collection Efficiency of Particles Down to 10nm.** ARANTZAZU EIGUREN FERNANDEZ, Gregory Lewis, Susanne Hering, *Aerosol Dynamics Inc* 9:45
- 1IM.2 Scanning Flow Isothermal CCN Analysis (SFICA): A New Method for Measuring CCN.** MARY KACARAB, Tomi 10:00 Raatikainen, Greg Kok, Athanasios Nenes, *Georgia Institute of Technology*
- 1IM.3 A Study of Alternative Working Fluids and Corresponding Effects for Condensation Nuclei Counters Applied on Automotive Exhaust.** MARTIN KUPPER, Martin Kraft, Tristan Reinisch, Alexander Bergmann, *CTR Carinthian Tech 10:15 Research, Villach, 9524, Austria*
- 1IM.4 Design and Performance of an Indirect Ionization Soft X-ray Charge Conditioner.** DEREK OBERREIT, Siqin He, 10:30 *Kanomax FMT, Inc.*

- 1IM.5 Characterization of a Condensation Particle Counter to Rapidly Measure Sub 3 Nanometer Atmospheric Clusters through Pulse Height Analysis.** CHONGAI KUANG, *Brookhaven National Laboratory*
10:45
- 1IM.6 A Compact, "MAGIC" Water Condensation Particle Counter.** STEVEN SPIELMAN, Gregory Lewis, Arantzazu Eiguren Fernandez, Jocelyn Bale-Glickman, David Delew, Susanne Hering, *Aerosol Dynamics Inc.*
11:00
- 1IM.7 A Method to Estimate the Bipolar Ion Mobility Ratio and Charge Fractions of Submicron Particles in an Aerosol Neutralizer.** XIAOTONG CHEN, Jingkun Jiang, *Tsinghua University*
11:15

1RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS I

301 B

Tim Gordon and Prakash Doraiswamy, chairs

- 1RA.1 Marine Aerosol Organic Composition and Sea Spray Production Processes.** LYNN RUSSELL, Raghu Betha, Savannah Lewis, Jun Liu, Patricia Quinn, Timothy Bates, *Scripps Institution of Oceanography*
9:45
- 1RA.2 Aerosol Properties over the Remote North Atlantic Ocean: Quantifying the Burden of Marine Emissions and Long-Range Transport.** LUKE ZIEMBA, Matthew Brown, Ewan Crosbie, Richard Moore, Michael Shook, Kenneth Thornhill, Edward Winstead, Bruce Anderson, *NASA*
10:00
- 1RA.3 Linking Barbados Mineral Dust Aerosols to North African Sources Using Elemental Composition and Radiogenic Sr, Nd, and Pb Isotope Signatures.** AYSE BOZLAKER, Joseph M. Prospero, Jim Price, Shankar Chellam, *Texas A&M University*
10:15
- 1RA.4 Molecular Characteristics of Long-range Transported Organic Aerosol at the Pico Mountain Observatory (PMO).** SIMEON SCHUM, Bo Zhang, Katja Dzepina, Paulo Fialho, Claudio Mazzoleni, Lynn Mazzoleni, *Michigan Technological University*
10:30
- 1RA.5 Seasonal Cycles in Particle Number Fluxes over a Pine Forest.** HOLLY DEBOLT, Ryan Fulgham, John Ortega, Delphine Farmer, *Colorado State University*
10:45
- 1RA.6 Chemical and Physical Properties of Aerosols in Regional Air Masses and the Free Troposphere over the Western U.S..** SHAN ZHOU, Sonya Collier, Daniel Jaffe, Qi Zhang, *University of California, Davis*
11:00
- 1RA.7 Towards Understanding the Physical Conditions Governing the Relationship between Aerosol Optical Depth and Surface PM_{2.5} Mass in the Western U.S..** SANDRA-MARCELA LORÍA-SALAZAR, Anna Panorska, W. Patrick Arnott, James Barnard, Cesunica Ivey, Jayne Boehmler, Heather Holmes, *University of Nevada, Reno*
11:15

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

2AC AEROSOL CHEMISTRY II: POSTERS

EXHIBIT HALL

- 2AC.1 Formation of Secondary Organic Aerosols from Gas-Phase Emissions of Heated Cooking Oils.** Tengyu Liu, Zijun Li, Man Nin Chan, CHAK K. CHAN, *City University of Hong Kong*
1:00
- 2AC.2 Modeling the Formation of Secondary Organic Aerosol Precursors from Isoprene.** KELVIN BATES, John Seinfeld, Paul Wennberg, *California Institute of Technology*
1:00
- 2AC.3 Spatial Differences in Summertime Enhancement of Aerosol Optical Thickness: Organic Carbon Fractionation and Particle Size.** AMY CHRISTIANSEN, Annmarie Carlton, *University of California, Irvine*
1:00
- 2AC.4 Fog Enhances Toxicity of Ambient Particulate Matter.** Stefano Decesari, MOHAMMAD SOWLAT, Sina Hasheminassab, Silvia Sandrini, Stefania Gilardoni, M. Cristina Facchini, Sandro Fuzzi, Constantinos Sioutas, *University of Southern California*
1:00

- 2AC.5 Investigating the Formation of Quinonic Compounds from Aqueous-phase Reactions of Phenols.** WENQING JIANG, Lu Yu, Shan Zhou, Alexander Laskin, Cort Anastasio, Qi Zhang, *University of California, Davis*
1:00
- 2AC.6 The Effect of Short-chain Alcohols on Secondary Organic Aerosol Mimicking Solutions Containing Glyoxal and Ammonium Sulfate.** ANDREW BERKE, Tara Bhat, Claire Keller, Kim Lu, Hunter Myers, Lily Timpane, *Smith College*
1:00
- 2AC.7 Effect of the Urban Heat Island on Aerosol pH.** MICHAEL BATTAGLIA JR., Sarah Douglas, Christopher Hennigan, *University of Maryland, Baltimore County*
1:00
- 2AC.8 Photocatalyzed Autoxidation of Polycyclic Aromatic Hydrocarbons in the Production of Humic-like Substances.** JOHN HAYNES, Keith Miller, Brian Majestic, *University of Denver*
1:00
- 2AC.9 Secondary Organic Aerosol Formation from 3-Methylfuran Oxidation.** TAEKYU JOO, Masayuki Takeuchi, Nga Lee Ng, *Georgia Institute of Technology*
1:00
- 2AC.10 Chemical Characterization of 2016 Alberta Wildfire Smoke and Its Long-term Health Impact.** Meng Meng, Shunyao Wang, Lukas Kohl, ARTHUR W. H. CHAN, *University of Toronto*
1:00
- 2AC.12 Characterization of Highly Oxidized Multifunctional Species (HOM) Generated from the Oxidation of α -pinene Using High-resolution Time-of-Flight Chemical Ionization Mass Spectrometry (HR-ToF-CIMS).** PENGLIN YE, Andrew Lambe, Chao Yan, Wei Nei, Paola Massoli, Manjula Canagaratna, John Jayne, Douglas Worsnop, *Aerodyne Research, Inc.*
1:00
- 2AC.13 Modeling Peroxy Chemistry and VOC Evolution in Oxidation Flow Reactors.** ZHE PENG, Julia Lee-Taylor, Marie Camredon, Bernard Aumont, Alma Hodzic, Sasha Madronich, Jose-Luis Jimenez, *CIRES, University of Colorado*
1:00
- 2AC.14 Contrasting the Oxidation Behavior of Aerosols in Urban and Rural Locations.** RISHABH SHAH, Kalliopi Florou, Albert A. Presto, *Carnegie Mellon University*
1:00
- 2AC.16 Kinetic Process Models for Growth, Evaporation and Multiphase Chemistry of Organic Aerosols.** THOMAS BERKEMEIER, Masayuki Takeuchi, Gamze Eris, Ulrich Pöschl, Manabu Shiraiwa, Nga Lee Ng, *Georgia Institute of Technology*
1:00
- 2AC.17 Temperature Dependence of Vapor Wall Deposition: A Case Study with Levoglucosan.** ADITYA KIRAN SRIKAKULAPU, Vikram Pratap, Qijing Bian, Jeffrey R. Pierce, Philip K Hopke, Shunsuke Nakao, *Clarkson University*
1:00
- 2AC.18 Secondary Organic Aerosol (SOA) and Ozone Formation from Low NO_x Photo-oxidation of Select Intermediate-Volatility Organic Compounds (IVOCs) and Consumer Products Containing Them in the Presence of a Surrogate Mixture.** WEIHUA LI, Lijie Li, Chia-Li Chen, Mary Kacarab, Peng Weihan, David R. Cocker III, *University of California, Riverside*
1:00
- 2AC.19 Chemical Thermodynamics of Aqueous Atmospheric Aerosols: Modeling and Microfluidic Measurements.** LUCY NANDY, Cari Dutcher, *University of Minnesota*
1:00
- 2AC.20 Characterization of Winter Organic Aerosol in Zurich Using Extractive Electrospray Ionization Time-Of-Flight Mass Spectrometry (Eesi-Tof).** LU QI, Giulia Stefenelli, Veronika Pospisilova, Tianning Zhao, Samuel Brown, Yandong Tong, Christoph Hueglin, Martin Rigler, Mindong Chen, Xinlei Ge, Urs Baltensperger, Andre S.H. Prévôt, Jay G. Slowik, *Paul Scherrer Institute*
1:00
- 2AC.21 Measurement of Aerosol Acidity Using Colorimetry Integrated with a Portable Miniature UV-Visible Spectrometer.** RYAN WINSLOW, Myoseon Jang, *University of Florida*
1:00
- 2AC.22 The Gap between Short and Long Timescales in Vapor-Wall Interaction in Laboratory Chambers.** YUANLONG HUANG, Ran Zhao, Sophia Charan, Christopher Kenseth, John Seinfeld, *California Institute of Technology*
1:00
- 2AC.23 Predicting the Glass Transition Temperature and Viscosity of Secondary Organic Aerosols Using Molecular Composition.** WING-SY WONG DERIEUX, Ying Li, Mallory Hinks, Peng Lin, Julia Laskin, Alexander Laskin, Sergey Nizkorodov, Manabu Shiraiwa, *University of California, Irvine*
1:00
- 2AC.24 Molecular Composition and Phase Partitioning of Indoor Organic Aerosol Measured during the Atmospheric Composition and Reactivity from Outdoor and Indoor Mixing (ACRONIM) Study.** CLAIRE FORTENBERRY, Michael Walker, Audrey Dang, Arun Loka, Gauri Date, Karolina Cysneiros de Carvalho, Glenn Morrison, Brent Williams, *Washington University in St Louis*
1:00

- 2AC.25** **Mixing Times of Organic Molecules within Secondary Organic Aerosol Particles: A Global Planetary Boundary Layer Perspective.** ADRIAN MACLEAN, Christopher Butenhoff, James Grayson, Kelley Barsanti, Jose-Luis Jimenez, Allan Bertram, *University of British Columbia*
1:00
- 2AC.26** **Effects of Hydroperoxyl-Radical-to-NO Ratio on SOA Formation from Aromatic Hydrocarbons in a Controlled Reactivity Urban Atmosphere.** PENG WEIHAN, Mary Kacarab, William P. L. Carter, David R. Cocker III, *University of California, Riverside*
1:00
- 2AC.29** **Chemical Characterization of Organic Aerosol in a Northern Michigan Forest: Investigating Oxidation Products and Pathways.** JENNA DITTO, Emily Barnes, Masayuki Takeuchi, Gamze Eris, Peeyush Khare, Nga Lee Ng, Drew Gentner, *Yale University*
1:00
- 2AC.30** **Utilizing Outdoor Chambers to Quantify Secondary Organic Aerosol Formation from Evaporative Emissions of Commercial Fuels and Aromatics.** TERRY LATHEM, Jeff Bean, Shaokai Gao, John Gingerich, *Phillips 66*
1:00
- 2AC.31** **Identification of Organic Hydroperoxides and Organic Peroxyacids from α -pinene Secondary Organic Aerosol.** SHOUMING ZHOU, Jean Rivera-Rios, Frank Keutsch, Jonathan Abbott, *University of Toronto, Toronto, Canada*
1:00
- 2AC.32** **Particle Acidity Effects on SOA Formation from Toluene Oxidation in the Presence of NO_x under Dry and Humid Conditions.** DAO HUANG, Yunle Chen, Steve Kim, Nga Lee Ng, *Zhejiang University*
1:00
- 2AC.34** **Phase Separation, Morphology, and Diffusivity of Secondary Organic Matter Determined using Aerosol Optical Tweezers.** KYLE GORKOWSKI, Neil Donahue, Ryan Sullivan, *Carnegie Mellon University*
1:00
- 2AC.35** **Experimental Characterization and Lung Cytotoxicity of Secondary Aerosol from D5 Cyclic Siloxane Oxidation.** NATHAN JANECEK, Benjamin King, Nathan Bryngelson, Rachel Marek, Andrea Adamcakova-Dodd, Traci Lersch, Kristin Bunker, Gary Casuccio, William Brune, Peter Thorne, Keri Hornbuckle, Jennifer Fiegel, Charles Stanier, *University of Iowa*
1:00
- 2AC.36** **Evaluation of Organic Aerosol Production and Chemical Aging Modeling Schemes against Ground and Airborne PEGASOS Campaign Measurements.** ELENI KARNEZI, Benjamin Murphy, Spyros Pandis, *Carnegie Mellon University*
1:00
- 2AC.37** **Nighttime Secondary Organic Aerosol Formation from Biodiesel and Ultra-Low Sulfur Diesel Blends.** SHAOKAI GAO, Jennifer L. Murphy, *Phillips 66 Research Center*
1:00
- 2AC.38** **The Role of Day- and Night-time Aging on the Evolution and Composition of Organic Aerosol from Wildfire Emissions.** SHANTANU JATHAR, Ali Akherati, Shiva Tarun, Liam Lewane, Abril Galang, Timothy Onasch, Scott Herndon, Joseph Roscioli, Tara Yacovitch, Edward Fortner, Philip Croteau, Conner Daube, Berk Knighton, Benjamin Werden, Ezra Wood, *Colorado State University*
1:00
- 2AC.39** **Biological Impacts on Carbon Speciation and Morphology of Laboratory Generated Sea Spray Aerosols.** Don Pham, Rachel O'Brien, Matthew Fraund, Daniel Bonanno, Olga Laskina, Charlotte Beall, Kathryn Moore, Sara Forestieri, Xiaofei Wang, Chris Lee, Camille Sultana, Vicki Grassian, Christopher Cappa, Kimberly Prather, RYAN MOFFET, *University of the Pacific*
1:00
- 2AC.40** **Fe(II) and H₂O₂ Production in the Presence of Soot.** JUAN RODRIGUEZ, Stephen Bradford, Hector Casique, Dan Hinz, Ashleen Reddy, Justin Rodriguez, Anne Johansen, *Central Washington University*
1:00
- 2AC.41** **Role of Oleic Acid Coating in the Heterogeneous Uptake of Dimethylamine by Ammonium Sulfate Particles.** Yangxi Chu, CHAK K. CHAN, *City University of Hong Kong*
1:00
- 2AC.42** **Atmospheric Mineral Aerosol Reaction (AMAR) Model for Simulation of Heterogeneous Photooxidation of SO₂.** ZECHEN YU, Myoseon Jang, Jiyeon Park, *University of Florida*
1:00
- 2AC.43** **Sources of PM_{2.5} during Haze Episodes in Winter 2016 in Beijing.** MEI ZHENG, Caiqing Yan, Tian Zhou, Yue Liu, Xuhui Cai, Jie Li, *Peking University*
1:00
- 2AC.44** **Biologically Mediated Control of Marine Cloud Condensation Nuclei Concentrations.** XIAOFEI WANG, Kathryn Mayer, Mitchell Santander, Jon Sauer, Camille Sultana, Kimberly Prather, *University of California, San Diego*
1:00
- 2AC.45** **Profiling of Polycyclic Aromatic Compounds in Ambient Air Samples Collected in the Athabasca Oil Sands Region (Canada) from 2011 to 2015.** ANDRZEJ WNOROWSKI, Jasmin Schuster, Tom Harner, Yayne Aklilu, Jean-Pierre Charland, *Environment and Climate Change Canada*
1:00

- 2AC.46 Condensational Kinetics of Viscous Amorphous Organic Aerosol.** NICHOLAS ROTHFUSS, Aleksandra Marsh, Grazia Rovelli, Markus Petters, Jonathan P. Reid, *North Carolina State University*
1:00
- 2AC.47 Chemical Compositions of Outdoor and Indoor PM_{2.5} in Downtown Shanghai, China: Based on 1-Year Field Measurements.** JIANBANG XIANG, Jingjing Shi, Fengkui Duan, Zhuohui Zhao, Jinhan Mo, Haidong Kan, Yinping Zhang, *Tsinghua University*
1:00
- 2AC.48 Development of a Laser-Induced Breakdown Spectroscopy (LIBS) System with Timed Ablation to Increase Detection Efficiency of a Single Particle.** HYUNOK MAENG, Hoseung Chae, Heesung Lee, Gibaek Kim, Haebum Lee, Kyoungtae Kim, Jihyun Kwak, Gangnam Cho, Kihong Park, *Gwangju Institute of Science and Technology(GIST)*
1:00
- 2AC.49 New Explorations into the Atmospheric Auto-oxidation of Volatile Organic Compounds.** S. MANI SARATHY, Zhandong Wang, Matti Rissanen, Mikael Ehn, *KAUST*
1:00
- 2AC.50 Feedbacks between Atmospheric Aerosol Microphysics and Photochemistry of Iron Complexes.** PABLO CORRAL ARROYO, Peter Aaron Alpert, Jing Dou, Beiping Luo, Ulrich Krieger, Markus Ammann, *Paul Scherrer Institut*
1:00
- 2AC.51 Application of Three Dimensional Source Contribution Function (3d-Pscf) for Air Pollutants from Biomass Fuel Burning Affecting the Air Quality in Seoul.** IN SUN KIM, Dae Hyun Wee, Yong Pyo Kim, *Ewha Womans University*
1:00
- 2AC.52 ICARUS: An Online, Open-access, and Searchable Database for Atmospheric Chamber Research in the United States.** TRAN NGUYEN, William P. L. Carter, David R. Cocker III, Neil Donahue, Lea Hildebrandt Ruiz, Jose-Luis Jimenez, Ajith Kaduwela, Nga Lee Ng, Sergey Nizkorodov, John Orlando, Spyros Pandis, Allen Robinson, John Seinfeld, Geoffrey Tyndall, Paul Ziemann, *UC Davis*
1:00
- 2AC.53 Evolution of Brown Carbon Aerosol Optical Properties Induced by Heterogeneous OH Oxidation.** ELIJAH G. SCHNITZLER, Jonathan Abbott, *University of Toronto*
1:00
- 2AC.54 A Steady State Continuous Flow Chamber for the Study of Daytime and Nighttime Chemistry at Atmospherically Relevant NO Levels.** XUAN ZHANG, John Ortega, Yuanlong Huang, Geoffrey Tyndall, John Orlando, *National Center for Atmospheric Research*
1:00
- 2AC.55 Trends in the Oxidation and Relative Volatility of Chamber-Generated Secondary Organic Aerosols.** KENNETH DOCHERTY, Eric Corse, Mohammed Jaoui, John Offenberg, Tad Kleindienst, Jonathan Krug, Theran Riedel, Michael Lewandowski, *EPA/ORD/NERL*
1:00
- 2AC.57 In-Situ Surface Tension Measurements of CVOC Uptake onto Hanging Aerosol Mimic Droplets.** Thomas Beier, JOSEPH WOO, *Lafayette College*
1:00
- 2AC.58 The Role of Nonvolatile Cations on Aerosol Ammonium-Sulfate Molar Ratios and Aerosol pH.** RODNEY J. WEBER, Hongyu Guo, Athanasios Nenes, *Georgia Institute of Technology*
1:00
- 2AC.59 O₃- and NO₃-Initiated Aging of Toluene Secondary Organic Aerosol.** SATHIYAMURTHI RAMASAMY, Tomoki Nakayama, Takashi Imamura, Kei Sato, *National Institute for Environmental Studies, Japan*
1:00
- 2AC.60 Overview Of TANGENT (Tandem Aerosol Nucleation and Growth ENvironment Tube) 2017 IOP Study.** LEE TISZENKEL, Qi Ouyang, Chris Stangl, Justin Krasnomowitz, Shanhu Lee, Murray Johnston, *University of Alabama Huntsville*
1:00
- 2AC.61 Laboratory Studies of Temperature and Relative Humidity Dependence of Aerosol Nucleation during the TANGENT 2017 IOP Study.** QI OUYANG, Lee Tiszenkel, Justin Krasnomowitz, Chris Stangl, Murray Johnston, Shanhu Lee, *University of Alabama in Huntsville*
1:00
- 2AC.62 Temporal Variation of PAHs and n-Alkanes Concentrations in Atmospheric PM_{2.5} of a Background Site in South Korea: Evaluation of Fossil Fuel Combustion Contribution.** KI AE KIM, Soo Bin Hong, Jong Sik Lee, Eun Sil Kim, Yong Pyo Kim, Chang Hoon Jung, Ji Yi Lee, *Chosun University*
1:00
- 2AC.63 Nanoparticle Formation in a Tandem Flow Tube Apparatus (TANGENT).** CHRIS STANGL, Justin Krasnomowitz, Qi Ouyang, Lee Tiszenkel, Shanhu Lee, Murray Johnston, *University of Delaware*
1:00
- 2AC.64 Nanoparticle Growth in a Tandem Flow Tube Apparatus (TANGENT).** JUSTIN KRASNOMOWITZ, Chris Stangl, Lee Tiszenkel, Qi Ouyang, Shanhu Lee, Murray Johnston, *University of Delaware*
1:00
- 2AC.65 Multi-generation Chemical Aging of Secondary Organic Aerosol Components.** NINGXIN WANG, Neil Donahue, Spyros Pandis, *Carnegie Mellon University*
1:00

2AC.66 Product Identification of Reactions Between Small Atmospheric Carbonyls and Ammonium Sulfate.

1:00 MELISSA GALLOWAY, Daisy Grace, Jessica Ackendorf, Rachael Holappa, *Lafayette College*

2AC.67 Understanding Missing Sources of Fine Particulate Organosulfur Compounds in the Southeastern US: Implications from Ambient Measurements and Laboratory Experiments.

1:00 YUZHONG CHEN, Matthieu Riva, Karsten Baumann, Tianqu Cui, Mike Fort, Eric Edgerton, Lindsay Yee, Weiwei Hu, Sri Hapsari Budisulistiorini, Caitlin Rose, Zhenfa Zhang, Allen H. Goldstein, Jose-Luis Jimenez, Stephanie L. Shaw, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill*

2AE AEROSOL EXPOSURE I: POSTERS

EXHIBIT HALL

2AE.1 Exposure to PM during Different Sport Activities in a Sport Center in Astana, Kazakhstan. Mehdi Amouei

1:00 Torkmahalleh, MERUYET BAZHANOVA, Karakat Kabay, *Chemical Engineering Department, Nazarbayev University*

2AE.2 Quantifying the Sensitivity of Mortality Calculations to Household-level, Ambient-level, and Combined Exposure to PM_{2.5} from Solid-fuel Combustion.

1:00 JACK KODROS, John Volckens, Michael Brauer, Ellison Carter, Kelsey Bilsback, Christian L'Orange, Michael Johnson, Jeffrey R. Pierce, *Colorado State University*

2AE.3 Aerosol Deposition in Upper Respiratory Tract for Different Inhalation Patterns and Effective Flow Inlet Area: Computational Fluid Dynamics Study.

1:00 MAHDI ASGARI, Arkadiusz Kuczaj, *Philip Morris International R&D*

2AE.4 Interplay of Mobile Air Monitoring and Distributed Samplers to Study Intracity Spatiotemporal Variation.

1:00 HUGH LI, Peishi Gu, Qing Ye, Naomi Zimmerman, Ellis Shipley Robinson, Joshua Apte, Allen Robinson, Albert A. Presto, *Carnegie Mellon University*

2AE.5 Health Effects Investigation of Nebulizing Alternaria Extracts and Nanosilica Particulate Matter using a Mouse Chamber.

1:00 XINZE PENG, David R. Cocker III, David Lo, *University of California, Riverside*

2AE.6 An Enhanced Children's MicroPEM for Household Air Pollution Personal Exposure Measurements.

1:00 Ryan Chartier, Mukesh Dherani, KATHLEEN OWEN, *RTI International*

2AE.8 On-Line Aerosol Characterization within Exposure Systems Using Soft Ionization Time of Flight Mass Spectroscopy.

1:00 Sandro Steiner, Shoaib Majeed, ARKADIUSZ KUCZAJ, Stefan Frentzel, Julia Hoeng, *Philip Morris Products S.A., Switzerland*

2AE.9 Population Exposure to Ultrafine Airborne Particle Number and Mass Concentrations in California.

1:00 XIN YU, Melissa Venecek, Anikender Kumar, Abhishek Dhiman, Michael Kleeman, *University of California, Davis*

2AE.10 Wintertime Submicron Particulate Matter in Logan, UT as Measured by SMPS and EPC.

1:00 JONATHAN KRUG, John Offenberg, Maribel Colon, Kenneth Docherty, Bruce Habel, Russell Long, *EPA/ORD/NERL*

2AE.11 Exposure Assessment of Market Products Including Nanomaterial in General Use and Disposal Process.

1:00 YASUTO MATSUI, Shigeru Kimoto, Minoru Yoneda, *Kyoto University*

2AE.12 Aerosol and Gaseous Pollutants Emission from a Desktop Laser Cutter and Engraver.

1:00 JUN WANG, Kevin O'Neill, *University of Oklahoma*

2AE.13 Condensation Particle Growth for Improved Delivery of Nanoaerosols to Air-Liquid Interface Cell Culture.

1:00 TREVOR TILLY, Jiva Luthra, Sarah Robinson, Arantzazu Eiguren Fernandez, Gregory Lewis, Saber Hussain, Tara Sabo-Attwood, Chang-Yu Wu, *University of Florida*

2AE.14 In Vitro Aerosol Exposure of Nanoaerosols: From Laboratory to Field Toxicity Testing.

1:00 TREVOR TILLY, M. Tyler Nelson, Christin Grabinski, David Mattie, Chang-Yu Wu, Saber Hussain, *Air Force Research Laboratory*

2AP AEROSOL PHYSICS II: POSTERS

EXHIBIT HALL

2AP.1 Evaluation of Particle Release Map using Selected Turbulence Models on the T Junction for Cohesive Wall Treatment.

