American Association for Aerosol Research - Abstract Submission

AAAR 31st Annual Conference
October 8-12, 2012
Hyatt Regency Minneapolis
Minneapolis, Minnesota, USA

Tuesday

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

8:00 **Welcoming Remarks** Sergey Nizkorodov, Conference Chair, *University of California, Irvine*

8:05 **Friedlander Lecture: Nucleation of Clusters Bridging the Scale from Molecules to Nanoparticles** Paul Wagner, *Universitaet Wien, Vienna, Austria*

Moderator James Smith, *National Center for Atmospheric Research*

9:00 **Friedlander Award Presentation, AAAR Fellows, IARA Fellows** Sonia Kreidenweis, Awards Committee Chair, *Colorado State University, Fort Collins*

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

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

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

1AC AEROSOL CHEMISTRY I

NICOLLET A

Kelley Barsanti and Nicole Riemer, chairs

1AC.1 9:45 **Modeling of Solute Activities and Relative Humidity in Atmospheric Aerosols.** CARI DUTCHER, Ge Xinlei, Anthony Wexler, Simon Clegg, *University of California, Davis*

1AC.2 10:00 **Model for Acid-Base Chemistry in Nanoparticle Growth.** TAINA YLI-JUUTI, Kelley C. Barsanti, Lea Hildebrandt Ruiz, Antti-Jussi Kieloaho, Theo Kurten, Ulla Makkonen, Tuukka Petäjä, Mikko Äijälä, Markku Kulmala, Ilona Riipinen, *University of Helsinki*

1AC.3 10:15 **Modeling the Formation and Evolution of Secondary Organic Aerosol in a Potential Aerosol Mass (PAM) Chamber.** Shuang Chen, WILLIAM BRUNE, Paul Davidovits, Andrew Lambe, Timothy Onasch, *Pennsylvania State University*

1AC.4 10:30 **Modification of the CMAQ Secondary Organic Aerosol (SOA) Module to Allow Consideration of Activity Coefficients and Water Uptake.** MARGUERITE C. MARKS, Abdullah Mahmud, Kelley C. Barsanti, William E. Asher, James F. Pankow, *Portland State University*

1AC.5 10:45 **Impact of Meteorology and Aerosol Composition on Heterogeneous N2O5 Hydrolysis and Chlorine Activation during CalNex 2010.** WAYNE CHANG, Steven Brown, Nicole Riemer, *University of Illinois at Urbana-Champaign*

1AC.6 11:00 **Improvement of Simulation of Fine Inorganic PM Levels through Better Descriptions of Coarse Particle Chemistry.** ERICA TRUMP, Christos Fountoukis, Neil Donahue, Spyros Pandis, *Carnegie Mellon University*

1AC.7 11:15 **Effect of Criegee Biradical Reactions on Regional Secondary Inorganic and Organic Aerosol.** JINGYI LI, Qi Ying, *Texas A&M University*

1AE AEROSOL EXPOSURE I

LAKE SUPERIOR

Jana Kesavan and Gediminas Mainelis, chairs

1AE.1 9:45 **Inhalation Intake Fractions of Vehicle-Attributable Organic PM2.5.** JOSHUA APTE, Julian Marshall, William Nazaroff, *University of California, Berkeley*

1AE.2 10:00 **Personal, Indoor, and Outdoor Exposure Assessment of Particulate Matter and Their Associations with Respiratory Symptoms in Children.** SEUNG-HYUN CHO, Jonathan Thornburg, Charles Rodes, Diane Wagener, *RTI International*

1AE.3 10:15 **Refined Estimates of Ambient PM2.5 Exposure: Validation and Refinement of a Mechanistic Indoor Transport Model.** NATASHA HODAS, Qing Yu Meng, Melissa M. Lunden, Barbara Turpin, *Rutgers University*

1AE.4 10:30 **Enhanced Air Pollution Epidemiology Using a 3D Source Oriented Air Quality Model in California.** JIANLIN HU, Christina Zapata, Bart Ostro, Michael Kleeman, *UC Davis*

1AE.5 10:45 **In-Cabin Ultrafine Particle Concentration Inside Passenger Car Fleet on Several Los Angeles Roadways.** NEELAKSHI HUDDA, Constantinos Sioutas, Ralph Delfino, Scott Fruin, *University of Southern California*

1AE.6 11:00 **Spatiotemporal Assessment of Fine Particle Exposures During Commuting Activities.** KIRSTEN KOEHLER, Jennifer Peel, Maggie Clark, Stuart Amy, John Volckens, *Colorado State University*

1AE.7 11:15 **Nanoparticle Emission from Engineered Nanostructured Materials Leading to Exposure and Risk.** HEINZ FISSAN, Burkhard Stahlmecke, Christof Asbach, Thomas Kuhlbusch, *Institute of Energy and Environmental Technology*

1CC AEROSOLS, CLOUDS, AND CLIMATE I

NICOLLET B/C

Jeff Pierce and Ilona Riipinen, chairs

1CC.1 9:45 **Ice Nuclei Production from Sea Spray.** PAUL DEMOTT, Ryan Sullivan, Kimberly Prather, Thomas C. Hill, Gary D. Franc, Allan Bertram, Ryan Mason, Timothy Guasco, Douglas Collins, Luis Cuadra-Rodriguez, Andrew Ault, Vicki Grassian, *Colorado State University*

1CC.2 10:00 **Measurements of Ice Nucleation in the Contact Mode by Mineral Dusts.** Kristopher Bunker, Swarup China, Claudio Mazzoleni, Alexander Kostinski, WILL CANTRELL, *Michigan Technological University*

1CC.3 10:15 **The Role of Temperature in Cloud Droplet Activation.** Sara Christensen, MARKUS PETTERS, Paul Ziemann, Sonia Kreidenweis, *North Carolina State University*

1CC.4 10:30 **The Role of Time in Heterogeneous Freezing Nucleation.** TIMOTHY WRIGHT, Markus Petters, *North Carolina State University*

1CC.5 10:45 **Aerosol-Clouds-Precipitation: Aircraft Measurements on the East Coast of Canada.** Stéphanie Gagné, Richard Leaitch, JEFFREY PIERCE, *Dalhousie University*

1CC.6 11:00 **Effect of Rain on the Evolution of Aerosol Concentration Distribution in the Atmosphere.** BORIS KRASOVITOV, Tov Elperin, Andrew Fominykh, *Ben-Gurion University of the Negev*

1CC.7 11:15 **Biological Particles in Rain Events.** J. ALEX HUFFMAN, Christopher Pöhlker, Ryan Mason, Anthony J. Prenni, Paul DeMott, Niall Robinson, David Gochis, Douglas Day, Viviane Després, Janine Fröhlich-Nowoisky, Eliza Harris, Isabell Müller-Germann, Beatrice Schmer, Bärbel Sinha, Anita Sun, Yukata Tobo, Meinrat O Andreae, James N. Smith, Jose-Luis Jimenez, Martin Gallagher, Sonia Kreidenweis, Allan Bertram, Ulrich Pöschl, *University of Denver, CO*

1CO COMBUSTION I

MIRAGE ROOM

Xiaofei Ma and Mingdong Li, chairs

1CO.1 9:45 **Understanding the Role of a Nano Ce Additive in the Size Distribution and Organic Composition of the Particulate Phase of Diesel Emissions.** DAVID NASH, Jason Weinstein, William Roberts, Tiffany Yelverton, Jost Wendt, Robert Willis, Gary Norris, William Linak, *U.S. EPA*

1CO.2 10:00 **Characterization of Emissions Due to Internal Combustion of Nano-CeO$_2 Doped Diesel Fuel.** YEVGEN NAZARENKO, Leonardo Calderon, Lin Zhang, Jim Zhang, Paul Lioy, Kian Fan Chung, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

1CO.3 10:15 **Physicochemical Characterization of Cerium Particles Generated by Combustion of Ce-Doped Diesel Fuel.** ROBERT WILLIS, Kristin Bunker, Traci Lersch, Gary Casuccio, Eric Grulke, Natalia Mandzy, Joseph Conny, Michael Lewandowski, Jason Weinstein, Jonathan Krug, Kasey Kovalcik, *U.S. EPA*

1CO.4 10:30 **Exhaust PM Measurement Using Low Cost Monitors: What They Measure and How Well.** MATTI MARICQ, *Ford Motor Company*

1CO.5 10:45 **Comparison of PM Emissions in Expanding Exhaust Plumes from Gas Turbine Engines burning Conventional and Alternative Fuels.** PREM LOBO, Donald Hagen, Max Trueblood, Philip Whitefield, *Missouri University of Science and Technology*

1CO.6 11:00 **Evaluation of Uncertainties in Aircraft Engine Soot Emissions Derived from Engine Smoke Number.** MARC STETTLER, Adam M Boies, *University of Cambridge*

1CO.7 11:15 **The Investigation of Water-Insoluble Particle Emissions of Butanol and Ethanol Gasoline Mixtures.** DANIEL SHORT, Diep Vu, Maryam Hajbabaei, Georgios Karavalakis, Thomas D. Durbin, Akua Asa-Awuku, *University of California, Riverside*

1IM INSTRUMENTATION AND METHODS I

REGENCY ROOM

Nathan Kreisberg and Rodney Weber, chairs

1IM.1 9:45 **Importance of Temperature Calibration for the Sunset Laboratory Carbon Analyzer: NIOSH and IMPROVE Temperature Protocols.** JELICA PAVLOVIC, John Kinsey, *ORISE U.S.EPA*

1IM.2 10:00 **Development of an In Situ Thermal Desorption Gas Chromatograph for Intermediate-Volatility and Semi-volatile Organic Compounds.** YUNLIANG ZHAO, Nathan Kreisberg, Susanne Hering, Allen H. Goldstein, *University of California, Berkeley*

1IM.3 10:15 **Development of a Highly Specific and Sensitive Technique to Measure Organic Nitrogen in Atmospheric Aerosols.** JACQUELINE HAMILTON, Mustafa Ozel, Lewis Alastair, *University of York*

1IM.4 10:30 **Infrared Spectroscopic Determination of Aerosol Organic Mass using Partial Least Squares Regression.** TRAVIS RUTHENBURG, Ann Dillner, *University of California, Davis*

1IM.5 10:45 **Semi-continuous Online Measurements of Reactive Oxygen Species in the Particle and Gas Phase.** LAURA KING, Vishal Verma, Rodney Weber, *Georgia Institute of Technology*

1IM.6 11:00 **A Long Path Absorbance Photometer for the Determination of Peroxide Content and Brown Carbon in Organic Aerosol.** JOSEF DOMMEN, Peter Mertes, Stephen Platt, Imad El Haddad, Lisa Pfaffenberger, Andre Prévôt, Markus Kalberer, Urs Baltensperger, *Paul Scherrer Instiute*

1IM.7 11:15 **Extractive Electrospray Ionisation (EESI): A Novel Mass Spectrometry Technique for the Online Characterization of Organic Aerosol.** PETER GALLIMORE, Markus Kalberer, *University of Cambridge*

1UA URBAN AEROSOLS I

NICOLLET D

Cliff Davidson and Jill Craven, chairs

1UA.1 9:45 **Organic Aerosol Composition, Sources, and Modeling for Los Angeles during the 2010 CalNex Campaign.** Patrick Hayes, JOSE-LUIS JIMENEZ, Michael Cubison, Amber Ortega, James Allan, Jessica Gilman, William C. Kuster, Joost de Gouw, Gabriel Isaacman, David Worton, Nathan Kreisberg, Susanne Hering, Allen H. Goldstein, Rebecca Washenfelder, Jonathan Taylor, Rainer Volkamer, Eleanor Waxman, Ryan Thalman, Rodney Weber, Xiaolu Zhang, et al., *University of Colorado*

1UA.2 10:00 **Organic Aerosol Characterization of the Los Angeles Basin from Aircraft Measurements during CalNex.** JILL CRAVEN, Andrew Metcalf, Richard Flagan, John Seinfeld, *Caltech*

1UA.3 10:15 **Comparison of Estimates of Airmass Aging Using Particle and Other Measurements near Fort Worth, TX.** BASAK KARAKURT CEVIK, Robert Griffin, Andrew Rutter, Barry Lefer, James Flynn, Saewung Kim, *Rice University*

1UA.4 10:30 **Source Apportionment of Organic Aerosols and VOCs Near Fort Worth, TX.** ANDREW RUTTER, Basak Karakurt Cevik, Longwen Gong, Kabin Shakya, Caroline Gutierrez, Melanie Calzada, Saewung Kim, Robert Griffin, James Flynn, Barry Lefer, *Rice University*

1UA.5 10:45 **Understanding Intra-Neighborhood Patterns in Fine Particulate Air Pollution Using Mobile Monitoring in Braddock, PA.** Brett Tunno, Kyra Shields, Paul Lioy, Nanjun Chu, Joseph Kadane, Bambang Parmanto, Gede Pramana, Jennifer Zora, CLIFF DAVIDSON, Fernando Holguin, Jane Clougherty, Daniel S. Tkacik, Andrew A. May, *Syracuse University*

1UA.6 11:00 **Factors and Particle Dynamics Controlling Pollutant Plume Length Downwind of Major Roadways in Nocturnal Surface Inversions.** WONSIK CHOI, Meilu He, Vincent Barbesant, Kathleen Kozawa, Steve Mara, Arthur Winer, Suzanne Paulson, *University of California Los Angeles*

1UA.7 11:15 **Ultrafine Particle Infiltration to Passenger Vehicle Cabins: the Effects of Driving Speed and Ventilation Setting.** EON LEE, Yifang Zhu, *University of California, Los Angeles*

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

2AC AEROSOL CHEMISTRY II: POSTERS

EXHIBIT HALL

2AC.1 1:00 **Secondary Organic Aerosol Formation from the Isoprene Ozonolysis: Effect of OH Radical Scavenger on the Radical Chemistry.** KEI SATO, Satoshi Inomata, Risa Uchida, Takashi Imamura, Jun Hirokawa, Motonori Okumura, Susumu Tohno, *National Institute for Environmental Studies*

2AC.2 1:00 **Investigation of SOA Composition from the Photolysis of 1-Nitronaphthalene using Single Particle Mass Spectrometry.** ROBERT HEALY, Yang Chen, Ivan Kourtchev, Markus Kalberer, John Wenger, *University College Cork*

2AC.3 1:00 **Displacement of Ammonium from Aerosol Particles by Uptake of Triethylamine.** Lap P. Chan, CHAK K. CHAN, *Hong Kong University of Science and Technology*

2AC.4 1:00 **Gas-Particle Partitioning of Ammonia in the Fort Worth, TX Area.** LONGWEN GONG, Rafal Lewichi, Robert Griffin, Andrew Rutter, Frank Tittel, Barry Lefer, James Flynn, Jack Dibb, Eric Scheuer, *Rice University*

2AC.5 1:00 **Chamber Simulation of Photooxidation of Dimethyl Sulfide and Isoprene in the Presence of NOx.** Tianyi Chen, MYOSEON JANG, *University of Florida*

2AC.6 1:00 **Characterization of Oligomers Products from Heterogeneous Acid-Catalyzed Reaction of Methyl Vinyl Ketone and Their Formation Reaction Mechanisms.** Ka M. Chan, Dan D. Huang, Yong J. Li, Man N. Chan, John Seinfeld, CHAK K. CHAN, *Hong Kong University of Science and Technology*

2AC.7 1:00 **Organic Hydroperoxides (ROOH) Photolysis as a Source of Hydroxyl Radicals (OH) in Aqueous SOA.** DANA ALJAWHARY, Alex K. Y. Lee, Ran Zhao, Jonathan Abbatt, *University of Toronto*

2AC.8 1:00 **Photolysis of Aldehydes in Organic Matrices as a Model for Photolytic Processing of Organic Aerosols.** SANDRA BLAIR, Dorit Shemesh, Benny Gerber, Adam Bateman, Sergey Nizkorodov, *University of California, Irvine*

2AC.9 1:00 **Organosulfate Formation from 2-Methyl-3-Buten-2-ol (MBO) as a Secondary Organic Aerosol (SOA) Tracer in the Atmosphere.** HAOFEI ZHANG, David Worton, Michael Lewandowski, John Ortega, Caitlin Rubitschun, Kasper Kristensen, Pedro Campuzano-Jost, Douglas Day, Jose-Luis Jimenez, Mohammed Jaoui, John Offenberg, Tadeusz Kleindienst, Jessica Gilman, Joost de Gouw, Chang Hyoun Park, Gunnar Schade, Amanda Frossard, Lynn Russell, Marianne Glasius, Alex Guenther, Allen H. Goldstein, John Seinfeld, Avram Gold, Richard Kamens, Jason Surratt, *University of North Carolina at Chapel Hill*

2AC.10 1:00 **Characterization of the Heterogeneous Aging of Secondary Organic Aerosols Formed via Isoprene Ozonolysis Using Aerosol Flow Tube - FTIR Spectroscopy.** Demetrios Pagonis, Brian Bouchard, Jeff Baker, CINDY DEFOREST HAUSER, *Davidson College*

2AC.11 1:00 **Computational Study Probing the Potential Energy Surfaces of Acid Catalyzed Particle Phase Reactions.** IVAN PILETIC, Edward Edney, Libero Bartolotti, *U.S. Environmental Protection Agency*

2AC.13 1:00 **The Atmospheric Organic Aerosol Explored Through High Resolution Mass Spectrometry.** YIYI WEI, Tingting Cao, Yehia Mechref, Jonathan Thompson, *Texas Tech University*

2AC.14 1:00 **Implications of Aerosol-phase Photocatalytic Epoxidation and Ion-specific Enhancement of Organic Partitioning.** GE YU, Frank Keutsch, *University of Wisconsin - Madison*

2AC.15 1:00 **The Effect of Particle Size on Iron Solubility in Atmospheric Aerosols.** AURELIE MARCOTTE, Brian Majestic, Ariel Anbar, Pierre Herckes, *Arizona State University*

2AC.16 1:00 **A Chamber Study of the Aging of Reaction Products Formed by Photo-Oxidation of Beta-Pinene.** MEHRNAZ SARRAFZADEH, Donald Hastie, *York University*

2AC.17 1:00 **Detection of a Variety of Amines with Ambient Pressure Proton Transfer Mass Spectrometry.** Kimberly Carlson, NATHAN FRESHOUR, Walker Glasoe, Baradan Panta, David Hanson, *Augsburg College*

2AC.18 1:00 **Selective Depletion of Branched and Higher-Volatility Alkanes in the Heterogeneous OH Oxidation of Motor Oil Particles.** Gabriel Isaacman, ARTHUR CHAN, Theodora Nah, Katheryn Kolesar, Chris Ruehl, David Worton, Drew Gentner, Timothy Dallmann, Thomas Kirchstetter, Christopher Cappa, Robert Harley, Kevin Wilson, Allen H. Goldstein, *University of California, Berkeley*

2AC.19 1:00 **Images Reveal That Atmospheric Particles Can Undergo Liquid-Liquid Phase Separations.** Yuan You, LINDSAY RENBAUM-WOLFF, Marc Carreras-Sospedra, Sarah J. Hanna, Naruki Hiranuma, Saeid Kamal, Mackenzie Smith, Xiaolu Zhang, Rodney Weber, John Shilling, Donald Dabdub, Scot Martin, Allan Bertram, *University of British Columbia*

2AC.20 1:00 **Aqueous Processing of Low Molecular Weight Carbonyls in Ammonium Sulfate Solutions.** D M HABIB, Lynn Mazzoleni, *Michigan Technological University*

2AC.21 1:00 **Modeling NOx-dependent Chemistry During Organic Aerosol Aging with the 2D-VBS.** WAYNE CHUANG, Neil Donahue, *Carnegie Mellon University*

2AC.22 1:00 **The Role of Multiphase Aging in the Chemistry of Organic Aerosol.** KELLY DAUMIT, Jesse Kroll, *MIT*

2AC.23 1:00 **Modeling of Secondary Organic Aerosol from Aromatic Compounds in the Presence of SO2.** YUNSEOK IM, Myoseon Jang, *University of Florida*

2AC.24 1:00 **Oxidative Aging of Organic Aerosol: Role of Carbon Skeleton and Fragmentation Reactions.** JAMES HUNTER, Anthony Carrasquillo, Kelly Daumit, Eben Cross, Douglas Worsnop, Jesse Kroll, *MIT*

2AC.25 **Formation of Secondary Organic Aerosol by the Direct Photolytic Generation of Alkoxy Radicals.** ANTHONY
1:00 CARRASQUILLO, Sean Kessler, Theodora Nah, Kevin Wilson, Douglas Worsnop, Jesse Kroll, *MIT*

2AC.26 **Characterization of Fine Particles by the ASCM at an Urban Background Area in Kaohsiung, Taiwan.** MINNA
1:00 AURELA, Sanna Saarikoski, Yee-Lin Wu, Risto Hillamo, Min-Shiou Wu, *Finnish Meteorological Institute*

2AC.27 **Ship Impacts on Marine Aerosol and Clouds.** MATTHEW COGGON, Armin Sorooshian, Andrew Metcalf, Amanda
1:00 Frossard, Zhen Wang, Taylor Shingler, Jill Craven, Lynn Russell, Haflidi Jonsson, John Seinfeld, *Caltech*

2AC.28 **Online, Mobile Measurements of the Chemical Composition of Volcanic Smog ("vog").** Eben Cross, ZARA
1:00 L'HEUREUX, Lisa Wallace, Anna Kelly, Kelly Daumit, Philip Croteau, John Jayne, Douglas Worsnop, Jesse Kroll, *MIT*

2AC.29 **Characterization of Submicron Particles at Long Island New York Using a High-Resolution Aerosol Mass**
1:00 **Spectrometer.** Shan Zhou, QI ZHANG, Jianzhong Xu, Fan Mei, Jian Wang, Stephen Springston, Arthur Sedlacek, Yin-Nan Lee, *University of California, Davis*

2AC.30 **Comparison of Spectroscopic Signatures of Smog Chamber and Atmospheric Aerosols.** LYNN RUSSELL, Shang
1:00 Liu, Kabindra Shakya, Ashley Corrigan, Anita Johnson, Paul Ziemann, John Shilling, Lisa Pfaffenberger, Jay Slowik, Andre Prévôt, Josef Dommen, Urs Baltensperger, Hwajin Kim, Suzanne Paulson, Spyros Pandis, Michael Lewandowski, John Offenberg, Tadeusz Kleindienst, Christine Loza, Jill Craven, Lindsay Yee, Katherine Schilling, John Seinfeld, *Scripps Institution of Oceanography, UCSD*

2AC.31 **Long-Term Measurements of Organic Aerosol and its Components at the DOE Atmospheric Radiation**
1:00 **Measurement Sites.** QI ZHANG, Jerome Fast, Caroline Parworth, Timothy Shippert, Chitra Sivaraman, Fan Mei, Alison Tilp, *University of California, Davis*

2AC.32 **Chemically-Constrained CMAQ Evaluation of Organic Compounds with CALNEX Field Measurements.**
1:00 ANNMARIE CARLTON, Kirk Baker, Tadeusz Kleindienst, John Offenberg, Mohammed Jaoui, *Rutgers University*

2AC.33 **Feasibility of the Detection of Trace Elements in Particulate Matter Using Online High Resolution Aerosol**
1:00 **Mass Spectrometry.** DARA SALCEDO, Alexander Laskin, Vaithiyalingam Shutthanandan, Jose-Luis Jimenez, *Universidad Nacional Autónoma de México*

2AC.34 **Particulate Matter Chemistry in the San Joaquin Valley.** SURESH RAJA, Srikar M. Reddy, Neelesh Sule, Whitney
1:00 Rowe, Christopher Marlais, Scott Nester, Philip K. Hopke, Lin Lin, Xia Xiaoyan, Sriraam Ramanathan Chandrasekaran, Jon Klassen, James W. Sweet, *Providence Engineering and Environmental Group*

2AC.35 **The Linked Aqueous-Phase Oxidation of Glyoxal and SO2: Light-Absorbing Products.** DAVID DE HAAN, W.
1:00 Ryan Sueme, Eric Czer, Ashley Torkelson, Alec Rynaski, *University of San Diego*

2AC.36 **Laboratory Studies of α-Pinene Nitate Production and Aerosol Partitioning.** JOEL RINDELAUB, Kevin McAvey,
1:00 Paul Shepson, *Purdue University*

2AC.37 **One-Pot Derivatization Methods for Obtaining Functional Group Distributions of Aerosol Constituents.**
1:00 ALICIA KALAFUT-PETTIBONE, W. Sean McGivern, *National Institute of Standards and Technology*

2AC.38 **Aromatic Secondary Organic Aerosol Formation in the Presence of Sea Salt Aerosols.** ROSS BEARDSLEY,
1:00 Myoseon Jang, Yunseok Im, Ori Barber, Carrie Delcomyn, Ned Witherspoon, *University of Florida*

2AC.39 **Hygroscopic Growth of Mixed Aerosol Particles Composed of Inorganic and Organic Compounds of**
1:00 **Atmospheric Relevance.** IDANIA ZAMORA, Mark Jacobson, *Stanford University*

2AC.40 **Model Analysis of Aerosol Reaction Chamber Studies of Aqueous Aerosol SOA (aaSOA) Formation.** ANDREW
1:00 SUMNER, Joseph Woo, V. Faye McNeill, *Columbia University*

2AC.41 **Secondary Organic Aerosol Formation from Acid-Catalyzed Uptake of α-Pinene Oxide to Aqueous Sulfate**
1:00 **Particles.** JOSEPH WOO, Greg Drozd, Allison Schwier, V. Faye McNeill, *Columbia University*

2AC.42 **Investigation of a Particle into Liquid Sampler to Study the Formation and Ageing of Secondary Organic**
1:00 **Aerosol.** JACQUELINE HAMILTON, Kelly L. Pereira, Andrew R. Rickard, William J. Bloss, M. Salim Alam, Marie Camredon, Amalia Munoz, Monica Vasquez, Esther Garcia, Mila Rodenas, Teresa Espallardo, *University of York*

2AC.43 **Particle Formation, Growth and Composition from Exposed Ocean Vegetation.** ANDREW HORAN, Daniel
1:00 MacDonald, George Luther, Murray Johnston, *University of Delaware*

