

American Association for Aerosol Research - Abstract Submission



AAAR 33rd Annual Conference
October 20 - October 24, 2014
Rosen Shingle Creek
Orlando, Florida, USA

Tuesday

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

- 8:00 **Welcoming Remarks** Athanasios Nenes, Conference Chair, *Georgia Institute of Technology*
- 8:05 **Can We Tame the Aerosol Uncertainty Monster?** Ken Carslaw, *University of Leeds*
- Moderator** Peter Adams, *Carnegie Mellon University*
- 9:00 **Whitby Award Presentation** Donald Dabdub, *University of California, Irvine*

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

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

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

1AC AEROSOL CHEMISTRY

PANZACOLA H 1-3

V. Faye McNeill and Qi Zhang, chairs

- 1AC.1 Secondary Organic Aerosol Formation from Acylperoxynitrates (APNs) of Biogenic Aldehydes.** TRAN NGUYEN, 9:45 Kelvin Bates, Matthew Coggon, Xuan Zhang, Zhenfa Zhang, Avram Gold, Jason Surratt, John Crounse, Paul Wennberg, John Seinfeld, *California Institute of Technology*
- 1AC.2 SOA Formation from the Aqueous-phase Reactions of Phenolic Compounds.** QI ZHANG, Lu Yu, Jeremy Smith, 10:00 Cort Anastasio, Alexander Laskin, *University of California, Davis*
- 1AC.3 SOA Potential Formation from Whole Gasoline.** CHIA-LI CHEN, Ping Tang, Lijie Li, David R. Cocker III, *University of California, Riverside* 10:15
- 1AC.4 Effect of Temperature and Dilution on SOA Derived from Reaction of Beta-pinene with Nitrate Radical.** 10:30 CHRISTOPHER BOYD, Lu Xu, Javier Sanchez, Xiaoxi Liu, Wing-Yin Tuet, Greg Huey, Nga Lee Ng, *Georgia Institute of Technology*

- 1AC.5 Photoactivated SOA Formation: Mechanistic Insight from Modeling and Experiments.** V. FAYE MCNEILL, Andrew Sumner, Joseph Woo, Wanyi Li, Nabil Khan, Yi Rao, *Columbia University*
10:45
- 1AC.6 Instantaneous NO Effect on Secondary Organic Aerosol Formation during m-Xylene Photooxidation.** LIJIE LI, Ping Tang, Chia-Li Chen, David R. Cocker III, *University of California, Riverside*
11:00
- 1AC.7 Incremental Secondary Organic Aerosol Formation at Simulated Atmospheric Reactivities.** MARY KACARAB, William P. L. Carter, David R. Cocker III, *University of California, Riverside*
11:15
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1AP AEROSOL PHYSICS

PANZACOLA H4

Rajan Chakrabarty and William Heinson, chairs

- 1AP.1 Light Scattering by Thickened Percolation Aggregates.** WILLIAM HEINSON, Chris Sorensen, Amit Chakrabarti, 9:45 *Kansas State University*
- 1AP.2 Wavelength Resolved Polarized Elastic Scattering Measurements from Single Particles.** Jozsef Czege, 10:00 VASANTHI SIVAPRAKASAM, Jay Eversole, *Naval Research Laboratory*
- 1AP.3 Bounds on Aerosol Physical and Optical Properties Using Linear Programming-based Extension of the Quadrature Method of Moments.** ROBERT MCGRAW, *Brookhaven National Laboratory*
10:15
- 1AP.4 Linear Electrodynamic Quadrupole Trap for Single Particle Studies.** MATTHEW HART, Erin M. Durke, Jason Edmonds, Jay Eversole, *Naval Research Laboratory*
10:30
- 1AP.5 Radiative Properties of Soot Fractal Aggregates Formed by Polydisperse Point-Touch Spherical Particles.** 10:45 FENGSHAN LIU, Jerome Yon, *National Research Council Canada*
- 1AP.6 High Intensity X-ray Scattering of Nanosized Ice Particles Formed in a Supersonic Nozzle.** ANDREW AMAYA, 11:00 Viraj Modak, Harshad Pathak, Michael Bogan, Hartawan Laksmono, Claudiu Stan, Duane Loh, Raymond Sierra, Anders Nilsson, Jonas Sellburg, Trevor McQueen, Sebastien Boutet, Garth Williams, Marc Messerschmidt, Barbara Wyslouzil, *The Ohio State University*
- 1AP.7 Divine Proportion Shape Invariance of DLCA Fractal Aggregates: An Analytical Theory.** William Heinson, Amit Chakrabarti, CHRIS SORENSEN, *Kansas State University*
11:15
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1CC AEROSOLS, CLOUDS, AND CLIMATE

SEBASTIAN I 1

Andy Ault and Shunsuke Nakao, chairs

- 1CC.1 Optical Properties of Suspended Mineral Dusts from Desert Source Regions.** Johann Engelbrecht, HANS 9:45 MOOSMULLER, Samuel Pincock, David Campbell, Rajan K. Chakrabarty, R.K.M. Jayanty, Gary Casuccio, *Desert Research Institute*
- 1CC.2 In-situ Measurement of the Aerosol Absorption Spectrum as a Function of Particle Size: Implications for Climate Change.** CHRISTOPHER ZANGMEISTER, James Radney, *National Institute of Standards and Technology*
10:00
- 1CC.3 Effects of Global Climate on Photochemical Pollutant Levels Using Climate Downscaling Meteorology and Chemical Transport Model.** HONGLIANG ZHANG, Jianlin Hu, David Rasmussen, Zhan Zhao, Shu-Hua Chen, Michael Kleeman, *University of California, Davis*
10:15
- 1CC.4 Multi-year Analysis of Aerosol Optical Depth and its Impact on Cloud Properties over a Coastal-urban City of South Africa as Retrieved from MODIS.** A. JOSEPH ADESINA, Venkataraman Sivakumar, K. Raghavendra Kumar, *University of Kwazulu-Natal, Durban, South Africa*
10:30
- 1CC.5 Ice Nucleating Particle Emissions from Biomass Combustion and the Potential Importance of Soot Aerosol.** 10:45 EZRA LEVIN, Gavin McMeeking, Paul DeMott, Christina S. McCluskey, Christian Carrico, Shunsuke Nakao, Chelsea Stockwell, Robert J. Yokelson, Sonia Kreidenweis, *Colorado State University*

1CC.6 Adjoint Analysis of Ice Crystal Sensitivity to Heterogeneous Nucleation Spectrum. SYLVIA SULLIVAN, Benjamin Sheyko, Athanasios Nenes, *Georgia Institute of Technology*

1CC.7 Droplet Activation Parameterization for Climate Models: The Population Splitting Concept Revisited. 11:15 RICARDO MORALES BETANCOURT, Athanasios Nenes, *Georgia Institute of Technology*

1HA HEALTH RELATED AEROSOLS

SEBASTIAN I 3

Roby Greenwald and Jun Wang, chairs

1HA.1 Health Implications Of Aerosols from Asbestos-Bearing Road Pavements Traditionally Used in Southern Brazil. 9:45 RICARDO H. M. GODOI, Sérgio J. Gonçalves Jr., Célia Sayama, José M. Reis Neto, László Bencs, Bálint Alföldy, René Van Grieken, Carlos A. Riedi, Ana Flavia L. Godoi, Guilherme C. Borillo, Yara S. Tadano, *Federal University of Parana - Curitiba, PR, Brazil*

1HA.2 An Analysis of Air Pollution Effects On Health In São Paulo City Through Health Impact Assessment Approach. 10:00 SIMONE MIRAGLIA, Karina Abe, Ricardo Popescu-Junior, *Universidade Federal de Sao Paulo, Sao Paulo, Brazil*

1HA.3 Air Quality Assessment of Indoor Brazilians Elementary Schools Nearby Petrochemical Industry. 10:15 Ricardo H. M. Godoi, ANA FLAVIA L. GODOI, Sérgio J. Gonçalves Jr., Guilherme C. Borillo, Sarah L. Paralovo, Cybelli G. G. Barbosa, Manoela G. Arantes, Nelson A. Rosário Filho, Carlos I. Yamamoto, Sanja Potgieter-Vermaak, René Van Grieken, Yara S. Tadano, *Federal University of Parana - Curitiba, PR, Brazil*

1HA.4 Estimating Climate and Health Costs from Emissions of On-road Gasoline and Diesel Vehicles. 10:30 SHANTANU JATHAR, Allen Robinson, *University of California, Davis*

1HA.5 Aerosol Emissions from Ships Using Heavy Fuel Oil or Diesel Fuel: Composition and Biological Effects on Human Lung Cells. 10:45 RALF ZIMMERMANN, Sebastian Öder, Tamara Kanashova, Olli Sippula, Saen Sapcarriu, Thorsten Streibel, Manuel Jose Arteaga-Salas, Johannes Passig, Hanns-Rudolf Paur, Marco Dilger, Benjamin Stengel, Horst Harndorf, Jorma Jokiniemi, Kelly BeruBe, Erwin Karg, Jürgen Schnelle-Kreis, Jürgen Orasche, Laarnie Müller, Ahmed Rehda, Thomas Gröger, Martin Sklorz, Christian Radischat, Karsten Hiller, Jeroen Buters, Gunnar Dittmar, *Helmholtz Zentrum München and Rostock University*

1HA.6 Characterization of Atmospherically Important Organic Radicals in the Gas and Particle Phase. 11:00 STEVEN CAMPBELL, Chiara Giorio, Markus Kalberer, *University of Cambridge*

1HA.7 Factors Controlling the Pulmonary Bioaccessibility of Trace Elements in Atmospheric Fine and Ultrafine Particles Near an Industrial Site. 11:15 LAURENT ALLEMAN, Saliou Mbengue, Esperanza Perdrix, Aude Pascaud, Pascal Flament, *Mines Douai, SAGE, F-59508 Douai, France*

1IA INDOOR AEROSOLS

SEBASTIAN I 4

Tiina Reponen and Yifang Zhu, chairs

1IA.1 Relative Contributions of Self-Pollution and On-Road-Pollution to Children's Exposure in School Buses. 9:45 EON LEE, Yifang Zhu, *University of California, Los Angeles*

1IA.2 Commuters' Exposure to PM2.5 and CO2 in Metro Carriages of Shanghai Metro System. 10:00 HAO GU, Bin Xu, *Tongji University*

1IA.3 Feasibility of Partial Air Recirculation for Vehicle HVAC System. 10:15 HEEJUNG S. JUNG, Michael Grady, *University of California Riverside*

1IA.4 Physical Characteristics of Ultrafine Particles Generated by Electronic Cigarettes. 10:30 CHA-CHEN FUNG, Zhongshu Li, Mei Zheng, Yifang Zhu, *UCLA*

1IA.5 Investigation of the Reactivity of PAHs Present in Model Indoor Surfaces. 10:45 SHOUMING ZHOU, Matthew Forbes, Jonathan Abbatt, *University of Toronto*

- 1IA.6 How Air Quality Metrics and Wireless Technology can Maximize the Energy Efficiency of HVAC in a Working Auditorium.** ANNA LEAVEY, Yong Fu, Mo Sha, Andrew Kutta, Chenyang Lu, Wei-Ning Wang, Bill Drake, Yixin Chen, Pratim Biswas, *Washington University in St Louis*
11:00
- 1IA.7 Indoor and Outdoor Endotoxins at Santiago, Chile: Spring 2012 Results.** HECTOR JORQUERA, Francisco Barraza, Gonzalo Valdivia, Lupita Montoya, *Pontificia Universidad Catolica de Chile*
11:15

1UA URBAN AEROSOLS

SEBASTIAN I 2

Andy May and Kelley Barsanti, chairs

- 1UA.1 Assessment of In-cabin Human Exposure to Ultrafine Particles under Different Conditions of Urban Traffic in Salvador, Bahia, Brazil.** Egídio Guerreiro, Paulo Pinho, Márcio de Carvalho, Danilo Leão, João Marçal, José Róbson de Luna, Rodrigo Vieira, Lílian Guarieiro, Jailson de Andrade, ANTONIO MIGUEL, *University of California, Los Angeles*
9:45
- 1UA.2 Assessing the Impact of Driving Pattern on Emission Factor Variability Using a Gasoline Direct Injection Light-duty Passenger Vehicle.** NAOMI ZIMMERMAN, Jon M Wang, Cheol-Heon Jeong, Nathan Hilker, Kelly Sabaliauskas, Robert Healy, Greg J. Evans, *SOCAAR, University of Toronto*
10:00
- 1UA.3 Seasonal and Multi-Year Trends in Vehicle Emissions Measured in a Traffic Tunnel.** ALBERT A. PRESTO, Xiang Li, Timothy Dallmann, *Carnegie Mellon University*
10:15
- 1UA.4 Real-World Vehicle Emission Factors of Gaseous and Particle Phase Pollutants from High Time Resolution Near-Road Measurements.** JON M WANG, Cheol-Heon Jeong, Naomi Zimmerman, Nathan Hilker, Robert Healy, Greg J. Evans, *SOCAAR, University of Toronto*
10:30
- 1UA.5 Characterization of Black Carbon and Polycyclic Aromatic Hydrocarbon Plume Events in Near-Source Microenvironments Using a Mobile Sampling Platform.** TIMOTHY DALLMANN, Peishi Gu, Yi Tan, Allen Robinson, Albert A. Presto, *Carnegie Mellon University*
10:45
- 1UA.6 Lead Impacts from General Aviation Airports: A Weight of Evidence Approach.** STEPHEN FEINBERG, Jay Turner, *Washington University in St. Louis*
11:00
- 1UA.7 Highly-resolved Modeling of Emissions and Concentrations of Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides, and Fine Particulate Matter in Salt Lake City, Utah.** DANIEL MENDOZA, John Lin, Logan Mitchell, James Ehleringer, *University of Utah*
11:15

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

2AC AEROSOL CHEMISTRY

PANZACOLA F/G

Tran Nguyen, chair

- 2AC.1 Resolving Complex Hydrocarbon Mixtures Using Gas Chromatography Mass Spectrometry with Soft Ionization.** ARTHUR CHAN, Farhana Hoque, Aviv Amirav, *University of Toronto*
1:00
- 2AC.2 Effects of Meteorological Conditions on the Formation of Secondary Organic Aerosol from Amine Precursors.** DEREK PRICE, Mary Kacarab, David R. Cocker III, Kathleen Purvis-Roberts, Philip Silva, *University of California, Riverside*
1:00
- 2AC.4 Photooxidation of Isoprene Epoxydiol (IEPOX)-Derived Secondary Organic Aerosol.** KELVIN BATES, Tran Nguyen, Rebecca Schwantes, Xuan Zhang, Matthew Coggon, Richard Flagan, Brian Stoltz, Paul Wennberg, John Seinfeld, *Caltech*
1:00

- 2AC.5 SOA Formation from Photooxidation of Individual PAHs and Mixtures.** CHIA-LI CHEN, Mary Kacarab, Ping Tang, David R. Cocker III, *University of California, Riverside*
1:00
- 2AC.6 Mass Spectral Observations of Submicron Aerosol Particles and Production of Secondary Organic Aerosol at an Anthropogenically Influenced Site during the Wet Season of GoAmazon2014.** SUZANE SIMOES DE SA, Brett Palm, Pedro Campuzano-Jost, Douglas Day, Weiwei Hu, Matt Newburn, Joel Brito, Paulo Artaxo, Rodrigo A. F. Souza, Antonio O. Manzi, Jose-Luis Jimenez, Lizabeth Alexander, Scot Martin, *Harvard University*
1:00
- 2AC.10 Kinetics Modeling of the Functionalization and Fragmentation Mechanisms of Aerosol Oxidation.** AARON WIEGEL, Kevin Wilson, William Hinsberg, Frances Houle, *Lawrence Berkeley National Laboratory*
1:00
- 2AC.11 Chemical Mechanisms of Atmospheric Aging of Secondary Organic Aerosol.** PEIJUN TU, Murray Johnston, *University of Delaware*
1:00
- 2AC.12 Evaporation of and Water Uptake by Sub-10 Nano-meter Dimethylamine-Sulfuric Acid Nanoparticles.** HUI OUYANG, Siqin He, Christopher Hogan Jr., *University of Minnesota*
1:00
- 2AC.13 OH- Initiated Heterogeneous Oxidation of Saturated Organic Aerosols in the Presence of SO₂: Uptake Kinetics and Product Identification.** NICOLE K. RICHARDS-HENDERSON, Michael Ward, Allen H. Goldstein, Kevin Wilson, *Lawrence Berkeley National Laboratory*
1:00
- 2AC.14 Secondary Organic Aerosol from Aqueous Reactions of Green Leaf Volatiles with Organic Triplet Excited States and Singlet Molecular Oxygen.** NICOLE K. RICHARDS-HENDERSON, Andrew Pham, Kalliat Valsaraj, Cort Anastasio, *University of California, Davis*
1:00
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2AE AEROSOL EXPOSURE

PANZACOLA F/G

Roby Greenwald, chair

- 2AE.1 Characterization of Aerosols Generated from Stainless Steel Plasma Cutting.** JUN WANG, *University of Oklahoma Health Sciences Center*
1:00
- 2AE.2 Nanoparticle Measurements for the Breathing Zone Model.** JEROME GILBERRY, Meaghan McGrath, Jonathan Thornburg, *RTI International*
1:00
- 2AE.3 Release of Airborne Particles from Nanotechnology-enabled Clothing.** LEONARDO CALDERÓN, Letao Yang, Kibum Lee, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
1:00
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2AP AEROSOL PHYSICS

PANZACOLA F/G

Hans Moosmuller, chair

- 2AP.2 Evolution of Capacitance for Agglomerated Nanoparticles during Sintering.** LEO N.Y. CAO, Jing Wang, Heinz Fissan, Sotiris E. Pratsinis, Max L. Eggersdorfer, David Y. H. Pui, *University of Minnesota*
1:00
- 2AP.3 Gravity-induced Trapping and Aerogelation of Nanoparticles in Flame Reactors.** RAJAN K. CHAKRABARTY, Igor Novosselov, Nicholas Beres, Hans Moosmuller, Chris Sorensen, Christopher Stipe, *Desert Research Institute*
1:00
- 2AP.4 The Crossover from Spherical Particle Scattering to Circular Aperture Diffraction in the Limit of Vary Large Spheres.** WILLIAM HEINSON, Chris Sorensen, Amit Chakrabarti, *Kansas State University*
1:00
- 2AP.5 Q-space Analysis of Light Scattering by Gaussian Random Spheres.** JUSTIN MAUGHAN, William Heinson, Amit Chakrabarti, Chris Sorensen, *Kansas State University*
1:00
- 2AP.6 Characterization of Particle Resuspension from Surfaces.** BABAK NASR, Suresh Dhaniyala, Andrea R. Ferro, Goodarz Ahmadi, Sari Paikoff, *Clarkson University*
1:00

2AP.8 Growth of Small Molecular Clusters: Comparison of Growth Rates Determined from Cluster Appearance Times and Collision–Evaporation Fluxes. Tinja Olenius, Ilona Riipinen, Katrianne Lehtipalo, HANNA VEHKAMÄKI, *University of Helsinki*

2AP.9 Alignment of Aerosolized Glass Fibers by an Applied Electric Field. Bon Ki Ku, C.S. Lauber, G. J. DEYE, Leonid Turkevich, *NIOSH*

2AQ AIR QUALITY AND CLIMATE IN THE SOUTHEAST US: INSIGHTS FROM RECENT MEASUREMENT CAMPAIGNS
PANZACOLA F/G

Annamarie Carlton, chair

2AQ.1 Long-Range Transport of Agricultural Smoke to Houston, TX during September 2013: Effects on Aerosol Optical Depths. ANDREAS BEYERSDORF, Sharon P. Burton, Gao Chen, Jack Lin, Robert Martin, Richard Moore, Athanasios Nenes, Kenneth Thornhill, Edward Winstead, Luke Ziemba, Bruce Anderson, *NASA Langley Research Center*

2AQ.2 The Impact of Emissions from Mobile Sources and Biomass Burning on Ambient PM_{2.5} EC and OC in the SEARCH Network, 1999 - 2013. CHARLES BLANCHARD, George Hidy, *Envair*

2AQ.3 The Southeastern Center for Air Pollution and Epidemiology: Results from the Measurement Campaign. LAURA KING, Hongyu Guo, Ting Fang, Vishal Verma, Eric Edgerton, Armistead Russell, Rodney Weber, *Georgia Institute of Technology*

2AQ.4 Single Particle Diversity and Its Impact on Heterogeneous Reactivity during the SOAS Field Campaign. ANDREW AULT, Amy Bondy, Rebecca Craig, Rachel O'Brien, Ryan Moffet, Bingbing Wang, Alexander Laskin, Mary Gilles, Kerri Pratt, Victor Nhliziyo, Steve Bertman, Paul Shepson, *University of Michigan*

2AQ.5 Radiocarbon Measurements of PM_{2.5} Total Carbon and Elemental Carbon from Centreville, AL during the SOAS Field Study. ERIC EDGERTON, Yanlin Zhang, Soenke Szidat, Andre Prévôt, Stephanie Shaw, John Jansen, Karsten Baumann, Charles Blanchard, *Atmospheric Research & Analysis*

2AQ.6 Chemical Characterization of Atmospheric Fine Aerosol at the Jefferson Street, Atlanta, GA Using the Aerodyne Aerosol Chemical Speciation Monitor (ACSM): Results from Winter, Spring and Summer 2014. WERUKA RATTANAVARAHA, 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*

2BB BIOMASS BURNING AEROSOL: FROM EMISSIONS TO IMPACTS
PANZACOLA F/G

Sonia Kreidenweis and Ryan Sullivan, chairs

2BB.2 Quantifying Personal Exposures to Biomass Cookstove Emissions using RTI International's MicroPEM™ Technology. RYAN CHARTIER, Charles Rodes, J. Randall Newsome, James Carlson, Samuel DeFilipp, Seung-Hyun Cho, Jonathan Thornburg, *RTI International*

2BB.3 How Fuel and Household Characteristics May Explain Variability in Biomass-burning Cookstove Emissions in Rural Rajasthan, India. ANNA LEAVEY, Jessica Londeree, Ravi Shrimali, Gautam Yadama, Pratim Biswas, *Washington University in St Louis*