1:00 YUKI TSUZUKI, Ralph Aldredge, *University of California, Davis*

- 2AP.2 Heterogeneous Nucleation of CO₂ on n-Alkane Nanodroplets.** YENSIL PARK, Barbara Wyslouzil, *The Ohio State University*
1:00
- 2AP.3 DMA-MS based Examination of Organic Vapor Uptake by Nanometer Scale Clusters.** CHENXI LI, Christopher Hogan Jr., *University of Minnesota*
1:00
- 2AP.4 Experimental Determination of Optical Losses due to Absorbing and Non-Absorbing Particles Deposited onto Solar Cells.** LAURA LLANZA, Patricio Piedra, Hans Moosmuller, *Desert Research Institute*
1:00
- 2AP.5 Scattering by Wavelength-scale Spheroidal Particles.** JEHAN SENEVIRATNE, Matthew Berg, *Mississippi State University*
1:00
- 2AP.6 Dynamic Modeling of Wall Loss in a Teflon Atmospheric Smog Chamber.** MEREDITH SCHERVISH, Neil Donahue, *Carnegie Mellon University*
1:00
- 2AP.7 Applying Extended Kirkwood-Riseman Theory to Rotating Fractal Aggregates in the Transition Regime.** JAMES CORSON, George Mulholland, Michael Zachariah, *University of Maryland*
1:00
- 2AP.8 Solving the General Dynamic Equation for Nucleation, Surface Growth, and Coagulation, using the Nodal Method.** JAMES CORSON, George Mulholland, Michael Zachariah, *University of Maryland*
1:00
- 2AP.9 The Light Scattering Internal Coupling Parameter for Aggregates of Particles.** CHRIS SORENSEN, *Kansas State University*
1:00
- 2AP.10 Homogeneous Nucleation of Carbon Dioxide in a Supersonic Laval Nozzle.** KAYANE DINGILIAN, Yensil Park, Kyaw Hpone Myint, Barbara Wyslouzil, *The Ohio State University*
1:00
- 2AP.11 Aerosol Emission from Seawater Contaminated by Crude Oil and Crude Oil-Dispersant Slicks due to Bubble Bursting.** NIMA AFSHAR-MOHAJER, Kaushik Sampath, Ana Rule, Joseph Katz, Kirsten Koehler, *Johns Hopkins University*
1:00
- 2AP.12 Fractal Scaling of Soot Packing Density across Five Size Decades.** PAI LIU, William Heinson, Rajan Chakrabarty, *Washington University in St. Louis*
1:00
- 2AP.13 An Experimental Comparison of Aerodynamic and Optical Particle Sensing for Indoor Aerosols.** PARICHEHR SALIMIFARD, Donghyun Rim, James Freihaut, *The Pennsylvania State University*
1:00
- 2AP.14 The Effect of Polydispersity of Ultrafine Aerosol Particles on Electrical Charge Measurements in Low-cost Sensors.** ROBERT NISHIDA, Nene Yamasaki, Adam M Boies, Simone Hochgreb, *University of Cambridge*
1:00

2BA BIOAEROSOLS II: POSTERS

EXHIBIT HALL

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- 2BA.1 A Realizable Fast Way to Measure Biological Airborne Particles via Adenosine Triphosphate Detection.** HYEONG RAE KIM, Ji-Woon Park, Ki Young Yoon, Jeong Hoon Byeon, Jungho Hwang, *Yonsei University, Korea*
1:00
- 2BA.2 Sampling of Bacterial Aerosols using a Personal Electrostatic Particle Concentrator.** SEONGKYEOL HONG, Myeong-Woo Kim, Jaesung Jang, *Ulsan National Institute of Science and Technology, Korea*
1:00
- 2BA.3 Anti-Bacterial and Anti-Viral Performance Test of Silver Nanowire Coated Nanofiber Filter.** KYUHYUN PARK, Jungho Hwang, *Yonsei University, Republic of Korea*
1:00
- 2BA.4 Measurements of Airborne Influenza Viruses using a Personal Electrostatic Particle Concentrator and Vertical Flow Assay based Electrochemical Paper Sensors.** Jyoti Bhardwaj, MYEONG-WOO KIM, Seongkyeol Hong, Jaesung Jang, *Ulsan National Institute of Science and Technology, S. Korea*
1:00
- 2BA.5 Hydrogen Peroxide Modulates the Energetic Metabolism of the Cloud Microbiome.** ANNE-MARIE DELORT, Nolwenn Wirgot, Virginie Vinatier, Martine Sancelme, Laurent Deguillaume, *Université Clermont Auvergne, France*
1:00
- 2BA.6 Siderophores in Cloud Waters and Potential Impact on Atmospheric Chemistry.** Virginie Vinatier, Monica Passananti, Nolwenn Wirgot, Muriel Joly, Martine Sancelme, Laurent Deguillaume, Gilles Mailhot, Marcello Brigante, ANNE-MARIE DELORT, *Université Clermont Auvergne, France*
1:00

- 2BA.7 Diversity and Abundance of Microorganisms in Individual Raindrops Isolated from Natural Precipitation Events.** REGINA HANLON, Ellen Garcia, Osman Karatum, Linsey Marr, David Schmale, *Virginia Tech*
1:00
- 2BA.8 Effect of Airborne Ion Emissions on Microbial Viability and Culturability.** NIRMALA THOMAS, Taewon Han, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
1:00
- 2BA.10 Wind Tunnel Experiment of Bacillus Spores Resuspension.** JING QIAN, Babak Nasr, Meilu He, Kavindra Kumaragama, Matthew Brown, Morgan Minyard, Andrea R. Ferro, Goodarz Ahmadi, Suresh Dhaniyala, *Clarkson University*
1:00
- 2BA.12 Collection of Air Samples for Improved Detection of Microbes onboard the International Space Station.** Andrew Page, DAVID ALBURTY, Michael Hornback, Stephanie Cantrell, *InnovaPrep LLC*
1:00
- 2BA.13 Development of A High Volume Portable Bioaerosol Concentrating Sampler.** HAOXUAN CHEN, Maosheng Yao, *Peking University*
1:00
- 2BA.14 Detecting Breath-borne Pathogens Using a New Device Together with LAMP.** YUNHAO ZHENG, Haoxuan Chen, Maosheng Yao, Li Xiaoguang, Xu Jie, *Peking University*
1:00
- 2BA.15 Use of Automobile Filter Samples for Profiling Global Bioaerosols.** JING LI, Maosheng Yao, *Peking University*
1:00
- 2BA.16 Use of Online Yeast Sensor (SLEPTor) for Analyzing PM2.5 Effects on Autophagy Gene Expression.** TING ZHANG, Maosheng Yao, *Peking University*
1:00
- 2BA.17 A Rotating Drum System with Environmental Conditioning for Research on Bioaerosols.** KELLY BRINKLEY, Benjamin Alvarez, Daniel Hahn, Elizabeth Corson, Michael Herman, Thomas Buckley, Michael House, Daniel Simon, *Johns Hopkins University Applied Physics Laboratory*
1:00
- 2BA.18 Octanol-water Partition Coefficients of Airborne Fungi.** CHEOLWOON WOO, Naomichi Yamamoto, *Seoul National University*
1:00
- 2BA.19 Seasonal Changes of Bacteria Measured on a High Elevation Tower in Tokyo.** JUN UETAKE, Yutaka Tobo, Ryohei Misumi, Paul DeMott, Thomas Hill, Sonia Kreidenweis, *Colorado State University*
1:00
- 2BA.20 Bacterial Diversity in the Indoor Environment: A Factorial Design Approach for Isolating the Impact of Environmental Conditions and Sampling Methods.** DAHAE SEONG, Shamia Hoque, *USC*
1:00
- 2BA.21 Laser-Induced Fluorescence Measurements of CRISPR-Cas9 Bioaerosols.** BRIAN DAMIT, Elizabeth Corson, Mellisa Theodore, Ellen Forsyth, Rebecca Lilly, Robert Player, Robert M. Miceli, *Johns Hopkins University Applied Physics Laboratory*
1:00
- 2BA.22 Systematic Characterization and Fluorescence Threshold Strategies for the Wideband Integrated Bioaerosol Sensor (WIBS) Using Size-Resolved Biological and Interfering Particles.** NICOLE SAVAGE, Christine Krentz, Tobias Könnemann, Taewon Han, Gediminas Mainelis, Christopher Pöhlker, J. Alex Huffman, *University of Denver, CO*
1:00
- 2BA.23 Raman Spectra of Individual Bioaerosol Particles in the Laboratory Using the Resource Effective Bio-Identification System (REBS).** JACQUELINE MERLE, Nicole Savage, David Doughty, Steven Hill, J. Alex Huffman, *University of Denver, CO*
1:00

2CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE I: POSTERS

EXHIBIT HALL

- 2CA.1 Secondary Organic Aerosol Formation in Biomass-burning Plumes: Theoretical Analysis of Lab Studies and Ambient Plumes.** QIJING BIAN, Shantanu Jathar, Jack Kodros, Kelley Barsanti, Lindsay Hatch, Andrew May, Sonia Kreidenweis, Jeffrey R. Pierce, *Colorado State University*
1:00
- 2CA.2 Black Carbon Characterization in Aged Wildfire Plumes Observed at the Mt. Bachelor Observatory.** JAMES LAING, Daniel Jaffe, Arthur J. Sedlacek, *University of Washington, Bothell, WA, USA*
1:00
- 2CA.3 Characterization of Humic-like Substances in Particulate Matter in Malaysia Influenced by Indonesian Peatland Fires.** FUJII YUSUKE, Ikeda Kazuhiro, Tohno Susumu, Mahmud Mastura, *Center for Environmental Science in Saitama*
1:00

- 2CA.4 Optical Properties of Black Carbon Particles in Aircraft Engine Exhaust: Engine Type, Operating Conditions, and Fuel Effects.** MIRIAM ELSER, Benjamin Brem, Lukas Durdina, David Schönerberger, Jing Wang, *Empa, Switzerland*
1:00
- 2CA.5 Light-absorbing Organic Carbon from Prescribed and Laboratory Biomass Burning and Gasoline Vehicle Emissions.** MINGJIE XIE, Michael Hays, Amara Holder, *U.S. EPA*
1:00
- 2CA.6 Characterization of Hydroxy/Carboxyl-Nitro Compounds in SOA from Aromatic Oxidation: Implication for PM_{2.5}.** MOHAMMED JAOUI, John Offenberg, Michael Lewandowski, Amara Holder, Tad Kleindienst, *EPA/ORD/NERL*
1:00
- 2CA.7 Measured Absorption Spectra of Aerosolized Carbonaceous Species and Their Influence on Climate Forcing.** CHRISTOPHER ZANGMEISTER, James Radney, Rian You, Michael Zachariah, *National Institute of Standards and Technology*
1:00
- 2CA.8 Primary and Secondary Sources of PM_{2.5} in the Kathmandu Valley, Nepal.** MD ROBIUL ISLAM, Thilina Jayarathne, Ashley Gilbert, Maheswar Rupakheti, Elizabeth Stone, *University of Iowa*
1:00
- 2CA.9 Chemical Characterization of Secondary Organic Aerosol under High NH₃ in a Transitional Season of Biogenic VOC Emission using HR-ToF-AMS.** YUNLE CHEN, Theodora Nah, David Tanner, Masayuki Takeuchi, Hongyu Guo, Amy P. Sullivan, Rodney J. Weber, Greg Huey, Lu Xu, Nga Lee Ng, *Georgia Institute of Technology*
1:00
- 2CA.11 Climate Relevant Aerosol Properties from Biomass Burning.** SAMANTHA BIXLER, Christian Carrico, Manvendra Dubey, Allison Aiken, Thom Rahn, *New Mexico Institute of Mining and Technology*
1:00
- 2CA.12 Tar Ball Aggregates in the Plume of the Whitewater-Baldy Complex Wildfire, NM.** Giulia Giroto, Swarup China, Janarjan Bhandari, CLAUDIO MAZZOLENI, Barbara Scarnato, Kyle Gorkowski, Allison Aiken, Manvendra Dubey, *Michigan Technological University*
1:00
- 2CA.13 Measured and Simulated Secondary Organic Aerosol Formation from Vehicle Exhaust in Light and Dark Conditions.** YING LI, Yu Morino, Yuji Fujitani, Kei Sato, Satoshi Inomata, Kiyoshi Tanabe, Yoshinori Kondo, Tomoki Nakayama, Akihiro Fushimi, Akinori Takami, Shinji Kobayashi, *National Institute for Environmental Studies*
1:00
- 2CA.14 Preliminary Assessment of Aerosol Associated Organic Tracers in Rural and Urban Location of Western Himalayas.** SHWETA YADAV, Deepika Kaushal, Sarita Bamotra, Ankit Tandon, *Central University of Jammu, Samba, Jammu, India*
1:00
- 2CA.16 Mass Absorption and Scattering Cross Sections of Brown Carbon Aerosol from Smoldering Biomass Combustion.** NISHIT SHETTY, Benjamin Sumlin, Yuli W. Heinson, Wei Min Hao, Jay Turner, Brent Williams, Rajan Chakrabarty, *Washington University in St. Louis*
1:00
- 2CA.17 Size and Volatility of Vehicle Emitted Primary Particles Measured in a Traffic Tunnel.** XIANG LI, Timothy Dallmann, Andrew May, Albert A. Presto, *Carnegie Mellon University*
1:00
- 2CA.18 Brown Carbon Chromophores from Biomass Burning and their Evolution during Oxidative Aging.** BENJAMIN SUMLIN, Claire Fortenberry, Audrey Dang, Michael Walker, James Meyer, Brent Williams, Rajan Chakrabarty, *Washington University in St. Louis*
1:00
- 2CA.19 First Year of Black Carbon and Brown Carbon Measurements in a Mountain Top Station in Bogotá, Colombia.** RICARDO MORALES BETANCOURT, Luis Carlos Belalcazar, Diego Miguel Quirama, Juan Manuel Rincón, Juan Felipe Mendez, *Universidad de los Andes*
1:00
- 2CA.20 Choice of OC/EC Ratio in the EC Tracer Method to Estimate Secondary Organic Carbon over a National Park in Bhopal, India: A Sensitivity Analysis.** SHILPI SAMIKSHA, Ramya Sunder Raman, Samresh Kumar, *Indian Institute of Science Education and Research, Bhopal*
1:00
- 2CA.21 On the Density and Homogeneous Internal Composition of Brown Carbon Spheres from Biomass Burning.** Bongjin Seo, Christopher Oxford, BENJAMIN SUMLIN, Robert Pattison, Brent Williams, Rajan Chakrabarty, *Washington University in St. Louis*
1:00
- 2CA.22 Development of a Unified Information System for Prescribed Fire and Air Quality in the Southeastern U.S..** SADIA AFRIN, Fernando Garcia-Menendez, *North Carolina State University*
1:00
- 2CA.23 Controlled Combustion Experiments for Constraining the Light-absorption Properties of Brown Carbon.** ZEZHEN CHENG, Rawad Saleh, *University of Georgia*
1:00

- 2CA.24 Refractive Index of Secondary Organic Aerosols Formed from Oxidation of Alpha-Pinene, Longifolene, Phenol and 1-Methylnaphthalene.** JUSTIN DINGLE, Stephen Zimmerman, Alexander Frie, Justin Min, Roya Bahreini, *University of California Riverside*
1:00
- 2CA.25 Optical Properties of Secondary Organic Aerosol Generated via Photooxidation in Single and Multiple Precursor Systems.** ALEXANDER FRIE, Justin Dingle, Stephen Zimmerman, Justin Min, Roya Bahreini, *University of California, Riverside*
1:00
- 2CA.26 Aerosol Optical Properties of Biomass Smoke from Southwestern U.S. Fuels.** JARED LAM, Christian Carrico, Samantha Bixler, Dian Romonosky, Allison Aiken, Thom Rahn, Manvendra Dubey, *New Mexico Institute of Mining and Technology*
1:00
- 2CA.27 Occurrence of Volatiles and Larger Molecular Weight Compounds in Organic Particulate Matter Using Thermal Desorption – Pyrolysis – Gas Chromatography/Mass Spectrometry.** BRETT NESPOR, Richard Cochran, Haewoo Jeong, David Delene, Alena Kubatova, Evgenii I. Kozliak, *University of North Dakota*
1:00
- 2CA.28 Climate Implications of Emissions from Traditional and Improved Cooking Stoves.** GEORGES SALIBA, R. Subramanian, Kelsey Bilsback, Christian L'Orange, John Volckens, Michael Johnson, Allen Robinson, *Carnegie Mellon University*
1:00
- 2CA.29 Relating Chemical Evolution of Laboratory Generated SOA to Optical Properties.** STEPHEN ZIMMERMAN, Justin Dingle, Alexander Frie, Justin Min, Roya Bahreini, *University of California, Riverside*
1:00

2CC AEROSOL, CLOUDS, AND CLIMATE I: POSTERS

EXHIBIT HALL

- 2CC.1 Laboratory Measurements of the Removal of Interstitial Aerosol in a Cloudy Turbulent Environment.** SARITA KARKI, Will Cantrell, Kamal Kant Chandrakar, David Ciochetto, Gregory Kinney, Raymond Shaw, *Michigan Technological University*
1:00
- 2CC.2 1-Octanol-water Partitioning as a Classifier of Water Soluble Organic Matters: Implication for Solubility Distribution.** MIKINORI KUWATA, Wen-Chien Lee, *Nanyang Technological University*
1:00
- 2CC.3 Decrease in Acid Rain over 26-year Study at Paradise, Mt. Rainier National Park.** ASHLEEN REDDY, Juan Rodriguez, Rebecca Lofgren, Barbara Samora, Anne Johansen, *Central Washington University*
1:00
- 2CC.5 Biomass Burning as a Modulator of Droplet Number in the Southern Atlantic.** MARY KACARAB, Steven Howell, Jennifer Griswold, Kenneth Thornhill, Rob Wood, Jens Redemann, Athanasios Nenes, *Georgia Institute of Technology*
1:00
- 2CC.6 Gas-Phase Oxidation Impacts the CCN Activation of a 100nm Particle.** Ashley Vizenor, AKUA ASA-AWUKU, *University of California, Riverside*
1:00
- 2CC.7 Temperature- and Humidity-Dependent Phase States of Secondary Organic Aerosols.** SARAH SUDA PETERS, Sonia Kreidenweis, Andrew Grieshop, Megan Claflin, Paul Ziemann, Markus Petters, *Colorado State University*
1:00
- 2CC.8 A Multi-Instrument Cloud Condensation Nuclei Spectrum Product.** EZRA LEVIN, Manasi Mahish, Peter Marinescu, Don Collins, Sonia Kreidenweis, *Colorado State University*
1:00
- 2CC.9 Compaction of Soot Particles during Cloud Processing: Field and Laboratory Observations.** JANARJAN BHANDARI, Gregory Kinney, Kamal Kant Chandrakar, Stefania Gilardoni, Stefano Decesari, M. Cristina Facchini, Nicola Zanca, Lynn Mazzoleni, Manvendra Dubey, Barbara Scarnato, Noopur Sharma, Paulo Fialho, Swarup China, Will Cantrell, Claudio Mazzoleni, *Michigan Technological University*
1:00
- 2CC.10 Measurement of Atmospheric Organic Aerosol Hygroscopicity and Oxidation Level as a Function of Volatility.** KERRIGAN CAIN, Spyros Pandis, *Carnegie Mellon University*
1:00
- 2CC.11 Using High-Spectral Resolution Lidar to Infer CCN Proxies: Results from NASA DISCOVER-AQ and NAAMES Field Campaigns.** PATRICIA SAWAMURA, Richard Moore, Sharon P. Burton, Eduard Chemyakin, Detlef Müller, Alexei Kolgotin, Richard Ferrare, Chris Hostetler, Luke Ziemba, Andreas Beyersdorf, Ewan Crosbie, Edward Winstead, Yohei Shinozuka, Kenneth Thornhill, Bruce Anderson, *NASA Langley Research Center*
1:00
- 2CC.12 Aerosol Optical Properties Derived from In Situ Measurements at the DOE ARM Site in Oklahoma.** MANASI MAHISH, Don Collins, *Texas A&M University*
1:00

- 2CC.13 Surface Tension in the Formation of Cloud Droplets.** JAMES F. DAVIES, Kevin Wilson, *Lawrence Berkeley National Laboratory*
1:00
- 2CC.14 Minimal Water Uptake by Fresh Indonesian Peat Burning Particles is Governed by Limited Availability of Water Soluble Organic Matter.** JING CHEN, Sri Hapsari Budisulistiorini, Masayuki Itoh, Wen-Chien Lee, Takuma Miyakawa, Yuichi Komzaki, LiuDongQing Yang, Mikinori Kuwata, *Nanyang Technological University*
1:00
- 2CC.15 The Role of Grid Resolution on the Overprediction of Aerosol Nitrate by Chemical Transport Models.** Maria Zakoura, SPYROS PANDIS, *University of Patras*
1:00
- 2CC.16 Development of a Method for the Measurement of the Water Solubility Distribution of Atmospheric Organic Aerosol.** AIKATERINI LIANGO, Kalliopi Florou, Magdalini Psychoudaki, Evangelia Kostenidou, Epameinondas Tsiligiannis, Spyros Pandis, *University of Patras, Patras, Greece*
1:00
- 2CC.17 Atomistic Study of Synergism Among Surfactants at the Air-Water Interface.** Gözde Ergin, Mária Darvas, SATOSHI TAKAHAMA, *EPFL*
1:00
- 2CC.18 Measured In Situ Mineral Dust Absorption Spectra.** Patricia Razafindrambinina, JAMES RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
1:00

2IA INDOOR AEROSOLS II: POSTERS

EXHIBIT HALL

- 2IA.1 A Kitchen Degreaser Can Alter Aerosol Composition in a Room for Days.** JAROSLAV SCHWARZ, Otakar Makeš, Jakub Ondráček, Michael Cusack, Nicholas Talbot, Petr Vodicka, Lucie Kubelová, Vladimír Ždímal, *Institute of Chemical Process Fundamentals CAS*
1:00
- 2IA.3 Aerosol Constituents in Thirdhand Tobacco Smoke.** XIAOCHEN TANG, Noelia Ramirez Gonzalez, Marion Russell, Xavier Correig, Lara Gundel, Hugo Destailats, *Lawrence Berkeley National Laboratory*
1:00
- 2IA.4 Modeling Exposure Close to Air Pollution Sources in Mechanically Ventilated Rooms: Association of Turbulent Diffusion Coefficient with Ventilation Power Input.** KAI-CHUNG CHENG, Yan Zheng, Lynn M. Hildemann, *Stanford University*
1:00
- 2IA.5 Indoor/Outdoor Relationships and Anthropogenic Elemental Signatures in Airborne PM_{2.5} at a High School: Impacts of Petroleum Refining Emissions on Lanthanoid Enrichment.** SHANKAR CHELLAM, Ayse Bozlaker, Jordan Peccia, *Texas A&M University*
1:00
- 2IA.6 Rapid Evaporation of Ultrafine and Fine Particulate Matters in Electronic Cigarette Emissions.** Eon Lee, Charlene Nguyen, YIFANG ZHU, *University of California Los Angeles*
1:00
- 2IA.8 The Influence of Air Cleaners on Concentrations of Indoor Particulate Matter Components and Oxidative Potential in Beijing, China.** Ying Zhan, CHRISTINA NORRIS, James Schauer, Martin Shafer, Michael Bergin, Karoline Johnson, Junfeng Zhang, Yinping Zhang, *University of Wisconsin-Madison*
1:00
- 2IA.9 Method Development for Determining Particle/Air Partition Coefficient of SVOCs.** YAOXING WU, Shengyang Chen, Clara Eichler, Eric Vejerano, Linsey Marr, John Little, *Virginia Tech*
1:00
- 2IA.10 Aerosol Sampling Experiment on the International Space Station Part II: Characterization Techniques and Results.** GARY CASUCCIO, Kristin Bunker, Traci Lersch, Roger R. West, Marit Meyer, *RJ Lee Group, Inc.*
1:00
- 2IA.11 Lung Deposited Surface Area and Black Carbon in Urban High Rise Apartments.** DONGHYUN RIM, Gwi Nam Bae, Jong Bum Kim, Chang Hyeok Kim, *Pennsylvania State University*
1:00
- 2IA.12 A Controlled Study to Estimate PM Mass and Number Emission Rates during Grilling.** MEHDI AMOUEI, TORKMAHALLEH, Saltanat Ospanova, Nurbay Shynggys, Zhanakhmet Gulaina, *Chemical and Aerosol Research Team, Nazarbayev University*
1:00
- 2IA.13 Emission Factors of Fine Particulate Matter, Organic and Elemental Carbon, Carbon Monoxide, and Carbon Dioxide for Solid Fuels Commonly Used for Heating Navajo Homes.** Wyatt Champion, Lea Connors, LUPITA MONTOYA, *University of Colorado Boulder*
1:00
- 2IA.14 Personal Exposure to Airborne Particulate Matter due to Residential Dryer Lint Cleaning.** KAI-CHUNG CHENG, Yan Zheng, Afua O. Tetteh, Hye-Kyung Park, Kari C. Nadeau, Lynn M. Hildemann, *Stanford University*
1:00

- 2IA.15 Characterization of a Flow Type Vacuum Ultraviolet Photocatalysis Reactor for Airborne Microorganisms and VOCs.** JEONGHYUN KIM, Jaesung Jang, *Ulsan National Institute of Science and Technology, Korea*
1:00
- 2IA.16 Using Aerosol Principles to Advance Exposure Science: Development of a Better Understanding of the Roles of Water and Water-Soluble Gases on Indoor Surface Chemistry and Indoor Air Composition.** MARC WEBB, Sara Duncan, Liyong Cui, Joanna Atkin, Jason Surratt, Barbara Turpin, *University of North Carolina at Chapel Hill*
1:00
- 2IA.17 Aerosol Particle Emissions and Efficiency of Cookstove Prototypes for Use in Ethiopia.** CLARISSA SMITH, Tsegaye Nega, Deborah Gross, *Carleton College*
1:00
- 2IA.18 Investigating Particle Emissions from a Consumer Fused Deposition Modeling 3D Printer with a Lognormal Moment Aerosol Dynamic Model.** QIAN ZHANG, Girish Sharma, Jenny P.S. Wong, Aika Davis, Marilyn Black, Pratim Biswas, Rodney J. Weber, *Georgia Institute of Technology*
1:00
- 2IA.19 PM_{2.5}, OC, EC, CO, and CO₂ Emissions from Briquettes Made with Human Waste.** WYATT CHAMPION, Lupita Montoya, *University of Colorado Boulder*
1:00
- 2IA.20 Analysis of Air Cleaner Test Results with Korea Air Cleaning Association Certificate from 2003 to 2015.** Chang-gyu Woo, Bangwoo Han, Hak-Joon Kim, YONG-JIN KIM, *Korea Institute of Machinery and Materials*
1:00
- 2IA.21 Observation of Particles' Penetration and Deposition by the Difference of Particle Size and Charge in a Chamber.** YOSHIRO SADATANI, Shigeru Kimoto, Yasuto Matsui, Chiaki Murai, Shota Shakagori, Minoru Yoneda, *Kyoto University*
1:00
- 2IA.22 Ultrafine Particle Formation from Oxidation of Cigarette Smoke in the Indoor Environment.** CHEN WANG, Douglas Collins, Rachel Hems, Nadine Borduas, Maria Antiñolo, Jonathan Abbatt, *University of Toronto, Canada*
1:00
- 2IA.24 Comparison of Reactive Oxygen Species (ROS) Generation Ability of Size Segregated Aerosols of Ambient Origin in Indoor and Outdoor Environments.** HAORAN YU, Haoran Zhao, Brent Stephens, Vishal Verma, *University of Illinois, Urbana, IL*
1:00

2RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS II: POSTERS

EXHIBIT HALL

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- 2RA.1 Examine Spatial Gradients in Surface PM_{2.5} Fields by Integrating Low Cost Sensors with Satellite Data.** PRAKASH DORAISWAMY, Pawan Gupta, Olga Pikelnaya, Brandon Feenstra, Andrea Polidori, Robert Levy, *RTI International*
1:00
- 2RA.2 Data Processing, Fluorescence Removal, and Database Matching of Crustal Aerosols Using Raman Spectroscopy.** DAVID DOUGHTY, Steven Hill, *US Army Research Lab*
1:00
- 2RA.3 The Project PerduS: Assessment of the Mineral Dust Related Reduction of Photovoltaic Power Generation in Central Europe with ICON-ART.** JOCHEN FÖRSTNER, Andrea Steiner, Vanessa Bachmann, Daniel Rieger, Philipp Gasch, Bernhard Vogel, Heike Vogel, Bodo Ritter, *German Weather Service*
1:00
- 2RA.4 Remote Sensing Sulfuric Acid Droplets in the Stratosphere.** Wenbo Sun, GORDEN VIDEEN, Yongxiang Hu, Rosemary Baize, *Science Systems and Applications, Inc.*
1:00
- 2RA.5 Laboratory and Field Based Evaluation of Chromatography Related Performance of the Monitor for AeRosols and Gases in ambient Air (MARGA).** XI CHEN, John Walker, *US Environmental Protection Agency*
1:00
- 2RA.6 Chemical Characteristics and Potential Sources of PM_{2.5} at a Regional Background Site in East China.** JUNJUN DENG, Yanru Zhang, Jinsheng Chen, Hongliang Zhang, Youwei Hong, Lingling Xu, *Institute of Urban Environment, Chinese Academy of Sciences*
1:00
- 2RA.7 Partitioning of Particulate Matter and Elements of Suburban Continental Aerosols between Fine and Coarse Mode.** Jelena Đuričić-Milanković, Ivan Anđelković, Ana Pantelić, Srđan Petrović, Andera Gambaro, DRAGANA ĐORĐEVIĆ, *Centre of Environmental Chemistry and Engineering – ICTM*
1:00
- 2RA.8 Ambient Aerosol Extinction in Great Smoky Mountains National Park.** TIM GORDON, Gavin McMeeking, Jim Renfro, Ethan McClure, Anthony Prenni, Timothy Onasch, Andrew Freedman, Ping Chen, *Handix Scientific*
1:00
- 2RA.9 Isotopic Source Apportionment of Carbonaceous Aerosols Observed in Noto Region, Japan: Impact of Biomass Burning on the East Asian Outflow.** ATSUSHI MATSUKI, Reina Yamada, Fumikazu Ikemori, Kento Kinouchi, Yoko Iwamoto, Naoki Kaneyasu, Takayuki Kameda, Minami Masayo, Toshio Nakamura, *Kanazawa University*
1:00

