

## Monday

Monday 8:00 AM - 9:45 AM  
Tutorials I

Monday 10:00 AM - 11:45 AM  
Tutorials II

Monday 1:00 PM - 2:45 PM  
Tutorials III

Monday 3:00 PM - 4:45 PM  
Tutorials IV

Monday 1:00 PM - 5:00 PM  
AMS/ACSM "Mini" Users' Meeting

Monday 2:00 PM - 4:30 PM  
AAAR Executive Committee Meeting

Monday 5:00 PM - 6:00 PM  
Science Communication Program

Monday 6:00 PM - 7:00 PM  
Refreshment Break

Monday 7:00 PM - 8:30 PM  
Geeks Who Drink Trivia for AAAR

## Tuesday

Tuesday 7:00 AM - 8:00 AM  
Committee Meetings - Awards, Endowment, Internet

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

8:00 **Welcoming Remarks** Amy P. Sullivan, Conference Chair and Akua Asa-Awuku, President, *Colorado State University, University of Maryland College Park*

8:05 **AEESP Lecture: Low-cost Sensors for Exposure and Health Science: How It Started, How It's Going** John Volckens, *Colorado State University*

**Moderator** Krystal Pollitt, *Yale University*

9:00 **Hering Award Presentation, Announcement of 2022 AAAR Fellows** Jacky Rosati, Anthony S. Wexler, and Christopher M. Sorensen, *U.S. Environmental Protection Agency, University of California - Davis, and Kansas State University*

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

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

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

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1AC AEROSOL CHEMISTRY I: AGEING OF ORGANIC AEROSOL

BALLROOM C – Yue Zhang and Christopher Kenseth, chairs

- 1AC.1** [Exploring the Chemical Evolution of Aerosol Particle Composition and Physical Properties using Single Particle Levitation.](#) 9:45 RAVLEEN KAUR KOHLI, James F. Davies, *University of California, Riverside*
- 1AC.2** [Modeling of the Atmospheric Process of Cyanobacterial Toxins in Algal Aerosol.](#) 10:00 VICTORIA ZORBAS, Myoseon Jang, *University of Florida*
- 1AC.3** [The Peroxy Radical Fates during Heterogeneous Oxidation of Organic Aerosols.](#) 10:15 WEN ZHANG, Chuanyang Shen, Haofei Zhang, *University of California, Riverside*
- 1AC.4** [Photosensitized Aging of Secondary Organic Aerosol by Nitrophenols.](#) 10:30 AVERY DALTON, Maggie Chou, Sergey Nizkorodov, *University of California, Irvine*
- 1AC.5** [Nitration Reactions of Proteins in Urban Air: O<sub>3</sub> and NO<sub>2</sub> Concentrations, Exposure Time, and Implications.](#) 10:45 RACHEL L. DAVEY, Erick Mattson, J. Alex Huffman, *University of Denver*
- 1AC.6** [Aqueous-Phase Autoxidation of Organic Compounds: Study on Fate and Detection of Organic Peroxides.](#) 11:00 TANIA GAUTAM, Lisa Ng, Ran Zhao, *University of Alberta*
- 1AC.7** [Aging of Secondary Organic Aerosols at Atmospherically Relevant Acidities.](#) 11:15 CYNTHIA WONG, Sergey Nizkorodov, *University of California, Irvine*
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1AE AEROSOL EXPOSURE I: PERSONAL & MODELING

302 B/C – Krystal Pollitt and Yiting Li, chairs

- 1AE.1** [Characterization of VOC and Particle Emissions in Exhaled Air during Vaping.](#) 9:45 KATHERINE HOPSTOCK, Donald Blake, Sergey Nizkorodov, Rufus Edwards, *University of California, Irvine*
- 1AE.2** [Personal Exposure of Domestic Dogs and Their Owners to Airborne Per- and Polyfluoroalkyl Substances \(PFAS\).](#) 10:00 EMILY JOHNSON, Maryam Aniya Khalili, Elizabeth Lin, Jeremy Koelmel, Shelly L. Miller, Krystal Godri Pollitt, *Yale University*
- 1AE.3** [Toxicological Impact of Secondary Organic Aerosol Compounds in Air-Liquid-Interface Exposed Lung Cell Models.](#) 10:15 Svenja Offer, Elena Hartner, Thomas Gröger, Yinon Rudich, Michal Prado, Astrid Kiendler-Scharr, Thorsten Hohaus, Andreas Paul, Sebastiano di Bucchianico, Martin Sklorz, Hendryk Czech, RALF ZIMMERMANN, *Helmholtz Zentrum München and University of Rostock*
- 1AE.4** [Air Pollution Constituents that Influence the Frequency and Severity of Children's Asthma Exacerbations.](#) 10:30 JONATHAN THORNBURG, *RTI International*
- 1AE.5** [Measurement and Speciation of Ultrafine Particles Generated by Small Electric Motors.](#) 10:45 GARY CASUCCIO, Traci Lersch, Kristin Bunker, Scott Hollenbeck, John Jankovic, Tracy Zontek, *RJ Lee Group, Inc.*
- 1AE.6** [Contributing to the Mechanistic Understanding of Asthma Development: Allergenic and Inflammatory Cell Response from Exposure to Salton Sea Derived Aerosol.](#) 11:00 RYAN W. DROVER, Trevor Biddle, Mia R. Maltz, Qi Li, Daniel Gonzalez, David D. Lo, David R. Cocker III, *University of California, Riverside*
- 1AE.7** [Developing National Exposure Models for Source-Specific Primary Particulate Matter Concentrations Using Aerosol Mass Spectrometry Data.](#) 11:15 PROVAT SAHA, Albert A. Presto, Steven Hankey, Benjamin Murphy, Julian Marshall, Allen Robinson, *Carnegie Mellon University*
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1BC SYMPOSIUM: BIOMASS COMBUSTION: OUTDOOR/INDOOR TRANSPORT AND INDOOR AIR QUALITY I