2AC.44 1:00 **Organic Matrix Effects on Aqueous Processing in Atmospheric Aerosols.** GREG DROZD, V. Faye McNeill, *Columbia University*

2AC.45 1:00 **Sulfuric Acid Hydration and Its Atmospheric Implications.** BERHANE TEMELSO, George Shields, *Bucknell University*

2AC.46 1:00 **Secondary Organic Particle Growth Under Different Conditions in a Flow Tube Reactor.** YUE ZHANG, Scot Martin, Franz Geiger, Mona Shrestha, *Harvard University*

2AE AEROSOL EXPOSURE II: POSTERS

EXHIBIT HALL

2AE.2 1:00 **Time-Resolved Chemical Characterization of Ambient PM2.5 in Stockton, California.** ARANTZAZU EIGUREN-FERNANDEZ, Gregory Lewis, Steven Spielman, Susanne Hering, *Aerosol Dynamics Inc.*

2AE.3 1:00 **Virus, Bacteria, Gas and Odour Reductions by an Innovative Air Cleaning System Developed for Animal Housing.** VALÉRIE LÉTOURNEAU, Caroline Duchaine, Martin Belzile, Matthieu Girard, Stéphane P. Lemay, *IRDA, Canada*

2AE.4 1:00 **Development of an Air-Liquid Direct Exposure System for In Vitro Cell Exposure to Airborne Sub-Micron and Nano- Particles.** TA-CHIH HSIAO, Chun-Wan Chen, Yun-Ching Cheng, Ya-Chien Changchien, *National Central University, Jhongli City, Taiwan*

2AE.5 1:00 **Fine Particle Exposures During Vehicle Fire Suppression: Mobile Direct Reading Sampling.** DOUGLAS EVANS, Kenneth Fent, James Couch, *NIOSH DART*

2AE.6 1:00 **A Case Study in Fusion of Surface PM2.5 Observations and 3D Air Quality Model Output.** SINAN SOUSAN, Tiangfeng Chai, Jaemeen Baek, Scott Spak, Naresh Kumar, Jacob Oleson, Sarika Kulkarni, Gregory Carmichael, Charles Stanier, *University of Iowa*

2AE.7 1:00 **Determining the Recovery Efficiencies of Two Aerosol Samplers for Bacteria, Yeast, and Fungi.** JOHN TROMBLEY, Jordan Bohannon, Jonathan Spurgin, Larry Bowen, *Southern Research*

2AE.8 1:00 **Measurement of Silica on Filter Samples of Coal Dust Using a Field-Portable FTIR Method.** NATE MURPHY, Zachary Briggs, Andrew Kilpatrick, Courtney Quinn, Mackenzie Wadas, Emanuele Cauda, Art Miller, *NIOSH*

2AE.9 1:00 **Evaluation of a 7-Year Air Quality Simulation Study for Eastern United States.** HONGLIANG ZHANG, Gang Chen, Qi Ying, Jianlin Hu, Michael Kleeman, *Texas A&M University*

2AE.11 1:00 **Estimation of Residential Exposure to Coal Powered Power Plant Emissions: From Regional to Biological Specimens.** QUENTIN MALLOY, Cortina Johnson, James Raymer, Jonathan Thornburg, Elizabeth Frey, Sangeeta Gupta, *RTI International*

2AE.12 1:00 **Measurements of PM2.5 Concentration and Composition in the Vicinity of Barnett Shale Natural Gas Production Facilities for Population Exposure Assessment.** BARBARA ZIELINSKA, Eric Fujita, David Campbell, *Desert Research Institute*

2AE.13 1:00 **Advances in Particulate Matter Exposure Assessment Instrumentation.** Charles Rodes, JONATHAN THORNBURG, *RTI International*

2AE.14 1:00 **Polycyclic Aromatic Hydrocarbons (PAHs) Concentration and Related Carcinogenic Potencies in PM10 at a Semi Arid Region of India.** AMIT MASIH, Ajay Taneja, *St. Andrew's College, Gorakhpur, India*

2AN SYMPOSIUM: AEROSOL NUCLEATION: FROM CLUSTERS TO NANOPARTICLES I: POSTERS

EXHIBIT HALL

2AN.1 1:00 **Vapor Nucleation Rate Surfaces for Some Systems with Polymorphous Phase Transitions.** Michael Anisimov, Elena Fominykh, PHILIP K. HOPKE, *Tech. Design Inst. of Scientific Instrument Engr SB RAS*

2AN.3 1:00 **New Particle Formation and Growth Observed at Fukue Island, Japan in March 2012.** SEYOUNG KIM, Takafumi Seto, Yoshio Otani, Akinori Takami, Naoki Kaneyasu, Toshiyuki Fujimoto, Kikuo Okuyama, *Kanazawa university*

2AN.4 1:00 **Neutral Sulfuric Acid Clusters during Strong Nucleation Events in a Sulfate-Rich Urban Atmosphere.** JUN ZHAO, Fred Eisele, Peter McMurry, James N. Smith, *University of Minnesota*

2AN.5 1:00 **Resolving Size-dependent Particle Growth Rates below 2 nm from the Particle Size Magnifier.** Katrianne Lehtipalo, Siegfried Schobesberger, Alessandro Franchin, Tuomo Nieminen, Juha Kangasluoma, Jenni Kontkanen, JYRI MIKKILÄ, Tuukka Petäjä, Markku Kulmala, *University of Helsinki*

2AN.6 1:00 **A novel kinetics mechanism for particle formation from methanesulfonic acid, amines and water..** MATT DAWSON, Mychel E. Varner, Veronique Perraud, Micheal, J. Ezell, Benny Gerber, Barbara J. Finlayson-Pitts, *University of California, Irvine*

2CC AEROSOLS, CLOUDS, AND CLIMATE II: POSTERS

EXHIBIT HALL

2CC.1 1:00 **Global Perspectives on Aerosol Hygroscopicity and Cloud Forming Ability: A Synthesis of 8 Airborne and Field Campaigns.** TERRY LATHEM, Athanasios Nenes, *Georgia Institute of Technology*

2CC.2 1:00 **Cloud Condensation Nuclei Activity and Hygroscopicity of In-situ Biomass Burning Aerosol.** TERRY LATHEM, Bruce Anderson, Andreas Beyersdorf, Lee Thornhill, Edward Winstead, Joe Shaw, Michael Thomas, Glenn Shaw, Athanasios Nenes, *Georgia Institute of Technology*

2CC.3 1:00 **Hygroscopic Growth Measurements of Ambient Aerosol at a Suburban Site in Hong Kong: Seasonal Trends and Water-Uptake Behavior as a Function of Relative Humidity.** Ming Chee Yeung, CHAK K. CHAN, *Hong Kong University of Science and Technology*

2CC.5 1:00 **Coatings on Light Absorbing Aerosols: Optical Effects, Morphology, and Composition.** LULU MA, Hao Tang, Jonathan Thompson, *Texas Tech University*

2CC.6 1:00 **A Model Study on the CCN Activation of Multicomponent Organic Aerosols.** ILONA RIIPINEN, Narges Rastak, Spyros Pandis, *Carnegie Mellon University*

2CC.7 1:00 **Power-Law Patterns in Electromagnetic Scattering for Nonspherical Particles.** MATTHEW BERG, *Mississippi State Univeristy*

2CC.8 1:00 **Droplet Number Prediction Uncertainties from CCN: An Integrated Assessment Using Observations and a Global Model Adjoint.** RICHARD MOORE, Vlassis Karydis, Shannon Capps, Athanasios Nenes, *Georgia Institute of Technology*

2CC.9 1:00 **Comparison of Surface and Aircraft Cloud Condensation Nuclei Measurements in North Dakota.** NICOLE BART, David Delene, *University of North Dakota*

2CC.10 1:00 **Future Air Quality in a Changing Climate in the Eastern United States.** MELISSA DAY, Benjamin Murphy, Spyros Pandis, *Carnegie Mellon University*

2CC.11 1:00 **Analyses and Forecasts of Long Range Transport of Particulates to North America.** DOUGLAS WESTPHAL, Rudolf Husar, Shawn McClure, James Campbell, Edward Hyer, Walter Sessions, Wynn Eberhard, Jianglong Zhang, *US Naval Research Laboratory*

2CC.12 1:00 **Ice Nuclei Produced from Prescribed Fires in Southeastern United States.** CHRISTINA S. MCCLUSKEY, Paul DeMott, Anthony J. Prenni, Amy P. Sullivan, Gavin McMeeking, Yury Desyaterik, Gary D. Franc, Thomas C. Hill, Sonia Kreidenweis, *Colorado State University*

2CC.13 1:00 **Heterogeneous Ice Nucleation and Water Uptake by Field-Collected Atmospheric Particles Below 273 K.** BINGBING WANG, Alexander Laskin, Tobias Roedel, Mary Gilles, Ryan Moffet, Alexei Tivanski, Daniel Knopf, *Pacific Northwest National Laboratory*

2CC.14 1:00 **Wintertime Measurements of Scavenging Ratios of Sea-Salt Components for Snow and Rain in Niigata Prefecture, Japan.** SHIN OHARA, Shin-ichi Fujita, Soichiro Sugimoto, Akira Takahashi, *Central Research Institute of Electric Power Industry*

2CC.15 1:00 **Assessing the Importance of Contact Ice Nucleation.** DANIEL CZICZO, Yi-wen Huang, *MIT*

2CC.16 1:00 **Efficiency of Biological Aerosol for Contact Mode Freezing.** JOSEPH NIEHAUS, Xin Xin Woodward, Will Cantrell, *Michigan Technological University*

2CC.17 1:00 **Cloud Condensation Nuclei Measurements at a High Elevation Site: Composition and Hygroscopicity.** BETH FRIEDMAN, Alla Zelenyuk, Josef Beranek, Gourihar Kulkarni, Mikhail Pekour, Anna Gannet Hallar, Ian McCubbin, Joel A. Thornton, Daniel Cziczo, *University of Washington*

2CC.18 1:00 **Formation of Semi-solid, Oligomerized Aqueous SOA: Cloud and Aerosol Lab Simulations.** LELIA HAWKINS, Amanda Lemire, Katherine Muller, David De Haan, Molly J. Baril, Alec Rynaski, Nahzaneen Sedehi, *Harvey Mudd College*

2CC.19 1:00 **Effect of Secondary Organic Aerosol Amount and Condensational Behavior on Global Aerosol Size Distributions.** STEPHEN D'ANDREA, Dominick Spracklen, Ilona Riipinen, Jeffrey Pierce, *Dalhousie University*

2CC.20 1:00 **Optical Properties of Hematite and Fine Desert Dust Aerosols.** HANS MOOSMULLER, Allison Aiken, Mavendra Dubey, Garrett Frey, Bruce Garro, Johann Engelbrecht, *Desert Research Institute*

2CC.21 1:00 **Measurement of Halyomorpha Halys (Brown Marmorated Stink Bug) Biogenic Volatile Organic Compounds and Their Role in Secondary Aerosol Formation.** Danielle Solomon, DABRINA DUTCHER, Timothy Raymond, *Bucknell University*

2CC.22 1:00 **Modeling the Surface Tension of Complex Organic-Inorganic Solutions.** Allison Schwier, Giuliana Viglione, V. FAYE MCNEILL, *Columbia University*

2CC.23 1:00 **Organic Composition of Submicron Aerosols in Cloud and Below Cloud in La Jolla, California: the Role of Organic Aerosols in Cloud Formation.** ASHLEY CORRIGAN, Rob Modini, Anita Johnson, Janin Guzman Morales, Lynn Russell, Desiree Toom-Sauntry, Annie-Marie Macdonald, John Liggio, Richard Leaitch, Jason Schroder, Allan Bertram, Alex K. Y. Lee, Ran Zhao, Jonathan Abbatt, *Scripps Institution of Oceanography, UCSD*

2CH CONTROL TECHNOLOGY AND HOMELAND SECURITY I: POSTERS

EXHIBIT HALL

2CH.1 1:00 **Nanometer-rated Liquid Filter Evaluation using the TSI Nanoparticle Nebulizer.** TSZ YAN LING, Axel Zerrath, David Pui, *University of Minnesota*

2CH.2 1:00 **Combined Influences of Electrophoresis and Thermophoresis on Particle Deposition on a Flat Plate Exposed to a Parallel Airflow.** HANDOL LEE, Se-Jin Yook, *Hanyang University*

2CH.3 1:00 **A Cylindrical Water-Film Electrostatic Precipitator to Remove Fine Particles or SO2/NO Gases.** Bangwoo Han, Hak-Joon Kim, Dong-Keun Song, YONG-JIN KIM, *Korea Institute of Machinery and Materials*

2CH.4 1:00 **The Electrical and Particle Removal Performance of Dry and Wet Electrostatic Precipitators at a 0.7 MW-Oxygen Pulverized Coal Combustion Pilot Plant.** Hak-Joon Kim, Bangwoo Han, YONG-JIN KIM, Sang-In Keel, Jin-Han Yun, Tae-Hyung Kim, Jung-Hee Hong, *Korea Institute of Machinery and Materials*

2CH.5 1:00 **Experimental Investigation of Haze and Particle Formation by Airborne Molecular Contamination under Irradiation.** CHANG HYUK KIM, Zhili Zuo, David Pui, *University of Minnesota*

2CH.6 1:00 **Optimization of the Novel Collector for Diesel Emissions Control.** TAEWON HAN, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

2CH.7 1:00 **Effect of Particle and Filter Charges on Particle Loading Characteristics of Air Filter Media.** Hyun-Seol Park, WEONGYU SHIN, *Korea Institute of Energy Research*

2CH.8 1:00 **Comparison of Charging States between Electrospun and Electret Meltblown Filter Media through Filtration Test for Submicrometer Aerosol.** Hyun-Seol Park, WEONGYU SHIN, *Korea Institute of Energy Research*

2CH.9 1:00 **Effects of Spray Surfactant and Particle Charge on Respirable Dust Control.** MEI WANG, Peter Raynor, *University of Minnesota*

2CH.10 1:00 **Biosafety Level 3 Bio-Aerosol Generation System.** Joseph Lacirignola, JONATHAN RICHARDSON, Robert Martinez, Edward Froehlich, Andreas Gennis, Richard Vanderbeek, Mary Wade, Todd Sickler, Amber Prugh, Kevin Hung, *MIT*

2CH.11 1:00 **Room Scale Deposition of Chem/Bio Decontaminants Dispersed through Commercially Available Induction Spray Charging Nozzles.** Joshua Hubbard, Rita Betty, Daniel Lucero, Danielle Rivera, ANDRES SANCHEZ, Brandon Servantes, *Sandia National Laboratories*

2CH.12 1:00 **High-Speed High-Resolution Tracking of Micrometer Particle Detachment and Resuspension on Different Surfaces.** ASMAA KASSAB, Victor Ugaz, Maria D. King, Yassin Hassan, *Texas A&M University*

2CH.13 1:00 **Evaluation of Outdoor Surface Adhesion and Reaerosolization of Anthrax: Reaerosolization from a Sod Matrix.** JACKY ANN ROSATI ROWE, Laurie Brixey, Zora Drake-Richmon, Jonathan Thornburg, Alfred Eisner, *US EPA*

2CH.14 1:00 **Collection Efficiency of a New Portable Electrostatic Precipitator (BIODOSI) Designed for the Collection of Airborne Pathogens.** ROLAND SARDA-ESTEVE, Jean-Maxime Roux, Jean Sciare, Guillaume Delapierre, Marie-Helene Nadal, *LSCE (CEA-CNRS-UVSQ)*

2CH.15 1:00 **Development of Calibration Standards for BW Aerosol Sensors.** JESSE LINNELL, Trina Vian, Jay Eversole, Vasanthi Sivaprakasam, John Tucker, Joseph Morency, Adam Dai, *MIT*

2CO COMBUSTION II: POSTERS

EXHIBIT HALL

2CO.2 1:00 **Morphology of Aerosol Particles at Freeway On-Ramps.** SWARUP CHINA, Neila Salvadori, Claudio Mazzoleni, *Michigan Technological University*

2CO.3 1:00 **Controlled Studies on Aerosol Formation During Biomass Combustion in a Flat Flame Reactor.** JIAXI FANG, Anna Leavey, Pratim Biswas, *Washington University in St Louis*

2CO.4 1:00 **Impact of Natural Gas Fuel Composition on PM Mass, Number, and Size Distribution from Heavy-duty Vehicles.** MARYAM HAJBABAEI, Zhongqing Zheng, Thomas D. Durbin, Kent C. Johnson, J. Wayne Miller, David R. Cocker III, Georgios Karavalakis, *University of California, Riverside*

2CO.5 1:00 **An Empirical Model for Predicting the Amount of Gaseous Emissions Based on Instantaneous Modified Combustion Efficiency (MCE).** SEYEDEHSAN HOSSEINI, Li Qi, Heejung S. Jung, J. Wayne Miller, David Weise, David R. Cocker III, *University of California, Riverside*

2CO.6 1:00 **Emission Characterization from Residential Scale Boilers Using Grass as Fuel.** SRIRAAM RAMANATHAN CHANDRASEKARAN, Philip K. Hopke, Michael Newtown, Arthur Hurlbut, *Clarkson University*

2CO.7 1:00 **Light-Duty Diesel Engine Exhaust Particle Number Distribution Differences between Petro-Diesel and Different Blends of Soy Biodiesel Fuels.** TYLER FERALIO, Britt Holmén, Jim Dunshee, *University of Vermont*

2CO.8 1:00 **Chemical Characterization of Primary and Secondary Biodiesel Exhaust Particulate Matter.** JOHN KASUMBA, Britt Holmén, *University of Vermont*

2CO.9 1:00 **Mapping the Operation of the Miniature Combustion Aerosol Standard (mini-CAST) Soot Generator.** RICHARD MOORE, Andreas Beyersdorf, Suzanne Crumeyrolle, Lee Thornhill, Edward Winstead, Luke Ziemba, Bruce Anderson, *NASA Langley Research Center*

2CO.10 1:00 **Comparison of Measurement Methods for Black Carbon in Diesel Engine Exhaust.** SANNA SAARIKOSKI, Samara Carbone, Matti Happonen, Antti Rostedt, Topi Ronkko, Jyrki Ristimäki, Jorma Keskinen, Risto Hillamo, *Finnish Meteorological Institute*

2CO.11 1:00 **Investigations of Particle Number and Gas-Phase Tailpipe Pollutants from Comparable Hybrid and Conventional Vehicles.** KAREN SENTOFF, Britt Holmén, Matt Conger, *University of Vermont*

2CO.14 1:00 **Visualization of Filter Pore Bridging with Diesel Particles from Two Different Size Distributions.** SIMON PAYNE, Nick Collings, *University of Cambridge*

2CO.15 1:00 **Aerosol Microphysical Properties from Canadian Boreal Forest Fires Measured during BORTAS.** KIMIKO SAKAMOTO, James Allan, Hugh Coe, Jonathan Taylor, Thomas Duck, Jeffrey Pierce, *Dalhousie University*

2CO.16 1:00 **Morphology of Particles Produced by Aviation Gas Turbines.** Hugo Tjong, STEVEN ROGAK, Jason Olfert, Tyler Johnson, Jonathan Symonds, Kevin Thomson, Gregory Smallwood, *University of British Columbia*

2CO.17 1:00 **In-use Emission Factors from Traditional and Upgraded Cookstoves in Rural Karnataka, India.** ANDREW GRIESHOP, Grishma Jain, Karthik Sethuraman, Ther Aung, T. Pradeep, Narayanswami S., Julian Marshall, *North Carolina State University*

2CO.18 1:00 **Characterization of Soot Particle Deposition Rates and Optical Effects.** DE-LING LIU, Stephen Didziulis, Jesse Fowler, *The Aerospace Corporation*

2FM SYMPOSIUM: SYNTHESIS OF FUNCTIONAL MATERIALS USING FLAMES, PLASMAS AND OTHER AEROSOL METHODS I: POSTERS

EXHIBIT HALL

2FM.1 1:00 **Numerical Modeling of a Low-Pressure Radio Frequency Argon-Silane Plasma in Which Silicon Particles Nucleate and Grow.** PULKIT AGARWAL, Steven Girshick, *University of Minnesota*

2FM.3 1:00 **Silicon Nanocrystal Solvation: From Plasma to Stable Colloidal Dispersion.** LANCE M. WHEELER, Uwe R. Kortshagen, *University of Minnesota*

2FM.4 1:00 **Production and Characterization of Boron Nanoparticles Synthesized With a Thermal Plasma System.** WEONGYU SHIN, Steven Calder, Ozan Ugurlu, Steven Girshick, *Chungnam National University*

2FM.5 1:00 **Production and Characterization of SiO2 Nanoparticles Synthesized with an Electron Beam Irradiation System.** JIN HYOUNG KIM, Youngku Sohn, WeonGyu Shin, *Chungnam National University*

2FM.6 1:00 **Crystallizing Amorphous Silicon Nanoparticles with a Double Plasma Configuration.** NICOLAAS J. KRAMER, Rebecca J. Anthony, Aloysius A. Gunawan, K. Andre Mkhoyan, Uwe R. Kortshagen, *University of Minnesota*

2IA INDOOR AEROSOLS I: POSTERS

EXHIBIT HALL

2IA.1 1:00 **Physical Characteristics of Particle Emission from Multiple Cooking Activities.** YIJIA ZHAO, Mehdi Amouei Torkmahalleh, Iman Goldasteh, Alan Rossner, Philip K. Hopke, Andrea R. Ferro, *Clarkson University*

2IA.2 1:00 **Critical Review of Particulate Matter Emitted from Biomass Cookstoves.** YUNGANG WANG, Ashok Gadgil, *Lawrence Berkeley National Laboratory*

2IA.3 1:00 **Gravimetric Analysis of Dust Loading and Human Exposure Assessment.** YAN MA, Lisa Bramwell, Andrea R. Ferro, *Clarkson University*

2IA.4 1:00 **Characterizing Particulate Formation and Filtration in Hookah smoke.** Jessica Annonio, Mac Gilliland, Timothy Oh, Jeff Baker, CINDY DEFOREST HAUSER, *Davidson College*

2IA.5 1:00 **Applications of Real-Time Quantitative Polymerase Chain Reaction in Assessing the Pseudomonas Aeruginosa in Air Environment.** MIAO-CHING CHI, *Chang Gung University of Science and Technology, Taiwan*

2IA.7 1:00 **Calibration of the Aerodynamic Particle Sizer using an Ink Jet Aerosol Generator (IJAG).** JANA KESAVAN, Jerold Bottiger, Deborah Schepers, Andrew McFarland, *US ARMY ECBC*

2IA.9 1:00 **Numerical Study of Thermophoresis Effects on Particle Dispersion in a Turbulent Channel Flow Using the V2F Turbulence Model.** Mohammad Majlesara, Mazyar Salmanzadeh, GOODARZ AHMADI, *Shahid Bahonar University of Kerman*

2IA.10 1:00 **Numerical Study of Various Parameters on Performance of Portable Air Cleaners in a Ventilated Room.** Vahid Akbari, Mazyar Salmanzadeh, GOODARZ AHMADI, *Shahid Bahonar University of Kerman*

2IA.11 1:00 **Development of Deodorizing and Sterilizing Filter.** YOUNGJIN SEO, Seong Jin Yun, Sang Hyeon Kang, Sun Yong Lee, Gi Chun Lee, Sang Bock Lee, Il Seouk Park, *The Environment Technology Institute, Coway Co., Ltd.*

2IA.12 1:00 **Nanoparticle Loading and Agglomeration in Charged and Discharged Electret Filter Media.** JAMES MONTGOMERY, Steven Rogak, Sheldon Green, *University of British Columbia*

2IA.13 1:00 **The Indoor Environment Within Green-Renovated Homes.** KANISTHA CHATTERJEE, Tiina Reponen, Chris Schaffer, Eric Kettleson, Reshmi Indugula, Sergey A. Grinshpun, Gary Adamkiewicz, Stephen Vesper, *University of Cincinnati*

2IM INSTRUMENTATION AND METHODS II: POSTERS

EXHIBIT HALL

2IM.1 1:00 **How Many Replicates Are Sufficient for Characterizing Cookstove Emissions: A Case Study Using the Berkeley-Darfur Stove and Three Stone Fire.** YUNGANG WANG, Ashok Gadgil, Thomas Kirchstetter, *Lawrence Berkeley National Laboratory*

2IM.2 1:00 **Comprehensive Single Particle Analysis by Aerosol Mass Spectrometry with Different Desorption and Ionisation Techniques.** MARKUS OSTER, Matthias Bente-von Frowein, Jürgen Schnelle-Kreis, Ralf Zimmermann, *Helmholtz Zentrum München*

2IM.3 1:00 **Comparison of the Ion Mobility Spectra of Four Different Bipolar Chargers.** PETER KALLINGER, Gerhard Steiner, Wladyslaw Szymanski, *University of Vienna*

2IM.4 1:00 **Development of Thermal Desorption – Comprehensive Two-Dimensional Gas Chromatography Coupled with Tandem Mass Spectrometry (TD–GC×GC–MS/MS) for Determination of Trace Polycyclic Aromatic Hydrocarbons and Their Derivatives in Diesel Exhaust and Atmosphere.** AKIHIRO FUSHIMI, Shunji Hashimoto, Teruyo Ieda, Nobuo Ochiai, Yoshikatsu Takazawa, Yuji Fujitani, Kiyoshi Tanabe, *National Institute for Environmental Studies*

2IM.5 1:00 **Improving the Resolution of Low Pressure Impactor.** ANSSI ARFFMAN, Jaakko Yli-Ojanperä, Jorma Keskinen, *Tampere University of Technology*

2IM.6 1:00 **Practical Implementation of a New Coincidence Correction Technique.** AARON COLLINS, William Dick, Francisco Romay, Lin Li, *MSP Corporation*

2IM.7 1:00 **Scattering Phase Function Measurements of PSLs and Ammonium Sulfate Particles.** PAUL KEBABIAN, Timothy Onasch, Joda Wormhoudt, Andrew Freedman, *Aerodyne Research, Inc.*