- 2RA.10 Unintentional Ozone Increase Due to Particulate Matter Controls in China.** JIANLIN HU, Yanhong Zhu, Lin Huang, Hongliang Zhang, Qi Ying, *Nanjing University of Information Science & Technology*
1:00
- 2RA.11 Summertime Maximum of Organic Functional Group Concentrations and High Organic Nitrogen from Ocean Biogenic Aerosols at Coastal West Antarctica during AWARE.** JUN LIU, Jeremy Dedrick, Lynn Russell, Andy Vogelmann, Gunnar Senum, Stephen Springston, Chongai Kuang, Janek Uin, Dan Lubin, Anne Jefferson, *Scripps Institution of Oceanography*
1:00

2SA SOURCE APPORTIONMENT I: POSTERS

EXHIBIT HALL

-
- 2SA.1 Spatiotemporal Trends of Fine and Ultrafine Particulate Matter in Cincinnati, OH.** SIVARAMAN BALACHANDRAN, Jonathan Corey, Farzan Oroumijeh, Harika Tadepally, *University of Cincinnati*
1:00
- 2SA.2 Source Apportionment of High Temporal Resolution PM1 Data for Delhi, India.** Sahil Bhandari, DONGYU S. WANG, Shahzad Gani, Sarah Seraj, Zainab Arub, Gazala Habib, Joshua Apte, Lea Hildebrandt Ruiz, *University of Texas at Austin*
1:00
- 2SA.3 Air Quality Impact of a Power Plant in the Midwest: High Resolution CMAQ-ISAM Modeling and Policy Applications.** CAN DONG, Scott N. Spak, Robert Bullard, Elizabeth Stone, Charles Stanier, *University of Iowa*
1:00
- 2SA.4 A Comparison of the Source Apportionment of Fine Particles Measured over a National Park in Central India Using PMF2 and US EPA PMF5.** SAMRESH KUMAR, Ramya Sunder Raman, Jayant Nirmalkar, *Indian Institute of Science Education and Research, Bhopal*
1:00
- 2SA.5 Positive Matrix Factorization of Microscopy Data to Apportion Emissions Generated from an Automotive Repair Shop to Ambient PM10 in Rome, Italy.** TRACI LERSCH, Gary Casuccio, Roger R. West, Adriana Pietrodangelo, Tommaso Rossi, *RJ Lee Group, Inc.*
1:00
- 2SA.6 Sensitivity of Geographically-Distributed Precursor Emissions Reductions for Mitigating PM2.5 in the Kaoping Air Basin in Taiwan.** CIAO-KAI LIANG, Jason West, Joshua Fu, Hsin-Chih Lai, Der-Min Tsai, Li-Wei Lai, *University of North Carolina at Chapel Hill*
1:00
- 2SA.7 Regional Nucleation Events and Sources of Submicron Particles in Rochester (NY).** MAURO MASIOL, Stefania Squizzato, David C. Chalupa, David Rich, Philip K. Hopke, *University of Rochester School of Medicine and Dentistry*
1:00
- 2SA.9 Modeling the Impact of Cookstove Emissions on Ambient Aerosol in Rural India.** BRIGITTE ROONEY, Kirk Smith, John Seinfeld, Ajay Pillarisetti, Rufus Edwards, Lauren Fleming, Sergey Nizkorodov, Tami Bond, Nicholas Lam, Sumit Sharma, Seema Kundu, Shaocai Yu, Pengfei Li, Kelvin Bates, Ran Zhao, *California Institute of Technology*
1:00
- 2SA.10 Changes in PM2.5 Sources across New York State during 2005-2015.** STEFANIA SQUIZZATO, Mauro Masiol, Philip K. Hopke, David Rich, *University of Rochester School of Medicine and Dentistry*
1:00
- 2SA.11 Source Apportionment of Carbonaceous Ultrafine Particulate Matter (PM0.1) in Four Polluted Cities in California.** JIAN XUE, Wei Xue, Michael Kleeman, *University of California, Davis*
1:00
- 2SA.12 Source Apportionment of Carbonaceous Aerosol in the San Joaquin Valley, California – Sensitivity to Seasonal Variation.** MICHAEL OLSON, Alexandra Lai, Min-Suk Bae, Qingyang Liu, Matthew Skiles, Benjamin de Foy, James Schauer, *University of Wisconsin-Madison*
1:00
- 2SA.13 Concentrations and Chemical Compositions of Size-resolved Particulate Matter in the Southwest of Pearl River Delta (PRD) Region.** Yuanxun Zhang, DONGQING FANG, Yuqin Wang, Wei Huang, Reza Bashiri Khuzestani, Jing Shang, *University of Chinese Academy of Sciences*
1:00
- 2SA.14 Source Attribution with PMF of Recent Speciated PM2.5 in Bakersfield, California.** Yufei Dong, SHANNON CAPPS, *Drexel University*
1:00

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

Tuesday 3:30 PM - 5:00 PM

Session 3: Platform

3AC AEROSOL CHEMISTRY III - FIRST RESULTS FROM THE FIREX CAMPAIGN

305 A

Peng Lin and Jenny Wong, chairs

- 3AC.1 Molecular Characterization of Individual Chromophores in Atmospheric Brown Carbon.** PENG LIN, Lauren Fleming, Nir Bluvshstein, Yinon Rudich, Sergey Nizkorodov, Julia Laskin, Alexander Laskin, *Pacific Northwest National Laboratory*
3:30
- 3AC.2 Evolution of Optical Properties of Biomass Burning-Derived Particles.** CHRISTOPHER CAPPA, Christopher Lim, David Hagan, Jesse Kroll, Matthew Coggon, Abigail Koss, Timothy Onasch, *University of California, Davis*
3:45
- 3AC.3 Climate-Relevant Compounds Produced from Burning Forest Fire Fuels in Conjunction with the FIREX Campaign.** LAUREN FLEMING, Sergey Nizkorodov, Peng Lin, Alexander Laskin, Julia Laskin, *University of California, Irvine*
4:00
- 3AC.4 Speciated Chemical Composition of Biomass Burning Aerosol from Various Fuels during FIREX.** Coty Jen, Lindsay Hatch, Nathan Kreisberg, Vanessa Selimovic, Robert J. Yokelson, Kelley Barsanti, ALLEN H. GOLDSTEIN, *University of California, Berkeley*
4:15
- 3AC.5 OH-initiated Aging of Biomass Burning Aerosol during FIREX.** CHRISTOPHER LIM, David Hagan, Christopher Cappa, Jesse Kroll, Matthew Coggon, Abigail Koss, Kanako Sekimoto, Carsten Warneke, *MIT*
4:30
- 3AC.6 Chemical Characterization of Brown Carbon from Primary and Aged Biomass Burning Emissions during 2016 FIREX Campaign.** TIANQU CUI, Sophie Tomaz, Yuzhi Chen, Shiva Tarun, Shantanu Jathar, Barbara Turpin, Jason Surratt, *University of North Carolina at Chapel Hill*
4:45
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3AE AEROSOL EXPOSURE II - WORKPLACE EXPOSURE AND NEW METHODS

305 B

Jun Wang and Thomas M. Peters, chairs

- 3AE.1 Workplace Ultrafine Particle Respiratory Deposition Measurement.** WEI-CHUNG SU, Yi Chen, *University of Texas Health Science Center at Houston*
3:30
- 3AE.2 Laboratory Evaluation of a Novel Real-time Respirator Seal Integrity Monitor.** BINGBING WU, Michael Yermakov, Yan Liu, Jonathan Corey, Sergey A. Grinshpun, *University of Cincinnati*
3:45
- 3AE.3 Personal Exposure to Black Carbon and PM Oxidative Potential in Fresno, CA using an Automated Microenvironmental Aerosol Sampler (AMAS).** CASEY QUINN, Dan Miller-Lionberg, Kevin Klunder, Jaymin Kwon, Betsey Noth, John Mehaffy, Laurelle Turner, Sheryl Magzamen, S. Katharine Hammond, Charles Henry, John Volckens, *Colorado State University*
4:00
- 3AE.4 A Sensor Network for Multiple Hazards in Heavy-Vehicle Manufacturing.** THOMAS PETERS, Sinan Sousan, Alyson Gray, Laura Hallett, Geb Thomas, Xiaoxing Liu, Christopher Zuidema, Kirsten Koehler, *University of Iowa*
4:15
- 3AE.5 Facilitating Real-Time Exposure Studies on Traffic Related Air Pollution.** Keith Bein, Christopher Wallis, Yongjing Zhao, ANTHONY WEXLER, *University of California Davis*
4:30
- 3AE.6 Evaluation of the Transferability of Resolved Vs Unresolved Land Use Regression Models for Traffic-Related Air Pollutants.** KEROLYN SHAIRSINGH, Cheol H. Jeong, Greg J. Evans, *SOCAAR, University of Toronto*
4:45
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3AP AEROSOL PHYSICS III

306 A

Cari Dutcher and Girish Sharma, chairs

- 3AP.1 Kinetic Percolation.** CHRIS SORENSEN, William Heinson, Amit Chakrabarti, *Kansas State University*
3:30
- 3AP.2 Mobility and Sedimentation of Agglomerates with Polydisperse Primary Particles.** Anastasia Spyrogianni, Katerina S. Karadima, Eirini Goudeli, Vlassis G. Mavrantzas, SOTIRIS E. PRATSINIS, *ETH Zurich*
3:45
- 3AP.3 Determination of the Binding Rate for Nanoclusters in the Gas Phase via Molecular Dynamics.** EIRINI GOUDELI, Huan Yang, Christopher Hogan Jr., *University of Minnesota*
4:00
- 3AP.4 Calculating the Translational Friction Coefficient of DLCA Aggregates in the Transition Regime using Extended Kirkwood-Riseman Theory.** JAMES CORSON, George Mulholland, Michael Zachariah, *University of Maryland*
4:15
- 3AP.5 Investigating the Coagulation Coefficient and Sticking Probability of Nanoparticles at High Temperatures.** GIRISH SHARMA, Yang Wang, Rajan Chakrabarty, Pratim Biswas, *Washington University in St Louis*
4:30
- 3AP.6 The Collision Rates of Charged Aerosol Particles in Shear Fields.** HUAN YANG, Christopher Hogan Jr., *University of Minnesota*
4:45
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3BA BIOAEROSOLS III - BIOAEROSOL SOURCES AND CONTROL

306 B

Kerry Kinney and Shanna Ratnesar-Shumate, chairs

- 3BA.1 Inactivation of Aerosolized Bacillus Anthracis Surrogates by Combustion Products of Energetic Powdered Materials: Effect of Exposure Time.** WORRAWIT NAKPAN, Michael Yermakov, Reshmi Indugula, Tiina Reponen, Song Wang, Mirko Schoenitz, Edward Dreizin, Sergey A. Grinshpun, *University of Cincinnati*
3:30
- 3BA.2 Airborne Inactivation of Bacteriophage MS2 by a Packed Bed Dielectric Barrier Discharge Non-thermal Plasma.** TIAN XIA, Abby Kleinheksel, Eric Monsu Lee, Zhong Qiao, Krista Wigginton, Herek Clack, *University of Michigan*
3:45
- 3BA.3 The Effect of Relative Humidity on the Viability of Airborne Bacteria and Viruses.** KAISEN LIN, Aaron Prussin II, Eric Vejerano, Linsey Marr, *Virginia Tech*
4:00
- 3BA.4 Evaluation of Multiple-antibiotic Resistant Gram-negative Pathogenic Bacteria in the Bioaerosols of a Pharmaceutical Wastewater Treatment Plant in Northern China.** ZHANG MENGYU, Zuo Jiane, *Tsinghua University*
4:15
- 3BA.5 Spatial and Temporal Tracking of Pathogenic Bioaerosols in Beef Slaughter Facilities Using Airflow Model Based Dynamic Monitoring Techniques.** Samuel Beck, Alejandro Castillo, Zahra Mohammad, Juan Pedro Maestre, Kerry Kinney, Yassin Hassan, MARIA D. KING, *Texas A&M University*
4:30
- 3BA.6 Transport and Characterization of Particulate Emissions from Three Wastewater Treatment Plants in Southern California.** Pedro Piqueras, Md Robiul Islam, Fengying Li, Leigha Meredith, Mark Matsumoto, Elizabeth Stone, AKUA ASA-AWUKU, *University of California, Riverside*
4:45
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3CC AEROSOL, CLOUDS, AND CLIMATE II

301 A

Richard Moore and Andi Zuend, chairs

- 3CC.1 Absorption Enhancement and Optical Properties of Black Carbon – Aging Diesel Emissions with Alpha-Pinene SOA Coatings.** ALLISON AIKEN, Manvendra Dubey, Alla Zelenyuk, Rahul Zaveri, Claudio Mazzoleni, John Shilling, *Los Alamos National Lab*
3:30
- 3CC.2 Hygroscopicity, CCN Activity and Droplet Kinetics of Aged Vehicle Emissions.** Emmanuel Fofie, Patrick Roth, Georgios Karavalakis, AKUA ASA-AWUKU, *University of California, Riverside*
3:45
- 3CC.3 Why Would Apparent CCN Activity Linearly Change with O/C? Assessing the Role of Volatility, Solubility, and Surface Activity of Organic Aerosols.** SHUNSUKE NAKAO, *Clarkson University*
4:00

- 3CC.4 Determining Water Solubility Distribution of Organic Matters: Verification by the 1-Octanol-Water Partitioning Method and Application to Indonesian Biomass Burning Particles.** WEN-CHIEN LEE, Jing Chen, Masayuki Itoh, Mikinori Kuwata, *Nanyang Technological University*
4:15
- 3CC.5 Initiation of Secondary Ice Production in Clouds.** Sylvia Sullivan, Corinna Hoose, Alexei Kiselev, Thomas Leisner, ATHANASIOS NENES, *Georgia Institute of Technology*
4:30
- 3CC.6 Factors Controlling the Emissions and Activity of Ice Nucleating Particles Released in Sea Spray Aerosol.** PAUL DEMOTT, Gregory Schill, Christina S. McCluskey, Gavin Cornwell, Grant Deane, Francesca Malfatti, Mitchell Santander, Hashim Al-Mashat, Thomas Hill, *Colorado State University*
4:45

3IM INSTRUMENTATION AND METHODS II - PARTICLE SIZING

301 B

Yang Wang and David Buckley, chairs

- 3IM.1 The Transfer Function of a Drift Tube Ion Mobility Spectrometer-CPC System.** DAVID BUCKLEY, Christopher Hogan Jr., *University of Minnesota*
3:30
- 3IM.2 Experimental Validation of the AAC Transfer Function and Data Inversion.** TYLER J. JOHNSON, Martin Irwin, Jonathan Symonds, Jason S. Olfert, Adam M Boies, *University of Cambridge*
3:45
- 3IM.3 A Performance Evaluation Method for Instruments for Aerosol Particle Size Distribution Measurement based on the Ttotal Number Concentration of Monodisperse Particles using Reference CPC.** YOSHIKO MURASHIMA, Hiromu Sakurai, *AIST*
4:00
- 3IM.4 Simulation and Experiments with a Modular Electrical Particle Detector.** MARIO ANTON SCHRIEFL, Alexander Bergmann, *Graz University of Technology*
4:15
- 3IM.5 Rapid Measurements of Particle Hygroscopic Growth with a Humidity-Controlled Fast Integrated Mobility Spectrometer (HFIMS).** YANG WANG, Tamara Pinterich, Steven Spielman, Susanne Hering, Jian Wang, *Brookhaven National Laboratory*
4:30
- 3IM.6 The Caltech-ADI Portable Scanning Electrical Mobility Spectrometer.** STAVROS AMANATIDIS, Changhyuk Kim, Richard Flagan, Steven Spielman, Gregory Lewis, Susanne Hering, *California Institute of Technology*
4:45

Tuesday 5:00 PM - 6:00 PM

Working Group Meetings 1: Aerosol Chemistry, Aerosol Physics, Bioaerosols, Control and Mitigation Technologies, History of Aerosol Science

Tuesday 6:00 PM - 8:00 PM

Welcome Reception

Tuesday 8:00 PM - 10:00 PM

Celebrating Diversity and Inclusivity within AAAR

Wednesday

Wednesday 8:00 AM - 9:15 AM

Plenary II

- 8:00 **Numerical Modelling of Titania Nanoparticles from Flame Synthesis.** MARKUS KRAFT, *University of Cambridge*

Moderator Adam Boies, *University of Cambridge*

9:00 **Sinclair Award Presentation, Mercer Award Announcement** Nicole Riemer, *University of Illinois at Urbana-Champaign*

AS&T Outstanding Paper Award Presentation and Outstanding Reviewer Awards 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 - NUCLEATION AND INTERFACES

305 A

Ran Zhao and Matthieu Riva, chairs

4AC.1 Laboratory Observations of Temperature- and Humidity- Dependencies of Nucleation and Growth Rates of Sub-3 nm Particles. Huan Yu, SHANHU LEE, *University of Alabama in Huntsville*
9:45

4AC.2 Size-resolved Chemical Composition of Nanoparticles from Reactions of Sulfuric Acid with Ammonia and Dimethylamine. HAIHAN CHEN, Michael Lawler, Sabrina Chee, James Smith, *University of California, Irvine*
10:00

4AC.3 Investigation of Nucleation Events in Wintertime Beijing, China. JUN ZHENG, Dongsun Yang, Yan Ma, *Nanjing University of Information Science & Technology*
10:15

4AC.4 Photochemical Synthesis of Oligomeric Surfactants at the Ocean-Atmosphere Interface. REBECCA RAPF, Veronica Vaida, *University of Colorado Boulder*
10:30

4AC.5 Electro Spray-Surface Enhanced Raman Spectroscopy (ES-SERS) for the Surface-Sensitive Characterization of Atmospherically Relevant Particles. Masao Gen, CHAK K. CHAN, *City University of Hong Kong*
10:45

4AC.6 Measurement of the pH of Individual Aerosol Droplets by Surface-Enhanced Raman Spectroscopy. HAORAN WEI, Linsey Marr, Peter Vikesland, *Virginia Tech*
11:00

4AC.7 Quantification of the Partitioning Behaviour of Surfactants in Picolitre Droplets. BRYAN R. BZDEK, Jonathan P. Reid, *University of Bristol*
11:15

4AE AEROSOL EXPOSURE III - COMMUTER EXPOSURE AND EXPOSURE ERROR

305 B

Yu Feng and Sergey Grinshpun, chairs

4AE.1 Commuter's Air Pollution Exposure: Ventilation Rate and Urban Design Are Major Factors in Cyclist's Elevated Intake. NICHOLAS GOOD, Jennifer Peel, John Volckens, *Colorado State University*
9:45

4AE.2 Exposure to Ultrafine Particles and Black Carbon in Diesel-powered Commuter Trains. CHEOL H. JEONG, Alison Traub, Greg J. Evans, *SOCAR, University of Toronto*
10:00

- 4AE.3 Numerical Investigation of Occupational-related Metal Aerosol Transmission and Deposition Patterns in a Virtual Human Respiratory System.** YU FENG, Jun Wang, Ahmadreza Haghnegahdar, Marcio Bezerra, *Oklahoma State University*
10:15
- 4AE.4 Child Exposure by Aerosol Particles inside a Bicycle Trailer during the Usual City Ride.** JAN BENDL, Jan Hovorka, *Charles University in Prague*
10:30
- 4AE.5 High Spatial Resolution of Sources, Mixing State and Exposure of Particulate Matter Using Single Particle Mass Spectrometry.** QING YE, Peishi Gu, Zhongju Li, Ellis Shipley Robinson, Joshua Apte, Ryan Sullivan, Allen Robinson, Albert A. Presto, Neil Donahue, *Carnegie Mellon University*
10:45
- 4AE.6 Assessing Exposure Misclassification Error Using Cell Phone Location Data.** Haofei Yu, ARMISTEAD G RUSSELL, James Mulholland, *Georgia Tech*
11:00
- 4AE.7 Aerosol Deposition Efficiency Model for Exposure Systems with Diffusion-Sedimentation Driven Aerosol Transport.** FRANCESCO LUCCI, Arkadiusz Kuczaj, *Philip Morris International R&D*
11:15

4AQ SYMPOSIUM: THERE MUST BE SOMETHING IN THE WATER: CLOUD, FOG AND AEROSOL AQUEOUS CHEMISTRY FOR AEROSOL PRODUCTION I

306 A

Annamarie Carlton and Faye McNeill, chairs

- 4AQ.1 The Rise and Fall of Organic Matter in Clouds and Fogs: The Transition from Functionalization to Fragmentation.** JEFFREY COLLETT, Misha Schurman, Alexandra Boris, Taehyoung Lee, Denise Napolitano, Pierre Herckes, *Colorado State University*. INVITED.
9:45
- 4AQ.2 A Community Effort for Furthering Cloud Chemistry Studies.** MARY BARTH, Annmarie Carlton, Sara Lance, Kerri Pratt, Jeffrey Collett, Delphine Farmer, James Schwab, Barbara Ervens, V. Faye McNeill, Hartmut Herrmann, Mauro Morichetti, *National Center for Atmospheric Research*. INVITED.
10:00
- 4AQ.3 Recent Findings from Airborne Cloud Water Measurements off the Western United States Coast.** ARMIN SOROOSHIAN, Zhen Wang, Hossein Dadashazar, Alex MacDonald, Ewan Crosbie, Hafliði Jonsson, Richard Flagan, John Seinfeld, *University of Arizona*. INVITED.
10:15
- 4AQ.4 Effect of Aerosol Water on Chemical Composition and Aging of Organic Aerosols.** SERGEY NIZKORODOV, Mallory Hinks, Julia Montoya, Lucas Ellison, Kurtis Malecha, Paige Aiona, Manabu Shiraiwa, Donald Dabdub, Peng Lin, Alexander Laskin, Julia Laskin, *University of California, Irvine*. INVITED.
10:30
- 4AQ.5 Influence of Aqueous-Phase Processing on the Chemical Composition of Fog Droplets and Interstitial Aerosols in California's San Joaquin Valley.** QI ZHANG, Hwajin Kim, Sonya Collier, Jianzhong Xu, Xinlei Ge, Yele Sun, Pierre Herckes, Youliang Wang, *University of California, Davis*. INVITED.
10:45
- 4AQ.6 Studies of OH Oxidation of Cloudwater Organics.** JONATHAN ABBATT, Rachel Hems, Alex Lee, Ran Zhao, *University of Toronto, Toronto, Canada*. INVITED.
11:00
- 4AQ.7 What Aerosol Water do Organic Compounds See?** HAVALA PYE, Andreas Zuend, Jin Ma, Shannon Capps, Gabriel Isaacman-VanWertz, Juliane L. Fry, Lu Xu, Nga Lee Ng, Allen H. Goldstein, *Environmental Protection Agency*. INVITED.
11:15

4CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE II

306 B

Andrew Metcalf and Alex Lee, chairs

- 4CA.1 A New Instrument and Method for the Speciation of Carbonaceous Aerosols.** MARTIN RIGLER, Luka Drinovec, Athanasia Vlachou, Giulia Stefanelli, Jay G. Slowik, Andre S.H. Prévôt, Anthony D.A Hansen, Iasonas Stavroulas, Jean Sciare, Griša Močnik, *Aerosol d.o.o.*
9:45
- 4CA.3 Measured Direct In-situ Mass Specific Absorption Spectra from Nine Forms of Carbonaceous Aerosol.** CHRISTOPHER ZANGMEISTER, Rian You, James Radney, Michael Zachariah, *National Institute of Standards and Technology*
10:15

- 4CA.4 Light Absorption Properties of Coated Soot Aggregates with Increasing Fractal Dimension and Comparisons to the Spherical Core-Shell Model.** WILLIAM HEINSON, Rajan Chakrabarty, *Washington University in St. Louis*
10:30
- 4CA.5 An Investigation on Secondary Organic Aerosol Induced Restructuring in Soot Aggregates.** Kaiser Leung, Elijah G. Schnitzler, Ramin Dastanpour, Steven Rogak, Wolfgang Jager, JASON S. OLFERT, *University of Alberta*
10:45
- 4CA.6 Apportionment of Black Carbon to Fossil Fuel and Biomass Sources in Ontario.** ROBERT HEALY, Uwayemi Sofowote, Yushan Su, Jerzy Debosz, Michael Noble, Cheol H. Jeong, Jon M. Wang, Nathan Hilker, Greg J. Evans, Geoff Doerksen, Keith Jones, Tony Munoz, *Ontario Ministry of the Environment and Climate Change*
11:00
- 4CA.7 Characteristics and Processing of Black Carbon Particles in an Urban Environment: Insights from a Soot Particle – Aerosol Mass Spectrometer (SP-AMS).** Sonya Collier, Leah Williams, Timothy Onasch, Christopher Cappa, Xiaolu Zhang, Lynn Russell, QI ZHANG, *University of California, Davis*
11:15
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4CM CONTROL AND MITIGATION TECHNOLOGY I

301 A

Nima Afshar Mohajer and Christine Loza, chairs

- 4CM.1 Dieselgate - The Aerosol Analyst's View.** REINHARD NIESSNER, *Analytical Chemistry, Institute of Hydrochemistry, TU Munich*
9:45
- 4CM.2 Sulfur Particulate Emissions from Ocean Going Vessels with Scrubber System.** JIACHENG YANG, David R. Cocker III, Kent C. Johnson, Wayne Miller, Thomas D. Durbin, Yu Jiang, Georgios Karavalakis, *University of California, Riverside*
10:00
- 4CM.3 Investigation of VOC Exposure from Nail Salon Products.** AARON LAMPLUGH, Feng Xiang, Janice Trinh, Elizabeth Ly, Lupita Montoya, *University of Colorado Boulder*
10:15
- 4CM.4 Performance of Respirator Filter Media under Breathing Flow Condition.** PENG WANG, Da-Ren Chen, *Virginia Commonwealth University*
10:30
- 4CM.5 Designing Composite Filters for High Efficiency, Low Pressure Drop, and High Loading Capacity.** SHENG-CHIEH CHEN, Min Tang, Drew Thompson, Luying Liu, David Y. H. Pui, *University of Minnesota*
10:45
- 4CM.6 Air Intake Filter Media Loading by Solid and Oil Mixtures.** QISHENG OU, David Y. H. Pui, *University of Minnesota*
11:00
- 4CM.7 Modeling and Simulation of Electrostatically Charged Particle Dynamics in the Inflow and Transition Area of Cabin Air Filter Media.** CAROLIN SCHOBBER, David Keerl, Martin Lehmann, Miriam Mehl, *MANN+HUMMEL GmbH*
11:15
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4IM INSTRUMENTATION AND METHODS III - SINGLE PARTICLE METHODS