2BB.4 Transmission Electron Microscopy Analysis of Biomass-Burning Aerosol Particles during BBOP Campaign 2013. KOUJI ADACHI, Arthur J. Sedlacek, Lawrence Kleinman, Duli Chand, Peter Buseck, *Meteorological Research Institute*

2BB.5 Impact of Biomass Combustion Activities from Olive Oil Industry on Air Quality in South European Regions. BEGONA ARTINANO, Ana Sanchez de la Campa, Esther Coz, Rocio Fernandez Camacho, Marta Becerril, Pedro Salvador, Rosa Perez Pastor, Susana Garcia Alonso, Jesus de la Rosa, *CIEMAT*

2BB.6 An Integrated Particulate and Gaseous Emissions Model to Investigate the Effects of Cookstove Design and Operating Conditions. SAMEER PATEL, Chang Ki Kang, Ahmed Amin Abokifa, Pratim Biswas, *Washington University in St Louis*

2CC AEROSOLS, CLOUDS, AND CLIMATE

PANZACOLA F/G

Honglian Zhang, chair

- 2CC.2 Effect of Raindrop Size Distribution on Scavenging of Aerosol Particles from Gaussian Air Pollution Plumes Emitted from Point and Line Sources.** BORIS KRASOVITOV, Tov Elperin, Andrew Fominykh, *Ben-Gurion University of the Negev*
1:00
- 2CC.3 An Overview of the NASA ACCESS Flight Experiment.** BRUCE ANDERSON, Richard Moore, Andreas Beyersdorf, Charles Hudgins, Robert Martin, Michael Shook, Kenneth Thornhill, Edward Winstead, Luke Ziemba, Aaron Swanson, *NASA*
1:00
- 2CC.5 Simulation of Particle Number and Cloud Droplet Concentrations in the Midwestern United States Using WRF-Chem.** CAN DONG, Charles Stanier, Robert Bullard, Ashish Singh, *University of Iowa*
1:00
- 2CC.7 Atmospheric Impacts of Black Carbon Emissions Reductions through the Strategic Use of Biodiesel.** HONGLIANG ZHANG, Kento Magara-Gomez, Michael Olson, Tomoaki Okuda, Keeneth Walz, Michael Kleeman, James Schauer, *University of California, Davis*
1:00
- 2CC.8 Future Projections of Aerosol Optical Depth, Radiative Forcing, and Climate Response due to Diminishing Aerosol Emissions.** DANIEL WESTERVELT, Larry Horowitz, Vaishali Naik, Denise Mauzerall, *Princeton University*
1:00
- 2CC.9 Microscopic Studies of Ice Nucleation.** BINGBING WANG, Daniel Knopf, Mary Gilles, Gourihar Kulkarni, Shawn Kathmann, Libor Kovarik, Alexander Laskin, *Pacific Northwest National Laboratory*
1:00
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2CH CONTROL TECHNOLOGY

PANZACOLA F/G

Mei Wang and Zhili Zuo, chairs

- 2CH.1 Filtration of Combustion Aerosols by Facepiece Respirators and Stationary IAQ Filters.** SHUANG GAO, Jin Yong Kim, Michael Yermakov, Xinjian He, Yousef Elmashae, Tiina Reponen, Sergey A. Grinshpun, *University of Cincinnati*
1:00
- 2CH.3 Filtration Characteristics of Granular Ceramic Filter.** MYONG-HWA LEE, Hyun-Jin Choi, Jeong-Uk Kim, *Korea institute of Industrial Technology*
1:00
- 2CH.4 The Effect of Simulated Air Conditions on N95 Respirator Performance.** JOEL RAMIREZ, Patrick O'Shaughnessy, *University of Iowa*
1:00
- 2CH.5 Effects of Particle and Spray Droplet Charge on Respirable Dust Capture by Surfactant Sprays.** MEI WANG, Peter Raynor, *University of Minnesota*
1:00
- 2CH.8 Evaluation of Sampling Media for Use in a Nanoparticle Respiratory Deposition Sampler.** LEVI MINES, Jae Hong Park, Imali Mudunkotuwa, Vicki Grassian, T. Renee Anthony, Thomas Peters, *University of Iowa*
1:00
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2HA HEALTH RELATED AEROSOLS

PANZACOLA F/G

Maosheng Yao and Haider Khwaja, chairs

- 2HA.1 Modeling Deposition of Cigarette Puff Mixture in Human Lungs.** BAHMAN ASGHARIAN, Owen Price, Caner Yurteri, John McAughey, *Applied Research Associates, Inc.*
1:00
- 2HA.2 What is Effect of Water Pipe Height on Particulate Formation in Mainstream Waterpipe Smoke?** CINDY DEFOREST HAUSER, Jessica Annonio, *Davidson College*
1:00
- 2HA.3 Estimation of Electron Microscopy Image-based Aerodynamic and Diffusion Diameters for Carbon Nanotube Aerosols.** BON KI KU, Pramod Kulkarni, *Centers for Disease Control and Prevention, NIOSH*
1:00

- 2HA.5 Airway-by-Airway Imaging of Particles Deposited in Animal Lungs.** CHRISTOPHER WALLIS, DongYoub Lee, Annalisa Smullin, Anthony Wexler, *University of California Davis*
1:00
- 2HA.6 Generating a Pharmaceutical Aerosol with High Charge and Low Device Losses.** LONDON HOLBROOK, Worth Longest, *Virginia Commonwealth University*
1:00
- 2HA.7 Source, Size and Seasonal Differences in the Biological Potency of Ambient Particulate Matter Collected at Three Different Locations across Canada.** SUBRAMANIAN KARTHIKEYAN, Dalibor Breznan, Errol Thomson, Yunus Siddiqui, P. Goegan, Michael Denison, P. Kumarathasan, Jeff Brook, Renaud Vincent, *Hazard Identification Division, HECSB, Health Canada*
1:00
- 2HA.8 Evaluation Criteria for Bioaerosol Samplers.** JANA KESAVAN, Jose-Luis Sagripanti, *US ARMY ECBC*
1:00
- 2HA.9 Evaporation Kinetics of Secondary Organic Aerosols Derived from Engine Exhaust Precursors.** Mohammad Baasiri, ALAN SHIHADDEH, *American University of Beirut*
1:00
- 2HA.10 Effects of User Puff Topography, Device Power, and Liquid Nicotine Concentration on Electronic Cigarette Nicotine Yield: Measurements and Model Predictions.** Soha Talih, Zainab Balhas, Thomas Eissenberg, Rola Salman, Nareg Karaoghlanian, Ahmad El Hellani, Rima Baalbaki, Najat A. Saliba, ALAN SHIHADDEH, *American University of Beirut*
1:00
- 2HA.12 Respiratory Dose Assessment for Heterogeneous Ambient Aerosols.** CHONG KIM, Jung-il Choi, *USEPA*
1:00

2IA INDOOR AEROSOLS

PANZACOLA F/G

Tiina Reponen, chair

- 2IA.1 High Face Velocity (0.5-1.0 m/s) Penetration of sub-50 nm Nanoparticles through HVAC Filter Media Used in Residence.** DEQIANG CHANG, Sheng-Chieh Chen, David Y. H. Pui, *China Northeastern University, University of Minnesota*
1:00
- 2IA.3 Comparison of Indoor and Outdoor Air Quality in Latino Communities in Peru, Chile, and USA.** Wyatt Champion, Francisco Barraza, Hector Jorquera, LUPITA MONTOYA, *University of Colorado Boulder*
1:00
- 2IA.5 Preliminary Evidence for Aqueous Oxidation of Organic Compounds in Indoor Air.** SARA DUNCAN, Yong Lim, Jeffrey R. Kirkland, Barbara Turpin, *Rutgers University*
1:00
- 2IA.6 Heating and Indoor Air Quality on the Navajo Nation.** JOANNA GORDON, John Ortega, Mike Russel, Evan Coffey, Josh Bowen, Ashley Collier, Ricardo Piedrahita, Nick Masson, Margaret Mayer, Barbara Klein, Perry Charley, Michael Hannigan, *University of Colorado at Boulder*
1:00
- 2IA.7 Emission Patterns of PM and UFP from 3D Printers.** Scott Steady, Bill Hoffman, ELLIOTT HORNER, *UL Environment*
1:00
- 2IA.8 Effects of Walking Factors on Particle Resuspension via Human Walking.** Kyung Sul, Yilin Tian, ANDREA R. FERRO, *Clarkson University*
1:00
- 2IA.9 Variability of Aerosols and Chemical Composition of PM₁₀, PM_{2.5} and PM₁ in the Prague Underground Metro.** MICHAEL CUSACK, Jakub Ondrecek, Nicholas Talbot, Jaroslav Schwarz, Vladimir Zdimal, *Institute of Chemical Process Fundamentals of the ASCR, v. v*
1:00
- 2IA.10 An Experimental Assessment of the Dissociation of Ammonium Nitrate Aerosol.** NICHOLAS TALBOT, Vladimir Zdimal, Jakub Ondrecek, Jaroslav Schwarz, *PhD candidate*
1:00
- 2IA.11 Wintertime Indoor and Outdoor PM_{2.5} Northern Utah's Cache Valley.** Randy Martin, KORI MOORE, *Utah State University*
1:00
- 2IA.12 Using Direct Feedback from IAQ Monitors to Change Human Behavior and Reduce Exposure to PM.** SANGEETHA KUMAR, Haley Grassi, Jing Qian, Julia Jacobs, Angela Benedict, Andrea R. Ferro, *Clarkson University*
1:00
- 2IA.13 Overview of Air Quality Regulations in South America.** ANDRÉ HENRIQUE PEREIRA DE FREITAS LEAL, Lupita Montoya, *University of Colorado Boulder*
1:00
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Rui Li and Amy Sullivan, chairs

- 2IM.2 Atmospheric Aerosol Measurement Using Tethered Balloon Package System and Equipment Development.** 1:00 Kang-Ho Ahn, HEE-RAM EUN, Hong-Ku Lee, Lee Gun Ho, Yong-Hee Park, Chi-Young Choi, In-Kyu Hwang, *Hanyang University, R. of Korea*
- 2IM.3 MWCNTs Dispersion and Aerosolization Using EAAA (Electro-static Assist Axial Atomizer).** GUN-HO LEE, 1:00 Hong-Ku Lee, Hee-Ram Eun, Yong-Hee Park, In-Kyu Hwang, Chi-Young Choi, Jin-Kwon Kim, Ellen Kim, Il Je Yu, Kang-Ho Ahn, *Hanyang University, R. of Korea*
- 2IM.4 Chemical Analysis of Microliter-sized Liquid Samples Using Ultrasonic Nebulization and Aerosol Mass Spectrometry.** KELSEY BOULANGER, Eben Cross, James Hunter, Anthony Carrasquillo, Manjula Canagaratna, John Jayne, Philip Croteau, Jesse Kroll, *MIT*
- 2IM.5 Shear Induced Mixing of Laminar Flows: Implications for Aerosol Measurements.** MATTHEW BROWN, Suresh 1:00 Dhaniyala, *Clarkson University*
- 2IM.7 A New Personal Sampler for Measuring Inorganic Acid Mist and Gases: The Validation Test.** CHIH-HSIANG 1:00 CHIEN, Lin Shou, Alex Theodore, Chang-Yu Wu, Yu-Mei Hsu, Brian Birky, *University of Florida*
- 2IM.8 Development of Sheathless Particle Classifier with Electrometer.** HIROYUKI YAMADA, Hiroshi Okuda, *National 1:00 Traffic Safety and Environment Laboratory*
- 2IM.9 Standard Test Method for the Measurement of Filtration Efficiency of Electret Facepiece Respirators Challenged with Diesel Exhaust.** SWATHI SATISH, Jacob Swanson, David Kittelson, David Y. H. Pui, *University of 1:00 Minnesota*
- 2IM.10 NIOSH Center for Direct Reading and Sensor Technologies.** D. Gayle DeBord, MARK D HOOVER, *National 1:00 Institute for Occupational Safety and Health*
- 2IM.11 Detection of Light vs. Heavy Atoms with a Laser Induced Plasma Ionization Source for Single Particle Analysis.** ANDREW J. HORAN, Justin Krasnomowitz, Murray Johnston, *University of Delaware 1:00*
- 2IM.12 Reduced Graphene Oxide: Towards an Absorbing Aerosol Standard.** JAMES RADNEY, Christopher Zangmeister, 1:00 *National Institute of Standards and Technology*
- 2IM.13 Electro spray Aerosol Generator with Integrated Soft X-Ray Neutralizer and Usability Enhancements.** 1:00 SHERRIE ELZEY, Jacob Scheckman, Aaron Avenido, Tim Johnson, *TSI Incorporated*

Jim Smith and Jeff Pierce, chairs

- 2NP.2 Chemical Mechanisms of Nanoparticle Growth Studied through a Combination of Ambient and Laboratory Measurements.** MURRAY JOHNSTON, Bryan R. Bzdek, Joseph DePalma, Andrew J. Horan, *University of Delaware 1:00*
- 2NP.3 Aerosol Formation Initiated by Nucleation of Radical-Water Complexes.** SAMBHAV KUMBHANI, Emily Burrell, 1:00 Shirts Randall, Jaron Hansen, *Brigham Young University*
- 2NP.5 Shrinkage of New Atmospheric Particles in an Urban Area of Southern Europe.** Elisabeth Alonso-Blanco, F. 1:00 Javier Gomez-Moreno, Lourdes Nunez, Manuel Pujadas, BEGONA ARTINANO, *CIEMAT*
- 2NP.6 Insight into Particle Growth Rates and Controls from Two Years of SMPS and HTDMA Data.** MANASI MAHISH, 1:00 Don Collins, *Texas A&M University*
- 2NP.7 Particle Nucleation and Vertical Profiles of 8-15 nm Particles at the DOE Southern Great Plains Facility from 300m to 1000m Above Sea Level.** JOHN ORTEGA, James N. Smith, James Greenberg, *National Center for 1:00 Atmospheric Research*

V. Verma and Ting Fang, chairs

2PH.2 An Automated Microenvironmental Aerosol Sampler (AMAS) for Location/Activity Exposure Assessment.

1:00 CASEY QUINN, David Cate, Dan Miller-Lionberg, Charles Henry, John Volckens, *Colorado State University*

2PH.3 Impact of Urban Growth Form and Fleet Electrification on Emissions, Concentrations, and Exposures for Nitrogen Oxides and Select Toxic Volatile Organic Compounds.

1:00 HAOFEI YU, Amy L. Stuart, *University of South Florida*

2PH.5 E-cigarettes: Aerosol Sampling and Droplet Size Measurement.

1:00 JOHN MCAUGHEY, Ross Cabot, Caner Yurteri, David Lawson, *British American Tobacco*

Adam Bateman and Paul A. Solomon, chairs

2UA.1 Urban and Suburban Intermodal Fraction of Atmospheric Aerosol in Winter 2014.

1:00 JANA KOZAKOVA, Jan Hovorka, Jaroslav Schwarz, *Charles University in Prague*

2UA.2 European Air Pollution Hot-Spot: Evidence of Industrial Plume over a Residential Area.

1:00 CECILIA LEONI, Jan Hovorka, *Charles University in Prague*

2UA.4 Relationship between PAHs and Elemental Composition of Size-segregated Aerosol.

1:00 JAN BENDL, Jan Hovorka, Jan Topinka, *Charles University in Prague*

2UA.7 Microcharacterization and Identification of Non-exhaust Particles from On-road Driving and Laboratory Measurements using SEM-EDX Analysis.

1:00 SEOKHWAN LEE, Sunyoun Lee, Hongsuk Kim, *Korea Institute of Machinery and Materials*

2UA.8 Evaluation of Carbonyl Compounds Levels in Residential and Industrial Areas of Tijuana BC, Mexico Air Basin.

1:00 Jesus Guerrero-García, GUILLERMO RODRÍGUEZ-VENTURA, Ernesto Velez-Lopez, Lilia Hurtado, Javier Emmanuel Castillo-Quifones, Penelope Quintana, Miguel Zavala, Luisa Molina, *Universidad Autonoma de Baja California*

2UA.9 Atmospheric Aerosols in Southeast Asia: Sources and Impacts.

1:00 RAGHU BETHA, Xian Huang, Rajasekhar Balasubramanian, *National University of Singapore*

2UA.10 Morphological and Elemental Classification of Long-range Transported Fine and Ultrafine Particles by STEM-EDX Individual Particle Analysis.

1:00 SHILA MASKEY, Hoseung Chae, Kihong Park, *GIST*

Tuesday 3:00 PM - 3:30 PM

Coffee Break

Tuesday 3:30 PM - 5:00 PM

Session 3: Platform

Sergey Nizkorodov and Manabu Shiraiwa, chairs

- 3AC.1 Photochemical Aging of Brown Carbon Aerosols.** Paige Aiona, Hyun Ji Lee, Alexander Laskin, Julia Laskin, SERGEY NIZKORODOV, *University of California, Irvine*
3:30
- 3AC.2 Investigation of the Chemical Aging and Absorption of Carbonaceous Aerosol from Wood Fires.** ANTONIOS TASOGLU, Spyros Pandis, *Carnegie Mellon University*
3:45
- 3AC.3 Aging of Alpha-pinene First-Generation Ozonolysis Products by Reactions with OH.** NINGXIN WANG, Spyros Pandis, Neil Donahue, *Carnegie Mellon University*
4:00
- 3AC.4 Molecular Corridors Represent the Multiphase Chemical Evolution of Secondary Organic Aerosol.** MANABU SHIRAIWA, Thomas Berkemeier, Katherine Schilling, John Seinfeld, Ulrich Poeschl, *MPIC*
4:15
- 3AC.5 Formation of Low-Volatility Organics in Organic Acid/Inorganic Salt Mixtures.** SILJA HÄKKINEN, Ilona Riipinen, V. Faye McNeill, *University of Helsinki, Columbia University*
4:30
- 3AC.6 Organosulfates Formation in Secondary Organic Aerosol Produced from Photooxidation of Various VOCs In the Presence of NO_x and Sulfuric Acid Aerosol Using Natural Sunlight.** Jiaying Li, MYOSEON JANG, *University of Florida*
4:45
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3AE AEROSOL EXPOSURE

SEBASTIAN I 3

Sergey Grinshpun and Jonathan Thornburg, chairs

- 3AE.1 Advances in Nanoparticle Sampling and Analysis Methods.** GARY CASUCCIO, Traci Lersch, Henry Lentz, Dan Miller-Lionberg, John Volckens, *RJ Lee Group, Inc.*
3:30
- 3AE.2 Aerosol-to-Liquid Phase Collection: A Method for Making Liquid Suspension Containing Dry-Dispersed Nanomaterials with a Known Mass Concentration.** KENJIRO IIDA, Hiromu Sakurai, Junko Nakanishi, Kensei Ehara, *AIST*
3:45
- 3AE.3 Characterization of 3-D Printer Aerosol Emissions.** MARIT MEYER, Kristin Bunker, Gary Casuccio, *NASA Glenn Research Center*
4:00
- 3AE.4 Uncontrolled Combustion of Shredded Tires in a Landfill: Emission Characterization, Population Exposure and Public Health Responses.** ASHISH SINGH, Scott N. Spak, Elizabeth Stone, Jared Downard, Robert Bullard, Mark Pooley, Pamela Kostle, Matthew W. Mainprize, Thomas Peters, Doug Beardsley, Charles Stanier, *University of Iowa*
4:15
- 3AE.5 Measurement of Aerosols Generated by Combustion of Different Materials.** SERGEY A. GRINSHPUN, Jin Yong Kim, Michael Yermakov, Shuang Gao, Tiina Reponen, Pramod Kulkarni, *University of Cincinnati*
4:30
- 3AE.6 Indoor Air Quality in Latino Homes in Boulder, Colorado.** Luis Escobedo, WYATT CHAMPION, Ning Li, Lupita Montoya, *University of Colorado Boulder*
4:45
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3CC AEROSOLS, CLOUDS, AND CLIMATE

SEBASTIAN I 1

Richard Moore and Ezra Levin, chairs

- 3CC.1 Measurement of the Optical Properties and Contact Freezing Ability of Supercooled Water Droplets Using Optical Tweezers.** Hassan Beydoun, Kyle Gorkowski, Mark Aboff, Jim Walker, Jonathan P. Reid, RYAN SULLIVAN, *Carnegie Mellon University*
3:30
- 3CC.2 The Role of Aqueous Chemistry in Cloud Formation: Impact of Oligomerization.** SHUNSUKE NAKAO, Yong Lim, Barbara Turpin, Alexandra Boris, Jeffrey Collett, Sonia Kreidenweis, *Colorado State University*
3:45
- 3CC.3 Understanding Cloud Condensation Nuclei Mixing States from Flow Tube Experiments.** DIEP VU, Shaokai Gao, Jeffrey Pierce, Akua Asa-Awuku, *University of California, Riverside*
4:00
- 3CC.4 Cloud Condensation Nuclei Activity of Secondary Organic Aerosol: Kappa Values for a Range of VOCs, Individually and Combined.** Josh Custer, William Madry, Dabrina Dutcher, TIMOTHY RAYMOND, *Bucknell University*
4:15

3CC.5 Relating Volatility, Size and Cloud Condensation Nuclei Activation Properties of Longifolene SOA. ASHLEY VIZENOR, Akua Asa-Awuku, *University of California, Riverside*

3CC.6 Aerosol Size Distribution Response to Anthropogenically Driven Historical Changes in Biogenic Secondary Organic Aerosol Formation. STEPHEN D'ANDREA, Juan-Camillo Acosta Navarro, Salvatore Farina, Catherine Scott, Delphine Farmer, Ilona Riipinen, Jeffrey Pierce, *Colorado State University*

3IA INDOOR AEROSOLS

SEBASTIAN I 4

Jordan Peccia and Lindsey Marr, chairs

3IA.1 Shorter People May Be Exposed to More Influenza Viruses in Resuspended Dust. Peeyush Khare, LINSEY MARR, 3:30 *Virginia Tech*

3IA.2 Biofilms and Bioaerosols in Showers. MARIA D. KING, Alexandra Caya, Chloe Wooldridge, Juan Pedro Maestre, 3:45 Michal Ziv-El, Yassin Hassan, Kerry Kinney, *Texas A&M University*

3IA.3 The Influence of Residential Environmental Factors on the Indoor Microbiome. KAREN C. DANNEMILLER, 4:00 Janneane Gent, Brian Leaderer, Jordan Peccia, *Yale University*