2IM.8 1:00 **Application of Ambient Ion Monitoring in the Athabasca Oil Sands Region.** YU-MEI HSU, *Wood Buffalo Environmental Association*

2IM.9 1:00 **Prediction of Balloon-Borne Impactor Collection Efficiency at Different Altitudes.** Gyuho Kim, SE-JIN YOOK, Kang-Ho Ahn, *Hanyang University*

2IM.10 1:00 **Calibration of a Condensation Particle Counter by Aerosol Particle Number Concentration System with Uncertainty Analysis.** GUO-DUNG CHEN, Ta-Chang Yu, *Center for Measurement Standards, ITRI, Taiwan*

2IM.11 1:00 **Atmospheric Aerosol Measurement Using All-in-One Balloon Particle Sampler System.** Kang-Ho Ahn, HONG-KU LEE, Hee-Ram Eun, Gun-Ho Lee, Dong-Hyun Yoo, *Hanyang University*

2IM.12 1:00 **Ultrafine Particle Monitor (TSI 3031) Measurements and Evaluation in New York City.** JAMES SCHWAB, G. Garland Lala, Kenneth Demerjian, Brian P. Frank, H. Dirk Felton, Oliver Rattigan, Robert Anderson, *University at Albany, SUNY*

2IM.13 1:00 **A Hi-Volume Dichot Sampler to Collect Fine and Coarse Particulate Matter for Chemical Composition.** Guan Zhao, Philip K. Hopke, Paul A. Solomon, SURESH DHANIYALA, *Clarkson University*

2IM.14 1:00 **The Low Cut Point Viable Bioaerosol Collector: Viability of E. coli Samples Collected at 300 L/min and Archived for 15 Days.** MARIA D. KING, Ray Pierson, Asmaa Kassab, *Texas A&M University*

2IM.15 1:00 **Intercomparison of Particle Sizing Between AMS, SMPS and FMPS.** BERTO LEE, Yong J. Li, Chak K. Chan, *Hong Kong University of Science and Technology*

2IM.16 1:00 **Development of Near Continuous Sampling Methods for On Line Measurement of Chemical and Toxicological Properties of Size Fractionated PM.** PAYAM PAKBIN, Constantinos Sioutas, Nancy Daher, Dongbin Wang, *University of Southern California*

2IM.17 1:00 **Constraining Particle Bounce in an Impactor.** ADAM BATEMAN, Scot Martin, *Harvard University*

2IM.19 1:00 **An Aerosol Detection Technique for Diesel Fuel Contaminants.** KAI XIAO, Jacob Swanson, Lin Li, Tsz Yan Ling, David Kittelson, David Pui, *University of Minnesota*

2IM.20 1:00 **High-Time Resolution Measurement of Particulate Matter Mass and Chemical Speciation.** CHEOL-HEON JEONG, Krystal J. Godri, Greg J. Evans, *SOCAAR, University of Toronto*

2IM.21 1:00 **Calibration of an Optical Particle Counter for low concentrations of 3 µm particles using a Wafer Surface Scanner.** LIN LI, Laura Windmuller, George Mulholland, Miles Owen, David Pui, *University of Minnesota*

2IM.23 1:00 **Determination of Polycyclic Aromatic Hydrocarbons and Their Oxidation Products in Particulate Matter Using Pressurized Fluid Extraction.** RICHARD COCHRAN, Nagaraju Dongari, Haewoo Jeong, Josef Beranek, Alena Kubatova, *University of North Dakota*

2IM.26 1:00 **Method Development and Field Evaluation of an Acidic Ultrafine Particle Detector.** Da-Wei Wang, Hai Guo, KALAM CHEUNG, Chak K. Chan, *Hong Kong Polytechnic University*

2IM.27 1:00 **Evaluation of the Classification Performance of the New Centrifugal Particle Mass Analyzer.** JONATHAN SYMONDS, *Cambustion*

2IM.28 1:00 **Quantification of Carboxylic Acid and Carbonyl Functional Groups in Organic Aerosol Infrared Absorbance Spectra.** SATOSHI TAKAHAMA, Anita Johnson, Lynn Russell, *Scripps Inst. of Oceanography; EPF Lausanne*

2IM.29 1:00 **Validating a Centrifugal Particle Mass Analyzer and Differential Mobility Spectrometer System for Mass-Mobility Measurements.** Tyler Johnson, Jonathan Symonds, JASON OLFERT, *University of Alberta*

2IM.30 1:00 **Investigation of Beta Attenuation Monitor Filter Rolls for Particulate Matter Speciation.** SURESH RAJA, Philip K. Hopke, Xia Xiaoyan, Sriraam Ramanathan Chandrasekaran, Lin Lin, Kalliat Valsaraj, Jon Klassen, James W. Sweet, *Providence Engineering and Environmental Group*

2IM.31 1:00 **Development of a Special Dust Feeder for Long-Term Aerosol Generation from Poor Flow Dust Materials.** STEPHAN GROSSE, *Topas GmbH*

2IM.32 1:00 **Two Sources of Errors in Determination of the Particle Concentration Reduction Factor of the Volatile Particle Remover Used in Legislated Vehicle Emission Measurement.** HIROMU SAKURAI, Keizo Saito, Tsuyoshi Taishi, Tetsuji Koyama, *AIST*

2IM.33 1:00 **Evaluation of a Personal Diffusion Battery.** DONNA VOSBURGH, Timothy Klein, Maura Sheehan, T. Renee Anthony, Thomas Peters, *University of Wisconsin-Whitewater*

2IM.34 1:00 **Development of a Mobile Atmospheric Reaction Chamber with Precision Thermodynamic Control for Generation of Complex Urban Air Mixtures.** JONATHAN KRUG, Michael Lewandowski, John Offenberg, Tadeusz Kleindienst, M. Ian Gilmour, *U.S. Environmental Protection Agency*

2MB SYMPOSIUM: INDOOR MICROBIOME I: POSTERS

EXHIBIT HALL

2MB.1 1:00 **The Effect of the Dust Samples Collected From Moisture Damaged Schools on the Immunological Cells: Results of HITEA-Study.** KATI HUTTUNEN, Martin Täubel, Juha Pekkanen, Anne Hyvärinen, Dick Heederik, Jan-Paul Zock, Maija-Riitta Hirvonen, *University of Eastern Finland, Kuopio, Finland*

2MB.4 1:00 **Coupling a Viable Bioaerosol Collector (VBAC) with Pyrosequencing to Characterize a Dynamic Bioaerosolization Event.** Juan Pedro Maestre, Andrew Hoisington, Sungwoo Bae, Maria D. King, KERRY KINNEY, *The University of Texas at Austin*

2MB.5 1:00 **Selectively Detecting Influenza Viruses in Exhaled Breath in Minutes Using Silicon Nanowire Sensor: A New Arena for Flu Diagnosis.** Fangxia Shen, Jindong Wang, Zhenqiang Xu, Yan Wu, Qi Chen, Xiaoguang Li, Jie Xu, Li Lidong, MAOSHENG YAO, Xuefeng Guo, Zhu Tong, *Peking University*

2MB.6 1:00 **Thermal Inactivation of Bioaerosol during Filtration.** HSING-WANG LI, Elizabeth Gomez, Brian Damit, Chang-Yu Wu, *University of Florida*

2MB.8 1:00 **The Floor Dust-Indoor Air Continuum: A Microbial Community Perspective.** DENINA HOSPODSKY, William Nazaroff, Jordan Peccia, *Yale University*

2MB.9 1:00 **Potential for Metabolic Activity of Bioaerosols.** Valdis Krumins, GEDIMINAS MAINELIS, Lee Kerkhof, ValaRae Partee, Donna Fennell, *Rutgers, The State University of New Jersey*

2UA URBAN AEROSOLS II: POSTERS

EXHIBIT HALL

2UA.5 1:00 **Seasonal and Spatial Variations of Individual Organic Compounds of Coarse Particulate Matter in the Los Angeles Basin.** KALAM CHEUNG, Michael Olson, Brandon Shelton, James Schauer, Constantinos Sioutas, *University of Southern California*

2UA.6 1:00 **Size-segregated Composition of Particulate Matter (PM) in Major Roadways and Surface Streets.** WINNIE KAM, James Liacos, James Schauer, Ralph Delfino, Constantinos Sioutas, *University of Southern California*

2UA.7 1:00 **Process Analysis and Sensitivity of Air Quality to Emissions in Pearl River Delta of China using CMAQ Model.** QI FAN, Wei Yu, Shaojia Fan, Jing Lan, YeRong Feng, *Sun yat-sen University*

2UA.9 1:00 **Quantification of Ultrafine Particles with Electric Charges in On- and Near-freeway Environments.** EON LEE, Bin Xu, Yifang Zhu, *University of California, Los Angeles*

2UA.10 1:00 **Measurement of Aerosol Number Concentrations in Houston, TX.** YU JUN LEONG, Longwen Gong, Robert Griffin, Barry Lefer, *Rice University*

2UA.11 1:00 **Non-Refractory Submicron Aerosol and Black Carbon Measurements in Background, Industrial and Traffic Sites in Santiago, Chile.** FELIPE REYES, Paula Reyes, Marcela Castillo, María A. Rubio, Ernesto Gramsch, Pedro Oyola, *Universidad de Santiago de Chile*

2UA.12 1:00 **Characteristics of Carbonaceous Compounds for PM2.5 Aerosols in the Gyeongsan Area, Korea.** INJO HWANG, Yeong-Jin Jeong, Min-Jae Jeong, *Daegu University*

2UA.13 1:00 **Chemical Characteristics of Submicrometer Aerosols at Urban Gwangju in Korea Measured with Aerosol Mass Spectrometer.** Kihong Park, Jiyeon Park, Seungyong Lee, HEE-JOO CHO, Minsoo Kang, *Gwangju Institute of Science and Technology*

2UA.14 1:00 **Diurnal Variation of On-road Black Carbon Pollution on the Motor Express Ways in Seoul.** SEUNG-BOK LEE, Bo-Eun Park, Dong-Hun Lee, Seung-Jae Lee, Dae-Kwang Woo, Hyoun-Cher Jin, Gwi Nam Bae, *Korea Institute of Science and Technology*

2UA.16 1:00 **Characterization of Rural and Urban PM2.5 and PM10-2.5 Mass Concentrations in Colorado from 3 Years of Continuous Monitoring.** NICHOLAS CLEMENTS, Jana Milford, Shelly Miller, Jennifer Peel, Michael Hannigan, *University of Colorado at Boulder*

2UA.17 1:00 **Characterization of Metal and Ion Concentrations in Rural and Urban PM2.5 and PM10-2.5 in Colorado.** Nicholas Clements, JENNY EAV, Allison Moore, Kelly Albano, Jana Milford, Shelly Miller, Michael Hannigan, *University of Colorado at Boulder*

2UA.18 1:00 **Spatially Resolved Elemental Air Pollution Concentrations in Southern California.** SCOTT FRUIN, Fred Lurmann, Ed Avol, *University of Southern California*

2UA.19 1:00 **Quantifying the Uncertainty of Particulate Matter in Regional Air Quality Models in the Presence of Uncertain Emission Inventories.** WENXIAN ZHANG, Marcus Trail, Alexandra Tsimpidi, Yongtao Hu, Athanasios Nenes, Armistead Russell, *Georgia Institute of Technology*

2UA.20 1:00 **Variations in Aerosol Size and Number During DISCOVER-AQ.** EDWARD WINSTEAD, Lee Thornhill, Andreas Beyersdorf, Charles Hudgins, Luke Ziemba, Bruce Anderson, *NASA Langley Research Center*

2UA.21 1:00 **Overview of ClearfLo Detling Site: Study of Aerosol Sources and Processing at a Rural Site Southeast of London.** LEAH WILLIAMS, Scott Herndon, John Jayne, Andrew Freedman, William Brooks, Jonathan Franklin, Paola Massoli, Edward Fortner, Puneet Chhabra, Mark Zahniser, Harald Stark, Timothy Onasch, Douglas Worsnop, Felipe Lopez-Hilfiker, Claudia Mohr, Joel A. Thornton, Nga Lee Ng, Lu Xu, Matthew Kollman, Berk Knighton, Mavendra Dubey, Allison Aiken, Kyle Gorkowski, Timothy Martin, Richard Coulter, *Aerodyne Research, Inc.*

2UA.22 1:00 **Numerical Study of Dust Deposition and Accumulation at the Entrance of Electrostatic Precipitators with a Bend.** Sadegh Naderinejad, Mazyar Salmanzadeh, GOODARZ AHMADI, Mohammad Yavarzadeh, *Shahid Bahonar University of Kerman*

2UA.23 1:00 **European Air Pollution Hot Spot in Winter 2012: Middle Scale PM2.5 Variability.** JAN HOVORKA, Michal Grégr, Martin Braniš, Petra Pokorná, Alexandra Baranová, *Charles University in Prague*

2UA.24 1:00 **European Air Pollution Hot Spot in Winter 2012: Distribution of PAH with Aerosol Particle Size.** JAN HOVORKA, Jan Topinka, Jan Bendl, Alexandra Baranová, Petra Pokorná, Martin Braniš, *Charles University in Prague*

2UA.25 1:00 **Spatial Distribution of Black Carbon, Polycyclic Aromatic Hydrocarbons and Volatile Organic Compounds During the Wintertime in Greater Pittsburgh Area.** YI TAN, Rawad Saleh, Eric Lipsky, Albert A. Presto, Neil Donahue, Allen Robinson, *Carnegie Mellon University*

2UA.26 1:00 **Characterization of Carbonaceous Particle Emissions by Mobile Sources in Sao Paulo (Brazil).** Maria de Fatima Andrade, Adalgiza Fornaro, Beatriz Oyama, Rita Ynoue, PIERRE HERCKES, *Arizona State University*

2UA.27 1:00 **Seasonal Variation of Organic Aerosols at Urban Gwangju, Korea Measured With Aerosol Mass Spectrometer.** Seungyong Lee, JIYEON PARK, Kihong Park, *Aerosol Technology and Monitoring Lab., GIST*

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

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

3AC AEROSOL CHEMISTRY III

NICOLLET A

Cari Dutcher and Wayne Chang, chairs

3AC.1 3:30 **Comparison of Laboratory Generated Secondary Organic Aerosol from Oxidation of Biogenic Volatile Organic Compound Mixtures and Remote Ambient Samples Using High Resolution Mass Spectrometry.** IVAN KOURTCHEV, Stephen Fuller, Juho Aalto, Robert Healy, Taina Ruuskanen, Willy Maenhaut, John Wenger, Markku Kulmala, Markus Kalberer, *University of Cambridge*

3AC.2 3:45 **Modeling Nanoparticle Growth in Biogenic VOC+Nitrate Radical Chamber Studies.** KELLEY C. BARSANTI, Juliane L. Fry, Danielle C Draper, John Ortega, Steven Brown, Peter Edwards, Michael J. Lawler, Paul M Winkler, Peter McMurry, James N. Smith, *Portland State University*

3AC.3 4:00 **An Evaluation of the Mixing and Evaporation of Organic Aerosol Components.** CHRISTINE LOZA, Matthew Coggon, Jill Craven, Wilton Mui, Katherine Schilling, Rebecca Schwantes, Lindsay Yee, Xuan Zhang, Richard Flagan, John Seinfeld, *Caltech*

3AC.4 4:15 **Laboratory Measurements of Organic Aerosol Chemical Composition: Primary Emissions and Secondary Formation from Biomass Combustion.** BRENT WILLIAMS, Raul Martinez, Peter Mellott, Dhruv Mitroo, Yaping Zhang, Pratim Biswas, Andrew Lambe, Kenneth Christian, William Brune, Thorsten Hohaus, Manjula Canagaratna, John Jayne, Douglas Worsnop, *Washington University in St. Louis*

3AC.5 4:30 **Effect of Temperature, Humidity, and Background Aerosol Concentrations on Organic Aerosol Emissions from Gasoline and Diesel Fueled Motor Vehicles.** Toshihiro Kuwayama, Isabel Faria, Peter Green, MICHAEL KLEEMAN, *UC Davis*

3AC.6 4:45 **The Role of the Precursor's Volatility and Structure on Secondary Organic Aerosol Formation: From Experiments to Models.** SHANTANU JATHAR, Marissa Miracolo, Daniel S. Tkacik, Peter Adams, Allen Robinson, *Carnegie Mellon University*

3AE AEROSOL EXPOSURE III

LAKE SUPERIOR

Maria D King and Seema Bhangar, chairs

3AE.1 3:30 **Paper-Based Microfluidic Devices for Aerosol Exposure Assessment.** David Cate, Josephine Cunningham, Mallory Mentele, Wijitar Dungchai, Yupaporn Sameenoi, Kirsten Koehler, Charles Henry, JOHN VOLCKENS, *Colorado State University*

3AE.2 3:45 **An Aerosol Sampler to Estimate Regional Deposition within the Human Respiratory Tract.** KIRSTEN KOEHLER, John Volckens, *Colorado State University*

3AE.3 4:00 **Evaluation of Real-time Instruments Used to Monitor PM in a Green Building.** ZUOCHENG WANG, Gediminas Mainelis, Leonardo Calderon, Clinton J. Andrews, Richard Wener, Jennifer Senick, MaryAnn Sorensen-Allacci, *Rutgers, The State University of New Jersey*

3AE.4 4:15 **Real-Time Measurements of Direct and Catalytic Aerosol Oxidative Activity.** Yupaporn Sameenoi, Meghan Mensack, Kirsten Koehler, Jeff Shapiro, Jeffrey L. Collett, John Volckens, CHARLES HENRY, *Colorado State University*

3AE.5 4:30 **Nanoparticle Characterization for Exposure Studies.** KAARLE HAMERI, Joonas Koivisto, *University of Helsinki, Department of Physics*

3AE.6 4:45 **Facial Effect on Regional Deposition of Aerosols in Human Upper Airway System in Calm Air Condition.** Arash Naseri, Pejman Farhadi Ghalati, Omid Abouali, GOODARZ AHMADI, *Shiraz University*

3AN SYMPOSIUM: AEROSOL NUCLEATION: FROM CLUSTERS TO NANOPARTICLES II

REGENCY ROOM

Lea Hildebrandt Ruiz and Chris Hogan, chairs

3AN.1 3:30 **The vSANC – An Instrument for Basic Nucleation Studies and Ambient Measurements of Nanoparticles.** TAMARA PINTERICH, Paul M Winkler, Paul E. Wagner, Aron Vrtala, *Universitaet Wien, Vienna, Austria*

3AN.2 3:45 **Evidence for Surface Freezing in Supercooled n-Alkane Nanodroplets.** VIRAJ MODAK, Harshad Pathak, Mitchell Thayer, Sherwin Singer, Barbara Wyslouzil, *The Ohio State University*

3AN.3 4:00 **Monomer, Clusters, Liquid: An Integrated Study of Methanol Condensation.** BARBARA WYSLOUZIL, Hartawan Laksmono, Shinobu Tanimura, Heather Allen, Gerald Wilemski, Mark Zahniser, Joanne Shorter, David Nelson, J. Barry McManus, *The Ohio State University*

3AN.4 4:15 **Sulfuric Acid Nucleation: A Systematic Study of the Effect of Bases.** WALKER GLASOE, Baradan Panta, Juliana Zollner, David Hanson, *Augsburg College*

3AN.5 4:30 **DMA-MS Measurement of Water Vapor Uptake by Charged Clusters Under Sub-Saturated Conditions.** DEREK OBERREIT, Carlos Larriba, Peter McMurry, Christopher Hogan Jr., *University of Minnesota*

3AN.6 4:45 **The Roles of Gaseous Oxidation Products in Organic Nucleation from Ozonolysis of Atmospheric Terpenes.** JUN ZHAO, Paul M Winkler, John Ortega, Peter McMurry, James N. Smith, *National Center for Atmospheric Research*

3CC AEROSOLS, CLOUDS, AND CLIMATE III

NICOLLET B/C

Athanasios Nenes and Markus Petters, chairs

3CC.1 3:30 **Causes of the Seasonal Variation of Cloud Effective Radii over Oceans.** HANNELE KORHONEN, Anton Laakso, *Finnish Meteorological Institute*

3CC.2 3:45 **Using a Global Model Adjoint to Unravel the Footprint of Spatially-Distributed Emissions on Cloud Properties.** VLASSIS KARYDIS, Shannon Capps, Daven Henze, Athanasios Nenes, *Georgia Institute of Technology*

3CC.3 4:00 **Evaluation of the Sectional Aerosol Model SALSA within the Aerosol-Climate Model ECHAM5-HAM.** TOMMI BERGMAN, Veli-Matti Kerminen, Hannele Korhonen, Kari Lehtinen, Risto Makkonen, Antti Arola, Tero Mielonen, Sami Romakkaniemi, Markku Kulmala, Harri Kokkola, *Finnish Meteorological Institute*

3CC.4 4:15 **The Importance of the Cloud Processing of Aerosols in Predicting in Aerosol Nucleation, Growth and CCN.** JEFFREY PIERCE, Betty Croft, *Dalhousie University*

3CC.5 4:30 **Kinetics of Droplet Growth Observed in Recent Field Campaigns.** FAN MEI, Jian Wang, *Brookhaven National Laboratory*

3CC.6 4:45 **Eastern Pacific Emitted Aerosol Cloud Experiment (E-PEACE).** LYNN RUSSELL, Armin Sorooshian, John Seinfeld, Bruce Albrecht, Athanasios Nenes, Lars Ahlm, Yi-Chun Chen, Matthew Coggon, Jill Craven, Richard Flagan, Amanda Frossard, Haflidi Jonsson, Eunsil Jung, Jack Lin, Andrew Metcalf, Rob Modini, Johannes Muelmenstaedt, Greg Roberts, Taylor Shingler, Siwon Song, Edwin Sumargo, Zhen Wang, Anna Wonaschutz, *Scripps Institution of Oceanography*

3CO COMBUSTION III

MIRAGE ROOM

Wei-Ning Wang and Ying Li, chairs

3CO.1 3:30 **Dynamic Changes in the Aerosol Composition and Concentration During Different Burning Phases of Wood Combustion.** MICHAEL ELSASSER, Christian Busch, Jürgen Orasche, Hans Hartmann, Jürgen Schnelle-Kreis, Ralf Zimmermann, *Helmholtz Zentrum München*

3CO.2 3:45 **Polycyclic Aromatic Hydrocarbon Emissions in Transient Wood Combustion.** Axel Eriksson, Erik, Z Nordin, Robin Nyström, Esbjörn Pettersson, Christoffer Bergvall, Roger Westerholm, Erik Swietlicki, Christoffer Boman, JOAKIM PAGELS, *Lund University, Lund, Sweden*

3CO.3 4:00 **Particulate Matter and Other Criteria Pollutants Reduced by Algae Fuel in Marine Vessels.** M. Yusuf Khan, William A. Welch, Robert L. Russell, David R. Cocker III, MARYAM HAJBABAEI, *UC Riverside*

3CO.4 4:15 **Fate of Nanomaterials and Byproducts During Combustion.** ERIC VEJERANO, Amara Holder, Linsey Marr, *Virginia Tech*

3CO.5 4:30 **Detailed Characterization of Shape-Selected Fractal Soot Particles.** ALLA ZELENYUK, Dan Imre, Josef Beranek, Paul Reitz, *Pacific Northwest National Laboratory*

3CO.6 4:45 **Pro-inflammatory Responses of Diesel Engine Exhaust Particles - Impact of Organic Compounds.** ANNIKE IRENE TOTLANDSDAL, Alena Kubatova, Johan Øvrevik, Richard Cochran, Jan Inge Herseth, Anette Kocbach Bølling, Per E Schwarze, Flemming R Cassee, Edel Lilleaas, Magne Refsnes, Jørn A Holme, Marit Låg, *Norwegian Institute of Public Health, Norway*

3UA URBAN AEROSOLS III

NICOLLET D

Jay Slowik and Nancy Daher, chairs

3UA.1 3:30 **Long-term Measurements of Aerosol Particle Composition with an Aerosol Chemical Speciation Monitor in Megacity Beijing, China.** YELE SUN, Zifa Wang, Ting Yang, Xiaole Pan, Pingqing Fu, Huabin Dong, Jie Li, Ping Chen, John Jayne, *Institute of Atmospheric Physics, Chinese Academy of Science*

3UA.2 3:45 **Long-Term Aerosol Mass Spectrometric Measurements in Zurich.** Francesco Canonaco, JAY SLOWIK, Andre Prévôt, Urs Baltensperger, *Paul Scherrer Institute*

3UA.3 4:00 **PMF Analysis of Urban and Transported Aerosols in Fukuoka, Japan.** AKINORI TAKAMI, Takao Miyoshi, Satoshi Irei, Keiichiro Hara, Masahiko Hayashi, Naoki Kaneyasu, *NIES*

3UA.4 4:15 **Chemical Characterization of Sub-micron Aerosol Particles with the ACSM in Santiago, Chile.** SAMARA CARBONE, Sanna Saarikoski, Felipe Reyes, Paula Reyes, Marcela Castillo, Pedro Oyola, John Jayne, Risto Hillamo, *Finnish Meteorological Institute*

3UA.5 4:30 **Characteristics of Ambient Aerosol at a Suburban Site in Hong Kong During Springtime Using Aerosol Mass Spectrometry.** BERTO LEE, Yong J. Li, Chak K. Chan, Jian Zhen Yu, Peter Louie, *Hong Kong University of Science and Technology*

3UA.6 4:45 **Chemical Characterization and Redox Activity of Fine and Coarse Particulate Matter in Milan, Italy.** NANCY DAHER, Ario Ruprecht, Giovanni Invernizzi, Cinzia De Marco, Justin Miller-Schulze, Jong Bae Heo, Martin Shafer, Brandon Shelton, James Schauer, Constantinos Sioutas, *University of Southern California*

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: Embracing Complexity: Deciphering Origins and Transformations of Atmospheric Organics through Speciated Measurements** Allen Goldstein, *University of California, Berkeley*

Moderator Cliff Davidson, *Syracuse University*

9:00 **Whitby Award and Liu Award Presentations** Sonia Kreidenweis, Awards Committee Chair, *Colorado State University, Fort Collins*