301 B

Ryan Sullivan and Adam Birdsall, chairs

- 4IM.1 Detection and Characterization of Chemical Aerosol Using Laser Trapping Single-Particle Raman Spectroscopy.** AIMABLE KALUME, Joshua Santarpia, Yong-Le Pan, *U.S. Army Research Laboratory, Adelphi, MD*
9:45
- 4IM.2 Opto-Aerodynamic Manipulating and Focusing of Aerosol Particles.** YONG-LE PAN, Aimable Kalume, Chuji Wang, Joshua Santarpia, *U.S. Army Research Laboratory, Adelphi, MD.*
10:00
- 4IM.3 A New Single Particle Aerosol Mass Spectrometer: Multiple-Analyses of the Same Individual Airborne Aerosol Particle for Determination of Particle Size, Polycyclic Aromatic Hydrocarbon-Content as well as the Elemental Composition.** Johannes Passig, Julian Schade, Matthias Fuchs, Markus Oster, Martin Sklorz, Sven Ehlerl, RALF ZIMMERMANN, *Helmholtz Zentrum München and Rostock University, Germany*
10:15
- 4IM.4 The Sensitivity of a Q-ACSM in Measuring Chamber Generated SOA with Different Oxidation States.** Yan Ma, XIAOXIAO LI, Hui Chen, Xin Ma, Youling Jiang, Rujin Yin, Jiming Hao, Jun Zheng, Jingkun Jiang, *Tsinghua University*
10:30

- 4IM.5 Coalescence Sampling of Ambient Aerosol Using Aerosol Optical Tweezers.** JIM WALKER, Allen E. Haddrell, Lilly Manzonei, Jonathan P. Reid, Rebecca Hopkins, *University of Bristol*
10:45
- 4IM.6 Determination of the Activity Coefficients of Water in Aqueous Solutions at Sub-zero Temperatures using a Novel Chilled optical Aerosol Tweezers.** Hassan Beydoun, Kyle Gorkowski, Jim Walker, Jonathan P. Reid, RYAN SULLIVAN, *Carnegie Mellon University*
11:00
- 4IM.7 Mass Spectrometric Analysis of Aerosol Particles Levitated in an Electrodynamic Balance: a Platform for Atmospheric Chemistry Research.** ADAM BIRDSALL, Ulrich Krieger, Frank Keutsch, *Harvard University*
11:15

Wednesday 11:30 AM - 1:00 PM
Early Career Scientists Event

Wednesday 1:00 PM - 3:00 PM
Session 5: Platform

5AC AEROSOL CHEMISTRY V - CHEMISTRY AND APPLICATIONS OF OXIDATION FLOW REACTORS

305 A

Siegfried Schobesberger and Andrew Lambe, chairs

- 5AC.1 Controlled HO_x and NO_x Production via Alkyl Nitrite Photolysis for Use in Oxidation Flow Reactor Studies of Secondary Organic Aerosol Formation Pathways.** ANDREW LAMBE, Penglin Ye, William Brune, Anthony Carrasquillo, Jordan Krechmer, Paola Massoli, Roy Lee III Mauldin, Zhe Peng, Jonathan Raff, Jose-Luis Jimenez, Douglas Worsnop, *Aerodyne Research, Inc.*
1:00
- 5AC.2 Influence of Fuel to Primary Exhaust Emissions and Secondary Aerosol Formation Potential from a Ship Engine.** HILKKA TIMONEN, Niina Kuittinen, Päivi Aakko-Saksa, Minna Aurela, Pauli Simonen, Panu Karjalainen, Mia Isotalo, Matthew Bloss, Timo Murtonen, Hannu Vesala, Jukka-Pekka Jalkanen, Päivi Koponen, William Brune, Topi Rönkkö, Sanna Saarikoski, *Finnish Meteorological Institute*
1:15
- 5AC.3 Modeling of High-NO Chemistry in Oxidation Flow Reactors.** ZHE PENG, Brett Palm, Ranajit Talukdar, Weiwei Hu, Andrew Lambe, William Brune, Jose-Luis Jimenez, *CIRES, University of Colorado*
1:30
- 5AC.4 Compounds Controlling SOA Formation from Stressed and Unstressed Scots Pine Emissions in an Oxidation Flow Reactor.** CELIA FAIOLA, Angela Buchholz, Eetu Kari, Pasi Yli-Pirilä, Jarmo Holopainen, Minna Kivimaenpää, Pasi Miettinen, Douglas Worsnop, Kari Lehtinen, Alex Guenther, Annele Virtanen, *University of Eastern Finland*
1:45
- 5AC.5 Secondary Organic Aerosol Formation from Ambient Air in an Oxidation Flow Reactor at GoAmazon2014/5.** BRETT PALM, Suzane de Sá, Douglas Day, Pedro Campuzano-Jost, Weiwei Hu, Roger Seco, Steve Sjostedt, Alex Guenther, Saewung Kim, Joel Brito, Florian Wurm, Paulo Artaxo, Lindsay Yee, Rebecca Wernis, Gabriel Isaacman-VanWertz, Allen H. Goldstein, Ryan Thalman, Jian Wang, Yingjun Liu, Stephen Springston, Rodrigo A. F. Souza, Elizabeth Alexander, Scot Martin, Jose-Luis Jimenez, et al., *CIRES, University of Colorado*
2:00
- 5AC.6 Highly Oxygenated Multifunctional Compounds in α -pinene Secondary Organic Aerosol.** XUAN ZHANG, Andrew Lambe, Mary Alice Upshur, William Brooks, Ariana Gray Be, Regan Thomson, Franz Geiger, Jason Surratt, Zhenfa Zhang, Avram Gold, Stephan Graf, Michael Cubison, Michael Groessl, John Jayne, Douglas Worsnop, Manjula Canagaratna, *NCAR*
2:15
- 5AC.7 Impact of VOC Composition and Reactor Conditions on the Aging of Biomass Cookstove Emissions in an Oxidation Flow Reactor.** ADITYA SINHA, Ingrid George, Andrew Grieshop, *North Carolina State University*
2:30
- 5AC.8 Use of a Potential Aerosol Mass Flow Reactor for the Measurement of Secondary Organic Aerosol Production from Gasoline Vehicle Emissions.** YUNLIANG ZHAO, Andrew Lambe, Rawad Saleh, Georges Saliba, Allen Robinson, *Carnegie Mellon University*
2:45

Faye McNeill and Annmarie Carlton, chairs

- 5AQ.1 Impact of Aerosol Acidity and Aerosol Liquid Water on Volatility and the Chemical Composition of SOA Formed from Alpha-Pinene Ozonolysis.** MATTHIEU RIVA, Liine Heikkinen, Otso Peräkylä, Matti Rissanen, Mikael Ehn, *University of Helsinki*
1:00
- 5AQ.2 In-cloud AqSOA and Sulfate Formation: A New Microphysical Parameterization for Regional and Global Models.** BARBARA ERVENS, Renee McVay, *NOAA/ESRL and CIRES/CU*. INVITED.
1:15
- 5AQ.3 Particle-Phase Chemistry Leading to Sulfate Product.** RENYI ZHANG, *Texas A&M University*. INVITED.
1:30
- 5AQ.4 Formation of Hydrogen Peroxide and Hydroxyl Radicals by Ambient Particles in Simulated Cloud Water.** Xiaobi Kuang, John Scott, David Gonzalez, SUZANNE PAULSON, *University of California Los Angeles*
1:45
- 5AQ.5 The Sensitivity Of Particle pH To NH₃: Can High NH₃ Cause London Fog Conditions?** Hongyu Guo, Rodney J. Weber, ATHANASIOS NENES, *Georgia Institute of Technology*. INVITED.
2:00
- 5AQ.6 How Important is Nitrogen Dioxide (NO₂) to Sulfur (S(IV)) Oxidation at Air-Water Interface of Aquated Aerosol under Acidic Conditions?** LIJIE LI, Agustin Colussi, Michael Hoffmann, *California Institute of Technology*
2:15
- 5AQ.7 Interactions of Glyoxal and SO₂ in Clouds and Aqueous Aerosol: Production of SOA and Light-Absorbing Quinone Species.** DAVID DE HAAN, Alyssa Andretta, Elyse Pennington, Hannah G. Welsh, Lelia Hawkins, Kevin Jansen, Margaret Tolbert, Mathieu Cazaunau, Edouard Pangui, Jean-François Doussin, *University of San Diego*
2:30
- 5AQ.8 Aerosol Sulfate Production in Extreme Air Quality Episodes.** V. FAYE MCNEILL, Kelsey Reed, Athanasios Nenes, *Columbia University*
2:45

5CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE III

Rob Healy and Jianhuai Ye, chairs

- 5CA.1 A Systematic Inter-Comparison of Black Carbon Measurement Techniques using Biomass Burning Smoke.** HANYANG LI, Kara D. Lamb, Joshua P. Schwarz, Vanessa Selimovic, Robert J. Yokelson, Gavin McMeeking, Andrew May, *The Ohio State University*
1:00
- 5CA.2 Similarities and Differences in Aerosol Optical Properties between Smoke from Biomass Burning and Fireworks.** CHRISTIAN CARRICO, Samantha Bixler, Caroline Allen, Manvendra Dubey, Allison Aiken, Sanna Sevanto, Thom Rahn, *New Mexico Institute of Mining and Technology*
1:15
- 5CA.3 Linking Light Absorption Properties to Combustion Efficiency for Individual Residential Woodsmoke Sources.** K. Max Zhang, ALEXANDER LI, Wei Xu, Shaojun Zhang, Bo Yang, Khaled Hashad, Jeffrey Sward, George Allen, James Schwab, H. Dirk Felton, Oliver Rattigan, *Cornell University*
1:30
- 5CA.4 A Comparative Study on Aerosol Emission Factors from Residential Biomass Cookstoves and Wildland Fires.** APOORVA PANDEY, Sameer Patel, Benjamin Sumlin, Shamsh Pervez, Suresh Tiwari, Gautam Yadama, Judith Chow, John Watson, Pratim Biswas, Rajan Chakrabarty, *Washington University in St Louis*
1:45
- 5CA.5 Comparison of Airborne-Based Measurements of Biomass Burning Markers Levoglucosan and Aerosol Mass Spectrometer m/z 60 and the Role of Residential Burning during the WINTER Campaign.** AMY P. SULLIVAN, Hongyu Guo, Jason Schroder, Pedro Campuzano-Jost, Jose-Luis Jimenez, Teresa Campos, Joel A. Thornton, Steven S. Brown, Rodney J. Weber, *Colorado State University*
2:00
- 5CA.6 Light Absorption Properties of Polar and Non-polar Aerosols in Fresh and Aged Biomass-Burning Emissions.** DEEP SENGUPTA, Vera Samburova, Chiranjivi Bhattarai, Michealene Iaukea-Lum, Adam Watts, Hans Moosmuller, Andrey Khlystov, *Desert Research Institute*
2:15
- 5CA.7 Refractive Index and Optical Properties of Brown Carbon Aerosols from Peat Fires.** YULI W. HEINSON, Benjamin Sumlin, Nishit Shetty, Apoorva Pandey, Brent Williams, Rajan Chakrabarty, *Washington University in St. Louis*
2:30

5CA.8 Influence of Brown Carbon Aerosol Deposition on Snow Surface Reflection Spectra. NICHOLAS D BERES, Deep Sengupta, Vera Samburova, Andrey Khlystov, Hans Moosmuller, *Desert Research Institute*

5IA INDOOR AEROSOLS III - 3-D PRINTING AND COMBUSTION AEROSOLS

306 B

Andrea Ferro and Jeffrey Siegel, chairs

5IA.1 Sub-10 nm Particle Emissions from Industrial 3D Printers. ANDREA TIWARI, Jeremy Kolb, Severine Dubroecq, Juergen Spielvogel, Robert Anderson, Brian Osmondson, *TSI Incorporated*

5IA.2 Investigations into the Composition of Aerosols Emitted by 3D Printing Process. MARINA VANCE, Zachary Linden, David Pfothhauer, Michael Hannigan, *University of Colorado Boulder*

5IA.3 Chemical Composition of Particle Emissions from Clean Cookstoves. Clarissa Smith, Tsegaye Nega, DEBORAH GROSS, *Carleton College*

5IA.4 Multi-Year Characterization of Cookstove Activity and Emissions Measured in Two Rural Areas in India. MOHAMMAD MAKSIMUL ISLAM, Roshan Wathore, Grishma Jain, Karthik Sethuraman, Hisham Zerriffi, Julian Marshall, Andrew Grieshop, Rob Bailis, *North Carolina State University*

5IA.5 Household and Ambient Contributions to Particulate Matter Exposures in Rural Households Using Traditional and Semi-Gasifier Stoves in the Tibetan Plateau. ALEXANDRA LAI, Ellison Carter, Sierra Clark, Shan Ming, Kun Ni, Niu Hongjiang, Xudong Yang, Jill Baumgartner, James Schauer, *University of Wisconsin-Madison*

5IA.6 Aerosol Mass Production via Oxidation and Non-Reactive Gas-Particle Partitioning of Semi-Volatile Organic Compounds from Cigarette Smoke. DOUGLAS COLLINS, Chen Wang, Rachel Hems, Shouming Zhou, Jeffrey Siegel, Jonathan Abbatt, *University of Toronto*

5IA.7 Assessing Exposures to PM_{2.5} and UFP from Secondhand Electronic Cigarette Emissions in Southern California Vape Shops. Charlene Nguyen, Chanbopha (Amy) Sen, YIFANG ZHU, *University of California, Los Angeles*

5IA.8 The Impact of Cooking Pan Material on PM Emission. MEHDI AMOUEI TORKMAHALLEH, Saltanat Ospanova, Soudabeh Gorjinezhad, *Chemical Engineering Department, Nazarbayev University*

5IM INSTRUMENTATION AND METHODS IV - LOW COST SENSORS

301 A

David Hagan and Andrew Grieshop, chairs

5IM.1 A Network of Low-Cost Sensors to Monitor Ambient PM_{2.5}: A Case Study in Jining, China. XIAOHUI QIAO, Qiang Zhang, Fenglin Liu, Jingkun Jiang, *Tsinghua University*

5IM.2 Performance Evaluation of "Low-Cost" Sensors for Measuring Gaseous and Particle Air Pollutants: Results from Three Years of Field and Laboratory Testing. ANDREA POLIDORI, Brandon Feenstra, Vasileios Papapostolou, Hang Zhang, *South Coast Air Quality Management District*

5IM.3 Development of an Environmental Chamber for the Laboratory Evaluation of "Low-Cost" Air Quality Sensors. VASILEIOS PAPAPOSTOLOU, Hang Zhang, Brandon Feenstra, Andrea Polidori, *South Coast Air Quality Management District*

5IM.4 Assessing the Accuracy and Reliability of a Low-Cost Particle Counter for Determining PM₁ Loadings Using a Fit-and-Integrate Approach. DAVID HAGAN, Rebecca Sugrue, Jesse Kroll, *MIT*

5IM.5 A Black Carbon Air Quality Network. JULIEN CAUBEL, Troy Cados, Chelsea V. Preble, Thomas W. Kirchstetter, *University of California, Berkeley*

5IM.6 A Low-cost Monitor for Simultaneous Measurement of PM_{2.5} and Aerosol Optical Depth. ERIC WENDT, Scott Kelleher, Lizette Van Zyl, Casey Quinn, Dan Miller-Lionberg, John Mehaffy, Jessica Tryner, Christian L'Orange, Bonne Ford, Azer Yalin, Marilee Long, Shantanu Jathar, Jeffrey R. Pierce, John Volckens, *Colorado State University*

- 5IM.7 Ambient Observations from Low-cost Gas and Particle Sensor Packages Deployed in Malawi: Pre-validation and Initial Deployment.** ANDREW GRIESHOP, Eric Lipsky, Rebecca Tanzer, Eben Cross, R. Subramanian, *North Carolina State University*
2:30
- 5IM.8 Towards an Improved Understanding of the Conditions that Undermine the Reliability of Low-cost AQ Sensor Systems.** EBEN CROSS, David K. Lewis, Leah Williams, David Hagan, Jesse Kroll, Ann Backus, Gary Adamkiewicz, Douglas Worsnop, John Jayne, *Aerodyne Research, Inc.*
2:45

5SA SOURCE APPORTIONMENT II

301 B

Stefania Squizzato and Sivaraman Balachanran, chairs

- 5SA.1 PM0.1 Trace Metal Concentrations and Source Apportionment at Four California Sites Using Positive Matrix Factorization (PMF).** WEI XUE, Jian Xue, Peter Green, Michael Kleeman, *University of California, Davis*
1:00
- 5SA.2 Long-Term Evaluation and Source Apportionment of Redox-Active Metals Using a Novel Metal Monitor and PMF.** AMIRHOSEIN MOUSAVI, Mohammad Sowlat, Constantinos Sioutas, *University of Southern California*
1:15
- 5SA.3 Estimating Gasoline and Diesel Source Contributions to Organic Aerosol in Southern California using a Chemical Transport Model.** SHANTANU JATHAR, Matthew Woody, Havala Pye, Kirk Baker, Allen Robinson, *Colorado State University*
1:30
- 5SA.4 Investigating Chemical and Physical Atmospheric Properties of Wintertime Persistent Cold Air Pool Events in Salt Lake City for Air Quality Assessments.** CESUNICA IVEY, Xia Sun, Sivaraman Balachandran, Yongtao Hu, Armistead G. Russell, Heather Holmes, *University of Nevada Reno*
1:45
- 5SA.5 Molecular Composition and Long-term Source Contributions to Organic Aerosol in Central Europe.** KASPAR RUDOLF DAELLENBACH, Imad El Haddad, Ivan Kourtchev, Alexander Lucas Vogel, Gaëlle Uzu, Giulia Stefanelli, Carlo Bozzetti, Athanasia Vlachou, Paula Fermo, Andrea Piazzalunga, Jay G. Slowik, Samuel M. Luedin, Valentin Pflueger, Guido Vogel, Jean-Luc Jaffrezo, Markus Kalberer, Urs Baltensperger, Andre S.H. Prévôt, *Paul Scherrer Institute*
2:00
- 5SA.6 A Synergic Approach to Perform Source Apportionment of Organic Aerosol Using Offline and Online Measurements in Positive Matrix Factorization.** DEEPCHANDRA SRIVASTAVA, Olivier Favez, Nicolas Bonnaire, Emilie Perraudin, Valérie Gros, Franco Lucarelli, Eric Villenave, Alexandre Albinet, *INERIS*
2:15
- 5SA.7 Impact of Secondary Organic Aerosol Tracers on Tracer-based Source Apportionment of Organic Carbon and PM2.5: A Case Study in the Pearl River Delta, China.** Qionqiong Wang, Xiao He, X.H. Hilda Huang, Stephen Griffith, Yongming Feng, Ting Zhang, Qingyan Zhang, Dui Wu, JIAN ZHEN YU, *Hong Kong University of Science & Technology*
2:30
- 5SA.8 Classification, Variation and Spatial Patterns of Mass Spectra Extracted from Plume Events Observed from Mobile Measurement by Aerodyne Aerosol Mass Spectrometer and Comparison with PMF Results.** PEISHI GU, Zhongju Li, Qing Ye, Ellis Shipley Robinson, Allen Robinson, Albert A. Presto, *Carnegie Mellon University*
2:45

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

Wednesday 3:30 PM - 5:00 PM
Session 6: Platform

6AP AEROSOL PHYSICS IV

305 A

Carlos Larriba-Andaluz and Andrew Metcalf, chairs

- 6AP.1 True vs. Average Electrical Mobility. Happel And Brenner's Settling Velocity vs. Mason and McDaniel's First**

- 3:30 **Collision Integral.** CARLOS LARRIBA-ANDALUZ, Tianyang Wu, *IUPUI*
- 6AP.2 Experimental Observation of Ballistic to Brownian Transition in an Aerosol System.** PAI LIU, William Heinson, 3:45 Rajan Chakrabarty, *Washington University in St. Louis*
- 6AP.3 Resuspension Rates of Energetic Materials in an Aerodynamic Flow Cell.** KALYAN KOTTAPALLI, Igor Novosselov, 4:00 *University of Washington*
- 6AP.4 Particle Removal from the Surfaces in Turbulent Flow: Effect of Large-Scale Surface Roughness.** BABAK NASR, Jing Qian, Morgan Minyard, Andrea R. Ferro, Goodarz Ahmadi, Suresh Dhaniyala, *Clarkson University*
- 6AP.5 Optical Losses due to Aerosol Deposition on Solar Cells: Two-Stream Theory vs. Spectrophotometer Measurements.** PATRICIO PIEDRA, Laura Llanza, Hans Moosmuller, *Desert Research Institute*
- 6AP.6 Exploring the Phase Transitions of Highly Supersaturated Vapors and Supercooled Nanodroplets of Short-Chain (C5-C7) Alkanes in a Supersonic Laval Nozzle.** KEHINDE OGUNRONBI, Barbara Wyslouzil, *The Ohio State University*

6BA BIOAEROSOLS IV - BIOAEROSOL SAMPLING AND ANALYSIS

305 B

Shanna Ratnesar-Shumate and Jillianne Taylor, chairs

- 6BA.1 Evaluation of Two Concentrating Techniques for Bioaerosol Quantification.** HYEON-JU OH, Taewon Han, 3:30 Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 6BA.2 Long-Term Viable Bioaerosol Sampling Using a Temperature- and Humidity-Controlled Filtration Apparatus.** 3:45 HOWARD WALLS, Jean Kim, Lauren Harvey, Robert Yaga, Laura Haines, David S. Ensor, Susanne Hering, Steven Spielman, Nathan Kreisberg, *Research Triangle Institute*
- 6BA.3 Improved Collection of Airborne Bacteria and Yeast through Water-based Size Amplification.** MAOHUA PAN, 4:00 Leah Carol, John Lednický, Arantzazu Eiguren Fernandez, Susanne Hering, Hugh Fan, Chang-Yu Wu, *University of Florida*
- 6BA.4 Variability of Primary Biological Aerosol Particles at Different Growth Stages of a Model Grass.** SWARUP 4:15 CHINA, Daniel Veghte, Amir Ahkami, Johannes Weis, Libor Kovarik, Mary Gilles, Alexander Laskin, *Pacific Northwest National Laboratory*
- 6BA.5 Probing the Fundamentals of Bioaerosol Longevity as a Function of Atmospheric and Particle Compositions through Using a Next Generation Electrodynamic Balance.** ALLEN E. HADDRELL, Mara Otero, Richard Thomas, 4:30 Jonathan P. Reid, *University of Bristol*
- 6BA.6 Evaluation of a Self-Contained Personal Electrostatic Bioaerosol Sampler (PEBS) for Bioaerosol Collection.** 4:45 TAEWON HAN, Nirmala Thomas, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

6CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE IV

306 A

Shunsuke Nakao and Naomi Zimmerman, chairs

- 6CA.1 Rapid Formation of Secondary Organic Aerosols from Alberta Oil Sands Emissions.** Max Adam, ALEX LEE, 3:30 Megan Willis, Jonathan Abbatt, Charles Odame-Ankrah, Jennifer Huo, Travis Tokarek, Hans Osthoff, Jeff Brook, Shao-Meng Li, *National University of Singapore*
- 6CA.2 Equilibration Timescales of Secondary Organic Aerosols under Dry and Humid Conditions.** KHAIRALLAH ATWI, 3:45 Mohamad Baassiri, Mariam Fawaz, Nareg Karaoghlanian, Alan Shihadeh, *American University of Beirut*
- 6CA.3 Synthesis of Four Monoterpene-derived Organosulfates and their Quantification in Atmospheric Aerosol Samples.** YUCHEN WANG, Jingyun Ren, X.H. Hilda Huang, Rongbiao Tong, Jianzhen Yu, *Hong Kong University of Science and Technology*

- 6CA.4 Significant Organic Aerosol Formation from Biogenic Volatile Organic Compounds in the Southeastern United States.** LU XU, Havala Pye, Jia He, Yunle Chen, Benjamin Murphy, Nga Lee Ng, *California Institute of Technology*
4:15
- 6CA.5 Secondary Organic Aerosol Formation from OH-and Cl- Initiated Photo-oxidation of Non-combustion Intermediate Volatility Organic Compounds.** SURYA VENKATESH DHULIPALA, Lea Hildebrandt Ruiz, *University of Texas at Austin*
4:30
- 6CA.6 Demonstrating That Speciation of Organic Fraction Does Matter for Source Apportionment: Use of Specific Primary and Secondary Organic Markers.** DEEPCHANDRA SRIVASTAVA, Olivier Favez, Emilie Perraudin, Jean-Luc Besombes, Laurent Alleman, Grazia-Maria Lanzafame, Sophie Tomaz, Jean-Luc Jaffrezo, Clément Bret, Benjamin Golly, Eric Villenave, Alexandre Albinet, *INERIS*
4:45

6CC AEROSOL, CLOUDS, AND CLIMATE III

306 B

Mikinori Kuwata and Mary Kacarab, chairs

- 6CC.1 Sensitivity of Radiative Forcing to Uncertainties in Real and Imaginary Refractive Indices as Determined from Single Trapped Particle Measurements.** ANTONIO VALENZUELA, Jonathan P. Reid, Rose Willoughby, Allen E. Haddrell, Bryan R. Bzdek, Andrew J. Orr-Ewing, *University of Bristol*
3:30
- 6CC.2 Top-down and Bottom-up Aerosol-Cloud-Closure: Towards Understanding Sources of Uncertainty in Deriving Cloud Radiative Flux.** KEVIN SANCHEZ, Greg Roberts, Radiance Calmer, Keri Nicoll, Daniel Rosenfeld, Jurgita Ovadnevaite, Jana Preissler, Darius Ceburnis, Colin O'Dowd, Lynn Russell, *Scripps Institution of Oceanography*
3:45
- 6CC.3 Aerosol Size Distribution, Chemical Composition and CCN Activities in Eastern North Atlantic.** GUANGJIE ZHENG, Tamara Pinterich, Janek Uin, Thomas Watson, Stephen Springston, Robert Bullard, Chongai Kuang, Allison Aiken, Rob Wood, Jian Wang, *Brookhaven National Laboratory*
4:00
- 6CC.4 Sensitivity of Cloud Droplet Number to Environmental Changes in Aerosol and Cloud Condensation Nuclei (CCN) during the NASA North Atlantic Aerosols and Marine Ecosystems Study (NAAMES).** RICHARD MOORE, Ewan Crosbie, Luke Ziemba, Mary Kacarab, Athanasios Nenes, Gao Chen, Michael Shook, Kenneth Thornhill, Edward Winstead, Bruce Anderson, *NASA Langley*
4:15
- 6CC.5 Sensitivity of Estimated CCN Concentration at a Rural Site to Common Assumptions Regarding Aerosol Composition and Mixing State.** MANASI MAHISH, Anne Jefferson, Don Collins, *Texas A&M University*
4:30
- 6CC.6 Size-dependence of Aerosol Hygroscopicity Parameters at Sub- and Super-saturation.** ANDREAS ZUEND, Natasha Hodas, John Seinfeld, *McGill University*
4:45

6IM INSTRUMENTATION AND METHODS V - OPTICAL METHODS

301 A

James Radney and Prem Lobo, chairs

- 6IM.1 Assessment of Measurement Methods using CAPS PM_{ss}, PAX, Aethalometer, LII, and TOA for Measuring the Mass Concentration of Black Carbon Produced from a MiniCAST Soot Generator over a Wide Range of Setpoints.** PREM LOBO, Fengshan Liu, Meghdad Saffaripour, Kevin Thomson, Gregory Smallwood, *National Research Council Canada*
3:30
- 6IM.2 Limits to the Absolute Accuracy of the Optical Closure Technique.** JAMES RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
3:45
- 6IM.3 Development of a Portable Aerosol Collector and Spectrometer (PACS).** CAI CHANGJIE, Geb Thomas, Sivaram Gogineni, Tianbao Yang, Thomas Peters, *University of Iowa*
4:00
- 6IM.4 Development and Characterization of Thermal Dissociation Cavity Attenuated Phase Shift Spectroscopy (TD-CAPS).** GAMZE ERIS, Masayuki Takeuchi, Ezra Wood, David Tanner, Greg Huey, Nga Lee Ng, *Georgia Institute of Technology*
4:15

6IM.5 Experimental Evaluation of Components for a Super Compact In-Situ LII Probe Applicable on Automotive Exhaust Pipes. MARTIN KUPPER, Pulko Jožef, Alexander Bergmann, Martin Kraft, *CTR Carinthian Tech Research, Villach, 9524, Austria*

6IM.6 Infrared Spectroscopy Analysis of Aerosols By Solvent Extraction. Christophe Delval, Giulia Ruggeri, SATOSHI TAKAHAMA, *EPFL*

6OP SYMPOSIUM: LINKING AEROSOL OXIDATIVE POTENTIAL WITH CHEMICAL COMPOSITION AND BIOLOGICAL ENDPOINTS I
301 B

Rodney Weber and Vishal Verma, chairs

6OP.1 Particulate Oxidative Burden as a Predictor of Exhaled Nitric Oxide in Children with Asthma. Caitlin Maikawa, 3:30 Scott Weichenthal, Amanda Wheeler, Nina Dobbin, Audrey Smargiassi, Greg J. Evans, Ling Liu, Mark Goldberg, KRYSTAL GODRI POLLITT, *University of Massachusetts Amherst*. INVITED.

