

American Association for Aerosol Research - Abstract Submission

AAAR 34th Annual Conference
October 12 - October 16, 2015
Hyatt Regency
Minneapolis, Minnesota, USA

Tuesday

Tuesday 8:00 AM - 9:15 AM

Plenary I: Clarkson Institute for a Sustainable Environment (ISE) Lecture

8:00 **Welcoming Remarks** Andrea Ferro, Conference Chair, *Clarkson University*

8:05 **Introduction of Plenary Speaker** Roger McClellan, *Toxicology and Human Health Risk Analysis*

8:10 **Clarkson ISE Lecture: Exposure To Airborne Particles - Health Effects and Mechanisms: Where Are We and Where Are We Headed?** Mark Utell, *University of Rochester Medical Center*

Moderator Andrea Ferro, Conference Chair, *Clarkson University*

9:00 **Whitby Award Presentation, Ben Liu Award Presentation** Tiina Reponen, Awards Committee Chair, *University of Cincinnati*

9:10 **Announcement of Historical Aerosol Instrumentation Exhibition** Peter McMurry, *University of Minnesota*

Tuesday 9:00 AM - 5:00 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 - MODELING

NICOLLET D2/D3

Cari Dutcher and Manish Shrivastava, chairs

1AC.1 Role of Semi- and Low-Volatile Organic Compounds and Particle Phase Processes in Nanoparticle Growth - a Modeling Study. TAINA YLI-JUUTI, Ilona Riipinen, Ulrich Poeschl, Manabu Shiraiwa, *University of Eastern Finland*

1AC.2 Surface Tension Modeling of Binary and Multicomponent Atmospheric Aqueous Aerosols. HALLIE BOYER, Cari Dutcher, *University of Minnesota, Twin Cities*

- 1AC.3 Global Transformation and Fate of SOA: Implications of Low Volatility and Gas Phase Fragmentation Reactions.** MANISHKUMAR SHRIVASTAVA, Richard Easter, Xiaohong Liu, Alla Zelenyuk, Singh Balwinder, Kai Zhang, Po-Lun Ma, Duli Chand, Steven Ghan, Jose-Luis Jimenez, Qi Zhang, Jerome Fast, Philip Rasch, Petri Tiitta, *Pacific Northwest National Laboratory*
- 1AC.4 Simulation of Atmospheric Organic Aerosol Using Volatility-Oxygen Content during the PEGASOS Southern and Northern Europe Campaigns.** ELENI KARNEZI, Benjamin Murphy, Spyros Pandis, *Carnegie Mellon University*
- 1AC.5 Constraining Condensed-Phase Kinetics of Secondary Organic Aerosol Components from Isoprene Epoxydiols.** THERAN P. RIEDEL, Kevin Chu, Tianqu Cui, Ying-Hsuan Lin, Sri Hapsari Budisulistiorini, Zhenfa Zhang, Joel A. Thornton, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill*
- 1AC.6 Adsorption-Based Chemical Thermodynamics of Atmospheric Aerosols: Electrostatic Interactions and Weakly Dissociating Organic Acids.** CARI DUTCHER, Peter Ohm, *University of Minnesota, Twin Cities*
- 1AC.7 Acid Dissociation in Organic-Solvent/Water Mixtures and Its Relevance to Gas/Particle Partitioning to Atmospheric OPM.** JULIA DEGAGNE, James F. Pankow, *Portland State University*
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1HA HEALTH RELATED AEROSOLS I

LAKESHORE A

John Volckens and Roby Greenwald, chairs

- 1HA.1 The Influence of Particulate and Gas-Phase Pollutants on Markers of Acute Airway Oxidative Stress in Active Adolescents.** ROBY GREENWALD, Shiwei Gao, *Georgia State University*
- 1HA.2 Isoprene-derived Secondary Organic Aerosol Induces Expression of Nuclear Factor Erythroid 2-like 2 (NRF2)-mediated Oxidative Stress Response Genes in Human Lung Cells.** Ying-Hsuan Lin, Amanda Kramer, Maiko Arashiro, Weruka Rattanavara, Elizabeth Martin, Zhenfa Zhang, Kenneth Sexton, Avram Gold, Ilona Jaspers, Rebecca Fry, JASON SURRATT, *University of North Carolina at Chapel Hill*
- 1HA.3 Estimating Lung Deposition Fraction of Mold Spores with the ICRP and BAIL Models.** JESSICA SAGONA, Leonardo Calderón, Zuo Cheng Wang, Jennifer Senick, MaryAnn Sorensen-Allacci, Richard Wener, Clinton J. Andrews, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 1HA.4 Economic Input-Output Life Cycle Assessment of PM2.5 Health Impacts and Environmental Injustice.** CHRISTOPHER TESSUM, Kimberley Mullins, Julian Marshall, Jason Hill, *University of Minnesota*
- 1HA.5 Outdoor Aerosols and Respiratory Health Outcomes in Two Saskatchewan Communities.** SHELLEY KIRYCHUK, George Katselis, Wojciech Dawicki, Olasaji Awoyera, Josh Lawson, Donna Rennie, Donald Cockroft, Akwasi Owusu-Kyem, Brian Graham, John Gordon, Niels Koehncke, *University of Saskatchewan*
- 1HA.6 A Portable and Automated On-Line Instrument to Quantify Health-Relevant Aerosol-Bound Reactive Oxygen Species (ROS).** FRANCIS WRAGG, Markus Kalberer, *University of Cambridge, UK*
- 1HA.7 Source Impacts on Reactive Oxygen Species Generated by Water-Soluble PM2.5 in Atlanta and Associations with Cardiorespiratory Effects.** JOSEPHINE BATES, Rodney J. Weber, Joseph Abrams, Vishal Verma, Ting Fang, Mitchel Klein, Matthew Strickland, Stefanie Ebel Sarnat, Howard Chang, James Mulholland, Paige Tolbert, Armistead G. Russell, *Georgia Institute of Technology*
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1IF ENVIRONMENTAL FATE OF INFECTIOUS AEROSOLS I

NICOLLET D1

Paul Dabisch and Matthew Moe, chairs

- 1IF.1 Viable Influenza Virus in Cough and Exhaled Breath Aerosol Particles.** WILLIAM LINDSLEY, Francoise Blachere, Donald Beezhold, Robert Thewlis, Bahar Noorbakhsh, Sreekumar Othumpangat, William Goldsmith, Cynthia McMillen, Carmen Burrell, John Noti, *National Institute for Occupational Safety and Health*

- 1IF.2 Influenza Virus in Respiratory Droplets from Humans with Community Acquired Infection.** JING YAN, Jovan Pantelic, Michael Grantham, Barbara Albert, Fengjie Liu, Sheryl Ehrman, Donald Milton, *University of Maryland School of Public Health*
10:00
- 1IF.3 Aerosolization of Ebola Virus Surrogate in Wastewater Systems.** MARI TITCOMBE LEE, Amy Pruden, Linsey Marr,
10:15 *Virginia Tech*
- 1IF.4 Survival of Ebolavirus in Aerosols.** STEVE LEVER, Sophie Smither, Lin Eastaugh, Jackie Steward, *Dstl Porton Down*
10:30
- 1IF.5 Development of a Sampling Strategy for Detecting Infectious Ebola Virus Aerosols.** SHANNA RATNESAR-
10:45 SHUMATE, Michael Schuit, Jill Matus, Stewart Wood, Kristin Bower, Paul Dabisch, *NBACC*
- 1IF.6 Characterization of the Performance of Personal Sampling Devices for Detecting Infectious Aerosols
Containing Burkholderia pseudomallei.** JILL MATUS, John Yeager, Jeremy Boydston, Kristin Bower, Paul Dabisch,
11:00 *NBACC*
- 1IF.7 Electro-hydrodynamically-Assisted Non-Thermal Plasmas as a Barrier Against Airborne Disease
Transmission into Animal Confinement Buildings.** HEREK CLACK, *University of Michigan*
11:15

1IM INSTRUMENTATION AND METHODS I - CPC AND DMA

LAKESHORE B/C

James Radney and Amy Sullivan, chairs

- 1IM.1 Characterization of a Universal Fluid Condensation Particle Counter to Rapidly Measure Sub 3 Nanometer
Atmospheric Clusters.** CHONGAI KUANG, Fan Mei, *Brookhaven National Laboratory*
9:45
- 1IM.2 An Inversion Routine to Determine a Two Dimensional Mass-Size Distribution Function from DMA-APM
Measurements of Non-Spherical Particles and Externally Mixed Aerosols.** VIVEK RAWAT, David Buckley, Shigeru
10:00 Kimoto, Nobuhiko Fukushima, Christopher Hogan Jr., *University of Minnesota*
- 1IM.3 Resolution Limitations to Tandem Differential Mobility Analyzer-Aerosol Particle Mass Analyzer
Measurements.** JAMES RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
10:15
- 1IM.4 Particle Classification by the Tandem Differential Mobility Analyzer – Particle Mass Analyzer System.**
10:30 MIKINORI KUWATA, *Nanyang Technological University*
- 1IM.5 A DMA Train for Precision Quantification of Nanoparticle Growth Rates in the sub-10 nm Size Range.** Dominik
10:45 Stolzenburg, Gerhard Steiner, PAUL M. WINKLER, *University of Vienna*
- 1IM.6 Performance of a Prototype Radial Opposed Migration Ion/Aerosol Classifier (ROMIAC).** WILTON MUI, Andrew
11:00 Downard, Daniel Thomas, Huajun Mai, Amanda Grantz, Jesse Beauchamp, John Seinfeld, Richard Flagan, *California
Institute of Technology*
- 1IM.7 Experimental Study of Mini-Plate Differential Mobility Analyzers (Mini-plate DMAs) with
Expansion/Contraction Flow Channel.** QIAOLING LIU, Da-Ren Chen, *Virginia Commonwealth University*
11:15

1RA REMOTE AND REGIONAL AEROSOLS I

MIRAGE ROOM

Neil Donahue and Kerri Pratt, chairs

- 1RA.1 Tracking Ambient New Particle Formation by an Expansion-type CPC.** TAMARA PINTERICH, Paul M. Winkler,
9:45 Tuukka Petäjä, Markku Kulmala, Paul E. Wagner, *Universitaet Wien, Vienna, Austria*
- 1RA.2 Low Hygroscopic Scattering Enhancement of Boreal Aerosol and the Implications for a Columnar Optical
Closure Study.** PAUL ZIEGER, Pasi Aalto, Veijo Aaltonen, Mikko Äijälä, John Backman, Juan Hong, Mika Komppula,
10:00 Radek Krejci, Laborde Marie, Janne Lampilahti, Gerrit de Leeuw, Anne Pfüller, Bernadette Rosati, Matthias Tesche, Peter
Tunved, Riikka Väänänen, Tuukka Petäjä, *Stockholm University*

- 1RA.3 Dynamics of Aromatic-Derived SOA in the South Coast Air Basin of California.** MATT DAWSON, Jialu Xu, Robert Griffin, Donald Dabdub, *University of California, Irvine*
10:15
- 1RA.4 Observational Constraints on Terpene Oxidation in the Amazon Using Speciated Measurements from SV-TAG.** LINDSAY YEE, Gabriel Isaacman-VanWertz, Rebecca Wernis, Nathan Kreisberg, Yingjun Liu, Karen McKinney, Suzane Simoes de Sa, Scot Martin, Elizabeth Alexander, Brett Palm, Weiwei Hu, Pedro Campuzano-Jost, Douglas Day, Jose-Luis Jimenez, Juarez Viegas, Stephen Springston, Florian Wurm, Joel Brito, Paulo Artaxo, Antonio O. Manzi, Luiz Machado, Maria Oliveira, Rodrigo A. F. Souza, Susanne Hering, Allen H. Goldstein, *University of California at Berkeley, Berkeley, CA, USA*
10:30
- 1RA.5 Processes Controlling the Seasonal Cycle of Arctic Aerosol Number and Size.** BETTY CROFT, Jeffrey R. Pierce, W. Richard Leaitch, Stephen D'Andrea, Randall V. Martin, *Dalhousie University, Halifax, Canada*
10:45
- 1RA.6 Long-term Comparison of Thermal-optical Transmittance Elemental Carbon and Optical Black Carbon in the Arctic.** Philip K. Hopke, YUANYUAN ZHANG, *Clarkson University*
11:00
- 1RA.7 Antarctic Aerosols: Sources and Meteorological Influences on Aerosol Composition as Measured with High Resolution Aerosol Mass Spectrometry.** Michael Giordano, Lars Kalnajs, Terry Deshler, Anita Johnson, Sean Davis, PETER DECARLO, *Drexel University*
11:15

1UA URBAN AEROSOLS I

REGENCY ROOM

Mike Kleeman and Zheming Tong, chairs

- 1UA.1 Volatility Profile, Low Volatile Core and Mixing State of Ultra-fine Particles in the Midwestern United States.** 9:45 ASHISH SINGH, Robert Bullard, Matthew Johnson, Charles Stanier, *University of Iowa*
- 1UA.2 Spatial Distribution, Chemical Composition, and Sources of Atmospheric Gases and Aerosols in Estonia.** 10:00 MIRIAM ELSER, Carlo Bozzetti, Imad El Haddad, Rene Richter, Marek Maasikmets, Erik Teinmaa, Urs Baltensperger, Andre Prévôt, *Paul Scherrer Institute*
- 1UA.3 Comparative Assessment of the Oxidative Potential of Daytime and Nighttime Secondary Organic Particles in Los Angeles.** 10:15 ARIAN SAFFARI, Sina Hasheminassab, Martin Shafer, James Schauer, Constantinos Sioutas, *University of Southern California*
- 1UA.4 Overview of Surface Measurements of Submicron Particulate Matter in the Greater Houston Area during the DISCOVER-AQ 2013 Field Campaign.** 10:30 YU JUN LEONG, Nancy Sanchez, Henry Wallace, Basak Karakurt Cevik, James Flynn, Yan Han, Paola Massoli, Cody Floerchinger, Edward Fortner, Scott Herndon, Barry Lefer, Robert Griffin, *Rice University*
- 1UA.5 Influence of Urban Aerosols on the Chemistry of Stormwater Runoff from Building Roofs.** 10:45 ALEXANDER JOHNSON, Cliff Davidson, *Syracuse University*
- 1UA.6 Understanding the Character and Dynamics of Organic Aerosol in the Houston Area Using Multi-way Factor Analysis.** 11:00 NANCY SANCHEZ, Yu Jun Leong, Henry Wallace, Basak Karakurt Cevik, James Flynn, Barry Lefer, Robert Griffin, *Rice University*
- 1UA.7 Aerosol Optical Properties Retrieved Using Actinic Flux and Irradiance during DISCOVER-AQ Texas: In-situ Comparisons and Photochemical Impacts.** 11:15 CHELSEA CORR, Jungbin Mok, Nickolay Krotkov, Barry Lefer, Bruce Anderson, John Barrick, Andreas Beyersdorf, Gao Chen, Richard Moore, Michael Shook, Kenneth Thornhill, Edward Winstead, Luke Ziemba, Sasha Madronich, James Crawford, Jack Dibb, *ORAU*

Tuesday 1:00 PM - 2:45 PM

Session 2: Poster / Historical Instrumentation Exhibition

2AC AEROSOL CHEMISTRY

EXHIBIT HALL

Neil Donahue, chair

- 2AC.1 Comparison of NO₂ Effects on Secondary Organic Aerosol (SOA) Formation from Ozonolysis of Four Monoterpenes.** DANIELLE C DRAPER, Delphine Farmer, Yury Desyaterik, James N. Smith, Juliane L. Fry, *Reed College*
1:00
- 2AC.2 Design and Application of Aerosol Optical Tweezers to Investigate Organic Aerosol Morphology.** KYLE GORKOWSKI, Mark Aboff, Hassan Beydoun, Michael Polen, Jim Walker, Neil Donahue, Ryan Sullivan, *Carnegie Mellon University*
1:00
- 2AC.3 Pressure Dependence of Criegee Intermediate Stabilization for a Sequence of Alkenes.** JANI HAKALA, Neil Donahue, *Carnegie Mellon University*
1:00
- 2AC.4 Control of Ozonolysis Kinetics and Aerosol Yield by Nuances in the Molecular Structure of Volatile Organic Compounds.** REBECCA HARVEY, Giuseppe Petrucci, *University of Vermont*
1:00
- 2AC.5 Modeling the Chemistry and Growth of Organic Aerosol in Biomass Burning Plumes at Local and Regional Scales.** CHANTELE LONSDALE, Matthew Alvarado, Robert J. Yokelson, Katherine Travis, Sheryl K. Akagi, Donald Blake, Ian Burling, Hugh Coe, Emily Fischer, David Griffith, Timothy Johnson, Sonia Kreidenweis, Taehyoung Lee, Andrew May, Gavin McMeeking, Simone Meinardi, Isobel Simpson, Amy P. Sullivan, Jonathan Taylor, Shawn P. Urbanski, David R. Weise, Cyle Wold, *AER*
1:00
- 2AC.6 A Stochastic Reaction Diffusion Kinetics Model of the Fragmentation Processes during Heterogeneous Oxidation of Organic Aerosol.** AARON WIEGEL, Kevin Wilson, William Hinsberg, Frances Houle, *Lawrence Berkeley National Laboratory*
1:00
- 2AC.7 Measurement of IVOC and SVOCs as Intermediates to SOA Using Online Electron-impact Mass Spectrometry.** JONATHAN FRANKLIN, Gabriel Isaacman-VanWertz, Jesse Kroll, *MIT*
1:00
- 2AC.8 Photochemical Generation of OH Radicals in Secondary Organic Aerosols.** RACHEL HEMS, Jenny Wong, Shouming Zhou, Jonathan Abbatt, *University of Toronto, Canada*
1:00
- 2AC.9 Ozone and Secondary Organic Aerosol Formation from Ethylene-NO_x-NaCl Irradiations under Different Relative Humidity Conditions.** LONG JIA, Yongfu Xu, *Institute of Atmospheric Physics, Chinese Academy of Science*
1:00
- 2AC.10 Multiphase Chemistry of Biomass Burning Markers and Its Relevance in Cold Regions.** VIKRAM PRATAP, Shunsuke Nakao, *Clarkson University*
1:00
- 2AC.11 Modeling Nitrate Radical Oxidation of Biogenic Volatile Organic Compounds Above and Below the Canopy during CABINEX 2009.** BEN SCHULZE, Henry Wallace, Robert Griffin, *Rice University*
1:00
- 2AC.12 Organic Nitrogen Formation by Aqueous Processing of Condensed Carbonyls and Ammonium Sulfate.** CHRIS STANGL, Murray Johnston, *University of Delaware*
1:00
- 2AC.13 Highly Oxidized Species in Fresh and Aged Secondary Organic Aerosol (SOA).** PEIJUN TU, Murray Johnston, *University of Delaware*
1:00
- 2AC.14 Constraining IEPOX and IEPOX-derived SOA Formation in CMAQ with the Use of SOAS Observations.** PETROS VASILAKOS, Havala Pye, Yongtao Hu, Lu Xu, Hongyu Guo, Aikaterini Bougiatioti, Kate Cerully, Lindsay Yee, Allen H. Goldstein, Nga Lee Ng, Rodney J. Weber, Matthieu Riva, Jason Surratt, Abigail Koss, Alex Guenther, Joost de Gouw, Kevin Olson, Armistead G. Russell, Athanasios Nenes, *Georgia Institute of Technology*
1:00
- 2AC.15 Aging of Alpha-pinene First-Generation Ozonolysis Products Formed under High NO_x Conditions by Reactions with OH.** NINGXIN WANG, Neil Donahue, Spyros Pandis, *Carnegie Mellon University*
1:00
- 2AC.16 Secondary Organic Aerosol from Gas Phase Methylsiloxane Oxidation.** YUE WU, Murray Johnston, *University of Delaware*
1:00
- 2AC.17 Enhancements in Secondary Organic Aerosol Formation in the Presence of Preexisting Organic Particles.** JIANHUAI YE, Greg J. Evans, Bruce Urch, Arthur Chan, *University of Toronto*
1:00
- 2AC.18 Effect of Particle Acidity on the Yield and Chemical Composition of Secondary Organic Aerosol from OH-Initiated Photooxidation of Alpha-Pinene under Low- and High-NO Conditions.** YUEMEI HAN, John Liggio, Shao-Meng Li, Craig A. Stroud, *Environment Canada*
1:00
- 2AC.19 Bacterial Metabolism in the Atmospheric Aerosol Microbiome: Missing Sink of Oxalate?** ALISON FANKHAUSER, Asher M. Krell, Simone J. Alston, Scott Banta, V. Faye McNeill, *Columbia University*
1:00

- 2AC.21 Formation of Highly Oxidized Multifunctional Organic Compounds in the OH-Initiated Heterogeneous Oxidation of Squalene under Environmental Conditions.** NADJA HEINE, Kevin Wilson, *Lawrence Berkeley National Laboratory*
1:00
- 2AC.22 A Simple and Fast Approach to Determine Aldehyde-amine Reactions of Trace Compounds in the Atmosphere by Mass Spectrometry.** GEOFFROY DUPORTE, Jevgeni Parshintsev, Luis Barreira, Kari Hartonen, Marja-Liisa Riekkola, *University of Helsinki*
1:00
- 2AC.23 Comprehensive Characterization of Organic Carbon in Diesel Exhaust and Wood Smoke Particulate Matter and Its Correlation to the Toxicity.** KLARA ONDRUSOVA, Jana Rousova, Richard Cochran, Alena Kubatova, Annike Irene Totlandsdal, Johan Øvrevik, Per E Schwarze, Marit Låg, *University of North Dakota*
1:00
- 2AC.24 Effect of Titanium Dioxide Particles on Secondary Organic Aerosol Formation from Photooxidation of Toluene.** TIANQU CUI, Richard Kamens, Joe Pedit, Jason Surratt, Ilona Jaspers, Kenneth Sexton, *University of North Carolina at Chapel Hill*
1:00
- 2AC.25 A New Oxidation Flow Tube for Measuring Secondary Aerosol of Rapidly Changing Emission Sources.** PAULI SIMONEN, Erkkä Saukko, Panu Karjalainen, Miikka Dal Maso, Topi Rönkkö, Jorma Keskinen, *Tampere University of Technology*
1:00
- 2AC.26 Deliquescence and Hygroscopic Properties of Organosulfates.** ARMANDO ESTILLORE, Anusha Priyadarshani Silva Hettiyadura, Zhen Qin, Timothy Humphry, Vicki Grassian, Elizabeth Stone, *University of Iowa*
1:00
- 2AC.27 Secondary Organic Aerosols from Oil Spills: Wind Tunnel Evaporation and Flow Tube Oxidation Experiments.** OMAR AMADOR-MUNOZ, Haofei Zhang, Pawel Misztal, Dave Worton, Greg Drozd, Allen H. Goldstein, *University of California, Berkeley*
1:00
- 2AC.28 Characterization of Secondary Organic Aerosols Formed from the Photolysis of 2-Iodoctane/Air Mixtures Using 254nm Light.** Iftikhar Awan, W. SEAN MCGIVERN, *National Institute of Standards and Technology*
1:00
- 2AC.29 Characterizing the Oxidation by Nitrate Radicals of Alcohol Amines Used in Carbon Dioxide Control Technologies.** PAUL VAN ROOY, Derek Price, Jackson Dulla, Dana Pierce, Tatissa Zunguze, Kathleen Purvis-Roberts, David R. Cocker III, *University of California, Riverside*
1:00

2AP AEROSOL PHYSICS

EXHIBIT HALL

Chris Hogan and Matt Berg, chairs

- 2AP.2 Investigation of Particle and Vapor Wall-loss Effects on Controlled Wood-smoke Smog-chamber Experiments.** Qijing Bian, Andrew May, Sonia Kreidenweis, JEFFREY R. PIERCE, *Colorado State University*
1:00
- 2AP.3 Windblown Dust Characterization in the Canadian Oil Sands Region.** XIAOLIANG WANG, Judith Chow, Steven Kohl, Laxmi Narasimha Yatavelli, Kevin Percy, Allan Legge, John Watson, *Desert Research Institute*
1:00
- 2AP.4 Impact of Crystallization Kinetics on Spray Dried Microparticles Properties.** ALBERTO BALDELLI, Reinhard Vehring, *University of Alberta, Canada*
1:00
- 2AP.5 Diffusive Filtration Efficiency of Granular Activated Carbons for Nanoparticles.** CHANG HYUK KIM, David Y. H. Pui, *University of Minnesota*
1:00
- 2AP.6 Volatility of Source Apportioned Wintertime Organic Aerosol in the City of Athens.** Evangelos Louvaris, Kalliopi Florou, ELENI KARNEZI, Spyros Pandis, *University of Patras, Patra, Greece*
1:00
- 2AP.7 The Effect of Hygroscopicity and Oxidation on the Phase State of Ambient SOA Particles in the Southeastern US.** AKI PAJUNOJA, Weiwei Hu, Yu Jun Leong, Nathan Taylor, Pasi Miettinen, Don Collins, Jose-Luis Jimenez, Annele Virtanen, *University of Eastern Finland*
1:00
- 2AP.8 Molecular Dynamics of Evaporation and Ion Emission Process of Aqueous Nanodroplet.** HIDENORI HIGASHI, Takuya Tokumi, Yasuaki Mukai, Christopher Hogan Jr., Hiroshi Suda, Mikio Kumita, Takafumi Seto, Yoshio Otani, *Kanazawa University*
1:00
- 2AP.9 Enhanced Growth of n-propanol Nanodroplets in the Free Molecular Regime.** YENSIL PARK, Shinobu Tanimura, Barbara Wyslouzil, *The Ohio State University*
1:00