3IA.4 Assessing Building Penetration Challenges by Subalpine Wildfires: Juxtaposing Airborne Biomarker Profiles with Microbial Community Analysis. ALINA M. HANDOREAN, Bharath Prithiviraj, Odessa Gomez, Jane Turner, Mark T. Hernandez, *University of Colorado Boulder*

3IA.5 Assessing Pollutant Exposures in Rural Homes Using a Filter Forensics Approach. JUAN PEDRO MAESTRE, 4:30 Shahana Khurshid, Kelli Royse, Sharon Horner, Jeffrey Siegel, Kerry Kinney, *The University of Texas at Austin*

3IA.6 Contextualizing Particles on HVAC Filters. JEFFREY SIEGEL, Juan Pedro Maestre, Ying Xu, Shahana Khurshid, Kerry 4:45 Kinney, *University of Toronto*

3NP ADVANCES IN THE PHYSICS AND CHEMISTRY OF NEW PARTICLE FORMATION AND GROWTH

PANZACOLA H4

Jim Smith and Robin Stevens, chairs

3NP.1 Field Deployment of a Size-Resolved Nano CPC Battery to Infer the Composition of Freshly Formed Atmospheric Nuclei in the Boreal Forest. CHONGAI KUANG, Juha Kangasluoma, Daniela Wimmer, Katrianne Lehtipalo, Jian Wang, Markku Kulmala, Tuukka Petäjä, *Brookhaven National Laboratory*

3NP.3 Chemical Ionization of Sulfuric Acid Clusters Containing Basic Molecules. COTY JEN, Jun Zhao, Peter McMurry, 4:00 David Hanson, *University of Minnesota*

3NP.4 Enhancement in the Production of Nucleating Clusters Due to Dimethylamine and Large Uncertainties in the Thermochemistry of Amine-enhanced Nucleation. ALEXEY NADYKTO, Jason Herb, Fangqun Yu, Yisheng Xu, *Moscow State University of Technology; SUNY at Albany*

3NP.5 Novel Methods for Determining Free Energies of Molecular Clusters of Water and Sulphuric Acid. Gabriel Lau, 4:30 Jake Stinson, Shawn Kathmann, IAN FORD, *University College London*

3NP.6 New-particle Formation, Growth and Climate-relevant Particle Production in Egbert, Canada: Analysis from one Year of Size-distribution Observations. JEFFREY PIERCE, Daniel Westervelt, Samuel Atwood, Elizabeth Barnes, Richard Leaitch, *Colorado State University*

3UA URBAN AEROSOLS

SEBASTIAN I 2

Charles Stanier and Robert Bullard, chairs

- 3UA.1 How To Achieve Further PM2.5 Reductions in a Midwestern City? A Combined Modeling and Measurement-Based Analysis of Iowa City, IA.** ROBERT BULLARD, Elizabeth Stone, Charles Stanier, Ashish Singh, Can Dong, Chathurika Rathanyake, Thilina Jayarathne, Scott N. Spak, *University of Iowa*
3:30
- 3UA.2 Investigation of the Sources and Evolution Processes of Severe Haze Pollution in Beijing in January 2013.**
3:45 YELE SUN, Qi Jiang, Zifa Wang, Pingqing Fu, Jie Li, Ting Yang, Yan Yin, *Institute of Atmospheric Physics, CAS*
- 3UA.3 Outdoor and Indoor Black Carbon at Multiple Schools in Salt Lake City, Utah.** Jennifer DeWinter, Steven Brown, David Vaughn, PAUL ROBERTS, *Sonoma Technology, Inc*
4:00
- 3UA.4 Sources and Chemical Composition of Atmospheric Fine Particles in Rabigh, Saudi Arabia.** HAIDER A KHWAJA, Omar S Abu-Rizaiza, Azhar Siddique, Shedrack R Nayebare, Mirza M Hussain, Jahan Zeb, *King Abdulaziz University, Saudi Arabia*
4:15
- 3UA.5 Chemical Characterization of Time Resolved Haboob Samples from Phoenix, AZ.** AURELIE MARCOTTE, Jershon Eagar, Denise Napolitano, Pierre Herckes, *Arizona State University*
4:30
- 3UA.6 Silicon is a Nearly Ubiquitous Component of Ambient Nanoparticles.** BRYAN R. BZDEK, M. Ross Pennington, Andrew J. Horan, Christopher A. Zordan, Murray Johnston, *University of Delaware*
4:45

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 **AEESP Lecture: Fine Particulate Air Pollution and Human Health: Science, Public Policy, and Controversy C.**
Arden Pope III, *Brigham Young University*

Moderator Robert Griffin, *Rice University*

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

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

Andrew Grieshop and Manish Shrivastava, chairs

- 4AC.1 Explicit Modeling of Multi-generational Aging of Organic Aerosol in an Air Quality Model.** SHANTANU JATHAR, 9:45 Anthony Wexler, Christopher Cappa, Michael Kleeman, *University of California, Davis*
- 4AC.2 Modeling Secondary Organic Aerosol Formation via Partitioning and Aerosol Phase Reactions under Two Phase States: Liquid-liquid Phase Separated and Homogeneously Mixed.** ROSS BEARDSLEY, Myoseon Jang, 10:00 *University of Florida*
- 4AC.3 Understanding the Sensitivity of SOA Formation to Various Uncertain Modeling Parameters Using a Variance-Based Statistical Approach.** MANISHKUMAR SHRIVASTAVA, Chun Zhao, Yun Qian, Richard Easter, Alla Zelenyuk, Jerome Fast, *Pacific Northwest National Laboratory*
- 4AC.4 1D Nanodusty Pulsed Plasma Sectional Chemistry Model for the Study and Control of Particle Generation and Growth.** CARLOS LARRIBA-ANDALUZ, Steven Girshick, *University of Minnesota*
- 4AC.5 Modelling of Amines in the Global Atmosphere: Impacts of Oxidation and Aerosol Uptake.** FANGQUN YU, Gan 10:45 Luo, *University at Albany*
- 4AC.6 Simulation of the Volatility-Oxygen Content Distribution of Organic Aerosol during the PEGASOS Campaigns.** 11:00 ELENI KARNEZI, Benjamin Murphy, Spyros Pandis, *Carnegie Mellon University*
- 4AC.7 Surface-specific Chemical Reactions for Atmospheric Surfactants Observed Directly with Synchrotron-based XPS.** NONNE PRISLE, Gunnar Öhrwall, Josephina Werner, Olle Björneholm, *University of Helsinki, Helsinki, Finland*

4AP AEROSOL PHYSICS

SEBASTIAN I 4

Chris Hogan and Matthew Berg, chairs

- 4AP.1 Classical Nucleation Theory Does Not Correctly Predict the Dependence of Nucleation Rate on Supersaturation.** STEVEN GIRSHICK, *University of Minnesota*
- 9:45
- 4AP.2 Resolving the Surface and Bulk Accommodation of Atmospherically Relevant Compounds with Molecular Dynamics Simulations.** JAN JULIN, Paul M. Winkler, Neil Donahue, Paul E. Wagner, Ilona Riipinen, *Stockholm University*
- 10:00
- 4AP.3 Experimental Study of Light Scattering from Irregularly Shaped Particles.** YULI WANG, Amit Chakrabarti, Chris 10:15 Sorensen, *Kansas State University*
- 4AP.4 Surface Freezing of n-alkanes.** VIRAJ MODAK, Mitchell Thayer, Barbara Wyslouzil, Sherwin Singer, *The Ohio State University*
- 10:30
- 4AP.5 Experimental Bipolar Diffusion Charging of Spherical and Cylindrical Aerosol Particles with Detailed Characterization of the Charging Ions.** Ranganathan Gopalakrishnan, Peter McMurry, CHRISTOPHER HOGAN JR., *University of Minnesota*
- 10:45
- 4AP.6 Understanding the Drag Force and Mobility of Nonspherical Particles in the Free Molecular Regime.** 11:00 MINGDONG LI, George Mulholland, Michael Zachariah, *University of Maryland*
- 4AP.7 Evaporation Loss of PM_{2.5} during Filter Sampling.** CHUEN-JINN TSAI, Chun-Nan Liu, Sih-Fan Lin, Guo-Rui Lee, 11:15 *National Chiao Tung University*

4AQ AIR QUALITY AND CLIMATE IN THE SOUTHEAST US: INSIGHTS FROM RECENT MEASUREMENT CAMPAIGNS

SEBASTIAN I 1

Annamarie Carlton and Rob Griffin, chairs

- 4AQ.1 Overview of the NOAA SENEX Field Mission.** JOOST DE GOUW, Aikaterini Bougiatioti, Jerome Brioude, Steven G. 9:45 Brown, William P. Dube, Peter Edwards, David Fahey, Jessica Gilman, Timothy Gordon, Martin Graus, Tom Hanisco, John Holloway, Jennifer Kaiser, Frank Keutsch, Daniel Lack, Daniel Law, Ben Lee, Brian Lerner, Jin Liao, Jack Lin, Felipe Lopez-

- 4AQ.2 DISCOVER-AQ Investigation of Aerosol Impacts on Air Quality over Houston.** RICHARD FERRARE, James Crawford, Robert Griffin, Chris Hostetler, Bruce Anderson, Sharon P. Burton, Brent Holben, Andreas Beyersdorf, Luke Ziemba, *NASA Langley Research Center*
- 4AQ.3 Highlights from the St. Louis Air Quality Regional Study (SLAQRS) 2013.** BRENT WILLIAMS, Dhruv Mitroo, Raul Martinez, Yaping Zhang, Michael Walker, Christopher Oxford, Xiaochen Zuo, David Hagan, Steven Dhawan, Li Du, Jay Turner, Gavin McMeeking, Laura King, Hongyu Guo, Rodney Weber, Munkhbayar Baasandorj, Lu Hu, Dylan Millet, *Washington University in St. Louis*
- 4AQ.4 Comparison of the Observed Organosulfates (IEPOX Sulfate and GA Sulfate) in the Southeast US to the Western US during DC3 and SEAC4RS.** JIN LIAO, Karl D. Froyd, Daniel Murphy, Frank Keutsch, Ge Yu, Paul Wennberg, Jason St. Clair, John Crouse, Armin Wisthaler, Tomas Mikoviny, Jose-Luis Jimenez, Pedro Campuzano-Jost, Douglas Day, *CU CIRES- NOAA ESRL*
- 4AQ.5 Particle Formation in Power Plant Plumes in the Southeastern United States.** CHARLES BROCK, Steven G. Brown, Timothy Gordon, Joost de Gouw, John Holloway, Jin Liao, Ann M. Middlebrook, J. Andrew Neuman, John B. Nowak, Jeff Peischl, Ilana Pollack, Thomas Ryerson, Michael Trainer, Nick Wagner, Jeffrey Pierce, Robin Stevens, André Welti, *NOAA Earth System Research Laboratory, Boulder, CO*
- 4AQ.6 Characterization of Nocturnal Aerosol Formation in Houston during DISCOVER-AQ.** H. William Wallace, Yu Jun Leong, Basak Karakurt Cevik, Madeline Camp, James Flynn, Barry Lefer, ROBERT GRIFFIN, *Rice University*
- 4AQ.7 Organic Aerosol from Nocturnal Oxidation of Biogenic VOCs: Results from Night Flights in the Southeast U.S. during SENEX 2013.** STEVEN G. BROWN, Peter Edwards, Benjamin Ayres, Charles Brock, Joost de Gouw, Martin Graus, William P. Dube, Juliane L. Fry, Jessica Gilman, John Holloway, Ben H. Lee, Brian Lerner, Jin Liao, Felipe Lopez-Hilfiker, Ann M. Middlebrook, Kyung-Eun Min, J. Andrew Neuman, Ilana Pollack, James Roberts, Thomas Ryerson, Joel A. Thornton, Patrick Veres, Carsten Warneke, Robert Wild, Reed Wommack, *NOAA ESRL*

4HA HEALTH RELATED AEROSOLS

SEBASTIAN I 3

Patrick O'Shaughnessy and James McDevitt, chairs

- 4HA.1 Exposure of Workers to Mixed Aerosols.** EMANUELE CAUDA, Luca Stabile, Giorgio Buonanno, Teresa Barone, *NIOSH*
9:45
- 4HA.2 Comparison of Personal Sampling and Robotic Sampling Platform to Estimate Personal Exposures in Young Children.** JESSICA SAGONA, Marta Hernandez, Zuo Cheng Wang, Maya Ramagopal, Stuart Shalat, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
10:00
- 4HA.3 Internal Airway Percussion (IAP) for Lung Infection Diagnostics.** NIMA AFSHAR-MOHAJER, Chang-Yu Wu, Hsiu-Wen Tsai, Erin Silverman, Paul Davenport, Satyanarayan Hegde, *University of Florida*
10:15
- 4HA.4 The Association of National Air Toxics Assessment Exposures and the Risk of Childhood Autism Spectrum Disorder: A Case Control Study.** EVELYN TALBOTT, Lynne Marshall, Judith Rager, Vincent Arena, Ravi Sharma, *University of Pittsburgh*
10:30
- 4HA.5 Reformulation of Abandoned Wortmannin into Biodegradable Nanoparticles for Lung Cancer Treatment.** HSI-WEI YEH, Da-Ren Chen, *Virginia Commonwealth University*
10:45
- 4HA.6 Variability of Lung Targeted Aerosol Delivery during High Flow Nasal Cannula Therapy.** ROSS WALENGA, Geng Tian, Michael Hindle, Worth Longest, *Virginia Commonwealth University*
11:00
- 4HA.7 Detecting Respiratory Infection by 3D Microbial Fingerprints from Exhaled Breath.** Fangxia Shen, Xiaoguang Li, Zhuanglei Zou, Jie Xu, Chang-Yu Wu, MAOSHENG YAO, *Peking University*
11:15

4IM INSTRUMENTATION AND METHODS

PANZACOLA H 1-3

Derek Oberreit and Chongai Kuang, chairs

- 4IM.1 Liquid Atomization via a Newly Designed, Multi-notched Electrospray Head.** JINGJIE ZHANG, Da-Ren Chen, 9:45 *Virginia Commonwealth University*
- 4IM.2 A Non-Specific Monodisperse Aerosol Generation System.** JONATHAN ESHBAUGH, Francisco Romay, Shanna Ratnesar-Shumate, Paul Dabisch, *Johns Hopkins University Applied Physics Laboratory*
- 4IM.3 Performance Study of Miniature Cyclones with Multiple Inlets.** DI LIU, Zhenzhong Zhang, Ta-Chih Tsiao, Da-Ren Chen, 10:15 *Virginia Commonwealth University*
- 4IM.4 Collection of Airborne Particles by a High-Gradient Permanent Magnetic Separator.** MENG-DAWN CHENG, Steve Allman, Larry Avens, Gerard Ludtka, *Oak Ridge National Laboratory*
- 4IM.5 Performance of Inertial Impactor with Varying Geometries.** HUAN LI, William Faulkner, John Haglund, *Texas A&M University*
- 4IM.6 Trapping of Individual Airborne Absorbing Particles Using a Counterflow Nozzle and Photophoretic Trap for Continuous Sampling and Analysis.** YONG-LE PAN, Chuji Wang, Steven Hill, Joshua Santarpia, *US Army Research Lab*
- 4IM.7 Collection of Droplets by Centrifugal Filter.** HIROAKI MATSUHASHI, Shusuke Nakajima, Mikio Kumita, Takafumi Seto, Hidenori Higashi, Yoshio Otani, *Kanazawa University*

4UA URBAN AEROSOLS

SEBASTIAN I 2

Derek Jason Price and Andrew Metcalf, chairs

- 4UA.1 Contribution of Biomass Use for Renewable Energy to Particulate Matter Formation.** MARC CARRERAS-SOSPEDRA, Donald Dabdub, Jack Brouwer, Rob Williams, *University of California, Irvine*
- 4UA.2 Atlanta Rail Yard Study (ARYS): Evaluation of Local-scale Air Pollution Trends and Emissions Quantification Using Stationary and Mobile Monitoring Strategies.** GAYLE HAGLER, Halley Brantley, Boris Galvis, Scott Herndon, Armistead Russell, Michael Bergin, Paola Massoli, Edward Fortner, Jonathan Franklin, Lu Xu, Nga Lee Ng, *ORD-US EPA, RTP, NC*
- 4UA.3 Total Particulate Matter from Mobile Sources in Los Angeles.** TIMOTHY GORDON, Albert A. Presto, Andrew May, Mang Zhang, Christine Maddox, Hector Maldonado, William Robertson, Ngoc Nguyen, Eric Lipsky, Matti Maricq, Daniel S. Tkacik, Neil Donahue, Sulekha Chattopadhyay, Shantanu Jathar, John Massetti, Tin Truong, Pablo Cicero-Fernandez, Kwangsam Na, Paul Rieger, Keshav Sahay, Alvaro Gutierrez, Allen Robinson, *NOAA*
- 4UA.4 Atmospheric Intermediate-volatility Organic Compounds: A Small Fraction of Atmospheric Hydrocarbons and a Large Contribution to Secondary Organic Aerosol.** YUNLIANG ZHAO, Allen Robinson, Christopher Hennigan, Andrew May, Joost de Gouw, Jessica Gilman, Bill Kuster, Agnes Borbon, *Carnegie Mellon University*
- 4UA.5 Assessing Aerosol Mixing State through Single Particle Mass Spectrometry and Particle-Resolved Modeling.** NICOLE RIEMER, Swarnali Sanyal, Robert Healy, Greg J. Evans, John Wenger, *University of Illinois at Urbana-Champaign*
- 4UA.6 On the Importance of New Particle Formation Events as a Source for Cloud Condensation Nuclei in an Urban Environment.** ANNA WONASCHUETZ, Julia Burkart, Anselm Demattio, Carmen Dameto de Espana, Robert Wagner, Georg Reischl, Gerhard Steiner, Regina Hitznerberger, *University of Vienna*
- 4UA.7 Influence of the Manaus Plume on Aerosol Size Distribution and Cloud Condensation Nuclei (CCN) during GoAmazon – Preliminary Results.** FAN MEI, Jian Wang, Jason Tomlinson, Jennifer Comstock, John Hubbe, Mikhail Pekour, John Shilling, Chongai Kuang, Karla Longo, Scot Martin, Beat Schmid, *Pacific Northwest National Laboratory*

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

5AC AEROSOL CHEMISTRY

PANZACOLA H4

Lea Hildebrandt Ruiz and Jesse Kroll, chairs

- 5AC.1 Heterogeneous Reaction Kinetics of Isoprene-Derived Epoxides.** THERAN P. RIEDEL, Cassandra Gaston, Sri Hapsari Budisulistiorini, Ying-Hsuan Lin, Zhenfa Zhang, Avram Gold, Joel A. Thornton, Jason Surratt, *University of North Carolina at Chapel Hill*
1:00
- 5AC.2 Reactions of Condensed Phase Alkoxy Radicals.** ANTHONY CARRASQUILLO, Kelly Daumit, Jesse Kroll, *MIT*
1:15
- 5AC.3 Hydrolysis and Gas-particle Partitioning of Organic Nitrates Formed in Environmental Chamber Experiments.** JEFFREY BEAN, Lea Hildebrandt Ruiz, *University of Texas at Austin*
1:30
- 5AC.4 Reactions Between Water-Soluble Organic Acids and Nitrates in Atmospheric Aerosols: Recycling of Nitric Acid and Formation of Organic Salts.** BINGBING WANG, Alexander Laskin, *Pacific Northwest National Laboratory*
1:45
- 5AC.5 Organic Peroxide Formation from Photooxidation of Methylglyoxal in the Aqueous Phase.** YONG LIM, Barbara Turpin, *Rutgers University*
2:00
- 5AC.6 Uptake and Transformation of Glyoxal on Mineral Dust Particles.** Xiaoli Shen, Yue Zhao, Dao Huang, ZHONGMING CHEN, *Peking University*
2:15
- 5AC.7 Effect of Ammonia on Glyoxal SOA in Inorganic Aqueous Seed Particles.** ELEANOR WAXMAN, Alexander Laskin, Jay Slowik, Aurelia Maxut, Siyuan Wang, Jian Zhen Yu, Theodore Koenig, Julia Laskin, Andre Prévôt, Urs Baltensperger, Barbara Noziere, Josef Dommen, Rainer Volkamer, *University of Colorado*
2:30
- 5AC.8 Molecular Composition of Aged Secondary Organic Aerosol Generated from a Mixture of Biogenic Volatile Compounds Using Ultrahigh Resolution Mass Spectrometry.** IVAN KOURTCHEV, Chiara Giorio, Brendan Mahon, Jean-François Doussin, Nicolas Maurin, Aline Gratien, Edouard Panqui, Sebastien Morales, Manuela Cirtog, Juho Aalto, Taina Ruuskanen, Markku Kulmala, Markus Kalberer, *University of Cambridge*
2:45

5AQ AIR QUALITY AND CLIMATE IN THE SOUTHEAST US: INSIGHTS FROM RECENT MEASUREMENT CAMPAIGNS

SEBASTIAN I 1

Ann Middlebrook and Raul Martinez, chairs

- 5AQ.1 BVOC Oxidation Products Measured by SV-TAG Reveal Differences in Chemistry and Partitioning between Natural and Polluted Environments Forming Secondary Organic Aerosol (SOA).** ALLEN H. GOLDSTEIN, Gabriel Isaacman, Lindsay Yee, Nathan Kreisberg, Suzane Simoes de Sa, Scot Martin, Elizabeth Alexander, Brett Palm, Weiwei Hu, Pedro Campuzano-Jost, Douglas Day, Jose-Luis Jimenez, Thien Khoi Nguyen, Annmarie Carlton, Juarez Viegas, Antonio O. Manzi, Rodrigo A. F. Souza, Maria Oliveira, Paulo Artaxo, Joel Brito, Eric Edgerton, Karsten Baumann, Susanne Hering, *University of California, Berkeley*
1:00
- 5AQ.2 Processes Influencing the Organic Aerosol Mass during SENEX.** ANN M. MIDDLEBROOK, Wayne Angevine, Jerome Brioude, Charles Brock, Joost de Gouw, Jessica Gilman, Martin Graus, John Holloway, Brian Lerner, Jin Liao, J. Andrew Neuman, Michael Trainer, Carsten Warneke, Jennifer Kaiser, Glenn Wolfe, Tom Hanisco, Frank Keutsch, Jingqiu Mao, Larry Horowitz, André Welti, *NOAA ESRL*
1:15
- 5AQ.3 Seasonal Characterization of Atmospheric Organic Aerosol at the Look Rock Site, Great Smoky Mountains National Park during 2013 Using the Aerodyne Aerosol Chemical Speciation Monitor (ACSM).** SRI HAPSARI BUDISULISTIORINI, Xinxin Li, Philip Croteau, Manjula Canagaratna, Solomon Bairai, Roger Tanner, Stephanie Shaw, Eladio Knipping, John Jayne, Zhenfa Zhang, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill*
1:30
- 5AQ.4 Sources of primary and secondary organic aerosol during the Southeast Atmosphere Study.** ELIZABETH STONE, Anusha Priyadarshani Silva Hettiyadura, John Groenenboom, Thilina Jayarathne, *University of Iowa*
1:45
- 5AQ.5 Chemical Characterization of Organic Aerosol during SOAS Using High Resolution Aerosol Mass Spectrometer.** LU XU, Hongyu Guo, Christopher Boyd, Kate Cerully, Aikaterini Bougiatioti, Laura King, Rodney Weber, Athanasios Nenes, Nga Lee Ng, *Georgia Institute of Technology*
2:00
- 5AQ.6 Chemical Characterization of Isoprene- and Monoterpene-Derived SOA Tracers in PM_{2.5} Collected from Centerville, AL, during SOAS 2013.** MATTHIEU RIVA, Lindsay Yee, Sri Hapsari Budisulistiorini, Eric Edgerton, Stephanie Shaw, Eladio Knipping, Allen H. Goldstein, Zhenfa Zhang, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill, Chapel Hill, NC*
2:15

5AQ.7 Initial Field Deployments of a Volatility and Polarity Separator (VAPS) for Organic Aerosol Characterization.