305 A/B – Sarah Styler and Benjamin Nault, chairs

- 1BC.1** [\(Not\) Burning Down the House: Investigating the Fate of wildfire Smoke in Homes.](#) DELPHINE K. FARMER, Kathryn Mayer, Liora Mael, Lauren A. Garofalo, Jienan Li, Katelyn Rediger, Michael Link, Dustin Poppendieck, Marina Vance, *Colorado State University*. INVITED.
- 1BC.2** [The Chemistry of Wildfire Smoke in the Indoor Environment during the CASA Campaign.](#) KATHRYN MAYER, Jienan Li, Lauren A. Garofalo, Liora Mael, Andrew Martin, Michael Link, Dustin Poppendieck, Marina Vance, Delphine K. Farmer, *Colorado State University*
- 1BC.3** [Impacts of Aging and Relative Humidity on Wildfire Smoke in Indoor Environments.](#) LIORA MAEL, Andrew Martin, Kathryn Mayer, Dustin Poppendieck, Delphine K. Farmer, Marina Vance, *University of Colorado Boulder*
- 1BC.4** [Deposited Biomass Burning Aerosol as a Possible Source of Reactive Species to Air-Exposed Surface Films.](#) DOUGLAS COLLINS, April Hurlock, Naomi Douek, *Bucknell University*
- 1BC.5** [Impact of Do-It-Yourself and Commercial Air Cleaner Use on Residential PM2.5 in a Smoke-Impacted Community.](#) PRADEEP PRATHIBHA, Mallory Turner, Madison Kirshner, Amber Batchelder, Brian McCaughey, Julia Carlstad, Ann Chelminski, Ana Rappold, Beth Hassett-Sipple, Amara Holder, *U.S. Environmental Protection Agency*
- 1BC.6** [Measurements of VOCs in Homes Impacted by Smoke from the Marshall Fire.](#) WILLIAM DRESSER, Alexander Bradley, Abby Koss, Joost de Gouw, *CU Boulder*
- 1BC.7** [Using Low-Cost Sensor Networks To Estimate Health Impacts of Indoor Exposures to Wildfire Emissions.](#) ELLIOTT GALL, Ruth Dittrich, Julia Weinand, Franklyn Santos, Joshua Zulueta, *Portland State University*

1HA HEALTH-RELATED AEROSOLS I: AIR POLLUTION, EXPOSURE, AND HUMAN HEALTH EFFECTS

306 A/B/C – Shruti Choudhary and Cesunica Ivey, chairs

- 1HA.1** [Climate-induced Air Quality Deterioration and Associated Health Risks.](#) PENGFEI LIU, Qiao Zhu, Haisu Zhang, Haomin Li, Bin Bai, Howard Chang, Loretta Mickley, Joel Schwartz, Liuhua Shi, *Georgia Institute of Technology*
- 1HA.2** [Spray-Dried Encapsulated Iron for Food Fortification.](#) ALBERTO BALDELLI, Yigong Guo, Anubhav Pratap-Singh, *The University of British Columbia*
- 1HA.3** [Measurement Artifacts in the Dithiothreitol \(DTT\) Oxidative Potential Assay Caused by Precipitation of Aqueous Transition Metals.](#) JAYASHREE YALAMANCHILI, Christopher Hennigan, Brian Reed, *University of Maryland, Baltimore County*
- 1HA.4** [Incident Dementia and Long-Term Exposure to Constituents of U.S. Fine Particle Air Pollution: A National Cohort Study.](#) LIUHUA SHI, Qiao Zhu, Yifan Wang, Hua Hao, Haisu Zhang, Aaron van Donkelaar, Randall Martin, Heresh Amini, Kyle Steenland, Jeremy A. Sarnat, Howard Chang, Jeremiah Liu, Tszshan Ma, Haomin Li, William M. Caudle, Rodney J. Weber, Pengfei Liu, *Emory University*
- 1HA.5** [Measurement of Aerosol Emissions and Exposure to Firefighters during Fire Training.](#) SHRUTI CHOUDHARY, Darlington Imhanzuar, Erin Kobetz, Alberto Caban-Martinez, Pratim Biswas, *University of Miami*
- 1HA.6** [Long-term Air Quality and Health Effects of Dairy Digesters in the Future San Joaquin Valley.](#) Jia Jiang, Ali Akherati, Hamed El-Mashad, Frank Mitloehner, MICHAEL KLEEMAN, *University of California, Davis*
- 1HA.7** [The Nervous Impact of Short Term Exposure to Cooking Ultrafine Particles.](#) Motahareh Naseri, MEHDI AMOUEI TORKMAHALLEH, Seyedeh Mohadeseh Kazemitabar, Seyedeh Ayeh Esmaili Talesh, Sahar Sadeghi, Milad Malekipirbazari, Mojtaba Jouzizadeh, Reza Khanbabaie, Dhawal Shah, Flemming Cassee, Byron Crape, Giorgio Buonanno, Luca Stabile, *University of Illinois at Chicago*