2BA BIOAEROSOLS

EXHIBIT HALL

Juan Pedro Maestre, chair

- 2BA.1 Diversity and Difference of Bacteria in PM2.5 before and during the APEC Meeting Days in Beijing City.** 1:00 PENG RUI DU, Rui Du, Zedong Lu, Pingqing Fu, *University of Chinese Academy of Science*
- 2BA.2 Influence of Storm Origin and Type on Biological Ice Nucleation Activity in Louisiana Precipitation.** RACHEL 1:00 JOYCE, Heather Lavender, Jennifer Farrar, Mickaël Vaitilingom, Juliana D'Andrilli, Brent Christner, *Louisiana State University*
- 2BA.3 Observations of Fluorescent Aerosol at the Mado Observatory on La Reunión.** ANNE PERRING, Ellis Shipley 1:00 Robinson, Mark T. Hernandez, Odessa Gomez, David O'Connor, J. Alex Huffman, Joshua P. Schwarz, Jerome Brioude, Stephanie Evan, Aurelie Colomb, Valentin Duflot, Jean-Marc Metzger, Pierre Tulet, Ru-Shan Gao, David Fahey, *CU CIRES- NOAA ESRL*
- 2BA.4 Correlations of Airborne Microbial Community with Air Pollutions in Beijing.** WEIZHUO YAN, Buying Wang, 1:00 Changyi Xie, Yunfeng Yang, Jingkun Jiang, *Tsinghua*
- 2BA.5 Screening of Biosurfactants from Cloud Microorganisms.** Isabelle Canet, Martine Sancelme, Pascal Renard, 1:00 Mounir Traikia, Yveta Uhliarikova, Peter Capek, Maria Matulova, Pierre Amato, ANNE-MARIE DELORT, *Université Clermont Auvergne, france*
- 2BA.6 Resistant Microorganisms Present in Cattle Feedlots in Airborne in Tijuana, Mexico.** LILIA HURTADO, 1:00 Guillermo Rodriguez, Javier Emmanuel Castillo-Quñones, Luisa Molina, Penelope Quintana, Jonathan Lopez, Marvic Carrillo, *Universidad Autonoma de Baja California, Tijuana, Mexico*
- 2BA.7 Multi-instrument Inter-comparison of Fluorescent Bioaerosol Measurement Techniques during Summer 2014 in Saclay, France.** WALFRIED LASSAR, Kyle Pierce, Roland Sarda-Esteve, Jean Sciare, Ian Crawford, Martin 1:00 Gallagher, David O'Connor, John Sodeau, Marie Prass, Christopher Pöhlker, Ulrich Poeschl, Sampo Saari, Jorma Keskinen, J. Alex Huffman, *University of Denver, CO*
- 2BA.8 Design and Development of a Portable Electrostatic Bioaerosol Sampler (PEBS) with High Sampling Flow Rate.** TAEWON HAN, Gediminas Mainelis, *Rutgers, The State University of New Jersey* 1:00
- 2BA.9 Fluctuation of Viable and Non-viable Bacterial Concentration in the Air Associated with Weather Changes: Observations on the Southwestern Coast of Japan.** KOTARO MURATA, Daizhou Zhang, *Prefectural University of Kumamoto* 1:00
- 2BA.10 Evaluation of the Wide-Band Integrated Bioaerosol Sensor (WIBS) as an Automated Pollen and Fungal Spore Monitor vs Traditional Hirst-Type Impactors: Payerne, Switzerland in 2013.** DAVID O'CONNOR, Natalie 1:00 Lemonis, Bernard Clot, Santiago Fernández-Rodríguez, Rafael Tormo-Molina, John Sodeau, *University College Cork*
- 2BA.11 Detection of Fluorescent Particles with a Wideband Integrated Bioaerosol Sensor (WIBS-4A) at CEA Atmospheric Super Site in the Region of Paris.** DOMINIQUE BAISNEE, Roland Sarda-Esteve, Michel Thibaudon, 1:00 Gavin McMeeking, Ian Crawford, Martin Gallagher, J. Alex Huffman, David O'Connor, John Sodeau, Virginia E. Foot, Jean-Maxime Roux, Christophe Bossuet, *CEA*
- 2BA.12 Relationship Between Allergy Symptoms Pollen Grain Concentration and Atmospheric Pollution Events in the Region of Paris.** ROLAND SARDA-ESTEVE, Michel Thibaudon, Vincent Auvigne, Dominique Baisnee, Benjamin 1:00 Guinot, Jean-Maxime Roux, *CEA*
- 2BA.13 A Novel Bioaerosol Sampler for the Preservation of Viral Infectivity.** DANIEL VERREAULT, Caroline Duchaine, 1:00 Solange Levesque, Samira Mubareka, *Sunnybrook Health Sciences Centre and Research Institute*

2CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE

EXHIBIT HALL

Cari Dutcher, chair

- 2CA.1 Spatial Patterns and Temporal Trends of Black Carbon in Boston MA.** GEORGE ALLEN, *NESCAUM* 1:00

- 2CA.2 Detection of Carbonaceous Aerosols by Using Laser Induced Breakdown Spectroscopy (LIBS).** GIBAEK KIM, 1:00 Myoseon Jang, Kihong Park, *Gwangju Institute of Science and Technology*
- 2CA.3 Oxidative Potential of Ambient Ultrafine Particulate Matter in the Los Angeles Air Basin: Possible Impact of Atmospheric Aging.** ARIAN SAFFARI, Sina Hasheminassab, Dongbin Wang, Martin Shafer, James Schauer, Constantinos Sioutas, *University of Southern California*
- 2CA.4 Characteristics and Major Sources of Carbonaceous Aerosols in PM_{2.5} from Sanya, China.** JINGZHI WANG, 1:00 Steven Sai Hang Ho, Junji Cao, Rujin Huang, Jiamao Zhou, Youzhi Zhao, Hongmei Xu, Suixin Liu, Gehui Wang, Zhenxing Shen, Yongming Han, *Institute of Earth Environment, Chinese Academy of Sciences*
- 2CA.5 Chemical Characterization of Organic Aerosol in Greater London Area Using High Resolution Aerosol Mass Spectrometry: Aerosol Volatility and Spatial Distribution.** LU XU, Leah Williams, Dominique Young, James Allan, Hugh Coe, Paola Massoli, Edward Fortner, Puneet Chhabra, Scott Herndon, Allison Aiken, Kyle Gorkowski, Manvendra Dubey, Zoe Fleming, Nga Lee Ng, *Georgia Institute of Technology*
- 2CA.6 Optical and Physical Characterization of Coal Fly Ash and Powdered Activated Carbon Agglomerates.** TIAN 1:00 XIA, Herek Clack, *University of Michigan*
- 2CA.7 Seasonal Variations in the Carbonaceous Composition of Size-Resolved Particles Collected in Tempe, Arizona.** DENISE NAPOLITANO, Pierre Herckes, *Arizona State University*
- 2CA.8 Evaluation of Modeled Organic Aerosol Formation in the Houston Region Using Measurements from the 2013 DISCOVER-AQ Campaign.** BONYOUNG KOO, Lea Hildebrandt Ruiz, Rebecca Sheesley, Sascha Usenko, Greg Yarwood, *Ramboll Environ*
- 2CA.9 Wintertime Secondary Organic Aerosol Over an Oil and Natural Gas Producing Region of the U.S. from an Air Quality Model Perspective.** RAVAN AHMADOV, Stuart McKeen, Michael Trainer, Joost de Gouw, Jessica Gilman, Carsten Warneke, Timothy Bates, James Johnson, Patricia Quinn, *CU CIRES- NOAA ESRL*
- 2CA.10 Characterization of Fresh and Aged Emissions from a Marine Vessel Fueled with Diesel and Biodiesel.** 1:00 DEREK PRICE, Kevin Sanchez, Jun Liu, Raghu Betha, Lynn Russell, David R. Cocker III, J. Wayne Miller, *Scripps Institution of Oceanography*

2CO COMBUSTION

EXHIBIT HALL

Yang Wang, chair

- 2CO.1 Evolution of Fine Organic Aerosol Emitted from Residential Coal Combustion.** WEI ZHOU, Jingkun Jiang, Jianguo 1:00 Deng, Lei Duan, Jiming Hao, *Tsinghua University*
- 2CO.2 Impacts of Co-firing Biomass on Emissions of Particulate Matter to the Atmosphere.** IBRAHIM AL NAGHEMAH, 1:00 Elizabeth Stone, *University of Iowa*
- 2CO.3 Electrical Charges on Particles Generated by Combustion.** Sergey A. Grinshpun, SHUANG GAO, Michael Yermakov, 1:00 Tiina Reponen, *University of Cincinnati*
- 2CO.4 The Effect of Sampler Design on Nanoparticle Sizing.** EIRINI GOUDELII, Arto Groehn, Sotiris E. Pratsinis, *ETH 1:00 Zurich*
- 2CO.5 Drift Tube Ion Mobility Measurements of Sub-10 nm Soot Particles Produced in Flames.** DAVID BUCKLEY, 1:00 Christopher Hogan Jr., *University of Minnesota*
- 2CO.6 Optical Properties of Aerosols Emitted from Laboratory Peat Combustion.** Madhu Gyawali, Laxmi Narasimha 1:00 Yatavelli, Adam Watts, Vera Samburova, Rajan Chakrabarty, Joseph Knue, L.-W. Antony Chen, Ian Arnold, Xiaoliang Wang, Andrey Khlystov, Judith Chow, Barbara Zielinska, John Watson, HANS MOOSMULLER, *Desert Research Institute, Reno*
- 2CO.7 Combustion Process Apportionment of Carbonaceous Particulate Emission from a Diesel Fuel Burner.** 1:00 LAARNIE MÜLLER, Jürgen Schnelle-Kreis, Gert Jakobi, Lianpeng Jing, Jürgen Orasche, Francesco Canonaco, Andre Prévôt, Ralf Zimmermann, *Helmholtz Zentrum München*

2CO.8 Automated Primary Particle Sizing of Nanoparticle Aggregates by TEM Image Analysis. Ramin Dastanpour,
1:00 STEVEN ROGAK, *University of British Columbia*

2CT CONTROL TECHNOLOGY

EXHIBIT HALL

Nima Mohajer, chair

- 2CT.1 A Numerical Study for Fine Particle Removal Gadget with Low Pressure Drop and Superior Efficiency for Industrial Application.** YOUNGJIN SEO, *Kumoh National Institute of Technology*
1:00
- 2CT.2 Experimental Determination of the Effective Vortex Length of Cyclones.** HSIAO-YI HUNG, Chih-Wei Lin, Sheng-Hsiu Huang, Chih-Chieh Chen, *National Taiwan University*
1:00
- 2CT.3 The Micro-particle Capture by a Cylindrical Fiber in a Particulate Aerosol Channel Flow.** MING DONG, Lin-ying Bai, Jun Xie, Su-fen Li, *Dalian University of Technology*
1:00
- 2CT.4 An Experimental Study on the Effect of Particle Concentration on Air Filtration.** RAHELEH GIVEHCHI, Zhongchao Tan, *University of Waterloo*
1:00
- 2CT.5 The Change of Pressure Drop during Dust Loading at Different Relative Humidity.** MYONG-HWA LEE, Jeong-Uk Kim, *Korea Institute of Industrial Technology*
1:00
- 2CT.6 Micro- and Ultra-filtration of Polystyrene Latex Nanoparticles through Nuclepore Filters: Experiments and Models.** HANDOL LEE, Sheng-Chieh Chen, David Y. H. Pui, *University of Minnesota*
1:00
- 2CT.7 Control of Respirable Crystalline Silica Exposure from Cutting Fiber-cement Siding.** CHAOLONG QI, Alan Echt, Amy Feng, Micheal Gressel, *NIOSH*
1:00
- 2CT.8 Modeling of Nanoparticle Penetration through Electret Filter Media.** DREW THOMPSON, Sheng-Chieh Chen, Deqiang Chang, Min Tang, David Y. H. Pui, *University of Minnesota*
1:00
- 2CT.9 Physical and Biological Characterization of Porous Media for Indoor Air Quality Control.** LUPITA MONTOYA, Anne Wrobetz, Ahu Aydogan Akseli, *University of Colorado Boulder*
1:00
-

2IA INDOOR AEROSOLS

EXHIBIT HALL

Lupita Montoya, chair

- 2IA.1 Mathematical Models for Bioinformed Design of Indoor Spaces: Integrated CFD Simulation of Fungi Sporulation and Transport.** SHAMIA HOQUE, *USC*
1:00
- 2IA.2 Application of ISO 14644 as an Indoor Air Quality (IAQ) Metric.** ELLIOTT HORNER, Nate Sanders, *UL Environment*
1:00
- 2IA.3 Characterization of a Commercial Synthetic Jet Actuator for Air Quality Applications.** Miles Abarr, Denise Mauney, Jean Hertzberg, LUPITA MONTOYA, *University of Colorado, Boulder*
1:00
- 2IA.4 Characterizing VOC Emissions from Human Occupants in a University Classroom.** XIAOCHEN TANG, Pawel Misztal, Allen H. Goldstein, William Nazaroff, *University of California, Berkeley*
1:00
- 2IA.5 Volatile Organic Compounds and Aerosol Emissions from a Low-Cost Desktop 3-D Printer.** JUN WANG, Evan Floyd, James Regens, *University of Oklahoma*
1:00
- 2IA.7 Evaluating and Controlling Human Exposure to Ultrafine Particle and VOC Emissions from Desktop 3D Printers.** PARHAM AZIMI, Dan Zhao, Brent Stephens, *Illinois Institute of Technology*
1:00
- 2IA.8 Particle Tracking Velocimetry Analysis of Flow Patterns in Showers.** Carlos Estrada, Michal Ziv-El, Yassin Hassan, Kerry Kinney, MARIA D. KING, *Texas A&M University*
1:00

- 2IA.9 Human Occupants as Sources of Airborne Particles in a Neonatal Intensive Care Unit.** DUSAN LICINA, Seema Bhangar, Brandon Brooks, Robyn Baker, Brian Firek, Xiaochen Tang, Michael Morowitz, Jillian Banfield, William Nazaroff, *University of California, Berkeley, CA*
1:00
- 2IA.10 Physical and Chemical Characterization of Indoor Dusts: A Critical Review.** ALIREZA MAHDAVI, Jeffrey Siegel, *University of Toronto*
1:00
- 2IA.11 Emissions from Consumer 3-D Printers.** Qian Zhang, Marilyn Black, Aika Davis, RODNEY J. WEBER, *Georgia Institute of Technology*
1:00
- 2IA.12 Evaluation of Particulate Matters and Total VOC Emissions from Binder Jetting 3D Printers.** NIMA AFSHAR-MOHAJER, Chang-Yu Wu, Thomas Ladun, Didier Rajon, Yong Huang, *University of Florida*
1:00
- 2IA.13 Identifying Optimum Indoor Space Design and Ventilation System for Reducing Second-hand Exposure between Office Occupants.** FIROZA OMAR, Shamia Hoque, *USC*
1:00
- 2IA.14 Evaluation of Self-pollution Inside School Buses Using a CFD and Multi-zone Coupled Model.** Fei Li, EON LEE, Junjie Liu, Yifang Zhu, *University of California, Los Angeles*
1:00
- 2IA.15 Reduction of Residential Indoor Particulate Matter Concentration Using a Portable Air Cleaner Equipped with Wireless Sensors: Big Data Analysis.** BYONG HYOEK LEE, Jong Cheol Kim, Kyung Hwan Lee, Yoon Hyuk Choi, Sanghyeon Kang, Sun Yong Lee, *Environmental Technology Institute, Coway R&D Center*
1:00
- 2IA.16 Applying a Low-Cost Wireless Particulate Matter Sensor for Indoor Air Quality Monitoring: Calibration and Verification.** BYONG HYOEK LEE, Jong Cheol Kim, Kyung Hwan Lee, Sanghyeon Kang, Sun Yong Lee, *Environmental Technology Institute, Coway R&D Center*
1:00
- 2IA.17 Crustal and Toxic Metal Emissions from Fuel Sources Used on the Navajo Nation.** MARIEL PRICE, Brian Majestic, Wyatt Champion, Jason Schenandoah, Lupita Montoya, Joanna Gordon, Benton Cartledge, Michael Hannigan, *University of Denver*
1:00
- 2IA.18 Assessment of Biological and Non-biological Aerosol Concentrations in Two Green Multi-unit Residential Buildings in the Northeastern US.** NIRMALA THOMAS, Leonardo Calderón, Mengyang Guo, Brian Pavilonis, Prarthana Raja, MaryAnn Sorensen-Allacci, Deborah Plotnik, Jennifer Senick, Jie Gong, Clinton J. Andrews, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
1:00
- 2IA.19 The Field-Potential Aerosol Mass (F-PAM) Reactor: Development and Preliminary Lab Measurements of Cook-stove Emissions.** STEPHEN REECE, Roshan Wathore, Provat Saha, Andrew Grieshop, *North Carolina State University*
1:00

ZIF ENVIRONMENTAL FATE OF INFECTIOUS AEROSOLS

EXHIBIT HALL

Paul Dabisch, chair

- 2IF.1 Evaluation of Methods for Collecting Aerosolized Bacillus Spores.** SERGEY A. GRINSHUPUN, Michael Yermakov, Reshmi Indugula, Yousef Elmashae, Tiina Reponen, Angela M. Weber, *University of Cincinnati*
1:00
- 2IF.2 Customized Solar Simulation for Biological Aerosol Agent Fate Experimentation.** DANIEL HAHN, *JHU/APL*
1:00
- 2IF.3 Measuring Changes over Time in Bioaerosol Spectral Signatures with the WIBS.** ELIZABETH CORSON, Jonathan Eshbaugh, *Johns Hopkins University Applied Physics Laboratory*
1:00
- 2IF.4 Atmospheric Fate of Individual Aerosol Particles.** ERIN M. DURKE, Matthew B. Hart, *EXCET Inc./Edgewood Chemical Biological Center*
1:00
- 2IF.5 Understanding How Exosporium Hairs Affect Spore Adhesion on Simple Surfaces.** JANA KESAVAN, Pamela Humphreys, Craig Knox, Erica Valdes, Vipin Rastogi, Babak Nasr, Suresh Dhaniyala, *US ARMY ECBC*
1:00
- 2IF.6 A Design of Experiments Approach for Conducting Bioaerosol Aging Studies in Rotating Drum Aerosol Chambers.** MICHAEL SCHUIT, Shanna Ratnesar-Shumate, Artemas Herzog, Jonathan Eshbaugh, Paul Dabisch, *NBACC*
1:00
- 2IF.7 Evaporation and Transport of Bodily Fluid Aerosol Droplets.** JONATHAN THORNBURG, Quentin Malloy, James Hanley, Jerome Gilberry, Howard Walls, *RTI International*
1:00

- 2IF.8 Accurate and Adaptive Test and Evaluation of Biological Aerosol Detection Systems - The Aerosol Challenge Simulator.** JAMES S. BURKE, Nigel Pomeroy, Maurice W. Walker, Virginia E. Foot, *DSTL*
1:00
- 2IF.9 Particle Removal from Substrates with an Impinging Air Jet.** BABAK NASR, Jana Kesavan, Andrea R. Ferro, Goodarz Ahmadi, Suresh Dhaniyala, *Clarkson University*
1:00
- 2IF.10 Wind Tunnel Detachment of Bacillus Thuringiensis Spores.** JING QIAN, Meilu He, Babak Nasr, Minyard Morgan, Andrea R. Ferro, Goodarz Ahmadi, Suresh Dhaniyala, *Clarkson University*
1:00
- 2IF.11 A Vibrating-mesh Nebulizer is an Alternative to the 'Gold Standard' Collison Nebulizer for Generating Experimental Aerosols Containing Infectious Agents.** Jennifer Bowling, DOUGLAS REED, *University of Pittsburgh*
1:00

2IM INSTRUMENTATION AND METHODS

EXHIBIT HALL

Jian Wang, chair

- 2IM.1 The Sensitivity of a Thermal Desorption Mass Spectrometer to Molecular Weight.** DANIEL MURPHY, *NOAA CSD*
1:00
- 2IM.2 Evaluation and Modification of a Cost-effective DMA for Sub-5 nm Aerosol Classification.** RUNLONG CAI, Da-Ren Chen, Jingkun Jiang, *Tsinghua University*
1:00
- 2IM.3 Nebulization of Microliter-sized Environmental Samples: Aerosol Mass Spectrometry as an Offline Analytical Technique.** RACHEL O'BRIEN, Kelsey Boulanger, Gabriel Isaacman-VanWertz, Manjula Canagaratna, John Jayne, Philip Croteau, Jesse Kroll, *MIT*
1:00
- 2IM.4 Characterization of the 8-stage Rotating Drum Impactor under Low Concentration Conditions.** MELISSA VENECEK, Yongjing Zhao, Jose Mojica, Charles McDade, Peter Green, Michael Kleeman, Anthony Wexler, *University of California, Davis*
1:00
- 2IM.5 Development of a Dilutor for Flue Gas Aerosol Sampling under High Water Vapor and High Temperature Conditions.** JIANGUO DENG, Yueyun Fu, Jingkun Jiang, *Tsinghua University*
1:00
- 2IM.6 A New Method to Measure Aerosol Particle Bounce and Estimating the Phase State of Atmospheric Aerosols.** SHASHANK JAIN, Giuseppe Petrucci, *University of Vermont*
1:00
- 2IM.7 Limitation of Current SMPS Transfer Function Theories.** MEILU HE, Suresh Dhaniyala, *Clarkson University*
1:00
- 2IM.8 Performance Study of a Cylindrical Thermal Precipitator with a Particle Size-Selective Inlet.** BIN WANG, Shu Su, Qisheng Ou, Shu Tao, Da-Ren Chen, *Peking University*
1:00
- 2IM.9 Modeling and Simulation of Droplet Breakup: A Lagrangian Volume-of-Fluid Approach to Turbulent Spray Formation.** EVERETT WENZEL, WanJiao Liu, Sean Garrick, *University of Minnesota*
1:00
- 2IM.10 Development and Evaluation of New Hy-NPS.** Kang-Ho Ahn, HONG-KU LEE, Gun-Ho Lee, Hee-Ram Eun, Yong-Hee Park, Jinhong Ahn, *Hanyang University, R. of Korea*
1:00
- 2IM.11 Toward the Development of Particle-number Standard Wafers for Calibrating Wafer-Surface-Scanners.** Naoko Tajima, KENJIRO IIDA, Kensei Ehara, Hiromu Sakurai, Sommawan Khumpuang, Shiro Hara, *AIST*
1:00
- 2IM.12 DMA Transfer Functions under Down Scan Operation.** MARK KANAPARTHI, Suresh Dhaniyala, *Clarkson University*
1:00
- 2IM.13 Evaluation of Combined Electrical Mobility and Optical Sizing Techniques for Deriving Aerosol Refractive Index.** Stephen Zimmerman, RICHARD MOORE, Bruce Anderson, Andreas Beyersdorf, Chelsea Corr, Michael Shook, Kenneth Thornhill, Edward Winstead, Luke Ziemba, *NASA Langley Research Center*
1:00
- 2IM.14 Development of CPC Calibration Technique at Low Flow Rate.** SHIGERU KIMOTO, George Mulholland, Miles Owen, David Y. H. Pui, *University of Minnesota*
1:00
- 2IM.15 Number-size Distribution of Nano-TiO₂ Agglomerates Measured by NanoScan SMPS: Dispersion of Agglomerates across the Orifice Inlet.** MAROMU YAMADA, Mitsutoshi Takaya, Isamu Ogura, *Japan National Institute of Occupational Safety and Health*
1:00

- 2IM.16 Comparison of the Grimm 11-R Mini Laser Aerosol Spectrometer to the TSI 3321 Aerodynamic Particle Sizer.** CHIH-HSIANG CHIEN, Alex Theodore, Chang-Yu Wu, Yu-Mei Hsu, Brian Birky, *University of Florida*
1:00
- 2IM.17 Particle Mass Concentration Determined from Single-Particle Mass Spectrometry Number Concentrations: Stability of Number Scaling Factors over Multiple Seasons.** LISA AU, Aurora Janes, Ernesto Polania-Gonzalez, Jumaanah Flowers, Elizabeth Grubb, Deborah Gross, *Carleton College*
1:00
- 2IM.18 Identification of Organic Components in Aerosols Sampled with Electrostatic Precipitation-Electrospray Ionization Mass Spectrometry (EP-ESI-MS).** JUMAANAH FLOWERS, Elizabeth Grubb, Lisa Au, Siqin He, Lin Li, Hongxu Duan, Amir Naqwi, Christopher Hogan Jr., Deborah Gross, *Carleton College*
1:00
- 2IM.19 An Electrospray / Differential Mobility Analysis / Inductively Coupled Plasma / Mass Spectrometry (ES/DMA/ICP-MS) Based Method for the Quantification of Engineered Nanoparticles in Environmentally-Relevant Water Matrices.** MARK ELLEFSON, Charlie Chan, Christine Loza, Sue Wolf, Brian Mader, *3M Company*
1:00
- 2IM.20 Optimizing Nuclepore Filter Penetration for Length and Fractal Dimension Characterization of Non-spherical Particles.** SHENG-CHIEH CHEN, Jing Wang, Heinz Fissan, David Y. H. Pui, *University of Minnesota*
1:00
- 2IM.21 Development of an Ultrafine Condensation Particle Counter (UCPC) for Measurements of Particles Down to 1 nm in Diameter.** JUN ZHAO, Hee-Siew Han, Ashish Karn, Peter H. McMurry, *University of Minnesota*
1:00
- 2IM.22 Investigation of Dust Dynamics Using Imaging Techniques.** WING-TAK LAI, Seungkoo Kang, Sheng-Chieh Chen, David Y. H. Pui, *TSI Inc*
1:00
- 2IM.23 Development of Aerosol-LIBS (Laser Induced Breakdown Spectroscopy) for Real Time Detection of Chemical Elements in Process-induced Particles.** Kyoungtae Kim, Hoseong Chae, GIBAEK KIM, Kihong Park, *Memory Business, Samsung Electronics Co., LTD, South Korea*
1:00
- 2IM.24 Experimental Characterization of Microfabricated Virtual Impactor Efficiency.** TROY CADOS, Omid Mahdavi-pour, Dorsa Fahimi, Seiran Khaledian, Richard White, Paul A. Solomon, Igor Paprotny, Lara Gundel, Thomas Kirchstetter, *Lawrence Berkeley National Laboratory*
1:00
- 2IM.25 Direct Ultraviolet Photoionization and Charge Recombination of Aerosol Nanoparticles.** Robert Nishida, Simone Hochgreb, ADAM M BOIES, *University of Cambridge*
1:00

2NM NANOPARTICLES AND MATERIALS SYNTHESIS

EXHIBIT HALL

Yang Wang, chair

- 2NM.1 A Study on Nanoparticle Formation Events at Urban and Coastal Sites in Korea.** KWANGYUL LEE, Hoseong Chae, Hee-joo Cho, Ji Yeon Park, Peter H. McMurry, Kihong Park, *Gwangju Institute of Science and Technology, Gwangju, Korea*
1:00
- 2NM.2 Examining the Physicochemical Properties of Silver Nanoparticles in Simple and Complex Simulated Gastric Fluid.** JESSICA AXSON, Diana Stark, Amy Bondy, Justin Keeney, Sonja Capracotta, Andrew Maynard, Martin Philbert, Ingrid Bergin, Andrew Ault, *University of Michigan, Ann Arbor MI*
1:00
- 2NM.3 Controlled Morphology of Nanostructured Metal Oxide Films for ACVD and FLAR Methodologies.** KELSEY HADDAD, Tandeep Chadha, Pratim Biswas, Nalin Katta, Barani Raman, *Washington University in St. Louis*
1:00
- 2NM.4 Crumpled Graphene-Encapsulated Si Composites as Anode Materials for Li Ion Batteries.** KIM HYEKYOUNG, Kil Dae Sup, Chang Hankwon, Choi Ji-Hyuk, Kim Hansu, Hee Dong Jang, *University of Science and Technology*
1:00
- 2NM.5 Generation of Controlled Fluxes of Nanoparticles to a Substrate by Pulsed Radio-Frequency Hydrogen-Silane Dusty Plasmas.** PARTH SHAH, Carlos Larriba-Andaluz, Steven Girshick, *University of Minnesota*
1:00
- 2NM.6 Thin Film Deposition of Self-assembled Carbon Nanotubes.** Jean de La Verpilliere, ADAM M BOIES, *University of Minnesota*
1:00