2:30 RAUL MARTINEZ, David Hagan, Yaping Zhang, Dhruv Mitroo, Michael Walker, Lu Hu, Munkhbayar Baasandorj, Dylan Millet, Brent Williams, *Washington University in St. Louis*

5AQ.8 Measurements of Atmospheric Amines and Ammonia with a Chemical Ionization Mass Spectrometer (CIMS).

2:45 SHANHU LEE, Yi You, Roxana Sierra-Hernández, Joost de Gouw, Abigail Koss, Karsten Baumann, Eric Edgerton, *Kent State University*

5BB BIOMASS BURNING AEROSOL: FROM EMISSIONS TO IMPACTS

SEBASTIAN I 2

Sonia Kreidenweis and Ryan Sullivan, chairs

5BB.1 The Current State and Future of Wildfire Smoke and Air Quality Modeling. TIMOTHY BROWN, Narasimhan (Sim)

1:00 Larkin, Pete Lahm, *Desert Research Institute*

5BB.2 Constraining Emissions from Open Burning Sources and Their Atmospheric Impacts. CHRISTINE WIEDINMYER,

1:15 Serena H. Chung, Robert J. Yokelson, Elena McDonald-Buller, Tomohiro Oda, Christopher Elvidge, Louisa Emmons, John Orlando, *National Center for Atmospheric Research*

5BB.3 Satellite Characterization of Biomass-Burning Aerosol Emissions for Regional Modeling. CHARLES ICHOKU,

1:30 Luke Ellison, Jun Wang, Feng Zhang, *NASA Goddard Space Flight Center*

5BB.4 Constraints on Smoke Injection Height, Source Strength, and Transports from MISR and MODIS. RALPH

1:45 KAHN, Maria Val Martin, Mariya Petrenko, Mian Chin, *NASA Goddard Space Flight Center*

5BB.5 The Joint Fire Sciences Program Smoke Science Plan: Progress toward Goals. DOUGLAS G. FOX, Cindy Huber,

2:00 Allen Riebau, *Nine Points South Technical Pty. Ltd., Australia*

5BB.6 Projecting the Impacts of Climate Change on Wildfire-driven Air Quality over the Southeastern U.S. UMA

2:15 SHANKAR, Jeffrey Prestemon, Aijun Xiu, Kevin Talgo, Bok Baek, Dongmei Yang, Mohammad Omary, *University of North Carolina at Chapel Hill*

5BB.7 Quantify the Impact of Biomass Burning Aerosols on Regional Climate over the Southeastern USA. PENG LIU,

2:30 Yongtao Hu, Athanasios Nenes, Armistead Russell, *Georgia Institute of Technology*

5BB.8 WRAP Fire Tools and Support for Smoke Management Programs, Land Managers, and Air Quality Planning in the Western U.S. TOM MOORE, Chen Bin, *WRAP/WESTAR*

5CH CONTROL TECHNOLOGY

SEBASTIAN I 3

Lara Gundel and Nima Afshar-Mohajer, chairs

5CH.1 Effect of Particle Loading Rate on Flat Filter Medium Performance. QIANG WANG, Xiuli Lin, Da-Ren Chen, *Virginia*

1:00 *Commonwealth University*

5CH.2 Effect of Nanofibers on Collection Performance of Air Filters. HISASHI YUASA, Takashi Yoshitake, Takafumi Seto,

1:15 Yoshio Otani, *Kanazawa university*

5CH.3 Artifacts in Filter Penetration Measurements Associated with Multiple Charging of Particles. MEILU HE, Suresh

1:30 Dhaniyala, Matthew Wagner, *Clarkson University*

5CH.4 Evaluation of Metallic Filter Media for High Temperature Filtration Application. QISHENG OU, James Warner,

1:45 Matti Maricq, David Y. H. Pui, *University of Minnesota*

5CH.5 Impact of Relative Humidity on HVAC Filters Loaded with Hygroscopic and Non-hygroscopic Particles. JAMES

2:00 MONTGOMERY, Sheldon Green, Steven Rogak, *University of British Columbia*

5CH.6 Electrostatic Collection of Tribocharged Lunar Dust Simulants at Elevated Vacuum Levels. NIMA AFSHAR-

2:15 MOHAJER, Chang-Yu Wu, Nicoleta Sorloacia-Hickman, *University of Florida*

5CH.7 Nanoparticle Penetration through Facepiece Respirators. YUE ZHOU, Yung-Sung Cheng, *Lovelace Respiratory Research Institute*
2:30

5CH.8 How Small Can We Go: Exploring the Limitations and Scaling Laws of Air-Microfluidic Particulate Matter Sensors. OMID MAHDAVIPOUR, Ben Gould, Dorsa Fahimi, David Liederman, Son Duy Nguyen, David Woolsey, Paul A. Solomon, Richard White, Lara Gundel, Igor Paprotny, *University of Illinois at Chicago*
2:45

5IM INSTRUMENTATION AND METHODS

PANZACOLA H 1-3

Fan Mei and Patrick O'Shaughnessy, chairs

5IM.1 Effect of Upstream Flow Mixing on Charging Capability of Aerosol Neutralizers. JAMES FARNSWORTH, Hans-Georg Horn, *TSI Incorporated*
1:00

5IM.2 A New Device for Measuring Number Concentration of Solid Particulate Matter. AARON AVENIDO, Jason Johnson, Brian Osmondson, Hans-Georg Horn, *TSI Incorporated*
1:15

5IM.3 Statistical Comparison of Particle Counts. PATRICK O'SHAUGHNESSY, *University of Iowa*
1:30

5IM.4 Laboratory Characterization of an Ultrafine Condensation Particle Counter Using a Perfluorinated Compound Working Fluid: Particle Size, Charge, and Composition Dependent Responses down to 1 nm. CHONGAI KUANG, Juha Kangasluoma, Daniela Wimmer, Jian Wang, Markku Kulmala, Tuukka Petäjä, *Brookhaven National Laboratory*
1:45

5IM.5 A Portable Water Condensation Particle Counter. SUSANNE HERING, Steven Spielman, Gregory Lewis, *Aerosol Dynamics Inc.*
2:00

5IM.6 A Filter Sensor for Determining the Fractal Dimension of Nanosized Agglomerates and Fibrous Carbon Nanotubes. SHENG-CHIEH CHEN, Jing Wang, Heinz Fissan, David Y. H. Pui, *University of Minnesota*
2:15

5IM.7 Accurate Control of Relative Humidity for HTDMA Particle Growth Rate Measurements. STEVEN CEVAER, Suresh Dhaniyala, *Clarkson University*
2:30

5PH LINKING AEROSOLS WITH PUBLIC HEALTH IN A CHANGING WORLD

SEBASTIAN I 4

R. Weber and Sherri Hunt, chairs

5PH.1 Linking Air Pollution and Health Effects: The Role of Semi-volatile Components of Ultrafine Ambient Particles. MICHAEL KLEINMAN, Andrew Keebaugh, David Herman, Vishal Verma, Payam Pakbin, Loyda Mendez, Constantinos Sioutas, *University of California, Irvine*
1:00

5PH.3 Sources of Reactive Oxygen Species (ROS) Generation Properties of Atmospheric Aerosols in Southeastern United States. VISHAL VERMA, Ting Fang, Laura King, Hongyu Guo, Rodney Weber, *Georgia Institute of Technology*
1:30

5PH.4 Isoprene-derived Secondary Organic Aerosol and Epoxide Intermediates Induce Altered Expression of Inflammation-associated Genes in Lung Cells. YING-HSUAN LIN, Maiko Arashiro, Zhenfa Zhang, Avram Gold, Ilona Jaspers, Rebecca Fry, Jason Surratt, *University of North Carolina at Chapel Hill*
1:45

5PH.5 Investigating the Health Effects of Fresh and Aged Traffic Aerosols: Linking Particle Oxidative Potential to Chemical Composition. NGA LEE NG, Matthew Kollman, Vasileios Papapostolou, Joy Lawrence, Sriram Suresh, Vishal Verma, Rodney Weber, Armistead Russell, Petros Koutrakis, *Georgia Institute of Technology*
2:00

5PH.6 Linking Nitrogen Oxide Chemistry and Aerosol over the Last Decade in San Joaquin Valley, California. SALLY PUSEDE, Ronald Cohen, *UC Berkeley*
2:15

5PH.7 Estimating Spatiotemporal Variations of PM_{2.5} over the Pittsburgh Metropolitan Area Using Aerosol Optical Depth. Tao Xue, RICHARD BILONICK, Daniel Connell, Evelyn Talbott, Judith Rager, LuAnn Brink, *University of Pittsburgh*
2:30

5PH.8 Mutagenicity of PAH and Nitro-Derived: An Assessment of Respirable Particulate Matter in Rio de Janeiro, Brazil. Claudia Rainho, SERGIO CORREA, Jose Mazzei, Claudia Aiub, Israel Felzenszwalb, *Rio de Janeiro State University*
2:45

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

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

6AC AEROSOL CHEMISTRY

PANZACOLA H4

Leah Williams and Arthur Chan, chairs

- 6AC.1 A Smog Chamber-Flow Tube Study of the Direct Photolysis of Model Biogenic and Anthropogenic SOA.**
3:30 SANDRA BLAIR, Scott A. Epstein, Amanda MacMillan, Sergey Nizkorodov, *University of California, Irvine*
- 6AC.2 A Real-Time Fast-Flow Tube Study of VOC and Particulate Emissions from Electronic, Reduced-Harm, Conventional, and Reference Cigarettes.** SANDRA BLAIR, Scott A. Epstein, Sergey Nizkorodov, Rufus Edwards, Ralph J. Delfino, Michael Kleinman, Nosratola Vaziri, Norbert Staimer, *University of California, Irvine*
- 6AC.3 Measurements of Oxidized Organic Compounds during SOAS 2013 Using Nitrate Ion Chemical Ionization Coupled with High Resolution Time-of-Flight Mass Spectrometry.** PAOLA MASSOLI, Harald Stark, Manjula Canagaratna, Heikki Junninen, Jani Hakala, Roy Lee III Mauldin, Mikael Ehn, Mikko Sipilä, Jordan Krechmer, Joel Kimmel, John Jayne, Jose-Luis Jimenez, Douglas Worsnop, *Aerodyne Research, Inc.*
- 6AC.4 Sources of Black Carbon Particles at a Rural Site Southeast of London, UK during ClearfLo (Winter 2012).**
4:15 LEAH WILLIAMS, Scott Herndon, John Jayne, Andrew Freedman, William Brooks, Jonathan Franklin, Paola Massoli, Edward Fortner, Puneet Chhabra, Mark Zahniser, Timothy Onasch, Manjula Canagaratna, Douglas Worsnop, Nga Lee Ng, Lu Xu, Berk Knighton, Manvendra Dubey, Allison Aiken, Kyle Gorkowski, Shang Liu, Dominique Young, Dantong Liu, James Allan, *Aerodyne Research, Inc.*
- 6AC.5 Organosulfates from Pinene and Isoprene over the Pearl River Delta, South China.** XIANG DING, Quanfu He, Xinming Wang, Jian Zhen Yu, Neil Donahue, *Guangzhou Institute of Geochemistry, CAS*
- 6AC.6 Chemical Composition of Marine Emissions from Mediterranean Seawaters: Results from a Mesocosm Study.**
4:45 JORGE PEY, H. Langley DeWitt, Brice Temime-Roussel, Aurelie Mème, Bruno Charriere, Richard Sempere, Anne Delmont, Sébastien Mas, David Parin, Clemence Rose, Allison Schwier, Badr Rmili, Karine Sellegri, Barbara D'Anna, Nicolas Marchand, *Aix-Marseille Université, CNRS, LCE FRE 3416*

6AQ AIR QUALITY AND CLIMATE IN THE SOUTHEAST US: INSIGHTS FROM RECENT MEASUREMENT CAMPAIGNS

SEBASTIAN I 1

Karsten Baumann and Neha Sareen, chairs

- 6AQ.1 Identifying Precursors and Aqueous Organic Aerosol Formation Pathways in the Humid, Photochemically-Active Southeastern US during the SOAS Campaign.** NEHA SAREEN, Annmarie Carlton, Barbara Turpin, *Rutgers University*
3:30
- 6AQ.2 Particle Water and pH in the Southeastern US.** HONGYU GUO, Lu Xu, Kate Cerully, Aikaterini Bougiatioti, Shannon Capps, Annmarie Carlton, Shanhu Lee, Nga Lee Ng, Michael Bergin, Athanasios Nenes, Rodney Weber, *Georgia Institute of Technology*
3:45
- 6AQ.3 On the Link Between Hygroscopicity, Volatility, and Oxidation State of Ambient and Water-soluble Aerosol in the Southeastern United States.** KATE CERULLY, Aikaterini Bougiatioti, Lu Xu, Hongyu Guo, James Hite, Nga Lee Ng, Rodney Weber, Athanasios Nenes, *TSI, Inc.*
4:00

- 6AQ.4 Estimation of Organo-Sulfur in PM_{2.5} via Isotope Dilution ICPMS and Ion Chromatography.** ERIC EDGERTON, Karsten Baumann, Mike Fort, Stephanie Shaw, John Jansen, *Atmospheric Research & Analysis*
4:15
- 6AQ.5 Constraints on the Parameters Dictating Organic Aerosol Volatility from Dual Thermodenuder Field Measurements in the Southeastern US.** PROVAT SAHA, Andrey Khlystov, Andrew Grieshop, *North Carolina State University*
4:30
- 6AQ.6 Aqueous Sources of Secondary Organic Aerosol in the Southeast Atmosphere Study (SAS).** V. FAYE MCNEILL, Jason Surratt, Annmarie Carlton, Havala Pye, *Columbia University*
4:45

6BB BIOMASS BURNING AEROSOL: FROM EMISSIONS TO IMPACTS

SEBASTIAN I 2

Allison Aiken and Lindsay Hatch, chairs

- 6BB.1 How Well Do Laboratory Studies Represent Microphysical Properties of Soot Emitted from Wildfires?** RAJAN K. CHAKRABARTY, Nicholas Beres, Hans Moosmuller, Swarup China, Claudio Mazzoleni, Manvendra Dubey, Li Liu, Michael I Mishchenko, *Desert Research Institute*
3:30
- 6BB.2 Optical and Physical Properties of Biomass Burning Aerosols – Linking Laboratory and Field Measurements.** ALLISON AIKEN, Manvendra Dubey, Shang Liu, Claudio Mazzoleni, Gavin McMeeking, Ezra Levin, Paul DeMott, Sonia Kreidenweis, Robert J. Yokelson, Allen Robinson, Neil Donahue, Christopher Cappa, Leah Williams, Nga Lee Ng, Douglas Worsnop, Timothy Onasch, *Los Alamos National Lab*
3:45
- 6BB.3 Real-time Evolution of the Gas-phase Precursors for Secondary Organic Aerosol from Biomass Burning.** Adam Ahern, Patrick Veres, Daniel S. Tkacik, Ellis Shipley Robinson, Rawad Saleh, Albert A. Presto, Allen Robinson, Robert J. Yokelson, Neil Donahue, RYAN SULLIVAN, *Carnegie Mellon University*
4:00
- 6BB.4 Fluoride Emissions from Biomass Burning.** Thilina Jayarathne, Chelsea Stockwell, Robert J. Yokelson, Shunsuke Nakao, ELIZABETH STONE, *University of Iowa*
4:15
- 6BB.5 Smoke Marker Ratios from Controlled Laboratory Burns, Prescribed Burns, and Wildfires.** AMY P. SULLIVAN, Sonia Kreidenweis, Bret Schichtel, Jeffrey Collett, *Colorado State University*
4:30
- 6BB.6 Impacts of Transboundary Peatland Burning Smoke on In Situ Acidity of Urban Aerosols.** Shiguo Jia, Wei Hong Fan, Choon Nam Ong, Jeffrey Reid, LIYA YU, *National University of Singapore*
4:45

6EP AEROSOL SOURCES FROM EMERGING ENERGY TECHNOLOGIES AND PRODUCTION

SEBASTIAN I 3

Akua Asa-Awuku and David Cocker, chairs

- 6EP.1 Airborne Measurements of Biogenic and Anthropogenic Secondary Organic Aerosol Formation in the Oil Sands Region of Alberta.** JOHN LIGGIO, Katherine Hayden, Peter Liu, Amy Leithead, Samar Moussa, Jason O'Brien, Shao-Meng Li, *Environment Canada*
3:30
- 6EP.2 Winter Fine Particle Haze Episodes in the Bakken Oil and Gas Production Region.** ASHLEY EVANOSKI-COLE, Anthony Prenni, Derek Day, Misha Schurman, Amy P. Sullivan, Yi Li, Barkley Sive, Yong Zhou, Jenny Hand, Kristi Gebhart, Bret Schichtel, Jeffrey Collett, *Colorado State University*
3:45
- 6EP.3 Amines and Their Degradation Products from Post-Combustion Carbon Capture.** STEPHANIE SHAW, Annette Rohr, Eladio Knipping, *Electric Power Research Institute*
4:00
- 6EP.4 Effects of Global Warming Mitigation Strategies in Major Energy Sectors on Primary and Secondary Aerosol.** Michael MacKinnon, MARC CARRERAS-SOSPEDRA, Jack Brouwer, Donald Dabdub, *University of California, Irvine*
4:15
- 6EP.5 Detailed Characterization of Particulate Matter (PM) Emitted by Pre-commercial High-Efficiency Spark Ignition Direct Injection Gasoline Engine.** ALLA ZELENYUK, Paul Reitz, Mark Stewart, Dan Imre, David Rothamer, David Foster, Mitchell Hageman, Axel Maier, Stephen Sakai, Michael Andrie, Roger Krieger, Kushal Narayanaswamy, Paul Najt, Arun Solomon, *Pacific Northwest National Laboratory*
4:30

6EP.6 Modeling Aerosol Release from Explosion-Induced Vessel Ruptures for Nuclear Fuel Reprocessing. FRED GELBARD, Alexander Brown, David L. Y. Louie, Chengcheng Feng, Nathan E. Bixler, *Sandia National Laboratories*

6IM INSTRUMENTATION AND METHODS

PANZACOLA H 1-3

Fred Bretchel and Hagen Telg, chairs

- 6IM.1 Design and Testing of an Inhalable Particle Spectrometer.** KIMBERLY ANDERSON, Mwangi Ndonga, David Leith, 3:30 Jordan Rath, Azer Yalin, John Volckens, *Colorado State University*
- 6IM.2 A Small, Sensitive, Light-weight, and Disposable Aerosol Spectrometer for Balloon and UAV Applications.** 3:45 Ru-Shan Gao, HAGEN TELG, Timothy Bates, Richard McLaughlin, Laurel Watts, Steven Ciciora, James Johnson, Joshua P. Schwarz, Anne Perring, Andrew Rollins, Troy Thornberry, David Fahey, *NOAA/CIRES*
- 6IM.3 High Speed Size Distribution Measurements of Aerosol Particles.** Michael Pikridas, Chongai Kuang, Steven 4:00 Spielman, Susanne Hering, JIAN WANG, *Brookhaven National Laboratory*
- 6IM.4 A Liquid Nebulization / Differential Mobility Analysis / Transmission Electron Microscopy Approach to Evaluate Nanoparticles in Environmentally-Relevant Water Matrices.** BRIAN MADER, Mark Ellefson, Sue Wolf, 3M 4:15 *Company*
- 6IM.5 Development of a Miniature Plate Differential Mobility Analyzer (Mini-plate DMA).** QIAOLING LIU, Da-Ren 4:30 Chen, *Virginia Commonwealth University*
- 6IM.6 Initial Field Deployment of a Custom Multi-Channel Tandem Differential Mobility Analyzer (mc-TDMA).** 4:45 CHRISTOPHER OXFORD, Yang Wang, Steven Dhawan, David Hagan, Dhruv Mitroo, Pratim Biswas, Brent Williams, *Washington University in St. Louis*
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6PH LINKING AEROSOLS WITH PUBLIC HEALTH IN A CHANGING WORLD