6OP.3 Ambient Size Distributions and Lung Deposition of Aerosol Dithiothreitol-Measured Oxidative Potential: A Contrast between Soluble and Insoluble Particles. TING FANG, Linghan Zeng, Dong Gao, Hongyu Guo, Vishal Verma, Aleksandr Stefaniak, Athanasios Nenes, Rodney J. Weber, *Georgia Institute of Technology*

6OP.4 Reduction in Dithiothreitol Oxidative Potential in Copper/Organic Aerosol Mixtures. SHUNYAO WANG, Jianhui 4:15 Ye, Rudraksha Dutta Majumdar, Andre Simpson, Arthur W. H. Chan, *University of Toronto*

6OP.5 Linking Chemical Composition and Volatility to the Oxidative Potential of Diesel Exhaust Aerosols. 4:30 SHANTANU JATHAR, Cody Vanderheyden, Abril Galang, Liam Lewane, Kevin Klunder, Charles Henry, John Volckens, *Colorado State University*

6OP.6 Chemical Oxidant Production and Cellular Inflammatory Response from Secondary Organic Aerosols (SOA) Generated from the Photooxidation of Biogenic and Anthropogenic Precursors. WING-YIN TUET, Shierly Fok, Yunle Chen, Rodney J. Weber, Julie Champion, Nga Lee Ng, *Georgia Institute of Technology*

Wednesday 5:00 PM - 6:00 PM

Working Group Meetings 2: Atmospheric Aerosols, Combustion & Material Synthesis, Health-Related Aerosols, Indoor Aerosol and Aerosol Exposure, Instrumentation

Wednesday 6:00 PM - 7:00 PM

Annual Business Meeting

Thursday

Thursday 8:00 AM - 9:15 AM

Plenary III

8:00 **Towards a Molecular Understanding of Biogenic Organic Aerosol: From New Particle Formation and Growth to Multiphase Aging.** JOEL THORNTON, *University of Washington*

Moderator Sergey Nizkodorov, *University of California Irvine*

9:00 **Announcement of AAAR 2017 Fellows** Pratim Biswas, *Washington University St. Louis*

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

7AC AEROSOL CHEMISTRY VI - SECONDARY ORGANIC AEROSOLS

305 A

Zhe Peng and Haihan Chen, chairs

- 7AC.1 Influence of Soluble Surfactants on Heterogeneous Photooxidation of Aqueous Aerosol.** JENNIFER FAUST, 9:45 Jonathan Abbatt, *University of Toronto, Canada*
- 7AC.2 Characterization of the Heterogeneous Reactivity of Alpha-Pinene Oxidation Products with Dimethylamine and Ammonia.** MATTHIEU RIVA, Geoffroy Duporte, Jevgeni Parshintsev, Otso Peräkylä, Liine Heikkinen, Eva Canaval, Enna Heikkinen, Luis Barreira, Nana Myllys, Kari Hartonen, Markku Kulmala, Armin Hansel, Marja-Liisa Riekkola, Mikael Ehn, *University of Helsinki*
- 7AC.3 Effect of SO₂ on the Yields and Optical Properties of Secondary Organic Aerosol from Limonene Ozonolysis.** 10:15 JIANHUAI YE, Jonathan Abbatt, Arthur W. H. Chan, *University of Toronto, Toronto, Canada*
- 7AC.4 Aerosol Formation from Hydroxyl Radical Oxidation of Agricultural Amines and Reduced Sulfur Compounds.** 10:30 PAUL VAN ROOY, Kathleen Purvis-Roberts, Philip Silva, David R. Cocker III, *University of California, Riverside*
- 7AC.5 The Effects of Aerosol Phase State on Secondary Organic Aerosol Formation from the Acid-Catalyzed Reactive Uptake of Isoprene-Derived Epoxydiols.** YUE ZHANG, Yuzhi Chen, Andrew Lambe, Amy Bondy, Nicole Olson, Rebecca Craig, Zhenfa Zhang, Avram Gold, Timothy Onasch, John Jayne, Douglas Worsnop, Charles Kolb, William Vizuete, Andrew Ault, Jason Surratt, *University of North Carolina at Chapel Hill*
- 7AC.6 NO_x-related Increases of Biogenic Secondary Aerosols (bSOA) in Summertime Southeastern U.S..** JUN LIU, 11:00 Lynn Russell, Megan Claflin, Paul Ziemann, Nga Lee Ng, Havala Pye, Benjamin Murphy, Karena McKinney, Jason Surratt, *Scripps Institution of Oceanography*
- 7AC.7 SOA Formation from Toluene Oxidation in the Presence of NO_x: The Importance of Relative Humidity.** DAO 11:15 HUANG, Yunle Chen, Steve Kim, Nga Lee Ng, *Zhejiang University*

7CO COMBUSTION I

305 B

Francesco Carbone and Kelsey Bilsback, chairs

- 7CO.1 Coal Combustion as a Source to Levoglucosan in PM_{2.5} in China.** CAIQING YAN, Amy P. Sullivan, Guofeng Shen, 9:45 Yury Desyaterik, Xiaoying Li, Tian Zhou, Shuxiao Wang, Bin Zhao, Orjan Gustafsson, Jeffrey Collett, Mei Zheng, *Peking University*
- 7CO.2 Gas and Particle Phase Emissions from Residential Wood Combustion.** DEEPIKA BHATTU, Peter Zotter, Giulia 10:00 Stefenelli, Jun Zhou, Thomas Nussbaumer, Amelie Bertrand, Nicolas Marchand, Brice Temime-Roussel, Urs Baltensperger, Jay G. Slowik, Andre S.H. Prévôt, Imad EI Haddad, Josef Dommen, *Paul Scherrer Institute*
- 7CO.3 Physical and Chemical Characterization of Fresh and Aged Emissions from Open Combustion of Biomass Fuels.** CHIRANJIVI BHATTARAI, Vera Samburova, Deep Sengupta, Michealene Iaukea-Lum, Adam Watts, Hans 10:15 Moosmuller, Andrey Khlystov, *Desert Research Institute*
- 7CO.4 Parametric Study of Secondary Air Injection to Reduce Particulate Emissions from Biomass Cookstoves.** 10:30 JULIEN CAUBEL, Vi Rapp, Sharon Chen, Ashok Gadgil, *Lawrence Berkeley National Laboratory*

- 7CO.5 A Laboratory Assessment of PM_{2.5} and CO as Markers of Cookstove Air Pollution Composition.** KELSEY BILSBACK, Nicholas Good, Kristen Fedak, Jordyn Dahlke, Ethan Walker, Lizette Van Zyl, Christian L'Orange, Jennifer Peel, John Volckens, *Colorado State University*
- 7CO.6 High-Resolution Mass Spectrometry of Soot Nuclei formed in a Laminar Premixed Flame Diffusionally Charged at Atmospheric Pressure.** FRANCESCO CARBONE, Manjula Canagaratna, Andrew Lambe, Paola Massoli, John Jayne, Douglas Worsnop, Alessandro Gomez, *Yale University*
- 7CO.7 The Catalytic Effect of Potassium Salts on Diesel Soot Oxidation.** REINHARD NIESSNER, Alexander Rinkenburger, Kazuhiro Yasuda, *Technical University of Munich, Germany*

7IM INSTRUMENTATION AND METHODS VI - MASS SPECTROMETRY

306 A

Kaitlyn Suski and Jay Slowik, chairs

- 7IM.1 Real-time Measurements of Gas Phase Organic Acids Using SF₆- Chemical Ionization Mass Spectrometry.** 9:45 THEODORA NAH, David Tanner, Hongyu Guo, Yi Ji, Rodney J. Weber, Greg Huey, *Georgia Institute of Technology*
- 7IM.2 Evaluation of the New Capture Vaporizer for Aerosol Mass Spectrometers (AMS): Fragmentation, Elemental Ratio and Source Apportionment, Quantification of Organic Aerosols (OA).** WEIWEI HU, Douglas Day, Pedro Campuzano-Jost, Benjamin A. Nault, Taehyun Park, Taehyoung Lee, Philip Croteau, Manjula Canagaratna, John Jayne, Douglas Worsnop, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*
- 7IM.3 Droplet Assisted Inlet Ionization (DAII) for Online Molecular Analysis of Nanoparticles.** MICHAEL J. APSOKARDU, Devan E. Kerecman, Yao Zhang, Andrew J. Horan, Murray Johnston, *University of Delaware*
- 7IM.4 Response of HR-ToF-AMS to Inorganic Sulfates and Organosulfur Compounds and Applications in Field Measurements.** YUNLE CHEN, Lu Xu, Elizabeth Stone, Timothy Humphry, Jurgita Ovadnevaite, Colin O'Dowd, Shan Huang, Laurent Poulain, Hartmut Herrmann, Nga Lee Ng, *Georgia Institute of Technology*
- 7IM.5 An Electrospray Chemical Ionization Source for Real-time Measurement of Atmospheric Organic and Inorganic Compounds.** YUE ZHAO, Jeremy Chan, Felipe Lopez-Hilfiker, Jeff Riffell, Joel A. Thornton, *University of Washington, Seattle, WA*
- 7IM.6 Towards Quantitative Organic Aerosol Sampling with an Extractive Electrospray Ionization Time-of-Flight Mass Spectrometer (EESI-TOF).** JAY G. SLOWIK, Felipe Lopez-Hilfiker, Veronika Pospisilova, Lu Qi, Giulia Stefanelli, Yandong Tong, Alexander Lucas Vogel, Liwei Wang, Bin Yuan, Mao Xiao, Wei Huang, Claudia Mohr, Josef Dommen, Imad El Haddad, Urs Baltensperger, Andre S.H. Prévôt, *Paul Scherrer Institute*
- 7IM.7 Comprehensive Real-time Characterization of Particles Produced by Laser Ablation for Analysis by Inductively Coupled Plasma Mass Spectrometry.** KAITLYN J. SUSKI, David Bell, Elizabeth Alexander, Matt Newburn, David Koppenaal, Dan Imre, Alla Zelenyuk, *Pacific Northwest National Laboratory*

7MO SYMPOSIUM: REGIONAL AND GLOBAL AIR QUALITY AND CLIMATE MODELING I - IMPACTS ON HUMAN HEALTH

306 B

Shantanu Jathar and Hongyu Guo, chairs

- 7MO.1 Improving the Global Representation of Fine Particulate Matter (PM_{2.5}) by Combining Satellites, Models and Monitors.** AARON VAN DONKELAAR, Randall V. Martin, Michael Brauer, N. Christina Hsu, Ralph Kahn, Robyn Latimer, Robert Levy, Alexei Lyapustin, Andrew Sayer, Graydon Snider, Crystal Weagle, David Winker, *Dalhousie University*. INVITED.
- 7MO.2 Regional Air Quality Modeling of Wildfires for Health Assessments over the Continental United States.** 10:00 CESUNICA IVEY, Cong Liu, Ashley Pierce, Yang Liu, Howard Chang, Matthew Strickland, Heather Holmes, *University of Nevada Reno*
- 7MO.3 Role of Inter-regional Variability in Aerosol Size Distributions on Respiratory Deposition of PM_{2.5}.** JACK KODROS, John Volckens, Shantanu Jathar, Jeffrey R. Pierce, *Colorado State University*

- 7MO.4 Significantly Reduced Health Burden from Ambient Air Pollution in the U.S. under Emission Reductions from 1990 to 2010.** YUQIANG ZHANG, Jia Xing, Christian Hogrefe, Shawn Roselle, Jesse Bash, Jonathan Pleim, Chuen-Meei Gan, David Wong, Rohit Mathur, Jason West, *U.S. EPA*
10:30
- 7MO.5 Quantifying PM_{2.5} Health Benefits of Coal Power Plant Phase-out in Ontario and Alberta: An Adjoint Sensitivity Analysis.** Burak Y. Oztaner, Marjan Soltanzadeh, Shunliu Zhao, AMIR HAKAMI, Matt Turner, Daven Henze, Shannon Capps, Peter Percell, Jaroslav Resler, Jesse Bash, Sergey Napelenok, Kathleen Fahey, Rob Pinder, Armistead G. Russell, Athanasios Nenes, Jaemeen Baek, Gregory Carmichael, Charles Stanier, Adrian Sandu, Tianfeng Chai, Daewon Byun, *Carleton University*
10:45
- 7MO.6 Estimation for Location-specific Marginal Benefits for Primary and Precursor PM_{2.5} Emissions using the Adjoint of CMAQ.** Amanda Pappin, Shunliu Zhao, Marjan Soltanzadeh, Burak Y. Oztaner, AMIR HAKAMI, Masoud Naseri, Mieczyslaw Szyszkowicz, Rick Burnett, Matt Turner, Shannon Capps, Daven Henze, Peter B. Percell, Jaroslav Resler, Jesse Bash, Sergey Napelenok, David Fahey, Rob Pinder, Armistead G Russell, Athanasios Nenes, Jaemeen Baek, Gregory Carmichael, Charles Stanier, Adrian Sandu, Tianfeng Chai, Daewon Byun, *Carleton University*
11:00
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7OP SYMPOSIUM: LINKING AEROSOL OXIDATIVE POTENTIAL WITH CHEMICAL COMPOSITION AND BIOLOGICAL ENDPOINTS II
301 A

Sherri Hunt and Vishal Verma, chairs

- 7OP.1 On the Health Effects of Urban Particulate Matter.** Michal Pardo, YINON RUDICH, *Weizmann Institute of Science*.
9:45 INVITED.
- 7OP.3 A Comparison of Oxidative Potential of POA and SOA Derived from α -Pinene and Gasoline Engine Exhaust Precursors.** Khairallah Atwi, ALAN SHIHADDEH, Constantinos Sioutas, Farimah Shirmohammadi, Vishal Verma, James Schauer, *American University of Beirut*
10:15
- 7OP.4 Synergistic and Antagonistic Interactions among the Particulate Matter (PM) Components in Generating the Reactive Oxygen Species (ROS).** HAORAN YU, Jinlai Wei, Vishal Verma, *University of Illinois, Urbana, IL*
10:30
- 7OP.5 The Oxidative Potential of Gasoline-derived Organic Aerosols and Wood Smoke Particles.** HUANHUAN JIANG, Myoseon Jang, *University of Florida*
10:45
- 7OP.6 Aerosol Oxidative Potential and Altered Oxidative Stress-Associated Gene Expression in BEAS-2B Cells Exposed to Major Isoprene Secondary Organic Aerosol Precursors and Constituents.** YING-HSUAN LIN, Zhenfa Zhang, Avram Gold, Ilona Jaspers, Rebecca Fry, Jason Surratt, *University of North Carolina at Chapel Hill*
11:00
- 7OP.7 Impacts of Emission Sources on Spatiotemporal Variability in Aerosol Oxidative Potential.** JOSEPHINE BATES, Rodney J. Weber, Joseph Abrams, Vishal Verma, Ting Fang, Cesunica Ivey, Mitchel Klein, Matthew Strickland, Stefanie Ebel, Sarnat, Howard Chang, James Mulholland, Paige Tolbert, Armistead G. Russell, *Georgia Institute of Technology*
11:15
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7UA URBAN AEROSOLS I

301 B

Steven Brown and Hongliang Zhang, chairs

- 7UA.1 Investigating Spatial Variation in Organic Aerosol Concentrations and Source Impact in a Metropolitan Area by Mobile Sampling with Aerodyne Aerosol Mass Spectrometer.** PEISHI GU, Zhongju Li, Qing Ye, Ellis Shipley Robinson, Jiqiao Shi, Rishabh Shah, Naomi Zimmerman, Joshua Apte, Allen Robinson, Albert A. Presto, *Carnegie Mellon University*
9:45
- 7UA.2 Mobile Measurements of PM, NO_x, and O₃ Across California Using Google Street View Cars.** ANDREW WHITEHILL, Surender Kaushik, Paul A. Solomon, Ashok K. Singh, Melissa M. Lunden, Okorie Puryear, Brian LaFranchi, Davida Herzl, *U.S. EPA, Office of Research and Development*
10:00
- 7UA.3 Characterization of Winter Air Pollutant Gradients near a Major Highway.** CHEOL H. JEONG, Nathan Hilker, Jon M. Wang, Jerzy Debosz, Robert Healy, Uwayemi Sofowote, Tony Munoz, Dennis Herod, Greg J. Evans, *SOCAR, University of Toronto*
10:15

- 7UA.4** **A Study of the Impact of Diesel Buses on Downtown Boulder.** Josue Hernandez Pedroza, SHELLY MILLER, *CU Boulder*
10:30
- 7UA.5** **Characterization of On-road Vehicle Emissions in a Roadway Tunnel in Hong Kong.** XIAOLIANG WANG, Judith Chow, John Watson, L.W. Antony Chen, Kin-Fai Ho, Shun-Cheng Lee, *Desert Research Institute*
10:45
- 7UA.6** **High Temporal and Spatial Variability in Ambient Black Carbon in an Urban Area from Fixed-Site and Mobile Monitoring.** AJA ELLIS, Naomi Zimmerman, Hugh Li, Peishi Gu, Ellis Shipley Robinson, Allen Robinson, Joshua Apte, Albert A. Presto, R. Subramanian, *Carnegie Mellon University*
11:00
- 7UA.7** **Effects of After-Treatment Emission Control Technologies on In-Use Heavy-Duty Diesel Trucks under Two Different Driving Modes.** CHELSEA V. PREBLE, Troy Cados, Robert Harley, Thomas W. Kirchstetter, *University of California, Berkeley*
11:15

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

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

8AQ SYMPOSIUM: THERE MUST BE SOMETHING IN THE WATER: CLOUD, FOG AND AEROSOL AQUEOUS CHEMISTRY FOR AEROSOL PRODUCTION III: POSTERS

EXHIBIT HALL

- 8AQ.1** **Ambient Biomass Burning Influenced Fog and Aerosol Samples: Molecular Insights on Aging.** MATTHEW BREGE, Marco Paglione, Stefania Gilardoni, Stefano Decesari, M. Cristina Facchini, Lynn Mazzoleni, *Michigan Technological University*
12:15
- 8AQ.2** **Vertically Resolved Concentration and Liquid Water Content of Atmospheric Nanoparticles at the US DOE Southern Great Plains Site.** HAIHAN CHEN, Anna Hodshire, John Ortega, James Greenberg, Peter H. McMurry, Annmarie Carlton, Jeffrey R. Pierce, David Hanson, James Smith, *University of California, Irvine*
12:15
- 8AQ.3** **Chemical and Biological Analysis of Cloud-Water in Marine Boundary Layer Clouds.** EWAN CROSBIE, Luke Ziemba, Richard Moore, Taylor Shingler, Michael Shook, Kenneth Thornhill, Edward Winstead, Hossein Dadashazar, Alex MacDonald, Armin Sorooshian, Bruce Anderson, *NASA*
12:15
- 8AQ.4** **Characterizing the Behavior of Ambient Organic Aerosols Under Conditions of Aerosol Liquid Water Evaporation.** MARWA EL-SAYED, Dziejzorm Amenumey, Christopher Hennigan, *University of Maryland, Baltimore County*
12:15
- 8AQ.5** **Bimodal Aerosol Caused by Cloud Processing.** JAMES HUDSON, Stephen Noble, *Desert Research Institute*
12:15
- 8AQ.6** **Photosensitized SOA Production by Humic Acid in Aqueous Aerosols.** WILLIAM TSUI, V. Faye McNeill, *Columbia University*
12:15
- 8AQ.7** **In-Particle Chemistry and Gas-Particle Partitioning of Isoprene SOA Tracers.** ALISON FANKHAUSER, ManishKumar Shrivastava, Gabriel Isaacman-VanWertz, V. Faye McNeill, *Columbia University*
12:15
- 8AQ.8** **Aerosol Interactions with Fog in Urban and Suburban Sites in Northeastern France: Applications of Carbon Isotopic Analysis.** DENISE NAPOLITANO, Olivier Delhomme, Maurice Millet, Pierre Herckes, *Arizona State University*
12:15
- 8AQ.9** **Hydrolysis of Daytime and Nighttime Organic Nitrates from α -Pinene and β -Pinene.** MASAYUKI TAKEUCHI, Gamze Eris, Nga Lee Ng, *Georgia Institute of Technology*
12:15
- 8AQ.10** **Characterizing Oxidized North American Fire Emissions and Their Aqueous/Multiphase Atmospheric Transformations through the FIREX Campaign.** SOPHIE TOMAZ, Tianqu Cui, Yuzhi Chen, Kenneth Sexton, Jason Surratt, Barbara Turpin, *University of North Carolina at Chapel Hill*
12:15

- 8AQ.12 Photosensitized Processes as an Alternative Photochemical Pathways in the Atmospheric Bulk Aqueous Phase.** MAJDA MEKIC, Wei Deng, Wei Song, Xinming Wang, Xiang Ding, Sasho Gligorovski, *Guangzhou Institute of Geochemistry, CAS*
12:15
- 8AQ.13 Characterizing Brown Carbon Formation and Persistence in Various Conditions: Cloudwater pH, Evaporation, and Photodegradation.** LELIA HAWKINS, Hannah G. Welsh, Matthew V. Alexander, *Harvey Mudd College*
12:15
- 8AQ.14 Recommended Reactive Uptake Coefficients for Uptake of Glyoxal and Methylglyoxal by Several Aerosol Types and Cloud Droplets in Atmospheric Chemistry Models.** Leah Curry, V. FAYE MCNEILL, *Columbia University*
12:15
- 8AQ.15 Following Carboxylic Acid and Peroxyacid Chemistry in the Formation of Aqueous Secondary Organic Aerosol Produced from Oxidation of Monoterpenes.** MICHAEL LINK, Delphine Farmer, *Colorado State University*
12:15

8CM CONTROL AND MITIGATION TECHNOLOGY II: POSTERS

EXHIBIT HALL

- 8CM.1 A Study on the Filtration Characteristics of Charged Porous Fiber Filters.** CHIH-TE WANG, Tsung-Ming Tu, Shao-Tai Lee, Yu-Hao Tseng, Bi-Ling Huang, Jia-Xi Shi, Wen-Yinn Lin, *Institute of Environmental Engineering and Management, NTUT*
12:15
- 8CM.2 Charge Decay of Electret Filters with Various Surface Charge Densities by Liquid Isopropyl Alcohol Exposure.** EUN-SEON PARK, Myong-Hwa Lee, *KITECH*
12:15
- 8CM.3 An Optimization and Sensitivity Study on SALSCS Design by Using Numerical Method.** QINGFENG CAO, Lian Shen, Sheng-Chieh Chen, David Y. H. Pui, *University of Minnesota*
12:15
- 8CM.4 Effect of Relative Humidity Hysteresis on Loading Characteristics of Air Intake Filter Media by Hygroscopic Salt Particles.** Chenxing Pei, QISHENG OU, David Y. H. Pui, *University of Minnesota*
12:15
- 8CM.5 Comparison of Different Neutralizing Methods by IPA on Electret Filter Media.** MIN TANG, Sheng-Chieh Chen, Luying Liu, David Y. H. Pui, *University of Minnesota*
12:15
- 8CM.6 Electrodynamic Dust Shield for Dust Removal.** BING GUO, Wasim Javed, Benjamin Figgis, *Texas A&M University at Qatar*
12:15
- 8CM.7 Use of Nanofibrous Membranes for Effective Filtration of Fine Particles.** Jun Xi Lee, Sundararajan Subramanian, RAJASEKHAR BALASUBRAMANIAN, *National University of Singapore*
12:15
- 8CM.8 Electrodynamic Mitigation of Dust for Solar Panels via Computational Simulation.** Chesnutt Jennifer, Husain Ashkanani, Chia-Yang Chen, Hiroyuki Kan, Rowan Malvezin, Satoru Watano, Hideya Nakamura, Bing Guo, CHIH-HSIANG CHIEN, Chang-Yu Wu, *University of Florida*
12:15

8CO COMBUSTION II: POSTERS

EXHIBIT HALL

- 8CO.1 Growth Mechanism of Soot in Recirculating Hydrocarbon Flames.** KARTIK TIWARI, Justin Davis, Igor Novosselov, *University of Washington*
12:15
- 8CO.2 Chemical Composition of Emissions Originating from Biomass and Municipal Solid Waste Burning in a Masonry Heater.** MATTHEW BLOSS, Fanni Mylläri, Minna Aurela, Marek Maasikmets, Hanna Lii Kupri, Keio Vainumäe, Pauli Simonen, Laura Salo, Ville Niemelä, Topi Rönkkö, Hilikka Timonen, *Finnish Meteorological Institute*
12:15
- 8CO.3 Morphology and Internal Structure of Soot Carbon Characterized by Transmission Electron Microscopy and Raman Spectroscopy.** RAMIN DASTANPOUR, Alberto Baldelli, Steven Rogak, *University of British Columbia*
12:15
- 8CO.4 Predicting Fouling and Slagging Tendencies during Ash Deposition in Non-isothermal, Turbulent Parallel Flows: Applications to Utility Boilers.** AKSHAY GOPAN, Zhiwei Yang, Richard Axelbaum, *Washington University in St. Louis*
12:15
- 8CO.5 Evaluation of Semi-Empirical Soot Formation Models in Strained, Oxygen-Enriched Flames.** PHILLIP R. JOHNSON, Benjamin M. Kumfer, *Washington University in St. Louis*
12:15

- 8CO.6** **Three-Wavelength Optical Characterization of Fresh and Photochemically-Aged Aerosols from Siberian Peat Burning.** MICHELENE IAUKEA-LUM, Chiranjivi Bhattarai, Deep Sengupta, Patricio Piedra, Jessica Connolly, Vera Samburova, Andrey Khlystov, Adam Watts, Hans Moosmuller, *Desert Research Institute*
12:15
- 8CO.8** **Chemical Characterization of Submicron Aerosol Particles and Light Extinction Apportionment before and during Heating Season in Beijing, China.** QINGQING WANG, Yele Sun, Qi Jiang, Wei Du, Chengzhu Sun, Pingqing Fu, Zifa Wang, *Institute of Atmospheric Physics, CAS*
12:15
- 8CO.9** **Air Quality Implications of Replacing Natural Gas with Biomethane in Vehicles and Home Appliances.** YIN LI, Jian Xue, Chris Alaimo, Joshua Peppers, Peter Green, Norman Kado, Minji Kim, Christoph Vogel, Ruihong Zhang, Thomas Young, Michael Kleeman, *University of California, Davis*
12:15
- 8CO.10** **Emission Factors of Carbonaceous Aerosol and Brown Carbon Constituents for Biomass Fuel Combustion in Rural Cookstoves: A Field Study.** ANNADA PADHI, Gazala Habib, Ramya Sunder Raman, *IIT Delhi*
12:15
- 8CO.11** **Black Carbon and Nox Measurement from Three Ocean Going Vessels.** JIACHENG YANG, David R. Cocker III, Kent C. Johnson, Wayne Miller, Thomas D. Durbin, Yu Jiang, Georgios Karavalakis, *University of California, Riverside*
12:15
- 8CO.12** **Sampling Temperature Effects on the Size Distribution of Particles Emitted by a Two-Stroke Engine.** Ricardo Morales Betancourt, YADERT CONTRERAS BARBOSA, Ana Paola Corredor, Joseph Herrera, Juan Camilo Vigoya, *Universidad de los Andes*
12:15
- 8CO.13** **Size, Mass-Mobility, Effective Density, and Volatility of Soot Particles Generated from Large-Scale Turbulent Diffusion Flames.** MOHSEN KAZEMIMANESH, Melina Jefferson, Alireza Moallemi, Kevin Thomson, Matthew Johnson, Jason S. Olfert, *University of Alberta*
12:15
- 8CO.14** **Effects of Fuel Moisture Content on Pollutant Emissions from a Rocket-Elbow Cookstove.** LIZETTE VAN ZYL, Nicholas Good, Kelsey Bilsback, Kristen Fedak, John Volckens, *Colorado State University*
12:15
- 8CO.15** **Black Carbon Measurement Intercomparison during the 2017 Black Carbon Shootout.** TAYLOR SHINGLER, Richard Moore, Claire Robinson, Edward Winstead, Ewan Crosbie, Luke Ziemba, Kenneth Thornhill, Michael Shook, Bruce Anderson, *NASA*
12:15