2RA REMOTE AND REGIONAL AEROSOLS

EXHIBIT HALL

Andy Ault, chair

- 2RA.1** **Physiochemical Characterization of Ambient Aerosols and Insoluble Residues in Snow.** JESSICA AXSON, 1:00 Jessie Creamean, Hongru Shen, Amy Bondy, Rebecca Craig, Nathaniel May, Kerri Pratt, Andrew Ault, *University of Michigan, Ann Arbor MI*
- 2RA.2** **10-Month Characterization of the Aerosol Number Size Distribution and Related Air Quality and Meteorology at a Reference Site in the Central U.S..** Robert Bullard, Ashish Singh, CHARLES STANIER, *University of Iowa*
- 2RA.3** **A PAM Reactor Investigation on Physiochemical Properties of Transported Chinese Haze at Gosan Climate Observatory.** XIAONA SHANG, Eunha Kang, William Brune, Jihyun Han, Saehee Lim, Sang-Woo Kim, Meehye Lee, *Korea University, South Korea*
- 2RA.4** **Characterization of Local and Long-range Transported Arctic Aerosol Particles in Wintertime.** RACHEL KIRPES, Amy Bondy, Bingbing Wang, Alexander Laskin, Andrew Ault, Kerri Pratt, *University of Michigan*
- 2RA.5** **Characterization of Lake Spray Aerosol Produced from the Great Lakes.** NATHANIEL MAY, Jessica Axson, Andrew Ault, Kerri Pratt, *University of Michigan*
- 2RA.6** **Long-term Observations of Ammonia, Nitric Acid, Ammonium, and Nitrate in a Rural Gas Production Region.** AMY P. SULLIVAN, Yi Li, Mark Tigges, Cassie Archuleta, Jeffrey Collett, *Colorado State University*
- 2RA.7** **Characteristics of Cloud Condensation Nuclei in Barrow, Alaska.** GARRETT WELSHOFER, Nathaniel May, Anne Jefferson, Patricia Quinn, Peter Peterson, William Simpson, Kerri Pratt, *University of Michigan*
- 2RA.8** **Chemical Composition of PM_{2.5} at Sanya: Effects from Regional Transport.** JIAMA O ZHOU, *Institute of Earth Environment, Chinese Academy of Sciences*
- 2RA.9** **Mass Size-segregated of Sub-urban Aerosol of Continental Part of Balkans.** DRAGANA ĐORĐEVIĆ, *ICTM*
- 2RA.10** **Centrifugal Separator for Micron Size Aerosol Particles.** SHU NAKAO, Hiromu Matsubara, Mikio Kumita, Hidenori Higashi, Osamu Akasaka, Yoshiki Hayasaki, Takafumi Seto, Yoshio Otani, *Kanazawa University*
- 2RA.11** **Halogenated and Organophosphorus Flame Retardants on Particles in the Arctic Atmosphere.** MARK HERMANSON, Amina Salamova, Ronald Hites, *University Center on Svalbard*
- 2RA.12** **Water-Soluble Dicarboxylic Acids, Ketocarboxylic Acids, Alpha-Dicarbonyls, and Fatty Acids in Association with Biogenic Secondary Organic Aerosol over a Forest Site in Japan.** YUEMEI HAN, Kei Nosaka, Yoko Iwamoto, Kaori Kawana, Kimitaka Kawamura, Tomoki Nakayama, Mochida Michihiro, *Graduate School of Environmental Studies, Nagoya University*

2UA URBAN AEROSOLS

EXHIBIT HALL

Kristina Wagstrom, chair

- 2UA.1** **Houston Aerosol Characterization and Health Experiment: A Two-year Health Impacts Survey of Chemically Resolved, Non-refractory PM₁ in the Houston, TX Metropolitan Area.** HENRY WALLACE, Yu Jun Leong, Nancy Sanchez, Ben Schulze, James Flynn, Barry Lefer, Robert Griffin, *Rice University*
- 2UA.2** **Direct Measurements of Ozone Sensitivity to NO_x and VOC Controls in Los Angeles.** Toshihiro Kuwayama, Peter Green, Christopher Cappa, Anthony Wexler, MICHAEL KLEEMAN, *University of California, Davis*
- 2UA.3** **Missing Urban Aerosol Source: Secondary Organic Aerosol Formation from Glycol Ethers Photooxidation under Low NO_x Conditions.** LIJIE LI, Mary Kacarab, David R. Cocker III, *University of California, Riverside*
- 2UA.4** **Impact of Multi-generational Aging of Secondary Organic Aerosol Species In Regional PM Simulations.** SHANTANU JATHAR, Christopher Cappa, Michael Kleeman, *University of California, Davis*
- 2UA.5** **Simulating Secondary Organic Aerosol in a Regional Air Quality Model Using the Statistical Oxidation Model: Assessing the Influence of Vapor Wall Losses.** CHRISTOPHER CAPP A, Shantanu Jathar, John Seinfeld, Anthony Wexler, Michael Kleeman, *University of California, Davis*

- 2UA.6 Particles and VOCs Emissions from DPF Diesel Engine during Regeneration.** HIROYUKI YAMADA, Satoshi Inomata, Hiroshi Tanimoto, *National Traffic Safety and Environment Laboratory*
1:00
- 2UA.7 Analysis of Particle Number Concentrations in Houston.** CARLOS HERNANDEZ, Yu Jun Leong, Robert Griffin, *Rice University*
1:00
- 2UA.8 Short and Long Term Temporal Patterns and Chemical Profile of Airborne Urban Road Dust near a Major Road.** CHEOL-HEON JEONG, Nathan Hilker, Jon M Wang, Angela Huang, Dennis Herod, Ewa Dabek-Zlotorzynska, Luc White, Tony Munoz, Greg J. Evans, *SOCAAR, University of Toronto*
1:00
- 2UA.9 Urban and Suburban Intermodal Fraction of Atmospheric Aerosol.** JANA KOZAKOVA, Jan Hovorka, Jaroslav Schwarz, *Charles University in Prague*
1:00
- 2UA.10 Source Apportionment of the Carbonaceous Aerosols at an Urban Background Site of Vilnius (Lithuania) during January 2014.** KRISTINA PLAUSKAITE, Steigvile Bycenkiene, Carlo Bozzetti, Roman Frohlich, Genrik Mordas, Vidmantas Ulevicius, *SRI Center for Physical Sciences and Technology*
1:00
- 2UA.11 Particle Number Concentrations at a Traffic Impacted Site: Precision and Temporal Patterns.** Oliver Rattigan, H. Dirk Felton, James Schwab, ROBERT ANDERSON, *New York State Dept. of Environmental Conservation*
1:00
- 2UA.12 Chemical Characterization and Redox Activity of Roadside Trash Burning Particulate Matter (PM) Emissions in Bangalore, India.** VREELAND HEIDI, Michael Bergin, Akihiro Fushimi, Armistead G. Russell, Grishma Jain, Karthik Sethuraman, James Schauer, Ana Villalobos, S.N. Tripathi, Julian Marshall, *Duke University*
1:00
- 2UA.13 Seasonal and Temporal Variation in Real-world Vehicle Emission Factors in Toronto, Canada.** JON M WANG, Naomi Zimmerman, Cheol-Heon Jeong, Robert Healy, Nathan Hilker, Greg J. Evans, *SOCAAR, University of Toronto*
1:00
- 2UA.14 Particulate Air Pollution in Qatar and the Air Quality Index.** TERRANCE MURPHY, Syed Abbas Mehdi, Nourhan ElKhatib, *Carnegie Mellon University-Qatar*
1:00

Tuesday 2:45 PM - 3:15 PM
Coffee Break

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

3AC AEROSOL CHEMISTRY II - NEW EXPERIMENTAL METHODS
NICOLLET D2/D3

James Davies and Brett Palm, chairs

- 3AC.1 Surface Enhanced Raman Spectroscopy Enabled Observations of Previously Undetectable Secondary Organic Aerosol Functional Groups and Intra-Particle Variation at the Individual Particle Level.** ANDREW AULT, Rebecca Craig, Amy Bondy, *University of Michigan*
3:15
- 3AC.2 Exploring the Physical and Chemical Properties of Aerosol Using Aerosol Optical Tweezers.** JAMES F. DAVIES, Kevin Wilson, *Lawrence Berkeley National Laboratory*
3:30
- 3AC.3 Laboratory Evaluation of a Commercial Spot Sampler.** ARANTZAZU EIGUREN-FERNANDEZ, Gregory Lewis, Susanne Hering, Christopher Hare, Patricia Keady, *Aerosol Devices Inc.*
3:45
- 3AC.4 Microfluidic Measurements of Atmospheric Aerosol Mimic Rheology.** ANDREW METCALF, Cari Dutcher, *University of Minnesota, Twin Cities*
4:00
- 3AC.5 Oxidation Flow Reactors (OFRs): Highlights of Recent Modeling and Field Studies.** BRETT PALM, Rui Li, Zhe Peng, Weiwei Hu, Amber Ortega, Pedro Campuzano-Jost, Douglas Day, Harald Stark, Jason Schroder, Joost de Gouw, William Brune, Jose-Luis Jimenez, *University of Colorado*
4:15

- 3AC.6 The Relative Roles of Solubility, Adsorption and Mixture Effects in Predicting the Hygroscopic Behaviour of Complex Organic Mixtures.** Narges Rastak, Aki Pajunoja, Yu Jun Leong, Annele Virtanen, ILONA RIIPINEN, *Stockholm University*
4:30
- 3AC.7 Sorption of Semi-volatile α -Pinene SOA into Non-volatile Polyethylene Glycol Seeds.** PENGLIN YE, Neil Donahue, *Carnegie Mellon University*
4:45
-

3IA INDOOR AEROSOLS I

LAKESHORE A

Shelly Miller and JP Maestre, chairs

- 3IA.1 Simultaneous Experimentation for Indoor Aerosol Transport Studies Using DNATrax.** CYNTHIA J. KAESER, George R. Farquar, Joanne J. Osburn, A. Daniel Jones, Elizabeth K. Wheeler, *Lawrence Livermore National Laboratory*
3:15
- 3IA.2 Microbial Colonization of HVAC Filters in Homes.** Juan Pedro Maestre, Wiley Jennings, Sandra Dedesko, Sharon Horner, Jeffrey Siegel, KERRY KINNEY, *The University of Texas at Austin*
3:30
- 3IA.3 Fungal Diversity in the Indoor Environment of Green vs. Non-Green Homes.** Kanistha Coombs, Doyle Ward, Diana Taft, Brett Green, Jaroslaw Meller, Reshmi Indugula, TIINA REPONEN, *University of Cincinnati*
3:45
- 3IA.4 Influence of Relative Humidity on Indoor Bacterial and Fungal Communities.** KAREN C. DANMILLER, Charles Weschler, Jordan Peccia, *Yale University*
4:00
- 3IA.5 Investigation of the Correlation between Indoor Air Quality (IAQ) Parameters and Spatial Thermal Imaging in Two Multi-Apartment Residential Buildings in Northeastern US.** LEONARDO CALDERÓN, Nirmala Thomas, Mengyang Guo, Brian Pavilonis, Prarthana Raja, MaryAnn Sorensen-Allacci, Deborah Plotnik, Jie Gong, Clinton J. Andrews, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
4:15
- 3IA.6 How Does Reducing Air Exchange Rate Affect Indoor Microbial Communities and Air Quality?** JUAN PEDRO MAESTRE, Josh Aldred, Wiley Jennings, Shahana Khurshid, Chloe Wooldridge, Atila Novoselac, Kerry Kinney, *The University of Texas at Austin*
4:30
- 3IA.7 Size-resolved Particle Emissions from Seated Occupants.** YILIN TIAN, Seema Bhangar, William Nazaroff, *University of California, Berkeley*
4:45
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3IF ENVIRONMENTAL FATE OF INFECTIOUS AEROSOLS II

NICOLLET D1

Paul Dabisch and Suresh Dhaniyala, chairs

- 3IF.1 Priorities and Implications for Aerosol Research in Biological Hazard Assessments.** MATTHEW MOE, Morgan Minyard, *Department of Homeland Security*
3:15
- 3IF.2 A Novel Test Apparatus and Method for the Measurement of Biological Aerosol Viability Decay Under Controlled Environmental Conditions Using Synthetic Microfibers.** Kevin Hommema, KENT HOFACRE, Michael Kuhlman, Traci Jordan, *Battelle*
3:30
- 3IF.3 Novel Aerosol Particle Image Velocimetry Measurement Method for Rotating Drum Systems.** Kelly Brinkley, Jonathan Eshbaugh, DANIEL SIMON, Michael House, *The Johns Hopkins Applied Physics Laboratory*
3:45
- 3IF.4 Changes in the Detectability and Viability of Biological Particles Aged in the Presence of Ozone, Humidity, and UV Irradiation.** SEAN KINAHAN, Yong-Le Pan, Crystal Glen, Andres Sanchez, Steven Hill, Matthew Tezak, Steven Storch, Gabriel Lucero, Mark Coleman, Chatt Williamson, Jonathan Eshbaugh, Joshua Santarpia, *Sandia National Laboratories*
4:00
- 3IF.5 Particle Resuspension from Surface, Current State of the Art.** BABAK NASR, Jing Qian, Meilu He, Morgan Minyard, Andrea R. Ferro, Goodarz Ahmadi, Suresh Dhaniyala, *Clarkson University*
4:15

3IF.6 Inactivation of Aerosolized Bacillus Thuringiensis Spores by Combustion of Powderized Materials Containing Boron and Iodine. SERGEY A. GRINSHPUN, Michael Yermakov, Reshmi Indugula, Tiina Reponen, Edward Dreizin, Mirko Schoenitz, *University of Cincinnati*

3IF.7 Influence of Aerosol Particle Size on Inhalational Pathogenesis. RICHARD THOMAS, *Dstl*
4:45

3IM INSTRUMENTATION AND METHODS II

LAKESHORE B/C

Matthew Berg and Xiaoliang Wang, chairs

3IM.1 Optimizing Design for Oxidative Flow Tube Reactors. DHRUV MITROO, Yujian Sun, Bong Wook Lee, Andrew Lambe, William Brune, Brent Williams, *Washington University in St. Louis*

3IM.2 Evaluation of Combined Electrical Mobility and Optical Sizing Techniques for Deriving Aerosol Refractive Index. Stephen Zimmerman, RICHARD MOORE, Bruce Anderson, Andreas Beyersdorf, Chelsea Corr, Michael Shook, Kenneth Thornhill, Edward Winstead, Luke Ziembra, *NASA Langley Research Center*

3IM.3 Imaging Nonspherical Particles and Measuring their Extinction Cross Section with Digital Holography. MATTHEW BERG, Nava Subedi, *Mississippi State University*

3IM.4 Effects of Laser Fluence Non-Uniformity on Black Carbon Measurements Using the Auto-Compensating Laser-Induce Incandescence Technique. FENGSHAN LIU, Steven Rogak, David Snelling, Kevin Thomson, Gregory Smallwood, *National Research Council Canada*

3IM.5 Effect of Particle Properties on Relative Response of Real Time Black Carbon Mass Concentration Instruments. Ali Momenimovahed, KEVIN THOMSON, Mark Johnson, Jason S. Olfert, Matthew Dickau, Andrew Crayford, Yura Sevenco, Paul Williams, Benjamin Brem, Gregory Smallwood, *National Research Council Canada*

3IM.6 Design and Characterization of a Multiwavelength Thermal/Optical Carbon Analyzer. XIAOLIANG WANG, Benjamin Sumlin, Sierra Mayorga, Steven Gronstal, L.-W. Antony Chen, Judith Chow, John Watson, *Desert Research Institute*

3IM.7 Infrared Spectroscopy Calibration Models for Prediction of Thermal Optical Reflectance (TOR) OC and EC in IMPROVE Monitoring Network Sites: Interpretation and Extended Evaluation. Matteo Reggente, SATOSHI TAKAHAMA, Ann Dillner, *Ecole Polytechnique Federale de Lausanne, Switzerland*

3RA REMOTE AND REGIONAL AEROSOLS II

MIRAGE ROOM

Pete DeCarlo and Lindsay Yee, chairs

3RA.1 Cloud Particle Precursors in and around West Coast U.S. Storm Systems. MARKUS PETTERS, Hans Taylor, Nicholas Rothfuss, Paul DeMott, Samuel Atwood, Christina S. McCluskey, Thomas Hill, Sonia Kreidenweis, Kimberly Prather, Andrew Martin, *North Carolina State University*

3RA.2 Physical Characterization and Modeling of Particle Nucleation and Particle Growth in the Central U.S.. CHARLES STANIER, Robert Bullard, Can Dong, Ashish Singh, *University of Iowa*

3RA.3 Observed and Modeled Particle Size Distributions at Rural and Urban New York Sites. JAMES SCHWAB, G. Garland Lala, Fangqun Yu, H. Dirk Felton, Oliver Rattigan, *University at Albany, SUNY*

3RA.4 The Contributions of Amines to Ambient Wintertime Aerosol as Measured by High-Resolution Aerosol Mass Spectrometry. COURTNEY L. HERRING, Graham VanderSchelden, Manjula Canagaratna, Donna Sueper, Paola Massoli, Serena H. Chung, B. Thomas Jobson, Timothy M. VanReken, *Washington State University*

3RA.5 Human Particulate Matter Exposure Implications from Regional Pollutant Transport. Fatema Parvez, Carmen Lamancusa, KRISTINA WAGSTROM, *University of Connecticut*

3RA.6 Long-term Variation and Chemical Characteristics of Long-range-transported Aerosols at Background Site, Korea. KWANGYUL LEE, Young Joon Kim, Chang-Hee Kang, Jeong-soo Kim, Lim-seok Chang, Kihong Park, *Gwangju Institute of Science and Technology*

3RA.7 What Shapes the Aerosol Size Distribution at High Altitude? - Insights from the Alpine Site Jungfrauoch. 4:45 ERIK HERRMANN, Martin Gysel, Ernest Weingartner, Stephan Henne, Nicolas Bukowiecki, Emanuel Hammer, Zsofia Juranyi, Martine Collaud Coen, Laurent Vuilleumier, Martin Steinbacher, Franz Conen, Urs Baltensperger, *Paul Scherrer Institute*

3UA URBAN AEROSOLS II

REGENCY ROOM

Chelsea Corr and Nancy Sanchez, chairs

3UA.1 Characterizing the Volatility of Near-road Submicron Organic Aerosols Near a North Carolina Interstate Freeway. 3:15 PROVAT SAHA, Andrey Khlystov, Andrew Grieshop, *North Carolina State University*

3UA.2 Incremental Secondary Organic Aerosol Formation and Composition at Simulated Urban Atmospheric Reactivities. 3:30 MARY KACARAB, Lijie Li, William P. L. Carter, David R. Cocker III, *University of California, Riverside*

3UA.3 Secondary Organic Aerosol Formation from Aircraft Turbine Engine Exhaust. 3:45 Dogushan Kilic, Ru-Jin Huang, Benjamin Brem, Lukas Durdina, Imad El Haddad, Felix Klein, Avi Lavi, Simone Pieber, Theo Rindlisbacher, Yinon Rudich, Jing Wang, JAY SLOWIK, Urs Baltensperger, Andre Prévôt, *Paul Scherrer Institute*

3UA.4 Characterization of Fine Particulate Matter and Black Carbon Emissions from an Urban Bus Fleet: Emissions Measurements and High Spatial-resolution Inventory Development. 4:00 Timothy Dallmann, Eric Lipsky, Richa Khosla, Andrea Polli, ALBERT A. PRESTO, *Carnegie Mellon University*

3UA.5 Characterizing Aerosol Emissions from Light Duty Gasoline Vehicles. 4:15 ROYA BAHREINI, Jian Xue, Kent C. Johnson, Thomas D. Durbin, David Quiros, Shaohua Hu, Tao Huai, Alberto Ayala, Heejung S. Jung, *University of California, Riverside*

3UA.6 Chemical Evolution of Emissions from Meat Charbroiling. 4:30 CHRISTOS KALTSOUDIS, Evangelia Kostenidou, Evangelos Louvaris, Magdalini Psychoudaki, Epameinondas Tsiligiannis, Kalliopi Florou, Spyros Pandis, *University of Patras, Patra, Greece*

3UA.7 Micro-environmental Air Quality Impact of a Biomass Boiler with and without PM Emission Control. 4:45 ZHEMING TONG, Bo Yang, Kui Wang, Devraj Thimmaiah, Philip K. Hopke, Thomas Whitlow, Andrew Landers, K. Max Zhang, *Cornell University*

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

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

Wednesday

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

8:00 **Introduction of Plenary Speaker** Robert Harley, *University of California, Berkeley*

8:05 **AEESP Lecture: Application of Aerosol Science to Engineered Nanomaterials** Linsey Marr, *Virginia Tech*

Moderator Andrea Ferro, Conference Chair, *Clarkson University*

9:00 **Sinclair Award Presentation, Mercer Award Announcement** Tiina Reponen, Awards Committee Chair, *University of Cincinnati*

9:10 **AS&T Journal Update and AS&T Outstanding Publication Award** Peter McMurry, AS&T Editor-in-Chief, *University of Minnesota*

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 III - SOA FORMATION AND AGING

NICOLLET D2/D3

Tran Nguyen and Rebecca Schwantes, chairs

4AC.1 Secondary Organic Aerosol Yields from Isoprene under High NO Conditions. REBECCA SCHWANTES, Tran
9:45 Nguyen, Kelvin Bates, Xuan Zhang, Yuanlong Huang, Richard Flagan, John Seinfeld, *Caltech*

4AC.2 Secondary Organic Aerosol Yields from Isoprene Oxidation under Low-NO Conditions. KELVIN BATES, Rebecca
10:00 Schwantes, Tran Nguyen, Xuan Zhang, Yuanlong Huang, Richard Flagan, John Seinfeld, *Caltech*

4AC.3 Efficient Organic Aerosol Formation from Isoprene Photooxidation in Pristine Conditions. JIUMENG LIU, Ben H.
10:15 Lee, Emma D'Ambro, Felipe Lopez-Hilfiker, Becky Alexander, Rahul Zaveri, Jean C. Rivera-Rios, Frank Keutsch,
Siddharth Iyer, Theo Kurten, Ying-Hsuan Lin, Jason Surratt, Pattanun Achakulwisut, Loretta Mickley, Joel A. Thornton,
John Shilling, *Pacific Northwest National Laboratory*

**4AC.4 Oxidation Chemistry and Secondary Organic Aerosol Yields from Isoprene when Alkylperoxy Radical (RO₂)
10:30 Lifetimes Approach Ambient Values.** TRAN NGUYEN, Rebecca Schwantes, Kelvin Bates, Xuan Zhang, Yuanlong
Huang, Richard Flagan, Paul Wennberg, John Seinfeld, *California Institute of Technology*

**4AC.5 Explicit Simulation of the Secondary Organic Aerosol Formation of Isoprene from Partitioning and Aerosol
10:45 Phase Reactions.** ROSS BEARDSLEY, Myoseon Jang, *University of Florida*

**4AC.6 Photochemical Aging of a-Pinene and b-Pinene Secondary Organic Aerosol Formed from Nitrate Radical
11:00 Oxidation.** THEODORA NAH, Javier Sanchez, Christopher Boyd, Nga Lee Ng, *Georgia Institute of Technology*

**4AC.7 Effect of Temperature and Dilution on Secondary Organic Aerosol (SOA) Formed from NO₃ Oxidation of
11:15 Monoterpenes: A Case Study for Aerosol Evaporation during the Night-to-Day Transition.** CHRISTOPHER
BOYD, Theodora Nah, Lu Xu, Nga Lee Ng, *Georgia Institute of Technology*

4BA BIOAEROSOLS I - EFFECT ON WATER AND CLOUDS

REGENCY ROOM

Alex Huffman and Ryan Mason, chairs

**4BA.1 Biotransformation of Various Saccharides and Production of Exopolymeric Substances (EPSs) by
9:45 Cloud-borne Bacillus SP. 3B6.** ANNE-MARIE DELORT, Maria Matulova, Slavomira Husarova, Martine Sancelme, Peter
Capek, *Université Clermont Auvergne, France*

- 4BA.2 Aerosolization of Two Strains (Ice+ and Ice-) of Pseudomonas Syringae in a Collision Nebulizer at Different Temperatures.** RENEE PIETSCH, Ray David, Linsey Marr, Boris Vinatzer, David Schmale, *Virginia Tech*
10:00
- 4BA.3 Hygroscopicity and Cloud Condensation Nuclei Activity of Bacterial Cells.** Natasha DeLeon-Rodriguez, Aikaterini Bougiatioti, Nimmy Mathew, Arnaldo Negron-Marty, Sara Purdue, Samantha Waters, Michael Bergin, Konstantinos Konstantinidis, ATHANASIOS NENES, *Georgia Institute of Technology*
10:15
- 4BA.4 The Hygroscopic Properties of Pollenkitt and Its Importance for Regulating Water Uptake by Pollen Particles.** SARA PURDUE, Nonne Prisle, Haisheng Lin, Carson Meredith, Athanasios Nenes, *Georgia Institute of Technology*
10:30
- 4BA.5 Bacterial Aerosol Concentration Associated with Dust Passage at Southwestern Japan Observed in 2010-2014.** KOTARO MURATA, Kazutaka Hara, Daizhou Zhang, *Prefectural University of Kumamoto*
10:45
- 4BA.6 Production of Siderophores by Cloud Microorganisms: Occurrence and Potential Impact on Cloud Chemistry.** Nolwenn Wirgot, Virginie Vinatier, Martine Sancelme, Muriel Joly, Magali Abrantes, Laurent Deguillaume, ANNE-MARIE DELORT, *Université Clermont Auvergne, France*
11:00
- 4BA.7 The Relationship between Fluorescent Particles and Ice Nuclei Measured at Two Contrasting Sites: A Coastal Marine Site (Ucluelet, Canada) and a Semi-urban Location (Saclay, France).** DAVID O'CONNOR, Ryan H. Mason, Meng Si, Jixiao Li, Cédric Chou, Robin Dickie, Allan Bertram, Walfried Lassar, Kyle Pierce, Dominique Baisnee, Roland Sarda-Esteve, J. Alex Huffman, *University of Denver, CO*
11:15
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4CO COMBUSTION

NICOLLET D1

Chris Sorensen and Adam Boies, chairs

- 4CO.1 Secondary Organic Aerosol Production from Intermediate Volatility Organic Compound Emissions from On-road Vehicles.** YUNLIANG ZHAO, Ngoc Nguyen, Albert A. Presto, Christopher Hennigan, Andrew May, Allen Robinson, *Carnegie Mellon University*
9:45
- 4CO.2 An Investigation of How Well Aerosol Instruments Estimate Solid Particle Number and PM Mass in Vehicle Emissions.** MATTI MARICQ, *Ford Motor Company*
10:00
- 4CO.3 Emission Characterization of a Large Scale Wood Pellet Combined Heat and Power System.** KUI WANG, Philip K. Hopke, Devraj Thimmaiah, *Clarkson University*
10:15
- 4CO.4 Combustion Emissions from Biomass Cookstoves vs. Operational Firepower: Lab and Field Observations.** KELSEY BILSBACK, Kelley Hixson, Michael Johnson, Jack Kodros, James Liacos, Eric Lipsky, Christian L'Orange, Jeffrey R. Pierce, Brooke Reynolds, Allen Robinson, R. Subramanian, John Volckens, *Colorado State University*
10:30
- 4CO.5 Size Resolved High Temperature Oxidation Kinetics of Nano-Sized Metal Particles.** R. Jacob, Y. Zong, S. Li, MICHAEL ZACHARIAH, *University of Maryland*
10:45
- 4CO.6 Observations of Two Reverse Particle Growth Pathways during the Char Burning Stage of Residential Coal Combustion.** QING LI, Jingkun Jiang, Jianguo Deng, Lei Duan, Wei Zhou, Jiming Hao, *Tsinghua University*
11:00
- 4CO.7 Generation of Particulate Matters (PM) by Burning Pulverized Coals and Biomasses for In-Vitro Toxicity Study.** HUNGSOO JOO, Shila Maskey, Mustafa Mamun, Arom Seo, KwangYul Lee, Kihong Park, *Gwangju Institute of Science and Technology*
11:15
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4IA INDOOR AEROSOLS II