SEBASTIAN I 4

V. Verma and Nga Lee (Sally) Ng, chairs

- 6PH.1 SPARTAN: An Emerging Global Aerosol Network.** GRAYDON SNIDER, Crystal Weagle, Randall Martin, Aaron van 3:30 Donkelaar, Clement Akoshile, Paulo Artaxo, Jeff Brook, Brent Holben, Ralph Kahn, Nofel Lagrosas, Puji Lestari, Vanderlei J. Martins, Eduardo J. Quel, Yinon Rudich, Abdus Salam, S.N. Tripathi, Zhang Qiang, Michael Brauer, Aaron Cohen, Mark D. Gibson, Yang Liu, *Dalhousie University*
- 6PH.2 Balancing Health and Climate Impacts of Aerosols in a Changing World using GEOS-Chem Adjoint Sensitivities.** FORREST LACEY, Daven Henze, *University of Colorado, Boulder* 3:45
- 6PH.3 A Reduced-Complexity, Variable Grid Resolution Model for PM_{2.5} Transport and Transformation.** 4:00 CHRISTOPHER TESSUM, Jason Hill, Julian Marshall, *University of Minnesota*
- 6PH.4 Linking Air Quality Health Impacts and Electricity Capacity Planning.** PAUL KERL, Wenxian Zhang, Juan Moreno- 4:15 Cruz, Athanasios Nenes, Matthew Realff, Armistead Russell, Joel Sokol, Valerie Thomas, *Georgia Institute of Technology*
- 6PH.5 Reducing Global Mortality from PM_{2.5}.** JOSHUA APTE, Julian Marshall, *Lawrence Berkeley National Laboratory* 4:30
- 6PH.6 Development and Application of a Markov Chain Model for Predicting Influenza Risk and Control in an Office Environment.** PARHAM AZIMI, Brent Stephens, *Illinois Institute of Technology* 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 **Friedlander Lecture: Linking Tailpipe to Ambient: Atmospheric Evolution of Combustion Emissions** Allen L. Robinson, *Carnegie Mellon University*

Moderator Sonia Kreidenweis, *Colorado State University*

9:00 **Friedlander Award Presentation, AAAR Fellows, IARA Fellows, Fuchs Award Announcement** Donald Dabdub, *University of California, Irvine*

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

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

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

7AQ AIR QUALITY AND CLIMATE IN THE SOUTHEAST US: INSIGHTS FROM RECENT MEASUREMENT CAMPAIGNS

SEBASTIAN I 1

Steve Brown and Alexis Attwood, chairs

7AQ.1 Changes in Visibility and Local Radiative Forcing in the Southeast U.S. Linked to Decreased Aerosol Sulfate Mass. ALEXIS ATTWOOD, Rebecca Washenfelder, Weiwei Hu, Nick Wagner, Allison McComiskey, Pedro Campuzano-Jost, Douglas Day, Brett Palm, Suzane Simoes de Sa, Charles Brock, Eric Edgerton, Karsten Baumann, Jose-Luis Jimenez, Steven G. Brown, *CU CIRES- NOAA ESRL*

7AQ.2 Cloud Condensation Nuclei, Cloud Droplet Number, and the Radiative Balance over the Southeastern United States: Measurement and Modeling Results from the NOAA SENEX Campaign. JACK LIN, Ricardo Morales Betancourt, Aikaterini Bougiatioti, Petros Vasilakos, Athanasios Nenes, Charles Brock, Nick Wagner, Daniel Lack, Daniel Law, Timothy Gordon, Mathews Richardson, Milos Markovic, Joshua P. Schwarz, Ann M. Middlebrook, Jin Liao, André Welti, Joost de Gouw, *Georgia Institute of Technology*

7AQ.3 Multivariate Analysis of Historical Trends in Condensed Phase Liquid Water in the Southeastern United States. THIEN KHOI NGUYEN, Annmarie Carlton, Shannon Capps, *Rutgers University*

7AQ.4 Vertical Profiles of Aerosol Extinction Over the Southeastern US during the Summer. NICK WAGNER, Charles Brock, Timothy Gordon, Daniel Lack, Mathews Richardson, Daniel Law, André Welti, Ann M. Middlebrook, Jin Liao, John Holloway, Jeff Peischl, Ilana Pollack, Thomas Ryerson, Martin Graus, Carsten Warneke, *NOAA Earth System Research Laboratory, Boulder, CO*

7AQ.5 HSRL-2 Observations of Aerosol Variability and Mixing During Boundary Layer Evolution in Houston. SHARON P. BURTON, Amy Jo Scarino, Raymond R. Rogers, Chris Hostetler, Richard Ferrare, Timothy A. Berkoff, David B. Harper, Anthony L. Cook, Pablo Saide, *NASA Langley Research Center*

7AQ.6 Chemical Climatology of the Southeastern United States, 1999-2013. George Hidy, CHARLES BLANCHARD, 11:00 Karsten Baumann, Eric Edgerton, Stephanie Shaw, Eladio Knipping, John Jansen, Shelley Tanenbaum, Justin Walters, Ivar Tombach, *Envair*

7AQ.7 Aerosol Optical Properties in the Ultraviolet Spectral Region during the Southern Oxidant and Aerosol Study. REBECCA WASHENFELDER, Alexis Attwood, Charles Brock, Steven G. Brown, *University of Colorado and NOAA* 11:15

7BA BIOAEROSOLS AND HOMELAND SECURITY

SEBASTIAN I 4

Sergey Grinshpun and Vera Samburova, chairs

7BA.1 Development of a Novel Microscope Spectrofluorometer for Individual Bioparticle Characterization. DONALD 9:45 R. HUFFMAN, J. Alex Huffman, *University of Arizona and University of Denver*

7BA.2 Physico-chemical qualification and refinements of a new portable bio aerosols collector: BIODOSI. ROLAND 10:00 SARDA-ESTEVE, Jean-Maxime Roux, *CEA*

7BA.3 International Inter-comparison of Laser/Light-induced Fluorescence (L/LIF) Methods for the Real-time Detection of Bioaerosols: BIODTECT 2014 Campaign at CEA/LSCE ACTRIS SUPERSITE (Saclay, France). 10:15 Roland Sarda-Esteve, Martin Gallagher, J. ALEX HUFFMAN, Ulrich Poeschl, Hang Su, Denis Kiselev, Sampo Saari, John Sodeau, David O'Connor, Gavin McMeeking, Greg Kok, Michel Thibaudon, Dominique Baisnee, Jean Sciare, Olivier Favez, Jean-Maxime Roux, Marie-Helene Nadal, Christophe Bossuet, Laurent Olmedo, *CEA*

7BA.4 Airborne Measurements of Bioaerosol Across the Southern U.S. ANNE PERRING, Darrel Baumgardner, Mark T. 10:30 Hernandez, Joshua P. Schwarz, Ru-Shan Gao, Greg Kok, Gavin McMeeking, David Fahey, *CU CIRES- NOAA ESRL*

7BA.5 Analysis of Atmospheric Biological Particles with High-Resolution Microscopy Techniques. VERA SAMBUROVA, 10:45 Alison Murray, Anna Gannet Hallar, Xufei Yang, Barbara Zielinska, *Desert Research Institute*

7BA.6 Development of a Passive Bioaerosol Sampler Using Piezoelectric Polymer. JENNIFER THERKORN, Jerry 11:00 Scheinbeim, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

7BA.7 Efficiency of Virus Collection with the Novel G-II Bioaerosol Collector. Jovan Pantelic, Michael Grantham, JING 11:15 YAN, Fengjie Liu, Sheryl Ehrman, Donald Milton, *University of Maryland School of Public Health*

7BB BIOMASS BURNING AEROSOL: FROM EMISSIONS TO IMPACTS

SEBASTIAN I 2

Betsy Stone and Andrew May, chairs

7BB.1 Observations of Wildfire Smoke and Ozone at the Mt. Bachelor Observatory in Central Oregon. DAN JAFFE, 9:45 Nicole Wigder, Pao Baylon, Jon Hee, Qi Zhang, Shan Zhou, Sonya Collier, Lawrence Kleinman, Arthur J. Sedlacek, *University of Washington, Bothell, WA, USA*

7BB.2 Aerosol Chemistry and Processing at Mt. Bachelor Summit: Influences from Wildfire Plumes. SHAN ZHOU, 10:00 Sonya Collier, Jon Hee, Nicole Wigder, Dan Jaffe, Lawrence Kleinman, Arthur J. Sedlacek, Qi Zhang, *University of California, Davis*

7BB.3 Aged Biomass Burning Size Distributions from BORTAS 2011. KIMIKO SAKAMOTO, James Allan, Hugh Coe, 10:15 Jonathan Taylor, Thomas Duck, Jeffrey Pierce, *Colorado State University*

7BB.4 Lagrangian Photochemical Modeling of Aerosol Evolution in Biomass Burning Plumes. MATTHEW ALVARADO, 10:30 Chantelle Lonsdale, Robert J. Yokelson, Sheryl K. Akagi, Emily Fischer, Katherine Travis, Jill Craven, Jonathan Taylor, Gavin McMeeking, Ian Burling, Shawn P. Urbanski, Cyle Wold, John Seinfeld, Hugh Coe, David R. Weise, *AER*

7BB.5 Investigation of Chemical and Physical Perturbations to Organic Aerosol Present in Biomass Burning Plumes over Prescribed Fires in South Carolina. ANDREW MAY, Taehyoung Lee, Gavin McMeeking, Sheryl K. Akagi, Amy P. 10:45 Sullivan, Shawn P. Urbanski, Robert J. Yokelson, Sonia Kreidenweis, *Colorado State University*

7BB.6 Observations on Aging of Biomass Burning Aerosols in Southern Africa. VILLE VAKKARI, Veli-Matti Kerminen, 11:00 Johan Paul Beukes, Petri Tiitta, Pieter G. van Zyl, Miroslav Josipovic, Andrew D. Venter, Kerneels Jaars, Douglas Worsnop, Markku Kulmala, Lauri Laakso, *Finnish Meteorological Institute, Helsinki, Finland*

7BB.7 Polluted vs Clean: Chronic Nitrogen Deposition Affects on Emissions from Burning of Forest Litter. Michael 11:15 Giordano, David R. Weise, AKUA ASA-AWUKU, *University of California, Riverside*

7CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE

PANZACOLA H 1-3

Shane Murphy and James Radney, chairs

7CA.1 Secondary Organic Aerosol Formation at an Urban Downwind Location in Long Island, New York. SHAN 9:45 ZHOU, Sonya Collier, Jianzhong Xu, Fan Mei, Jian Wang, Yin-Nan Lee, Arthur J. Sedlacek, Stephen Springston, Qi Zhang, *University of California, Davis*

7CA.2 Evidence of Ambient Aqueous SOA Formation in the Po Valley, Italy. AMY P. SULLIVAN, Natasha Hodas, Barbara 10:00 Turpin, Kate Skog, Frank Keutsch, Stefano Decesari, M. Cristina Facchini, Jeffrey Collett, *Colorado State University*

7CA.3 Examining New Pathways of Secondary Organic Aerosol Formation in a 3D Model: Role of Absorbed Water, 10:15 Multi-generational Aging, Intermediate-Volatility Organics and Aqueous Chemistry. SHANTANU JATHAR, Christopher Cappa, V. Faye McNeill, Michael Kleeman, *University of California, Davis*

7CA.4 Modeling Regional Secondary Organic Aerosol from Isoprene in Southeast United States Using the Master 10:30 Chemical Mechanism. Jingyi Li, QI YING, *Texas A&M University*

7CA.5 Characterization of Organic Aerosol in Severe Haze Episodes Using FTIR during Fall 2013 in Beijing, China. 10:45 Xiaoying Li, Kathryn George, Caiqing Yan, MEI ZHENG, Ann Dillner, *Peking University*

7CA.6 Instrument Intercomparison of Black Carbon Measurements and Correlations with Gas and Aerosol 11:00 Composition during an Urban Field Study. MICHAEL WALKER, Brent Williams, Raul Martinez, Yaping Zhang, Dhruv Mitroo, David Hagan, Steven Dhawan, Li Du, Jay Turner, Hongyu Guo, Laura King, Rodney Weber, Lu Hu, Munkhbayar Baasandorj, Dylan Millet, Gavin McMeeking, *Washington University in St. Louis*

7CA.7 Black and Elemental Carbon in Two European Urban Areas – Temporal Trends, Site and Seasonal Similarities 11:15 and Differences. Regina Hitzemberger, Jaroslav Schwarz, Isabella Aschauer, Richard Haindl, Wolfgang Ludwig, Robert Wagner, ANNA WONASCHUETZ, Gudrun Zecha, Petr Vodicka, Zdenek Wagner, Nadezda Zikova, Vladimir Zdimal, *University of Vienna*

7NM NANOPARTICLES AND MATERIALS SYNTHESIS

SEBASTIAN I 3

Mark Swihart and David Cocker, chairs

7NM.1 Collisional Growth Below 2 nm in Flame Aerosol Reactors. JIAXI FANG, Yang Wang, Pai Liu, Pratim Biswas, 9:45 *Washington University in St Louis*

7NM.2 Flame-driven Aerosol Synthesis of Multicomponent Metal and Non-Oxide Semiconductor Nanoparticles. Di 10:00 Qi, Singh Saurabh, Munish Sharma, MARK SWIHART, *University at Buffalo (SUNY)*

7NM.3 Kinetics of Sub 3 nm Titanium Dioxide Particle Formation in an Aerosol Reactor during the Thermal 10:15 Decomposition of Titanium Isopropoxide (TTIP). YANG WANG, Pai Liu, Tandeep Chadha, Jiaxi Fang, Pratim Biswas, *Washington University in St Louis*

7NM.4 Lanthanide Doped Silica Nanospheres – Surface Sampling in Deposition Studies. ERIN M. DURKE, Wesley 10:30 Gordon, Amanda Jenkins, Jason Edmonds, *Edgewood Chemical Biological Center*

7NM.5 Near-road Modeling and Measurement of Cerium-containing Aerosol Generated by Nanoparticle Diesel Fuel 10:45 Additive Use. BRETT GANTT, Shamia Hoque, Robert Willis, Kathleen Fahey, Juana Delgado-Saborit, Roy M. Harrison, Garnet Erdakos, Prakash Bhave, K. Max Zhang, Kasey Kovalcik, Havala Pye, *U.S. EPA*

- 7NM.6 A Liquid Nebulization / Differential Mobility Analysis (LN/DMA) Based Method for the Quantification of Nanomaterials in Environmentally-Relevant Water Matrices.** BRIAN MADER, Mark Ellefson, Sue Wolf, *3M Company*
11:00
- 7NM.7 Aminated Reduced Graphene Oxide-Titanium Dioxide Nanocomposites (AGOTi) for Carbon Dioxide Capture and Photoreduction.** YAO NIE, Wei-Ning Wang, Yi Jiang, John Fortner, Pratim Biswas, *Washington University in St. Louis*
11:15

7NP ADVANCES IN THE PHYSICS AND CHEMISTRY OF NEW PARTICLE FORMATION AND GROWTH

PANZACOLA H4

Ilona Riipinen and Coty Jen, chairs

- 7NP.1 Effect of Chemical Structure on the Rapid Formation of Extremely Low Volatility Organic Compounds from BVOC Oxidation.** MIKKO SIPILÄ, Tuija Jokinen, Torsten Berndt, Mikael Ehn, Heikki Junninen, Pauli Paasonen, Stefanie Richters, Frank Stratmann, Hartmut Herrmann, Douglas Worsnop, Markku Kulmala, Veli-Matti Kerminen, *University of Helsinki*
9:45
- 7NP.3 Chemical Mechanisms Behind the Isoprene Suppression of Biogenic New Particle Formation.** SHANHU LEE, Yi You, Janek Uin, Alex Guenther, Joost de Gouw, William Brune, Paul Wennberg, Alex Teng, Tran Nguyen, Jason St. Clair, John Crouse, Pawel Misztal, Gabriel Isaacman, Allen H. Goldstein, Karsten Baumann, Eric Edgerton, *Kent State University*
10:15
- 7NP.4 Atmospheric Nanoparticle Growth, Particle Phase Reactions and Particle Phase State.** TAINA YLI-JUUTI, Ilona Riipinen, Ulrich Poeschl, Manabu Shiraiwa, *Max Planck Institute for Chemistry*
10:30
- 7NP.5 Observation of Water Vapor Uptake by Dimethylamine-Sulfuric Acid Cluster Ions in the Sub 2 nm Size Range via Ion Mobility Spectrometry-Mass Spectrometry.** Jikku Thomas, Siqin He, Joseph DePalma, Carlos Larriba-Andaluz, Murray Johnston, CHRISTOPHER HOGAN JR., *University of Minnesota*
10:45
- 7NP.6 Particle Formation from Methanesulfonic Acid and Ammonia/Amines via Laboratory Experiments, Ab Initio Calculations, and Modeling Studies.** HAIHAN CHEN, Mychel E. Varner, Andrew Martinez, Veronique Perraud, Micheal, J. Ezell, Kristine Arquero, Jeremy Horne, Benny Gerber, Donald Dabdub, Barbara J. Finlayson-Pitts, *University of California, Irvine*
11:00
- 7NP.7 New Particle Formation in the Volatility Basis Set.** NEIL DONAHUE, Wayne Chuang, Ismael Kenneth Ortega Colomer, *Carnegie Mellon University*
11:15

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

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

8AC AEROSOL CHEMISTRY

PANZACOLA F/G

Kate Cerully, chair

- 8AC.1 Chlorine-initiated SOA Formation from Biogenic VOCs.** CHRISTOPHER LIM, Kelsey Boulanger, Jesse Kroll, *MIT*
12:15
- 8AC.2 Products Formed during the Heterogeneous Oxidation of Polycyclic Aromatic Hydrocarbons in an Atmospheric Chamber.** KLARA ONDRUSOVA, Richard E. Cochran, Haewoo Jeong, Alena Kubatova, *University of North Dakota*
12:15

- 8AC.3** 12:15 **Molecular Composition and Photochemical Aging of Alpha-Pinene SOA and Alpha-Humulene SOA Generated Under Nocturnal and Diurnal Conditions.** DIAN ROMONOSKY, Sergey Nizkorodov, Julia Laskin, Alexander Laskin, *University of California, Irvine*
- 8AC.4** 12:15 **Characterization of Organic Precursors and Products during Aqueous Hydroxyl Radical Oxidation of Po Valley, Italy and Fresno, CA Fog Water.** Jeffrey R. Kirkland, Yong Lim, Lynn Mazzoleni, Jeffrey Collett, Stefano Decesari, M. Cristina Facchini, Amy P. Sullivan, Frank Keutsch, BARBARA TURPIN, *Rutgers University*
- 8AC.5** 12:15 **Secondary Organic Aerosol from Gas Phase Methylsiloxane Oxidation: Products and Reaction Mechanisms.** YUE WU, Murray Johnston, *University of Delaware*
- 8AC.6** 12:15 **Effect of Ambient Primary Organic Aerosols on Secondary Organic Aerosol Formation.** JIANHUAI YE, Bruce Urch, Greg J. Evans, Arthur Chan, *University of Toronto*
- 8AC.7** 12:15 **Spectroscopy of Cloud-Processed Aerosols: Glyoxal Oligomers.** SARAH D. BROOKS, Elena Avzianova, *Texas A&M University*
- 8AC.8** 12:15 **A Study of the Aqueous Phase Processing of Organic Aerosols through Compound Specific Stable Isotope Analysis.** DENISE NAPOLITANO, Pierre Herckes, *Arizona State University*
- 8AC.9** 12:15 **Optical Properties of Water Soluble Organic Carbon (WSOC) in Atmospheric Aerosols and Fog Waters.** JINWEI ZHANG, David Hanigan, Paul Westerhoff, Pierre Herckes, *Arizona State University*
- 8AC.10** 12:15 **Surface-specific Chemical Reactions for Atmospheric Surfactants Observed Directly with Synchrotron-based XPS.** NONNE PRISLE, Gunnar Öhrwall, Josephina Werner, Olle Björneholm, *University of Helsinki, Helsinki, Finland*
- 8AC.11** 12:15 **Identification and Characterization of Visible Absorption Components in Methylglyoxal-Ammonium Sulfate Mixtures.** W. SEAN MCGIVERN, Thomas C. Allison, James Radney, Christopher Zangmeister, *National Institute of Standards and Technology*
- 8AC.12** 12:15 **Gas-phase Oxidation of Naphthalene, Acenaphthylene and Acenaphthene Initiated by the Nitrate Radical: Mechanistic Study and SOA Formation.** MATTHIEU RIVA, Manuela Cirtog, Emilie Perraudin, Bénédicte Picquet-Varrault, Eric Villenave, *EPOC, Université Bordeaux, France*
- 8AC.13** 12:15 **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, Tashana Detwiler, Zhenfa Zhang, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill, Chapel Hill, NC*

8AQ AIR QUALITY AND CLIMATE IN THE SOUTHEAST US: INSIGHTS FROM RECENT MEASUREMENT CAMPAIGNS
PANZACOLA F/G

Rob Griffin, chair

- 8AQ.2** 12:15 **Investigating Chemical Reaction Pathways in the SE US Using Comprehensive Gas Chromatography.** KELLEY C. BARSANTI, Melissa J. Roskamp, Wentai Luo, Lindsay E. Hatch, James F. Pankow, *Portland State University*
- 8AQ.3** 12:15 **Representativeness of Aggregate Vertical Profiles and Influencing Factors from NASA DISCOVER-AQ.** MICHAEL SHOOK, Gao Chen, James Crawford, Bruce Anderson, Andreas Beyersdorf, Richard Moore, Amy Jo Scarino, Kenneth Thornhill, Edward Winstead, Luke Ziemba, *SSAI*
- 8AQ.4** 12:15 **Minimizing Cloud Shattering Effects: Comparing Aerosol Measurements Made during the 2013 SEAC4RS Campaign Behind Two Types of Airborne Sampling Inlets.** KENNETH THORNHILL, Michael Shook, Luke Ziemba, Bruce Anderson, Andreas Beyersdorf, Gao Chen, Edward Winstead, Richard Moore, *SSAI*
- 8AQ.5** 12:15 **Southern Oxidant and Aerosol Study (SOAS); A Modelling Perspective.** PETROS VASILAKOS, Yongtao Hu, Jack Lin, Lu Xu, Nga Lee Ng, Armistead Russell, Athanasios Nenes, *Georgia Institute of Technology*