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

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

Wednesday 9:45 AM - 11:30 AM
Session 4: Platform

4AC AEROSOL CHEMISTRY IV

NICOLLET A

Eben Cross and Mackenzie Smith, chairs

4AC.1 9:45 **Thermodynamic Properties and Evaporation Kinetics of DOP, DEHS, and Oleic Acid Aerosols.** ALAN SHIHADEH, Sarah Safieddine, Rawad Saleh, Andrey Khlystov, *American University of Beirut*

4AC.2 10:00 **The Importance of Relative Humidity and Particle Phase on the Oxidation of Unsaturated Compounds in Aerosols.** PETER GALLIMORE, Francis Pope, Pattanun Achakulwisut, Jason Lee, Stephen Fuller, Vanesa Carrascon, James F. Davies, Alex Björkegren, David Spring, Markus Kalberer, *University of Cambridge*

4AC.3 10:15 **Ammonia Uptake by Pure and Secondary Organic Aerosol Particles: Dependence on Particle Phase.** SCOT MARTIN, Mikinori Kuwata, Ronan Lebouteiller, *Harvard University*

4AC.4 10:30 **Deliquescence, Efflorescence, and Phase Miscibility of Mixed Particles of Aqueous Ammonium Sulfate and Isoprene-Derived Secondary Organic Material.** MACKENZIE SMITH, Allan Bertram, Scot Martin, *Harvard University*

4AC.5 10:45 **Equilibration Time Scales of Secondary Organic Aerosol from Alpha-pinene Ozonolysis.** RAWAD SALEH, Allen Robinson, *Carnegie Mellon University*

4AC.6 11:00 **Novel Experiments Give Quantitative Measure of Atmospheric Particle Viscosities.** LINDSAY RENBAUM-WOLFF, Allan Bertram, Adam Bateman, Mikinori Kuwata, Scot Martin, *University of British Columbia*

4AC.7 11:15 **Comparison of Heterogeneous Oxidation Products of Branched and Normal Alkanes, as Characterized by Two-dimensional Gas Chromatography with Vacuum Ultraviolet High-Resolution Time-of-Flight Mass Spectrometry.** CHRIS RUEHL, Theodora Nah, Gabriel Isaacman, David Worton, Arthur Chan, Katheryn Kolesar, Christopher Cappa, Allen H. Goldstein, Kevin Wilson, *Univeristy of California, Berkeley*

4AN SYMPOSIUM: AEROSOL NUCLEATION: FROM CLUSTERS TO NANOPARTICLES III

NICOLLET B/C

Chongai Kuang and Jeff Pierce, chairs

4AN.1 9:45 **Computational Chemistry of Condensing and Clustering Vapors.** Theo Kurten, NEIL DONAHUE, Ditte Linde Thomsen, Henrik Kjaergaard, Joseph Lane, Solvejg Jørgensen, Hanna Vehkamäki, *University of Helsinki*

4AN.2 10:00 **Equilibrium Size Distributions of Neutral and Negatively Charged Sulfuric Acid-Water Clusters from Self-Consistent Thermodynamic Tables.** JAMISON A. SMITH, Karl D. Froyd, Owen B. Toon, *University of Colorado*

4AN.3 10:15 **Structure and Energetics of Uncharged Sulfuric Acid Clusters with Ammonia and Amines.** JOSEPH DEPALMA, Douglas Doren, Murray Johnston, *University of Delaware*

4AN.4 10:30 **Insights from Cluster Thermodynamics: Atmospheric Conditions that Promote Nucleation for a Variety of Neutral and Ionic Systems.** KARL D. FROYD, *National Oceanic & Atmospheric Administration*

4AN.5 10:45 **First-Principles Molecular Dynamics Simulation of Sulfuric Acid - Ammonia/Dimethylamine Clusters.** VILLE LOUKONEN, I-Feng William Kuo, Matt J. McGrath, Hanna Vehkamäki, *University of Helsinki*

4AN.6 11:00 **Nucleation Free Energy Landscapes: Sensitivity to Force Fields and Influence of Salt Nanoparticles.** SAMUEL KEASLER, Christopher Hogan Jr., Ilja Siepmann, *University of Minnesota*

4AN.7 11:15 **Molecular Dynamics Simulations of Aqueous-Organic Binary and Ternary Nanodroplets.** Fawaz Hrahsheh, GERALD WILEMSKI, *Missouri University of Science and Technology, Rolla MO*

4CH CONTROL TECHNOLOGY AND HOMELAND SECURITY II

MIRAGE ROOM

Emanuele Cauda and Marit Meyer, chairs

4CH.1 9:45 **Aerosol Test Particles with DNA Barcodes.** RUTH N. UDEY, Elizabeth K. Wheeler, Brian R. Baker, A. Daniel Jones, George R. Farquar, *Lawrence Livermore National Laboratory*

4CH.2 10:00 **The Multiwavelength Aerosol Signature Testbed for BSL3 (MAST-3) Program.** JONATHAN RICHARDSON, Robert Martinez, Joseph Lacirignola, Edward Froehlich, Andreas Gennis, Richard Vanderbeek, Mary Wade, Todd Sickler, Amber Prugh, Kevin Hung, *MIT*

4CH.3 10:15 **High Temperature Short-Time Infrared Disinfection of Bioaerosols.** BRIAN DAMIT, Chang-Yu Wu, *University of Florida*

4CH.4 10:30 **Collection of Aerosolized Bacterial Endospores from Post-Explosion/Combustion Air Environments.** SERGEY A. GRINSHPUN, Michael Yermakov, Reshmi Indugula, Atin Adhikari, Tiina Reponen, *University of Cincinnati*

4CH.5 10:45 **Use of Atmospheric Pressure Non-thermal Plasma for Rapid Bioaerosol Inactivation.** Yan Wu, Yongdong Liang, Ke Sun, Qi Chen, Fangxia Shen, Jue Zhang, MAOSHENG YAO, Tong Zhu, Jing Fang, *Peking University*

4CH.6 11:00 **Experimental Study of Agglomerate Particle Filtration Using Flat Filter Media.** QISHENG OU, Da-Ren Chen, *Washington University in St. Louis*

4CH.7 11:15 **A Thermal Precipitator for Fire Characterization Research.** MARIT MEYER, Victoria Bryg, *NASA Glenn Research Center*

4IA INDOOR AEROSOLS II

LAKE SUPERIOR

Jeffrey Siegel and Josh Apte, chairs

4IA.1 9:45 **Ultrafine Particle Removal by Central Heating and Air-Conditioning Filters in a Test House.** BRENT STEPHENS, Jeffrey Siegel, *Illinois Institute of Technology*

4IA.2 10:00 **Experimental Comparison of Dust Resuspension Using a Consistent Test Mechanism.** YILIN TIAN, Kyung Sul, Jing Qian, Andrea R. Ferro, *Clarkson University*

4IA.3 10:15 **Ozone-initiated Oxidation of Indoor Organics and its Potential Health Impact.** Guang Zeng, Hai Pham, Vu Luong Duc, YONG LIU, *University of Colorado Denver*

4IA.4 10:30 **Formation, Morphology and Hygroscopic Growth of Indoor Aerosols Formed by Oxidation of Household Products.** Andrew Hritz, Dabrina Dutcher, TIMOTHY RAYMOND, *Bucknell University*

4IA.5 10:45 **Particle Detachment, Resuspension and Dispersion Due to Human Induced Flow Field in Gate Cycle.** IMAN GOLDASTEH, Yilin Tian, Kyung Sul, Goodarz Ahmadi, Andrea R. Ferro, *Clarkson University*

4IA.6 11:00 **Identifying the Indoor Particle Resuspension Mechanism for Human Walking.** KYUNG SUL, Iman Goldasteh, Pooya Kabiri, Douglas Bohl, Goodarz Ahmadi, Andrea R. Ferro, *Clarkson University*

4IA.7 11:15 **Effect of Store Type, Location and Season on the Microorganisms Captured in HVAC Filter Dust Recovered from Retail Facilities.** ANDREW HOISINGTON, Juan Pedro Maestre, Sungwoo Bae, Jeffrey Siegel, Kerry Kinney, *The University of Texas at Austin*

4IM INSTRUMENTATION AND METHODS III

REGENCY ROOM

Jason Surratt and Reddy Yatavelli, chairs

4IM.1 9:45 **Characterization of Organic Aerosol Using Electrospray Ionization Coupled to Ion Mobility Spectrometry High-Resolution Time-of-Flight Mass Spectrometry (ESI-IMS-HR-TOFMS).** JASON SURRATT, Ying-Hsuan Lin, Joel Kimmel, Manjula Canagaratna, Richard Knochenmuss, Douglas Worsnop, *University of North Carolina at Chapel Hill*

4IM.2 10:00 **Atmospheric Amine Measurements with CI-APi-TOF.** TUIJA JOKINEN, Mikko Sipilä, Heikki Junninen, Mikael Ehn, Gustaf Lönn, Jani Hakala, Roy Lee III Mauldin, Tuukka Petäjä, Markku Kulmala, Douglas Worsnop, *University of Helsinki*

4IM.3 10:15 **Direct Surface Analysis of Size- and Time- Resolved Organic Aerosol.** STEPHEN FULLER, Markus Kalberer, Yongjing Zhao, Anthony Wexler, *University of Cambridge*

4IM.4 10:30 **Introducing the Volatility and Polarity Separator (VAPS) for Total Organic Aerosol Characterization.** RAUL MARTINEZ, Brent Williams, Yaping Zhang, Peter Mellott, Nathan Kreisberg, Susanne Hering, David Worton, Allen H. Goldstein, Thorsten Hohaus, Manjula Canagaratna, Donna Sueper, John Jayne, Douglas Worsnop, *Washington University in St. Louis*

4IM.5 10:45 **Advanced Analysis Procedures of Ambient Organic Aerosol from Thermal Desorption – Mass Spectrometry Measurement Techniques.** YAPING ZHANG, Brent Williams, Raul Martinez, Manjula Canagaratna, Douglas Worsnop, Allen H. Goldstein, Ingrid Ulbrich, Donna Sueper, Jose-Luis Jimenez, *Washington University in St. Louis*

4IM.6 11:00 **A Hybrid Impactor-Filter Collector Extends Semi- and Non-volatile Organic Aerosol Speciation by Thermal Desorption Aerosol Gas Chromatography (TAG).** NATHAN KREISBERG, Yunliang Zhao, Chris Ruehl, Allen H. Goldstein, Susanne Hering, *Aerosol Dynamics Inc.*

4IM.7 11:15 **Influence and Efficiency of a Catalytic Stripper in Organic Carbon Removal from Laboratory Generated Soot Aerosols.** JELICA PAVLOVIC, John Kinsey, *ORISE U.S.EPA*

4UA URBAN AEROSOLS IV

NICOLLET D

Ng Nga Lee (Sally) and Pierre Herckes, chairs

4UA.1 9:45 **Aerosol Composition at a Rural Site Southeast of London Measured by High Resolution Mass Spectrometry.** NGA LEE NG, Lu Xu, Matthew Kollman, John Jayne, Scott Herndon, William Brooks, Leah Williams, Paola Massoli, Edward Fortner, Puneet Chhabra, Timothy Onasch, Douglas Worsnop, *Georgia Institute of Technology*

4UA.2 10:00 **Optical Characterization of Aerosols at a Rural Site in Southeast England During the Winter ClearfLo Campaign.** Paola Massoli, Allison Aiken, Kyle Gorkowski, Scott Herndon, Edward Fortner, John Jayne, William Brooks, LEAH WILLIAMS, Puneet Chhabra, Nga Lee Ng, Timothy Onasch, Jonathan Franklin, Mavendra Dubey, Douglas Worsnop, Andrew Freedman, *Aerodyne Research, Inc*

4UA.3 10:15 **Seasonal Comparison of Comprehensive Aerosol Measurements in London During ClearfLo.** DOMINIQUE YOUNG, James Allan, Paul Williams, Michael Flynn, Dantong Liu, James Whitehead, Niall Robinson, Andre Prévôt, Suzanne Visser, Markus Furger, Martin Gallagher, Hugh Coe, *University of Manchester*

4UA.4 10:30 **Fog Processing of Particulate Molecular Marker Species.** Jershon Eagar, Franz Ehrenhauser, Youliang Wang, James Hutchings, Aurelie Marcotte, Olivier Delhomme, Raghava Kommalapati, Mary Wornat, Kalliat Valsaraj, PIERRE HERCKES, *Arizona State University*

4UA.5 10:45 **Air Quality Impacts of a Scheduled 36-hour Closure of a Major Highway.** DAVID QUIROS, Qunfang Zhang, Suzanne Paulson, Rui Wang, Wonsik Choi, Arthur Winer, Yifang Zhu, *University of California Los Angeles*

4UA.6 11:00 **MOUDI Size-Resolved Measurements of Elemental and Brown Carbon and Their Contributions to Light Absorption Based on Mie Theory Calculations.** JIUMENG LIU, Michael Bergin, Rodney Weber, *Georgia Institute of Technology*

4UA.7 11:15 **Investigation of Ultrafine Particle Deposition onto Vegetation Branches in a Wind Tunnel.** MING-YENG LIN, Gabriel Katul, Andrey Khlystov, *Research Triangle Institute*

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

5AN SYMPOSIUM: AEROSOL NUCLEATION: FROM CLUSTERS TO NANOPARTICLES IV

NICOLLET B/C

Kari Lehtinen and James Smith, chairs

5AN.1 1:00 **An Acid-Base Chemical Reaction Model for Nucleation Rates in the Polluted Boundary Layer.** MODI CHEN, Mari Titcombe, Jingkun Jiang, Jun Zhao, Chongai Kuang, Ilja Siepmann, David Hanson, Peter McMurry, *University of Minnesota*

5AN.2 1:15 **Dimethylamine-Sulfuric Acid Clustering Can Explain Observed Atmospheric New Particle Formation.** Ismael Kenneth Ortega Colomer, Oona Kupiainen, Tinja Olenius, Matt J. McGrath, Theo Kurten, VILLE LOUKONEN, Taina Yli-Juuti, Ilona Riipinen, Johannes Leppä, Markku Kulmala, Hanna Vehkamäki, *University of Helsinki*

5AN.3 1:30 **Flux Induced Growth of Sub-Kelvin Nano-Particles by Organic Vapor.** JIAN WANG, Robert McGraw, Chongai Kuang, *Brookhaven National Laboratory*

5AN.4 1:45 **Using Simulated Particle Formation Events for Testing and Improving Event Analysis Tools.** KARI LEHTINEN, Hannele Korhonen, Johannes Leppä, Veli-Matti Kerminen, *Finnish Meteorological Institute, Kuopio, Finland*

5AN.5 2:00 **Potential Factors Limiting Growth of Nucleated Particles into Cloud Condensation Nuclei.** DANIEL WESTERVELT, Jeffrey Pierce, Peter Adams, *Carnegie Mellon University*

5AN.6 2:15 **Nanoparticle Chemical Composition During New Particle Formation.** BRYAN R. BZDEK, M. Ross Pennington, Murray Johnston, *University of Delaware*

5AN.7 2:30 **The Role of Nitrate in New Particle Formation: Results from Ambient Measurements and Models.** LEA HILDEBRANDT RUIZ, James N. Smith, Ilona Riipinen, Kelley C. Barsanti, Juliane L. Fry, Taina Yli-Juuti, Tuukka Petäjä, Markku Kulmala, Peter McMurry, *National Center for Atmospheric Research*

5AN.8 2:45 **The Effect of Coal-Fired Power Plant SO2, NOX Control Technologies and Background Particle Concentrations on Aerosol Nucleation and Growth in Source Plumes.** CHANTELLE LONSDALE, Robin Stevens, Charles Brock, Paul Makar, Jeffrey Pierce, *Dalhousie University*

5CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE I

NICOLLET A

Alla Zelenyuk and Betsy Stone, chairs

5CA.1 1:00 **Organic Aerosols: What Happens Where and How Fast.** NEIL DONAHUE, *Carnegie Mellon University*

5CA.2 1:15 **Molecular Composition of Water-Soluble Organic Carbon in Nonurban Aerosols.** LYNN MAZZOLENI, Parichehr Saranjampour, Megan Dalbec, Vera Samburova, Anna Gannet Hallar, Barbara Zielinska, Douglas Lowenthal, *Michigan Technological University*

5CA.3 1:30 **Evaluating the Degree of Oxygenation of Organic Aerosols During Foggy Days and Hazy Days in Springtime in Hong Kong Using High-Resolution Time-of-Flight Aerosol Mass Spectrometry (HR-ToF-AMS).** Yong J. Li, BERTO LEE, Chak K. Chan, *Hong Kong University of Science and Technology*

5CA.4 1:45 **Comparison of Biomass Burning Organic Aerosol Mixing Ratios and Their Evolution With Aging.** MATTHEW JOLLEYS, Hugh Coe, Gordon McFiggans, Gerard Capes, James Allan, Jonathan Crosier, Paul Williams, Grant Allen, Keith Bower, Jose-Luis Jimenez, *University of Manchester*

5CA.5 2:00 **Aging of Biomass Burning Aerosols: Comparison of Smog Chamber Experiments with Ambient Aerosols.** JEFFREY L. COLLETT, Yury Desyaterik, Amy P. Sullivan, Christopher Hennigan, Allen Robinson, Amanda Holden, Sonia Kreidenweis, Bret Schichtel, *Colorado State University*

5CA.6 2:15 **Probing Complex Hydrocarbon Mixtures in Atmospheric Organic Aerosols: Insights into Sources and Mechanisms.** ARTHUR CHAN, Gabriel Isaacman, David Worton, Chris Ruehl, Katherine Schilling, John Seinfeld, Kevin Wilson, Allen H. Goldstein, *University of California, Berkeley*

5CA.7 2:30 **Density and Elemental Ratios of Secondary Organic Aerosol: Application of a Density Prediction Method.** SHUNSUKE NAKAO, Ping Tang, Xiaochen Tang, Christopher Clark, Li Qi, Eric Seo, Chia-Li Chen, Akua Asa-Awuku, David R. Cocker III, *University of California, Riverside*

5CA.8 2:45 **Investigation of Organic Aerosol Wet Removal during Fog Events.** STEFANIA GILARDONI, Lara Giulianelli, Matteo Rinaldi, Vanes Poluzzi, Silvia Ferrari, Paola Massoli, M. Cristina Facchini, *ISAC-CNR*

5FM SYMPOSIUM: SYNTHESIS OF FUNCTIONAL MATERIALS USING FLAMES, PLASMAS AND OTHER AEROSOL METHODS II

MIRAGE ROOM

Steven Girshick and Gerhard Kasper, chairs

5FM.1 1:00 **Flame Synthesis of Aerosol Gels.** RAJAN CHAKRABARTY, Christopher Stipe, Hans Moosmuller, *Desert Research Institute*

5FM.2 1:15 **Aerosol Growth and Potential Applications of Carbon Nanostructures.** Ji Hoon Kim, Kook Joo Moon, Ji Young Ahn, SOO H. KIM, *Pusan National University*

5FM.3 1:30 **Combustion-Driven One Step Synthesis of Non-Oxide Nanoparticle Hybrid Films in a High Temperature Reducing Jet Reactor.** Munish Sharma, Raymond Buchner, William Scharmach, Vasilis Papavassiliou, MARK SWIHART, *University at Buffalo (SUNY)*

5FM.4 1:45 **Effect of Shape of Au Nanoparticles on the Photoelectrochemical Water-Splitting Performance of Au-TiO2 Nanocomposite Thin Films.** TANDEEP CHADHA, Jinho Park, Woo-Jin An, Pratim Biswas, *Washington University in St. Louis*

5FM.5 2:00 **Nanoparticle Synthesis and In-Situ In-Flight Functionalization in an Inductively Coupled Plasma Reactor.** CHRISTOPHE DELVAL, Marc Leparoux, Christian Jaeggi, *Empa, Laboratory for Advanced Materials Processing, Feuerwer*

5FM.6 2:15 **Numerical Study of Growth Process of Binary Alloy Nanopowders in Thermal Plasma Synthesis.** MASAYA SHIGETA, Takayuki Watanabe, Toyonobu Yoshida, *Tohoku University*

5FM.7 2:30 **Plasma-Produced Silicon Nanocrystals for Light-Emitting Devices.** REBECCA J. ANTHONY, Kai-Yuan Cheng, Zachary C. Holman, Russell J. Holmes, Uwe R. Kortshagen, *University of Minnesota*

5FM.8 2:45 **Aerosol Synthesis of Superparamagnetic Silica-Coated Iron Oxide Nanoparticles.** PINGYAN LEI, Steven Girshick, *University of Minnesota*

5IM INSTRUMENTATION AND METHODS IV

REGENCY ROOM

Chongai Kuang and Susanne Hering, chairs

5IM.1 1:00 **Neutralization of Electrosprayed Particles via Photo-ionizer.** QIAOLING LIU, Da-Ren Chen, *Washington University in St. Louis*

5IM.2 1:15 **A New Instrument to Classify Particles by Their Aerodynamic Size.** Farzan Tavakoli, Jonathan Symonds, JASON OLFERT, *University of Alberta*

5IM.3 1:30 **Polar Nephelometer for the Measurement of the Particle Asymmetry Parameter.** Paul Kebabian, TIMOTHY ONASCH, Joda Wormhoudt, Andrew Freedman, *Aerodyne Research, Inc.*

5IM.4 1:45 **Particle Size Distributions Following Condensational Growth in Continuous Flow Aerosol Reactors as Derived from Residence Time Distributions: Theoretical Development and Application to Secondary Organic Aerosol.** MIKINORI KUWATA, Scot Martin, *Harvard University*

5IM.5 2:00 **Water-Based Fast Integrated Mobility Spectrometer.** STEVEN SPIELMAN, Chongai Kuang, Jian Wang, Susanne Hering, *Aerosol Dynamics Inc.*

5IM.6 2:15 **The Impact of Efficient Trapping Millions of Atmosphere-Sampled Singly-Charged Nanoparticles up to 200 nm.** PETER T. A. REILLY, Xinyu Wang, Huijuan Chen, Katherine G. E. Donahoe, *Washington State University*

5IM.7 2:30 **Field Testing of Genetically Tagged Spores for Specific Detection and Tracking of Biological Simulants in the Environment.** TIFFANY SUTTON, *US Army Edgewood Chemical Biological Center*

5IM.8 2:45 **Multiple Charging Correction for SMPS Algorithm.** Meilu He, SURESH DHANIYALA, *Clarkson University*

5MB SYMPOSIUM: INDOOR MICROBIOME II

LAKE SUPERIOR

Jordan Peccia and Tiina Reponen, chairs

5MB.1 1:00 **Fungal Concentrations in Air Samples Correlated with Environmental Relative Moldiness Index Values in French Homes.** DELPHINE MÉHEUST, Pierre Le Cann, Tiina Reponen, Larry Wymer, Stephen Vesper, Jean-Pierre Gangneux, *Ecole des Hautes Etudes en Santé Publique, IRSET, France*

5MB.2 1:15 **Phylogenetic-based Fungal Population Comparisons of Dust Collected from Water-damaged and Nonwater-Damaged Homes.** KAREN DANNEMILLER, Jordan Peccia, *Yale University*

5MB.3 1:30 **Spatiotemporal Analysis of Microbial Diversity Patterns from the 454 Pyrosequencing of Bioaerosols Recovered from Flooded Commercial Office Environments.** Kevin McCabe, Alina M. Handorean, Bharath Prithiviraj, Alison L. Ling, Keeley Hernandez, Norman R. Pace, MARK T. HERNANDEZ, *University of Colorado at Boulder*

5MB.4 1:45 **Stenotrophomonas Maltophilia Exposure in Homes.** ERIC KETTLESON, Sudhir Kumar, Delphine Méheust, Sergey A. Grinshpun, Tiina Reponen, Stephen Vesper, Atin Adhikari, *University of Cincinnati*

5MB.5 2:00 **Microbial Content of Vacuum Cleaner Dust and Emitted Bioaerosols.** CAROLINE DUCHAINE, Luke Knibbs, Congrong He, Marc Veillette, Ariane Pelletier, Remi Charlebois, Lidia Morawska, *Université Laval, Canada*

5MB.6 2:15 **Detection of Tetracycline Resistance and Class 1 Integrase Genes in Indoor and Outdoor Air.** ALISON L. LING, Mark T. Hernandez, Norman R. Pace, Timothy M. LaPara, *University of Colorado*

5MB.7 2:30 **Comparing the Indoor Microbiome from Seven Different Bioaerosol Samplers.** ANDREW HOISINGTON, Juan Pedro Maestre, Sungwoo Bae, Kerry Kinney, Jeffrey Siegel, Maria D. King, *The University of Texas at Austin*

5MB.8 2:45 **Indoor Bioaerosol Dynamics: Fluorescent Particles in a College Classroom.** SEEMA BHANGAR, Elizabeth Heredia, J. Alex Huffman, William Nazaroff, *University of California, Berkeley, CA*

5UA URBAN AEROSOLS V

NICOLLET D

Tim Gordon and Tim Dallmann, chairs

5UA.1 1:00 **Characterization of Exhaust Emissions from In-Use Motor Vehicles.** TIMOTHY DALLMANN, Steven DeMartini, Thomas Kirchstetter, David Worton, Edward Fortner, Scott Herndon, Timothy Onasch, Ezra Wood, Robert Harley, *University of California, Berkeley*

5UA.2 1:15 **On-road Emission Factors of PM Pollutants for Light-duty Vehicles (LDVs) Based on Real-world Urban Street Driving Conditions.** WINNIE KAM, James Liacos, James Schauer, Ralph Delfino, Constantinos Sioutas, *University of Southern California*

5UA.3 1:30 **Gas-Particle Partitioning of Primary Organic Aerosol Emissions from Gasoline and Diesel Vehicles.** ANDREW A. MAY, Albert A. Presto, Ngoc T. Nguyen, Christopher Hennigan, Timothy Gordon, Allen Robinson, *Carnegie Mellon University*