LAKESHORE A

Michael Waring and Brent Stephens, chairs

- 4IA.1 Indoor Secondary Organic Aerosol Formation due to α -Terpineol Ozonolysis.** Yanan Yang, MICHAEL WARING, *Drexel University*
9:45

- 4IA.2 Investigation of the Reactivity of Model and Genuine Organic Surface Layers in the Indoor Environment.** 10:00 SHOUMING ZHOU, Matthew Forbes, Jonathan Abbatt, *University of Toronto, Toronto, Canada*
- 4IA.3 The Formation of Indoor Secondary Pollutants and Their Potential Health Effects.** YU HUANG, Junji Cao, 10:15 Shun-Cheng Lee, *Institute of Earth Environment, Chinese Academy of Sciences*
- 4IA.4 Model Framework to Predict Indoor Aerosol Concentrations based on Composition, Volatility, Water Uptake, and Mechanical Losses.** MICHAEL WARING, Peter DeCarlo, *Drexel University* 10:30
- 4IA.5 Performance of Wearable Ionization Air Cleaners: Ozone Emission and Particle Removal.** Shanshan Shi, Shihao 10:45 Zhu, Eon Lee, Bin Zhao, YIFANG ZHU, *University of California, Los Angeles*
- 4IA.6 Effects of Environmental Factors on Chemically-Specific Indoor-Outdoor Ratios.** ANITA JOHNSON, Michael 11:00 Waring, Peter DeCarlo, *Drexel University*
- 4IA.7 Experimental Study of Active Flow and Photocatalytic Materials for Indoor Air Quality Applications.** Denise 11:15 Mauney, Christella Suwongso, Wil Srubar, LUPITA MONTOYA, *University of Colorado, Boulder*
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4IM INSTRUMENTATION AND METHODS III

LAKESHORE B/C

Leah Williams and Nathan Kreisberg, chairs

- 4IM.1 Evaluation of a Low Flow Particle Concentrator for Atmospheric Aerosols.** LEAH WILLIAMS, Philip Croteau, John 9:45 Jayne, Thorsten Hohaus, Douglas Worsnop, Susanne Hering, Gregory Lewis, *Aerodyne Research, Inc.*
- 4IM.2 Enhanced Concentration and Charging of Ultrafine Particles.** NATHAN KREISBERG, Steven Spielman, Gregory 10:00 Lewis, Susanne Hering, Michael J. Lawler, James N. Smith, Peter H. McMurry, *Aerosol Dynamics Inc.*
- 4IM.3 Aerosol Microconcentration for Aerosol Measurement Using Optical Spectroscopies.** LINA ZHENG, Pramod 10:15 Kulkarni, Huayan Liang, Konstantinos Zavvos, G.J. Deye, M. Eileen Birch, Dionysios Dionysiou, *Centers for Disease Control and Prevention, NIOSH*
- 4IM.4 Performance Comparison of Aerosol Corona-based Mini-chargers for Miniature Ultrafine Particle Sizers.** DI 10:30 LIU, Qiaoling Liu, Da-Ren Chen, *Virginia Commonwealth University*
- 4IM.5 Bipolar Diffusion Charging Efficiencies of Particles Ranging from 100 to 900nm.** HUADONG YANG, Meilu He, 10:45 Suresh Dhaniyala, *Clarkson University*
- 4IM.6 Optical Trap for Both Transparent and Absorbing Particles in Air Using a Single Shaped Laser Beam for Measuring Raman Spectra.** YONG-LE PAN, Brandon Redding, Chuji Wang, Steven Hill, Joshua Santarpia, *US Army Research Lab* 11:00
- 4IM.7 The Use of Pneumatic Nebulization to Enable Aerosol Based Measurements of 5-50 nm Particles in Liquid Suspensions.** SEONGHO JEON, Gary Van Schooneveld, Derek Oberreit, Christopher Hogan Jr., *University of Minnesota* 11:15
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4UA URBAN AEROSOLS III

MIRAGE ROOM

Roya Bahreini and Courtney Herring, chairs

- 4UA.1 Health and Air Quality Benefits of Reduced Primary Ultrafine Particulate Matter Associated with the No-Burn Day Rule in the San Joaquin Valley, California.** Jianlin Hu, MICHAEL KLEEMAN, David Lighthall, *University of California, Davis* 9:45
- 4UA.2 Impact of Global Climate Change on Ozone, Particulate, and Secondary Organic Aerosol Concentrations in California: a Model Perturbation Analysis.** JEREMY HORNE, Donald Dabdub, *University of California, Irvine* 10:00
- 4UA.3 Air Quality Co-Benefits of Climate Mitigation Strategies in California.** CHRISTINA ZAPATA, Hongliang Zhang, 10:15 Sonia Yeh, Christopher Yang, Michael Kleeman, *University of California, Davis*

- 4UA.4 Evaluation of Ozone and PM_{2.5} Model Performance from the Incorporation of Temporally and Spatially Resolved Real-Time Traffic Profiles.** SCOTT A. EPSTEIN, Xinqiu Zhang, Kalam Cheung, Sang-Mi Lee, Joe Cassmassi, South Coast Air Quality Management District
10:30
- 4UA.5 Linking High Time Resolution Particle Size Distribution Measurements to Real-world Emission Factors: Variability in Pollutant Emissions Relating to Particle Characteristics.** JON M WANG, Naomi Zimmerman, Cheol-Heon Jeong, Robert Healy, Nathan Hilker, Greg J. Evans, SOCAAR, University of Toronto
10:45
- 4UA.6 Effects of After-Treatment Control Technologies on Heavy-Duty Diesel Truck Emissions.** CHELSEA PREBLE, Timothy Dallmann, Nathan Kreisberg, Susanne Hering, Robert Harley, Thomas Kirchstetter, University of California, Berkeley
11:00
- 4UA.7 Spatiotemporal Comparison of Highly-Resolved Emissions and Concentrations of Carbon Dioxide and Criteria Pollutants in Salt Lake City, Utah.** DANIEL MENDOZA, John Lin, Logan Mitchell, James Ehleringer, University of Utah
11:15

Wednesday 1:00 PM - 2:45 PM
Session 5: Platform

5AC AEROSOL CHEMISTRY IV - SOA FORMATION AND AGING
NICOLLET D2/D3

Alan Shihadeh and Lea Hildebrandt Ruiz, chairs

- 5AC.1 Phase Equilibration Timescales of Engine Exhaust SOA Generated in a Photo-oxidation Reactor.** Mariam Fawaz, Mohamad Baassiri, Nareg Karaoghlanian, ALAN SHIHADDEH, American University of Beirut
1:00
- 5AC.2 Laboratory Study of Secondary Organic Aerosol Mixing at Low and High Relative Humidity: Implication for Moisture-induced Phase Change.** QING YE, Ellis Shipley Robinson, Ryan Sullivan, Neil Donahue, Carnegie Mellon University
1:15
- 5AC.3 Rethinking Secondary Organic Aerosol Formation from Aromatic Hydrocarbons: Role of NO_x, ·OH and Substitute.** LIJIE LI, Ping Tang, Chia-Li Chen, Shunsuke Nakao, Li Qi, David R. Cocker III, University of California, Riverside
1:30
- 5AC.4 Formation and Growth of Secondary Organic Aerosol Particles from the Ozonolysis of α -cedrene: Contributions from High Molecular Weight Products.** YUE ZHAO, Lisa M. Wingen, Veronique Perraud, Barbara J. Finlayson-Pitts, University of California, Irvine
1:45
- 5AC.5 SOA Formation from Photooxidation of Naphthalene and Methylnaphthalenes with m-Xylene and Surrogate Mixtures.** Chia-Li Chen, Lijie Li, DAVID R. COCKER III, University of California, Riverside
2:00
- 5AC.6 Secondary Organic Aerosol from Chlorine-Radical Initiated Oxidation of Volatile Organic Compounds: Organic Aerosol Mass Yields, Composition, and Gas-Phase Products.** Dongyu Wang, Surya Dhulipala, LEA HILDEBRANDT RUIZ, University of Texas at Austin
2:15
- 5AC.7 Secondary Organic Aerosol Formation from the Photochemical Oxidation of Fuels: Quantifying the Impact of Fuel Composition and Environmental Variables.** TERRY LATHAM, Phillips 66
2:30

5AP AEROSOL PHYSICS I - HOMOGENEOUS AND HETEROGENEOUS NUCLEATION
LAKESHORE B/C

Barbara Wyslouzil and Paul Winkler, chairs

- 5AP.1 Heterogeneous Nucleation Experiments of n-Butanol Vapor at Varying Nucleation Temperature.** PAUL M. WINKLER, Robert McGraw, Paul E. Wagner, Universitaet Wien, Vienna, Austria
1:00

- 5AP.2 Heterogeneous Nucleation of CO₂ on H₂O Ice Particles.** SHINOBU TANIMURA, Yensil Park, Barbara Wyslouzil, *The Ohio State University*
1:15
- 5AP.3 MD Simulation of Surface Tension of Organic Droplets Based on Energy Different Method and Evaporation Correction.** XIAOXIANG WANG, Hang Su, Ulrich Poeschl, Yafang Cheng, *Max Planck Institute for Chemistry*
1:30
- 5AP.4 Linking Vapor Uptake Coefficients to Shifts in Mobility for Cluster Ions and Nanoparticles.** Vivek Rawat, Hui Ouyang, Derek Oberreit, Jikku Thomas, Carlos Larriba-Andaluz, CHRISTOPHER HOGAN JR., *University of Minnesota*
1:45
- 5AP.5 Interpreting Heterogeneous Nucleation Probability Measurements: Molecule-Level Cluster Properties and Unusual Temperature Dependence.** ROBERT MCGRAW, Paul M. Winkler, Paul E. Wagner, *Brookhaven National Laboratory*
2:00
- 5AP.6 Freezing of Supercooled n-decane Nanodroplets in a Supersonic Nozzle.** VIRAJ MODAK, Barbara Wyslouzil, *The Ohio State University*
2:15
- 5AP.7 Molecular Dynamics Simulation of Water Vapor Forming Aerosols on Solid Precursor Particles.** DONGUK SUH, Kenji Yasuoka, *Keio University*
2:30

5BA BIOAEROSOLS II - OUTDOOR MEASUREMENTS

REGENCY ROOM

David O'Connor and Anne Perring, chairs

- 5BA.1 On-line Fluorescence Detection of Primary Biological Aerosol Particles (PBAP) in an Urban Environment Heavily Impacted by Black Carbon Particles.** Stig Hellebust, David O'Connor, JOHN SODEAU, Dominique Baisnee, Roland Sarda-Estève, Michel Thibaudon, Gavin McMeeking, Ian Crawford, Martin Gallagher, J. Alex Huffman, Virginia E. Foot, Jean-Maxime Roux, Christophe Bossuet, Walfried Lassar, Kyle Pierce, *University College Cork*
1:00
- 5BA.2 Mobile Sampling of Bioaerosols around Animal Feeding Operations.** ELLIS SHIPLEY ROBINSON, Anne Perring, Eilerman Scott, Jeff Peischl, J. Andrew Neuman, Holloway Maxwell, Aikin Kenneth, Joshua P. Schwarz, Ru-Shan Gao, Thomas Ryerson, David Fahey, *CU-CIRES - NOAA ESRL*
1:15
- 5BA.3 Fluorescent Biological Aerosol Particle Concentrations and Size Distributions Measured with the Waveband Integrated Bioaerosol Spectrometer WIBS-4 in Nanjing China.** Xiawei Yu, Zhibin Wang, Zhengning Xu, J. Alex Huffman, Christopher Pöhlker, Uwe Kuhn, Aijun Ding, Yafang Cheng, Ulrich Poeschl, Zhouqing Xie, HANG SU, *MPIC*
1:30
- 5BA.4 The Effect of the Atlanta Urban Meteorological Variability in the Abundance and Behavior of Bioaerosols: A Fluorescence and Molecular Biology Approach.** ARNALDO NEGRON-MARTY, Natasha DeLeon-Rodriguez, Samantha Waters, Luke Ziemba, Bruce Anderson, Michael Bergin, Konstantinos Konstantinidis, Athanasios Nenes, *Georgia Institute of Technology*
1:45
- 5BA.5 Meteorological Influences on the Size and Concentration of Airborne Pollens.** CHATHURIKA RATHANYAKE, Josh Kettler, Thilina Jayarathne, Elizabeth Stone, *University of Iowa*
2:00
- 5BA.6 Bioaerosol Emissions and Detection of Airborne Antibiotic Resistance Genes from a Wastewater Treatment Plant.** Jing Li, Liantong Zhou, Xiangyu Zhang, Caijia Xu, Liming Dong, MAOSHENG YAO, *Peking University*
2:15
- 5BA.7 Further Development of a Passive Bioaerosol Sampler Using Ferroelectric Polymer.** JENNIFER THERKORN, Jerry Scheinbeim, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
2:30

5CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE I

MIRAGE ROOM

Rob Griffin and Adam Bateman, chairs

- 5CA.1 Aerosol Characterization over the Southeastern United States Using High Resolution Aerosol Mass Spectrometry: Spatial and Seasonal Variation of Aerosol Composition, Sources, and Organic Nitrates.** NGA LEE NG, Lu Xu, Sriram Suresh, Hongyu Guo, Rodney J. Weber, *Georgia Institute of Technology*
1:00

- 5CA.2 Organosulfates in Centreville, Alabama: Quantification and Insights to Their Formation.** ANUSHA
1:15 PRIYADARSHANI SILVA HETTIYADURA, Thilina Jayarathne, Elizabeth Stone, *University of Iowa*
- 5CA.3 Sources and Composition of Aerosol Measured near Houston, TX: Anthropogenic-biogenic Interactions.**
1:30 JEFFREY BEAN, Cameron Faxon, Puneet Chhabra, Manjula Canagaratna, Lea Hildebrandt Ruiz, *University of Texas at Austin*
- 5CA.4 Aircraft Measurement of Isoprene-derived Organic Aerosol during the Southeast Nexus (SENEX) Campaign Using an Aerosol Mass Spectrometer.** LU XU, Ann M. Middlebrook, Jin Liao, Joost de Gouw, Andre Welti, Hongyu Guo, Jack J. Lin, Aikaterini Bougiatioti, Rodney J. Weber, Athanasios Nenes, Ben H. Lee, Joel A. Thornton, John Holloway, Jessica Gilman, Brian Lerner, Martin Graus, Carsten Warneke, Michael Trainer, Nga Lee Ng, *Georgia Institute of Technology*
- 5CA.5 Atmospheric Observations of Secondary Aerosol Formation from Isoprene in the St. Louis Region during SLAQRS 2013.** YAPING ZHANG, Raul Martinez, Dhruv Mitroo, Michael Walker, Christopher Oxford, Xiaochen Zuo, David Hagan, Jay Turner, Li Du, Dylan Millet, Munkhbayar Baasandorj, Lu Hu, Rodney J. Weber, Laura King, Brent Williams, *Washington University in St. Louis*
- 5CA.6 Quantification of Organic Molecules as Potential Tracers for Anthropogenic Secondary Organic Aerosol.**
2:15 ELIZABETH STONE, Ibrahim Al Nagemah, Josh Kettler, *University of Iowa*
- 5CA.7 Measurements of In-situ SOA Formation Using an Oxidation Flow Reactor at GoAmazon2014/5.** BRETT PALM,
2:30 Suzane Simoes de Sa, Pedro Campuzano-Jost, Douglas Day, Weiwei Hu, Roger Seco, Jeong-Hoo Park, Alex Guenther, Saewung Kim, Joel Brito, Florian Wurm, Paulo Artaxo, Lindsay Yee, Gabriel Isaacman-VanWertz, Allen H. Goldstein, Rodrigo A. F. Souza, Antonio O. Manzi, Oscar Vega, Julio Tota, Matt Newburn, Lizabeth Alexander, Scot Martin, William Brune, Jose-Luis Jimenez, *University of Colorado*

5IA INDOOR AEROSOLS III

LAKESHORE A

Kerry Kinney and Karen Dannemiller, chairs

- 5IA.1 Physical Characterization of Indoor Dust.** Haaland Daniel, Alireza Mahdavi, JEFFREY SIEGEL, *University of Toronto*
1:00
- 5IA.2 Continuous PM_{2.5} Monitor for Commercial Indoor Environments in China.** James Farnsworth, Siva Iyer, ROB
1:15 CALDOW, *TSI Incorporated*
- 5IA.3 Laboratory Evaluation and Calibration of Three Low-cost Particle Sensors for Particulate Matter Measurement.** Yang Wang, JIAYU LI, He Jing, Qiang Zhang, Jingkun Jiang, Pratim Biswas, *Washington University in St Louis*
1:30
- 5IA.4 A Method to Rapidly Measure Size-Resolved Particle Penetration Factors in Residences.** HAORAN ZHAO, Brent
1:45 Stephens, *Illinois Institute of Technology*
- 5IA.5 Computational Fluid Dynamics Application for the Prediction of the Evolution of Aerosol Transport in an Indoor Space: Effect of Furniture and Different Surface Types.** Andrew Clohessey, Tanvir Farouk, SHAMIA
2:00 HOQUE, *USC*
- 5IA.6 Sampling Indoor Aerosols on the International Space Station.** MARIT MEYER, Gary Casuccio, *NASA Glenn Research Center*
2:15
- 5IA.7 A Comparative Controlled Study for the Characterization of PM_{2.5} Emitted during Heating Corn Oil and Ground Beef (PM_{2.5}, OC, EC and Elemental Concentrations).** Soudabeh Gorjinezhad, Mehdi Amouei Torkmahalleh, Hedyie Sumru Ünlüevcek, E. Cihan, B. Tanış, N. Soy, N. Özasan, M. Keleş, Fatma Öztürk, PHILIP K HOPKE, *Middle East Technical University Northern Cyprus Campus*
2:30

5NM NANOPARTICLES AND MATERIALS SYNTHESIS I

NICOLLET D1

Wei-Ning Wang and Tandeep Chadha, chairs

- 5NM.1 Nanosilver Toxicity: Enhanced Ag⁺ Ion Release from Aqueous Nanosilver Suspensions by Absorption of**

- 1:00 **Ambient CO₂.** Kakeru Fujiwara, Georgios A. Sotiriou, SOTIRIS E. PRATSINIS, *ETH Zurich*
- 5NM.2 Evaluating the Evolution of Silver Nanoparticles in Gastrointestinal Tract through Application of State-of-the-Art Methods to Simulated Gastric Fluids of Increasing Complexity.** ANDREW AULT, Jessica Axson, Diana Stark, Amy Bondy, Sonja Capracotta, Justin Keeney, Andrew Maynard, Martin Philbert, Ingrid Bergin, *University of Michigan*
1:15
- 5NM.3 Aerosol Synthesis of 3D Silver-Graphene-Titanium Oxide Composite.** HEE DONG JANG, Sun Kyung Kim, Hankwon Chang, Eun Hee Jo, *Korea Institute of Geoscience and Mineral Resources*
1:30
- 5NM.4 Studying the Charging Characteristics of Flame Generated Particles below 3 nm with a Condensation Particle Counter Battery (CPCB).** YANG WANG, Jiayu Li, Jiayi Fang, Nathan Reed, Pratim Biswas, *Washington University in St Louis*
1:45
- 5NM.5 Plasmonic Properties of Phosphorus-doped and Boron-doped Silicon Nanocrystals.** Nicolaas J. Kramer, KATELYN SCHRAMKE, Uwe R. Kortshagen, *University of Minnesota*
2:00
- 5NM.6 Quantitative Measurement of Nanoparticle Concentration by Electron Microscopy Techniques.** KRISTIN BUNKER, Traci Lersch, Gary Casuccio, *RJ Lee Group, Inc.*
2:15
- 5NM.7 Selective Oxidation of Carbon on Silicon Kerf using Furnace Aerosol Reactor (FuAR) aided by TGA Kinetic Estimations.** MIGUEL VAZQUEZ PUFLEAU, Tandeep Chadha, Gregory Yablonsky, Henry Erk, Pratim Biswas, *Washington University in St. Louis*
2:30

Wednesday 2:45 PM - 3:15 PM
Coffee Break

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

6AC AEROSOL CHEMISTRY V - SOA FORMATION AND AGING

NICOLLET D2/D3

Andrew Lambe and Alla Zelenyuk, chairs

- 6AC.1 Temperature Effects on Secondary Organic Aerosol Formation, Composition, and Phase State.** MARY KACARAB, David R. Cocker III, *University of California, Riverside*
3:15
- 6AC.2 Effect of Oxidant Concentration, Exposure Time and Seed Particles on Secondary Organic Aerosol Chemical Composition and Yield.** ANDREW LAMBE, Puneet Chhabra, Timothy Onasch, William Brune, James Hunter, Jesse Kroll, Molly Cummings, James Brogan, Yatish Parmar, Douglas Worsnop, Charles Kolb, Paul Davidovits, *Aerodyne Research, Inc.*
3:30
- 6AC.3 Influence of Vapor Wall Loss in Laboratory Chambers on Secondary Organic Aerosol (SOA) Formation from Select Low Vapor Pressure-Volatile Organic Compounds (LVP-VOCs).** WEIHUA LI, Lijie Li, Mary Kacarab, David R. Cocker III, *University of California, Riverside*
3:45
- 6AC.4 The Effects of Long-Wavelength UV Light on Photochemically Generated Organic Aerosols.** Iftikhar Awan, W. SEAN MCGIVERN, *National Institute of Standards and Technology*
4:00
- 6AC.5 Composition and Photochemistry of Biodiesel and Diesel Fuel SOA.** SANDRA BLAIR, Amanda MacMillan, Greg Drozd, Allen H. Goldstein, Peng Lin, Julia Laskin, Alexander Laskin, Sergey Nizkorodov, *University of California, Irvine*
4:15
- 6AC.6 Effective Absorption Cross Sections and Photolysis Rates of Model Secondary Organic Aerosol.** DIAN ROMONOSKY, Nujhat Ali, Mariyah Saiduddin, Sergey Nizkorodov, *University of California, Irvine*
4:30
- 6AC.7 The Effect of Hydrophobic Organics on Nucleation, Formation Yield, Volatility, Viscosity, and Oligomer Content of SOA Particles.** ALLA ZELENYUK, Dan Imre, Jacqueline Wilson, David Bell, Josef Beranek, ManishKumar Shrivastava, *Pacific Northwest National Laboratory*
4:45

6AE AEROSOL EXPOSURE I - AMBIENT EXPOSURES

LAKESHORE A

Dan Jaffe and Kirsten Koehler, chairs

- 6AE.1 Characterization of Ambient Residential Woodsmoke PM Exposures in Upstate New York.** GEORGE ALLEN, 3:15 *NESCAUM*
- 6AE.2 Multipollutant Analysis of Microenvironmental Exposures.** KIRSTEN KOEHLER, Nicholas Good, Christian L'Orange, 3:30 Anna Molter, Jennifer Peel, John Volckens, *Johns Hopkins School of Public Health*
- 6AE.3 Variability of Size-segregated PM Mass and Submicrometer Particle Numbers during Perambulations in a Small City.** JAN HOVORKA, Martina Pisova, Cecilia Leoni, Nikola Kuzelova, *Charles University in Prague* 3:45
- 6AE.4 Personal Air Pollution Intake: Combining Spatio-temporally Resolved Exposure and Inhalation Metrics.** 4:00 NICHOLAS GOOD, Taylor Carpenter, Brooke Anderson, Kirsten Koehler, Anna Molter, Ray Browning, Jennifer Peel, John Volckens, *Colorado State University*
- 6AE.5 Spatial Patterns and Environmental Justice of Traffic Related Pollutants in Pittsburgh, PA.** Yi Tan, Timothy 4:15 Dallmann, Allen Robinson, ALBERT A. PRESTO, *Carnegie Mellon University*
- 6AE.6 Diesel Particulate Matter and Coal Dust from Trains.** DAN JAFFE, Jon Hee, Francisco Gabela, Juliane L. Fry, 4:30 Benjamin Ayres, Makoto Kelp, *University of Washington, Bothell, WA, USA*
- 6AE.7 In Harm's Way: High-Resolution Modeling of Wildfire Plumes in the Western US for Use in Human Health Studies.** WILLIAM LASSMAN, Bonne Ford, Gabriele Pfister, Emily Fischer, Jeffrey R. Pierce, *Colorado State University* 4:45
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6AP AEROSOL PHYSICS II - PHYSICOCHEMICAL STRUCTURE AND PROPERTIES

LAKESHORE B/C

Chris Sorensen and Anne Maisser, chairs

- 6AP.1 Scanning Supersaturation CPC Applied as a Nano-CCN Counter for Size-resolved Analysis of the Hygroscopicity and Chemical Composition of Nanoparticles.** Zhibin Wang, HANG SU, Xin Wang, Nan Ma, Alfred 3:15 Wiedensohler, Ulrich Poeschl, Yafang Cheng, *Max Planck Institute for Chemistry*
- 6AP.2 The Crystal Structure of Nanosized Ice Particles Formed in a Supersonic Nozzle.** ANDREW AMAYA, Viraj Modak, 3:30 Harshad Pathak, Michael Bogan, Hartawan Laksmono, Claudiu Stan, Duane Loh, Jonas Sellburg, Raymond Sierra, Sebastien Boutet, Garth Williams, Marc Messerschmidt, Soenke Seifert, Randy Winans, Barbara Wyslouzil, *The Ohio State University*
- 6AP.3 Tandem Mobility-Mass Measurements of Bipolar Ions Generated in a Po-210 alpha Radiation Source.** ANNE 3:45 MAISSER, Jikku Thomas, Carlos Larriba-Andaluz, Siqin He, Christopher Hogan Jr., *University of Minnesota*
- 6AP.4 Superaggregate Structure in Diffusion Limited Cluster-Cluster Aggregation (DLCA).** WILLIAM HEINSON, Chris 4:00 Sorensen, Amit Chakrabarti, *Kansas State University*
- 6AP.5 Surface Charge Effects on the Dynamics of Electrostatically Confined Particles.** MATTHEW B. HART, Vasanthi 4:15 Sivaprakasam, Lee J. Johnson, Jay D. Eversole, *Naval Research Laboratory*
- 6AP.6 Aerosol Morphology Transformations from Humidity Cycling.** Thuong Phan, Hemanta Timsina, Dabrina Dutcher, 4:30 TIMOTHY RAYMOND, Ryan Snyder, *Bucknell University*
- 6AP.7 Control of Condensation onto 1-2 nm Particles in Laminar Growth Tubes via Lewis Number Modulation in He-CO₂ Gas Mixtures.** JIKKU THOMAS, Anne Maisser, Christopher Hogan Jr., *University of Minnesota* 4:45
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6BA BIOAEROSOLS III - TECHNIQUE DEVELOPMENT