8BA BIOAEROSOLS AND HOMELAND SECURITY
PANZACOLA F/G

Alex Huffman, chair

- 8BA.1 Characterization of a Rotating Drum System for Bioaerosol Studies in Biocontainment.** MICHAEL SCHUIT, Shanna Ratnesar-Shumate, Jamie Kline, John Yeager, Kristin Bower, Paul Dabisch, *NBACC*
12:15
- 8BA.2 Preferential Aerosolization of Different Strains of a Swine Pathogen: Streptococcus Suis.** LÉA GAUTHIER-LEVESQUE, Laetitia Bonifait, Phillipa Perrott, Nathalie Turgeon, Marc Veillette, Caroline Duchaine, *Université Laval, Canada*
12:15
- 8BA.4 Emissions and Dispersion Bioaerosol in Four Sites During Spring-Summer at Tijuana, Mexico.** LILIA HURTADO, Guillermo Rodriguez, Miguel Zavala, Penelope Quintana, Luisa Molina, Bertha Landeros, Mirna Brito, *Universidad Autonoma de Baja California, Tijuana, Mexico*
12:15
- 8BA.5 Investigation of Bioaerosol Sampling Efficiency with the Steam Jet-Aerosol Collector.** Wei-Ting Chen, Andrey Khlystov, Huey-Jen Su, Nai-Tzu Chen, Wei-Yen Tu, MING-YENG LIN, *National Cheng Kung University*
12:15
- 8BA.6 In Vitro Aerosolized Antigen Dosimetry Lung Models.** AYESHA MAHMOOD, John Dye, *US Army Medical Research Institute for Infectious Disease*
12:15
- 8BA.8 Viral and Bacterial Microbiome of Air in a Daycare Center.** AARON PRUSSIN II, Kyle Bibby, Linsey Marr, *Virginia Tech*
12:15
- 8BA.9 Fluorophore-Tagged Reagents for Aerosol Experiments.** CYNTHIA J. KAESER, Elizabeth K. Wheeler, Joanne J. Osburn, A. Daniel Jones, George R. Farquar, *Lawrence Livermore National Laboratory*
12:15
- 8BA.10 Generation and Characterization of Large Particle Aerosols Using the Center Flow Tangential Aerosol Generator for Nonhuman Primate Aerosol Models.** KYLE BOHANNON, Matthew Lackemeyer, Jens Kuhn, Jiro Wada, Lisa Hensley, Peter Jahrling, Reed Johnson, *NIAID*
12:15
- 8BA.11 Non-Human Primate Model Development Using Large Particle Aerosolized Cowpox Virus.** MATTHEW LACKEMEYER, Kyle Bohannon, Amy Papaneri, Gary Sparks, Reed Johnson, Peter Jahrling, *NIAID*
12:15
- 8BA.12 Quantum Cascade Laser Cavity Ring Down Spectroscopy: New Method for the Characterization and Detection of Aerosols.** Erin M. Durke, ANGELA M. BUONAUGURIO, Jason Edmonds, *Edgewood Chemical Biological Center*
12:15
- 8BA.13 Simultaneous Real-time Fluorescence and Microscopy Measurements of Bioaerosols during the BIODTECT 2014 Campaign in Paris Area.** DOMINIQUE BAISNEE, Michel Thibaudon, Raphaelle Baumier, Gavin McMeeking, Greg Kok, David O'Connor, John Sodeau, J. Alex Huffman, Walfried Lassar, Kyle Pierce, Martin Gallagher, Ian Crawford, Georges Salines, Roland Sarda-Esteve, *CEA*
12:15
- 8BA.14 BIODTECT 2014 Campaign in Paris Area: Overview of the Experimental Strategy and Preliminary Results.** ROLAND SARDA-ESTEVE, J. Alex Huffman, Martin Gallagher, Michel Thibaudon, Dominique Baisnee, Raphaelle Baumier, Gavin McMeeking, Greg Kok, John Sodeau, David O'Connor, Ian Crawford, Michael Flynn, Sampo Saari, Ulrich Poeschl, Olivier Favez, Tanguy Amodeo, Jean Sciare, Nicolas Bonnaire, Walfried Lassar, Kyle Pierce, Cédric Chou, Allan Bertram, Georges Salines, Jean-Maxime Roux, et al., *CEA*
12:15
- 8BA.15 BIODTECT 2014: Ambient Observations by a Comprehensive Suite of Light-induced Fluorescence Techniques during Summer Near Paris, France.** WALFRIED LASSAR, Roland Sarda-Esteve, Kyle Pierce, Martin Gallagher, Ian Crawford, John Sodeau, David O'Connor, Gavin McMeeking, Greg Kok, Ulrich Poeschl, Jean Sciare, Dominique Baisnee, Sampo Saari, J. Alex Huffman, *University of Denver, CO*
12:15
- 8BA.16 A Global Overview of Measurements of Fluorescent Biological Particles Using Ultraviolet Aerodynamic Particle Sizer (UVAPS) and Wideband Integrated Bioaerosol Sensor (WIBS).** KYLE PIERCE, Niall Robinson, Ian Crawford, Martin Gallagher, David Healy, David O'Connor, John Sodeau, Miia Hiltunin, Markku Kulmala, Warren Stanley, Paul Kaye, Carolyn J. Schumacher, Paulo Artaxo, Meinrat O Andreae, J. Alex Huffman, *University of Denver*
12:15
- 8BA.17 Seasonal and Spatial Variation of Bioaerosols in Midwestern United States.** CHATHURIKA RATHANYAKE, Nervana Metwali, Zach Baker, Peter Thorne, Patrick O'Shaughnessy, Thilina Jayarathne, Pam Kastle, Elizabeth Stone, *University of Iowa*
12:15
- 8BA.18 Evaluation of the WIBS-4A for Biodefense-Related Applications.** ELIZABETH CORSON, Jonathan Eshbaugh, David Drewry, *Johns Hopkins University Applied Physics Laboratory*
12:15
- 8BA.19 Leveraging Real Time Fluorescence Pattern Recognition of Airborne Biological Particles a National Reconnaissance and Database of Water Damaged Buildings.** Darrel Baumgardner, Kevin McCabe, Greg Kok, Gary Granger, Matthew Coghill, MARK T. HERNANDEZ, *University of Colorado Boulder*
12:15

8BB BIOMASS BURNING AEROSOL: FROM EMISSIONS TO IMPACTS

PANZACOLA F/G

Ryan Sullivan and Sonia Kreidenweis, chairs

- 8BB.1 Contribution of Biomass Burning to the Total Organic Aerosol in the Eastern Mediterranean.** AIKATERINI BOUGIATIOTI, Iasonas Stavroulas, Evangelia Kostenidou, Francesco Canonaco, Spyros Pandis, Athanasios Nenes, Nikolaos Mihalopoulos, *Georgia Institute of Technology*
- 12:15
- 8BB.2 Assessment of Alternatives to Indoor Stove Use on the Navajo Nation.** WYATT CHAMPION, Barbara Klein, Perry Charley, Avery Denny, James McKenzie, Kathleen Stewart, Paul A. Solomon, Lupita Montoya, *University of Colorado Boulder*
- 12:15
- 8BB.3 Photochemical Processing of Secondary Organic Aerosol Precursors in Biomass Burning Smoke Measured by Comprehensive Two-Dimensional Gas Chromatography.** LINDSAY E. HATCH, Wentai Luo, James F. Pankow, Daniel S. Tkacik, Adam Ahern, Rawad Saleh, Ellis Shipley Robinson, Allen Robinson, Ryan Sullivan, Neil Donahue, Robert J. Yokelson, Anton Rusanen, Ditte Mogensen, Sampo Smolander, Michael Boy, Kelley C. Barsanti, *Portland State University*
- 12:15
- 8BB.4 Climatic Implications of Peat Fire Emissions.** Adam Watts, Rajan K. Chakrabarty, Vera Samburova, HANS MOOSMULLER, *Desert Research Institute*
- 12:15
- 8BB.5 Hygroscopicity and Cloud Condensation Nucleation Activity of Fresh Biomass Burning Aerosol: Black Carbon Mixing States.** SHUNSUKE NAKAO, Ezra Levin, Gavin McMeeking, Christian Carrico, Thilina Jayarathne, Elizabeth Stone, Sonia Kreidenweis, *Colorado State University*
- 12:15
- 8BB.6 Characterization of Emissions from the Combustion of Solid Fuels Used in the Navajo Nation and Others relevant to Developing Communities.** Charles James, Sandra Garcia-Fine, Barbara Ward, WYATT CHAMPION, Lupita Montoya, *University of Colorado Boulder*
- 12:15

8CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE

PANZACOLA F/G

Shuka Schwarz, chair

- 8CA.1 Measured Optical Absorption and Scattering Coefficients of Agglomerates of Coal Fly Ash and Powdered Activated Carbon.** TIAN XIA, Akosua Miller, Herek Clack, *University of Michigan*
- 12:15
- 8CA.2 Predicting Ambient Aerosol Thermal Optical Reflectance OC, EC and TC Measurements from Infrared Spectra.** ANN DILLNER, Satoshi Takahama, *University of California, Davis*
- 12:15
- 8CA.3 Uncertainties in Global Aerosol and Climate Forcings from Biofuel Emissions.** JOHN KODROS, Catherine Scott, Salvatore Farina, Jeffrey Pierce, *Colorado State University*
- 12:15
- 8CA.4 Laboratory Evaluation of Black Carbon Aerosol Deposition to Snow.** Larry Hermanson, JOSHUA P. SCHWARZ, Anne Perring, Milos Markovic, David Fahey, *NOAA/CIRES*
- 12:15
- 8CA.5 Primary and Secondary Organic Aerosol during Severe Haze Episodes in January 2013 in Beijing, China.** CAIQING YAN, Mei Zheng, Xiaoying Li, Huaiyu Fu, Xiang Ding, Quanfu He, Xinming Wang, *Peking University*
- 12:15
- 8CA.8 Evaluation of Black Carbon and Carbon Monoxide Levels at Low Traffic Sites in Tijuana-Tecate, Mexico Air Basin.** Jesus Guerrero-García, Guillermo Rodríguez-Ventura, JAVIER EMMANUEL CASTILLO-QUIÑONES, Lilia Hurtado, Penelope Quintana, Miguel Zavala, Luisa Molina, *Universidad Autónoma de Baja California*
- 12:15
- 8CA.9 Global Modeling of SOA: The Use of Different Mechanisms for Aqueous Phase Formation.** GUANGXING LIN, Joyce Penner, Sanford Sillman, Akinori Ito, *University of Michigan*
- 12:15
- 8CA.10 Mass and Energy-Based Emission Factors and Gas-Particle Partitioning of Intermediate-Volatility and Semi-Volatile Organic Compounds from Laboratory Combustion of Boreal and Sub-Tropical Peat.** LAXMI NARASIMHA YATAVELLI, L.-W. Antony Chen, Joseph Knue, Vera Samburova, Madhu Gyawali, Adam Watts, Rajan K. Chakrabarty, Hans Moosmuller, Xiaoliang Wang, Barbara Zielinska, Judith Chow, John Watson, Anna Tsibart, *Desert Research Institute, Reno*
- 12:15

- 8CA.11 Molecular Characterization of Optically Active Organo-Nitrogen Species in Organic Aerosol.** CHRIS STANGL, 12:15 Murray Johnston, *University of Delaware*
- 8CA.12 Absorption Enhancement of Monodisperse Cook Stove Soot Coated with alpha-Pinene SOA: Measurements and Modeling.** Georges Saliba, Adam Ahern, Rawad Saleh, James Liacos, Eric Lipsky, Ryan Sullivan, Allen Robinson, R. SUBRAMANIAN, *Carnegie Mellon University*
- 8CA.13 Emissions from Burning Incense and Dung: Two Unregulated Sources of Brown Carbon in Asia.** LAXMI 12:15 NARASIMHA YATAVELLI, Rajan K. Chakrabarty, Joseph Knue, Madhu Gyawali, Guenter Engling, Hans Moosmuller, David Rhode, L.-W. Antony Chen, Xiaoliang Wang, Judith Chow, John Watson, *Desert Research Institute, Reno*
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8CO COMBUSTION

PANZACOLA F/G

Matti Maricq, chair

- 8CO.1 Measured and Modeled Biodiesel Exhaust from Diesel Vehicles: A MOVES2010b Evaluation.** JIM DUNSHEE, 12:15 Britt Holmén, *University of Vermont*
- 8CO.2 Emissions of IVOC and SVOC from Mobile Sources Using Online Electron Impact Mass Spectrometry.** 12:15 JONATHAN FRANKLIN, Eben Cross, Jesse Kroll, *Massachusetts Institute of Technology*
- 8CO.3 Influence of Jet Fuel Composition on Aircraft Engine Emissions: A Synthesis of Aerosol Emissions Data from the NASA APEX, AAFEX, and ACCESS Missions.** RICHARD MOORE, Michael Shook, Andreas Beyersdorf, Chelsea Corr, Scott Herndon, Berk Knighton, Richard Miake-Lye, Kenneth Thornhill, Edward Winstead, Zhenhong Yu, Luke Ziemba, Bruce Anderson, *NASA*
- 8CO.4 Predicting Particle Number Emissions from Hybrid-Electric Vehicle Engine Restart Events.** KAREN SENTOFF, 12:15 Britt Holmén, Matt Conger, *University of Vermont*
- 8CO.5 Physicochemical Assessment of Exhaust Emissions from a Light-duty Gasoline Direct Injection Engine Operated with Conventional and Ethanol-blended Fuels.** NAOMI ZIMMERMAN, Manuel Ramos, Cheol-Heon Jeong, Krystal J. Godri-Pollitt, James S. Wallace, Greg J. Evans, *SOCAAR, University of Toronto*
- 8CO.6 Physical and Chemical Characterization of Fine Particles from Biomass Burning Process (Woods and Rice Straw).** HEE-JOO CHO, Shila Maskey, Arom Seo, Kihong Park, *GIST*
- 8CO.7 Light-Duty Diesel Biodiesel Particle Number Emissions Relative to Blend Ratio and Engine Conditions.** TYLER 12:15 FERALIO, Britt Holmén, *University of Vermont*
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8EP AEROSOL SOURCES FROM EMERGING ENERGY TECHNOLOGIES AND PRODUCTION

PANZACOLA F/G

Akua Asa-Awuku, chair

- 8EP.1 Development of New PM Test Protocol and Characterization of PM Formation and Growth from Natural Gas Turbines.** NICHOLAS GYSEL, William A. Welch, Chia-Li Chen, J. Wayne Miller, David R. Cocker III, *University of California Riverside*
- 8EP.2 Particle Number and Composition Differences From Conventional and Emerging Vehicle Technology on Varying Aromatic and High Octane Fuels.** DANIEL SHORT, Diep Vu, Tyler Berte, Georgios Karavalakis, Thomas D. Durbin, Akua Asa-Awuku, *University of California, Riverside*
- 8EP.3 The Impact of Radioactive Charging on the Microphysical Evolution and Transport of Radioactive Aerosols.** 12:15 PETROS VASILAKOS, Yong-Ha Kim, Sotira Yiacomou, Costas Tsouris, Jeffrey Pierce, Athanasios Nenes, *Georgia Institute of Technology*
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8IM INSTRUMENTATION AND METHODS

Igor Paprotny and Brent Williams, chairs

- 8IM.1** 12:15 **Evaluating Elemental and Organic Carbon composition of Size-Segregated Combustion Particles Using the Electrical Low Pressure Impactor.** PATRICIA FRITZ, Shida Tang, David Guerrieri, Brian P. Frank, Marilyn Wurth, Daniel Hershey, *New York State Dept. of Environmental Conservation*
- 8IM.2** 12:15 **Design of a Novel Open-path Aerosol Extinction Cavity Ringdown Spectrometer and Initial Data from Deployment at NOAA's Atmospheric Observatory.** TIMOTHY GORDON, Nick Wagner, Mathews Richardson, Daniel Law, Daniel Wolfe, Charles Brock, Frank Erdesz, Daniel Murphy, *NOAA*
- 8IM.3** 12:15 **Advances in Speciating Highly Oxygenated Organic Aerosol Using In-situ Thermal Desorption Semi-volatile Aerosol Gas Chromatography (SV-TAG) with On-line Derivatization.** Gabriel Isaacman, NATHAN KREISBERG, Lindsay Yee, David Worton, Rebecca Wernis, Susanne Hering, Allen H. Goldstein, *University of California, Berkeley*
- 8IM.4** 12:15 **Inversion of Multi-channel Light Scattering Data for Particle Size Distribution Measurements.** MARK KANAPARTHI, Ishara Jayasuriya, Suresh Dhaniyala, *Clarkson University*
- 8IM.5** 12:15 **Real-time and On-line Screening Method for Outgassing-materials Using Soft X-ray.** CHANG HYUK KIM, Young Tae Sul, David Y. H. Pui, *University of Minnesota*
- 8IM.6** 12:15 **Evaluation of Nano-sized Silica Size Standards.** SHIGERU KIMOTO, William Dick, David Y. H. Pui, Daryl Roberts, *University of Minnesota*
- 8IM.7** 12:15 **Design and Operational Optimisation of Pneumatic Sampler for Resuspension Chamber.** MIROSLAV KLÁN, Jan Hovorka, Martin Civiš, *Charles University in Prague*
- 8IM.8** 12:15 **Online Particle Separation and Shape Measurement Using Pulsed-Field DMA.** MINGDONG LI, George Mulholland, Michael Zachariah, *University of Maryland*
- 8IM.9** 12:15 **Characterization of an Humidified Tandem DMA System: Size and Humidity Dependent Efficiencies and Dispersion.** XERXES LOPEZ-YGLESIAS, Ming Chee Yeung, Fred Brechtel, Chak K. Chan, *Brechtel Manufacturing Inc.*
- 8IM.10** 12:15 **Development of a High Throughput Wind Tunnel Evaluation Method for Ultra-Coarse Inlet Testing.** QUENTIN MALLOY, Andrew Dart, Jonathan Thornburg, Carlton Witherspoon, Zora Drake-Richmon, Jonathan Krug, Robert Vanderpool, *RTI International*
- 8IM.11** 12:15 **Evaluation of Granular Bed with Glass Beads for Use in a Nanoparticle Respiratory Deposition (NRD) Sampler.** JAE HONG PARK, Levi Mines, Imali Mudunkotuwa, T. Renee Anthony, Vicki Grassian, Thomas Peters, *University of Iowa*
- 8IM.12** 12:15 **Development Of An Online Measurement For Soluble And Total Cu In PM2.5.** DONGBIN WANG, Martin Shafer, James Schauer, Constantinos Sioutas, *University of Southern California*
- 8IM.13** 12:15 **Charge Distributions of Arbitrary Shaped Particles Charged by the Unipolar Diffusion Charger in the EAD and NSAM.** DREW THOMPSON, David Y. H. Pui, *University of Minnesota*
- 8IM.14** 12:15 **Generation of Monodisperse Aerosols by Aerodynamic Flow Focusing.** HONGXU DUAN, Amir Naqwi, Francisco Romay, Benjamin Liu, *MSP Corporation*
- 8IM.15** 12:15 **Particle Losses with a Large Diameter Nafion Air Sample Dryer.** Alfred Wiedensohler, EUGENE BOHENSKY, Paul Smith, Craig Sunada, *Perma Pure LLC*
- 8IM.17** 12:15 **A Nanoparticle Nebulizer for Generation of Aerosolized Colloid Particles with Reduced Interference from Non-Volatile Residue.** DEREK OBERREIT, Gary Van Schooneveld, David Blackford, *Fluid Measurement Technologies, Inc.*
- 8IM.18** 12:15 **Measuring Aerosol Scattering and Absorption - Limitations of the Extinction-Minus-Scattering Method.** SUJEETA SINGH, Damon Smith, Marc Fiddler, Solomon Bililign, *North Carolina A&T State University*
- 8IM.19** 12:15 **Development and Evaluation of Real-time Nano-particle Counter.** KANG-HO AHN, Hong-Ku Lee, *Hanyang University, R. of Korea*

David Cocker, chair

- 8NM.1 3D Label-Free Prostate Specific Antigen Immunosensor Based on Graphene-Gold Nanocomposites.** HEE DONG JANG, Sun Kyung Kim, Hankwon Chang, *Korea Institute of Geoscience and Mineral Resources*
- 8NM.4 Modelling of Fluid-Dynamic Transport of Growing Nanoparticles with a Turbulent-Like Plasma Jet.** MASAYA SHIGETA, *Osaka University*
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8PH LINKING AEROSOLS WITH PUBLIC HEALTH IN A CHANGING WORLD

R. Weber and V. Verma, chairs

- 8PH.1 Vibrational Spectra of Individual Dust Particles Obtained from the International Space Station and New York 9/11 Disaster.** ANTRIKSH LUTHRA, Aruna Ravi, James Coe, *The Ohio State University*
- 8PH.2 Development of a Microfluidic Instrument for the Real-time Measurement of Aerosol Oxidative Potential Using DTT (Dithiothreitol) Assay.** TING FANG, Vishal Verma, Rodney Weber, *Georgia Institute of Technology*
- 8PH.3 Distribution of Ambient Atmospheric Water-soluble Metals in the Southeastern United States and Insights into Their Complexation States.** TING FANG, Vishal Verma, Richard E. Peltier, Hongyu Guo, Laura King, Rodney Weber, *Georgia Institute of Technology*
- 8PH.4 Spatial and Seasonal Variation in the Molecular Composition of the Humic-Like-Substances (HULIS) Fraction of Ambient Aerosols: Clue for the Sources of Aerosol Oxidative Potential.** YING WANG, Vishal Verma, Ting Fang, Rodney Weber, *Georgia Institute of Technology*
- 8PH.5 Estimating the Public Health Impacts of Ultrafine Particulate Matter in the San Francisco Bay Area.** CUONG TRAN, Saffet Tanrikulu, David Fairley, Su-tzai Soong, Yiqin Jia, Jeffery Matsuoka, Eric Stevenson, Henry Hilken, *Bay Area Air Quality Management District*
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8RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS

Lynn Russell, chair

- 8RA.1 Characterization of Arctic Aerosol Particles during the Arctic Ocean Expedition in 2013.** GIBA EK KIM, Young Jun Yoon, Hee-joo Cho, Kihong Park, *Gwangju Institute of Science and Technology*
- 8RA.2 The Characteristics of Long-range Transboundary Inorganic Secondary Aerosols in Northeast Asia.** YOO JUNG KIM, Gregory Carmichael, Jung-Hun Woo, Zhang Qiang, Young Sunwoo, Young-il Ma, *University of Iowa*
- 8RA.3 Frost Flower Aerosol Effects on Arctic Wintertime Longwave Cloud Radiative Forcing.** Li Xu, LYNN RUSSELL, Richard Somerville, Patricia Quinn, *Scripps Institution of Oceanography*
- 8RA.4 Source Attribution of Aerosol Size Distributions and Model Evaluation Using Whistler Mountain Measurements and GEOS-Chem-TOMAS Simulations.** STEPHEN D'ANDREA, Jessica Ng, Michael Wheeler, Annie-Marie Macdonald, Richard Leaitch, Jeffrey Pierce, John Kodros, *Colorado State University*
- 8RA.5 Individual Particle Chemistry during the Summer in Remote Northern Michigan.** MATTHEW GUNSCH, Nathaniel May, Daniel Gardner, Stephanie Schmit, Andrew Ault, Kerri Pratt, *University of Michigan*
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8SA SOURCE APPORTIONMENT