8ET SYMPOSIUM: EXTRATERRESTRIAL AEROSOLS: FROM MARS TO TITAN AND BEYOND I: POSTERS

EXHIBIT HALL

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- 8ET.1** **Single Particle Studies of Atmospheric Meteor Ablation.** DANIEL CZICZO, Daniel Murphy, *MIT*
12:15

8HA HEALTH RELATED AEROSOLS I: POSTERS

EXHIBIT HALL

-
- 8HA.1** **Comparison of Aircraft Emissions near Los Angeles International Airport (LAX) to Urban Vehicle Traffic Emissions and Its Impact on Air Quality in Los Angeles.** FARIMAH SHIRMOHAMMADI, Christopher Lovett, Mohammad Sowlat, Sina Hasheminassab, Arian Saffari, George Ban-Weiss, Vishal Verma, Martin Shafer, James Schauer, Constantinos Sioutas, *University of Southern California*
12:15
- 8HA.2** **Effect of Combustion Particle Size on Pathologically Important Responses in Lung Cells.** KAMALJEET KAUR, Raziye Mohammadpour, Isabel C. Jaramillo, Robert Paine, Chris Reilly, Hamid Ghandehari, Kerry Kelly, *University of Utah*
12:15
- 8HA.3** **Nasal Deposition of Aerosols and Sprays in Adults: A Wide Ranging Computational Study.** Milad Darunkola, Herbert Wachtel, Michelle L. Noga, Andrew R. Martin, WARREN H. FINLAY, *University of Alberta*
12:15
- 8HA.4** **Accuracy of the Temperature Control Feature in Advanced Electronic Cigarettes.** SEYED AHMAD REZA DIBAJI, Suvajyoti Guha, Bruce Murray, Matthew R. Myers, Aarthi Arab, Jenna F. Dumond, *U.S. Food and Drug Administration, CDRH*
12:15
- 8HA.5** **Comparison of Airway Responses Induced in a Mouse Model by the Gas and Particulate Fractions of Gasoline Direct Injection Engine Exhaust.** CAITLIN MAIKAWA, Naomi Zimmerman, Manuel Ramos, Mittal Shah, James S. Wallace, Krystal Godri Pollitt, *University of Massachusetts Amherst*
12:15

- 8HA.6** **Sampling Efficiencies of two Modified Cascade Impactors.** JANA KESAVAN, Pamela Humphreys, Daniel Mcgrady, Garrett Nelson, Meera Kesavan, Ana Rule, *US Army Edgewood Chemical Biological Center*
12:15
- 8HA.7** **Simulation of Particle Deposition in Laryngotracheal Stenosis Using Computational Fluid Dynamics.** TRACY CHENG, David Carpenter, David Witsell, Seth Cohen, Dennis Frank-Ito, *Duke University School of Medicine*
12:15
- 8HA.8** **Scaling the Idealized Infant Nasal Airway to Mimic Average Deposition in Neonates.** Scott Tavernini, Tanya Church, David Lewis, Michelle L. Noga, Andrew R. Martin, WARREN H. FINLAY, *University of Alberta*
12:15
- 8HA.9** **Assessing the Biological Effects of Various Components of Isoprene-Derived Secondary Organic Aerosol.** MAIKO ARASHIRO, Ying-Hsuan Lin, Kenneth Sexton, Avram Gold, Ilona Jaspers, Rebecca Fry, Jason Surratt, *University of North Carolina at Chapel Hill*
12:15
- 8HA.10** **Toxicological and Chemical Properties of Fine Particles Produced from Various Sources.** MINHAN PARK, HungSoo Joo, Kwangyul Lee, Tsatsral Batmunkh, Lucille Joanna Borlaza, Heung-Bin Lim, Han-Jae Shin, Myoseon Jang, Ji Yi Lee, Min-Suk Bae, Kyu-Hyuck Chung, Daeun Kim, Kihong Park, *Gwangju Institute of Science and Technology*
12:15
- 8HA.11** **Study on a Commercial Nasal Filter Against Environmental Tobacco Smoke Particulates.** JINTUO ZHU, Xinjian He, Steve Guffey, *West Virginia University, Morgantown, WV*
12:15
- 8HA.12** **Evaluation of Glass Fiber Lengths Collected on a Screen Using a Periodic Purging Flow System.** BON KI KU, G.J. Deye, Leonid Turkevich, *Centers for Disease Control and Prevention, NIOSH*
12:15
- 8HA.13** **The Impact of Head Composition and Design on the Physical Properties of Waterpipe Tobacco Smoke.** CINDY DEFOREST HAUSER, Sarah Coats, David DeGrood, Ronnae Mailig, *Davidson College*
12:15
- 8HA.14** **Bioaccessibility and Health Risk of Trace Elements in Fine Particulate Matter Using Different Simulated Body Fluids.** DONGYANG NIE, Mindong Chen, Xinlei Ge, Yun Wu, *Nanjing University of Information Science & Technology*
12:15
- 8HA.15** **Oxidative Potential of Various Laboratory-generated PM from Biomass Burning, Coal Burning, Fuel Combustion, and Road Dust.** LUCILLE JOANNA BORLAZA, Sejong Kim, Minhan Park, Kwangyul Lee, HungSoo Joo, Kihong Park, *Gwangju Institute of Science and Technology*
12:15
- 8HA.16** **Differential Lung Toxicity of Biomass Smoke from Smoldering and Flaming Phases Following Acute Inhalation Exposure.** YONG HO KIM, Charly King, Todd Krantz, Ingrid George, Marie McGee, Lisa Copeland, Michael Hays, Matthew Landis, Mark Higuchi, Stephen Gavett, Ian Gilmour, *U.S. EPA*
12:15
- 8HA.17** **Exposure to Respirable Crystalline Silica during Stone Countertop Grinding/Polishing using Handheld Tools.** CHAOLONG QI, Alan Echt, *NIOSH*
12:15
- 8HA.18** **The Dissemination and Fate of Inert Aerosolized Particles in a Clinical Biocontainment Unit (BCU).** David Drewry, Thomas Pilholski, Jennifer Therkorn, FELIX SAGE, Kaitlin Rainwater-Lovett, Kathryn Shaw-Saliba, Lauren Sauer, Gregory Bova, Brian Garibaldi, *Johns Hopkins University Applied Physics Laboratory*
12:15
- 8HA.19** **Deposition of Ultrafine Particles in Human Airway.** WEI-CHUNG SU, Yi Chen, *University of Texas Health Science Center at Houston*
12:15

8IM INSTRUMENTATION AND METHODS VII: POSTERS

EXHIBIT HALL

- 8IM.1** **The Pollution Particulate Concentrator (PoPCon), an Ambient Pollution Concentrator for the Study of Pathogen-Particulate Interactions.** NICOLAS GROULX, Bruce Urch, Caroline Duchaine, Samira Mubareka, James Scott, *University of Toronto*
12:15
- 8IM.2** **Calibration of the Laser Induced Incandescence-Mass Spectrometric Analyzer (LII-MS) Using Polydisperse Aerosol Particles.** CUIZHI SUN, Nobuyuki Takegawa, *Tokyo Metropolitan University*
12:15
- 8IM.4** **Improvement of Quantitative Fit Testing Methods Using Ambient Aerosols.** SHYANG-HAW YANG, Kai-Jie Yang, Chih-Wei Lin, Sheng-Hsiu Huang, Yu-Mei Kuo, Chih-Chieh Chen, *National Taiwan University*
12:15
- 8IM.6** **Application of "Low-Cost" Particulate Matter Sensors to Measure Fugitive Dust at the Fenceline of a Waste Processing Facility.** BRANDON FEENSTRA, Vasileios Papapostolou, Hang Zhang, Andrea Polidori, *South Coast Air Quality Management District*
12:15

- 8IM.7** 12:15 **Spatial and Temporal Variability of Particulate Matter Using a Network of Air Quality Sensors in a Southern California Community.** BRANDON FEENSTRA, Vasileios Papapostolou, Olga Pikelnaya, Hang Zhang, Andrea Polidori, *South Coast Air Quality Management District*
- 8IM.8** 12:15 **A Novel Inversion Method to Calculate the Mass Fraction of Coated Refractory Black Carbon Using a Centrifugal Particle Mass Analyzer and Single Particle Soot Photometer.** Kurtis Broda, JASON S. OLFERT, Martin Irwin, Gregory Schill, Gavin McMeeking, Elijah G. Schnitzler, Wolfgang Jager, *University of Alberta*
- 8IM.9** 12:15 **Numerical Study of Miniature Plate Differential Mobility Analyzers (Mini-plate DMAs).** THAMIR ALSHARIFI, Da-Ren Chen, *Virginia Commonwealth University*
- 8IM.10** 12:15 **Performance Testing of Two Virtual Impactors.** Maria D. King, John Haglund, Ahmad Kalbasi, Samuel Beck, Alexander Zuniga, PAUL A. SOLOMON, *Texas A&M University*
- 8IM.11** 12:15 **Laboratory and Field Calibration of a Low-Cost Particulate Matter Sensor.** TOFIGH SAYAHI, Kerry Kelly, *University of Utah*
- 8IM.12** 12:15 **Effects of Detection Wavelengths on Black Carbon Measurements Using the Auto-Compensating Laser-Induce Incandescence Technique.** FENGSHAN LIU, David Snelling, Kevin Thomson, Gregory Smallwood, *National Research Council Canada*
- 8IM.13** 12:15 **Application of Novel Sensors for Assessing Indoor Air Pollution.** JENNIE COX, Tiina Reponen, Sergey A. Grinshpun, Seung-Hyun Cho, *University of Cincinnati*
- 8IM.14** 12:15 **Assessing Occupational Exposure to Silica and Soot in Diamond Mines using Wearable Sensors and Samplers.** ALBERTO BALDELLI, Steven Rogak, Winnie Chu, *University of British Columbia*
- 8IM.15** 12:15 **A General Uncertainty Analysis for Measurements of Black Carbon Emissions from Gas Flaring Using Sky-LOSA.** BRADLEY CONRAD, Matthew Johnson, *Carleton University*
- 8IM.16** 12:15 **Limits to the Precision of the Optical Closure Technique When Quantifying Measurement Uncertainties.** JAMES RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
- 8IM.17** 12:15 **A 2-D Numerical Study of Virtual Impactor with Ultra-low Air Flow-rates.** WONYOUNG JEON, Hyunwoo Lee, Youngjin Seo, *Kumoh National Institute of Technology*
- 8IM.18** 12:15 **On the Use of the Field Sunset Semi-continuous Analyzer to Measure Equivalent Black Carbon Concentrations.** Nadežda Zíková, Petr Vodicka, Wolfgang Ludwig, Regina Hitzenberger, JAROSLAV SCHWARZ, *Institute of Chemical Process Fundamentals CAS*
- 8IM.19** 12:15 **Experimental Investigation of a Multi-notched Electropray.** YANG ZHANG, Da-Ren Chen, *Virginia Commonwealth University*
- 8IM.20** 12:15 **Response of a Filter-based Instrument with a BC Surrogate.** COURTNEY GRIMES, Russell Dickerson, James Radney, Joseph Conny, Christopher Zangmeister, *University of Maryland*
- 8IM.21** 12:15 **Indicating Particulate Matter (PM) Exposure with a Smartphone App.** GANG CHEN, Bruce Urch, Frances Silverman, Arthur W. H. Chan, *University of Toronto*
- 8IM.22** 12:15 **Comparison of Four Consumer-Grade Air Quality Monitors.** RUIKANG HE, Sanjeevi Thirumurugesan, Daniel Bachman, Dominick J. Carluccio, Rudolph Jaeger, Clinton J. Andrews, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 8IM.23** 12:15 **Innovative Analytical Solution for Inverted Drift Tube Characterization and Validation by Experimental Methods.** MD MINAL NAHIN, Carlos Larriba-Andaluz, *IUPUI*
- 8IM.24** 12:15 **Design Criteria and Development of the Next Generation of Butanol CPC's.** AXEL ZERRATH, Andrea Tiwari, Jacob Scheckman, Brian Osmondson, *TSI Incorporated*
- 8IM.25** 12:15 **Measurement Uncertainties of Black Carbon Concentration Using Photoacoustic Method.** MAJI NAJI, Kevin Thomson, *National Research Council Canada*
- 8IM.26** 12:15 **Design and Evaluation of a Low Flow Personal Cascade Impactor.** MODI CHEN, Francisco Romy, Virgil Marple, *MSP Corporation*

- 8IM.27 Measuring Sub-10 nm Particles from DPF Diesel and Gasoline DI Cars using PMP Methodology.** HIROYUKI YAMADA, *Tokyo Denki University*
12:15
- 8IM.28 Aerosol Detection using Unmanned Aerial Vehicles.** ANDREW DART, Jonathan Thornburg, *RTI International*
12:15
- 8IM.29 Aerosol Loading Effects on Particle Size-Selective Samplers.** SHENG-HSIU HUANG, Chih-Wei Lin, Ting-Ju Chen, Yu-Mei Kuo, Chih-Chieh Chen, *National Taiwan University*
12:15
- 8IM.30 Development of Single Particle Mass Spectrometer Coupled with Light Scattering Module to Increase the Detection Efficiency.** HEE-JOO CHO, Taewan Son, Donggeun Lee, Kihong Park, *Gwangju Institute of Science and Technology*
12:15
- 8IM.31 Accurate Signal Prediction of SEMS under Fast-Scan Operation.** MARK KANAPARTHI, Suresh Dhaniyala, *Clarkson University*
12:15
- 8IM.32 Performance of a New Tandem Differential Mobility Analyzer Inversion Routine to Interpret Non-Ideal Responses.** CHRISTOPHER OXFORD, Brent Williams, *Washington University in St. Louis*
12:15
- 8IM.33 Using a Low-Cost Electrochemical Wireless Sensor Network to Provide Spatiotemporal Measurements of Hazardous Gases in a Manufacturing Setting.** CHRISTOPHER ZUIDEMA, Nima Afshar-Mohajer, Sinan Sousan, Geb Thomas, Thomas Peters, Kirsten Koehler, *Johns Hopkins School of Public Health*
12:15
- 8IM.34 Towards a Calibration Procedure for Thermal Optical Analysis.** COURTNEY GRIMES, Russell Dickerson, Christopher Zangmeister, Joseph Conny, *University of Maryland*
12:15
- 8IM.35 UV-Visible Photoacoustic Spectroscopy for Aerosol Absorption.** AL FISCHER, Geoffrey Smith, *University of Georgia*
12:15
- 8IM.36 UAIR – Building a Distributed AQ Sensor Network for the Union College Community.** ANDREW HUISMAN, Sarah Connolly, Alexandra Novak, Paige Kotowitz, Eben Cross, *Union College*
12:15
- 8IM.37 Design and Performance Characterization of a Dilution Sampling System for the Measurement of Biomass Combustion Aerosols.** JAKE LINDBERG, Dave Guerrieri, Gerald Willson, *NYS DEC*
12:15
- 8IM.38 Experimental Evaluation of Opto-Dielectrometric Sensors for Monitoring of Total Incombustible Content (TIC) in Underground Coal Mines.** OMID MAHDAVIPOUR, John Sabino, Michael R. Shahan, Clara E. Seaman, Larry D. Patts, Paul Wright, Igor Paprotny, *University of Illinois at Chicago*
12:15
- 8IM.39 The Development of a Unique Multi-Wavelength Polar Nephelometer for the Retrieval of Ambient Aerosol Refractive Indices via Reverse Mie Theory.** AUSTEN SCRUGGS, Geoffrey Smith, *University of Georgia*
12:15
- 8IM.40 A Broadband Cavity-Enhanced Spectrometer for UV-Vis Extinction.** MICHAEL POGASH, Al Fischer, Geoffrey Smith, *The University of Georgia*
12:15
- 8IM.41 Surface Enhanced Raman Spectroscopy of Aerosol Particles.** Vasanthi Sivaprakasam, Matthew B. Hart, Paul Lane, Gary Kushto, JAY D. EVERSOLE, *Naval Research Laboratory*
12:15
- 8IM.42 A Wick Moisture Sensor for Next Generation Water Condensation Particle Counters.** GREGORY LEWIS, Steven Spielman, Susanne Hering, *Aerosol Dynamics Inc.*
12:15
- 8IM.43 Size-Resolved Acid:Base Ratio of Atomized Nanoparticles from Salt Solutions.** SABRINA CHEE, Haihan Chen, Michael J. Lawler, James Smith, *University of California, Irvine*
12:15
- 8IM.44 Design and Evaluation of a NO_x Denuder with Cobalt Oxide Adsorbent.** Blake Actkinson, Stone Yan, BENJAMIN SUMLIN, Christopher Oxford, Brent Williams, Rajan Chakrabarty, *Washington University in St. Louis*
12:15
- 8IM.45 Modeling and Optimization of Wearable Personal Dust Exposure Monitor (WPDEM) for Underground Mines.** MANDANA HAJIZADEHMOTLAGH, Omid Mahdavi pour, Igor Paprotny, *University of Illinois at Chicago*
12:15
- 8IM.46 Field Deployment of a Nanometer-Capable, Water-Based Condensation Particle Counter.** SUSANNE HERING, Gregory Lewis, Chongai Kuang, *Aerosol Dynamics Inc*
12:15
- 8IM.47 Dual Differential MEMS PM_{2.5} Mass Sensor: Mitigating Temperature and Humidity Effects through Dual Alternating Thermophoretic Precipitation.** DORSA FAHIMI, Shravan Nagarjun Rangaraj, Omid Mahdavi pour, Igor Paprotny, *University of Illinois at Chicago*
12:15

- 8IM.48** **Application of Laser Induced Breakdown Spectroscopy for Real Time Detection of Contamination Particles in Industrial Fabrication Process at Various Pressure and Temperature Conditions.** KYOUNGTAE KIM, Haebum Lee, Hyunok Maeng, Giback Kim, Jinsung Kim, Kihong Park, *Gwangju Institute of Science and Technology*
12:15
- 8IM.49** **Evaluation of a Miniature, Low-Cost Black Carbon Sensor for Unmanned Platforms.** GAVIN MCMEEKING, Julien Caubel, Troy Cados, Nicholas Good, Thomas W. Kirchstetter, *Handix Scientific*
12:15
- 8IM.50** **Continuous Flow Hygroscopicity-Resolved Relaxed Eddy Accumulation (Hy-Res REA) Method of Measuring Size-Resolved Sea-Salt Particle Fluxes.** NICHOLAS MESKHIDZE, Taylor Royalty, Brittany Phillips, Kyle Dawson, Markus Petters, Robert Reed, Jason Weinstein, Adam Hook, Russell Wiener, *NC State*
12:15
- 8IM.51** **Comparison of Aerosol Chemical Characterization Techniques Utilizing a PTR-ToF-MS: A Study on Biogenic SOA Formation and Gas-To-Particle Partitioning.** GEORGIOS GKATZELIS, Philipp Eichler, Iulia Gensch, Thorsten Hohaus, Markus Mueller, Patrick Schlag, Sebastian Schmitt, Ralf Tillmann, Kang-Ming Xu, ZhuJun Yu, Rupert Holzinger, Armin Wisthaler, Astrid Kiendler-Scharr, *Forschungszentrum Jülich*
12:15
- 8IM.52** **Accuracy and Reproducibility of DMS500 Fast Mobility Size Spectrometers Over 10 Years.** Jonathan Symonds, CHRIS NICKOLAUS, *Cambustion*
12:15
- 8IM.54** **A Novel Miniature Inverted Burner for the Steady Generation of Soot Particles.** MOHSEN KAZEMIMANESH, Kerry Chen, Jordan Titosky, Jason S. Olfert, *University of Alberta*
12:15
- 8IM.55** **Development of a Methodology for Generation of the Iodine Mixture Particles, and its Chemical Composition Analysis.** SHIGERU KIMOTO, Kenji Shiota, Yuki Yasumoto, Yasuto Matsui, Minoru Yoneda, *Kyoto University*
12:15
- 8IM.56** **Counting Efficiency Evaluation of Optical Particle Counters in Micrometer Range by Using Inkjet Aerosol Generator as a Monodisperse Particle Number Standard.** KENJIRO IIDA, Kensei Ehara, Hiromu Sakurai, Naoyuki Taketoshi, Fuminari Ito, *AIST*
12:15
- 8IM.57** **Determining the Validity of Storing Biomass Burning Aerosol in Water Using an Impinger for Laboratory Studies on Physicochemical and Optical Properties.** MARC FIDDLER, Damon Smith, Samin Poudel, Marquin Spann, Solomon Bililign, *North Carolina A&T State University*
12:15
- 8IM.58** **Characterization of a Smog Chamber for Analysis of the Formation, Physicochemical, and Optical Properties of Aging Biomass Burning Aerosol.** DAMON SMITH, Marquin Spann, Marc Fiddler, Solomon Bililign, *North Carolina A&T State University*
12:15
- 8IM.59** **Measurement of Crystalline Silica Aerosol Using Quantum Cascade Laser-based Infrared Spectroscopy.** SHIJUN WEI, Pramod Kulkarni, Kevin Ashley, Lina Zheng, *Centers for Disease Control and Prevention, NIOSH*
12:15
- 8IM.60** **In-situ Comparison of SFCA to Constant Flow Operation of Two CCNcs during KORUS-AQ.** JAMES HITE, Andreas Beyersdorf, Chelsea Corr, Edward Winstead, Kenneth Thornhill, Bruce Anderson, Athanasios Nenes, *Georgia Institute of Technology*
12:15
- 8IM.61** **Using Low-cost PM2.5 Sensors for Air Quality Education Outreach.** CHARLES STANIER, Can Dong, Nathan Janecek, Nathan Bryngelson, Joseph A'Hearn, Megan Christiansen, *University of Iowa*
12:15
- 8IM.62** **Probing Structure and Chemical Properties of Free-standing Clusters with Synchrotron Radiation.** NONNE PRISLE, J. Malila, K. Jänkälä, M. Patanen, M. Huttula, *University of Oulu, Oulu, Finland*
12:15
- 8IM.63** **A Real-time Impactor for Ambient and Vehicle Exhaust Particle Mass Distribution Measurement.** Yue Lin, Liem Pham, Heejung Jung, MODI CHEN, Francisco Romay, *University of California, Riverside*
12:15
- 8IM.64** **Influence of Shape Factor and Effective Density on Aerodynamic Sizing of Particles Generated by the TSI/MSP 1520 Flow-Focusing Monodisperse Aerosol Generator (FMAG).** Andrea Tiwari, LIN LI, Francisco Romay, *TSI Incorporated*
12:15
- 8IM.65** **Development and Evaluation of Cost-Efficient Multipollutant Monitors and High Spatiotemporal Resolution Measurement Networks.** DREW GENTNER, Fulizi Xiong, Kate Skog, Misti Zamora, Joseph Kohrman-Glaser, Kevin Ryan, Branko Kerkez, Kirsten Koehler, *Yale University*
12:15
- 8IM.66** **Limitations and Modifications of Impregnated Filter Method for Sampling Sulfur Dioxide Gas.** Chufan Zhou, CHIH-HSIANG CHIEN, Alexandros Theodore, Chang-Yu Wu, Yu-Mei Hsu, Brian Birky, *University of Florida*
12:15

- 8IM.67 Evaluation of a Low-Cost Monitor for PM_{2.5} in Two Chinese Cities.** QI YING, Jianlin Hu, Qiao Xue, Hongliang Zhang, *Texas A&M University*
- 8IM.68 Black Carbon Estimates from Optical Carbon Analysis of Federal Reference Method Teflon Filters.** Paige Presler-Jur, PRAKASH DORAISWAMY, Oliver Rattigan, H. Dirk Felton, *RTI International*
- 8IM.69 Light Absorption and Chemical Speciation of Organic Carbon in Wood Smoke, Diesel Exhaust and Urban Particulate Matter.** Alena Kubatova, Klara Kukowski, JAMES DIEKMAN, *University of North Dakota*

8MO SYMPOSIUM: REGIONAL AND GLOBAL AIR QUALITY AND CLIMATE MODELING II: POSTERS

EXHIBIT HALL

- 8MO.1 Implications of Emission Inventory Choice for Modeling Fire-Related Pollution in the U.S..** SHANNON KOPLITZ, Christopher Nolte, *U.S. EPA*
- 8MO.2 The Influence Pre-existing Organics on Secondary Organic Aerosol Formation from Reactive Uptake of Isoprene Epoxydiols in a Regional Scale Model.** MUTIAN MA, Havala Pye, Yue Zhang, Yuzhi Chen, Chitsan Wang, Jason Surratt, William Vizuete, *University of North Carolina at Chapel Hill*
- 8MO.4 Assessment of Important SPECIATE Profiles in EPA's Emissions Modeling Platform and Current Data Gaps.** CASEY BRAY, Madeleine Strum, Heather Simon, Lee Riddick, Mike Kosusko, Venkatesh Rao, *US EPA*
- 8MO.5 Evaluating Regional Air Quality Model Impacts during the 2013 Rim Fire.** MATTHEW WOODY, Kirk Baker, Benjamin Murphy, Jose-Luis Jimenez, Pedro Campuzano-Jost, *United States Environmental Protection Agency*
- 8MO.6 Size-resolved Mixing State of Black Carbon in the Arctic and Implications for Simulated Direct Radiative Forcing.** JACK KODROS, Sarah Hanna, Allan Bertram, W. Richard Leitch, Hannes Schulz, Andreas Herber, Marco Zanatta, Julia Burkart, Megan Willis, Jonathan Abbatt, Jeffrey R. Pierce, *Colorado State University, Fort Collins, USA*
- 8MO.7 Contributions of Semi-Volatile Compounds from Combustion Sources in Japan.** YU MORINO, Satoru Chatani, Kiyoshi Tanabe, Yuji Fujitani, Tazuko Morikawa, Kei Sato, *National Institute for Environmental Studies*
- 8MO.8 Insights into a Haze Episode over a Coastal City Based on Multiple Measurements and Modeling Study.** XIN WU, Junjun Deng, Youwei Hong, Lingling Xu, Lisi Zhao, Jinsheng Chen, *Institute of Urban Environment, Chinese Academy of Sciences*
- 8MO.9 Reductions in Airborne PAHs with a Zero Emissions Vehicle Fleet.** CYNTHIA WHALEY, Elisabeth Galarneau, Paul Makar, Wanmin Gong, Michael Moran, Craig A. Stroud, Junhua Zhang, Qiong Zheng, *Environment and Climate Change Canada*
- 8MO.10 Overview of Lake Michigan Ozone Study (LMOS 2017).** MEGAN CHRISTIANSEN, Nader Abuhassan, Jassim Al-Saadi, Timothy Bertram, Gregory Carmichael, Charles Stanier, Stephen Conley, Alan Czarnetzki, Angela F. Dickens, Marta Fuoco, Scott Janz, Laura Judd, Rob Kaleel, Donna Kenski, Matt Kowalewski, Russell Long, Dylan Millet, Brad Pierce, Stephanie L. Shaw, Elizabeth Stone, Jim Szykman, *University of Iowa*
- 8MO.11 Nitrogen Oxide Emissions Perturbation and its Effects on the WRF-Chem Forecast.** MEGAN CHRISTIANSEN, Maryam Abdioskouei, Negin Sobhani, Charles Stanier, Gregory Carmichael, Can Dong, *University of Iowa*
- 8MO.12 Comprehensive Atmospheric Modeling of Gas-phase Cyclic Volatile Methyl Siloxanes and Their Oxidation Products.** NATHAN JANECHKEK, Kaj Hansen, Charles Stanier, *University of Iowa*
- 8MO.13 Expanding the Modeling of Semivolatile Aerosols within the CMAQ Framework: Development and Application to Oxidized Cyclic Siloxanes and Polychlorinated Biphenyl Compounds.** NATHAN JANECHKEK, Scott N. Spak, Keri Hornbuckle, Charles Stanier, *University of Iowa*
- 8MO.14 Development of a CMAQ Adjoint Model with Aerosol Capabilities.** SHUNLIU ZHAO, Amir Hakami, Matt Turner, Daven Henze, Shannon Capps, Peter Percell, Jaroslav Resler, Jesse Bash, Sergey Napelenok, Kathleen Fahey, Rob Pinder, Armistead G. Russell, Athanasios Nenes, Jaemeen Baek, Gregory Carmichael, Charles Stanier, Adrian Sandu, Tianfeng Chai, Daewon Byun, *Carleton University*
- 8MO.15 Viewing Satellite-Based PM_{2.5} Data through an Urban Lens.** SARAH SERAJ, Sarah Chambliss, Joshua Apte, *University of Texas at Austin*