REGENCY ROOM

Vasanthi Sivaprakasam and Bill Harris, chairs

- 6BA.1 Bioaerosols Composed of Bacteria or Proteins: A Model of Their Fluorescence and Its Variations with Size and Water Content.** STEVEN HILL, David Doughty, Chatt Williamson, Yong-Le Pan, Joshua Santarpia, *US Army Research Lab*
3:15
- 6BA.2 Measurements of Changes in the Fluorescence and Viability of Biological Particles Exposed to Outdoor Conditions Outside of Houston, TX.** JOSHUA SANTARPIA, Sean Kinahan, Crystal Glen, Andres Sanchez, Matthew Tezak, Steven Storch, Gabriel Lucero, Kevin Crown, Danielle Rivera, Bryce Ricken, Keiko Salazar, Yong-Le Pan, Steven Hill, Mark Coleman, Chatt Williamson, Don Collins, Manuel Salgado, Hawkyard Thomas, *Sandia National Laboratories*
3:30
- 6BA.3 Real-time Monitoring of Total and Biologically Viable Aerosol Particles in Cleanroom Environments.** Boaz Granot, PETER HAIRSTON, Darrick Niccum, *TSI Inc*
3:45
- 6BA.4 Protein Biomarkers on Airborne Fungal Spores are Modified by Ozone During Environmentally Relevant Exposures.** ODESSA GOMEZ, Anne Perring, Darrel Baumgardner, Mark T. Hernandez, *University of Colorado Boulder*
4:00
- 6BA.5 A Novel Technology to Study the Longevity of Bioaerosol as a Function of Atmospheric Conditions.** ALLEN E. HADDRELL, Mara Otero, Alice Barber, Richard Thomas, Jonathan P. Reid, *University of Bristol*
4:15
- 6BA.6 Raman Spectra of Individual Particles for Characterization of Atmospheric Aerosol.** STEVEN HILL, David Doughty, Alan Wetmore, *US Army Research Lab*
4:30
- 6BA.7 On-line Quantification of Anhydrosugars Emitted in the Atmosphere by High Performance Anion Exchange Chromatography with Pulsed Amperometric Detection (HPAEC-PAD).** ROLAND SARDA-ESTEVE, Jason Vivarnick, Dominique Baisnee, Christophe Bohard, Olivier Favez, Jean-Maxime Roux, Christophe Bossuet, *CEA*
4:45

6CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE II

MIRAGE ROOM

Jesse Kroll and Alex Lee, chairs

- 6CA.1 The Mixing State of Urban Black Carbon: From Single Particles to an Ensemble View.** ALEX K. Y. LEE, Megan D. Willis, Robert Healy, Jon M Wang, Cheol-Heon Jeong, Matthew West, Nicole Riemer, Greg J. Evans, Jonathan Abbatt, *University of Toronto*
3:15
- 6CA.2 Long-term Airborne Black Carbon Measurements on a Lufthansa Passenger Aircraft.** Jeannine Ditas, Hang Su, Dieter Scharffe, Gavin McMeeking, Yuxuan Zhang, Carl Brenninkmeijer, Ulrich Poeschl, YAFANG CHENG, *MPIC*
3:30
- 6CA.3 A 3D Particle-resolved Model to Quantify the Importance of Black Carbon Mixing State for CCN Properties.** JEFFREY H. CURTIS, Nicole Riemer, Matthew West, *University of Illinois at Urbana-Champaign*
3:45
- 6CA.4 Unconstrained Climate Impacts of Biofuel Combustion Due to Uncertain Carbonaceous Radiative and Cloud Effects.** JOHN KODROS, Catherine Scott, Salvatore Farina, Lee Yunha, Christian L'Orange, John Volckens, Jeffrey R. Pierce, *Colorado State University*
4:00
- 6CA.5 Measurements of Absorption Enhancement at High Relative Humidity Using Short-Pulse Photoacoustic Spectroscopy.** JAMES RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
4:15
- 6CA.6 Seasonal Variation of Urban Carbonaceous Aerosols in Nanjing, a Typical City in Yangtze River Delta, China.** Jie Zhang, YU ZHAO, *Jiangsu Provincial Academy of Environmental Science*
4:30
- 6CA.7 Comparison of Ambient Absorption Measured Using a CAPS PM_{2.5} Monitor and AE33 Aethalometer at DEM GAW Athens.** Stergios Vratolis, Timothy Onasch, Kostas Eleftheriadis, ANDREW FREEDMAN, *Aerodyne Research, Inc.*
4:45

6CT CONTROL TECHNOLOGY

NICOLLET D1

John Volckens and Sinan Sousan, chairs

- 6CT.1 A Mini-baghouse to Control Respirable Crystalline Silica Dust Generated by Sand Movers.** EMANUELE CAUDA, Art Miller, Barbara Alexander, Eric Esswein, Micheal Gressel, Jerry Kratzer, Amy Feng, Bradley King, *NIOSH*
3:15

- 6CT.2 Characterizing the In-Situ Size-Resolved Removal Efficiency of Residential and Light-Commercial HVAC Filters for Particle Sizes between 0.01 and 10 Micro-meter.** TORKAN FAZLI, Brent Stephens, *Illinois Institute of Technology*
3:30
- 6CT.3 Low-Pressure Particle Filtration Measurements.** Meilu He, SURESH DHANIYALA, Matthew Wagner, *Clarkson University*
3:45
- 6CT.4 Effect of Relative Humidity and Particle Material on Filter Loading.** QISHENG OU, David Y. H. Pui, Allan Ouyang, *University of Minnesota*
4:00
- 6CT.5 PM2.5 Loading Characteristics of Commercial Indoor Electret HVAC and Air Cleaner Filter Media.** MIN TANG, Sheng-Chieh Chen, De-Qiang Chang, David Y. H. Pui, *South China University of Technology, University of Minnesota*
4:15
- 6CT.6 Numerical Simulation of N95 FFR Efficiency Relative to Aerosol Size Distribution.** PATRICK O'SHAUGHNESSY, Joel Ramirez, *University of Iowa*
4:30
- 6CT.7 Inactivation of Bacteria by Nanotechnology-Based Consumer Spray Products.** JENNIFER THERKORN, Leonardo Calderón, Benton Cartledge, Brian Majestic, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
4:45

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

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

Thursday

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

- 8:00 **Introduction of Plenary Speaker** Sheryl Ehrman, *University of Maryland*
- 8:05 **Friedlander Lecture: Science and Public Policy: Past, Present and Future of the PM NAAQS** Philip Hopke, *Clarkson University*
- Moderator** Andrea Ferro, Conference Chair, *Clarkson University*
- 9:00 **Friedlander Award Presentation, AAAR Fellows** Tiina Reponen, Awards Committee Chair, *University of Cincinnati*

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

Pete Raynor and Kim Anderson, chairs

- 7AG.1 Creating and Evaluating a New National Inventory for Livestock Ammonia Emissions in the United States.** 9:45 ALYSSA MCQUILLING, Peter Adams, *Carnegie Mellon University*
- 7AG.2 Characterization of the Oxidation Chemistry of Secondary Aliphatic Amines Under Dry and Humid Conditions.** 10:00 DEREK PRICE, David R. Cocker III, *University of California, Riverside*
- 7AG.3 Investigating the Regional Scale Impacts of Amine-Sulfuric Acid New Particle Formation.** 10:15 JAN JULIN, Benjamin Murphy, Tinja Olenius, Oona Kupiainen-Määttä, Lars Ahlm, Saeed Falahat, David Patoulias, Christos Fountoukis, Hanna Vehkamäki, Spyros Pandis, Ilona Riipinen, *Stockholm University*
- 7AG.4 Inhalable Particle Exposures in Northern Colorado Dairies.** 10:30 KIMBERLY ANDERSON, Josh Scaeffler, John Mehaffy, Jessy Tryon, Amanda VanDyke, Mary Bradford, Stephen Reynolds, T. Renee Anthony, Darrah Sleeth, John Volckens, *Colorado State University*
- 7AG.5 Viability and Particle Size Distribution of Airborne Influenza Virus from Acutely Infected Pigs.** 10:45 Montserrat Torremorell, CARMEN ALONSO, Peter Raynor, Peter Davies, *College of Vet Med, University of Minnesota*
- 7AG.6 Filter Evaluation Methodology for Swine Barn Applications.** 11:00 JOHN HORNS, Christine Loza, Kelly Sater, Scott Dee, *3M*
- 7AG.7 Identification of Meteorological Predictors of Spore Release of Fusarium Graminearum.** 11:15 RAY DAVID, Amir BozorgMagham, David Schmale, Shane Ross, Linsey Marr, *Virginia Tech*
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7CC AEROSOLS, CLOUDS, AND CLIMATE I

MIRAGE ROOM

Jian Wang and Tim Gordon, chairs

- 7CC.1 Surfactant Effect on Cloud Condensation Nuclei for Two-Component Internally Mixed Aerosols.** 9:45 SARAH SUDA PETERS, Markus Petters, *North Carolina State University*
- 7CC.2 CCN Activity of Amazonian Aerosols: Diel and Seasonal Variations.** 10:00 Ryan Thalman, Chongai Kuang, Stephen Springston, Gunnar Senum, Arthur J. Sedlacek, Thomas Watson, JIAN WANG, Suzane Simoes de Sa, Scot Martin, Lizabeth Alexander, Brett Palm, Weiwei Hu, Douglas Day, Pedro Campuzano-Jost, Jose-Luis Jimenez, Henrique Barbosa, Paulo Artaxo, Rodrigo A. F. Souza, Antonio O. Manzi, Mira Krüger, Ulrich Poeschl, *Brookhaven National Laboratory*
- 7CC.3 How will Modern Light-Duty Diesel Vehicles Modify CCN?** 10:15 DIEP VU, Daniel Short, Georgios Karavalakis, Thomas D. Durbin, Akua Asa-Awuku, *University of California, Riverside*
- 7CC.4 The Relationship of Hygroscopicity Parameter of Organic Aerosols to Their Oxidation Level.** 10:30 FAN MEI, Jian Wang, Qi Zhang, Jose-Luis Jimenez, Shan Zhou, Ari Setyan, Patrick Hayes, Amber Ortega, Jianzhong Xu, Jonathan Taylor, James Allan, *Pacific Northwest National Laboratory*
- 7CC.5 Size-Resolved Measurements of Ice Nucleating Particles at North American and European Sites.** 10:45 RYAN H. MASON, Meng Si, Cédric Chou, Victoria Irish, Robin Dickie, Pablo Elizondo, Rachel Wong, Miranda Brintnell, Michael Elsassar, Walfried Lassar, Kyle Pierce, Kaitlyn J. Suski, Jonathan Abbatt, Paul DeMott, Thomas Hill, J. Alex Huffman, W. Richard Leitch, Annie-Marie Macdonald, Andrew Platt, Roland Sarda-Esteve, Corinne L. Schiller, Desiree Toom-Sauntry, Allan Bertram, *University of British Columbia*
- 7CC.6 Contact Freezing of Water by Simple Ionic Compounds.** 11:00 JOSEPH NIEHAUS, Will Cantrell, *Michigan Technological University*
- 7CC.7 The Effect of Particle Size, Shape, and Composition on Ice Nucleation.** 11:15 DAVID BELL, Jacqueline Wilson, Naruki Hiranuma, Ottmar Möhler, Harald Saathoff, Josef Beranek, Gourihar Kulkarni, Dan Imre, Alla Zelenyuk, *Pacific Northwest National Laboratory*
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7CH HAZE IN CHINA: SOURCES, FORMATION MECHANISMS, AND CURRENT CHALLENGES I

LAKESHORE A

Tong Zhu and Shuxiao Wang, chairs

- 7CH.1 Effects of Sulfate Seed Particles on Secondary Organic Aerosol Formation from α -pinene Photooxidation.** 9:45 JIMING HAO, Biwu Chu, Hideto Takekawa, John Liggi, Shao-Meng Li, *School of Environment, Tsinghua University*
- 7CH.2 Importance of Water to Heterogeneous Reaction of Peroxides on Authentic Particles.** 10:00 Qinqin Wu, Liubin Huang, Hao Liang, Yue Zhao, Dao Huang, ZHONGMING CHEN, *Peking University*
- 7CH.3 Chemical and Optical Properties of Carbonaceous Aerosol in China.** 10:15 MEI ZHENG, Caiqing Yan, Jing Cai, Xiaoying Li, Yanjun Zhang, *Peking University*
- 7CH.4 Vertical Profiles of Aerosol Optical Properties and NO_2 during two Severe Haze Episodes in Beijing.** 10:30 QINGQING WANG, Wei Du, Chen Chen, Weiqi Xu, Tingting Han, Dongsheng Ji, Zifa Wang, Yele Sun, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*
- 7CH.5 A Modeling Study of Secondary Organic Aerosol in China: Spatial and Temporal Variations and Precursor Contributions.** 10:45 PENG WANG, Hongliang Zhang, Jianlin Hu, Qi Ying, *Texas A&M University*
- 7CH.6 Simulation of Organic Aerosols in China with Two-dimensional Volatility Basis Set.** 11:00 Shuxiao Wang, BIN ZHAO, Neil Donahue, Xiaofeng Huang, Jiming Hao, *Tsinghua University*
- 7CH.7 Sources of Organic Aerosol during Severe Haze Episodes in Beijing.** 11:15 CAIQING YAN, Mei Zheng, Orjan Gustafsson, Carme Bosch, August Andersson, Xiaoying Li, Huaiyu Fu, *Peking University*
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7IM INSTRUMENTATION AND METHODS IV - SIZE AND MOBILITY*LAKESHORE B/C*

Kenjiro Iida and Steven Spielman, chairs

- 7IM.1 Aerosol Surface Area as an Alternative Metric for Source Testing, Ambient Air Monitoring, and Health Effect Study.** 9:45 HEEJUNG S. JUNG, *University of California Riverside*
- 7IM.2 Design and Performance Improvements of the Miniature Electrical Aerosol Spectrometer.** 10:00 JAYASURIYA, Suresh Dhaniyala, *Clarkson University*
- 7IM.3 Aerosol Mobility Imaging for Rapid Size Distribution Measurements.** 10:15 Steven Spielman, Susanne Hering, Chongai Kuang, Jian Wang, TAMARA PINTERICH, *Aerosol Dynamics Inc.*
- 7IM.4 Classifying Nanoparticles with the Aerodynamic Aerosol Classifier: Monodisperse Classification without Particle Charge Artifacts.** 10:30 JASON S. OLFERT, Charlie Lowndes, Jonathan Symonds, Kingsley Reavell, Mark Rushton, *University of Alberta*
- 7IM.5 Development of a Geometrical Surface Area Monitor for Nanoparticles: Experiments and Models.** 10:45 LEO N.Y. CAO, Jing Wang, Heinz Fissan, David Y. H. Pui, *University of Minnesota*
- 7IM.6 Traceable Calibration of Detection Efficiencies of Optical Particle Counters using Inkjet Aerosol Generator.** 11:00 KENJIRO IIDA, Kensei Ehara, Hiromu Sakurai, *AIST*
- 7IM.7 Theoretical Modeling of Aerosol Lifetimes in a Rotating Drum Aerosol Chamber.** 11:15 MATTHEW BROWN, Steven Cevaer, Erin M. Durke, Suresh Dhaniyala, *Clarkson University*
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7RW THE ROLE OF WATER IN AEROSOL CHEMISTRY I*NICOLLET D1*

Rodney Weber and Chris Hennigan, chairs

- 7RW.1 Laboratory and Field Constraints on Water Driven Multi-phase Chemistry.** 9:45 JOEL A. THORNTON, *University of Washington, Seattle, WA*

- 7RW.2 Understanding Aqueous-Phase Isoprene-epoxydiol (IEPOX) Secondary Organic Aerosol (SOA) Production during SOAS 2013.** Sri Hapsari Budisulistiorini, V. Faye McNeill, Havala Pye, JASON SURRETT, *University of North Carolina at Chapel Hill*
- 7RW.3 Trends in Oxygenated Organic Compound Composition and Water Content in Atmospheric Particles during SOAS.** KERRI PRATT, Eric Boone, Alexander Laskin, Julia Laskin, Hongyu Guo, Rodney J. Weber, Victor Nhliziyo, Andrew Ault, Steve Bertman, *University of Michigan*
- 7RW.4 The Salty World of Aqueous Aerosols: Biogenic OVOC Partitioning over the South Eastern US.** RAINER VOLKAMER, Eleanor Waxman, Neha Sareen, Paul Ziemann, Elm Jonas, Theo Kurten, Annmarie Carlton, *University of Colorado*
- 7RW.5 Link between Aerosol Liquid Water and Organosulfur Compounds in the Continental U.S..** ANNMARIE CARLTON, Thien Khoi Nguyen, Virendra Ghate, *Rutgers University*
- 7RW.6 Direct Atmospheric Evidence for the Irreversible Formation of Aqueous Secondary Organic Aerosol (aqSOA).** Marwa El-Sayed, Yingqing Wang, CHRISTOPHER HENNIGAN, *University of Maryland, Baltimore County*
- 7RW.7 Evidence for Ambient Dark Aqueous SOA Formation in the Po Valley, Italy.** AMY P. SULLIVAN, Natasha Hodas, Barbara Turpin, Kate Skog, Frank Keutsch, Stefania Gilardoni, Marco Paglione, Matteo Rinaldi, Stefano Decesari, M. Cristina Facchini, Laurent Poulain, Hartmut Herrmann, Alfred Wiedensohler, Eiko Nemitz, Marsailidh Twigg, Jeffrey Collett, *Colorado State University*

7SA SOURCE APPORTIONMENT I

REGENCY ROOM

Albert Presto and Leah Williams, chairs

- 7SA.1 A Novel Strategy for Long-term Source Apportionment of Aerosol Mass Spectra.** Francesco Canonaco, Kaspar Daellenbach, Imad El Haddad, Monica Crippa, JAY SLOWIK, Yuliya Sosedova, Carlo Bozzetti, Ru-Jin Huang, Urs Baltensperger, Christoph Hueglin, Hanna Herich, Andre Prévôt, *Paul Scherrer Institute*
- 7SA.2 Chemical Characterization of Atmospheric Fine Aerosol Collected from Atlanta, GA, and Centreville, AL Using the Aerodyne Aerosol Chemical Speciation Monitor (ACSM).** WERUKA RATTANAVARAHHA, Sri Hapsari Budisulistiorini, Philip Croteau, Karsten Baumann, Eric Edgerton, Manjula Canagaratna, John Jayne, Douglas Worsnop, Stephanie Shaw, Jason Surratt, *University of North Carolina at Chapel Hill*
- 7SA.3 Source Apportionment of PM_{2.5} in St. Louis Using Chemical Speciation Network Data.** LI DU, Jay Turner, *Washington University in St. Louis*
- 7SA.4 Sensitivity of Ambient PM_{2.5} Concentration to Prescribed Burning and Fire Weather Forecast Data Using Principal Components Regression Analysis.** KARSTEN BAUMANN, Sivaraman Balachandran, Jorge Pachon, James Mulholland, Armistead G. Russell, *Atmospheric Research & Analysis*
- 7SA.5 Evaluation of PM_{2.5} Source Apportionment Methods using Spectral Analysis.** SIVARAMAN BALACHANDRAN, Heather Holmes, James Mulholland, Armistead G. Russell, *Georgia Institute of Technology*
- 7SA.6 Source-resolved Simulation of Fresh and Chemically-aged Biomass Burning Emissions.** LAURA POSNER, Georgia Theodoritsi, Ksakousti Skyllakou, Bonyoung Koo, Matthew Mavko, Spyros Pandis, Allen Robinson, *Carnegie Mellon University, University of Patras*
- 7SA.7 CTM-Based Regression for Social Cost Accounting of Individual Emission Sources for PM_{2.5} Pollution.** JINHYOK HEO, Peter Adams, H. Oliver Gao, *Cornell University*

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

Thursday 12:15 PM - 2:00 PM
Session 8: Poster / Historical Instrumentation Exhibition

8AC AEROSOL CHEMISTRY

EXHIBIT HALL

Alex Lee, chair

- 8AC.1 Multiple New-Particle-Growth Pathways at the DOE Southern Great Plains Field Site in Oklahoma.** ANNA HODSHIRE, Jeffrey R. Pierce, James N. Smith, Peter H. McMurry, Jun Zhao, Michael J. Lawler, John Ortega, David Hanson, Kelley C. Barsanti, *Colorado State University*
12:15
- 8AC.2 Size-resolved CCN Activity in Winter Season at a Polluted Site, Kanpur in India.** DEEPIKA BHATTU, S.N. Tripathi, *IIT Kanpur*
12:15
- 8AC.3 Laboratory Studies of Biomass Burning Aerosol Oxidation at the Bulk and Molecular Level.** CLAIRE FORTENBERRY, Michael Walker, Yaping Zhang, Dhruv Mitroo, William Brune, Brent Williams, *Washington University in St Louis*
12:15
- 8AC.4 The Effect of Relative Humidity on the Composition and Structure of Ambient Secondary Organic Aerosol Particles from the SOAS Field Campaign.** AMY BONDY, Sydney Niles, Rachel O'Brien, Victor Nhliziyo, Steve Bertman, Paul Shepson, Ryan Moffet, Kerri Pratt, Andrew Ault, *University of Michigan*
12:15
- 8AC.5 Experimental and Computational Fluid Dynamics Study of Nucleation in a Flow Reactor: Sulfuric Acid with Ammonia and Trimethylamine.** IMANUEL BIER, David Hanson, Coty Jen, Peter H. McMurry, *Augsburg College*
12:15
- 8AC.7 Heterogeneous Oxidation of Organic Coatings on Submicron Aerosol Particles.** CHRISTOPHER LIM, Eleanor Browne, Rebecca Sugrue, Jesse Kroll, *MIT*
12:15
- 8AC.8 Contribution of Organic Nitrogen to Secondary PM at a Semi-Rural Site in the Southeastern US.** QUENTIN MALLOY, Prakash Doraiswamy, R.K.M. Jayanty, Jonathan Thornburg, *RTI International*
12:15
- 8AC.9 Chamber Simulation of Photochemistry of Mineral Dust Particles in the Presence of SO₂.** JIYEON PARK, Myoseon Jang, *University of Florida*
12:15
- 8AC.10 Chemical Characteristics of Submicrometer Particles at a Coastal Site in Korea.** Jiyeon Park, KwangYul Lee, Min Soo Kang, HungSoo Joo, Hyunji, Kim Kim, Seunghee Han, Leah Williams, MINHAN PARK, Dohyung Kim, Kihong Park, *Gwangju Institute of Science and Technology*
12:15
- 8AC.11 Real-time Measurements of Airborne Fluorescent Single Particles at Fukue Island, Japan.** FUMIKAZU TAKETANI, Hisahiro Takashima, Kohei Ikeda, Yugo Kanaya, *JAMSTEC*
12:15
- 8AC.12 The Absorption Enhancement of Soot Particles from Biomass Burning in the Presence of Aromatic SOA.** ANTONIOS TASOGLU, Georges Saliba, R. Subramanian, Spyros Pandis, *Carnegie Mellon University*
12:15
- 8AC.13 Influence on PM₁₀ of Air Mass Origin and Sea Spray Contribution at an Industrial Sampling Station.** LUIS NEGRAL, Eugenia Zapico, Laura Megido, Beatriz Suárez-Peña, Yolanda Fernández-Nava, Elena Marañón, Leonor Castrillón, *University of Oviedo*
12:15
- 8AC.14 Kinetic Model for Nanoparticle Growth Relevant to New Particle Formation.** MICHAEL APSOKARDU, Douglas Ridge, Murray Johnston, *University of Delaware*
12:15

8AE AEROSOL EXPOSURE

EXHIBIT HALL

Gedi Mainelis, chair

- 8AE.1 Evaluation of a Thermophoretic Nanoparticle Sampler.** TRACI LERSCH, Kristin Bunker, David Leith, John Volckens, Gary Casuccio, *RJ Lee Group, Inc.*
12:15
- 8AE.2 Perception, Cultural, and Technical Assessment of Heating Alternatives to Improve Indoor Air Quality on the Navajo Nation.** Wyatt Champion, Perry Charley, Barbara Klein, Avery Denny, James McKenzie, Kathleen Stewart, Paul A. Solomon, LUPITA MONTTOYA, *University of Colorado Boulder*
12:15

- 8AE.3** **Space and Seasonal Evaluation of Hydrogen Sulfide Levels in Surrounding Cerro Prieto Geothermal Plant at Mexicali, B.C., Mexico.** LIZETH AGUILAR, Guillermo Rodríguez-Ventura, Penelope Quintana, Miguel Zavala, Luisa Molina, *Universidad Autónoma de Baja California*
12:15
- 8AE.4** **Understanding Emissions from Wastewater Treatment Processes and Their Impact on Regional Air Quality and Health.** PEDRO PIQUERAS, Akua Asa-Awuku, Mark Matsumoto, *University of California, Riverside*
12:15
- 8AE.5** **Human Exposure Risk to Polycyclic Aromatic Hydrocarbons: A Case Study in Beijing, China.** YANXIN YU, Qi Li, Hui Wang, Bin Wang, Xilong Wang, Aiguo Ren, Shu Tao, *Beijing Normal University*
12:15
- 8AE.6** **Characterization of Local Particulate Matter Concentration Gradients Using Mobile Platform and Fixed-site Monitors and Comparison with R-LINE and CMAQ Air Quality Models.** XINXIN ZHAI, James Mulholland, Armistead G. Russell, Yongtao Hu, Timothy Larson, Elena Austin, Christopher Simpson, Timothy Gould, Kris Hartin, Sasakura Miyoko, Mike Yost, *Georgia Institute of Technology*
12:15
- 8AE.7** **Yearlong Air Quality Simulation and Population Exposure Estimation in China.** HONGLIANG ZHANG, Jianlin Hu, Qi Ying, *Louisiana State University*
12:15
- 8AE.8** **Dust and Radioactivity Concentrations Emitted from Radiocesium-contaminated Soil during Decontamination Work by a Heavy Vehicle.** MAROMU YAMADA, Mitsutoshi Takaya, Norio Tsujimura, Tadayoshi Yoshida, Seiichiro Kanno, Yasushi Shinohara, Kenji Nakamura, Shigeki Koda, *Japan National Institute of Occupational Safety and Health*
12:15
- 8AE.9** **Estimating Smoke Exposure Concentrations in Fort Collins, CO from Local and Transported Wildfire Plumes.** BONNE FORD, Jeffrey R. Pierce, William Lassman, Gabriele Pfister, Emily Fischer, *Colorado State University*
12:15
- 8AE.10** **Effects of Pulse Parameters on Welding Fume Aerosol Size Distribution and Respiratory Deposition.** MARCIO BEZERRA, Jun Wang, James Regens, *University of Oklahoma*
12:15
- 8AE.11** **Characterization of Ventilation and Ultrafine Particles Clearance in a Closed Firing Range during Firing of Lead Free Frangible Ammunition.** CHRISTIN GRABINSKI, Trevor Tilly, Claude Grigsby, Saber Hussain, Darrin Ott, *Air Force Research Laboratory*
12:15