Paul Solomon, chair

- 8SA.1 Elemental and Individual Particle Analysis of Atmospheric Aerosols from New Delhi, India.** HONGRU SHEN, 12:15 Thomas Peters, Gary Casuccio, Naresh Kumar, Andrew Ault, *University of Michigan*
- 8SA.2 Investigation of Sources of Particulate Matter through Trace Metal Measurements Near the Oil Sands Field in the Athabasca Region, Alberta.** CATHERINE PHILLIPS-SMITH, Cheol-Heon Jeong, Robert Healy, Ewa Dabek-Zlotorzynska, Valbona Celo, Jeff Brook, Greg J. Evans, *SOCAAR, University of Toronto*
- 8SA.4 Relating Stack Height to Regional Pollutant Exposures.** KRISTINA WAGSTROM, Fatema Parvez, *University of Connecticut* 12:15
- 8SA.6 Seasonal Variations and Regional Sources of Ultrafine Particulate Matter at a Semi-Rural Site on the Olympic Peninsula.** LAUREN WHYBREW, Cassandra Gaston, Felipe Lopez-Hilfiker, Odelle Hadley, Honglian Gao, Fran McNair, Dan Jaffe, Joel A. Thornton, *University of Washington, Seattle, WA* 12:15
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8UA URBAN AEROSOLS

PANZACOLA F/G

Tran B. Nguyen and Paul A. Solomon, chairs

- 8UA.1 Impact of Land Use on Atmospheric Quasi-Ultrafine Particles in Houston TX.** INKYU HAN, Yuncan Guo, Masoud Afshar, *University of Texas School of Public Health* 12:15
- 8UA.2 Contribution of Tailpipe Emissions of Gas Phase Precursors to Secondary Aerosol Formation.** BEHDAD YAZDANI BOROUJENI, Chance Spencer, Don Collins, *Texas A&M University* 12:15
- 8UA.3 Elucidating Emission Sources and Atmospheric Processes of Aerosols in Fresno, CA: Results from 2013 Winter NASA DISCOVER-AQ Study.** CAROLINE PARWORTH, Hwajin Kim, Shan Zhou, Sonya Collier, Xiaolu Zhang, Christopher Cappa, Qi Zhang, *University of California, Davis* 12:15
- 8UA.4 Monitoring Stations to Assess Near-Road Air Pollution.** NATHAN HILKER, Cheol-Heon Jeong, Jon M Wang, Naomi Zimmerman, Robert Healy, Kelly Sabaliauskas, Greg J. Evans, Tony Munoz, Al Melanson, Andrew Warner, Michael Noble, Jerzy Debosz, Yushan Su, Dennis Herod, Celine Audette, Luc White, Daniel Wang, Dave Henderson, *SOCAAR, University of Toronto* 12:15
- 8UA.5 Vertical and Horizontal Aerosol Profiling Over Residential Areas.** VERONIKA DOCEKALOVA, Jan Hovorka, Filip Kobrzek, Petr Marecek, *Charles University in Prague* 12:15
- 8UA.6 Long-term Trends in Criteria Pollutant Concentrations within the South Coast Air Basin of California.** SCOTT A. EPSTEIN, Kalam Cheung, Sang-Mi Lee, *South Coast Air Quality Management District* 12:15
- 8UA.7 Modeling the Spatial Variability of Traffic Related Pollutants and the Contribution of High Emitting Vehicles in Pittsburgh, PA.** YI TAN, Timothy Dallmann, Allen Robinson, Albert A. Presto, *Carnegie Mellon University* 12:15
- 8UA.8 High-spatial Resolution Profiling of Aerosol Size Distribution Aloft a Highway.** VERONIKA DOCEKALOVA, Jan Hovorka, Filip Kobrzek, Petr Marecek, Jan Bendl, *Charles University in Prague* 12:15

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

9AC AEROSOL CHEMISTRY

SEBASTIAN I 4

Chris Hennigan and Cari Dutcher, chairs

- 9AC.1 Vapor Wall Loss of Semi-Volatile Organic Compound in Smog Chamber.** PENGLIN YE, Xiang Ding, Ellis Shipley 1:45 Robinson, Neil Donahue, *Carnegie Mellon University*

- 9AC.2 Parameterizing Vapor Wall Loss Rate in a Teflon Chamber.** XUAN ZHANG, Rebecca Schwantes, Hanna Lignell, 2:00 Matthew Coggon, Richard Flagan, John Seinfeld, *Caltech*
- 9AC.3 Main Parameters Controlling Equilibration Time Scales of Atmospheric Semi-Volatile Aerosols.** ANDREY 2:15 KHLYSTOV, *Desert Research Institute*
- 9AC.4 A Critical Evaluation of Proxy Methods used to Estimate the Acidity of Atmospheric Particles.** CHRISTOPHER 2:30 HENNIGAN, Jessica Izumi, *University of Maryland, Baltimore County*
- 9AC.5 Probing Aerosol Particle Interfaces with Biphasic Microfluidics.** CARI DUTCHER, Andrew Metcalf, *University of Minnesota, Twin Cities*

9BA BIOAEROSOLS AND HOMELAND SECURITY

SEBASTIAN I 3

Jordan Peccia and Gedi Mainellis, chairs

- 9BA.1 Effect of Sampling Flow Rates on Virus Collection Efficiencies of a BioSampler vs. an All-Glass Impinger.** 1:45 John Lednicky, Julia Loeb, Kevin Fennelly, Diandra Anwar, Sewon Oh, CHANG-YU WU, *University of Florida*
- 9BA.2 Application of ATP-based Bioluminescence for Bioaerosol Quantification: Effect of Sampling Method.** TAEWON 2:00 HAN, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 9BA.3 Characterization of Gelatin Filters for Sampling Bacillus Anthracis.** KRISTIN BOWER, John Yeager, Paul Dabisch, 2:15 NBACC
- 9BA.4 Effect of Bioaerosol Sampling Stress on 16S rRNA/rRNA-gene Ratio of Airborne Bacteria.** HUAJUN ZHEN, 2:30 Valdis Kruminis, Donna Fennell, Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 9BA.5 Genomic RNA as a Physical Tracer in Filovirus Aerosol Studies.** TAMIKA KNIGHT, Michael Schuit, Shanna 2:45 Ratnesar-Shumate, Paul Dabisch, NBACC

9IM INSTRUMENTATION AND METHODS

PANZACOLA H 1-3

Susanne Herring and Suresh Dhaniyala, chairs

- 9IM.1 Determining the Absolute Concentration of Proteins Using ES-DMA.** MINGDONG LI, Jiaojie Tan, Michael Tarlov, 1:45 Michael Zachariah, *University of Maryland*
- 9IM.2 Bio-nanoparticles as Candidate Reference Materials for Mobility Analysis of Nanoparticles.** RIAN YOU, 2:00 Mingdong Li, Suvajyoti Guha, George Mulholland, Michael Zachariah, *University of Maryland*
- 9IM.3 A New Paradigm for Size Distribution Measurements Relevant to Aerosol Health Studies.** AMANDA GRANTZ, 2:15 Johannes Leppä, Richard Flagan, *California Institute of Technology*
- 9IM.4 Concentrated Particle Collection in to Liquid for Toxicological Studies.** GREGORY LEWIS, Steven Spielman, 2:30 Arantzazu Eiguren Fernandez, Susanne Herring, *Aerosol Dynamics Inc.*
- 9IM.5 A New Instrument for Direct Cellular Exposure to Ambient Aerosols.** ARANTZAZU EIGUREN FERNANDEZ, Ning Li, 2:45 Steven Spielman, Susanne Herring, *Aerosol Dynamics Inc.*

9NP ADVANCES IN THE PHYSICS AND CHEMISTRY OF NEW PARTICLE FORMATION AND GROWTH

PANZACOLA H4

Jeff Pierce and Taina Yli-Juuti, chairs

- 9NP.1 Atmospheric Nanoparticle Growth: From Nano- to Global Scale.** ILONA RIIPINEN, Jan Julin, Taina Yli-Juuti, Silja 1:45 Häkkinen, Lars Ahlm, Juan-Camillo Acosta Navarro, Ivica Crljenica, Katrianne Lehtipalo, Stephen D'Andrea, Jeffrey

Pierce, *Stockholm University*

- 9NP.3 The Contribution of Sub-Grid, Plume-Scale Nucleation to Global CCN Concentrations.** ROBIN STEVENS, Jeffrey Pierce, *Dalhousie University*
2:15
- 9NP.4 Difference in Particle Formation at a Mountain-top Location in Colorado during the Spring and Summer: Modeling and Comparison with Observations.** FANGQUN YU, Anna Gannet Hallar, *University at Albany*
2:30
- 9NP.5 Simulation of Nucleation in the Global Atmosphere Based on CERN CLOUD Chamber Measurements.** KEN CARSLAW, Eimear Dunne, Andreas Kuerten, Francesco Riccobono, Kamalika Sengupta, Catherine Scott, Joao Almeida, *University of Leeds*
2:45

9PH LINKING AEROSOLS WITH PUBLIC HEALTH IN A CHANGING WORLD

SEBASTIAN I 2

V. Verma and Jason Surratt, chairs

- 9PH.1 The Effects of Atmospheric Oxidation on the Levels of Aerosol Reactive Oxygen Species.** JONATHAN ABBATT, *University of Toronto*
1:45
- 9PH.3 In Vitro Exposures to Isoprene-Derived Secondary Organic Aerosol: Assessing the Effects of Cytotoxicity and Inflammation on BEAS-2B using Resuspension and Direct Deposition Approaches.** MAIKO ARASHIRO, Ying-Hsuan Lin, Kenneth Sexton, Ilona Jaspers, Rebecca Fry, Avram Gold, Jason Surratt, *University of North Carolina at Chapel Hill*
2:15
- 9PH.4 Application of Aerosol Mass Spectrometry to infer the Sources of the Reactive Oxygen Species Generating Properties of Organic Aerosols in the Southeastern United States.** VISHAL VERMA, Ting Fang, Lu Xu, Nga Lee Ng, Rodney Weber, *Georgia Institute of Technology*
2:30
- 9PH.5 Formation and Transformation of Hazardous Components in the Atmosphere: Reactive Oxygen Species, Polycyclic Aromatic Compounds and Allergenic Proteins.** MANABU SHIRAIWA, Andrea Arangio, Kathrin Selzle, Christopher Kampf, Ulrich Poeschl, *MPIC*
2:45

9UA URBAN AEROSOLS

SEBASTIAN I 1

Kristina Wagstrom and Ashish Singh, chairs

- 9UA.1 Impacts of Complete Street Retrofit on On-road Fine and Ultrafine Particles Concentrations: A Case Study in Santa Monica, California.** Shi Shu, Nu Yu, YIFANG ZHU, *UCLA*
1:45
- 9UA.2 Airborne Metal Concentrations during and After Pollution Restrictions in Beijing.** NITIKA DEWAN, Brian Majestic, YuanXun Zhang, *University of Denver*
2:00
- 9UA.3 Predicting the Effectiveness of Vegetation Barriers on Near-Road PM.** JONATHAN STEFFENS, K. Max Zhang, *Cornell University*
2:15
- 9UA.4 Contamination of Urban Stormwater Runoff in Syracuse, NY by Previously Deposited Atmospheric Aerosol.** CLIFF DAVIDSON, Emily Procopio, Jeremy Tamargo, *Syracuse University*
2:30
- 9UA.5 Spatial Distribution of and Correlation between Noise And Particulate Matter near Two Freeways in Los Angeles, California.** SHI SHU, Yang Pu, Yifang Zhu, *UCLA*
2:45

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

Thursday 3:30 PM - 5:00 PM
Session 10: Platform

10BA BIOAEROSOLS AND HOMELAND SECURITY

SEBASTIAN I 3

Alex Huffman and Anne Pering, chairs

- 10BA.1 Contribution of Bioaerosols to PM10 and PM2.5 in the Southeastern United States.** TRACI LERSCH, Gary Casuccio, Stephanie Shaw, Annette Rohr, *RJ Lee Group, Inc.*
3:30
- 10BA.2 On the Use of Organic Molecular Markers for the Apportionment of Aerosols - Insight from PMF Analysis at 3 French Urban Sites.** ANTOINE WAKED, Olivier Favez, Jean-Luc Jaffrezo, Jean-Luc Besombes, Benjamin Golly, Laurent Alleman, Tiphaine Delaunay, Géraldine Guillaud, Pierre-Yves Guernion, Eva Léoz-Garziandia, *Univ. Grenoble Alpes, CNRS, LGGE, F-38000 Grenoble, France*
3:45
- 10BA.3 Species Variations in Airborne Bacterial Communities in Asian Dust Downwind Area during a Dust Event.** TERUYA MAKI, Fumihisa Kobayashi, Kazunori Hara, Chen Bin, Yasunobu Iwasaka, *Kanazawa University*
4:00
- 10BA.4 Hunting Sources of Biogenic Ice Nucleating Particles in Soils, Sea Spray and Air.** PAUL DEMOTT, Thomas Hill, Yukata Tobo, Christina S. McCluskey, Ezra Levin, Kaitlyn Suski, Douglas Collins, Gavin Cornwell, Christopher Lee, Camille Sultana, Jessica Axson, Francesca Malfatti, Kimberly Prather, Sonia Kreidenweis, Tinkara Tinta, *Colorado State University*
4:15
- 10BA.5 Hydrophilicity and CCN Activity of Atmospheric Bacteria Isolates and Implications for Cloud Formation.** NATASHA DELEON-RODRIGUEZ, Aikaterini Bougiatioti, Nimmy Mathew, Arnaldo Negron-Marty, Michael Bergin, Konstantinos Konstantinidis, Athanasios Nenes, *Georgia Institute of Technology*
4:30
- 10BA.6 Emission Rates of Biological Aerosol Particles in a Montane Pine Forest.** STEPHAN NORDMANN, Hang Su, J. Alex Huffman, Ulrich Poeschl, Yafang Cheng, *MPIC*
4:45
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10BB BIOMASS BURNING AEROSOL: FROM EMISSIONS TO IMPACTS

SEBASTIAN I 2

Eben Cross and Matthew Alvarado, chairs

- 10BB.1 Impact of the Economic Crisis on Wintertime Air Quality in Thessaloniki, Greece.** ARIAN SAFFARI, Nancy Daher, Constantini Samara, Dimitra Voutsas, Athanasios Kouras, Evangelia Manoli, Olga Karagkiozidou, Christos Vlachokostas, Nicolas Moussiopoulos, Martin Shafer, James Schauer, Constantinos Sioutas, *University of Southern California*
3:30
- 10BB.2 2013 Southeast Asian Smoke Haze: Speciation of Size-resolved Aerosols and Associated Health Impacts.** RAJASEKHAR BALASUBRAMANIAN, Raghu Betha, Sailesh Behera, *National University of Singapore*
3:45
- 10BB.3 Characterizing Cookstove Emissions in South Asia.** RYAN THOMPSON, Cheryl Weyant, Tami Bond, *University of Illinois at Urbana-Champaign*
4:00
- 10BB.4 Chemical and Physical Characterization of Particulate Emissions from Different Phases of an Improved Cookstove Operation.** Raul Martinez, SAMEER PATEL, Anna Leavey, Dhruv Mitroo, Ruijie Yu, Brent Williams, Pratim Biswas, *Washington University in St. Louis*
4:15
- 10BB.5 Online Characterization of Biomass-derived Cooking Fuel Emissions with a Soot Particle Aerosol Mass Spectrometer.** EBEN CROSS, Dan Sweeney, Amy Banzaert, Amy Smith, Timothy Onasch, John Jayne, Douglas Worsnop, Jesse Kroll, *MIT*
4:30
- 10BB.6 Evolution of the Aerosol Size Distribution and Cloud Condensation Nuclei (CCN) Within Smoke Plumes during the Biomass Burning Observation Project (BBOP).** JASON TOMLINSON, Fan Mei, Jian Wang, Jennifer Comstock, John Hubbe, Mikhail Pekour, John Shilling, Edward Fortner, Duli Chand, Arthur J. Sedlacek, Lawrence Kleinman, Gunnar Senum, Beat Schmid, *Pacific Northwest National Laboratory*
4:45
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10CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE

Sean McGivern and Stephanie Shaw, chairs

- 10CA.1 Wavelength Dependence of the Optical Properties of Primary Combustion Aerosols.** Luka Drinovec, GRISA MOCNIK, Ian Arnold, Rajan K. Chakrabarty, Anthony D.A. Hansen, Hans Moosmuller, *Desert Research Institute*
3:30
- 10CA.2 Determining Aerosol Volatility Parameters using a 'Dual Thermodenuder' System: Application to Laboratory-generated Organic Aerosol.** PROVAT SAHA, Andrey Khlystov, Andrew Grieshop, *North Carolina State University*
3:45
- 10CA.3 Quantitative Evidence of Ultraviolet Organic Peroxy Radical Photochemistry in a Photochemical Flow Cell.** W. SEAN MCGIVERN, Joseph Klems, *National Institute of Standards and Technology*
4:00
- 10CA.4 Application of Positive Matrix Factor Analysis in Heterogeneous Kinetics Studies: OH Initiated Oxidation of Organophosphate Flame Retardants in PM.** JOHN LIGGIO, Yongchun Liu, Shao-Meng Li, *Environment Canada*
4:15
- 10CA.5 Relative Importance of Black vs. Brown Carbon Absorption in Biomass Burning Plumes.** SHANE MURPHY, Rudra Pokhrel, Eric Beamesderfer, Daniel Lack, Nick Wagner, Justin Langridge, Daniel Murphy, *University of Wyoming*
4:30
- 10CA.6 Comparison of Near-Roadway PAH Measurements via Multiple Methods.** STEVEN BROWN, David Olson, Taehyoung Lee, Paul Roberts, Gary Norris, Jeffrey Collett, *Sonoma Technology, Inc*
4:45
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10CO COMBUSTION

SEBASTIAN I 4

Albert Presto and Fred Gelbard, chairs

- 10CO.1 Temperature Effects on Secondary Organic Aerosol Formation from Gasoline Vehicle Exhaust.** MARY KACARAB, David R. Cocker III, *University of California, Riverside*
3:30
- 10CO.2 On the Black Carbon Content of Soot from Flames and Engine Exhaust.** MATTI MARICQ, *Ford Motor Company*
3:45
- 10CO.3 Determination of Suspended Exhaust PM Mass for Light Duty Vehicles Using IPSP Method.** HEEJUNG S. JUNG, Yang Li, Jian Xue, Kent Johnson, Thomas D. Durbin, Mark Villela, Liem Pham, Seyedehsan Hosseini, Zhongqing Zheng, Daniel Short, Georgios Karavalakis, Akua Asa-Awuku, Xiaoliang Wang, David Quiros, Shaohua Hu, Tao Huai, Alberto Ayala, *University of California Riverside*
4:00
- 10CO.4 Detailed Characterization of Particulate Matter (PM) Emitted by Lean-Burn Gasoline Direct Injection (GDI) Engine.** JACQUELINE WILSON, Alla Zelenyuk, Mark Stewart, George Muntean, John Storey, Vitaly Prikhodko, Samuel Lewis, Mary Eibl, *Pacific Northwest National Laboratory*
4:15
- 10CO.5 Morphology of Particles Emitted during Cold Start and Hot Start Operating Conditions of a GDI Engine Fuelled on Gasoline and Ethanol Blends.** RAMIN DASTANPOUR, Steven Rogak, Phillip Mireault, Manuel Ramos, James S. Wallace, *University of British Columbia*
4:30
- 10CO.6 Effect of Drive Cycle and Gasoline Particulate Filter on Size and Morphology of Soot Particles Produced by a Gasoline Direct Injection Vehicle.** MEGHDAD SAFFARIPOUR, Fengshan Liu, Kevin Thomson, Tak Chan, Joseph Kubsh, Brezny Rasto, *National Research Council Canada*
4:45
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10IM INSTRUMENTATION AND METHODS

PANZACOLA H 1-3

Jian Wang and Nathan Kreisberg, chairs

- 10IM.1 A Novel Glass Chamber for Studies of Aerosol Dynamics and Interactions.** YEVGEN NAZARENKO, Parisa A. Ariya, *McGill University*
3:30

- 10IM.2 Characterization of the Photochemistry in a Potential Aerosol Mass (PAM) Chamber by Modeling and Measurements: Radical Formation, OH Exposure Quantification and Calibration Equation Derivation.** RUI LI, Joost de Gouw, William Brune, Brett Palm, Amber Ortega, Weiwei Hu, Douglas Day, Jose-Luis Jimenez, *NOAA & CIRES & University of Colorado-Boulder*
3:45
- 10IM.3 Real-Time Separation and Detailed Characterization of Aspherical Nanoparticles.** ALLA ZELENYUK, David Bell, Jacqueline Wilson, Dan Imre, *Pacific Northwest National Laboratory*
4:00
- 10IM.4 Development of Triggering-LIBS for Elemental Analysis of Submicrometer Single Particle in Real Time.** Heesung Lee, GIBAEK KIM, Jihyun Kwak, Kihong Park, *GIST*
4:15
- 10IM.5 Recent Applications of Single Particle Aerosol Mass Spectrometry (SPAMS).** DAVID FERGENSON, Anna Susz, David Kohler, Jia-Yih Feng, Jordon Rose, Maria Balaxi, Bradley D. Morrical, Payam Nahid, Midori Kato-Maeda, Adithya Cattamanchi, *Livermore Instruments Inc.*
4:30
- 10IM.6 PAHs Emissions in Diesel and Biodiesel Using LVI-PTV-GC-MS.** CAROLINA SOUZA, Sergio Correa, *Rio de Janeiro State University*
4:45