5UA.4 1:45 **Evolution of Traffic-Related Atmospheric Pollutants Near Roadways.** CHEOL-HEON JEONG, Greg J. Evans, John Liggio, Jeremy Wentzell, Ralf Staebler, Jeff Brook, *SOCAAR, University of Toronto*

5UA.5 2:00 **Comparing Primary and Secondary Particulate Matter from On-Road Sources: Gasoline vs. Diesel Vehicles.** TIMOTHY GORDON, Albert A. Presto, Ngoc T. Nguyen, Allen Robinson, Hector Maldonado, Sulekha Chattopadhyay, Alvaro Gutierrez, William Robertson, Mang Zhang, Matti Maricq, Eric Lipsky, *Carnegie Mellon University*

5UA.6 2:15 **Mobile Monitoring: a Better Tool to Measure Vehicle Emission Factors.** SCOTT FRUIN, Neelakshi Hudda, Ralph Delfino, Constantinos Sioutas, *University of Southern California*

5UA.7 2:30 **Effects of Truck Retrofit/Replacement Program on Diesel Engine Emissions at the Port of Oakland.** CHELSEA PREBLE, Timothy Dallmann, Steven DeMartini, Nathan Kreisberg, Susanne Hering, Robert Harley, Thomas Kirchstetter, *University of California, Berkeley*

5UA.8 2:45 **Ultrafine Particle Exposure of Street Users Walking, Cycling, and Driving Along an Urban Residential Roadway.** DAVID QUIROS, Eon Lee, Yifang Zhu, Rui Wang, *University of California, Los Angeles*

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

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

6AC AEROSOL CHEMISTRY V

NICOLLET A

Lynn Mazzoleni and Puneet Chhabra, chairs

6AC.1 3:30 **A Comparison of the Chemical Sinks of Atmospheric Organics in the Gas and Aqueous Phase.** SCOTT A. EPSTEIN, Sergey Nizkorodov, *University of California, Irvine*

6AC.2 3:45 **Secondary Organic Aerosol Formation on Wet Aerosols: Model Simulation and Implications.** SIYUAN WANG, Jian Zhen Yu, *Hong Kong University of Science & Technology*

6AC.3 4:00 **SOA Formation from Glyoxal in the Aerosol Aqueous Phase: A Case Study From Mexico City Using an Explicit Laboratory-based Model.** ELEANOR WAXMAN, Barbara Ervens, Katja Dzepina, Julia Lee-Taylor, Rainer Volkamer, *University of Colorado*

6AC.4 4:15 **SOA Formation through Aqueous Chemistry: Volatility and Yields.** BARBARA TURPIN, Yong Bin Lim, Diana Ortiz-Montalvo, Allison Schwier, V. Faye McNeill, *Rutgers University*

6AC.5 4:30 **Analysis of Atmospheric Water-Soluble Organic Compounds Using H-NMR and Liquid Chromatography High Resolution Mass Spectrometry.** VERA SAMBUROVA, Lynn Mazzoleni, Alexander Laskin, Julia Laskin, Parichehr Saranjampour, Anna Gannet Hallar, Douglas Lowenthal, Barbara Zielinska, *Desert Research Institute*

6AC.6 4:45 **Organic-nitrogen Compound Formation via Aqueous Photo-oxidative Processing of Glyoxal in the Presence of Different Inorganic Salts.** ALEX K. Y. LEE, John Liggio, Shao-Meng Li, Jonathan Abbatt, *University of Toronto*

6AP AEROSOL PHYSICS I

MIRAGE ROOM

Sean Garrick and Barbara Wyslouzil, chairs

6AP.1 3:30 **Kinetics of Heterogeneous Nucleation in Supersaturated Vapor: Fundamental Limits to Neutral Particle Detection Revisited.** ROBERT MCGRAW, Jian Wang, Chongai Kuang, *Brookhaven National Laboratory*

6AP.2 3:45 **The Effects of Heat Release During Nanoparticle Nucleation.** JUN LIU, Sean Garrick, *University of Minnesota*

6AP.3 4:00 **Scattering Calculations to Predict Mobilities from Molecular Models.** CARLOS LARRIBA, Christopher Hogan Jr., *University of Minnesota*

6AP.4 4:15 **The Structure of Nanoparticle Nucleation in Three-Dimensional Planar Jets.** NATHAN MURFIELD, Sean Garrick, *University of Minnesota*

6AP.5 4:30 **D2O and Nonane Non-equilibrium Droplet Growth in the Free Molecular Regime.** HARSHAD PATHAK, Kelley Mullick, Barbara Wyslouzil, Shinobu Tanimura, *The Ohio State University*

6AP.6 4:45 **Molecular Dynamics of Evaporation and Mass Accommodation of Water for Various Droplet Sizes.** JAN JULIN, Manabu Shiraiwa, Ulrich Pöschl, Ilona Riipinen, *Stockholm University*

6CC AEROSOLS, CLOUDS, AND CLIMATE IV

NICOLLET B/C

Nicole Riemer and Chelsea Preble, chairs

6CC.1 3:30 **Studying the Climate Impact of Landuse Change at Fine Scale.** Peng Liu, Yongtao Hu, ATHANASIOS NENES, Armistead Russell, *Georgia Institute of Technology*

6CC.2 3:45 **Particle-Resolved Simulations on the Effects of Black Carbon Mixing State on Cloud Droplet Number Concentration and Radiative Forcing.** JOSEPH CHING, Nicole Riemer, Matthew West, *University of Illinois at Urbana-Champaign*

6CC.3 4:00 **Internal or External? The Mixing State of Biomass Burning Aerosol, Its Photochemical Evolution, and Climate Impacts.** MICHAEL GIORDANO, Lelia Hawkins, Akua Asa-Awuku, *University of California, Riverside*

6CC.4 4:15 **The Impact of Decreasing Black Carbon Emissions on California's Climate.** ODELLE HADLEY, Lukas Valin, Surabi Menon, Thomas Kirchstetter, *Lawrence Berkeley National Laboratory*

6CC.5 4:30 **The Impact of Source-Oriented Aerosols on Fog Formation and Energy Budget in the California Central Valley.** HSIANG-HE LEE, Shu-Hua Chen, Michael Kleeman, Steven DeNero, David Joe, Hongliang Zhang, *UC Davis*

6CC.6 4:45 **Investigating Effects of Ambient Temperature on Hygroscopic Properties of Atmospheric Aerosol using ATR-IR.** YONG LIU, Dong Fu, *University of Colorado Denver*

6IA INDOOR AEROSOLS III

LAKE SUPERIOR

William W Nazaroff and Brent Stephens, chairs

6IA.1 3:30 **The Concentration of Reactive Oxygen Species in a Sample of Houses in Austin, Texas.** SHAHANA KHURSHID, Jeffrey Siegel, Kerry Kinney, *The University of Texas at Austin*

6IA.2 3:45 **The Impact of Energy Efficiency Retrofits on Indoor PM Levels.** SARAH FREY, Matthew Fraser, Pierre Herckes, *Arizona State University*

6IA.3 4:00 **Evaluation of Environmental Tobacco Smoke Concentrations within Detroit Residential Households.** QUENTIN MALLOY, Jonathan Thornburg, Cortina Johnson, Allan Vette, Gary Norris, Janet Burke, Stuart Batterman, *RTI International*

6IA.4 4:15 **Investigation of Personal and Environmental Factors Affecting Indoor Air Quality in a Green Residential Building.** GEDIMINAS MAINELIS, Zuocheng Wang, Leonardo Calderon, Clinton J. Andrews, Richard Wener, Jennifer Senick, MaryAnn Sorensen-Allacci, Jin Young Shin, *Rutgers, The State University of New Jersey*

6IA.5 4:30 **Ultrafine Particles Emitted from Microwave Popcorn.** Qunfang Zhang, Jessica Avalos, YIFANG ZHU, *University of California, Los Angeles*

6IA.6 4:45 **HVAC Filters as Samplers of Particle-Bound Contaminants.** JEFFREY SIEGEL, Kerry Kinney, *The University of Texas at Austin*

6IM INSTRUMENTATION AND METHODS V

REGENCY ROOM

Suresh Dhaniyala and Hiromu Sakurai, chairs

6IM.1 3:30 **A New Laminar-Flow Water Condensation Method.** SUSANNE HERING, Steven Spielman, Gregory Lewis, *Aerosol Dynamics Inc.*

6IM.2 3:45 **Inter- and Intra-model Comparisons of Water-based Condensation Particle Counters near a Major Freeway with Significant Heavy-duty Diesel Traffic.** EON LEE, Yifang Zhu, Andrea Polidori, Michael Koch, Philip Fine, Ahmed Mehadi, Donald Hammond, Jeffery Wright, Antonio H. Miguel, Alberto Ayala, *University of California, Los Angeles*

6IM.3 4:00 **High Temperature Condensation Particle Counter.** Kanchit Rongchai, Nick Collings, JACOB SWANSON, *University of Cambridge*

6IM.4 4:15 **Advances in Concentrated Particle Collection with the Laminar Flow Growth Tube.** GREGORY LEWIS, Steven Spielman, Susanne Hering, *Aerosol Dynamics Inc.*

6IM.5 4:30 **Determination of Particle Counting Pressure Correction for Turbine Engine Exhaust Sampling.** MATTHEW DEWITT, Edwin Corporan, Christopher Klingshirn, *Air Force Research Laboratory/Propulsion Directorate*

6IM.6 4:45 **Traceable CPC Calibration in a Wide Particle Size Range: From 10 Nanometer up to 10 Micrometer.** JAAKKO YLI-OJANPERÄ, Hiromu Sakurai, Kenjiro Iida, Jyrki M. Mäkelä, Kensei Ehara, Jorma Keskinen, *Tampere University of Technology*

6SA SOURCE APPORTIONMENT I

NICOLLET D

Qi Ying and Brian Meland, chairs

6SA.1 **Source Apportionment of PM10 in Mumbai by the Chemical Mass Balance Receptor Model.** INDRANI GUPTA,

3:30 Abba Elizabeth, Rakesh Kumar, *NEERI, CSIR*

6SA.2 3:45 **Source Apportionment of PM2.5 Nitrite and Sulfate in China using a Source-Oriented Chemical Transport Model.** HONGLIANG ZHANG, Jingyi Li, Qi Ying, Jian Zhen Yu, Dui Wu, Cheng Yuan, Kebin He, Jingkun Jiang, *Texas A&M University*

6SA.3 4:00 **Source Apportionment of Ambient PM2.5 in Santiago, Chile: 1999 and 2004 Results.** HECTOR JORQUERA, Francisco Barraza, *Pontificia Universidad Catolica de Chile*

6SA.4 4:15 **A Bayesian – Based Ensemble Technique for Source Apportionment of PM2.5.** SIVARAMAN BALACHANDRAN, Howard Chang, James Mulholland, Armistead Russell, *Georgia Institute of Technology*

6SA.5 4:30 **Assessing Top of Atmosphere Polarization Sensitivity to Aerosol Emissions Using the GEOS-Chem Chemical Transport Model Adjoint.** BRIAN MELAND, Xiaoguang Xu, Daven Henze, Jun Wang, *Univesity of Colorado, Boulder*

6SA.6 4:45 **Top-Down Estimate of Dust Emissions through Integration of MODIS and MISR Aerosol Retrievals with the GEOS-Chem Adjoint Model.** Jun Wang, Xiaoguang Xu, Daven Henze, Jing Zeng, BRIAN MELAND, *University of Nebraska - Lincoln*

Wednesday 5:00 PM - 6:00 PM
Annual Business Meeting

Wednesday 6:00 PM - 7:00 PM
Working Group Meetings 2

Thursday

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

8:00 **A Tangled Web: Occupants, Squames, Ozone, SOA and SVOCs in Indoor Environments** Charles Weschler, *UMDNJ-Robert Wood Johnson Medical School*

Moderator William Nazaroff, *University of California, Berkeley*

9:00 **Sinclair Award Presentation, Mercer Award Announcement** Sonia Kreidenweis, Awards Committee Chair, *Colorado State University, Fort Collins*

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

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

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

7AC AEROSOL CHEMISTRY VI

NICOLLET A

Leah Williams and Albert Presto, chairs

7AC.1 9:45 **Yields of Alkyl Nitrates and Hydroxynitrates Formed from the Reactions of C8–C14 n-Alkanes with OH Radicals in the Presence of NOx.** GEOFFREY YEH, Paul Ziemann, *UC Riverside*

7AC.2 10:00 **Secondary Organic Aerosol Formation from Aromatic Compounds: Relationship between SOA Yield and Chemical Structure.** PING TANG, Shunsuke Nakao, Chia-Li Chen, David R. Cocker III, *University of California, Riverside*

7AC.3 10:15 **Functional Group Distributions in Photolytically Generated Organic Aerosols.** Alicia Kalafut-Pettibone, W. SEAN MCGIVERN, *National Institute of Standards and Technology*

7AC.4 10:30 **Transitions from Functionalization to Fragmentation Reactions of Laboratory Secondary Organic Aerosol (SOA) Generated from the OH Oxidation of Alkane Precursors.** ANDREW LAMBE, Timothy Onasch, David Croasdale, Justin Wright, Alex Martin, Jonathan Franklin, Paola Massoli, Jesse Kroll, Manjula Canagaratna, William Brune, Douglas Worsnop, Paul Davidovits, *Aerodyne Research, Inc.*

7AC.5 10:45 **Heterogeneous Ozonation and Nitration Products of Polycyclic Aromatic Hydrocarbons.** RICHARD COCHRAN, Haewoo Jeong, Shokouh H. Haddadi, Alexandra C. Smith, Rebeka F. Derseh, Nagaraju Dongari, Josef Beranek, Alena Kubatova, *University of North Dakota*

7AC.6 11:00 **Environmental Factors Influencing Peroxyhemiacetal Chemistry in SOA.** LINDSAY YEE, Jill Craven, Katherine Schilling, Christine Loza, Xuan Zhang, Matthew Coggon, Paul Ziemann, John Seinfeld, *California Institute of Technology*

7AC.7 11:15 **O3-initiated Heterogeneous Oxidation of Linoleic Acid and its Dependence on Ambient Temperature and Relative Humidity.** Guang Zeng, Yunhong Zhang, YONG LIU, *University of Colorado Denver*

7AP AEROSOL PHYSICS II

MIRAGE ROOM

Chris Hogan and Pramod Kulkarni, chairs

7AP.1 9:45 **Crossover from Ballistic to Epstein Motion.** William Heinson, CHRIS SORENSEN, Amit Chakrabarti, Flint Pierce, *Kansas State University*

7AP.2 10:00 **The Evolution of Primary Particle Polydispersity in Aggregates During Sintering.** MAX L. EGGERSDORFER, Sotiris E. Pratsinis, *ETH Zurich*

7AP.3 10:15 **Direct Simulation Monte Carlo (DMSC) Calculation of the Low Reynolds Number Drag on Aerosol Aggregates.** CHONGLIN ZHANG, Thaseem Thajudeen, Carlos Larriba, Thomas Schwartzentruber, Christopher Hogan Jr., *University of Minnesota*

7AP.4 10:30 **Break-up and Bounce of TiO2 and Cu Agglomerates Due to the Inertial Impaction.** MIKA IHALAINEN, Terttaliisa Lind, Tiina Torvela, Kari Lehtinen, Jorma Jokiniemi, *Paul Scherrer Institut, Switzerland*

7AP.5 10:45 **Drag Measurements of Cylindrical Aerosol Particles in the Transition Regime.** RANGANATHAN GOPALAKRISHNAN, Peter McMurry, Christopher Hogan Jr., *University of Minnesota*

7AP.6 11:00 **The Effect of Orientation on the Mobility and Dynamic Shape Factor of Charged Axially Symmetric Particles in an Electric Field.** MINGDONG LI, George Mulholland, Michael Zachariah, *University of Maryland*

7AP.7 11:15 **Light Scattering Shape Diagnostics for Agglomerates.** GEORGE MULHOLLAND, Lei Zhou, Michael Zachariah, William Heinson, Chris Sorensen, Amit Chakrabarti, *University of Maryland*

7CC AEROSOLS, CLOUDS, AND CLIMATE V

NICOLLET B/C

Paola Massoli and Paul Ziemann, chairs

7CC.1 9:45 **Comparison of n-Alkanoic Acid Surface Pressure Isotherms Determined for Microscopic Droplets and Macroscopic Solutions.** CHRIS RUEHL, Kevin Wilson, Athanasios Nenes, Patrick Chuang, Allen H. Goldstein, *Univeristy*

of California, Berkeley

7CC.2 10:00 **Hygroscopicity Trends of Secondary Organic Aerosol Generated from Ozonolysis of 1-Alkenes.** RYAN SULLIVAN, Markus Petters, Aiko Matsunaga, Sarah Suda, Lorena Minambres, Annelise Faulhaber, Paul Ziemann, Sonia Kreidenweis, *Carnegie Mellon University*

7CC.3 10:15 **Cloud Condensation Nuclei Activity of Secondary Organic Aerosol: Investigation of Hygroscopicity and Activation Kinetics.** KATE CERULLY, Lea Hildebrandt Ruiz, Andrea Paciga, Tomi Raatikainen, Neil Donahue, Spyros Pandis, Athanasios Nenes, *Georgia Institute of Technology*

7CC.4 10:30 **Water-Soluble VOCs and Aerosol CCN Activity: A Tale of Three Surfactants.** Neha Sareen, Allison Schwier, Greg Drozd, Joseph Woo, Terry Lathem, Athanasios Nenes, V. FAYE MCNEILL, *Columbia University*

7CC.5 10:45 **The Ice Nucleating Potential of Amorphous Secondary Organic Aerosol to Form Cold Clouds.** BINGBING WANG, Andrew Lambe, Paola Massoli, Timothy Onasch, Paul Davidovits, Douglas Worsnop, Daniel Knopf, *Stony Brook University*

7CC.6 11:00 **Hygroscopicity of Amine Secondary Aerosol – Mixtures of Organic and Inorganic Components.** XIAOCHEN TANG, David R. Cocker III, Kathleen Purvis-Roberts, Akua Asa-Awuku, *University of California Riverside*

7CC.7 11:15 **Kinetics of Water Transport in Amorphous Aerosol.** JAMES F. DAVIES, Allen E. Haddrell, Rachael E.H. Miles, Jonathan P. Reid, *University of Bristol*

7HA HEALTH RELATED AEROSOLS I: BIOLOGICAL AEROSOLS

LAKE SUPERIOR

Jana Kesavan and Sergey Grinshpun, chairs

7HA.1 9:45 **Airborne Biopolymer Analysis and Toxicity Potential Associated with Hydrocarbon Weathering on Shorelines Impacted by the Deepwater Horizon Oil Spill.** ALINA M. HANDOREAN, Kevin McCabe, Jane Turner, Alison L. Ling, Benjamin J. Miller, Mark T. Hernandez, *University of Colorado at Boulder*

7HA.2 10:00 **Release of Bioaerosol Genomic DNA Due to Membrane Damage During Aerosolization and Sampling.** HUAJUN ZHEN, Taewon Han, Donna Fennell, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

7HA.3 10:15 **Effect of Aerosolization and Sampling Time on the Activity of a Purified Neuraminidase from Clostridium Perfringens as Viral Neuraminidase Model.** MARIE-JOSÉE TOULOUSE, Nathalie Turgeon, Jim Ho, Dongqing Li, Caroline Duchaine, *Université Laval, Canada*

7HA.4 10:30 **Viable Approach for the Detection and Sampling of Mycobacteria Species Contamination by Aerosol and Surface Sampling.** Pamela Murowchick, DAVID ALBURTY, Alec Adolphson, Michael Hornback, Benjamin Cobb, Brian Dable, *AlburtyLab, Inc.*

7HA.5 10:45 **Investigation of an Optimized Single-Stage Electrostatic Precipitator for Bioaerosols.** TAEWON HAN, Donna Fennell, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

7HA.6 11:00 **Validation of Five Bacteriophages Models for the Study of Airborne Viruses.** NATHALIE TURGEON, Marie-Josée Toulouse, Sylvain Moineau, Caroline Duchaine, *Université Laval, Canada*

7HA.7 11:15 **Investigation of Possible Structural Modifications of Proteins and a Common Cold Virus at Elevated Temperature in the Gas-phase with DMA-technique.** PETER KALLINGER, Victor Weiss, Dieter Blaas, Günter Allmaier, Wladyslaw Szymanski, *University of Vienna*

7IM INSTRUMENTATION AND METHODS VI

REGENCY ROOM

Jim Farnsworth and Chongai Kuang, chairs

7IM.1 9:45 **Device and Method for Generation of Aerosol Distributions with Tuneable Geometric Mean Diameter down to 5 nm.** JAMES FARNSWORTH, Jason Johnson, *TSI Incorporated*

7IM.2 10:00 **Characterization of a Device for Measuring Electrical Mobility Size and Concentration of Nanoparticles.** JASON JOHNSON, Axel Zerrath, Rob Caldow, Melissa Grose, Sean Morell, Erik Willis, Daniel Jensen, *TSI Incorporated*

7IM.3 10:15 **Development and Evaluation of a Personal Sampler for Nanoparticle Exposure Assessment.** JOHN VOLCKENS, Dan Miller-Lionberg, Anthony Marchese, Hank Lentz, Matt Zock, Kristin Bunker, Traci Lersch, John Mastovich, Gary Casuccio, *Colorado State University*

7IM.4 10:30 **Design and Performance of a Thermophoretic Precipitator Nanoparticle Sampler.** ART MILLER, Chris Wendel, Alek Marinos, Grant King, Aleksandar Bugarski, *NIOSH*

7IM.5 10:45 **Evaluation of a Compact Electrostatic Nanoparticle Sampler.** HE JING, Ta-Chih Hsiao, Siqin He, Qisheng Ou, Da-Ren Chen, *Washington University in St. Louis*

7IM.6 11:00 **Environmental Particle Collector and Detector System for Continuous Sampling of Ultrafine Aerosols.** MARIA D. KING, Victor Ugaz, John Haglund, Ray Pierson, Yassin Hassan, *Texas A&M University*

7IM.7 11:15 **Quantifying Ligand Adsorption to Nanoparticles using Tandem Differential Mobility – Mass Analysis.** SUVAJYOTI GUHA, Xiaofei Ma, Michael Tarlov, Michael Zachariah, *University of Maryland, College Park*

7SA SOURCE APPORTIONMENT II

NICOLLET D

Betsy Stone and Punith Nallathamby, chairs

7SA.1 9:45 **Impact of Updated Emission Inventories on Source Apportionment of Fine Particle and Ozone Over the Southeastern U.S.** WEI WANG, Shiang-Yuh Wu, Kai Wang, Yang Zhang, Hiroaki Minoura, Zifa Wang, *North Carolina State University, Raleigh, NC, USA*

7SA.2 10:00 **Organic Aerosol Source Apportionment in the United States.** BENJAMIN MURPHY, Kristina Wagstrom, Spyros Pandis, *Carnegie Mellon University*

7SA.3 10:15 **Characterization of Organic Carbon Sources in Pasadena and Bakersfield, CA During CalNex 2010.** PUNITH NALLATHAMBY, Rebecca Sheesley, John Offenberg, Michael Lewandowski, Tadeusz Kleindienst, Mohammed Jaoui, *Baylor University*

7SA.4 10:30 **Daily Trends of Ultrafine Particulate Matter at Sacramento, California.** Toshihiro Kuwayama, Chris Ruehl, MICHAEL KLEEMAN, *UC Davis*

7SA.5 10:45 **Coarse Particles in the Desert Southwest: Final Results and Policy Insights.** ANDREA CLEMENTS, Matthew Fraser, Pierre Herckes, Kale Walch, Paul A. Solomon, *Arizona state University*

7SA.6 11:00 **Sources of Organic Aerosol in Eastern Iowa.** ELIZABETH STONE, Chathurika Rathanyake, Thilina Jayarathne, *University of Iowa*

7SA.7 11:15 **Development of a New SMP Model Satisfying All Known Physical Constraints in Aerosol Source Apportionment Study.** BONG MANN KIM, *AQMD*

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

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

8AP AEROSOL PHYSICS III: POSTERS

EXHIBIT HALL

8AP.1 12:15 **Aerosol Aggregation in the Transition Regime.** THASEEM THAJUDEEN, Suhrid Deshmukh, Christopher Hogan Jr., *University of Minnesota*

8AP.2 12:15 **Potential Enhanced Particle Growth in the Transition Regime.** HUI OUYANG, Ranganathan Gopalakrishnan, Christopher Hogan Jr., *University of Minnesota*

8AP.3 12:15 **Diffusion Charging of Non-Spherical Aerosol Particles from Brownian Dynamics Simulations.** RANGANATHAN GOPALAKRISHNAN, Thaseem Thajudeen, Christopher Hogan Jr., *University of Minnesota*

8AP.4 12:15 **Tandem DMA Measurement of the Evaporation of Sub 5nm Metal Nanoparticles.** CARLOS LARRIBA, Santiado Ruiz-Valdepeñas, Christopher Hogan Jr., *University of Minnesota*

8AP.5 12:15 **Determining the Proton Affinity of Atmospheric Molecular Ions.** KAI RUUSUVUORI, Theo Kurten, Ismael Kenneth Ortega Colomer, Hanna Vehkamäki, *University of Helsinki*

8AP.6 12:15 **Parameterization for Nanoparticle Growth.** SILJA HÄKKINEN, Hanna Manninen, Joonas Merikanto, Maija Kajos, Tuomo Nieminen, Markku Kulmala, Ilona Riipinen, *University of Helsinki*

8AP.9 12:15 **The Effects of Leaf Area Density Variation on the Collection Efficiency of Ultrafine Particles (UFP).** CHENG-WEI HUANG, Ming-Yeng Lin, Andrey Khlystov, Gabriel Katul, *Duke University*

8AP.10 12:15 **Modeling Cross-flow Aerosol Mixing under Moderate Reynolds Number.** MATTHEW BROWN, Yi-wen Huang, Daniel Cziczo, Suresh Dhaniyala, *Clarkson University*

8AP.12 12:15 **Effect of Fractal Dimension and Prefactor on Aggregate Heat Conduction in the Free-Molecular Regime.** FENGSHAN LIU, Gregory Smallwood, *National Research Council Canada*