8AG PRIMARY AND SECONDARY AEROSOLS FROM AGRICULTURAL OPERATIONS

EXHIBIT HALL

Phil Silva, chair

- 8AG.1** **Diet Formulation Impact on Ammonia Emission from Swine Production.** STEVEN TRABUE, Brian Kerr, Kenwood Scoggin, *USDA-ARS*
12:15
- 8AG.2** **Bioaerosols Emitted from Manure Application Sites: What are the Risks?** MICHAEL JAHNE, Shane Rogers, Thomas Holsen, Stefan Grimberg, Ivan Ramler, Seungo Kim, *Clarkson University*
12:15
- 8AG.3** **Primary and Secondary Aerosols from a Non-road Diesel Engine and the Role of Alternative Fuels and After Treatment.** SHANTANU JATHAR, Abril Galang, Patrick Brophy, Beth Friedman, Gregory Schill, Paul DeMott, Delphine Farmer, Sonia Kreidenweis, Anthony Marchese, Daniel Olsen, John Volckens, *Colorado State University*
12:15
- 8AG.4** **Single-particle Fluorescence Measurements for Bioaerosol Exposure Monitoring.** GAVIN MCMEEKING, Kimberly Anderson, Nicholas Good, John Volckens, *Droplet Measurement Technologies*
12:15
- 8AG.5** **Factors Affecting Particle and Gas Concentrations in Swine Production Facilities.** PETER RAYNOR, Shannon Engelman, Darby Murphy, Gurumurthy Ramachandran, Jeff Bender, Bruce Alexander, *University of Minnesota*
12:15
- 8AG.6** **Potential Secondary Aerosol Formation from Volatile Organic Compounds Emitted in Waste Handling.** PHILIP SILVA, David R. Cocker III, Nanh Lovanh, John Loughrin, *USDA - Agricultural Research Service*
12:15
- 8AG.7** **Inorganic PM in Poultry House Using Rice Hull Bedding.** NANH LOVANH, John Loughrin, Philip Silva, *USDA - Agricultural Research Service*
12:15
- 8AG.8** **Particle Burst and Growth Observed from a PAM Reactor at Taehwa Forest Observatory.** XIAONA SHANG, Eunha Kang, Hyunjin An, Meehye Lee, William Brune, *Korea University, South Korea*
12:15
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8AP AEROSOL PHYSICS

EXHIBIT HALL

Matt Berg and Chris Hogan, chairs

- 8AP.1 Discovery of a Scaling Law and a Natural Anisotropy Shape Factor from Polarizability.** MINGDONG LI, George Mulholland, Michael Zachariah, *University of Maryland*
12:15
- 8AP.2 Particle Mobility Dependence on the Frequency of Applied Electric Field.** MINGDONG LI, George Mulholland, Michael Zachariah, *University of Maryland*
12:15
- 8AP.3 Q-Space Analysis of Light Scattering from Gaussian Random Spheres.** JUSTIN MAUGHAN, Chris Sorensen, Amit Chakrabarti, *Kansas State University*
12:15
- 8AP.4 Optical Properties of Suspended Mineral Dusts from Desert Source Regions.** Johann Engelbrecht, HANS MOOSMULLER, Samuel Pincock, David Campbell, R.K.M. Jayanty, Gary Casuccio, *Desert Research Institute*
12:15
- 8AP.5 Mineral Dust Deposition and Solar Cell Spectral Performance.** Nicholas Beres, Patricio Piedra, Vicken Etyemezian, W. Patrick Arnott, HANS MOOSMULLER, *Desert Research Institute*
12:15
- 8AP.6 Evaluation of Nanoparticle Collection Efficiency for Nonwoven Textiles.** DONNA VOSBURGH, Levi Mines, Jae Hong Park, Stephanie Alami, Ozgur Yavuzcetin, Thomas Peters, T. Renee Anthony, *University of Wisconsin-Whitewater*
12:15
- 8AP.7 Equivalent-Diameter Relationships for Cluster-dense Soot in the Continuum Regime.** Saif Kazi, PAI LIU, Ian Arnold, Rajan Chakrabarty, *Washington University in St. Louis*
12:15
- 8AP.8 Simulation of Particle Charging and Transport in Corona-induced Electrohydrodynamic Flows.** HUAYAN LIANG, Pramod Kulkarni, Lina Zheng, Milind Jog, *Centers for Disease Control and Prevention, NIOSH*
12:15
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8BA BIOAEROSOLS

EXHIBIT HALL

Juan Pedro Maestre, chair

- 8BA.1 SenseNet – Performance Modeling of an Outdoor Biothreat Detection System.** WILLIAM HARRIS, Ray Pierson, Cody Niese, Egbert Tse, Dave Wasson, Jonathan Thornburg, Quentin Malloy, Prakash Doraiswamy, Robert Serino, *Northrop Grumman Inc.*
12:15
- 8BA.2 Seasonality of Bacteria and Viruses in the Air of a Daycare Center.** AARON PRUSSIN II, Amit Vikram, Kyle Bibby, Linsey Marr, *Virginia Tech*
12:15
- 8BA.3 Size Amplification of Viral Aerosol by a Batch Adiabatic Expansion System.** HAORAN YU, Chang-Yu Wu, Nima Afshar-Mohajer, John Lednický, Hugh Fan, Alex Theodore, *University of Florida*
12:15
- 8BA.4 A Global Overview of Fluorescent Biological Particles Using UVAPS and WIBS.** J. Alex Huffman, Ulrich Poeschl, Niall Robinson, Ian Crawford, Martin Gallagher, Hang Su, David Healy, David O'Connor, John Sodeau, Miia Hiltunin, Tuukka Petäjä, Markku Kulmala, Carolyn J. Schumacher, Paulo Artaxo, Meinrat O Andreae, KYLE PIERCE, *University of Denver, CO*
12:15
- 8BA.5 Development of a Novel Microscope Spectrofluorometer for Individual Bioparticle Characterization.** BENJAMIN E. SWANSON, Donald R. Huffman, J. Alex Huffman, *University of Denver*
12:15
- 8BA.6 Effect of Seasonal Variability and Co-Pollutants on Fine Bioaerosol Abundance in Urban and Rural Airsheds in Michigan.** PEARL M. NATHAN, Alexander H. Rickard, J. Timothy Dvonch, *University of Michigan, Ann Arbor*
12:15
- 8BA.7 Spectral Intensity Bioaerosol Sensor (SIBS): Description and Initial Characterization of a Novel Commercial Instrument for Spectrally-Resolved Fluorescence Measurements of Individual Particles.** NICOLE SAVAGE, Tobias Könemann, Gary Granger, Gavin McMeeking, Ulrich Poeschl, Christopher Pöhlker, J. Alex Huffman, *University of Denver, CO*
12:15
- 8BA.8 Investigating the Interaction Between Airborne Proteins and Urban Pollutants.** EMMALEE BIESIADA, Amani Alhalwani, J. Alex Huffman, *University of Denver, Denver, CO*
12:15

- 8BA.9 Highly Efficient Collection of Viable Influenza Virus A/Mexico/4108/2009 (pdmH1N1).** John Lednicky, MAOHUA PAN, Julia Loeb, Hsin Hsieh, Arantzazu Eiguren-Fernandez, Nima Afshar-Mohajer, Susanne Hering, Chang-Yu Wu, Hugh Fan, *University of Florida*
- 8BA.10 BioaerosolResearch.org: Towards a Web-Based Community Resource.** J. ALEX HUFFMAN, Viviane Després, Janine Fröhlich-Nowoisky, Christopher Kampf, David O'Connor, Christopher Pöhlker, Ulrich Poeschl, *University of Denver, CO*

8CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE

EXHIBIT HALL

Brent Williams, chair

- 8CA.1 Brown Carbon Lifetime and Chemistry Following Wildfires.** HAVILAND FORRISTER, Jiumeng Liu, Eric Scheuer, Jack Dibb, Luke Ziemba, Kenneth Thornhill, Bruce Anderson, Glenn Diskin, Anne Perring, Joshua P. Schwarz, Pedro Campuzano-Jost, Douglas Day, Jose-Luis Jimenez, Athanasios Nenes, Rodney J. Weber, *Georgia Institute of Technology*
- 8CA.2 Determination of Accommodation Coefficients for Organic Aerosol with Thermodenuder Measurements.** JAMES HITE, Tianyu Shi, Athanasios Nenes, *Georgia Institute of Technology*
- 8CA.3 Shootout at the CSU Corral: Soot Composition and Optical Properties for 23 Cookstove/Fuel Combinations.** R. SUBRAMANIAN, Antonios Tasoglou, Adam Ahern, Eric Lipsky, Christian L'Orange, Kelsey Bilsback, Brooke Reynolds, Kelley Hixson, Jack Kodros, Jeffrey R. Pierce, Michael Johnson, John Volckens, Allen Robinson, *Carnegie Mellon University*
- 8CA.5 Characterization of Carbonaceous Aerosol in the Southeastern Baltic Sea Region (Event of Grass Fires).** STEIGVILE BYCENKIENE, Kristina Plauskaite, Vadimas Dudoitis, Carlo Bozzetti, Roman Frohlich, Vidmantas Ulevicius, *SRI Center for Physical Sciences and Technology*
- 8CA.6 Predicting Ambient Aerosol Thermal Optical Reflectance (TOR) OC and EC in the Chemical Speciation Network (CSN) and the PM2.5 Federal Reference Method Network (FRM).** ANN DILLNER, Mohammed Kamruzzaman, Andrew Weakley, Satoshi Takahama, *University of California, Davis*
- 8CA.7 Chemical Composition and Volatility Distributions of Organic Compounds Emitted from Cooking Sources.** MOHAMMAD ASIF IQBAL, Craig A. Stroud, Jianhui Ye, Kevin Goodman-Rendall, Arthur Chan, *University of Toronto*
- 8CA.8 Evaluation and Characterization of Carbonyl Compounds in Ambient Air, Refuge Area, Tijuana, Baja California, Mexico.** DEISY SUGEY TOLEDO ARANGURE, Guillermo Rodriguez, Ernesto Velez-Lopez, Alejandro Gomez, Mariela Ruiz, *Universidad Autonoma de Baja California, Tijuana, Mexico*
- 8CA.9 Global Changes in Aerosol Concentration, Radiative Effects, and Health Impacts Due to Open Combustion of Domestic Waste.** JOHN KODROS, Rachel Cucinotta, Bonne Ford, Christine Wiedinmyer, Jeffrey R. Pierce, *Colorado State University*
- 8CA.10 Measurement of In-Use Freight and Passenger Locomotive Black Carbon Emissions in California.** Trevor Krasowsky, Nicholas Tang, Nancy Daher, Joshua Apte, Constantinos Sioutas, Philip Martien, George Ban-Weiss, THOMAS KIRCHSTETTER, *University of California, Berkeley*
- 8CA.11 Enhanced Light Absorption and Wavelength Dependency Due to Coating and Mixing States of Black Carbon.** RIAN YOU, James Radney, Christopher Zangmeister, Michael Zachariah, *University of Maryland*
- 8CA.12 Aging Diesel Black Carbon with SOA Coatings and Coagulation to Probe Morphology-dependent Aerosol Absorption Enhancements (Eabs).** ALLISON AIKEN, Manvendra Dubey, Shang Liu, Rahul Zaveri, John Shilling, Claudio Mazzoleni, Swarup China, Noopur Sharma, Alla Zelenyuk, Jacqueline Wilson, Gourihar Kulkarni, Mikhail Pekour, Duli Chand, R. Subramanian, *Los Alamos National Lab*

8CC AEROSOLS, CLOUDS, AND CLIMATE

EXHIBIT HALL

Will Cantrell, chair

- 8CC.1 On the Hygroscopicity of Laboratory Generated Inorganic Sea Spray Aerosol.** PAUL ZIEGER, Matthew Salter,

- 12:15 Juan-Camillo Acosta Navarro, Joel Corbin, Martin Gysel, Evelyne Hamacher-Barth, Magnus Johnson, Caroline Leck, Douglas Nilsson, Daniel Partridge, Narges Rastak, Ilona Riipinen, Bernadette Rosati, Johan Ström, Olli Väisänen, Annele Virtanen, Josephina Werner, *Stockholm University*
- 8CC.2 The Importance of Arctic Seabird Colony Emissions in New Particle Formation and Summertime Arctic Clouds.** BETTY CROFT, Greg Wentworth, W. Richard Leaitch, Jennifer Murphy, Jack Kodros, Jonathan Abbatt, Randall V. Martin, Jeffrey R. Pierce, *Dalhousie University, Halifax, Canada*
- 8CC.3 Modification of Droplet Sizes Due to Mixing in Anthropogenic Aerosols.** EMMANUEL FOFIE, Diep Vu, Akua Asa-Awuku, *University of California, Riverside*
- 8CC.4 Direct Measurements of Water Transport Kinetics and Viscosity of Glassy Organic Aerosol.** Young-Chul Song, Andrew Rickards, ALLEN E. HADDRELL, Rachael E.H. Miles, Frances Marshall, Jonathan P. Reid, *University of Bristol*
- 8CC.5 Dispersion of Aeolian Aerosols in Atmospheric Boundary Layer Following Dust Emission from Source Areas.** BORIS KRASOVITOV, Itzhak Katra, Tov Elperin, Andrew Fominykh, Hezi Yizhaq, *Ben-Gurion University of the Negev, Israel*
- 8CC.6 Ice Nucleating Particles at a Coastal Marine Boundary Layer Site: Correlations with Aerosol Type and Meteorological Conditions.** RYAN H. MASON, Meng Si, Jixiao Li, Cédric Chou, Robin Dickie, Desiree Toom-Saunty, Christopher Pöhlker, Jacqueline Yakobi-Hancock, Luis A. Ladino, Keith Jones, W. Richard Leaitch, Corinne L. Schiller, Jonathan Abbatt, J. Alex Huffman, Allan Bertram, *University of British Columbia*
- 8CC.7 Critical Time for CCN Activation of Biogenic Precursors.** ASHLEY VIZENOR, Akua Asa-Awuku, *University of California, Riverside*
- 8CC.8 In-cloud Observations of Aerosol Hygroscopicity and Cloud Droplet Activation.** OLLI VÄISÄNEN, Pasi Miettinen, Arttu Ylisirniö, Sami Romakkaniemi, Kari Lehtinen, Annele Virtanen, *University of Eastern Finland*
- 8CC.9 Laboratory Measurements of Contact Freezing by Clay Minerals.** WILL CANTRELL, Jyoti Thapa, Joseph Niehaus, *Michigan Technological University*
- 8CC.10 Radiative and Climate Impacts of Concurrent Stratospheric Sulfur Geoengineering and a Large Volcanic Eruption.** ANTON LAAKSO, Antti-Ilari Partanen, Harri Kokkola, Ulrike Niemeier, Claudia Timmreck, Kari Lehtinen, Hannele Korhonen, *Finnish Meteorological Institute*
- 8CC.11 The North Atlantic Aerosols and Marine Ecosystems Study (NAAMES): A 5-Year Investigation of Ocean, Aerosols, and Clouds.** Michael Behrenfeld, Chris Hostetler, RICHARD MOORE, NAAMES Science Team, *NASA*
- 8CC.12 Coefficients of an Analytical Aerosol Forcing Equation Determined with a Monte-Carlo Radiation Model.** Taufiq Hassan, HANS MOOSMULLER, Chul Chang, *Desert Research Institute*
- 8CC.13 Exploring the Relation between Aerosol Mixing State Metrics and Droplet Number Concentration.** RICARDO MORALES BETANCOURT, Athanasios Nenes, *Georgia Institute of Technology*
- 8CC.14 Organic Aerosol-sulfate Interaction: Evaluation of Thermodynamic Effects.** GAUTHAM SEKAR, Shunsuke Nakao, *Clarkson University*
- 8CC.15 Investigation of the Physical and Chemical Changes of Atmospheric Aerosols during Fog in Baengyeong Island, South Korea Using High Resolution Time of Flight Aerosol Mass Spectrometry.** TAEHYOUNG LEE, Taehyun Park, Alexandra Boris, Yongjae Lim, Junyoung Ahn, Haejin Jung, Youngkyo Seo, Donghee Jung, Seokjun Seo, Jeffrey Collett, *Hankuk University of Foreign Studies*
- 8CC.16 Metrics to Quantify the Importance of Mixing State for CCN Activity.** Joseph Ching, NICOLE RIEMER, Jeffrey H. Curtis, Jerome Fast, *University of Illinois at Urbana-Champaign*
- 8CC.17 SOA Formation, CCN Activity and PAH Products during Aging of Diesel Exhaust in a Laboratory Chamber.** HUMPHREY CHUKWUTO, Da' Nay Lacey, Alexis Tupy, Frank Bowman, *University of North Dakota*
- 8CC.18 Response of Clouds to Aerosol Concentration: Results from Mixing Clouds in a Multiphase, Turbulent Reaction Chamber.** WILL CANTRELL, Kamal Kant Chandrakar, Kelken Chang, David Ciochetto, Dennis Niedermeier, Raymond Shaw, *Michigan Technological University*
- 8CC.19 Statistical Analysis of Aerosol, Cloud Condensation Nuclei (CCN), Cloud Base Temperature and Pressure in Summer-time North Dakota.** JAMIE EKNES, David Delene, *University of North Dakota*

8CH HAZE IN CHINA: SOURCES, FORMATION MECHANISMS, AND CURRENT CHALLENGES

EXHIBIT HALL

Caiqing Yan, chair

- 8CH.1 Implications of the Tibetan Plateau for Haze in China.** TIANLIANG ZHAO, Xiangde Xu, Xuhui Lee, Feng Liu, David Kristovich, Chungu Lu, Yudi Guo, Xugeng Cheng, Yinjun Wang, Hongxiong Xu, *Nanjing University of Information Science and Technology*
- 8CH.2 Insights into the 2013-14 Winter Haze in Shanghai: Composition and Acidity of Size-Fractionated Inorganic Aerosols and Associated Health Risk.** Sailesh Behera, Jinping Cheng, Xian Huang, Qiongyu Zhu, Ping Liu, RAJASEKHAR BALASUBRAMANIAN, *NUS*
- 8CH.3 Air Quality in the Beijing-Tianjin-Hebei Region before, during and after 2014 Beijing APEC Economic Leaders' Meeting.** YANG HUA, Shuxiao Wang, Jiandong Wang, Jingkun Jiang, Wei Zhou, Xiaoqing Tang, *Tsinghua University*
- 8CH.5 Impact of Mixing State on Black Carbon Mass Absorption Cross Section.** JIANDONG WANG, Shuxiao Wang, Jing Cai, Mei Zheng, Jingkun Jiang, Zhen Li, Runlong Cai, *Tsinghua University*
- 8CH.8 Measurements on Emission Factors of Gaseous and Particulate Pollutants for Offshore Diesel Engine Vessels in China.** FAN ZHANG, Yingjun Chen, Chongguo Tian, Jun Li, Gan Zhang, *Yantai Institute of Coastal Zone Research, CAS*
- 8CH.9 Seasonal Differences in Ambient Particulate Matter Pollution in the Tibetan Plateau.** ELLISON CARTER, Kun Ni, Scott Archer-Nicholls, Alex Lai, James Schauer, Majid Ezzati, Christine Wiedinmyer, Xudong Yang, Jill Baumgartner, *University of Minnesota*
- 8CH.10 Light-absorbing Properties of Brown Carbon Emitted from Chinese Residential Sources.** CAIQING YAN, Mei Zheng, Xiaoying Li, Xiaoshuang Guo, *Peking University*
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8HA HEALTH RELATED AEROSOLS

EXHIBIT HALL

Tom Peters, chair

- 8HA.1 Source-oriented, Micro-environmental Modeling of Cerium Oxide Nanoparticles in an Urban Environment.** ALESHKA CARRION-MATTA, K. Max Zhang, Havala Pye, Brett Gantt, Kathleen Fahey, Robert Willis, *Cornell University*
- 8HA.2 Contrasting Oxidative Potential of Ambient Water-Soluble PM_{2.5} Measured by Dithiothreitol (DTT) and Ascorbic Acid (AA) Assays: Spatiotemporal Distribution, Source Apportionment, and Health Impacts.** TING FANG, Vishal Verma, Josephine Bates, James Mulholland, Armistead G. Russell, Rodney J. Weber, *Georgia Institute of Technology*
- 8HA.3 Cellular Assays for Measuring Reactive Oxygen Species (ROS) Production of Particulate Matter Mixtures.** WING-YIN TUET, Vishal Verma, Meghan Knight, Julie Champion, Anna Grosberg, Nga Lee Ng, *Georgia Institute of Technology*
- 8HA.4 Development of a Rabbit Deposition Model to Study Inhalation of Anthrax.** BAHMAN ASGHARIAN, Owen Price, Senthil Kabilan, Daniel Einstein, Andrew Kupart, Richard Jacob, Richard Corley, *Applied Research Associates, Inc.*
- 8HA.5 Effect of Electrostatic Charge on the Deposition of Inhaled Aerosols in Infant, Child and Adult Extrathoracic Airways.** Mehdi Azhdarzadeh, Jason S. Olfert, Reinhard Vehring, WARREN H. FINLAY, *University of Alberta*
- 8HA.6 Temperature and Humidity Effects on Pressurized Metered Dose Inhaler Sprays.** James Ivey, Chelsea Morin, Farzin Shemirani, Jonathan Suderman, Jordan Titosky, Susan Hoe, Reinhard Vehring, WARREN H. FINLAY, *University of Alberta, Canada*
- 8HA.7 What Is the Toxicity of the Photooxidation Products of Atmospherically Relevant Volatile Organic Compounds?** HUANHUAN JIANG, Myoseon Jang, Sarah Robinson, Tara Sabo-Attwood, *University of Florida*

- 8HA.8 Investigation of Screen Collection Efficiency of Airborne Glass Fibers.** BON KI KU, G.J. Deye, Leonid Turkevich, 12:15 *Centers for Disease Control and Prevention, NIOSH*
- 8HA.9 Thermodynamic and Kinetic Behavior of the Glycerin/Propylene Glycol/H₂O Aerosol System.** TIMOTHY WRIGHT, Chen Song, Steven Sears, Markus Petters, *North Carolina State University*
- 8HA.10 Size-Segregated Chemical and Morphological Analysis of Three Gold Mine Dusts.** Lauren Chubb, EMANUELE CAUDA, Traci Lersch, Gary Casuccio, *NIOSH*
- 8HA.12 Artifacts and Stability of Fine Particle Oxidative Potential Determined with Dithiothreitol (DTT) Assay on Filter Extracts.** DONG GAO, Ting Fang, Vishal Verma, Rodney J. Weber, *Georgia Institute of Technology*
- 8HA.13 Biological Effects of Combustion Aerosols on Human Lung Cells Exposed at the Air Liquid Interface: Comparison Between Ship Engine and Wood Combustion Aerosols.** Ralf Zimmermann, Gunnar Dittmar, Tamara Kanashova, Jeroen Buters, Sebastian Öder, Marco Dilger, Carsten Weiss, Horst Harndorf, Benjamin Stengel, Karsten Hiller, Sean Sapcariu, Kelly BeruBe, Anna Julia Wlodarczyk, Bernhard Michalke, Thorsten Streibel, Erwin Karg, Jürgen Schnelle-Kreis, Martin Sklorz, Jürgen Orasche, Patrick Richthammer, Johannes Passig, Ahmed Reda, Olli Sippula, Jorma Jokiniemi, LAARNIE MÜLLER, *Helmholtz Zentrum München*
- 8HA.14 Intersubject Variability in Regional Deposition of Aerosols in Nasal Airways of Children 2-6 Years Old.** RYAN MEEKINS, Gregory Vorona, Ammie White, Michael Hindle, Laleh Golshahi, *Virginia Commonwealth University*

8IM INSTRUMENTATION AND METHODS

EXHIBIT HALL

Amy Sullivan, chair

- 8IM.1 Surface Enhanced Raman Spectroscopy (SERS): Enhanced Detection of Organic Species in Individual Aerosol Particles.** REBECCA CRAIG, Amy Bondy, Joel Rindelaub, Paul Shepson, Andrew Ault, *University of Michigan*
- 8IM.2 A Shrouded Cell with Magnetic Passive Aerosol Sampler to Determine Particle Penetration through Protective Clothing Materials.** PETER JAQUES, Pengfei Gao, *National Institute for Occupational Safety and Health, CDC*
- 8IM.3 Optimization of Air-Microfluidic Circuits for Microfabricated Direct-Read Mass PM_{2.5} Sensors.** SEIRAN KHALEDIAN, Dorsa Fahimi, Troy Cados, David Woolsey, Omid Mahdavi-pour, Paul A. Solomon, Thomas Kirchstetter, Lara Gundel, Richard White, Igor Paprotny, *University of Illinois at Chicago*
- 8IM.4 Performance of Wireless Distributed Sensors for Automated Control of Float Dust in Underground Coal Mines.** OMID MAHDAVIPOUR, Timothy Mueller-Sim, Dorsa Fahimi, Croshere Skot, Pilatsch Pit, Jusuf Merukh, Valentino Zegna, Paul A. Solomon, Paul Wright, Richard White, Lara Gundel, Igor Paprotny, *University of Illinois at Chicago*
- 8IM.5 Gas/particle Partitioning of Organic Acids during the Southern Oxidant and Aerosol Study (SOAS): Measurements and Modeling.** SAMANTHA THOMPSON, Laxmi Narasimha Yatavelli, Harald Stark, Joel Kimmel, Jordan Krechmer, Weiwei Hu, Brett Palm, Pedro Campuzano-Jost, Douglas Day, Gabriel Isaacman-VanWertz, Allen H. Goldstein, Manjula Canagaratna, Rupert Holzinger, Felipe Lopez-Hilfiker, Claudia Mohr, Joel A. Thornton, John Jayne, Douglas Worsnop, Jose-Luis Jimenez, *University of Colorado, Boulder*
- 8IM.6 A Novel Aerosol-into-Liquid Collector for Online Measurements of Trace Metal and Elements in Ambient Particulate Matter (PM).** DONGBIN WANG, Martin Shafer, James Schauer, Constantinos Sioutas, *University of Southern California*
- 8IM.7 Assessment of PM Measurements Used in the US-EPA Residential Wood Heating Appliance Emission Test Method.** GEORGE ALLEN, Lisa Rector, *NESCAUM*
- 8IM.8 A One-Nanometer, Water-Based Laminar-Flow Condensation Particle Counter.** SUSANNE HERING, Gregory Lewis, Steven Spielman, Chongai Kuang, Arantazu Eiguren-Fernandez, Nathan Kreisberg, *Aerosol Dynamics Inc.*
- 8IM.9 Tropospheric Vertical Aerosol Measurement System Development.** Kang-Ho Ahn, HEE-RAM EUN, Hong-Ku Lee, Gun-Ho Lee, Yong-Hee Park, Jinhong Ahn, *Hanyang University, R. of Korea*
- 8IM.10 Assessing the Accuracy and Reliability of Low-Cost Counters for Determining Loadings of Fine Particulate Matter.** DAVID HAGAN, Eben Cross, Jesse Kroll, *MIT*