- 8MO.16 Evaluation of pH Biases in Chemical Transport Models and Their Role on Nitrate Substitution.** PETROS VASILAKOS, Armistead G. Russell, Athanasios Nenes, *Georgia Institute of Technology*
12:15
- 8MO.17 Simulation of an Actual Emissions Scenario with the Gaussian Plume Model.** XIANGWEI LIU, *HongX Enterprises Inc.*
12:15
- 8MO.18 The Impact of the New York Clean Energy Standard on Urban and Regional Air Quality.** JEFFREY SWARD, Danyang Guo, Kaleb Roush, Mackenzie Kinard, K. Max Zhang, *Cornell University*
12:15
- 8MO.19 Impacts of Future Climate, Emission, and Land Use Changes on Aerosols and Air Quality over the Continental U.S..** PATRICK CAMPBELL, Jesse Bash, Christopher Nolte, Tanya Spero, Ellen Cooter, Havala Pye, *U.S. EPA*
12:15
- 8MO.20 Organic Emission Profiles for Gasoline, Gas-turbine and Diesel Engines Using the Volatility Basis Set.** QUANYANG LU, Yunliang Zhao, Albert Presto, Tim Gordon, Andrew May, Allen Robinson, *Carnegie Mellon University*
12:15
- 8MO.21 Physical and Model-based Characterization of Ultrafine Particle Size Distributions, Nucleation, and Particle Growth in the Central US.** CAN DONG, Robert Bullard, Ashish Singh, Yuyan Cui, Alma Hodzic, Charles Stanier, *University of Iowa*
12:15
- 8MO.22 Effects of Near-Source Coagulation of Biomass Burning Aerosols on the Global Aerosol Size Distribution.** EMILY RAMNARINE, Jeffrey R. Pierce, *Colorado State University*
12:15
- 8MO.23 Single Particle Morphology and Phase State Analysis of Secondary Organic Aerosol Particles.** NICOLE OLSON, Rebecca Craig, Ziyang Lei, Yue Zhang, Yuzhi Chen, Amy Bondy, Jason Surratt, Andrew Ault, *University of Michigan*
12:15
- 8MO.24 Development and Assessment of an NEI-based U.S. Emissions Inventory for 1980-2015.** MARGUERITE COLASURDO MARKS, Peter Adams, Allen Robinson, *Carnegie Mellon University*
12:15

8NM NANOPARTICLES AND MATERIAL SYNTHESIS I: POSTERS

EXHIBIT HALL

- 8NM.1 Efficient Uptake of Aerosolized Nano-fertilizers by Plants as a Smart Agriculture Application.** RAMESH RALIYA, Pratim Biswas, *Washington University in St. Louis*
12:15
- 8NM.2 Sub-2 nm Particle Measurement in High-temperature Aerosol Reactor.** YANG WANG, Michel Attoui, Pratim Biswas, *Washington University in St. Louis*
12:15
- 8NM.3 On-demand Gas-to-liquid Process to Fabricate Thermoresponsive Antimicrobial Nanocomposites and Coatings.** Bijay Kumar Poudel, Jae Hong Park, JEONG HOON BYEON, *Yeungnam University*
12:15
- 8NM.4 Low Pressure Differential Mobility Analysis for Online Characterization of Silicon Nanocrystals Synthesized in a Nonthermal Plasma.** XIAOSHUANG CHEN, Jasmine Johnson, Takafumi Seto, Uwe R. Kortshagen, Christopher Hogan Jr., *University of Minnesota*
12:15
- 8NM.5 Modeling Simultaneous Coagulation and Charging of Nanoparticles at High Temperatures Using Moment Lognormal Size Distribution.** GIRISH SHARMA, Yang Wang, Rajan Chakrabarty, Pratim Biswas, *Washington University in St. Louis*
12:15
- 8NM.6 Aerosol Routes to Fabricate Stable Perovskite Solar Cells under Ambient Conditions.** SHALINEE KAVADIYA, Pratim Biswas, *Washington University in St. Louis*
12:15

8OP SYMPOSIUM: LINKING AEROSOL OXIDATIVE POTENTIAL WITH CHEMICAL COMPOSITION AND BIOLOGICAL ENDPOINTS III: POSTERS

EXHIBIT HALL

- 8OP.1 Chemical Exposure-Response Relationship Between Air Pollutants and Reactive Oxygen Species in the Human Respiratory Tract.** PASCALE LAKEY, Thomas Berkemeier, Haijie Tong, Andrea Arangio, Kurt Lucas, Ulrich Pöschl, Manabu Shiraiwa, *University of California, Irvine*
12:15

- 8OP.2 Cellular Neuroinflammatory Responses to Traffic Generated vs. Photochemically Aged Particulate Matter (PM_{2.5}).** CHRISTOPHER LOVETT, Mafalda Cacciottolo, Farimah Shirmohammadi, Constantinos Sioutas, Caleb E. Finch, Todd E. Morgan, *University of Southern California*
- 8OP.3 Oxidative Potential of Ambient Aerosol in Athens, Greece and its Dependence on Chemical Composition.** DESPINA PARASKEVOPOULOU, Aikaterini Bougiatioti, Ting Fang, Eleni Liakakou, Rodney J. Weber, Athanasios Nenes, Nikolaos Mihalopoulos, *National Observatory of Athens*
- 8OP.4 Chemical Characterization and Dithiothreitol Reactivity of Fine Particulate Matter Derived from Fourth Generation E-Cigarette Usage.** RACHEL LONG, Ilona Jaspers, Phillip Clapp, Barbara Turpin, Jason Surratt, *University of North Carolina at Chapel Hill*
- 8OP.5 Developing an Online System for Measuring the Oxidative Potential of Ambient Particles Based on Dithiothreitol (DTT) Assay.** JOSEPH PUTHUSSERY, Vishal Verma, *University of Illinois Urbana-Champaign*
- 8OP.6 Chemical and Cellular Oxidant Production Induced by Naphthalene Secondary Organic Aerosol (SOA) Formed in the Presence of Iron Sulfate.** WING-YIN TUET, Yunle Chen, Shierly Fok, Rodney J. Weber, Julie Champion, Nga Lee Ng, *Georgia Institute of Technology*
- 8OP.7 Relationship between Reactive Oxygen Species (ROS) Activity and Cytotoxicity of Ambient Particles.** YIXIANG WANG, Michael Plewa, Vishal Verma, *University of Illinois at Urbana-Champaign*
- 8OP.8 Effect of Sources and Chemical Aging on the Oxidative Potential of Organic Aerosol and Cellular Oxidative Stress.** SHUNYAO WANG, Jianhui Ye, Xiaomin Wang, Chow Chung-Wai, Arthur W. H. Chan, *University of Toronto*
- 8OP.9 Complexation State of Metals in Ambient Particulate Matter (PM) and Its Effect on the Oxidative Potential.** JINLAI WEI, Vishal Verma, *University of Illinois Urbana-Champaign, Urbana IL*
- 8OP.10 Understanding the Relationship between Aerosol Oxidative Potential, Electrophilicity, and Chemical Composition: Role of Particle-Phase Carbonyl Compounds.** JIN CHEN, Cody Cullen, Justin Dingle, Alexander Frie, Stephen Zimmerman, Justin Min, Roya Bahreini, Ying-Hsuan Lin, *University of California, Riverside*
- 8OP.11 Black Carbon Reactivity toward Antioxidant Glutathione.** KAYLEE TROTH, Juan Rodriguez, Anne Johansen, *Central Washington University*
- 8OP.12 Contribution of Open Burning of Agricultural Residues to PM_{2.5} in Suburban Tokyo: PM Mass and Oxidative Potential.** AKIHIRO FUSHIMI, Ana Villalobos, Akinori Takami, Kiyoshi Tanabe, James Schauer, *National Institute for Environmental Studies*
- 8OP.13 Pro-inflammatory Effects of PM_{2.5} from Beijing Winter Haze: Revealing the Role of Individual External and Internal Microbiome.** SHEN FANGXIA, Liu Fobang, Zhang Xiangyu, Li Jing, Ziegler Kira, Ting Zhang, Zhu Tianle, Manabu Shiraiwa, Maosheng Yao, Haijie Tong, Kurt Lucas, Ulrich Pöschl, *Beihang University*
- 8OP.14 High Oxidative Potential of Metal Oxides in Welding and Plasma Cutting Fume Aerosols.** JUN WANG, Jacob Bartels, *University of Oklahoma*

8PM SYMPOSIUM: PASSIVE MITIGATION STRATEGIES TO REDUCE EXPOSURE TO NEAR-ROAD AIR POLLUTION I: POSTERS
EXHIBIT HALL

- 8PM.1 Comparing Different VIT Formulations on Near-Road Dispersion of Particulate and Gaseous Pollutants.** 12:15 KHALED HASHAD, Bo Yang, Vlad Isakov, K. Max Zhang, *Cornell University*
- 8PM.2 Size-dependent Particle Filtration Efficiency of Stand-Alone HEPA Filters: Results From In-Home Experiments and Modeling.** 12:15 CAZ NICHOLS, Aidan McLaughlin, Jennifer Vaccaro, Scott Hersey, *Franklin W. Olin College of Engineering*

8UA URBAN AEROSOLS II: POSTERS
EXHIBIT HALL

- 8UA.1 High Resolution Air Quality Modeling in an Urban Area.** 12:15 PABLO GARCIA, Peter Adams, Spyros Pandis, *Carnegie Mellon University*

- 8UA.2 Modeling Urban Intake Fraction Gradients Using the InMAP Model.** SARAH CHAMBLISS, Christopher Tessum, Julian Marshall, Joshua Apte, *University of Texas at Austin*
12:15
- 8UA.4 Investigating the Source Dependence of Aethalometer Correction Factors Using an In-House Developed Multi-Wavelength PhotoAcoustic Spectrometer.** MÁTÉ PINTÉR, Gergely Kiss-Albert, Noémi Utry, Tibor Ajtai, Gábor Szabó, Zoltán Bozóki, *University of Szeged, Hungary*
12:15
- 8UA.5 Restaurant Impacts on Outdoor Air Quality: Elevated Organic Aerosol Mass from Restaurant Cooking with Neighborhood-scale Plume Extents.** ELLIS SHIPLEY ROBINSON, Peishi Gu, Rishabh Shah, Zhongju Li, Qing Ye, Naomi Zimmerman, Joshua Apte, Allen Robinson, Albert Presto, *Carnegie Mellon University*
12:15
- 8UA.6 Particle Size Distribution in New Delhi: Role of Coagulation and Nucleation.** SHAHZAD GANI, Sahil Bhandari, Sarah Seraj, Zainab Arub, Gazala Habib, Lea Hildebrandt Ruiz, Joshua Apte, *University of Texas at Austin*
12:15
- 8UA.7 Source Apportionment of Fine Particulate (PM_{2.5}) Air Pollution in Jeddah, Saudi Arabia.** HAIDER KHWAJA, Omar Aburizaiza, Azhar Siddique, Shedrack Nayebare, Jahanzeb Qurashi, *King Abdulaziz University*
12:15
- 8UA.8 Adsorption of Trace Atmospheric Gases by Carbon-based Aerosol Particles Dispersed from Industrial Sources.** BORIS KRASOVITOV, Tov Elperin, Andrew Fominykh, Itzhak Katra, *Ben-Gurion University of the Negev, Israel*
12:15
- 8UA.9 Diurnal and Day-to-Day Characteristics of Ambient Particle Mass Size Distributions from HR-ToF-AMS Measurements in Hong Kong.** BERTO PAUL YOK LONG LEE, Hao Wang, Chak K. Chan, *City University of Hong Kong*
12:15
- 8UA.10 A Distributed Network of Low-Cost Black Carbon Sensors to Evaluate Community Exposure to Diesel Exhaust.** CHELSEA V. PREBLE, Julien Caubel, Troy Cados, Thomas W. Kirchstetter, *University of California, Berkeley*
12:15
- 8UA.11 Spatial and Temporal Variation of PM_{2.5} and Gaseous Pollutants in Environmental Justice Communities.** REBECCA TANZER, Srinivasa Kumar, Naomi Zimmerman, Albert A. Presto, R. Subramanian, *Carnegie Mellon University*
12:15
- 8UA.12 Vertical Characteristics of Particle Number Size Distributions in the Megacity of Beijing, China.** WEI DU, Yele Sun, Jian Zhao, Yuying Wang, Yingjie Zhang, Conghui Xie, Qingqing Wang, Weiqi Xu, Wei Zhou, Tingting Han, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*
12:15
- 8UA.13 The Effect of NO gas on the Solubility of Dust-Borne Iron.** MUNKHZAYA BOLDBAATAR, Brian Majestic, *University of Denver*
12:15
- 8UA.14 Evolving Urban Emissions: Increasing Impact of Non-Combustion Secondary Organic Aerosol Precursor Sources on Urban Air Quality.** PEEYUSH KHARE, Drew Gentner, *Yale University*
12:15
- 8UA.15 Air Quality, Infrastructure, and Well-Being: Are They Linked?** RAJ LAL, Armistead G. Russell, Anu Ramaswami, Kirti Das, Yingling Fan, *Georgia Institute of Technology*
12:15
- 8UA.18 Characteristics and Formation Mechanism of Severe Winter Hazes in Beijing.** TAO MA, Fengkui Duan, Kebin He, *Tsinghua University*
12:15
- 8UA.19 Predicting the Spatial Variability of PM in Urban Areas with Low-Cost Monitors and Land Use Regression Modelling.** MAURO MASIOL, Nadezda Zikova, Gursumeeran Satsangi, Philip K Hopke, David C. Chalupa, David Rich, Andrea R. Ferro, *Clarkson University*
12:15
- 8UA.20 Trace Metals in Aging Urban Particulate Matter.** JOSEPH SALAZAR, David Pfothenauer, Frank Leresche, Fernando Rosario-Ortiz, Michael Hannigan, Brian Majestic, *University of Denver*
12:15
- 8UA.21 Effects of Meteorology Changes on Reduction of Air Pollutants Concentrations.** Pengfei Wang, Sri Kota, Jianlin Hu, Qi Ying, HONGLIANG ZHANG, *Louisiana State University*
12:15
- 8UA.22 Identification of the Main Contributors Producing Nitrosamines in the Atmosphere at Seoul, Republic of Korea.** NARAE CHOI, Yun Gyong Ahn, Hyung Bae Lim, Ji Yi Lee, Yong Pyo Kim, *Ewha Womans University*
12:15
- 8UA.23 Using Low-Cost Sensors to Probe Changes in Urban Aerosol on a Neighborhood Scale.** KAITLYN LIESCHKE, Alexis Shusterman, Catherine Newman, Jinsol Kim, Ronald Cohen, *UC Berkeley*
12:15
- 8UA.24 Characterizing Aerosols Near Major Highways Using the US EPA's National Near-road Monitoring Network.** BRETT GANTT, *U.S. EPA*
12:15

- 8UA.25 Reduced New Particle Formation in Urban Air due to Anthropogenic Emissions Reductions.** PROVAT SAHA, 12:15 Ellis Shipley Robinson, Rishabh Shah, Naomi Zimmerman, Joshua Apte, Albert Presto, Allen Robinson, *Carnegie Mellon University*
- 8UA.26 Using High Complexity Analysis to Probe the Evolution of Organic Aerosol during Pollution Events in Beijing.** JACQUELINE F. HAMILTON, William Dixon, Rachel E. Dunmore, Freya Squires, Stefan Swift, James D. Lee, Andrew R. Rickard, Yele Sun, Weiqi Xu, *University of York*

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

9AC AEROSOL CHEMISTRY VII - SECONDARY ORGANIC AEROSOLS
305 A

Jennifer Faust and Bryan Bzdek, chairs

- 9AC.1 Properties of Secondary Organic Aerosols Formed in the Oxidation of Alfa-pinene at Different Temperatures.** 1:45 Kasper Kristensene, Louise Normann Jensen, Marianne Glasius, MERETE BILDE, *Aarhus University*
- 9AC.2 Quantifying Oligomerization in Organic Aerosol through Desorption Thermogram Modeling.** SIEGFRIED 2:00 SCHOBESBERGER, Felipe Lopez-Hilfiker, Emma L. D'Ambro, Olli-Pekka Tikkanen, Joel A. Thornton, *University of Eastern Finland*
- 9AC.3 High Molecular Weight Dimeric Products from α -pinene Oxidation: Molecular Composition, Formation Mechanisms, and Implications for Particle Formation and Growth.** YUE ZHAO, Emma L. D'Ambro, Megan McKeown, Jiumeng Liu, John Shilling, Joel A. Thornton, *University of Washington, Seattle, WA*
- 9AC.4 Synergistic O₃ + OH Oxidation Pathway to High Molecular Weight, Extremely Low-Volatility Organic Compounds Revealed in Beta-Pinene Secondary Organic Aerosol.** CHRISTOPHER KENSETH, Yuanlong Huang, Ran Zhao, Nathan Dalleska, Caleb Hethcox, Brian Stoltz, John Seinfeld, *California Institute of Technology*
- 9AC.5 Reduced Nitrogen Organic Species Partitioning to Aerosol in the Indoor Environment.** PETER DECARLO, Anita 2:45 Avery, Michael Waring, *Drexel University*
- 9AC.6 Characterization of Primary and Secondary Organic Aerosol using a Novel Extractive Electrospray Ionization Time-of-Flight Mass Spectrometer (EESI-TOF) from Chamber Studies.** Bin Yuan, Giulia Stafenelli, Imad El Haddad, Veronika Pospisilova, Felipe Lopez-Hilfiker, Liwei Wang, Mao Xiao, Yandong Tong, Lu Qi, Sepideh Esmailirad, Simone Pieber, Josef Dommen, Urs Baltensperger, Andre S.H. Prévôt, JAY G. SLOWIK, *Paul Scherrer Institute*
- 9AC.7 Particle-phase Organic Peroxides; Where Are You?** RAN ZHAO, Christopher Kenseth, Yuanlong Huang, John 3:15 Seinfeld, *California Institute of Technology*
- 9AC.8 Direct Measurement of Size Resolved Aerosol Acidity.** REBECCA CRAIG, Peter Peterson, Ryan Dodson, Andrew 3:30 Ault, *University of Michigan*

9CS COMBUSTION III & SYMPOSIUM: PASSIVE MITIGATION STRATEGIES TO REDUCE EXPOSURE TO NEAR-ROAD AIR POLLUTION
II
305 B

Khaled Hashad and Panu Karjalainen, chairs

- 9CS.1 Take-Off Engine Particle Emission Indices for In-Service Aircraft at Los Angeles International Airport.** 1:45 RICHARD MOORE, Michael Shook, Luke Ziemba, Josh DiGangi, Edward Winstead, Bastian Rauch, Jurkat Tina, Kenneth Thornhill, Ewan Crosbie, Claire Robinson, Taylor Shingler, Bruce Anderson, *NASA Langley*
- 9CS.2 Secondary Aerosol Forming Potential of Gasoline Direct Injection Vehicles with Varying After-Treatment Technologies.** PATRICK ROTH, Jiacheng Yang, Diep Vu, Thomas D. Durbin, Georgios Karavalakis, Akua Asa-Awuku, *University of California, Riverside*

- 9CS.3 Impact of Exhaust Aftertreatment on Primary and Secondary Particulate Emissions of a Non-Road Diesel Engine.** PANU KARJALAINEN, Leonidas Ntziachristos, Pauli Simonen, Kimmo Teinilä, Hilka Timonen, Henna Saveljeff, Mika Lauren, Matti Happonen, Pekka Matilainen, Teuvo Maunula, Jukka Nuottimäki, Topi Rönkkö, Jorma Keskinen, *Tampere University of Technology*
2:15
- 9CS.4 The Effects of Aggressive Drive Cycles on the Characteristics and Measurement of GDI Vehicle PM Emissions.** MATTI MARICQ, Joseph Szente, Amy Harwell, Michael Loos, *Ford Motor Company*
2:30
- 9CS.5 Passive Control Systems for Improving Air Quality in Urban Street Canyons: The Origins, Current State of Art and Next Steps.** JOHN GALLAGHER, Brian Broderick, Prashant Kumar, Aonghus McNabola, Francesco Pilla, *Trinity College Dublin*. INVITED.
2:45
- 9CS.6 Effectiveness of Road-side Vegetation and Noise Barriers on Reducing Ultrafine and Fine Particulate Matters under Variable Wind Speeds.** Eon Lee, Dilhara Ranasinghe, Faraz Enayati Ahangar, Seyedmorteza Amini, Steve Mara, Wonsik Choi, Suzanne Paulson, YIFANG ZHU, *University of California Los Angeles*
3:00
- 9CS.7 Effectiveness of Sound Wall-Vegetation Combination Barriers as Near-Roadway Pollutant Mitigation Strategies.** DILHARA RANASINGHE, Isis Frausto-Vicencio, Wonsik Choi, Eon Lee, Yifang Zhu, Faraz Enayati Ahangar, Akula Venkatram, Seyedmorteza Amini, Steve Mara, Suzanne Paulson, *University of California Los Angeles*. INVITED.
3:15
- 9CS.8 Optimizing Urban Green Designs to Mitigate Traffic-Related Air Pollution.** KHALED HASHAD, Bo Yang, K. Max Zhang, *Cornell University*
3:30

9HA HEALTH RELATED AEROSOLS II

306 A

Roby Greenwald and Vishal Verma, chairs

- 9HA.1 Particle Size Characterization of a 4th Generation Electronic Cigarette Under Physiological Conditions.** LANDON HOLBROOK, Elizabeth Monaghan, Chris Jadelis, Kirby Zeman, Robert Tarran, Ilona Jaspers, William Bennett, *University of North Carolina at Chapel Hill*
1:45
- 9HA.2 Aerosol Emission during Human Speech.** SIMA ASADI, Anthony Wexler, Christopher Cappa, Nicole M. Bouvier, Santiago Barreda-Castanon, William D. Ristenpart, *University of California Davis*
2:00
- 9HA.3 A Novel Nanofiber Nasal Filter for Improved Respiratory Health.** TAEWON HAN, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
2:15
- 9HA.4 Particulate Exposures in Asthmatic Kids (PEAK): Differences between Ultrafine and Fine Particle Exposures in Baltimore, USA.** KIRSTEN KOEHLER, Ehsan Majd, McCormack Meredith, Hansel Nadia, *Johns Hopkins School of Public Health*
2:30
- 9HA.5 Estimating Personal Exposure to Particulate Matter Using a Low-Cost Wireless Sensor Network and Indoor Positioning System.** CHRISTOPHER ZUIDEMA, Thomas Peters, Geb Thomas, Kirsten Koehler, *Johns Hopkins School of Public Health*
2:45
- 9HA.6 Estimates of the Annual U.S. Mortality Burden Attributable to Fine Particulate Matter Exposure in Indoor and Outdoor Microenvironments.** PARHAM AZIMI, Brent Stephens, *Illinois Institute of Technology*
3:00
- 9HA.7 Source Contributions to Premature Mortality Attributable to Particulate Matter in India.** HAO GUO, Sri Kota, Shovan Sahu, Jianlin Hu, Qi Ying, Hongliang Zhang, *Louisiana State University*
3:15
- 9HA.8 The Oxidative Potential of Particulate Matter from Residential Coal Combustion in China.** XIAOYING LI, Jianzhong Sun, Caiqing Yan, Guorui Zhi, Yingjun Chen, Shexia Ma, Mei Zheng, *Peking University*
3:30

9IM INSTRUMENTATION AND METHODS VIII - IN SITU METHODS

306 B

Andrew Metcalf and Jose Jimenez, chairs

- 9IM.1 Direct Measurements of Gas/Particle Partitioning and Mass Accommodation Coefficients in Environmental Chambers.** JORDAN KRECHMER, Xiaoxi Liu, Douglas Day, Paul Ziemann, Jose-Luis Jimenez, *University of Colorado*,
1:45

- 9IM.2 In-situ Nanoparticle Characterization at Ambient Pressure by Small Angle X-Ray Scattering (SAXS).** PAULUS S. BAUER, Heinz Amenitsch, Paul M. Winkler, *Universitaet Wien, Vienna, Austria*
2:00
- 9IM.3 Freezing of Aerosol Liquid Mimics in a Microfluidic Device.** ANDREW METCALF, Christopher Hogan Jr., Cari Dutcher, *University of Minnesota, Twin Cities*
2:15
- 9IM.4 Exploring Interfacial Reactions on Ammonium Sulfate Particles Using a Novel Atmospheric Cloud Simulation Chamber.** CECILIA SMITH, Angela Ziegler, Matthew Brown, Erin M. Durke, Suresh Dhaniyala, John Morris, *Virginia Tech*
2:30
- 9IM.5 Laboratory Measurements of Total Suspended Organic Carbon: Technique Development and Application to Chamber SOA Photo-Oxidation Experiments.** JOSHUA MOSS, Jesse Kroll, Stephen Duncan, *MIT*
2:45
- 9IM.6 Experimental Evaluation of a Wearable, Bluetooth Enabled, Direct- Reading MEMS PM2.5 Mass Sensor.** DORSA FAHIMI, Omid Mahdavi-pour, John Sabino, Lisa Soderlind, Nobuhiko Fukushima, Hide Nagai, Richard White, Igor Paprotny, *University of Illinois at Chicago*
3:00
- 9IM.7 Oxidation Flow Reactors: Best Practices for Operation and Analysis, and Overview of Results from Ambient Studies.** JOSE-LUIS JIMENEZ, Zhe Peng, Brett Palm, Weiwei Hu, Amber Ortega, Douglas Day, *University of Colorado-Boulder*
3:15
- 9IM.8 Optical Characterization of the Low-Cost Sensor and Its Application with Robots.** JIAYU LI, Pratim Biswas, *Washington University in St Louis*
3:30