8AP.14 12:15 **Modeling Plume Dispersion of Diesel Truck Exhaust in a Wind Tunnel.** JONATHAN STEFFENS, Max Zhang, *Cornell University, Ithaca, NY, USA*

8AP.16 12:15 **Linear Multiplexed Electrospray Atomizers Micro-machined from Metal and Polymers.** BRANDON LOJEWSKI, Weiwei Yang, Weiwei Deng, *University of Central Florida*

8AP.17 12:15 **Strictly Monodispersed Droplets Generated by External Electro-hydrodynamic Perturbations on Liquid Jets.** HONGXU DUAN, Weiwei Yang, Johan Rodriguez, Jing Gu, Weiwei Deng, *University of Central Florida*

8AP.18 12:15 **Three Dimensional Characteristics of Mineral Dust using Atomic Force Microscopy.** XIN XIN WOODWARD, Ashima Chhabra, Will Cantrell, *Michigan Technological University*

8AP.19 12:15 **Estimates of Non-Ideal Effects on the Agglomerate Dynamics.** WEONGYU SHIN, George Mulholland, Seong C Kim, Jing Wang, Jacob Scheckman, David Pui, *Chungnam National University*

8AP.20 12:15 **Mobility Behavior of Nanoparticle Fractal Agglomerates.** WEONGYU SHIN, Jin Hyoung Kim, George Mulholland, David Pui, *Chungnam National University*

8AP.21 12:15 **Effect of In-Plume Aerosol Processing on the Efficacy of Marine Cloud Albedo Enhancement from Controlled Sea-Spray Injections.** Stuart Geoff, ROBIN STEVENS, Dominick Spracklen, Hannele Korhonen, Jeffrey Pierce, *Dalhousie University*

8AP.22 12:15 **Differential Light Scattering by Dye Coated Silica Microspheres.** Matthew Hart, PAUL LANE, Jay Eversole, *Naval Research Laboratory*

8CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE II: POSTERS

EXHIBIT HALL

8CA.1 12:15 **The Effect of Model Spatial Resolution on Secondary Organic Aerosol Predictions.** CHRIS WAINWRIGHT, Jeffrey Pierce, John Liggio, Kevin Strawbridge, Annie-Marie Macdonald, Richard Leaitch, *Dalhousie University*

8CA.3 12:15 **Real-Time Measurements of Water-Insoluble Fractions and Black Carbon Concentrations With Water and Butanol Based Particle Counters.** DANIEL SHORT, Michael Giordano, Yifang Zhu, Andrea Polidori, Akua Asa-Awuku, *University of California, Riverside*

8CA.4 12:15 **Carbon Enrichment in Windblown Sediment on the Columbia Plateau.** BRENTON SHARRATT, Laurel Graves, Shelley Pressley, *USDA-ARS*

8CA.6 12:15 **Tunable Laboratory Generated Aerosols: Linking Experimental Data to Field Measurements and Theory.** CHRISTOPHER ZANGMEISTER, Xiaofei Ma, Michael Zachariah, *National Institute of Standards and Technology*

8CA.7 12:15 **Contribution of Biomass Burning and Traffic Emissions to Aerosol Optical Properties at a Rural Site in Southeast England During the Winter ClearfLo IOP.** Paola Massoli, Allison Aiken, Kyle Gorkowski, Scott Herndon, Edward Fortner, John Jayne, William Brooks, Puneet Chhabra, Leah Williams, Nga Lee Ng, Timothy Onasch, Jonathan Franklin, Mavendra Dubey, Douglas Worsnop, ANDREW FREEDMAN, *Aerodyne Research, Inc.*

8CA.9 12:15 **Modeling of Regional Age Distribution of Black Carbon.** HONGLIANG ZHANG, Qi Ying, Michael Kleeman, *Texas A&M University*

8CA.10 12:15 **The Correlation between Positive Sampling Artifacts and Organic Aerosol Volatility.** ANDREW A. MAY, Albert A. Presto, Allen Robinson, *Carnegie Mellon University*

8CA.11 12:15 **Interpreting Thermal Denuder Data with an Optimizing Comprehensive Instrument Model.** JAMES HITE, Kate Cerully, Athanasios Nenes, *Georgia Institute of Technology*

8CA.12 12:15 **Comprehensive Characterization of Particulate Matter Using Sequential Thermal Extraction/Pyrolysis with On-line Gas Chromatography/Mass Spectrometry.** Josef Beranek, Allison Coffman, Evguenii Kozliak, ALENA KUBATOVA, *University of North Dakota*

8CA.13 12:15 **The Spatial and Temporal Variability in Bioaerosol Community Struture in Urban and Rural Colorado.** Robert Bowers, NICHOLAS CLEMENTS, Allison Moore, Michael Hannigan, Christine Wiedinmyer, Noah Fierer, *University of Colorado at Boulder*

8CA.14 12:15 **Volatility of Ambient Organic Aerosol at an Urban and a Remote Site in Europe.** ANDREA PACIGA, Lea Hildebrandt Ruiz, Gabriella Engelhart, Evangelia Kostenidou, Monica Crippa, Andre Prévôt, Urs Baltensperger, Spyros Pandis, *Carnegie Mellon University*

8CA.15 12:15 **Effect of Ammonia on the Volatility of Dicarboxylic Acids.** ANDREA PACIGA, Ilona Riipinen, Spyros Pandis, *Carnegie Mellon University*

8CA.16 12:15 **Molecular Characterization of Cloud Water Using Ultrahigh-Resolution FT-ICR Mass Spectrometry.** YUNZHU ZHAO, Parichehr Saranjampour, Anna Gannet Hallar, Lynn Mazzoleni, *Michigan Technological University*

8CA.17 12:15 **Advanced Molecular Speciation of Aircraft Engine Soot by Nano Desorption Electrospray Ionization Mass Spectrometry.** JEREMY CAIN, Alexander Laskin, Julia Laskin, Edwin Corporan, David Blunck, William Roquemore, *Air Force Research Laboratory/Propulsion Directorate*

8CA.18 12:15 **Simulating Black Carbon Mixing State in the Planetary Boundary Layer with a Particle-Resolving Single-Column Model.** JEFFREY H. CURTIS, Nicole Riemer, Matthew West, *University of Illinois at Urbana-Champaign*

8CA.19 12:15 **Light Absorption Properties of Brown Carbon from Fresh and Photo-chemically Aged Biomass Burning Emissions.** RAWAD SALEH, Christopher Hennigan, Gavin McMeeking, Wayne Chuang, Hugh Coe, Neil Donahue, Allen Robinson, *Carnegie Mellon University*

8CA.20 12:15 **Oxidation of C60 Aerosol by Ozone.** ANDREA TIWARI, Alec Wagner, John Morris, Linsey Marr, *Virginia Tech*

8CA.21 12:15 **Black Carbon Trends over Several Decades at Multiple Locations.** CHELSEA PREBLE, Odelle Hadley, Liang Liu, Tami Bond, Thomas Kirchstetter, *University of California, Berkeley*

8CA.22 12:15 **Regional Multi-generation Secondary Organic Aerosol Production from Major Anthropogenic and Biogenic Precursors.** JINGYI LI, Qi Ying, *Texas A&M University*

8CA.23 12:15 **The Dual-Spot Aethalometer: Application of Real-Time Source Apportionment Algorithm for Black Carbon and Carbonaceous Aerosols.** Luka Drinovec, Grisa Mocnik, Peter Zotter, Andre Prévôt, Christian Ruckstuhl, ANTHONY D.A. HANSEN, *Aerosol d.o.o., Slovenia*

8CA.25 12:15 **Secondary Organic Aerosol Formation from Dilute Small Off-Road Engine Emissions.** DANIEL S. TKACIK, Albert A. Presto, Allen Robinson, *Carnegie Mellon University*

8CA.26 12:15 **Volatility and Activity Coefficients of Levoglucosan in Artificial and Quasi-Ambient Organic Aerosols.** ANDREY KHLYSTOV, Suqi Huang, Ming-Yeng Lin, *Research Triangle Institute*

8CA.27 12:15 **Black Carbon Hygroscopicity at a Rural Site in the UK.** JAMES ALLAN, Dantong Liu, Michael Flynn, Dominique Young, James Whitehead, Gordon McFiggans, Hugh Coe, Zoe Fleming, *University of Manchester*

8CA.28 12:15 **Contribution of Alkanes and Polycyclic Aromatic Hydrocarbons to Organic Aerosol.** HAVALA PYE, George Pouliot, Michael Lewandowski, John Offenberg, Tadeusz Kleindienst, *U. S. Environmental Protection Agency*

8CA.29 12:15 **Carbonaceous Superaggregates in Souteast Asian Outflow.** NICHOLAS BERES, Rajan Chakrabarty, Hans Moosmuller, Frida Bender, Veerabhadran Ramanathan, *Desert Research Institute*

8CA.30 12:15 **Evidence and Quantitation of Aromatic Organosulfates in Ambient Aerosols in Lahore, Pakistan.** Shuvashish Kundu, Tauseef Quraishi, Ge Yu, Catalina Suarez, Frank Keutsch, ELIZABETH STONE, *University of Iowa*

8CA.31 12:15 **Measurement of Gas and Particulate Amines at Agricultural Facilities using an Ambient Ion Monitor.** PHILIP SILVA, *USDA - Agricultural Research Service*

8CA.32 12:15 **Characterization of Atmospheric Aerosols Impacted by the Iowa City Landfill Tire Fire.** Jared Downard, ELIZABETH STONE, *University of Iowa*

8HA HEALTH RELATED AEROSOLS II: POSTERS

EXHIBIT HALL

8HA.1 12:15 **Use of Two Samplers for Determination of Quantitative and Qualitative Bioaerosols In Tijuana, Mexico, Air Basin.** LILIA HURTADO, Guillermo Rodriguez, *Universidad Autonoma de Baja California, Tijuana, Mexico*

8HA.2 12:15 **Laboratory Studies of Humidity-Induced Pollen Rupture to Produce Respirable Particles.** QIAN ZHOU, Richard Flagan, Timothy M. VanReken, *Washington State University*

8HA.3 12:15 **Development and Optimization of ATP Bioluminescence Method for Rapid Bioaerosol Quantification.** TAEWON HAN, Srishty Subramanian, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

8HA.4 12:15 **Evaluation of Antimicrobial Durability on Natural Product Nanoparticle-Deposited Air Filter.** GI BYOUNG HWANG, Bo Mi Kwon, Chu Won Nho, Jae Hee Jung, Gwi Nam Bae, *Korea Institute of Science and Technology*

8HA.5 12:15 **Applying Real-Time Quantitative Polymerase Chain Reaction to Monitor the Airborne Streptococcus Pneumonia in a Daycare Center.** MIAO-CHING CHI, Lin Meng-Chih, Chen Min-Li, *Department of Respiratory Care, Chang Gung University of Sci*

8HA.6 12:15 **Association of Virus Content with Its Carrying Particle Size.** ZHILI ZUO, Thomas Kuehn, Sunil Kumar, Yogesh Chander, Sagar Goyal, Jessica Appert, Peter Raynor, Song Ge, David Pui, *University of Minnesota*

8HA.7 12:15 **Survival of Four Bacteriophages Virus Models Under Relative Humidity and Temperature Aerosol Stresses.** MÉLISSA MARCOUX-VOISELLE, Nathalie Turgeon, Daniel Verreault, Sylvain Moineau, Caroline Duchaine, *Université Laval, Canada*

8HA.8 12:15 **Transient Deposition Functions Applicable to Inhaled Pharmaceutical Aerosols.** Philip Ophus, CARLOS LANGE, *University of Alberta*

8HA.9 12:15 **Development of Controlled Condensational Growth for Aerosol Delivery During Nasal High Flow Therapy.** GENG TIAN, Yoen-Ju Son, Michael Hindle, Worth Longest, *Virginia Commonwealth University*

8HA.12 12:15 **Development of a Wick Electrospray Pharmaceutical Aerosol Generator.** LANDON HOLBROOK, Worth Longest, *Virginia Commonwealth University*

8HA.13 12:15 **Influence of Morphometry and Airway Constriction on Response to Inhaled Methacholine.** MICHAEL OLDHAM, Rodney Clinkenbeard, Owen Moss, *University of California, Irvine*

8HA.14 12:15 **Physical and Chemical Properties of Iron Oxide Nanoparticles that Contribute to Cellular Toxicity and Acellular Production of Hydroxyl Radical.** JESSICA CHARRIER, Christoph Vogel, Aamir Abid, Ian Kennedy, Cort Anastasio, *University of California, Davis*

8HA.15 12:15 **Worker and Environmental Assessment of Potential Unbound Engineered Nanoparticle Releases.** GARY CASUCCIO, Randall Ogle, Kristin Bunker, Keith Rickabaugh, *RJ Lee Group, Inc.*

8HA.16 12:15 **Toxicological Assessment of Emerging Diesel Fuel Emissions: The EMITTED Study.** JOSEPHINE COOPER, Krystal J. Godri, Naomi Zimmerman, Terry Jung, Cheol-Heon Jeong, Greg J. Evans, James S. Wallace, *SOCAAR, University of Toronto*

8HA.17 12:15 **Assessment of the Pre-Toddler Inhalable Particulate Environmental Robot's Ability to Mimic Dust Resuspension by Children.** Gediminas Mainelis, ZUOCHENG WANG, Kathleen Black, Marta Hernandez, Stuart Shalat, *Rutgers, The State University of New Jersey*

8HA.18 12:15 **Assessing the Impact of Hazardous Air Pollutants Emitted from Phosphate Fertilizer Plants Ambient Air Quality and Human Health.** HSING-WANG LI, Nima Afshar-Mohajer, Chang-Yu Wu, Jean-Claude J. Bonzongo, Vito A. Ilacqua, Yongsuk Choi, Brian Birky, *University of Florida*

8HA.19 12:15 **Genotoxic Potential of Organic Extracts from Particle Emissions of Diesel and Rapeseed Oil Powered Engines.** JAN TOPINKA, Alena Milcova, Jana Schmuczerova, Martin Mazac, Martin Pechout, Michal Vojtisek-Lom, *Institute of Experimental Medicine AS CR, Prague, Czech Repu*

8HA.20 12:15 **Discerning the Chemical Composition and Mutagenic Effects of Soy Biodiesel PM.** DAVID NASH, Esra Mutlu, William Preston, Michael Hays, Sarah Warren, Charly King, William Linak, M. Ian Gilmour, David DeMarini, *U.S. EPA*

8HA.21 12:15 **Development and Implementation of Techniques to Investigate the Physiological Response of Bacteria to Aerosolisation.** RICHARD THOMAS, Janine Jordan, David Cleary, *Dstl*

8HA.22 12:15 **Comparison of Face Mask Seal using Different Facial Materials on an Idealized Infant Replica.** NICHOLAS CARRIGY, Connor O'Reilly, James Schmitt, Warren Finlay, *University of Alberta*

8HA.23 12:15 **Modeling Deposition of Cerium-Containing Diesel Particles Inside a Wind Tunnel.** ZHEMING TONG, Thomas Peters, Robert Willis, Kathleen Fahey, Havala Pye, Max Zhang, *Cornell University, Ithaca, NY, USA*

8HA.24 12:15 **How Deposition Uniformity Affects FTIR Analysis of Filter Samples.** ART MILLER, Pamela Drake, Ryan LeBouf, Nate Murphy, Emanuele Cauda, *NIOSH*

8HA.25 12:15 **On Dithiothreitol (DTT) as a Measure of Oxidative Potential for Ambient Particles: Evidence for the Importance of Soluble Transition Metals.** JESSICA CHARRIER, Cort Anastasio, *University of California, Davis*

8HA.26 12:15 **Estimating Health Effects of Air Pollutants in Pittsburgh from 2001-2002 Using Autoregressive Moving Average (ARMA) Time Series Structural Equation Models (SEMs).** RICHARD BILONICK, Daniel Connell, Evelyn Talbott, Judith Rager, Lynne Pavlic Marshall, *University of Pittsburgh*

8HA.28 12:15 **Generation of Reactive Oxygen Species from Source-Oriented, Ambient Submicron Particulate Matter in a Cell-free Surrogate Lung Fluid Solution.** NICOLE RICHARDS, Jessica Charrier, Keith Bein, Anthony Wexler, Cort Anastasio, *UC Davis*

8HA.29 12:15 **Quantification of Leakages in Respirators using Computational Fluid Dynamics.** SUVAJYOTI GUHA, Matthew Myers, Prasanna Hariharan, *Food and Drug Administration*

8IM INSTRUMENTATION AND METHODS VII: POSTERS

EXHIBIT HALL

8IM.1 12:15 **Refinement of a Particle Trap Laser Desorption Mass Spectrometer (PT-LDMS) as a Field-Deployable Aerosol Composition Analyzer.** NAOKI TAKEDA, Takuma Miyakawa, Masahiko Takei, Noritomo Hirayama, Nobuyuki Takegawa, *Fuji Electric, Co., Ltd*

8IM.2 12:15 **Development of Aerosol Particle Trapping System with Signal from OPC for Particle Visualization.** CHIHO KITAYAMA, Tomomi Fujioka, Takafumi Seto, Yoshio Otani, Tetsuo Endo, *Kanazawa University*

8IM.3 12:15 **Use of Inertial-Filter as Sampling Inlet of CPC for Measuring Nanoparticles.** CHIHO KITAYAMA, Takebayashi Masato, Takafumi Seto, Yoshio Otani, Masami Furuuchi, Takuji Ikeda, *Kanazawa University*

8IM.4 12:15 **Development of a Triggering-LIBS for Determination of Elemental Composition of Single Particles in Real Time.** Kihong Park, HEESUNG LEE, Jihyun Kwak, *Gwangju Institute of Science and Technology*

8IM.5 12:15 **Characteristics of Nano-Particle Deposition in an Air-Liquid System.** KARI KUUSPALO, Ari Leskinen, Heidi Niskanen, Pasi, I Jalava, Tiina Torvela, Stefanie Kasurinen, Maija-Riitta Hirvonen, Kari Lehtinen, Jorma Jokiniemi, *University of Eastern Finland, Kuopio, Finland*

8IM.6 12:15 **Performance Evaluation of a Recently Developed Aerosol Chemical Speciation Monitor (ACSM).** Neel Kotra, VISHAL VERMA, Jiumeng Liu, Sri Hapsari Budisulistiorini, Wendy Marth, Jason Surratt, Eric Edgerton, Karsten Baumann, Eladio Knipping, Stephanie Shaw, Nga Lee Ng, Rodney Weber, *Georgia Institute of Technology*

8IM.7 12:15 **Development and Validation of an Isokinetic Calibration System for Cross Correlation of Differing Aerosol Measurement Methodologies.** WENDY MERKLEY, Michael Wojcik, Randy Martin, Kori Moore, *Utah State University*

8IM.9 12:15 **A Two-Stage Versatile Aerosol Concentration Enrichment System (VACES) for Very High Concentration of Ultrafine, PM2.5 and Coarse PM.** DONGBIN WANG, Winnie Kam, Kalam Cheung, Payam Pakbin, Constantinos Sioutas, *University of Southern California*

8IM.10 12:15 **Field and Laboratory Evaluation of a Sequential Time Resolved Aerosol Composition Measurement Instrument.** ARSINEH HECOBIAN, Arantzazu Eiguren-Fernandez, Amy P. Sullivan, Gregory Lewis, Susanne Hering, Charles Henry, Jeffrey L. Collett, *Colorado State University*

8IM.11 12:15 **The Age Old Question: Continuous or 24-hr Integrated Measurements.** Oliver Rattigan, H. Dirk Felton, Kevin Civerolo, JAMES SCHWAB, *New York State Dept. of Environmental Conservation*

8IM.12 12:15 **Method Development for Determination of Trace Concentrations of Aldehydes and Carboxylic Acids in Particulate Matter.** JANA ROUSOVA, Manikyala R. Chintapalli, Anastasia Lindahl, Jana Stavova, Alena Kubatova, *University of North Dakota*

8IM.13 12:15 **The Potential of Bio-nanoparticles as Standard Reference Materials for Mobility Calibration.** MINGDONG LI, Suvajyoti Guha, George Mulholland, Michael Zachariah, *University of Maryland, College Park*

8IM.14 12:15 **Generation of Aerosol Particles of Controlled Mixed Composition.** VASANTHI SIVAPRAKASAM, John Tucker, Jay Eversole, *Naval Research Laboratory*

8IM.15 12:15 **Performance Analysis of a High-Flow Dual-Channel Differential Mobility Analyzer (HD-DMA).** ISHARA HUNGAMA MUDALIGE, Meilu He, Praney Dubey, Suresh Dhaniyala, *Clarkson University*

8IM.16 12:15 **Comparison of Two PM Inlets for Improved Airborne lead Sampling.** QUENTIN MALLOY, Andrew Dart, Jonathan Thornburg, Robert Vanderpool, April Corbett, *RTI International*

8IM.17 12:15 **An Intercomparison of Airborne Aerosol Inlet Performances During ICE-T (2011) campaign.** Arash Moharreri, Lucas Craig, David C. Rogers, SURESH DHANIYALA, *Clarkson University*

8IM.18 12:15 **Aerosol Growth Rate Calculations from HTDMA Data: Sensitivity to Operating Conditions and Quality of Inversion Algorithm.** RAGHAV RAMAN, Meilu He, Suresh Dhaniyala, *Clarkson University*

8IM.19 12:15 **Characterization of Insoluble Submicrometer Particles in Seawater for Studying on Primary Marine Aerosol Formation.** JIYEON PARK, Miji Kim, Seung hee Han, Kihong Park, *Gwangju Institute of Science and Technology*

8IM.20 12:15 **Physico-chemical Assessment of Biodiesel Vehicle Fuel Exhaust Emissions and the Effect of New Emission Control Devices: The EMITTED Study.** NAOMI ZIMMERMAN, Krystal J. Godri, Terry Jung, Cheol-Heon Jeong, Josephine Cooper, James S. Wallace, Greg J. Evans, *SOCAAR, University of Toronto*

8IM.21 12:15 **The USEPA Coarse PM Pilot Speciation Study.** HILARY MINOR, Jay Turner, Steven Brown, Paul Roberts, Joann Rice, *Sonoma Technology, Inc.*

8IM.22 12:15 **Influence of Electrode and Carrier Gas Characteristics on the Measurement of Elemental Concentration of Aerosols Using Spark Plasma Spectroscopy.** Prasoon Diwakar, PRAMOD KULKARNI, *Centers for Disease Control and Prevention, NIOSH*

8IM.23 12:15 **Corona-assisted Microwave Plasma Spectroscopy for Spectrochemical Analysis of Aerosols.** PRAMOD KULKARNI, Philip Efthimion, *Centers for Disease Control and Prevention, NIOSH*

8IM.24 12:15 **Testing of a Battery Powered Data-Logging TSI Water-Based Ultrafine CPC for Mobile Outdoor Use.** ASHISH SINGH, Robert Bullard, Charles Stanier, *University of Iowa*

8IM.25 12:15 **Negative-ion Electrospray as an Ion Source for Chemical Ionization Mass Spectrometry of Atmospheric Gaseous Inorganic/organic Acids and Clusters.** JUN ZHAO, Coty Jen, Modi Chen, Michael J. Lawler, Peter McMurry, James N. Smith, *University of Minnesota*

8IM.26 12:15 **State-of-Art Toolbox for High Resolution De-convolution of Ion-Cluster Signal from Time-of-Flight Mass Spectrometry Data.** HEIKKI JUNNINEN, Gustaf Lönn, Mikael Ehn, Siegfried Schobesberger, Tuukka Petäjä, Douglas Worsnop, Markku Kulmala, *University of Helsinki*

8IM.27 12:15 **Drift Tube Ion Mobility Spectrometry of Sub-10 nm Nanoparticles.** DEREK OBERREIT, Peter McMurry, Christopher Hogan Jr., *University of Minnesota*

8IM.28 12:15 **Comparing Two Laser Ablation Time-of-Flight Aerosol Mass Spectrometers.** SOEREN ZORN, Klaus-Peter Hinz, Tabitha Schwinger, Philip Croteau, Alois Fendt, Bernhard Spengler, Douglas Worsnop, John Jayne, Achim Trimborn, *AeroMegt GmbH*

8IM.29 12:15 **Online Chemical Characterization of Sub-micron Organic Particles Using Direct Analysis in Real Time Mass Spectrometry (DART-MS).** THEODORA NAH, ManNin Chan, Stephen R. Leone, Kevin Wilson, *University of California, Berkeley*

8IM.30 12:15 **Toward In-Situ Characterization of Aerosol Optics with a Supercontinuum Light Source Covering Most of the Solar Spectrum.** Ian Arnold, HANS MOOSMULLER, Noopur Sharma, Claudio Mazzoleni, Patrick Arnott, *Desert Research Institute*

8IM.31 12:15 **Estimating the Primary Particle Size of an Agglomerate Using APM and SMPS.** MIKA IHALAINEN, Terttaliisa Lind, Jorma Jokiniemi, *Paul Scherrer Institut, Switzerland*

8IM.32 12:15 **Potential Effects of Agar Plate Volume on Bioaerosol Impactor Measurement Accuracy.** JENNIFER THERKORN, Gediminas Mainelis, *Rutgers, The State University of New Jersey*

8IM.33 12:15 **Bipolar Neutralization of Spherical Particles <23 nm using Radioactive, X-ray and AC Corona Methods.** JACOB SWANSON, Jean de La Verpilliere, Adam M Boies, *University of Cambridge*

8IM.34 12:15 **New Detection Method of Filter Leak using the Schlieren Shadow-graph Technique.** SHIGERU KIMOTO, Lin Li, Joseph Peterson, David Pui, *University of Minnesota*

8IM.35 12:15 **Prototype of Portable Cellphone-Connected Particulate Matter (PM) Sensor.** IGOR PAPROTNY, Dawn Hustig-Schultz, Jess Dominguez, Rick Farley, Paul A. Solomon, Richard White, Lara Gundel, *University of California, Berkeley*