- 8IM.11 Ambient Inlet Ionization for On-Line Molecular Characterization of Aerosols.** ANDREW J. HORAN, Murray Johnston, *University of Delaware*
12:15
- 8IM.12 Characterization of Air Velocity Patterns Downstream of Pleated Filters Using Particle Image Velocimetry (PIV).** SEUNGKOO KANG, Noah Bock, David Y. H. Pui, Jacob Swanson, *University of Minnesota*
12:15
- 8IM.13 Development of Multivariate Calibration Approach for Measurement of Aerosol Elemental Concentration Using Microplasma Spectroscopy.** LINA ZHENG, Pramod Kulkarni, M. Eileen Birch, Dionysios Dionysiou, *Centers for Disease Control and Prevention, NIOSH*
12:15
- 8IM.14 Experimental Verification of the Classification Accuracies for the Aerosol Particle Mass Analyzer(APM).** Nobuhiko Fukushima, YUSUKE OGIHARA, Yoshiko Murashima, Hiromu Sakurai, *AIST*
12:15
- 8IM.15 Portable Air Quality Monitoring Systems for Responding to Highly Localized Pollution Concerns.** JOSEPH P. MARTO, Maxime Gorson, James Schwab, H. Dirk Felton, Patricia Fritz, *University at Albany, SUNY*
12:15
- 8IM.16 Arctic Haze and Stratospheric Aerosol Studies Using POPS, a Small, Sensitive, and Light-weight Optical Particle Spectrometer.** HAGEN TELG, Ru-Shan Gao, Timothy Bates, Terry Deshler, Steven Ciciora, David Fahey, James Johnson, Richard McLaughlin, Anne Perring, Andrew Rollins, Joshua P. Schwarz, Troy Thornberry, Laurel Watts, *CIRES/NOAA*
12:15
- 8IM.17 Macro-Raman Spectroscopy on Respirable Particles Collected by a Single-nozzle Cascade Impactor.** HUI WANG, Lisa Williams, Susan Hoe, David Lechuga-Ballesteros, Reinhard Vehring, *University of Alberta*
12:15
- 8IM.18 Quantifying and Improving the Performance of a new Single Particle Mass Spectrometer.** MARIA ZAWADOWICZ, Philip Croteau, Fabian Mahrt, Nicholas Marsden, Daniel Cziczko, *MIT*
12:15
- 8IM.19 Characterization of a Nucleation-Mode Aerosol Size Spectrometer with Ammonium Sulfate and Oxidized Organics.** CHRISTINA WILLIAMSON, Frank Erdesz, Charles Brock, *NOAA ESRL and CIRES, University of Colorado Boulder*
12:15
- 8IM.20 Zero Temperature Gradient Operation of a CCN Counter in SFCA Mode.** SARA PURDUE, Jack J. Lin, Athanasios Nenes, Tomi Raatikainen, Greg Kok, *Georgia Institute of Technology*
12:15
- 8IM.21 Calibration Uncertainties in Cloud Condensation Nuclei Counters.** KURT HIBERT, David Delene, *University of North Dakota*
12:15
- 8IM.22 Charging and Collection Performance of a Novel ESP with an Indirect Particle Charging Method against Submicron Particles.** HAK-JOON KIM, Bangwoo Han, Chang-gyu Woo, Yong-Jin Kim, Seong-Jin Park, Jong-Pil Yoon, *Korea Institute of Machinery and Materials*
12:15

8NM NANOPARTICLES AND MATERIALS SYNTHESIS

EXHIBIT HALL

Adam Boies, chair

- 8NM.1 Mobility and Charging Characteristics of Crumpled Reduced Graphene Oxide Synthesized by Aerosol Process.** YAO NIE, Yang Wang, Yi Jiang, Pratim Biswas, *Washington University in St. Louis*
12:15
- 8NM.2 Establishing the Relationship between Precursor Feed Rate and Materials Composition during the Combustion Aerosol Synthesis of Metal Oxide Nanoparticles.** NATHAN REED, Jiayi Fang, Sanmathi Chavalmane, Pratim Biswas, *Washington University in St. Louis*
12:15
- 8NM.3 Aerosol Synthesis of 3D Crumpled Graphene and Their Application to Dye-Sensitized Solar Cells.** EUN HEE JO, Hankwon Chang, Jiwoong Kim, Ki-Min Roh, Hee Dong Jang, *University of Science and Technology*
12:15
- 8NM.4 Silicon Particle Formation and Growth in Silane Pyrolysis Reactors.** MIGUEL VAZQUEZ PUFLEAU, Martin Yamane, Shalinee Kavadiya, Thimsen Elijah, Pratim Biswas, *Washington University in St. Louis*
12:15
- 8NM.5 One Step Aerosol Synthesis of Pt/Graphene/Carbon Nanoparticles via Microwave Plasma and Methanol Oxidation Reaction.** HANKWON CHANG, Eun Hee Jo, Sun Kyung Kim, Hee Dong Jang, *Korea Institute of Geoscience and Mineral Resources*
12:15

8NM.6 High Throughput Carbon Nanotubes Aerosol Synthesis. Christian Hoecker, Fiona Smail, Martin Pick, ADAM M BOIES, *University of Minnesota*

8RW THE ROLE OF WATER IN AEROSOL CHEMISTRY

EXHIBIT HALL

Rodney Weber, chair

8RW.1 Hygroscopic Properties of Alkyl Aminium Sulfates at Low Relative Humidities (RH). YANGXI CHU, Meike Sauerwein, Chak K. Chan, *Hong Kong University of Science and Technology*

8RW.2 Photochemical Aging of 2-Methyltetrol in Aqueous Aerosols. ALISON FANKHAUSER, V. Faye McNeill, *Columbia University*

8RW.3 Physical State of Secondary Organic Material Affects the Production of Brown Carbon. PENGFEI LIU, Yong Jie Li, Yan Wang, Adam Bateman, Yue Zhang, Zhaoheng Gong, Mary Gilles, Scot Martin, *Harvard University*

8RW.4 Chemical Characterization of Gas- and Aerosol-Phase Products from Isoprene Ozonolysis in Presence of Acidic Aerosol: Re-examination of Secondary Organic Aerosol Formation. MATTHIEU RIVA, Sri Hapsari Budisulistiorini, Zhenfa Zhang, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill*

8RW.5 Vapor Wall Deposition of Isoprene Photooxidation Products: RH, Mixing Status and Isomer Structure Effect. XUAN ZHANG, John Crouse, Alex Teng, Paul Wennberg, Richard Flagan, John Seinfeld, *Caltech*

8RW.6 Distribution, Influential Factors, and Sources of Aerosol Liquid Water during the DISCOVER-AQ 2013 Campaign in Houston, TX. ALEXANDER BUI, Yu Jun Leong, Nancy Sanchez, Henry Wallace, Robert Griffin, *Rice University*

8SA SOURCE APPORTIONMENT

EXHIBIT HALL

Ryan Sullivan, chair

8SA.2 Fine and Ultrafine Particulate Organic Carbon in the Los Angeles Basin: Trends in Sources and Composition. FARIMAH SHIRMOHAMMADI, Sina Hasheminassab, Arian Saffari, James Schauer, Ralph J. Delfino, Constantinos Sioutas, *University of Southern California*

8SA.3 Nature and Sources of Measurement Error in the USEPA PM_{2.5} Chemical Speciation Network. KELSEY HADDAD, Li Du, Jay Turner, *Washington University in St. Louis*

8SA.4 Aerosol Composition, Oxidative Properties, and Sources in Beijing during 2014 Asia-Pacific Economic Cooperation (APEC) Summit. WEIQI XU, Chen Chen, Wei Du, Zifa Wang, Tingting Han, Qingqing Wang, Yele Sun, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*

8SA.5 Biodiesel Effects on Black Carbon Emissions from a Diesel Engine. YUAN CHENG, Shao-Meng Li, John Liggio, Katherine Hayden, Tak Chan, Marie-Josée Poitras, *Environment Canada*

8SA.6 Development of Fine Particulate Matter Source Profiles Using a Nonlinear Optimization Approach. Cesunica Ivey, Nabil Abdurehman, Xinxin Zhai, Yongtao Hu, James Mulholland, ARMISTEAD G. RUSSELL, *Georgia Institute of Technology*

8SA.7 Characterization of Ambient Aerosol Concentration, Composition, and Aging during the Southern Oxidant and Aerosol Study. BASAK KARAKURT CEVIK, Yu Jun Leong, Carlos Hernandez, Robert Griffin, *Rice University*

8SA.8 Temporally-Refined Sources of Light-Absorbing Species in Arctic Snow. KATRINA M. MACDONALD, Lin Huang, Andrew Platt, Sangeeta Sharma, Desiree Toom-Sauntry, Jonathan Abbott, Greg J. Evans, *University of Toronto*

8SA.9 Investigation of the Impact of Anthropogenic Pollution on Isoprene-derived Secondary Organic Aerosol (SOA) in PM_{2.5} Collected at Birmingham, AL during the 2013 Southern Oxidant and Aerosol Study (SOAS). WERUKA RATTANAVARAHHA, Kevin Chu, Sri Hapsari Budisulistiorini, Matthieu Riva, Ying-Hsuan Lin, Theran P. Riedel, Eric Edgerton, Karsten Baumann, Hongyu Guo, Rodney J. Weber, Elizabeth Stone, Zhenfa Zhang, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill*

8SA.10 Source Apportionment of Pb-containing Particles by Multiple Methods during January 2013 in Beijing, China. JING CAI, Jiandong Wang, Yanjun Zhang, Hezhong Tian, Shuxiao Wang, Deborah Gross, Mei Zheng, *Peking University*
12:15

8SA.11 Integration of Source Apportionment Methods to Understand the Local and Regional Source Contributions to Fine Particulate Matter: A Case Study in a Coastal City in Southern China. YANJUN ZHANG, Jing Cai, Zifa Wang, Junyu Zheng, Limin Zeng, James Schauer, Mei Zheng, *Peking University*
12:15

8UA URBAN AEROSOLS

EXHIBIT HALL

Kristina Wagstrom, chair

8UA.1 Mobile Measurements of 10 nm to 10 µm Particles and Black Carbon in Amman, Jordan. BRANDON BOOR, Vanessa Nogueira dos Santos, Huthaifa Abedallah Ahmad, Tareq Hussein, *University of Helsinki*
12:15

8UA.2 Air Quality Assessment in the Surrounding Holy Places of Mecca, Saudi Arabia During Hajj. HAIDER KHWAJA, Omar S Abu-Rizaiza, Azhar Siddique, Mirza M. Hussain, Fida Khatib, Jahan Zeb, Donald Blake, *Wadsworth Center, University at Albany*
12:15

8UA.3 Spatial Variation of PM_{2.5} Components with Mobile Sampling Strategy in Pittsburgh. ZHONGJU LI, Timothy Dallmann, Albert A. Presto, *Carnegie Mellon University*
12:15

8UA.4 Assessment of Diurnal and Seasonal Variability in Near-Road Dispersion. Fatema Parvez, KRISTINA WAGSTROM, *University of Connecticut*
12:15

8UA.5 Black Carbon, Particle Number Concentration and Nitrogen Oxide Emission Factors of Random In-Use Vehicles Measured with the On-Road Chasing Method. Irena Jezek, Tomaz Katrasnik, Dane Westerdahl, GRISA MOCNIK, *Aerosol d.o.o., Slovenia*
12:15

8UA.6 Leaf Blower Dust Resuspension Characterization. JOSE MORENO, Stella Moreno, Antonio García-Sánchez, Belén Elvira-Rendueles, María José Martínez-García, *Technical University of Cartagena*
12:15

8UA.7 Spatial Distribution of Aerosols in Four U.S. Regions: Impacts on Satellite Measurements. ANDREAS BEYERSDORF, Luke Ziemba, Timothy A. Berkoff, Sharon P. Burton, Gao Chen, James Collins, Anthony L. Cook, Chelsea Corr, Suzanne Crumeyrolle, Marta Fenn, Richard Ferrare, Johnathan Hair, David B. Harper, Chris Hostetler, Jack J. Lin, Robert Martin, Richard Moore, Raymond R. Rogers, Amy Jo Scarino, Shane Seaman, Michael Shook, Kenneth Thornhill, Edward Winstead, Bruce Anderson, *NASA Langley Research Center*
12:15

8UA.8 In-situ Investigation of Near-highway Secondary Aerosol Formation in a Potential Aerosol Mass (PAM) Flow Reactor. PROVAT SAHA, Stephen Reece, Andrew Grieshop, *North Carolina State University*
12:15

8UA.9 Evaluation and Characterization of PM_{2.5} (Metals and EC-OC) in Site Cecyte on the Basin Tijuana, Baja California, Mexico. RITA ZURITA FRIAS, Guillermo Rodríguez, Javier Emmanuel Castillo-Quíñones, Deisy Sugay Toledo Arangure, Nina Bogdanchikova, *Universidad Autónoma de Baja California, Tijuana, Mexico*
12:15

8UA.10 Effect of Pollution Control on Atmospheric Aerosol in Shenzhen, China. IBRAHIM AL-NAIEMA, Yaqin Wang, YuanXun Zhang, Elizabeth Stone, *University of Iowa*
12:15

8UA.11 Application of Big Data Technologies for Aerosol Modeling: A Perspective. SATISH VUTUKURU, *Independent Researcher*
12:15

8UA.12 Climatology of PM₁₀ Metals in St. Louis from Hourly Data. Clara Veiga Ferreira de Souza, JAY TURNER, *Washington University in St. Louis*
12:15

Thursday 2:00 PM - 3:15 PM Session 9: Platform

9AG PRIMARY AND SECONDARY AEROSOLS FROM AGRICULTURAL OPERATIONS II

Phil Silva and Christine Loza, chairs

- 9AG.1 Sharing the Air Space in the Great State of Texas: Aerosol Sources over Agricultural Operations.** SARAH D. BROOKS, John Zenker, Gunnar Schade, Geoffrey Roest, Naruki Hiranuma, *Texas A&M University*
2:00
- 9AG.2 Particulate Matter Concentration of Mono-slope Beef Cattle Facilities.** MINDY SPIEHS, Erin Cortus, Greg Holt, Kris Kohl, Beth Doran, Ferouz Ayadi, Scott Cortus, Md Rajibul Al Mamun, Stephen Pohl, Richard Nicolai, Richard Stowell, David Parker, *USDA ARS*
2:15
- 9AG.3 Contribution of Windblown Dust to Atmospheric Nitrogen in the Columbia Plateau.** BRENTON SHARRATT, *USDA-ARS*
2:30
- 9AG.4 Emissions of Ice Nucleating Particles from Agricultural Lands.** THOMAS HILL, Kaitlyn J. Suski, Ezra Levin, Anthony Prenni, Elvin Garcia, Sonia Kreidenweis, Paul DeMott, *Colorado State University*
2:45
- 9AG.5 On-line Monitoring of Airborne Bioaerosols Released from a Composting/Green Waste Site.** JOHN SODEAU, David O'Connor, Shane Daly, Stig Hellebust, *University College Cork*
3:00
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9CH HAZE IN CHINA: SOURCES, FORMATION MECHANISMS, AND CURRENT CHALLENGES II

LAKESHORE A

Jiming Hao and Mei Zheng, chairs

- 9CH.1 Estimate Mortality Attributable to PM2.5 Exposure in China with Assimilated PM2.5 Concentrations Based on Ground Monitoring Network and a Regional Air Quality Model.** Jun Liu, Yiqun Han, Xiao Tang, Jiang Zhu, TONG ZHU, *Peking University*
2:00
- 9CH.2 Formation and Sources: Seasonal Haze Episodes in Beijing, China in 2013.** YANJUN ZHANG, Jing Cai, Mei Zheng, *Peking University*
2:15
- 9CH.3 Chemical Apportionment of Aerosol Optical Properties during the Asia-Pacific Economic Cooperation (APEC) Summit in Beijing.** TINGTING HAN, Weiqi Xu, Chen Chen, Wei Du, Qingqing Wang, Zifa Wang, Ting Yang, Xingang Liu, Yele Sun, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*
2:30
- 9CH.4 PM2.5 Aerosol Composition and Sources in China during Extreme Haze Events.** MIRIAM ELSER, Imad El Haddad, Robert Wolf, Jay Slowik, Junji Cao, Urs Baltensperger, Ru-Jin Huang, Andre Prévôt, *Paul Scherrer Institute*
2:45
- 9CH.5 Exposure to Polycyclic Aromatic Hydrocarbons and Associated Oxidative Damage: A Natural Experiment between Los Angeles and Beijing.** YAN LIN, Xinghua Qiu, Yifang Zhu, *University of California Los Angeles*
3:00
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9IM INSTRUMENTATION AND METHODS V - MASS SPECTROMETRY

LAKESHORE B/C

Wen Xu and Adam Ahern, chairs

- 9IM.1 Development a PM2.5-Capable Aerosol Chemical Speciation Monitor.** WEN XU, Philip Croteau, Leah Williams, Timothy Onasch, Manjula Canagaratna, Douglas Worsnop, John Jayne, *Aerodyne Research, Inc.*
2:00
- 9IM.2 Characterization and Application of a Mini Aerodyne Aerosol Mass Spectrometer.** PETER DECARLO, Guan Yu Lin, Anita Johnson, J. Doug Goetz, Urs Rohner, Michael Cubison, Joel Kimmel, Marc Gonin, John Jayne, Douglas Worsnop, *Drexel University*
2:15
- 9IM.3 Effect of Secondary Organic Aerosol Coating Thickness on the Detection and Characterization of Biomass-burning Soot by Particle Mass Spectrometry.** ADAM AHERN, R. Subramanian, Georges Saliba, Eric Lipsky, Allen Robinson, Neil Donahue, Ryan Sullivan, *Carnegie Mellon University*
2:30
- 9IM.4 A Direct HO2 Measurement Method Using Chemical Ionization Mass Spectrometry (CIMS) for the Study of Peroxy Radical Fate.** JAVIER SANCHEZ, David Tanner, Greg Huey, Nga Lee Ng, *Georgia Institute of Technology*
2:45

9IM.5 Time Resolved Molecular Characterization of Water-Soluble Organic Aerosols by PILS + UPLC/ESI-ToF/MS.
3:00 XUAN ZHANG, Nathan Dalleska, Dan D. Huang, Kelvin Bates, Armin Sorooshian, Richard Flagan, John Seinfeld, *Caltech*

9RW THE ROLE OF WATER IN AEROSOL CHEMISTRY II

NICOLLET D1

Rodney Weber and Thanos Nenes, chairs

9RW.1 Aerosol pH Buffering in the Southeastern US: Fine Particles Remain Highly Acidic Despite Large Reductions in Sulfate. ATHANASIOS NENES, Hongyu Guo, Armistead G. Russell, Rodney J. Weber, *Georgia Institute of Technology*
2:00

9RW.2 Tracking Water Diffusion Fronts in a Highly Viscous Aerosol Particle. SANDRA BASTELBERGER, Ulrich Krieger, Thomas Peter, *ETH Zurich*
2:15

9RW.3 The Role of Water in Controlling Heterogeneous Transformations of Viscous Oxygenated Organic Aerosol. JAMES F. DAVIES, Kevin Wilson, *Lawrence Berkeley National Laboratory*
2:30

9RW.4 Laboratory Studies of In-particle Aqueous Oxidation of Organic Species. JESSE KROLL, Kelly Daumit, Anthony Carrasquillo, Rebecca Sugrue, *MIT*
2:45

9RW.5 What is the Meaning of "Non-liquid" or "Liquid" Applied to Secondary Organic Material? Highlighting Differences in the Effects of Absorbed Water on Physical Properties Compared to Chemical Reactivity. SCOT MARTIN, Yong Jie Li, Pengfei Liu, Zhaoheng Gong, Yan Wang, Adam Bateman, *Harvard University*
3:00

9SA SOURCE APPORTIONMENT II

REGENCY ROOM

Lea Hildebrandt Ruiz and Sivaraman Balachandran, chairs

9SA.1 Spatial and Temporal Variability of Sources of Ambient Fine Particulate Matter (PM_{2.5}) in California. SINA HASHEMINASSAB, Nancy Daher, Arian Saffari, Dongbin Wang, Bart Ostro, Constantinos Sioutas, *University of Southern California*
2:00

9SA.2 Long-term Trends of PM_{2.5} Sources at Metropolitan Areas in Canada: Identifying Factors that Contributed to Improved Air Quality. CHEOL-HEON JEONG, Kelly Sabaliauskas, Dennis Herod, Ewa Dabek-Zlotorzynska, Greg J. Evans, *SOCAAR, University of Toronto*
2:15

9SA.3 Seasonally and Spatially-resolved Source Contributions to Organic Aerosol in Switzerland. Kaspar Daellenbach, Giulia Stefanelli, Imad El Haddad, Carlo Bozzetti, Athanasia Vlachou, Paula Fermo, Raquel Gonzalez, Andrea Piazzalunga, Christina Colombi, JAY SLOWIK, Federico Bianchi, Francesco Canonaco, Urs Baltensperger, Andre Prévôt, *Paul Scherrer Institute*
2:30

9SA.4 A Rigorous Examination of the Impact of Modern Gasoline Vehicles on the Use of CMB to Determine the Gasoline/Diesel Split. ANDREW HIX, Andrew May, Christopher Hennigan, Allen Robinson, Neil Donahue, Albert A. Presto, *Carnegie Mellon University*
2:45

9SA.5 Evidence for Unrecognized Anthropogenic Sources of Organosulfates: Gas-Phase Oxidation of Anthropogenic Precursors in the Presence of Sulfate Aerosol. MATTHIEU RIVA, Tianqu Cui, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill*
3:00

9UA URBAN AEROSOLS IV

MIRAGE ROOM

Alla Zelanyuk and Will Wallace, chairs

9UA.1 Assessing the Quantitative Potential of Distributed Low-cost Air Quality Sensor Networks. EBEN CROSS, David Hagan, David Ogotu, Jonathan Franklin, Gary Adamkiewicz, Ann Backus, Jose Vallarino, Douglas Worsnop, John Jayne, Colette Heald, Jesse Kroll, *MIT*
2:00

9UA.2 Assessing the Spatial Representativeness of Central Monitor Measurements of Fine Particulate Matter in California for Exposure Estimation. Jianlin Hu, MICHAEL KLEEMAN, Bart Ostro, *University of California, Davis*
2:15

9UA.3 Changes in Black Carbon Outdoors and Indoors at Near-Roadway Schools in Las Vegas: 2008 to 2013. Steven G. Brown, LYLE CHINKIN, Paul Roberts, David Vaughn, *Sonoma Technology, Inc*
2:30

9UA.4 Characterization of Traffic Emissions Exposure Metrics in the Dorm Room Inhalation to Vehicle Emissions (DRIVE) Study: Spatial and Temporal Dynamics in an Urban Area. JENNIFER L. MOUTINHO, Donghai Liang, Rachel Golan, Chandresh Ladva, Karoline Johnson, Joseph Abrams, Roby Greenwald, Stefanie Ebelt Sarnat, Vishal Verma, Rodney J. Weber, Dean Jones, Jeremy Sarnat, Armistead G. Russell, *Georgia Institute of Technology*
2:45

9UA.5 Comparing Real-time Simultaneous In-car and Outdoor Particulate and Gaseous Concentrations with a Range of Ventilation Scenarios, Road-types and Traffic Densities. ANNA LEAVEY, Nathan Reed, Sameer Patel, Kevin Bradley, Pramod Kulkarni, Pratim Biswas, *Washington University in St Louis*
3:00

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

Thursday 3:45 PM - 5:00 PM
Session 10: Platform

10AC AEROSOL CHEMISTRY VI - NEW PARTICLE FORMATION AND GROWTH

NICOLLET D2/D3

Michael Lawler and Jun Zhao, chairs

10AC.1 Nucleation of Sulfuric Acid Particles with Various Atmospherically Relevant Bases. COTY JEN, Ryan Bachman, Jun Zhao, Peter H. McMurry, David Hanson, *University of Minnesota*
3:45

10AC.2 Multiple New-Particle-Growth Pathways at the DOE Southern Great Plains Field Site in Oklahoma. ANNA HODSHIRE, Jeffrey R. Pierce, James N. Smith, Peter H. McMurry, Jun Zhao, Michael J. Lawler, John Ortega, David Hanson, Kelley C. Barsanti, *Colorado State University*
4:00

10AC.3 New Particle Formation in the Boreal Forest: Characterizing the Molecules Responsible for Growth. MICHAEL J. LAWLER, Nina Sarnela, Mikko Sipilä, Tuukka Petäjä, Douglas Worsnop, James N. Smith, *National Center for Atmospheric Research*
4:15

10AC.4 Spring and Summer Contrast in New Particle Formation over Nine Forest Areas in North America. Fangqun Yu, Gan Luo, Viney Aneja, Kenneth Demerjian, Anna Gannet Hallar, Olga Hogrefe, W. Richard Leaitch, Shanhu Lee, John Ortega, Priya Pillai, Sara Pryor, JAMES SCHWAB, James N. Smith, John Walker, *University at Albany*
4:30

10AC.5 Atmospheric Oxidation Products Pertinent to New Particle Formation. JUN ZHAO, Coty Jen, Mark Stolzenburg, James N. Smith, Peter H. McMurry, *Sun Yat-Sen University*
4:45

10AE AEROSOL EXPOSURE II - INDOOR EXPOSURES

LAKESHORE A

Yifang Zhu and Donghun Rim, chairs

10AE.1 Inhalation Exposure to Aerosol Emitted when Using Electrocautery during Surgery: Operation Room Simulation Setting. SHUANG GAO, Michael Yermakov, Richard Koehler, Tiina Reponen, Sergey A. Grinshpun, *University of Cincinnati*
3:45

10AE.2 Towards a Better Characterization of E-Cigarette Effluent. Jordan Berger, Mark Daley, Timothy Raymond, James Baish, DABRINA DUTCHER, *Bucknell University*
4:00

- 10AE.3 Effects of Electronic Cigarette Puff Topography on Heating Coil Temperature and Mainstream Particle Characteristics.** Tongke Zhao, Shi Shu, Qiuju Guo, YIFANG ZHU, *UCLA*
4:15
- 10AE.4 Source Emission Rates of Indoor Ultrafine Particles Considering Coagulation, Deposition, and Ventilation.** DONGHYUN RIM, Lance Wallace, Andrew Persily, Jung-il Choi, *Pennsylvania State University*
4:30
- 10AE.5 Modeling the Impact of Residential HVAC Filtration on Indoor PM_{2.5} of Outdoor Origin and Associated Chronic Health Risks.** DAN ZHAO, Parham Azimi, Brent Stephens, *Illinois Institute of Technology*
4:45