9MO SYMPOSIUM: REGIONAL AND GLOBAL AIR QUALITY AND CLIMATE MODELING III - MODELS AND MEASUREMENTS
301 A

Colette Heald and Shannon Koplitz, chairs

- 9MO.1 Advancing Understanding of Aerosols: The Intersection of Models and Observations.** COLETTE HEALD, *MIT*.
1:45 INVITED.
- 9MO.2 Modelling of SOA Markers: Simulation Through Detailed Mechanisms and Validation by Comparison with Measurements. A New Approach to Understand SOA Formation.** GRAZIA-MARIA LANZAFAME, Deepchandra Srivastava, Nicolas Bonnaire, Florian Couvidat, Olivier Favez, Bertrand Bessagnet, Alexandre Albinet, *INERIS*
2:00
- 9MO.3 Evaluating Models of Secondary Organic Aerosols Produced from the Athabasca Oil Sands.** JACOB SOMMERS, Craig A. Stroud, John Liggi, Junhua Zhang, Ayodeji Akingunola, Katherine Hayden, Shao-Meng Li, Peter Liu, Jason O'Brien, Richard Mittermeier, Daniel Wang, Mengistu Wolde, Patrick Hayes, *Université de Montréal*
2:15
- 9MO.4 Sources of Ambient Ammonia in the Athabasca Oil Sands and North-Western Canada.** CYNTHIA WHALEY, Paul Makar, Mark Shephard, Leiming Zhang, Michael Moran, Junhua Zhang, Qiong Zheng, Ayodeji Akingunola, Greg Wentworth, Jennifer Murphy, *Environment and Climate Change Canada*
2:30
- 9MO.5 Modeling NH4NO3 in the San Joaquin Valley during the 2013 DISCOVER-AQ Field Campaign.** JAMES KELLY, John Nowak, David Miller, Kang Sun, Mark Zondlo, Caroline Parworth, Qi Zhang, Andrew Weinheimer, Sally Pusede, Ronald Cohen, Gail Tonnesen, Luke Valin, Jesse Bash, Kirk Baker, James Crawford, *US EPA*
2:45
- 9MO.6 On the Sensitivity of Fine Particle Nitrate to Ambient Ammonia Concentrations Assessed through a Detailed pH Analyses.** HONGYU GUO, Athanasios Nenes, Rodney J. Weber, *Georgia Institute of Technology*
3:00
- 9MO.7 Comparison of Model Simulated Ammonia with Observations: A Case for Implementation of Improved Gas/Aerosol Partitioning Schemes.** ARSHAD NAIR, Gan Luo, Fangqun Yu, *University at Albany*
3:15
- 9MO.8 Investigating the Role of Aromatic Compounds on Anthropogenic Secondary Organic Aerosol in Urban Environments.** ALI AKHERATI, Christopher Cappa, Michael Kleeman, Shantanu Jathar, *Colorado State University*
3:30

9UA URBAN AEROSOLS III
301 B

Haofei Zhang and Ben Murphy, chairs

- 9UA.1 Reactive Uptake of Ammonia by Secondary Organic Aerosols: Implications for Air Quality.** JEREMY HORNE, 1:45 Shupeng Zhu, Julia Montoya, Mallory Hinks, Sergey Nizkorodov, Donald Dabdub, *University of California, Irvine*
- 9UA.2 Development of Novel Model Fusion Method for Simulating Spatially Resolved (250-m) Air Pollutant Concentration Estimates.** JOSEPHINE BATES, 2:00 Audrey Pennington, Xinxin Zhai, Mariel Friberg, Francesc Metcalf, Matthew Strickland, Lyndsey Darrow, James Mulholland, Armistead G. Russell, *Georgia Institute of Technology*
- 9UA.3 An Improved Hybrid Modeling Framework for Estimation of Human Exposure to Near Roadway Air Pollution.** 2:15 Fatema Parvez, KRISTINA WAGSTROM, *University of Connecticut*
- 9UA.4 Investigating the Influence of Photocatalytic Cool Wall Adoption on Meteorology and Air Quality in the Los Angeles Basin.** Jiachen Zhang, Xiaochen Tang, Ronnen Levinson, Hugo Destailats, GEORGE BAN-WEISS, 2:30 *University of Southern California*
- 9UA.5 Washoff of Dry Deposited Atmospheric Aerosol from a Traditional Roof and a Green Roof.** ALEXANDER 2:45 JOHNSON, Cliff Davidson, *Syracuse University*
- 9UA.6 Sources and Dynamics of the Submicron Aerosol in Delhi, India: Overview of the 2017 Delhi Aerosol Supersite Campaign.** Joshua Apte, Shahzad Gani, Sahil Bhandari, Sarah Seraj, Dongyu S. Wang, Zainab Arub, Gazala 3:00 Habib, LEA HILDEBRANDT RUIZ, *University of Texas at Austin*
- 9UA.7 Dynamics of Nanoparticle Size Distribution in a Boundary Layer by an Airborne and Ground Measurements.** 3:15 JAN HOVORKA, Nikola Kuzelova, Cecilia Leoni, Jan Bendl, Oliver F. Bischof, *Charles University in Prague*
- 9UA.8 Active Remote Sensing of Air Quality: Comparison of In Situ Measurements and Lidar-Based Retrievals of Aerosol Volume Concentration During DISCOVER-AQ.** PATRICIA SAWAMURA, Richard Moore, Sharon P. Burton, 3:30 Eduard Chemyakin, Detlef Müller, Alexei Kolgotin, Richard Ferrare, Chris Hostetler, Luke Ziemba, Andreas Beyersdorf, Bruce Anderson, *NASA Langley Research Center*

Thursday 3:50 PM - 6:30 PM
EPA Site Visit

Friday

Friday 8:00 AM - 9:15 AM
Plenary IV

- 8:00 **Friedlander Lecture: Toward a Greater Understanding of the Chemistry and Impacts of Mineral Dust and Sea Spray Aerosols.** VICKI GRASSIAN, *University of California San Diego*
- Moderator** Sonia Kreidenweis, *Colorado State University Fort Collins*
- 9:00 **Friedlander Dissertation Award Presentation** Donald Dabdub, *University of California Irvine*
- Student Poster Competition Awards Presentation** Alex Huffman and Andrew Grieshop, *University of Denver and North Carolina State University*
- 9:10 **Concluding Remarks and Preview for 2018** Nicole Riemer and Pratim Biswas, *University of Illinois at Urbana-Champaign and Washington University St. Louis*

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

Friday 9:45 AM - 11:00 AM
Session 10: Platform

10AC AEROSOL CHEMISTRY VIII - SECONDARY ORGANIC AEROSOLS

305 A

Manabu Shiraiwa and Andrew Ault, chairs

- 10AC.1 Monoterpene Oxidation Products Dominate Organic Aerosol Mass in Centreville, Alabama during the SOAS Field Campaign.** HAOFEI ZHANG, Lindsay Yee, Ben Lee, Michael Curtis, Dave Worton, Gabriel Isaacman-VanWertz, Claudia Mohr, Felipe Lopez-Hilfiker, John Offenberg, Michael Lewandowski, Tad Kleindienst, Melinda Beaver, Amara Holder, William Lonneman, Kenneth Docherty, Mohammed Jaoui, Havala Pye, Weiwei Hu, Douglas Day, Pedro Campuzano-Jost, Jose-Luis Jimenez, Joel A. Thornton, Allen H. Goldstein, *University of California, Berkeley*
9:45
- 10AC.2 Reaction of Criegee Intermediates with Organic Acids in the Condensed Phase.** SHOUMING ZHOU, Shira Joudan, Matthew Forbes, Jonathan Abbatt, *University of Toronto, Toronto, Canada*
10:00
- 10AC.3 Secondary Organic Aerosol and Ozone Formation from Photo-Oxidation of Unburned Whole Gasoline and Diesel in a Surrogate Atmospheric Environment.** WEIHUA LI, Chia-Li Chen, Lijie Li, Mary Kacarab, David R. Cocker III, *University of California, Riverside*
10:15
- 10AC.4 Investigation of Biogenic Influences and Day/Night Chemistry on Secondary Organic Aerosol by Extractive Electro spray Ionization Time-Of-Flight Mass Spectrometry (EESI-TOF).** GIULIA STEFENELLI, Felipe Lopez-Hilfiker, Veronika Pospisilova, Alexander Lucas Vogel, Christoph Hueglin, Martin Rigler, Urs Baltensperger, Andre S.H. Prévôt, Jay G. Slowik, *Paul Scherrer Institute*
10:30
- 10AC.5 Measurements of Particulate Chloride Using the FIGAERO-CIMS and ACSM.** DONGYU S. WANG, Lea Hildebrandt Ruiz, *University of Texas at Austin*
10:45
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10ET SYMPOSIUM: EXTRATERRESTRIAL AEROSOLS: FROM MARS TO TITAN AND BEYOND II

305 B

Dan Czico and Alexandria Johnson, chairs

- 10ET.1 Stable Isotope Fractionation in Titan Aerosol Formation.** MELISSA TRAINER, Jennifer Stern, Melissa Ugelow, Thomas Gautier, Joshua Sebree, *NASA Goddard Space Flight Center*
9:45
- 10ET.2 Chemical Characteristics of Haze Particles Generated from the VUV Photolysis of C2 Hydrocarbons Under Oxygen-Free Conditions.** JONATHAN FRANKLIN, Jesse Kroll, *MIT*
10:00
- 10ET.3 Generation of Abiotic Molecular Complexity at Aerosol Air-Water Interfaces.** VERONICA VAIDA, Rebecca Rapf, *University of Colorado Boulder*
10:15
- 10ET.4 Chemical Composition of Ions During Laboratory Simulations of Titan's Haze Formation.** JENNIFER BERRY, Melissa Ugelow, Margaret Tolbert, Eleanor Browne, *University of Colorado, Boulder*
10:30
- 10ET.5 A Study of Exoplanet Aerosols by Earth Means.** ALEXANDRIA JOHNSON, Tajana Safran, Amy Bauer, Daniel Czico, *MIT*
10:45
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10HA HEALTH RELATED AEROSOLS III

306 A

Lupita Montoya and Paige Presler-Jur, chairs

- 10HA.1 Acellular Sources of Reactive Oxygen Species (ROS): Links between In Situ Ambient and Laboratory Quantifications of Different Emission Sources.** JUN ZHOU, Miriam Elser, Manuel Krapf, Roman Fröhlich, Deepika Bhattu, Giulia Stefenelli, Peter Zotter, Emily Bruns, Simone Pieber, Haiyan Ni, Qiyuan Wang, Yichen Wang, Jay G. Slowik, Thomas Nussbaumer, Marianne Geiser, Andre S.H. Prévôt, Urs Baltensperger, Imad EI Haddad, Rujin Huang, Josef Dommen, *Paul Scherrer Institute*
9:45

- 10HA.2 Analysis of Oxidative Potential and Chemical Composition of Fine Particulate Matter in Bucaramanga, Colombia.** KENTO MAGARA-GOMEZ, Victor Herrera-Galindo, Laura Rodriguez-Villamizar, Yurley Diaz-Ferreira, Maria Rondon-Villabona, *Universidad Pontificia Bolivariana-Bucaramanga*
- 10:00
- 10HA.3 Ambient PM2.5 in South Korea and Philippines: Oxidative Potential, Chemical Characteristics, and Source Apportionment.** LUCILLE JOANNA BORLAZA, Enrique Cosep, Sejong Kim, Kwangyul Lee, HungSoo Joo, Daphne Bate, Jinsang Jung, Mylene Cayetano, Kihong Park, *Gwangju Institute of Science and Technology*
- 10:15
- 10HA.4 Murine Precision-cut Lung Slices Exhibit Acute Responses Following Exposure to Gasoline Direct Injection Engine Emissions.** CAITLIN MAIKAWA, Naomi Zimmerman, Khaled Rais, Mittal Shah, Brie Hawley, Pallavi Pant, Cheol H. Jeong, Juana Delgado-Saborit, John Volckens, Greg J. Evans, James S. Wallace, Krystal Godri Pollitt, *University of Massachusetts Amherst*
- 10:30
- 10HA.5 Investigation of Combustion Aerosol Toxicity within the HICE-Project: Chemical Composition of Different Combustion-Emissions and Their Molecular Biological Effects on Air/Liquid-Interface Exposed Lung Cells (In-Vitro) as Well as on Exposed Mice (In-Vivo).** RALF ZIMMERMANN, Gunnar Dittmar, Tamara Kanashova, Jeroen Buters, Sebastian Öder, Hanns Paur, Marco Dilger, Carsten Weiss, Bert Buchholz, Benjamin Stengel, Karsten Hiller, Sean Sapcaru, Kelly BeruBe, Tobias Krebs, Thorsten Streibel, Jürgen Schnelle-Kreis, Martin Sklorz, Johannes Passig, Jürgen Orasche, Pasi Jalava, Mikko Happonen, Maija-Riitta Hirvonen, Olli Sippula, Jorma Jokiniemi, HICE Consortium, *Helmholtz Zentrum München and Rostock University*
- 10:45

10IM INSTRUMENTATION AND METHODS IX - COMPACT/AUTONOMOUS METHODS

306 B

Fan Mei and Audrey Dang, chairs

- 10IM.1 Characterization of Miniaturized Aerosol Spectrometer for Unmanned Aerial System Application.** FAN MEI, Hagen Telg, Gavin McMeeking, Tim Gordon, Joree Sandin, Mikhail Pekour, *Pacific Northwest National Laboratory*
- 9:45
- 10IM.2 Autonomous, UAV-based Sampling of NOx, O3, CO, and PM: Collaborative Innovation Between Olin College Undergraduates and Aerodyne Research Inc.** ROCCO DIVERDI, Taylor Sheneman, Kyle Flores, Riley Chapman, Pratul Gadtula, Cynthia Chen, Maximilian Schommer, John Jayne, Eben Cross, Scott Hersey, *Franklin W. Olin College of Engineering*
- 10:00
- 10IM.3 Chemical Speciation of Biomass Burning Aerosol Collected above and below the Forest Canopy with an Unmanned Aerial Vehicle during Prescribed Fires.** AUDREY DANG, Michael Walker, Claire Fortenberry, Christopher Oxford, Benjamin Sumlin, Jiayu Li, Jonathan Myers, Brent Williams, *Washington University in St. Louis*
- 10:15
- 10IM.4 Development and Evaluation of MEMS Air-Microfluidic Particle Focusing Systems.** OMID MAHDAVIPOUR, Dorsa Fahimi, Apoorva Jain, Igor Paprotny, *University of Illinois at Chicago*
- 10:30
- 10IM.5 Development and Field Test of a Compact Diluter and Optical Particle Counter for Emissions Measurements.** AMARA HOLDER, Brannon Seay, William Mitchell, Johanna Aurell, Brian Gullett, *U.S. EPA*
- 10:45

10MO SYMPOSIUM: REGIONAL AND GLOBAL AIR QUALITY AND CLIMATE MODELING IV - EVOLUTION OF THE AEROSOL SIZE DISTRIBUTION

301 A

Serena Chung and Yu Morino, chairs

- 10MO.1 Processes Controlling Aerosol Size Distributions and Climate Effects in the Arctic.** JEFFREY R. PIERCE, Betty Croft, Jonathan Abbatt, Allan Bertram, Julia Burkart, Sarah Hanna, Anna Hodshire, John Kodros, W. Richard Leitch, Randall V. Martin, Emma Mungall, Benjamin Murphy, Jennifer Murphy, Greg Wentworth, *Colorado State University*. INVITED.
- 9:45
- 10MO.2 Nucleation and Growth Under High Oh Conditions: Using an Oxidation Flow Reactor and the Tomas Box Model to Learn About Chemistry, Nucleation, and Growth Potential of Ambient Pine-Forest Air.** ANNA HODSHIRE, Brett Palm, Jose-Luis Jimenez, Qijing Bian, Jeffrey R. Pierce, Pedro Campuzano-Jost, Douglas Day, Zhe Peng, Amber Ortega, James Hunter, Eben Cross, Jesse Kroll, Lisa Kaser, Werner Jud, Thomas Karl, Armin Hansel, *Colorado State University*
- 10:00

- 10MO.3 Enhanced Characterization of Particle Size Distribution in the Community Multiscale Air Quality Model (CMAQ): A Case Study of Commercial Aircraft Emissions.** HUANG JIAOYAN, Lakshmi Pradeepa Vennam, Benjamin Murphy, Francis Binkowski, Saravanan Arunachalam, *University of North Carolina, Chapel Hill*
10:15
- 10MO.4 A Stability-based Inverse Model Applied to the General Dynamic Equation.** DANA MCGUFFIN, Peter Adams, Erik B. Ydstie, *Carnegie Mellon University*
10:30
- 10MO.5 Quantifying the Contribution of Primary and Secondary Emissions to Ultrafine Particle Contributions in the United States with the Regional Chemical Transport Model.** BENJAMIN MURPHY, Francis Binkowski, Ekbordin Winijkul, Tinja Olenius, Ilona Riipinen, Matthew Alvarado, Matthew Woody, Havala Pye, *United States Environmental Protection Agency*
10:45

10UA URBAN AEROSOLS IV

301 B

Arthur Chan and Kristina Wagstrom, chairs

- 10UA.1 Understanding of the Chemical Processes Involving Nitro- and Oxy-PAHs in Ambient Air and Evaluation of SOA PAH Contribution on PM via Annual and Intensive Field Campaigns.** ALEXANDRE ALBINET, Sophie Tomaz, Deepchandra Srivastava, Grazia-Maria Lanzafame, Olivier Favez, Clément Bret, Jean-Luc Jaffrezo, Jean-Luc Besombes, Nicolas Bonnaire, Valérie Gros, Laurent Alleman, Franco Lucarelli, Emilie Perraudin, Eric Villenave, *INERIS*
9:45
- 10UA.2 Size-Resolved Ultrafine Particle Concentrations near Busy Roadways: A Decade of Diameter Data.** NATHAN HILKER, Cheol H. Jeong, Jon M. Wang, Kelly Sabaliauskas, Greg J. Evans, *SOCAAR, University of Toronto*
10:00
- 10UA.3 Seasonal Variations and Possible Sources of Atmospheric HULIS in Urban Beijing, China.** Xinghua Li, Junzan Han, Qing Chang, PHILIP K HOPKE, *Beihang University, Beijing China*
10:15
- 10UA.4 Optical Properties of Aerosol at Different Altitude in Beijing: Based on Measurements at Ground Level and 260 m during 2016 Winter.** CONGHUI XIE, Wei Du, Wei Zhou, Jian Zhao, Yingjie Zhang, Weiqi Xu, Qingqing Wang, Tingting Han, Junwang Wang, Yele Sun, *IAP*
10:30
- 10UA.5 Size-resolved Measurements of Water and Methanol-extracted Brown Carbon in Beijing.** ZHENYU DU, Yuan Cheng, Jiumeng Liu, Shuping Dong, Ting Zhang, Yuwu Li, *CNEAC, China*
10:45

Friday 11:15 AM - 12:30 PM

Session 11: Platform

11AC AEROSOL CHEMISTRY IX - PARTICLE PHASE STATE

305 A

Haofei Zhang and Giulia Stefanelli, chairs

- 11AC.1 The Importance of Particle History When Exploring Particle Phase, Viscosity, and Structure within Individual Organic-Inorganic Mixed Particles Using Microscopy and Spectroscopy.** ANDREW AULT, Amy Bondy, Rebecca Craig, Sydney Niles, Nicole Olson, *University of Michigan*
11:15
- 11AC.2 Global Distribution of Particle Phase State in Atmospheric Secondary Organic Aerosols.** MANABU SHIRAIWA, Ying Li, Alexandra Tsimpidi, Vlassis Karydis, Thomas Berkemeier, Spyros Pandis, Jos Lelieveld, Thomas Koop, Ulrich Pöschl, *University of California, Irvine*
11:30
- 11AC.3 Formation and Properties of Secondary Organic Aerosol Particles Generated by Ozonolysis of β -Caryophyllene with and without the Presence of Gas-phase Pyrene.** David Bell, Kaitlyn J. Suski, Dan Imre, ALLA ZELENYUK, *Pacific Northwest National Laboratory*
11:45
- 11AC.4 Diel Variations in the Phase State of Atmospheric Aerosol in a Mixed Forest: The Role of Molecular Composition and Liquid Water.** JONATHAN SLADE, Alexander Bui, Ryan Cook, Amy Bondy, Sarah Desrochers, Rebecca Harvey, Jenna Ditto, Drew Gentner, Kerri Pratt, Andrew Ault, Robert Griffin, Brandon E. Boor, Giuseppe Petrucci, Paul Shepson, *Purdue University*
12:00

11AC.5 Probing the Microphysical Properties of Single Secondary Organic Aerosol Particles. GRAZIA ROVELLI, Young-Chul Song, Kelly Pereira, Jacqueline F. Hamilton, David Topping, Jonathan P. Reid, *University of Bristol*

11HA HEALTH RELATED AEROSOLS IV

305 B

Kerry Kelly and Nick Good, chairs

11HA.1 Critical Evaluation of Air-Liquid Interface Cell Exposure Systems for in Vitro Assessment of Atmospheric Pollutants. JOSE ZAVALA, Mark Higuchi, *EPHD, NHEERL, U.S. EPA*

11HA.2 Recommendations for Reducing CFD Model Variability and Matching Experimental Data When Simulating Microparticle Deposition with Two-Equation Turbulence Models. KARL BASS, Worth Longest, *Virginia Commonwealth University*

11HA.3 Quantifying Inter-individual Variability in Nasal Filtration of Nebulized Micron-sized Particles as a Function of Nasal Anatomy using Computational Fluid Dynamics. Azadeh Borojeni, John Rhee, GUILHERME GARCIA, *Medical College of Wisconsin*

11HA.4 Progress in the Development of a Complete-Airway Computational Fluid Dynamics (CFD) Model for Pharmaceutical Aerosols. WORTH LONGEST, *Virginia Commonwealth University*

11HA.5 Multi-component Droplet-Vapor Interaction in a Realistic Human Whole-Lung Airway Model. ARUN V KOLANJIYIL, Clement Kleinstreuer, *North Carolina State University*

11IM INSTRUMENTATION AND METHODS X - SAMPLER AND SENSORS

306 A

Gabriel Isaacman-VanWertz and Sukrant Dhawan, chairs

11IM.1 A New Electrical Particulate Matter Sensor (eM Sensor). DI LIU, Da-Ren Chen, *Virginia Commonwealth University*

11IM.2 Implications for the Sampling System in Extending Automotive Particle Regulations Below 23 nm. First Results of the DownToTen Project. PANU KARJALAINEN, Jorma Keskinen, Markus Bainschab, Alexander Bergmann, Athanasios Mamakos, Jonathan Andersson, Barouch Giechaskiel, Leonidas Ntziachristos, Zissis Samaras, *Tampere University of Technology*

11IM.3 Efficient and Improved Processing of Chromatographic Data Using Peak Fitting and Deconvolution. GABRIEL ISAACMAN-VANWERTZ, Donna Sueper, Brian Lerner, Kenneth Aikin, Jessica Gilman, Joost de Gouw, Douglas Worsnop, Allen H. Goldstein, *Virginia Tech*

11IM.4 Evaluation of Sampling Artifacts in Phase Partitioning Measurements of Semi-Volatile Organic Compounds in Denuders. SUKRANT DHAWAN, Pratim Biswas, *Washington University in St Louis*

11IM.5 A Miniature Ionic Wind Electrostatic Collector for Ultrafine Particles. RAVI SANKAR VADDI, Yifei Guan, Igor Novosselov, *University of Washington*

11MO SYMPOSIUM: REGIONAL AND GLOBAL AIR QUALITY AND CLIMATE MODELING V - RADIATIVE EFFECTS AND FEEDBACK ON METEOROLOGY

306 B

Havala Pye and Patrick Campbell, chairs

11MO.1 Towards a Fuller Understanding of the Benefits of Aerosol Reductions. DREW SHINDELL, *Duke University*. INVITED.

- 11MO.2 Effects of Aerosol Direct Feedback Effects on Surface Ozone and PM_{2.5} in Continental USA in 2005 by a Two-Way Coupled WRF-CMAQ Model.** CHOWDHURY MONIRUZZAMAN, Jared Bowden, Saravanan Arunachalam, *University of North Carolina, Chapel Hill*
11:30
- 11MO.3 Large Reductions in Solar Energy Production Due to Dust and Air Pollution.** MICHAEL BERGIN, Chinmay Ghoroi, Deepa Dixit, James Schauer, Drew Shindell, *Duke University*
11:45
- 11MO.4 Impacts of New Particle Formation on Short-term Midwestern Meteorology and Air Quality as Determined by the NPF-explicit WRF-Chem.** CAN DONG, Hitoshi Matsui, Scott N. Spak, Charles Stanier, *University of Iowa*
12:00
- 11MO.5 Simulating the Evolution and Sources of Organic Aerosols Observed during the 2016 Holistic Interactions of Shallow Clouds, Aerosols, and Land-Ecosystems (HI-SCALE) Field Campaign.** JEROME FAST, Larry Berg, Lizabeth Alexander, David Bell, Jiumeng Liu, Fan Mei, Siegfried Schobesberger, John Shilling, Stephen Springston, ManishKumar Shrivastava, James Smith, Joel A. Thornton, Jian Wang, Alla Zelenyuk, *Pacific Northwest National Laboratory*
12:15
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11NM NANOPARTICLES AND MATERIAL SYNTHESIS II

301 A

Jonathan Reid and Shaline Kavadiya, chairs

- 11NM.1 Size Focusing of Metal Nanoparticles in Low-Temperature Plasma.** NECIP BERKER UNER, Elijah Thimsen, *Washington University in St. Louis*
11:15
- 11NM.2 Surface-Enriched Zinc on Copper Particles Generated via Spray Pyrolysis.** Ryan Felix, Joseph Repac, Afshan Urooj, Howard Glicksman, SHERYL EHRMAN, *University of Maryland College Park*
11:30
- 11NM.3 Determination of Mass Mobility Exponent and Fractal Dimension of Crumpled Graphene Oxide Synthesized in a Furnace Aerosol Reactor (FuAR).** SHALINEE KAVADIYA, Yao Nie, Pratim Biswas, *Washington University in St. Louis*
11:45
- 11NM.4 Coagulation of Agglomerates with Polydisperse Primary Particles from Free Molecular to Transition Regime.** EIRINI GOUDEL, Georgios Kelesidis, Maximilian L. Eggersdorfer, Sotiris E. Pratsinis, *ETH Zurich*
12:00
- 11NM.5 Controlling the Microphysical Processes Occurring During Droplet Drying.** JONATHAN P. REID, Florence Gregson, Jim Walker, Rachael E.H. Miles, *University of Bristol*
12:15
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11UA URBAN AEROSOLS V

301 B

R Subramanian and Jason Surratt, chairs

- 11UA.1 Mapping Fine Particulate Matter and Ozone in Southern California Using Low-Cost Sensor Technologies.** RACHELLE DUVALL, Ron Williams, Dena Vallano, Andrea Polidori, Brandon Feenstra, Vasileios Papapostolou, Sam Garvey, *US EPA*
11:15
- 11UA.2 Characterizing Intra-Urban Air Pollution Gradients with a Spatially-Distributed Network of Lower Cost Sensors.** NAOMI ZIMMERMAN, Zhongju Li, Ellis Shipley Robinson, Aja Ellis, R. Subramanian, Allen Robinson, Joshua Apte, Albert A. Presto, *Carnegie Mellon University*
11:30
- 11UA.3 Variations in Wintertime PM among Communities in Sacramento Measured with a Combination of Traditional and Low-Cost Sensor Methods.** Anondo Mukherjee, STEVEN G. BROWN, Michael McCarthy, Aleta Kennard, Janice Snyder, Stephen D'Andrea, *Sonoma Technology, Inc*
11:45
- 11UA.4 Air Quality in East Africa: Measurements with Portable and Low-cost Sensors.** R. SUBRAMANIAN, Nestor Gomez, Rebecca Tanzer, Naomi Zimmerman, Nathan Williams, Paulina Jaramillo, *Carnegie Mellon University*
12:00
- 11UA.5 CitySpace Air Sensor Network: Evaluating Spatial Gradients of Urban Air Pollution with Low-Cost Air Sensor Technology.** STEPHEN FEINBERG, Ron Williams, Gayle Hagler, Judy Low, Larry Smith, Ryan Brown, Daniel Garver, Michael Davis, Michael Miller, Joe Schaefer, John Campbell, Tim McArthur, *ORD-US EPA, RTP, NC*
12:15