8NM NANOPARTICLES AND MATERIALS SYNTHESIS I: POSTERS

EXHIBIT HALL

8NM.1 12:15 **Fabrication of Micron Sized Porous Silicon Particles from Silicon Kerf Loss.** HEE DONG JANG, Dae-Sup Kil, Hankwon Chang, *Korea Institute of Geoscience and Mineral Resources*

8NM.2 12:15 **Inhibition of Thermal Charging of Gold Nanoparticles by Surface Modification.** CHI-TUNG CHIANG, Jeffrey Roberts, *Purdue University*

8NM.3 12:15 **Mass-Mobility Characterization of Flame-made ZrO2 Aerosols: the Primary Particle Diameter and Extent of Aggregation.** MAX L. EGGERSDORFER, Arto Groehn, Chris Sorensen, Peter McMurry, Sotiris E. Pratsinis, *ETH Zurich*

8NM.4 12:15 **A Novel Method for Bacteria Inactivation Using Engineered Water Nanostructures.** GEORGIOS PYRGIOTAKIS, James McDevitt, Toshiyuki Yamauchi, Yosuke Mitsuyama, Philip Demokritou, *Harvard University*

8NM.5 12:15 **Green Synthesis and Characterization of Silver Nanoparticle for Reference Material.** GUO-DUNG CHEN, Han-Fu Weng, *Center for Measurement Standards, ITRI, Taiwan*

8NM.6 12:15 **Aero-Sol-Gel Processing of Porous TiO2 Nanoparticles and Their Photovoltaic Properties in Dye-Sensitized Solar Cells.** KOOK JOO MOON, Ji Young Ahn, Ji Hoon Kim, Soo H. Kim, *Pusan National University*

8NM.7 12:15 **Multi-jet Electrospinning with High-Throughput Using a Coaxial Grooved Nozzle and Two Fluids.** INYONG PARK, Woojin Kim, Sang Soo Kim, *KAIST*

8NM.8 12:15 **Improvement of Amorphous Silica Encapsulation Efficiencies on Welding Fume Particles.** JUN WANG, Jianying Guan, Alex Theodore, Jessica Sharby, Chang-Yu Wu, Kathleen Paulson, Omar Es-Said, *University of Florida*

8NM.9 12:15 **Synthesis of Nanostructured Metal Oxide Films by Electrospray Deposition of Nanoparticles.** JUSTIN TANG, Alessandro Gomez, *Yale University*

8NM.10 12:15 **Near-field Electrospray Printing of Polymer Derived Ceramics.** CHENG LI, Hongxu Duan, Weiwei Yang, Johan Rodriguez, Brandon Lojewski, Linan An, Weiwei Deng, *University of Central Florida*

8NM.11 12:15 **Comparison of Release Profiles of Drug-Loaded PLGA Polymer Particles in Well-Mixed and Encapsulated Forms.** JENNIFER HEAD, Da-Ren Chen, *Washington University in St. Louis*

8NM.12 12:15 **Synthesis of Spherical Mesoporous Silica Particles by Spray Pyrolysis from Aqueous Silicic Acid.** HANKWON CHANG, Jin Woo Lee, Hee Dong Jang, Dae-Sup Kil, Jeong Woo Choi, *Korea Institute of Geoscience and Mineral Resources*

8NM.14 12:15 **To Maximize Triple-Phase Interfaces Between Fuel, Electrolyte, and Electrode of Direct Coal Fuel Cell Through CeO2 Coating.** CHENGGUO LI, Donggeun Lee, *Pusan National University, Busan, South Korea*

8NM.15 12:15 **Aerosol-Gel Synthesis of Pt-Based Catalysts for Hydrocarbon-Based Selective Catalytic Reduction of Nitrogen Mono-Oxide.** RIYAN ZAHAF, Jae Wook Jung, Dudi Adi Firmansyah, Yongho Kim, Donggeun Lee, *Pusan National University, Busan, South Korea*

8NM.16 12:15 **A Cost-Effective Method of Aerosolizing Dry Powdered Nanomaterials.** Andrea Tiwari, LINSEY MARR, Caleb Fields, *Virginia Tech*

8RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS I: POSTERS

EXHIBIT HALL

8RA.1 12:15 **Studies of the Optical Properties of Mineral Dust Aerosol from the IR to the Visible.** JENNIFER ALEXANDER, Olga Laskina, Brian Meland, Vicki Grassian, Mark Young, Paul Kleiber, *University of Iowa*

8RA.3 12:15 **Measurement of Free Tropospheric Aerosols in the North Atlantic at the Pico Mountain Observatory.** KATJA DZEPINA, Sumit Kumar, Claudio Mazzoleni, Paulo Fialho, Mike Dziobak, Jacques Hueber, Detlev Helmig, Louisa Kramer, Seth Olsen, Lynn Mazzoleni, *Michigan Technological University*

8RA.4 12:15 **Source Identification and Long-term Trend Analysis of Finnish Arctic Aerosols.** JAMES R. LAING, Philip K. Hopke, Liaquat Husain, Vincent A. Dutkiewicz, Jussi Paatero, Tanveer Ahmed, *Clarkson University*

8RA.5 12:15 **Aerodynamic Chracteristics of Fugitive Dusts by the Types of Animal Feed Stuffs Duing Gravitational Settle Down.** Hak-Joon Kim, Bangwoo Han, YONG-JIN KIM, *Korea Institute of Machinery and Materials*

8RA.7 12:15 **Assimilation of TES Ammonia and Ground-based Aerosol Observations during CalNEX to Refine Emissions Estimates.** SHANNON CAPPS, Daven Henze, Armistead Russell, Athanasios Nenes, *Georgia Institute of Technology*

8RA.8 12:15 **Determination of Seasonal and Height Resolved Number Concentration Patterns in a Pollution Impacted Rural Continental Location.** ROBERT BULLARD, Charles Stanier, Patrick Sheridan, John Ogren, *University of Iowa*

8RA.9 12:15 **Characterizing the Influence of Transport Variability on Aerosol Concentrations at Mauna Loa Observatory.** LAUREN POTTER, Sonia Kreidenweis, Molly Morman, Barry Huebert, Steven Howell, John Zhuang, *Colorado State University*

8RA.10 12:15 **Application of an Ultrafine V-TDMA to Atmospheric Aerosols in Eastern Iowa.** ASHISH SINGH, Robert Bullard, Charles Stanier, *University of Iowa*

8RA.11 12:15 **Two Years of Measurements of Atmospheric Aerosols at a Remote Mountain Site in NE of Spain.** ANNA RIPOLL, Jorge Pey, Andrés Alastuey, María-Cruz Minguillón, Xavier Querol, *IDAEA-CSIC*

8RA.12 12:15 **Characterization of Tropospheric Aerosols in a Remote Mountain Site in NE of Spain with an Aerosol Chemical Speciation Monitor.** ANNA RIPOLL, María-Cruz Minguillón, Jorge Pey, Marco Pandolfi, Andrés Alastuey, Xavier Querol, Jose-Luis Jimenez, Douglas Day, *IDAEA-CSIC*

8RA.13 12:15 **Characterization of Bioaerosols Isolated from Atacama Desert, Chile.** GUISELLA ESCALANTE, Carla León, Victor Campos, Roberto Urrutia, María Angélica Mondaca, *Universidad de Concepción, Chile*

8RA.14 12:15 **Development of a Process-Based Model for the Estimation of Beef Cattle Ammonia Emissions.** ALYSSA MOORE, Peter Adams, *Carnegie Mellon University*

8RA.15 12:15 **Free Tropospheric Aerosol Measurements at the Pico Mountain Observatory, Azores (2225m asl).** CLAUDIO MAZZOLENI, Lynn Mazzoleni, Paulo Fialho, Sumit Kumar, Katja Dzepina, Mike Dziobak, Louisa Kramer, Seth Olsen, Robert Owen, Detlev Helmig, Jacques Hueber, Swarup China, *Michigan Technological University*

8SA SOURCE APPORTIONMENT III: POSTERS

EXHIBIT HALL

8SA.1 12:15 **Improving Particulate Matter Source Apportionment: A Hybrid Approach Utilizing Chemical Transport and Receptor Models with Geostatistical Methods.** CESUNICA IVEY, Heather Holmes, Yongtao Hu, Armistead Russell, James Mulholland, *Georgia Institute of Technology*

8SA.2 12:15 **Status of Air Quality: Experience in Bangladesh.** BILKIS ARA BEGUM, Philip K. Hopke, Andreas Markwitz, *Atomic Energy Centre*

8SA.4 12:15 **Chemical Source Profiles for Airborne Crustal Material Over a Region in Central India.** RAMYA SUNDER RAMAN, Rohit Sirvaiya, Masood Ayub Kaloo, *Indian Institute of Science Education and Research, Bhopal*

8SA.5 12:15 **Verification of Fire Weather Forecasts Using PM2.5 Sensitivity Analysis.** SIVARAMAN BALACHANDRAN, Karsten Baumann, Jorge Pachon, James Mulholland, Armistead Russell, *Georgia Institute of Technology*

8SA.6 12:15 **Characterization of Re-suspended Soil Dust Samples from Sources Common in the Desert Southwest United States.** ANDREA CLEMENTS, Matthew Fraser, Nabin Upadhyay, Pierre Herckes, Paul A. Solomon, *Arizona state University*

8SA.7 12:15 **Sources of Ultrafine Particles in the Atmosphere over the Eastern United States.** LAURA POSNER, Spyros Pandis, *Carnegie Mellon University*

8SA.8 12:15 **Source Apportionment of Particles in London Paddington Station.** UVEN CHONG, Jacob Swanson, Adam M Boies, *University of Cambridge*

8SA.9 12:15 **Positive Matrix Factorization of PM2.5 -- Uncertainty and Bias Assessment of Factor Contribution.** MINGJIE XIE, Joshua Hemann, Steven Dutton, Jana Milford, Shelly Miller, Michael Hannigan, *University of Colorado at Boulder*

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

9AC AEROSOL CHEMISTRY VII

NICOLLET A

Yong Liu and Andrew Lambe, chairs

9AC.1 1:45 **Effects of Thermal Decomposition and Ion Fragmentation on Elemental Ratios and Chemical Compositions Measured with High Resolution Aerosol Mass Spectrometry.** MANJULA CANAGARATNA, Paola Massoli, Leah Williams, Sean Kessler, Edward Fortner, John Jayne, Kevin Wilson, Jesse Kroll, Douglas Worsnop, *Aerodyne Research, Inc.*

9AC.2 2:00 **MOVI-CIMS Measurements of Organic Aerosol Generated by a Potential Aerosol Mass (PAM) Reactor.** PUNEET CHHABRA, Andrew Lambe, Timothy Onasch, Manjula Canagaratna, John Jayne, Scott Herndon, Douglas Worsnop, Paul Davidovits, *Aerodyne Research, Inc.*

9AC.3 2:15 **A Source of Oxygenated Organic Aerosol and Oligomers from Primary Emitted Gases.** JOHN LIGGIO, Shao-Meng Li, Alexander Vlasenko, *Environment Canada*

9AC.4 2:30 **Oligomer-like Aerosol Formation from the Reactions of Secondary and Tertiary Amines with Hydroxyl and Nitrate Radicals.** DEREK PRICE, Xiaochen Tang, David R. Cocker III, Kathleen Purvis-Roberts, Philip Silva, *University of California, Riverside*

9AC.5 2:45 **Particle Size-Dependent Incorporation of Dimethylamine into Ammonium Sulfate and Nitrate Nanoparticles.** BRYAN R. BZDEK, Andrew Horan, M. Ross Pennington, Murray Johnston, *University of Delaware*

9AP AEROSOL PHYSICS IV

MIRAGE ROOM

Rajan Chakrabarty and Kihong Park, chairs

9AP.1 1:45 **Agglomerate and Spherical Nanoparticle Penetration Through Nuclepore Filters: Models and Experiment.** SHENG-CHIEH CHEN, Jing Wang, Heinz Fissan, David Pui, *University of Minnesota*

9AP.2 2:00 **Variation in Aerosol Nucleation and Growth in Coal-Fired Power-Plant Plumes due to Background Aerosol, Meteorology and Emissions: Sensitivity Analysis and Parameterization.** ROBIN STEVENS, Jeffrey Pierce, *Dalhousie University*

9AP.3 2:15 **A Study on Mixing Structure of Atmospheric Ultrafine Particles by Using the Thermo-Denuder HTDMA System.** Kihong Park, JAE-SEOK KIM, *School of Environmental Science and Engineering, Gwangju Ins*

9AP.4 2:30 **Reconciling Surface-Based Aerosol Retrievals with In-situ Aircraft Measurements in the Baltimore-Washington Area during DISCOVER-AQ.** SUZANNE CRUMEYROLLE, Luke Ziemba, Andreas Beyersdorf, Lee Thornhill, Edward Winstead, Gao Chen, Joel Schafer, Brent Holben, Richard Moore, Bruce Anderson, *NASA Langley Research Center*

9AP.5 2:45 **Validation of the Particle-Resolved Aerosol Model PartMC With Data from Chamber Experiments.** JIAN TIAN, Nicole Riemer, Benjamin T. Brem, Tami Bond, Mark Rood, Martin Schnaiter, Karl-Heinz Naumann, *University of Illinois at Urbana-Champaign*

9CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE III

NICOLLET B/C

James Allan and Dave Worton, chairs

9CA.1 1:45 **Soot Aggregate Restructuring: Effect of Surface Chemistry and Water Condensation.** XIAOFEI MA, Christopher Zangmeister, George Mulholland, Michael Zachariah, *University of Maryland-College Park*

9CA.2 2:00 **Soot Aggregate Restructuring Due to Coatings of Oleic Acid and Dioctyl Sebacate.** Rouzbeh Ghazi, JASON OLFERT, *University of Alberta*

9CA.3 2:15 **Characterization of Black Carbon Aging Processes with a Size-Dependent Timescale.** LAURA FIERCE, Nicole Riemer, Tami Bond, *University of Illinois at Urbana-Champaign*

9CA.4 2:30 **Diurnal Variations and the Effect of Atmospheric Transport on Black Carbon Mixing State: Observations from the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES).** R. SUBRAMANIAN, Arthur Sedlacek, Rahul Zaveri, *RTI International*

9CA.5 2:45 **Black Carbon Optical Properties Measured in Pasadena, Los Angeles During CalNex.** Jonathan Taylor, JAMES ALLAN, Michael Flynn, Patrick Hayes, Jose-Luis Jimenez, Barry Lefer, Hugh Coe, *University of Manchester*

9HA HEALTH RELATED AEROSOLS III: HEALTH EFFECTS

LAKE SUPERIOR

Gediminas Mainelis and David Alburty, chairs

9HA.1 1:45 **Effects of Ambient Air Pollution on Daily Morbidity in a Developing Mega City.** HAIDER A KHWAJA, Daniel Malashock, Zafar Fatmi, Azhar Siddique, Zafar Aminov, David Carpenter, *Wadsworth Center, University at Albany*

9HA.2 2:00 **Characterization of Ambient Air Pollution Measurement Error in a Time-Series Health Study using a Geostatistical Simulation Approach.** GRETCHEN GOLDMAN, James Mulholland, Armistead Russell, Katherine Gass, Matthew Strickland, Paige Tolbert, *Georgia Institute of Technology*

9HA.3 2:15 **Toxicological Effects of Fresh and Aged Particulate Matter Emissions from a Wood Stove in Two Different Combustion Conditions.** PASI, I JALAVA, Oskari Uski, Joakim Pagels, Erik, Z Nordin, Axel Eriksson, Christoffer Boman, Robin Nyström, Jorma Jokiniemi, Maija-Riitta Hirvonen, *University of Eastern Finland, Kuopio, Finland*

9HA.5 2:45 **Oxidative Stress and the Acceleration of Atherosclerosis in Susceptible Mice After Exposure to Semi-Volatile Components of Ultrafine Particulate Matter.** ANDREW KEEBAUGH, Payam Pakbin, Loyda Mendez, Zhi Ning, Glenn Gookin, Constantinos Sioutas, Michael Kleinman, *University of California, Irvine*

9IM INSTRUMENTATION AND METHODS VIII

REGENCY ROOM

Markus Petters and Mike Cubison, chairs

9IM.1 1:45 **Droplet Growth Kinetics from Scanning Flow CCN Analysis Data Using an Instrument Model.** Tomi Raatikainen, Terry Lathem, Jack Lin, Richard Moore, ATHANASIOS NENES, *Georgia Institute of Technology*

9IM.2 2:00 **Accurate Determination of Aerosol Activity Coefficients at Relative Humidities up to 99% Using the Hygroscopicity Tandem Differential Mobility Analyzer Technique.** SARAH SUDA, Markus Petters, Timothy Wright, *North Carolina State University*

9IM.3 2:15 **A Novel Compact Aerosol Mass Spectrometer - the ToF-ACSM: Instrument Performance and First Field Deployment.** Roman Fröhlich, MICHAEL CUBISON, Jay Slowik, Andre Prévôt, Urs Baltensperger, Urs Rohner, Marc Gonin, Joel Kimmel, Douglas Worsnop, John Jayne, *Tofwerk AG*

9IM.4 2:30 **First Field Application of a Thermal Desorption Resonance-Enhanced Multiphoton-Ionisation Single Particle Time-of-Flight Mass Spectrometer for On-line Measurements of Particle Bound Polycyclic Aromatic Hydrocarbons and Source Identification.** MARKUS OSTER, Michael Elsasser, Jürgen Schnelle-Kreis, Ralf Zimmermann, *Helmholtz Zentrum München*

9IM.5 2:45 **Laser Ablation Aerosol Mass Spectrometry for Molecular Analysis of Biological Materials.** LIZABETH ALEXANDER, Matthew Newburn, Douglas Day, Jose-Luis Jimenez, Manjula Canagaratna, Douglas Worsnop, Vanessa Bailey, *Pacific Northwest National Laboratory*

9SA SOURCE APPORTIONMENT IV

NICOLLET D

Jason Surratt and Steven Trabue, chairs

9SA.1 1:45 **Chemical Characterization of Ice-Nucleating Bacteria by Aerosol Mass Spectrometry.** ROBERT WOLF, Jay Slowik, Johannes Schneider, Caroline Oehm, Ottmar Möhler, Andre Prévôt, Urs Baltensperger, *Paul Scherrer Institute*

9SA.2 2:00 **Real-time Continuous Characterization and Quantification of Isoprene Epoxydiol (IEPOX)-Derived Secondary Organic Aerosol in Downtown Atlanta, Georgia Using the Aerodyne Aerosol Chemical Speciation Monitor (ACSM).** SRI HAPSARI BUDISULISTIORINI, Manjula Canagaratna, Philip Croteau, Wendy Marth, Karsten Baumann, Eric Edgerton, Stephanie Shaw, Eladio Knipping, John Jansen, Roger Tanner, Douglas Worsnop, John Jayne, Jason Surratt, *University of North Carolina at Chapel Hill*

9SA.3 2:15 **Characterizing Carbonaceous Materials Emitted from Animal Feeding Operations.** STEVEN TRABUE, Kenwood Scoggin, Laura McConnell, Ronaldo Maghirang, Alam Hasson, Segun Ogunjemiyo, *USDA-ARS*

9SA.4 2:30 **Source Apportionment of EC and OC in Beijing: Comparison between 14C Measurement and Chemical Transport Model.** YU MORINO, Toshimasa Ohara, Shuichi Hasegawa, Akihiro Fushimi, Miyuki Kondo, Masao Uchida, Kiyoshi Tanabe, Kazuyo Yamaji, Bin Zhao, Jiayu Xu, Jiming Hao, *National Institute for Environmental Studies*

9SA.5 2:45 **Off-Line Organic Aerosol Analyses of Filter Samples Using Aerosol Mass Spectrometry.** IMAD EL HADDAD, Kaspar Dällenbach, Peter Zotter, Jay Slowik, Urs Baltensperger, Andre Prévôt, *Paul Scherrer Institute*

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

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

10AC AEROSOL CHEMISTRY VIII

NICOLLET A

Markus Petters and Lea Hildebrandt-Ruiz, chairs

10AC.1 3:30 **Potential Aerosol Mass (PAM) Chamber Measurement in the Ambient Air for the Secondary Aerosol Formation and Oxidation Potential of Air Masses Transported from Korea and China.** EUNHA KANG, William Brune, Taehyoung Lee, Joon-young Ahn, Meehye Lee, *Korea University, South Korea*

10AC.2 3:45 **Volatility and Gas-Particle Partitioning of Organic Acids in a Ponderosa Pine Forest.** LAXMINARASIMHA YATAVELLI, Harald Stark, Samantha Thompson, Joel Kimmel, Douglas Day, Pedro Campuzano-Jost, Michael Cubison, Joel A. Thornton, John Jayne, Douglas Worsnop, Jose-Luis Jimenez, *University of Colorado, Boulder, CO*

10AC.3 4:00 **Closing the Gas Phase Organic Carbon Budget in Aircraft Engine Exhaust: Characterizing Low Volatility Organic Compounds (LVOCs).** EBEN CROSS, James Hunter, Jonathan Franklin, Scott Herndon, Richard Miake-Lye, Michael Timko, Yu Zhenhong, Edward Fortner, John Jayne, Douglas Worsnop, Jesse Kroll, *MIT*

10AC.4 4:15 **Atmospheric Chemistry of Sea Salt Particles Internally Mixed with Secondary Organic Material: Surprising Reactivity of NaCl with Weak Organic Acids.** Alexander Laskin, BINGBING WANG, Alla Zelenyuk, Jacqueline Wilson, John Shilling, Rahul Zaveri, Jerome Fast, Alexei Tivanski, Mary Gilles, Ryan Moffet, Steven Kelly, Nigge Pascal, *Pacific Northwest National Laboratory*

10AC.5 4:30 **Contribution of Cooking Emissions to Primary and Secondary Organic Aerosol in Urban Atmospheres.** IMAD EL HADDAD, Stephen Platt, Jay Slowik, Claudia Mohr, Monica Crippa, Brice Temime-Roussel, Anaïs Detournay, Nicolas Marchand, Urs Baltensperger, Andre Prévôt, *Paul Scherrer Institute*

10AC.6 4:45 **Real-Time Secondary Organic Aerosol Formation from Ambient Air using the Potential Aerosol Mass (PAM) – Aerosol Mass Spectrometer.** JOSE-LUIS JIMENEZ, Amber Ortega, Brett Palm, Douglas Day, Pedro Campuzano-Jost, Patrick Hayes, William Brune, Rui Li, Daniel Bon, Joost de Gouw, Lisa Kaser, Thomas Karl, Juliane L. Fry, Kyle Zarzana, Steven Brown, et al., *University of Colorado*

10AP AEROSOL PHYSICS V

MIRAGE ROOM

Will Cantrell and Weiwei Deng, chairs

10AP.1 3:30 **Polarized Elastic Scatter Measurements from Optically Trapped Micron Sized Individual Particles.** VASANTHI SIVAPRAKASAM, Jozsef Czege, Jay Eversole, *Naval Research Laboratory*

10AP.2 3:45 **Infrared Extinction Spectra of Mineral Dust Aerosol.** OLGA LASKINA, Jennifer Alexander, Mark Young, Paul Kleiber, Vicki Grassian, *University of Iowa*

10AP.3 4:00 **Toward Understanding the Role of Turbulence in Enhancing Particle Deposition onto Vegetation.** Eric Pardyjak, John Veranth, TIM PRICE, Sean Moran, *University of Utah*

10AP.4 4:15 **Coulombic Fission of Ionic Salt Solution Droplets at Super-Rayleigh Limits.** ASIT RAY, Kuo-Yen Li, *University of Kentucky*

10AP.5 4:30 **The Effects of Small Scale Interactions on Liquid Particle Formation in Spray.** WANJIAO LIU, Sean Garrick, Michael Cloeter, *University of Minnesota*

10AP.6 4:45 **The Effect of Shape on the Electrical Mobility "Diameter" of Mineral Dust.** SWARUP CHINA, Kristopher Bunker, Claudio Mazzoleni, Alexander Kostinski, Will Cantrell, *Michigan Technological University*

10CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE IV

NICOLLET B/C

Andre Prevot and Jason Olfert, chairs

10CA.1 3:30 **Differences in the Carbon Finger Print for Different Soot Sources.** AMEWU A. MENSAH, Joel Corbin, Berko Sierau, *Institute of Atmospheric and Climate Science*

10CA.2 3:45 **The Examination of Mass Spectral Signatures With Different Black Carbon Sources Utilizing a SP-AMS Instrument.** EDWARD FORTNER, Timothy Onasch, Leah Williams, Paola Massoli, William Brooks, Manjula Canagaratna, Puneet Chhabra, Jonathan Franklin, Achim Trimborn, Scott Herndon, John Jayne, Douglas Worsnop, *Aerodyne Research, Inc.*

10CA.3 4:00 **Characterization of Black Carbon Containing Particles Measured by the Soot Particle Aerosol Mass Spectrometer on Board the R/V Atlantis during the 2010 CalNex Study.** TIMOTHY ONASCH, Paola Massoli, Shao-Meng Li, Katherine Hayden, Christopher Cappa, Ibraheem Nuaanman, Donna Sueper, Douglas Worsnop, *Aerodyne Research, Inc.*

10CA.4 4:15 **Transformation of Diesel Soot Investigated in a Smog Chamber.** JOAKIM PAGELS, Axel Eriksson, Jenny Rissler, Jonathan Carlsson, Cerina Wittbom, Erik, Z Nordin, Patrik Nilsson, Pontus Roldin, Birgitta Svenningsson, Erik Swietlicki, *Lund University, Lund, Sweden*

10CA.5 4:30 **Speciated Characterization of Primary Organic Aerosol Emissions from on Road Gasoline and Diesel Vehicles.** DAVID WORTON, Gabriel Isaacman, Drew Gentner, Arthur Chan, Chris Ruehl, Timothy Dallmann, Thomas Kirchstetter, Kevin Wilson, Robert Harley, Allen H. Goldstein, *University of California, Berkeley*