10HA HEALTH RELATED AEROSOLS II

NICOLLET D1

Gedi Mainelis and Jing Wang, chairs

- 10HA.1 Inflammatory Response to Chronic Exposure of Secondary Organic Aerosol.** ARTHUR CHAN, Jianhui Ye, Xiaomin Wang, Sepehr Salehi, Chung-Wai Chow, *University of Toronto*
3:45
- 10HA.2 Unified Predictive Model for Particle Deposition in the Respiratory Tract.** CHONG KIM, Shu-Chieh Hu, *USEPA*
4:00
- 10HA.3 Airborne Particulate Matter Exposure in Green Multi-family Buildings.** Allison Patton, Leonardo Calderón, Youyou Xiong, Zuo Cheng Wang, Jennifer Senick, MaryAnn Sorensen-Allacci, Deborah Plotnik, Richard Wener, Clinton J. Andrews, Uta Kroghmann, GEDIMINAS MAINELIS, *Rutgers, The State University of New Jersey*
4:15
- 10HA.4 Temporal and Spatial Variability of Polycyclic Aromatic Hydrocarbons in Fresno, California, 2014-2015.** HILARY MINOR, Betsey Noth, David Vaughn, Jaymin Kwon, Charles Perrino, S. Katharine Hammond, Fred Lurmann, *Sonoma Technology, Inc.*
4:30
- 10HA.5 Quantification of Released Carbon Nanotubes from an Epoxy-based Nanocomposite during Abrasion and Particle Toxicity.** Lukas Schlagenhaut, Tina Buerki-Thurnherr, Yu-Ying Kuo, Adrian Wichser, Peter Wick, Frank Nüesch, JING WANG, *ETH Zurich/Empa*
4:45

10IM INSTRUMENTATION AND METHODS VI - ADVANCES IN MEASUREMENTS

LAKESHORE B/C

Elisabeth Galarneau and Jack Lin, chairs

- 10IM.1 Unraveling the Development of Supersaturation under Dynamic Flow Operation of CCN Counters.** JACK J. LIN, Sara Purdue, Tomi Raatikainen, Athanasios Nenes, *Georgia Institute of Technology*
3:45
- 10IM.2 Aerosol Measurement Artefacts using High-Volume Cascade Impactors with Polyurethane Foam and Their Implications.** ELISABETH GALARNEAU, Megha Patel, Jeff Brook, Jean-Pierre Charland, Marianne Glasius, Hayley Hung, *Environment Canada*
4:00
- 10IM.3 Laboratory Characterization of a Volatility and Polarity Separator (VAPS) for Analysis of Oxidized Organic Aerosol.** MICHAEL WALKER, Raul Martinez, Claire Fortenberry, Christopher Oxford, Dhruv Mitroo, Nathan Kreisberg, Brent Williams, *Washington University in St. Louis*
4:15
- 10IM.4 Organic and Inorganic Decomposition Products from the Thermal Desorption of Atmospheric Particles.** BRENT WILLIAMS, Yaping Zhang, Xiaochen Zuo, Raul Martinez, Michael Walker, Claire Fortenberry, Dhruv Mitroo, Allen H. Goldstein, Kenneth Docherty, Jose-Luis Jimenez, *Washington University in St. Louis*
4:30
- 10IM.5 A Direct Method for Measuring the pH of Individual Aerosol Particles Using Raman Microspectroscopy.** JOEL RINDELAUB, Amy Bondy, Rebecca Craig, Paul Shepson, Andrew Ault, *Purdue University*
4:45

10NM NANOPARTICLES AND MATERIALS SYNTHESIS II

REGENCY ROOM

Mark Swihart and Carlos Larriba-Andaluz, chairs

- 10NM.1 Nanoparticle Synthesis by Laser Pyrolysis: Recent Advances in Production and Application of Multicomponent Materials.** Parham Rohani, Seongbeom Kim, MARK SWIHART, *University at Buffalo (SUNY)*
3:45
- 10NM.2 Single Step Synthesis of Tin Oxide Nanopillar Arrays by Aerosol Chemical Vapor Deposition.** TANDEEP CHADHA, Kelsey Haddad, Pratim Biswas, *Washington University in St. Louis*
4:00
- 10NM.3 Gas-Phase Production of Aluminum-Doped Zinc Oxide Nanocrystalline Thin Films.** BENJAMIN GREENBERG, Shreyashi Ganguly, Eray Aydil, Uwe R. Kortshagen, *University of Minnesota*
4:15
- 10NM.4 Synthesis of Titanium Dioxide Aerosol Gel Using a Negative Gravity Diffusion Flame Reactor.** PAI LIU, Ian Arnold, Yang Yu, Rajan Chakrabarty, *Washington University in St. Louis*
4:30
- 10NM.5 Pulsed Radio-Frequency Argon-Silane Plasmas for Controlled Deposition of Silicon Nanoparticles.** CARLOS LARRIBA-ANDALUZ, Steven Girshick, *University of Minnesota*
4:45

10UA URBAN AEROSOLS V

MIRAGE ROOM

Eben Cross and Anna Leavey, chairs

- 10UA.1 Spatial and Temporal Variability in Chemical Composition of Ambient Fine Particulate Matter in the Megacity of Karachi, Pakistan.** HAIDER KHWAJA, Lurie Kelly, Zafar Fatmi, David Carpenter, Daniel Malashock, Azhar Siddique, Kamran Khan, Mirza M. Hussain, Fida Khatib, *Wadsworth Center, University at Albany*
3:45
- 10UA.2 Woodsmoke Pollution in Southern Chile.** HECTOR JORQUERA, Francisco Barraza, Johanna Heyer, *Pontificia Universidad Catolica de Chile*
4:00
- 10UA.3 Episodic Ambient PM_{2.5} in Beijing and Delhi.** JOSHUA APTE, Shahzad Gani, Douw Steyn, S.N. Tripathi, *University of Texas at Austin*
4:15
- 10UA.4 Characteristics and Sources of Submicron Aerosols above Urban Canopy (260 m) in Urban Beijing, China during 2014 APEC Summit.** CHEN CHEN, Wei Du, Weiqi Xu, Zifa Wang, Tingting Han, Qingqing Wang, Zhiqiu Gao, Yele Sun, *Inst. of Atmospheric Physics, Chinese Academy of Sciences*
4:30
- 10UA.5 Modeling Study of the 2010 Regional Haze Event in the North China Plain.** MENG GAO, Gregory Carmichael, Yuesi Wang, Pablo Saide, Man Yu, Jinyuan Xin, Zirui Liu, Zifa Wang, *University of Iowa*
4:45

Friday

Friday 8:00 AM - 9:15 AM

Plenary IV

- 8:00 **Introduction of Plenary Speaker** Lynn Russell, *Scripps Institution of Oceanography, UC San Diego*
- 8:05 **Intersection of Aerosols with Climate Change: Why Policy Makers Should Include Aerosols at the UN Paris-2015 Summit** Veerabhadran Ramanathan, *Scripps Institution of Oceanography, UC San Diego*
- Moderator** Andrea Ferro, Conference Chair, *Clarkson University*
- 9:00 **Student Poster Competition Award Presentation** Britt Holmén, Student Poster Program Chair, *University of Vermont*
- 9:10 **Concluding Remarks and Preview for 2016** Andrea Ferro and Mark Swihart, 2015 and 2016 Conference Chairs, *Clarkson University and State University of New York at Buffalo*

Friday 9:15 AM - 9:45 AM

Coffee Break

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

11AC AEROSOL CHEMISTRY VII - LABORATORY STUDIES

NICOLLET D2/D3

Gabriel Isaacman-VanWertz and Shouming Zhou, chairs

- 11AC.1 Partitioning and Selectivity of Organic Molecules in Nascent Sea Spray Aerosol.** RICHARD COCHRAN, Thilina Jayarathne, Olga Laskina, Camille Sultana, Christopher Lee, Kimberly Prather, Elizabeth Stone, Vicki Grassian, *University of Iowa*
9:45
- 11AC.2 Understanding the Role of Aerosols in the Lifecycle of Organic Carbon through Multiple Generations of Aging.** GABRIEL ISAACMAN-VANWERTZ, Jonathan Franklin, Christopher Lim, Paola Massoli, Andrew Lambe, John B. Nowak, Timothy Onasch, Manjula Canagaratna, Joseph Roscioli, Scott Herndon, John Jayne, Douglas Worsnop, Luping Su, Daniel Knopf, Pawel Misztal, Caleb Arata, Allen H. Goldstein, Jesse Kroll, *Massachusetts Institute of Technology*
10:00
- 11AC.3 Chemical and Hygroscopic Characterization of Photochemically Processed Laboratory Generated Aerosol.** CHRISTOPHER OXFORD, Michael Walker, Claire Fortenberry, Dhruv Mitroo, Eric Sussman, William Brune, Brent Williams, *Washington University in St. Louis*
10:15
- 11AC.4 Size Dependence of Phase Transitions in Aerosol Nanoparticles.** Yafang Cheng, HANG SU, Thomas Koop, Eugene Mikhailov, Ulrich Poeschl, *MPIC*
10:30
- 11AC.5 Formation of Hydroxyl Radical from Photolysis of Aqueous Secondary Organic Aerosol Material.** SHOUMING ZHOU, Katie Badali, Dana Aljawhary, Maria Antiñolo, Crystal Chen, Appana Lok, Emma Mungall, Jenny Wong, Ran Zhao, Jonathan Abbatt, *University of Toronto, Canada*
10:45
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11AP AEROSOL PHYSICS III - MOBILITY AND DRAG

LAKESHORE A

George Mulholland and Ranga Gopalakrishnan, chairs

- 11AP.1 IMoS: An Efficient Algorithm to Calculate Ion Mobilities from All Atom Models.** CARLOS LARRIBA-ANDALUZ, *University of Minnesota*
9:45
- 11AP.2 Effect of Particle Rotation on the Drift Velocity for Non-Spherical Aerosol Particles.** GEORGE MULHOLLAND, Charles Hagwood, Mingdong Li, Michael Zachariah, *University of Maryland*
10:00
- 11AP.3 Prediction of the Alignment, Preferred Orientation and Electrical Mobility of Nanoparticle Agglomerates during Electrical Mobility Classification.** RANGANATHAN GOPALAKRISHNAN, *University of Iowa*
10:15
- 11AP.4 Evaluating the Mobility of Soot Aggregates: Role of Electric Fields in Alignment.** MINGDONG LI, George Mulholland, Michael Zachariah, *University of Maryland*
10:30
- 11AP.5 Effect of Fractal Morphology on Aggregates Mass Mobility Relationship.** Pai Liu, RAJAN CHAKRABARTY, *Washington University in St Louis*
10:45
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11CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE III

REGENCY ROOM

Chris Hennigan and Arthur Chan, chairs

- 11CA.1 Detailed Analysis of Brown Carbon Constituents in Biomass Burning Emissions.** ANDREY KHLYSTOV, Vera Samburova, Madhu Gyawali, Laxmi Narasimha Yatavelli, Rajan Chakrabarty, Adam Watts, Joseph Knue, Anna Cunningham, Jessica Connolly, Hans Moosmuller, Barbara Zielinska, *Desert Research Institute*
9:45

- 11CA.2 Single Particle Characterization of Biomass Burning Organic Aerosol: Evidence of High Molecular Weight Organics with Low Potassium Content.** ALEX K. Y. LEE, Megan D. Willis, Robert Healy, Jon M Wang, Cheol-Heon Jeong, Greg J. Evans, Jonathan Abbatt, *University of Toronto*
10:00
- 11CA.3 Investigating Biomass Burning Contribution to Brown Carbon in Beijing.** CAIQING YAN, Mei Zheng, Yury Desyaterik, Amy P. Sullivan, Jeffrey Collett, *Peking University*
10:15
- 11CA.4 Laboratory and Field Measurements of Physical and Optical Properties of Open Biomass Burning and Cook Stove Aerosols.** CHRISTIAN CARRICO, Oluwatobi Oke, Sonia Kreidenweis, Paul DeMott, Ezra Levin, Gavin McMeeking, Chelsea Stockwell, Robert J. Yokelson, *New Mexico Institute of Mining and Technology*
10:30
- 11CA.5 Absorption Enhancement of Cook Stove Soot Coated with SOA: Measurements and Modeling.** GEORGES SALIBA, Adam Ahern, Antonios Tasoglou, Rawad Saleh, Eric Lipsky, Ryan Sullivan, Janarjan Bhandari, Claudio Mazzoleni, Allen Robinson, R. Subramanian, *Carnegie Mellon University*
10:45

11CC AEROSOLS, CLOUDS, AND CLIMATE II

MIRAGE ROOM

Richard Moore and Lindsay Renbaum-Wolff, chairs

- 11CC.1 The Effect of Climate Change on Future PM2.5 Concentrations.** DANIEL WESTERVELT, Larry Horowitz, Vaishali Naik, Denise Mauzerall, *Princeton University*
9:45
- 11CC.2 The Importance of Interstitial Particle Scavenging by Cloud Droplets in Shaping the Remote Aerosol Size Distribution and Global Aerosol-climate Effects.** JEFFREY R. PIERCE, Betty Croft, Jack Kodros, Stephen D'Andrea, Randall V. Martin, *Colorado State University*
10:00
- 11CC.3 The Effects of Model Spatial Resolution on Cloud Condensation Nuclei and Ultrafine Number Concentrations Simulated in a Global Model.** MARGUERITE COLASURDO MARKS, Peter Adams, *Carnegie Mellon University*
10:15
- 11CC.4 Impacts of New Particle Formation on Midwestern Climate and Air Quality as Determined by the NPF-explicit WRF-Chem.** CAN DONG, Charles Stanier, Robert Bullard, Ashish Singh, *University of Iowa*
10:30
- 11CC.5 Measurements of Organic Species within a Greenland Ice Core from 269-2013 AD.** CHRISTOPHER LIM, Eleanor Browne, Edward Fortner, Paola Massoli, Monica Arienzo, Nathan Chellman, Daniel Pasteris, Audrey Yau, Timothy Onasch, Leah Williams, John Jayne, Douglas Worsnop, Joseph McConnell, Jesse Kroll, *MIT*
10:45

11HA HEALTH RELATED AEROSOLS III

NICOLLET D1

Alan Shihadeh and Vishal Verma, chairs

- 11HA.1 Effect of Liquid Composition on Particle Size Distribution and Nicotine Yield of Electronic Cigarette Aerosols.** Mohamad Baassiri, Soha Talih, Nareg Karaoghlanian, Rola Salman, Najat A. Saliba, Rachel El Hage, ALAN SHIHADDEH, *American University of Beirut*
9:45
- 11HA.2 Reactive Oxygen Species (ROS) Associated with the Ambient Particulate Matter – Insights from Southeastern Center for Air Pollution and Epidemiology (SCAPE) Study.** VISHAL VERMA, Ting Fang, Josephine Bates, Robert Devlin, Armistead G. Russell, Rodney J. Weber, *Georgia Institute of Technology*
10:00
- 11HA.3 Impact of Height and Filtration Media on Size Distribution of Inhalable Fraction of Waterpipe Tobacco Smoke Using a TSI NanoScan.** CINDY DEFOREST HAUSER, Kate Cerully, *Davidson College*
10:15
- 11HA.4 Particulate Matter Oxidative Potential as an Additional Metric of Pollutant Exposure.** ANGELA HUANG, Jandi Kim, Greg J. Evans, Scott Weichenthal, Krystal G. Pollitt, *SOCAAR, University of Toronto*
10:30
- 11HA.5 Contrasting Oxidative Potential of Ambient Water-Soluble PM2.5 Measured by Dithiothreitol (DTT) and Ascorbic Acid (AA) Assays: Spatiotemporal Distribution, Source Apportionment, and Health Impacts.** TING FANG, Vishal Verma, Josephine Bates, James Mulholland, Armistead G. Russell, Rodney J. Weber, *Georgia Institute of Technology*
10:45

11IM INSTRUMENTATION AND METHODS VII - SPECTROSCOPY AND SPECTROMETRY

LAKESHORE B/C

Pramod Kulkarni and Siqin He, chairs

- 11IM.1 Measurement of Gas and Aerosol Phase Absorption Spectra across the Visible and Near-IR Using Supercontinuum Photoacoustic Spectroscopy.** James Radney, CHRISTOPHER ZANGMEISTER, *National Institute of Standards and Technology*
9:45
- 11IM.2 Portable Near-real Time Spectrometer for Measurement of Elemental Concentration of Aerosols.** PRAMOD KULKARNI, Lina Zheng, G.J. Deye, M. Eileen Birch, *Centers for Disease Control and Prevention, NIOSH*
10:00
- 11IM.3 Electropray-Differential Mobility Hyphenated with Single Particle-Inductively Coupled Plasma Mass Spectrometry for Characterization of Nanoparticles and Their Aggregates.** JIAOJIE TAN, Jingyu Liu, Mingdong Li, Hind El Hadri, Vincent Hackley, Michael Zachariah, *National Institute of Standards and Technology*
10:15
- 11IM.4 Chemical Analysis of Ambient Air In Real Time by Secondary Electropray Ionization High-Resolution Mass Spectrometry.** XUE LI, Pablo M.-L. Sinues, Renato Zenobi, *Jinan University; ETH Zurich*
10:30
- 11IM.5 The Development of Electrostatic Precipitation-Electropray Ionization Mass Spectrometry (EP-ESI-MS) for Aerosol Analysis.** SIQIN HE, Lin Li, Hongxu Duan, Amir Naqwi, Christopher Hogan Jr., *University of Minnesota*
10:45

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

12AC AEROSOL CHEMISTRY VIII - AMBIENT OBSERVATIONS

NICOLLET D2/D3

Gehui Wang and Manabu Shiraiwa, chairs

- 12AC.1 Black Carbon in Beijing: Mixing State, Sources and Optical Properties.** JING CAI, Mei Zheng, Jiandong Wang, Yanjun Zhang, Shuxiao Wang, *Peking University*
11:15
- 12AC.2 Field Observation of Heterogeneous Formation of Secondary Organic Aerosols on Asian Mineral Dust Surfaces.** GEHUI WANG, Chunlei Cheng, Jiayuan Wang, *Institute of Earth Environment, Chinese Academy of Sciences*
11:30
- 12AC.3 Secondary Organic Aerosol Formation in a Forested Environment with Limited Anthropogenic Influence.** ALEX K. Y. LEE, Jonathan Abbatt, W. Richard Leitch, Shao-Meng Li, John Liggio, Annie-Marie Macdonald, Steve Sjostedt, Jeremy Wentzell, *University of Toronto*
11:45
- 12AC.4 Organic Nitrogen and Carbon in Atmospheric Aerosols: Concentration, Chemical Composition, and Properties.** TIANQU CUI, Paul Selleck, Ying-Hsuan Lin, Kelsey Boulanger, Rachel O'Brien, Zhenfa Zhang, Avram Gold, Melita Keywood, Jesse Kroll, Jason Surratt, *University of North Carolina at Chapel Hill*
12:00
- 12AC.5 Detection and Quantification of Reactive Oxygen Species in Ambient and Laboratory-generated Organic Aerosols.** MANABU SHIRAIWA, Andrea Arangio, Haijie Tong, Fobang Liu, Christopher Kampf, Ulrich Poeschl, *Max Planck Institute for Chemistry*
12:15

12AP AEROSOL PHYSICS IV - OPTICAL MEASUREMENTS

LAKESHORE A

Chuji Wang and Rajan Chakrabarty, chairs

- 12AP.1 A Light-Scattering Study of the Scattering Matrix Elements of Irregularly Shaped Particles.** YULI HEINSON, Amit Chakrabarti, Chris Sorensen, *Kansas State University*
11:15

- 12AP.2 On the Contribution of Raman Lidar-derived Aerosol Backscatter and Humidity Profiles for Understanding Boundary Layer Mixing Processes and Aerosol Swelling.** SANDIP PAL, *University of Virginia*
11:30
- 12AP.3 Optical Trap, Manipulation, and Characterization of Light-absorbing Single Aerosol Particles in Air.** CHUJI WANG, Yong-Le Pan, Zhiyong Gong, Brandon Redding, *Mississippi State University, US Army Research Laboratory*
11:45
- 12AP.4 Quantum Cascade Laser Cavity Ring Down Spectroscopy: New Method for the Characterization and Detection of Aerosols.** ANGELA M. BUONAUGURIO, John M. Nilles, Erin M. Durke, Tiffany Sutton, *EXCET Inc./ Edgewood Chemical Biological Center*
12:00
- 12AP.5 Backscatter from Liquid Drop Aerosol.** BRENDAN HEFFERNAN, Yuli Heinson, Justin Maughan, Amit Chakrabarti, Chris Sorensen, *Kansas State University*
12:15

12BA BIOAEROSOLS IV - INDOOR BIOAEROSOLS AND THREATS

NICOLLET D1

Kerry Kinney and Brent Stephens, chairs

- 12BA.1 SenseNet: An Outdoor Monitoring System for Biothreats.** Ray Pierson, WILLIAM HARRIS, Cody Niese, Egbert Tse, Dave Wasson, Jonathan Thornburg, Quentin Malloy, Prakash Doraiswamy, Robert Serino, *Northrop Grumman Inc.*
11:15
- 12BA.2 Development of an Experimental System for Assessing Indoor Bioaerosol Transport and Control.** STEPHANIE KUNKEL, Parham Azimi, Brent Stephens, *Illinois Institute of Technology*
11:30
- 12BA.3 The Microbiology of Indoor Air Quality in a University Dormitory and Impacts on Student Health.** JULIA LUONGO, Noah Fierer, Shelly Miller, *University of Colorado Boulder*
11:45
- 12BA.4 Design and Performance Evaluation of a Ferret Exposition Chamber for the Study of Airborne Virus Transmission.** NATHALIE TURGEON, Daniel Verreault, Dan Zegan, Matthieu Girard, Martin Belzile, Caroline Duchaine, *Université Laval, Canada*
12:00
- 12BA.5 A Novel Sampler for Viral Aerosols through Water-based Condensation Particle Growth.** MAOHUA PAN, Arantzazu Eiguren-Fernandez, Nima Afshar-Mohajer, Susanne Hering, Chang-Yu Wu, John Lednický, Hugh Fan, Hsin Hsieh, *University of Florida*
12:15

12CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE IV

REGENCY ROOM

Dan Westervelt and Theodora Nah, chairs

- 12CA.1 Gas-Particle Partitioning of Primary Organic Aerosol from Vehicles Measured in a Traffic Tunnel.** XIANG LI, Timothy Dallmann, Albert A. Presto, *Carnegie Mellon University*
11:15
- 12CA.2 Particle Rebound and Phase State in Amazonia.** ADAM BATEMAN, Zhaoheng Gong, Antonio O. Manzi, Paulo Artaxo, Rodrigo A. F. Souza, Scot Martin, *Harvard University*
11:30
- 12CA.3 Simulation of the Size-Composition Distribution of Atmospheric Nanoparticles over Europe.** David Patoulias, Christos Fountoukis, Ilona Riipinen, SPYROS PANDIS, *University of Patras, Greece*
11:45
- 12CA.4 Raman Spectra of Individual Ambient Particles.** DAVID DOUGHTY, Steven Hill, Alan Wetmore, *US Army Research Lab*
12:00
- 12CA.5 Study of Ambient Solid Particle Size Distribution in Riverside California.** YUE LIN, Kihong Park, Heejung S. Jung, *University of California, Riverside*
12:15

12CC AEROSOLS, CLOUDS, AND CLIMATE III

MIRAGE ROOM

Kip Carrico and Andrew Metcalf, chairs

- 12CC.1** **Toward the Minimal Representation of the Aerosol Mixing State.** LAURA FIERCE, Nicole Riemer, Tami Bond, 11:15 *University of Illinois at Urbana-Champaign*
- 12CC.2** **Aerosol Optics, Radiative Forcing, and Climate Change.** HANS MOOSMULLER, *Desert Research Institute* 11:30
- 12CC.3** **New Optical Experiments "Shed Light" on Role of Particle Morphology and Chemical Composition in the Absorption Enhancement of Coated Soot Particles.** LINDSAY RENBAUM-WOLFF, Andrew Lambe, Timothy Onasch, Andrew Freedman, Leah Williams, Taylor Helgestad, Christopher Cappa, Al Fischer, Geoff Smith, Swarup China, Claudio Mazzoleni, Arthur J. Sedlacek, Eleanor Browne, Gabriel Isaacman-VanWertz, Jesse Kroll, James Brogan, Yatish Parmar, Andrew Lee, Noopur Sharma, Janarjan Bhandari, John Jayne, Douglas Worsnop, Paul Davidovits, *Boston College* 11:45
- 12CC.4** **Sensitivity of Aerosol Optical Depth to Aerosol and Meteorological Parameters in the Summertime Continental Boundary Layer.** CHARLES BROCK, Nick Wagner, Bruce Anderson, Andreas Beyersdorf, Pedro Campuzano-Jost, Annmarie Carlton, Douglas Day, Glenn Diskin, Timothy Gordon, Jose-Luis Jimenez, Daniel Lack, Jin Liao, Ann M. Middlebrook, Mathews Richardson, Rebecca Washenfelder, Andre Welti, Luke Ziemba, Daniel Murphy, *NOAA Earth System Research Laboratory, Boulder, CO* 12:00
- 12CC.5** **Assessing the Accuracy of Parameterized Aerosol Extinction Estimates during the HAGiS (Hygroscopic Aerosol Growth in winter Study) Field Campaign.** TIMOTHY GORDON, Nick Wagner, Bernard Mason, Ann M. Middlebrook, Charles Brock, Mathews Richardson, Frank Erdesz, Daniel Murphy, *CU CIRES - NOAA ESRL* 12:15

12IM INSTRUMENTATION AND METHODS VIII - PORTABLE INSTRUMENTATION AND SENSORS

LAKESHORE B/C

Ru-Shan Gao and Kimberly Anderson, chairs

- 12IM.1** **Design and Optimization of an Optical Detector for the Portable Inhalable Particle Sizer.** KIMBERLY ANDERSON, Sean Walsh, Azer Yalin, John Volckens, *Colorado State University* 11:15
- 12IM.2** **Evaluation of a Low-cost Direct Reading Instrument for Fine and Coarse Aerosol Particles.** SINAN SOUSAN, Kirsten Koehler, Geb Thomas, Jae Hong Park, Michael Hillman, Thomas Peters, *University of Iowa* 11:30
- 12IM.3** **Air Pollution Measurements Employing Multiple Mobile Platforms in Denver, CO, Summer 2014.** MELISSA M. LUNDEN, Nick Staubach, Davida Herzl, Paul A. Solomon, Melinda Beaver, Surender Kaushik, *Aclima Inc.* 11:45
- 12IM.4** **Air Quality Sensors Applications for Emissions Factors and Health Studies.** KAROLINE JOHNSON, Michael Bergin, Armistead G. Russell, Jennifer L. Moutinho, Jeremy Sarnat, Donghai Liang, Roby Greenwald, Joseph Abrams, Rachel Golan, *Duke University* 12:00
- 12IM.5** **A New and Inexpensive Tool for Aerosol, AOD, and O3 Vertical Profiling.** RU-SHAN GAO, Jack Elston, Daniel Murphy, Irina Petropavlovskikh, John Ogren, *NOAA* 12:15