10SA SOURCE APPORTIONMENT

SEBASTIAN I 1

Nga Lee (Sally) Ng and Shunsuke Nakao, chairs

- 10SA.1 Indoor PM_{2.5} in Santiago, Chile, Spring 2012: Source Apportionment and Outdoor Contributions.** LUPITA MONTOYA, Francisco Barraza, Hector Jorquera, Gonzalo Valdivia, *University of Colorado Boulder*
3:30
- 10SA.2 Characterization of Aral Sea Particulate Matter in Kyrgyzstan.** NITIKA DEWAN, Brian Majestic, Martin Shafer, James Schauer, Paul A. Solomon, *University of Denver*
3:45
- 10SA.3 Estimating the Impact of Air Pollution Controls on Ambient Concentrations.** LUCAS HENNEMAN, David Lavoue, Heather Holmes, James Mulholland, Armistead Russell, *Georgia Institute of Technology*
4:00
- 10SA.4 Receptor Modeling of Near-Real-Time, Ambient PM_{2.5} and Its Constituents Collected at an Urban-Industrial Site in Toronto, Ontario.** UWAYEMI SOFOWOTE, Ankit Rastogi, Jerzy Debosz, Philip Hopke, *AQARU, EMRB, Ontario Ministry of the Environment*
4:15
- 10SA.5 Positive Matrix Factorization Analysis of 47-years of Finnish Arctic Aerosol Composition.** JAMES R. LAING, Philip K. Hopke, Eleanor F. Hopke, Liaquat Husain, Vincent A. Dutkiewicz, Jussi Paatero, Yro Viisinen, *Clarkson University*
4:30
- 10SA.6 Long-term Source Apportionment of Ambient Fine Particulate Matter (PM_{2.5}) in the Los Angeles Basin: A Focus on Emissions Reduction from Vehicular Sources.** SINA HASHEMINASSAB, Nancy Daher, Bart Ostro, Constantinos Sioutas, *University of Southern California*
4:45

Friday

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

- 8:00 **Climate, Biofuel Emissions, and the Quest for Relevance** Tami Bond, *University of Illinois at Urbana-Champaign*
Moderator V.Faye McNeill, *Columbia University*
- 9:00 **Student Poster Competition Award Presentation** Britt Holmén, *University of Vermont*
- 9:10 **Concluding Remarks and Preview for 2015** Athanasios Nenes and Andrea Ferro, 2014 and 2015 Conference Chairs, *Georgia Institute of Technology and Clarkson University*

Friday 9:15 AM - 9:45 AM

Coffee Break

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

11AC AEROSOL CHEMISTRY

PANZACOLA H4

Adam Bateman and Nga Lee (Sally) Ng, chairs

- 11AC.1 The Effect of Particle Morphology on its Evaporation Kinetics and Rates of Heterogeneous Reactions.** ALLA ZELENYUK, Jacqueline Wilson, David Bell, Dan Imre, *Pacific Northwest National Laboratory*
9:45
- 11AC.2 Gas-Particle Partitioning of Organic Aerosols: Defining the Influence of Surface Interactions on Their Volatility.** RICHARD E. COCHRAN, Alena Kubatova, Evguenii I. Kozliak, *University of North Dakota*
10:00
- 11AC.3 Effect of Precursor Molecular Structure on the Volatility, Viscosity and Oligomer Content of SOA Particles Formed by Ozonolysis of Cycloalkenes.** JACQUELINE WILSON, Alla Zelenyuk, Dan Imre, ManishKumar Shrivastava, *Pacific Northwest National Laboratory*
10:15
- 11AC.4 APM Measured Shape Factor Change of α -pinene SOM and Its Dependence on Relative Humidity.** YUE ZHANG, Marianna Santos Sanchez, Claire Douet, Yan Wang, Adam Bateman, Zhaoheng Gong, Mikinori Kuwata, Lindsay Renbaum-Wolff, Pengfei Liu, Bruno Bianchi Sato, Allan Bertram, Franz Geiger, Scot Martin, *Harvard University*
10:30
- 11AC.5 Ultraviolet and Visible Complex Refractive Indices of Brown Carbon Formed via Photooxidation of Aromatic Toluene and m-Xylene.** PENGFEI LIU, Scot Martin, *Harvard University*
10:45
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11BA BIOAEROSOLS AND HOMELAND SECURITY

PANZACOLA H 1-3

Dave Alburty and Joanne Emerson, chairs

- 11BA.1 Study of the Aerosolization Mechanisms of Bacteria in Single Particle Using Fluorescence Spectroscopy.** NICOLAS GROULX, Nathalie Turgeon, Caroline Duchaine, *Université Laval, Canada*
9:45
- 11BA.2 Bacterial and Fungal Ecology in Indoor and Outdoor Air.** JOANNE B. EMERSON, Patricia Keady, Anne Perring, Jonathan Awerbuch, Joshua P. Schwarz, David Fahey, Shelly Miller, Noah Fierer, *University of Colorado Boulder*
10:00
- 11BA.3 Proteomic Analysis of *Sphingomonas aerolata* Incubated in the Airborne State.** Valdis Krumins, Maksim Abadjev, Sjef Boeren, Tomas Kruse, Peter Schaap, Hauke Smidt, Gediminas Mainelis, Lee Kerkhof, DONNA FENNELL, *Rutgers, The State University of New Jersey*
10:15
- 11BA.4 Characterization of Fungal Fragments.** JACOB MENSAH-ATTIPOE, Sampo Saari, Jorma Keskinen, Anniina Salmela, Anna-Maria Veijalainen, Pertti Pasanen, Tiina Reponen, *University of Eastern Finland*
10:30
- 11BA.5 Development of a Laboratory Surrogate for Swine Bioaerosol.** CHRISTINE LOZA, John Horns, Brian Mader, Scott Dee, *3M*
10:45
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11CO COMBUSTION

SEBASTIAN I 4

Matti Maricq and Hossein Ghiassi, chairs

- 11CO.1 Size Distributions and Volatility of Vehicle PM Emissions Measured in a Traffic Tunnel.** ALBERT A. PRESTO, Xiang Li, Timothy Dallmann, *Carnegie Mellon University*
9:45

- 11CO.2 Pyrolysis Smoke Generated Under Low-Gravity Conditions.** GEORGE MULHOLLAND, Marit Meyer, David Urban, Gary Ruff, Zeng-guang Yuan, Victoria Bryg, Thomas Cleary, Jiann Yang, *NASA Glenn Research Center*
10:00
- 11CO.3 Combining Selective Catalytic Reduction (SCR) System with Biodiesel in Mobile Sources: New Issues Arise.** Yara S. Tadano, Guilherme C. Borillo, Thiago O. B. Silva, Fabio B. Valebona, Penteado Neto, Denis Rempel, Lucas Martin, Carlos I. Yamamoto, Sanja Potgieter-Vermaak, Ana Flavia L. Godoi, RICARDO H. M. GODOI, *Federal University of Parana - Curitiba, PR, Brazil*
10:15
- 11CO.4 In-Situ Measurements of Contrail Properties Measured during the 2013-2014 ACCESS Project.** RICHARD MOORE, Bruce Anderson, Edward Winstead, Kenneth Thornhill, Andreas Beyersdorf, Charles Hudgins, Robert Martin, Michael Shook, Luke Ziemba, ACCESS Science Team, *NASA*
10:30
- 11CO.5 The Use of Diesel, Biodiesel Combined and Selective Catalytic Reduction (SCR) After-Treatment System on Particulate Matter Emissions: A Dynamometer Test Bench.** GUILLHERME C. BORILLO, Thiago O. B. Silva, Yara S. Tadano, Fabio B. Valebona, Penteado Neto, Denis Rempel, Lucas Martin, Carlos I. Yamamoto, Marcelo Nalin, Jacson Weber de Menezes, Flemming R Cassee, Sanja Potgieter-Vermaak, Ana Flavia L. Godoi, Ricardo H. M. Godoi, *Federal University of Parana - Curitiba, PR, Brazil*
10:45

11IM INSTRUMENTATION AND METHODS

SEBASTIAN I 1

Matthew Berg and Steven Spielman, chairs

- 11IM.1 A New Method to Measure the Extinction Cross Section Using Digital Holography.** MATTHEW BERG, Nava Subedi, *Mississippi State University*
9:45
- 11IM.2 Enhanced Thermal/Optical Characterization of Aerosol Elemental, Molecular, and Optical Properties.** XIAOLIANG WANG, Xufei Yang, Benjamin Sumlin, Gustavo Riggio, Jerome Robles, L.-W. Antony Chen, LaxmiNarasimha Yatavelli, Judith Chow, John Watson, *Desert Research Institute*
10:00
- 11IM.3 Multi-Wavelength Measurements of Soot Optical Properties Using CAPS PMssa and CRD-PAS Instruments.** Sara Forestieri, Andrew Lambe, Molly Cummings, James Brogan, Christopher Cappa, Paul Davidovits, ANDREW FREEDMAN, Timothy Onasch, *Aerodyne Research, Inc.*
10:15
- 11IM.4 Cleanable, High-Flow Aerosol Concentrator.** STEVEN SPIELMAN, Nathan Kreisberg, Susanne Hering, *Aerosol Dynamics Inc.*
10:30
- 11IM.5 Surface Tension Measurement of Secondary Organic Aerosols Using Atomic Force Microscopy.** ANDREW HRITZ, Dabrina Dutcher, Timothy Raymond, *Bucknell University*
10:45

11RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS

SEBASTIAN I 3

Satoshi Takahama and John Liggitto, chairs

- 11RA.1 Atmospheric Monitoring in the Western Mediterranean in Summer 2013: Overview of Physic-chemical Properties and Variability.** JORGE PEY, José Carlos Cerro, Stig Hellebust, H. Langley DeWitt, Brice Temime-Roussel, Miriam Elser, N. Pérez, Alexandre Sylvestre, Dalia Salameh, Grisa Mocnik, Andre Prévôt, Yanlin Zhang, Soenke Szidat, Nicolas Marchand, *Aix-Marseille Université, CNRS, LCE FRE 3416*
9:45
- 11RA.2 A Study on Primary Marine Organic Aerosols and Biological Materials in Seawater.** JI YEON PARK, Min Soo Kang, Wajih Ur Rehman, Dohyung Kim, Kihong Park, *Gwangju Institute of Science and Technology*
10:00
- 11RA.3 Using Ocean Biogeochemistry and Surface Activity to Improve Understanding of Regional Patterns in Sea Spray Chemistry.** SUSANNAH BURROWS, Oluwaseun Ogunro, Amanda Frossard, Lynn Russell, Phil Rasch, Scott Elliott, *Pacific Northwest National Laboratory*
10:15
- 11RA.4 Characterization of the Springtime Arctic Aerosol.** RICHARD LEITCH, Julia Burkart, Andreas Herber, Shao-Meng Li, John Ogren, Sangeeta Sharma, Jonathan Abbatt, *Environment Canada*
10:30

11RA.5 Chemical Characterization of PM_{2.5} for the Year 2013 for 5 Rural Background Sites in France. ANTOINE WAKED, Jean-Luc Jaffrezo, Jean-Luc Besombes, Emmanuelle Drab-Sommesous, Eve Chretien, Pierre-Yves Robic, Sebastien Conil, Géraldine Guillaud, Jérôme Rangognio, Quentin Poinsignon, *Univ. Grenoble Alpes, CNRS, LGGE, F-38000 Grenoble, France*

11SA SOURCE APPORTIONMENT

SEBASTIAN I 2

Amy Sullivan and Lindsay Hatch, chairs

11SA.1 Novel Approach for Estimating Light Duty Gasoline and Heavy Duty Diesel Mobile Source Impacts Based on Mobile Source Emissions and Fused Observation-CMAQ Data. XINXIN ZHAI, Mariel Friberg, Heather Holmes, Yongtao Hu, James Mulholland, Armistead Russell, *Georgia Institute of Technology*

11SA.2 Determination of Local and Remote Sources Areas of PM_{2.5} (10) In Northern France. Aude Pascaud, Esperanza Perdrix, LAURENT ALLEMAN, Stéphane Sauvage, Tiphaine Delaunay, *Mines Douai, SAGE, F-59508 Douai, France*

11SA.3 Influence of Industrial Activities on Concentrations and Chemical Composition of Ambient Aerosol Particles. ALEXANDRE SYLVESTRE, Aurelie Mizzi, Sebastien Mathiot, Boualem Mesbah, Julien Don, Gautier Revenko, Philippe Chamaret, Jean-Luc Jaffrezo, Henri Wortham, Nicolas Marchand, *Aix-Marseille Université, CNRS, LCE FRE 3416*

11SA.4 Source Apportionment of PM₁₀ in a North-Western Europe Regional Urban Background Site (Lens, France): Interest of the Use of Organic Tracers in a Positive Matrix Factorization Methodology. ANTOINE WAKED, Benjamin Golly, Olivier Favez, Laurent Alleman, Christine Piot, Tiphaine Delaunay, Emmanuel Verlinden, Jean-Luc Besombes, Jean-Luc Jaffrezo, Eva Léoz-Garziandia, *Univ. Grenoble Alpes, CNRS, LGGE, F-38000 Grenoble, France*

11SA.5 Comparison of the Sources of Organic Aerosol (OA) Using Aerosol Mass Spectrometry at Two Mediterranean Islands: Corsica and Mallorca. H. LANGLEY DEWITT, Jorge Pey, Stig Hellebust, Brice Temime-Roussel, Aurelie Mizzi, Dalia Salameh, Alexandre Sylvestre, Miriam Elser, N. Pérez, José Carlos Cerro, Jean-Luc Jaffrezo, Grisa Mocnik, Andre Prévôt, Nicolas Marchand, *Aix-Marseille Université, CNRS, LCE FRE 3416*

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

12BA BIOAEROSOLS AND HOMELAND SECURITY

PANZACOLA H 1-3

Matthias Frank and Paul Dabisch, chairs

12BA.1 Exposure of Aerosolized Bacillus Spores to Combustion Products of Novel Reactive Biocidal Materials: Kinetics of Inactivation Process. SERGEY A. GRINSHPUN, Michael Yermakov, Reshmi Indugula, Atin Adhikari, Tiina Reponen, Edward Dreizin, Mirko Schoenitz, *University of Cincinnati*

12BA.2 An Aerosol Dry Deposition System for Quantifying the Retention of Bacillus Spores on HVAC Filters. ANNE MARIE ERLER, Staci Kane, Matthias Frank, George R. Farquar, Lewis Wogan, *Lawrence Livermore National Laboratory*

12BA.3 Resuspension of Spores from Urban Surfaces. JEROME GILBERRY, Jonathan Thornburg, Laurie Brixey, Alfred Eisner, Russell Wiener, Marshall Gray, *RTI International*

12BA.4 Improved Threat Characterization Using Next Generation Sequencing. ZAHRA CHAUDHRY, Peter Thielen, Verratti Kathleen, Christopher Bradburne, *JHU APL*

12BA.5 DHS Biological Hazard Assessment Research: Characterizing Agents to Inform Risk: A Focus on Aerosols. MATTHEW MOE, Lloyd Hough, Scott White, *Department of Homeland Security*

12CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE

PANZACOLA H4

Hans Moosmuller and Andy Freedman, chairs

- 12CA.1 Experimental Studies of Particle Bounce: Comparison of Secondary Organic Material (SOM) from Harvard Environmental Chamber and Field Studies in Amazonia.** ADAM BATEMAN, Pengfei Liu, Yue Zhang, Zhaoheng Gong, Bruno Bianchi Sato, Glauber Cirino, Joel Brito, Rodrigo A. F. Souza, Antonio O. Manzi, Paulo Artaxo, Scot Martin, *Harvard University*
11:15
- 12CA.2 Interpretation of Regression Parameters for Quantification of Organic Aerosol Mass Components with Infrared Transmission Spectra.** SATOSHI TAKAHAMA, Ann Dillner, *Ecole Polytechnique Federale de Lausanne, Switzerland*
11:30
- 12CA.3 Atmospheric Aging of Fullerene Nanoparticles.** DHRUV MITROO, Peter Colletti, Michael Walker, Jiewei Wu, John Fortner, Brent Williams, *Washington University in St. Louis*
11:45
- 12CA.4 Phase Separation Effects on the Optical Properties of Mixed Brown Carbon/Ammonium Sulfate Aerosol.** JAMES RADNEY, Christopher Zangmeister, *National Institute of Standards and Technology*
12:00
- 12CA.5 Soot Aggregate Restructuring due to Coatings of Secondary Organic Aerosol from Aromatic Precursors.** ELIJAH G. SCHNITZLER, Jason S. Olfert, Wolfgang Jaeger, *University of Alberta*
12:15
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12CO COMBUSTION*SEBASTIAN I 4*

Heejung Jung and George Mulholland, chairs

- 12CO.1 Emissions of Intermediate-volatility Organic Compounds from On-road Vehicles.** YUNLIANG ZHAO, Ngoc Nguyen, Albert A. Presto, Andrew May, Christopher Hennigan, Allen Robinson, *Carnegie Mellon University*
11:15
- 12CO.2 An Investigation of Soot Oxidation-Induced Fragmentation in a Two-Stage Burner.** HOSSEIN GHIASSI, Isabel C. Jaramillo, JoAnn S. Lighty, *University of Utah*
11:30
- 12CO.3 Aerosol Measurements in Solid Rocket Propellant Fire Plumes.** FRED GELBARD, Daniel Lucero, Brandon Servantes, Andrew Lennon, Karen Siegrist, Mike Thomas, Adam Willitsford, *Sandia National Laboratories*
11:45
- 12CO.4 Measurements of High Spatial Resolution of Ultrafine and Coarse Aerosol Particles in Industrial Plume.** JAN HOVORKA, Veronika Docekalova, Miroslav Klán, Filip Kozbrzek, Petr Marecek, *Charles University in Prague*
12:00
- 12CO.5 Filtration of Ultrafine Dust Emitted by Biomass Combustion with a Baghouse Filter Using Precoat Materials.** SASCHA SCHILLER, Hans-Joachim Schmid, *University of Paderborn, Germany*
12:15
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12IM INSTRUMENTATION AND METHODS*SEBASTIAN I 1*

Jim Farnsworth and Leah Williams, chairs

- 12IM.1 Design, Testing, and Validation of a Calibration Chamber for Particles.** Wendy Merkley, KORI MOORE, Randy Martin, Michael Wojcik, *Utah State University*
11:15
- 12IM.2 A Novel Instrument for Measuring Broadband Optical Properties of PM Deposited on Filters.** KEITH BEIN, Charles McDade, *UC Davis*
11:30
- 12IM.3 Measuring PM and Related Air Pollutants Using Low-Cost Sensors.** KAROLINE JOHNSON, Michael Bergin, Armistead Russell, Gayle Hagler, *Georgia Institute of Technology*
11:45
- 12IM.4 Performance Evaluation of a Low-Cost, Real-Time Community Air Monitoring Station.** WAN JIAO, Gayle Hagler, Ron Williams, Bobby Sharpe, Joann Rice, Lewis Weinstock, *ORD-US EPA, RTP, NC*
12:00
- 12IM.5 Measurement System for the Simultaneous and Continuous Determination of PM-fractions and Ultrafine Particles.** JUERGEN SPIELVOGEL, Maximilian Weiss, *Palas GmbH*
12:15

12RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS

SEBASTIAN I 3

Richard Leaitch and Qi Ying, chairs

- 12RA.1 Livestock Ammonia Emissions: From Process-based Farm Emissions Models to a New National Inventory for Beef, Swine, and Poultry in the United States.** ALYSSA MCQUILLING, Peter Adams, *Carnegie Mellon University*
11:15
- 12RA.2 Response of Total NH₃ to Reductions in Atmospheric Levels of SO₂ and NO_x: An Analysis of Data from SEARCH.** RICK SAYLOR, LaToya Myles, Eric Edgerton, *NOAA Air Resources Laboratory*
11:30
- 12RA.3 Trends in Concentrations of Atmospheric Gaseous and Particulate Species at Look Rock as Related to Primary Emissions Reductions.** STEPHANIE SHAW, Roger Tanner, Solomon Bairai, Stephen Mueller, *Tennessee Valley Authority*
11:45
- 12RA.4 The Role of Nucleation in Controlling Aerosol Size Distributions: Analysis of 10 Months of Recent Aerosol Size Distributions at a Non-Forested Agricultural Location.** ROBERT BULLARD, Ashish Singh, Charles Stanier, *University of Iowa*
12:00
- 12RA.5 Volatility Measurement of Ultrafine Particles in the Midwestern United States: Field Measurement from Bondville, IL.** ASHISH SINGH, Robert Bullard, Matthew Johnson, Charles Stanier, *University of Iowa*
12:15
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12SA SOURCE APPORTIONMENT

SEBASTIAN I 2

Cari Dutcher and Paul Solomon, chairs

- 12SA.1 Quantifying Variability in Molecular Markers Used for Vehicle Source Profiles: Effects on PM Source Apportionment Results.** ALBERT A. PRESTO, Andrew Hix, Christopher Hennigan, Allen Robinson, *Carnegie Mellon University*
11:15
- 12SA.2 Analysis of Polar Organic Compounds by TAG-AMS: Case Study of an Alpine Valley in France.** AMELIE BERTRAND, H. Langley DeWitt, Brice Temime-Roussel, Thorsten Hohaus, Donna Sueper, Florie Chevrier, Jean-Luc Besombes, Jean-Luc Jaffrezo, Grisa Mocnik, Nathan Kreisberg, Gabriel Isaacman, Susanne Hering, Allen H. Goldstein, John Jayne, Henri Wortham, Nicolas Marchand, *Aix-Marseille Université, CNRS, LCE FRE 3416*
11:30
- 12SA.3 Performance Evaluation of Three Co-Located Ultrafine Particle Monitors Near the 710 in California.** Ahmed Mehadi, Donald Hammond, Jeff Wright, Andrea Polidori, Timothy Morphy, ROBERT ANDERSON, *CARB Monitoring and Laboratory Division*
11:45
- 12SA.4 Selenium in Ambient Fine Particulate Matter: Measurement and Trend Analysis.** LI DU, Jay Turner, *Washington University in St. Louis*
12:00
- 12SA.5 Temporal and Regional Analysis of Spatially-Resolved PM_{2.5} Source Apportionment Results over Continental US.** CESUNICA IVEY, Heather Holmes, Yongtao Hu, James Mulholland, Armistead Russell, *Georgia Institute of Technology*
12:15