10CA.6 4:45 **Chemical Characterization of Aircraft Engine Soot from JP-8, Fischer-Tropsch and Alternative Fuel Surrogates by Micro-FTIR Spectroscopy.** JEREMY CAIN, Alexander Laskin, Edwin Corporan, David Blunck, Paul Gassman, William Roquemore, *Air Force Research Laboratory/Propulsion Directorate*

10HA HEALTH RELATED AEROSOLS IV: LUNG DEPOSITION

LAKE SUPERIOR

Yung-Sung Chen and Chong Kim, chairs

10HA.1 3:30 **Motion of Ellipsoidal Fibers in Human Tracheobronchial Tree.** LIN TIAN, Goodarz Ahmadi, Philip K. Hopke, Yung-Sung Cheng, *Clarkson University*

10HA.2 3:45 **Respiratory Deposition of Fine and Coarse Particles During Moderate Exercise.** CHONG KIM, Shu-Chieh Hu, *USEPA*

10HA.3 4:00 **Deposition of Carbon Nanotubes in a Human Nasal Airway Replica.** WEI-CHUNG SU, Bahman Asgharian, Yung-Sung Cheng, *Lovelace Respiratory Research Institute*

10HA.4 4:15 **Losses of Cigarette Smoke Particles in Oral Cavities.** Bahman Asgharian, OWEN PRICE, Jeff Schroeter, Colin Dickens, John McAughey, *Applied Research Associates, Inc.*

10HA.5 4:30 **Idealized Infant and Child Throats for Mimicking Average Extrathoracic Deposition.** Warren Finlay, Laleh Golshahi, Emad Javaheri, CONOR RUZYCKI, *University of Alberta*

10HA.6 4:45 **Evaluation of Drug Particle Deposition in Mouse Lung via Inhalation.** JINGJIE ZHANG, Da-Ren Chen, Yian Wang, *Washington University in St. Louis*

10IM INSTRUMENTATION AND METHODS IX

REGENCY ROOM

Miriam Freedman and Derek Oberreit, chairs

10IM.1 3:30 **Using Single Particle Levitation Coupled with Raman Spectroscopy to Investigate the Displacement of Ammonium from Aerosol Particles by Uptake of Triethylamine.** Yong J. Li, Berto Lee, CHAK K. CHAN, *Hong Kong University of Science and Technology*

10IM.2 3:45 **Evaluation of a Particle Trap Laser Desorption Mass Spectrometer (PT-LDMS) for Online Measurements of Aerosol Composition.** NOBUYUKI TAKEGAWA, Takuma Miyakawa, Naoki Takeda, Masahiko Takei, Noritomo Hirayama, *RCAST, University of Tokyo*

10IM.3 4:00 **Photophoretic Trapping of Absorbing Particles in Air and Measurement of Their Single-Particle Raman Spectra.** YONG-LE PAN, Steve Hill, Mark Coleman, *US Army Research Laboratory*

10IM.4 4:15 **Laboratory Evaluation of Selected Methods for Determining Black Carbon Source Emissions.** John Kinsey, JELICA PAVLOVIC, *U.S. EPA*

10IM.5 4:30 **The Use of Cavity Ring-Down Spectroscopy to Quantify Mineral Dust Optical Properties.** Daniel P. Veghte, MIRIAM A. FREEDMAN, *The Pennsylvania State University*

10IM.6 4:45 **A Balloon-Borne Platform for Measuring Vertically Resolved Concentrations of Black Carbon in the Troposphere.** DANIEL WILSON, Odelle Hadley, Craig Corrigan, Jeff Blair, Thomas Kirchstetter, *Lawrence Berkeley National Laboratory*

10RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS II

NICOLLET D

Lynn Russell and Allen Robinson, chairs

10RA.1 3:30 **Regional Signatures from Seawater in Atmospheric Particles.** AMANDA FROSSARD, Lynn Russell, Patricia Quinn, Timothy Bates, Scott Elliot, *Scripps Institution of Oceanography*

10RA.2 3:45 **Chlorophyll-a and Other Ocean Color Products as Predictive Tools of the Organic Mass Fraction in Submicron Sea Spray.** MATTEO RINALDI, Sandro Fuzzi, Stefano Decesari, Salvatore Marullo, Rosalia Santoleri, Antonello Provenzale, Jost von Hardenberg, Darius Ceburnis, Colin O'Dowd, M. Cristina Facchini, *CNR-ISAC*

10RA.3 4:00 **Aerosol Hygroscopicity in a Mixed-Deciduous Forest During CABINEX 2009.** George R. Mwaniki, Rosenkrance Chelsea, Mark E. Erupe, Shelley Pressley, TIMOTHY M. VANREKEN, *Washington State University*

10RA.4 4:15 **LADCO Winter Nitrate Study – Sensitivity of 2009 Winter PM2.5 to Modeled Reductions in NOx and and Ammonia.** CHARLES STANIER, Scott Spak, Yoo Jung Kim, Jessica Carlson, Jaemeen Baek, Gregory Carmichael, Abigail Fontaine, Mark Janssen, Michael Koerber, Nicole Riemer, Stephanie Shaw, *University of Iowa*

10RA.5 4:30 **Current and Future Impacts of Natural Gas Drilling in the Marcellus Shale on Regional NOx, VOC and PM2.5 Emissions.** ANIRBAN ROY, Peter Adams, Allen Robinson, *Carnegie Mellon University*

10RA.6 4:45 **Real-World Emission Characterization in the Canadian Oil Sands Region.** XIAOLIANG WANG, Steven Kohl, Judith Chow, John Watson, *Desert Research Institute*

Friday

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

8:00 **Multiphase Oxidation Chemistry: Impacts on Both the Gas Phase and Aerosol** Jonathan Abbatt, *University of Toronto, Canada*

Moderator Alexander Laskin, *Pacific Northwest National Laboratory*

9:00 **Student Poster Competition Award Presentation** Peter DeCarlo, Student Poster Program Chair, *Drexel University*

9:10 **Concluding Remarks and Preview for 2013** Sergey Nizkorodov and Murray Johnston, 2012 & 2013 Conference Chairs, *University of California, Irvine and University of Delaware*

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

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

11AC AEROSOL CHEMISTRY IX

NICOLLET A

Ryan Sullivan and Jesse Kroll, chairs

11AC.1 9:45 **Laboratory and Field Studies of Organic Aerosol Aging Using Nanospray-DESI High-Resolution Mass Spectrometry.** ALEXANDER LASKIN, Julia Laskin, Peter Eckert, Tran Nguyen, Paula Lee, Katelyn Updyke, David Bones, Sergey Nizkorodov, Rachel O'Brain, Allen H. Goldstein, *Pacific Northwest National Laboratory*

11AC.2 10:00 **Brown Carbon Formation from Reactions of Limonene-derived Ketoaldehydes with Ammonium Sulfate and Amino Acids.** TRAN NGUYEN, Sergey Nizkorodov, *University of California, Irvine*

11AC.3 10:15 **Real Refractive Indices and Volatility of Secondary Organic Aerosol Generated from Ozonolysis and Photooxidation of Limonene, Alpha-Pinene and Toluene upon Heating.** Hwajin Kim, SUZANNE PAULSON, *University of California Los Angeles*

11AC.4 10:30 **Measurements of Nitrogen-Containing Organic Particle and Gas Phase Compounds with a New MOVI-HR-ToF-CIMS.** CLAUDIA MOHR, Felipe Lopez-Hilfiker, Julia. D. Wargo, Nga Lee Ng, Lu Xu, Matthew Kollman, Peter Zotter, Andre Prévôt, Scott Herndon, Jonathan Franklin, Mark Zahniser, Leah Williams, Douglas Worsnop, Joel A. Thornton, *University of Washington, Seattle, WA*

11AC.5 10:45 **Quantification of Organosulfate Formation in the SOA with Preexisting Acidic Sulfate Aerosol.** JIAYING LI, Myoseon Jang, *University of Florida*

11CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE V

NICOLLET B/C

Tim Onasch and Arthur Chan, chairs

11CA.1 9:45 **Primary to Secondary Organic Aerosol: Evolution of Emissions from Combustion Sources.** ALBERT A. PRESTO, Timothy Gordon, Christopher Hennigan, Marissa Miracolo, Allen Robinson, *Carnegie Mellon University*

11CA.2 10:00 **Road Vehicle Primary and Secondary Organic Aerosol.** ANDRE PRÉVÔT, Stephen Platt, Alessandro Zardini, Clairotte Michael, Covadonga Astorga, Robert Wolf, Imad El Haddad, Jay Slowik, Brice Temime-Roussel, Nicolas Marchand, Irena Jezek, Luka Drinovec, Grisa Mocnik, Ottmar Möhler, Urs Baltensperger, *Paul Scherrer Institute*

11CA.3 10:15 **Organic Aerosol Formation and Processing in the Los Angeles Basin: Role of Gasoline vs. Diesel Emissions.** ROYA BAHREINI, Ann Middlebrook, Joost de Gouw, Carsten Warneke, Michael Trainer, Charles Brock, Harald Stark, Steven Brown, William P. Dube, Jessica Gilman, Katharine Hall, John Holloway, William C. Kuster, Anne Perring, Andre Prévôt, Joshua P. Schwarz, J. Ryan Spackman, Soenke Szidat, Nick Wagner, Rodney Weber, Peter Zotter, David D. Parrish, *CU CIRES- NOAA ESRL*

11CA.4 10:30 **Unresolved Complex Mixture Emissions from Combustion Sources and Their Potential to Form Secondary Organic Aerosol.** SHANTANU JATHAR, Havala Pye, Peter Adams, Allen Robinson, *Carnegie Mellon University*

11CA.5 10:45 **On-Road Gasoline and Diesel Engine Exhaust Naphthalene Emissions: Contributions to Regional SOA Formation in Southern California.** Alexander Cohan, Donald Dabdub, Arantzazu Eiguren-Fernandez, ANTONIO H. MIGUEL, *University of California, Irvine*

11HA HEALTH RELATED AEROSOLS V: NANOAEROSOLS AND HEALTH

LAKE SUPERIOR

Bahman Asgharian and Michael Oldham, chairs

11HA.1 9:45 **An in Vitro Model for Tracking Translocation of Industrially Relevant Engineered Nanomaterials across the Alveolar Epithelium: The Importance of Size, Surface Chemistry, and Particle Kinetics.** JOEL COHEN, Ramon Molina, Joseph Brain, Philip Demokritou, *Harvard University*

11HA.2 10:00 **Transport Properties of Airborne Nanomaterials.** BON KI KU, Pramod Kulkarni, *Centers for Disease Control and Prevention, NIOSH*

11HA.3 10:15 **Aerosol Emission Monitoring in the Production of Silicon Carbide Nanoparticles by Induction Plasma Synthesis.** DREW THOMPSON, Jing Wang, Jelena Buha, Christian Jaeggi, Marc Leparoux, David Pui, *University of Minnesota*

11HA.4 10:30 **An Inhalation Toxicological Characterization of Nano CeO2 Using the Harvard VENGES Toxicological Platform.** Georgios Pyrgiotakis, Samuel Gass, William Goldsmith, David Frazer, Jane Ma, Walter McKinney, Mark Barger, Bridget Dolash, Vincent Castranova, PHILIP DEMOKRITOU, *Harvard University*

11HA.5 10:45 **Evaluation of the Toxicological Potential of Silver Nanoparticles.** STEFANIE KASURINEN, Pasi, I Jalava, Kari Kuuspalo, Ari Leskinen, Kati Huttunen, Jorma Jokiniemi, Kari Lehtinen, Maija-Riitta Hirvonen, *University of Eastern Finland, Kuopio, Finland*

11IM INSTRUMENTATION AND METHODS X

REGENCY ROOM

Jelica Pavlovic and Yue Zhou, chairs

11IM.1 9:45 **Development of Variable-Flow Rate Isokinetic Sampling System for 0.5-15 Micro-Meter Particles.** HIROKAZU ICHITSUBO, Yoshio Otani, *Japan Tobacco Inc.*

11IM.2 10:00 **Aspiration Efficiency Evaluation of Two Specific Personal Samplers.** YUE ZHOU, Hammad Irshad, Chuen-Jinn Tsai, Shao-Ming Hung, Bean Chen, Yung-Sung Cheng, *Lovelace Respiratory Research Institute*

11IM.3 10:15 **Examination of Sampler Efficiency of Thin-Walled Reference Samplers in Low Velocity Freestreams.** KIMBERLY ANDERSON, T. Renee Anthony, *University of Iowa*

11IM.4 10:30 **Experimental Study of a Miniature Dumbbell Electrical Aerosol Classifier (Dumbell EAC).** SIQIN HE, Da-Ren Chen, *Washington University in St. Louis*

11IM.5 10:45 **Bipolar Charge Measurement for DPI (Dry Powder Inhaler) Particles.** JONNA KANNOSTO, Ville Niemelä, Henna Isherwood, Jaakko Yli-Ojanperä, Jorma Keskinen, Risto Hillamo, Anna Frey, Steve Layzell, David Prime, Ari Ukkonen, *Dekati Ltd., Tampere, Finland*

11NM NANOPARTICLES AND MATERIALS SYNTHESIS II

MIRAGE ROOM

Xiaofei Ma and Jun Wang, chairs

11NM.1 9:45 **The Sintering Rate of Aerosol Nanoparticles.** Beat Buesser, Arto Groehn, SOTIRIS E. PRATSINIS, *ETH Zurich*

11NM.2 10:00 **A Safer Formulation Concept for Flame-Generated Engineered Nanomaterials (ENMs).** Samuel Gass, GEORGIOS PYRGIOTAKIS, Joel Cohen, Georgios A. Sotiriou, Sotiris E. Pratsinis, Philip Demokritou, *Harvard University*

11NM.3 10:15 **Highly Efficient Pt-TiO2 Nanostructured Films for CO2 Conversion to Hydrocarbon Fuels.** WEI-NING WANG, Woo-Jin An, Balavinayagam Ramalingam, Somik Mukherjee, Dariusz M. Niedzwiedzki, Shubhra Gangopadhyay, Pratim Biswas, *Washington University in St. Louis*

11NM.4 10:30 **Ultrasonic Spray Pyrolysis Synthesis of Ag-Ce Co-modified TiO2 Nanocomposites for Syngas Production Under Solar Irradiation.** Daniel Pitts, Cunyu Zhao, Huilei Zhao, Lianjun Liu, YING LI, *University of Wisconsin-Milwaukee*

11NM.5 10:45 **In situ Ambient Pressure XPS Investigations of PdAg Alloy Nanoparticles: Towards Cheaper Catalysts.** MARIA E MESSING, Sara Blomberg, Natalia M Martin, Johan Gustafson, Jesper Andersen, Lars Erik Walle, Anne Borg, Henrik Grönbeck, Michael E Grass, Zhi Liu, Edvin Lundgren, Knut Deppert, *Lund University*

11RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS III

NICOLLET D

David Cocker and Rick Saylor, chairs

11RA.1 9:45 **Influences of SO2 and NH3 Levels on Ambient Isoprene Epoxydiol (IEPOX)-Derived SOA Formation in the Rural Southeastern United States.** YING-HSUAN LIN, Eladio Knipping, Eric Edgerton, Stephanie Shaw, Jason Surratt, *University of North Carolina at Chapel Hill*

11RA.2 10:00 **Performance of High Resolution Time-of-Flight Aerosol Mass Spectrometer during Chemical Characterization of Particle Emissions from Controlled Biomass Burning.** POORNIMA DIXIT, Seyedehsan Hosseini, Ping Tang, David R. Cocker III, Li Qi, *University of California, Riverside*

11RA.3 10:15 **Characterization of Transboundary Biomass Burning Smoke on Organic Aerosols in a Tropical Urban Environment: Dicarboxylic Acids, Malic Acid, and Photooxidation Intermediates of Levoglucosan.** Liming Yang, Wei Hong Fan, Shiguo Jia, Duc Minh Nguyen, Jeffrey Reid, LIYA YU, *National University of Singapore*

11RA.4 10:30 **Long Term Measurements of Aerosol Optical Properties in Amazonian.** PAULO ARTAXO, Luciana Rizzo, Erik Swietlicki, Andrea Arana, Elisa Sena, Glauber Cirino, Alfred Wiedensohler, *Institute of Physics, University of Sao Paulo*

11RA.5 10:45 **Fine Particles Over an Ecologically Sensitive Zone in Bhopal, India-Characterization and Temporal Variability.** RAMYA SUNDER RAMAN, Balram Ambade, Masood Ayub Kaloo, *Indian Institute of Science Education and Research, Bhopal*

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

12AC AEROSOL CHEMISTRY X

NICOLLET A

Peter DeCarlo and Timothy VanReken, chairs

12AC.1 11:15 **Kinetics and Products of Multiphase Aging Reactions of Organic Aerosol.** JESSE KROLL, James Hunter, Kelly Daumit, Sean Kessler, Anthony Carrasquillo, Eben Cross, Theodora Nah, Douglas Worsnop, Kevin Wilson, *MIT*

12AC.2 11:30 **Aging of Secondary Organic Aerosol from Small Aromatic VOCs: Changes in Chemical Composition, Mass Yield, Volatility and Hygroscopicity.** LEA HILDEBRANDT RUIZ, Andrea Paciga, Benjamin Murphy, Kate Cerully, Athanasios Nenes, Neil Donahue, Spyros Pandis, *Carnegie Mellon University*

12AC.3 11:45 **Rapid Modification of Cloud-Nucleating Ability of Aerosols by Biogenic Emissions.** SARAH D. BROOKS, Yan Ma, German Vidaurre, Alexei F. Khalizov, Lin Wang, Jun Zheng, Renyi Zhang, *Texas A&M University*

12AC.4 12:00 **Sustained Chemical Evolution of alpha-Pinene Ozonolysis Products - Evidence for Bulk Phase Reaction.** PETER DECARLO, Torsten Tritscher, Lisa Pfaffenberger, Arnaud Praplan, Peter Barmet, Kaytlin Henry, Josef Dommen, Neil Donahue, Andre Prévôt, Urs Baltensperger, *Drexel University*

12AC.5 12:15 **New Information on Cr Speciation in the Presence of Ozone and Reactive Oxygen Species during Atmospheric and Sampling Aging.** Mehdi Amouei Torkmahalleh, Lin Lin, Thomas M. Holsen, Don H. Rasmussen, PHILIP K. HOPKE, *Clarkson University*

12CA CARBONACEOUS AEROSOLS IN THE ATMOSPHERE VI

NICOLLET B/C

Roya Bahreini and Andrey Khlystov, chairs

12CA.1 11:15 **Phase, Viscosity, Morphology, and Room Temperature Evaporation Rates of SOA Particles generated from different Precursors, at Low and High Relative Humidities, and their Interaction with Hydrophobic Organics.** ALLA ZELENYUK, Dan Imre, Josef Beranek, Jacqueline Wilson, Evan Abramson, *Pacific Northwest National Laboratory*

12CA.2 11:30 **Effect of Relative Humidity on the Evaporation Kinetics of Alpha-Pinene Secondary Organic Aerosol.** ELLIS SHIPLEY ROBINSON, Neil Donahue, *Carnegie Mellon University*

12CA.3 11:45 **Implementing Volatility Basis Set Algorithm for Organic Aerosol Formation in CMAQ 5.0.** BONYOUNG KOO, Greg Yarwood, Eladio Knipping, *ENVIRON International Corporation*

12CA.4 12:00 **Contribution of Uncertainties in Anthropogenic Emission Inventories to SOA Simulations for the Los Angeles Basin.** RAVAN AHMADOV, Stuart McKeen, Roya Bahreini, Ann Middlebrook, Joost de Gouw, Carsten Warneke, Jose-Luis Jimenez, Patrick Hayes, Allen Robinson, Michael Trainer, *NOAA ESRL*

12CA.5 12:15 **Assessment of Biogenic Secondary Organic Aerosol in the Himalayas.** ELIZABETH STONE, Tony Nguyen, Bidya Banmali Pradhan, Pradeep Man Dangol, *University of Iowa*

12HA HEALTH RELATED AEROSOLS VI: HEALTH EFFECTS

LAKE SUPERIOR

Carlos Lange and Zuocheng Wang, chairs

12HA.1 11:15 **Multistage Cyclone Array for the Simultaneous Collection of Aerosol Mass in the Ultrafine, Submicron, Respirable, and Coarse Region.** EMANUELE CAUDA, Steven Mischler, *NIOSH*

12HA.2 11:30 **Contribution of water-soluble and insoluble species and their hydrophobic/hydrophilic sub-fractions in the toxicological properties of ambient atmospheric aerosols.** VISHAL VERMA, Neel Kotra, Laura King, Jiumeng Liu, Roberto Rico-Martinez, Terry Snell, Rodney Weber, *Georgia Institute of Technology*

12HA.3 11:45 **On-line Measurements of Particle Bound Reactive Oxygen Species in Ambient and Combustion Aerosols.** STEPHEN FULLER, Jenny Nutter, Stephen Platt, Lisa Pfaffenberger, Peter Barmet, Josef Dommen, Urs Baltensperger, Andre Prévôt, Markus Kalberer, *University of Cambridge*

12HA.4 12:00 **The Complex Role of Vegetation in Mitigating Near Road Air Pollution.** ZHEMING TONG, Max Zhang, Patrick MacRae, Thomas Whitlow, *Cornell University, Ithaca, NY, USA*

12HA.5 12:15 **Relation Between Carbonaceous Aerosol Characterization and Lung Injury Endpoints in an In Vivo Model.** ANDRÉS HENRÍQUEZ, Matías Tagle, Felipe Reyes, Thomas Kuhlbusch, Bryan Hellack, Claudio Hetz, Pedro Oyola, *Centro Mario Molina*

12IM INSTRUMENTATION AND METHODS XI

REGENCY ROOM

Igor Paprotny and John Carpin, chairs

12IM.1 11:15 **Ultrafine Particle Generation Through Atomization Technique: The Influence of the Solution.** LUCA STABILE, Giorgio Buonanno, Conchita Vargas Trassierra, Gianfranco Dell'Agli, Aldo Russi, *University of Cassino and Southern Lazio*

12IM.2 11:30 **A Piezoelectrically Actuated Nebulizer for Inductively Coupled Plasma (ICP) Spectrometry.** SANAZ ARABZADEH, Hamid Badiei, Kaveh Kahen, Javad Mostaghimi, *PerkinElmer Inc.*

12IM.3 11:45 **A Micro-Liter Vaporization Condensation Aerosol Generator.** JOHN CARPIN, *US ARMY*

12IM.4 12:00 **Measuring Concentrations of Cigarette Smoke and Diesel Exhaust Using a MEMS-Based Microfluidic PM Sensor.** IGOR PAPROTNY, Frederick Doering, Richard White, Paul A. Solomon, Lara Gundel, *University of California, Berkeley*

12IM.5 12:15 **Computational Fluid Dynamics Analysis of High-Volume Inlets for Atmospheric Aerosol Sampling Application.** IGOR NOVOSSELOV, Riley Gorder, Anna Gannet Hallar, *Enertechnix Inc*

12NM NANOPARTICLES AND MATERIALS SYNTHESIS III

MIRAGE ROOM

Ying Li and Wei-Ning Wang, chairs

12NM.1 11:15 **Laser-Plasma Synthesis of Sb Nanoparticles.** A.M. Baklanov, O.V. BOROVKOVA, G.N. Grachev, A.A. Onischuk, A.L. Smirnov, M.I. Zimin, *Institute of Chemical Kinetics and Combustion, Novosibirsk*

12NM.2 11:30 **Preparation of Novel SiC and Carbon Nanostructures by Induction Heating of Preceramic Silicon-Carbon Nanoparticles.** ANNA LÄHDE, Mirella Miettinen, Jouni Hokkinen, Tommi Karhunen, Unto Tapper, Jorma Jokiniemi, *University of Eastern Finland*

12NM.3 11:45 **Low-Temperature Hydrolysis of AlCl3 Vapor in an Aerosol Reactor to Produce Spherical Preforms for Ceramic-Grade Alumina.** HOEY KYUNG PARK, Kyun Young Park, Kyeong Youl Jung, *Kongju National University, South Korea*

12NM.4 12:00 **Monodisperse Poly(lactide–co–glycolic acid)–based Nanocarriers for Gene Transfection.** JEONG HOON BYEON, Jeffrey Roberts, *Department of Chemistry, Purdue University*

12NM.5 12:15 **A Novel Method to Measure Effective Density of Engineered Nanomaterials in Liquid Suspensions: Implications for In Vitro Dosimetry and Nanotoxicology.** Glen DeLoid, Joel Cohen, PHILIP DEMOKRITOU, *Harvard University*

12RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS IV

NICOLLET D

Philip Hopke and Jason Surratt, chairs

12RA.1 11:15 **Long-term Trends in the Chemical Composition of Finnish Arctic Aerosols.** JAMES R. LAING, Philip K. Hopke, Liaquat Husain, Vincent A. Dutkiewicz, Jussi Paatero, Tanveer Ahmed, *Clarkson University*

12RA.2 11:30 **Ultra-High Resolution Mass Spectrometry Analysis of PM1 Finnish Boreal Forest Aerosol.** IVAN KOURTCHEV, Stephen Fuller, Juho Aalto, Taina Ruuskanen, Willy Maenhaut, Markku Kulmala, Markus Kalberer, *University of Cambridge*

12RA.3 11:45 **Long-term Volatility Measurements of Submicron Atmospheric Aerosol in Boreal Forest.** SILJA HÄKKINEN, Mikko Äijälä, Katrianne Lehtipalo, Heikki Junninen, John Backman, Aki Virkkula, Tuomo Nieminen, Mika Vestenius, Hannele Hakola, Mikael Ehn, Douglas Worsnop, Markku Kulmala, Tuukka Petäjä, Ilona Riipinen, *University of Helsinki*

12RA.4 12:00 **An Investigation of Secondary Organic Aerosol Precursors and Formation Processes in and above Deciduous Forest Canopies.** RICK SAYLOR, Ariel Stein, *NOAA Air Resources Laboratory*

12RA.5 12:15 **Spatial Extent of New Particle Formation and Growth Events.** JAMES SCHWAB, G. Garland Lala, Kenneth Demerjian, Brian P. Frank, H. Dirk Felton, Oliver Rattigan, *University at Albany, SUNY*