- 1SA.1** [Atmospheric Science and Chemistry mEasurement NeTwork \(ASCENT\): A New Ground-based High Time-resolution Air Quality Monitoring Network](#). NGA LEE NG, Ann Dillner, Roya Bahreini, Armistead G. Russell, Jeff de La Beaujardiere, James Flynn, Drew Gentner, Robert Griffin, Lelia Hawkins, Jose-Luis Jimenez, Jingqiu Mao, Shane Murphy, Eric Nienhouse, Albert Presto, Sean Raffuse, Allen Robinson, John Seinfeld, Jason Surratt, Joel A. Thornton, Bridget Thrasher, *Georgia Institute of Technology*  
9:45
- 1SA.2** [Computation of Numerically Exact First- and Second-Order Sensitivities of Biogenic Aerosols Formation Using a Column Model Version of CMAQ-hyd](#). JIACHEN LIU, Eric Chen, Ryan Russell, Shannon Capps, *Drexel University*  
10:00
- 1SA.3** [Polycyclic Aromatic Hydrocarbons in Background Air – A Single-particle Study on Their Sources and Atmospheric Processing in Northern Europe](#). JOHANNES PASSIG, Julian Schade, Robert Irsig, Thomas Kröger-Badge, Hendryk Czech, Henrik Fallgren, Jana Moldanova, Martin Sklorz, Thorsten Streibel, Andreas Walte, Ralf Zimmermann, *Helmholtz Zentrum München and University of Rostock*  
10:15
- 1SA.4** [Understanding the Sources and Light Absorption Properties of Brown Carbon Aerosols via Source Apportionment Analysis of Combined AMS and UV-vis Measurements](#). WENQING JIANG, Christopher Niedek, Lan Ma, Cort Anastasio, Qi Zhang, *University of California, Davis*  
10:30
- 1SA.5** [Metallic Trace Elements Shipping Profile by PM1 Source Apportionment in a Mediterranean Port City](#). LISE LE BERRE, Benjamin Chazeau, Brice Temime-Roussel, Grazia Maria Lanzafame, Alexandre Armengaud, Stéphane Sauvage, Leonidas Ntziachristos, Nicolas Marchand, Barbara D'Anna, Henri Wortham, *Aix Marseille Univ, CNRS, LCE, Marseille, France*  
10:45
- 1SA.6** [Evaluating the Trends in Sources of Ambient Particle-Bound Metals in the Environmental Justice Community of Paramount, CA, during Pre- and Post-COVID-19 Lockdown Periods](#). MOHAMMAD SOWLAT, Sina Hasheminassab, Bill Grant, Payam Pakbin, Jason Low, Andrea Polidori, *South Coast Air Quality Management District*  
11:00
- 1SA.7** [Development of a Database for Factor Analysis-Derived Profiles from TAG Measurements](#). MICHAEL WALKER, Claire Fortenberry, Brent Williams, *Washington University in St. Louis*  
11:15
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1UA URBAN AEROSOLS I

302 A – Havala Pye and Alex Prophet, chairs

- 1UA.1** [Seasonal Variation in Ambient Air Pollutants and Influence of Meteorological Factors in an Urban Environment, Sri Lanka](#). BUDDHI PUSHPAWELA, Sheryl Shelton, Gayathri Liyanage, Sanduni Jayasekara, Akila Jayasundara, LestyDias Jayasuriya, *California Institute of Technology*  
9:45
- 1UA.2** [Characterising the Seasonal Sources of Urban Organic Aerosol Using the Non-Targeted High-Resolution Mass Spectrometry and Factor Analysis](#). Sri Hapsari Budisulistiorini, DANIEL J. BRYANT, Jonathan Taylor, Alfred Mayhew, David Topping, Jacqueline Hamilton, *University of York*  
10:00
- 1UA.3** [Regional Air Quality Implications of Volatile Chemical Emissions in Some North American Cities](#). Amirashkan Askari, ARTHUR W. H. CHAN, *University of Toronto*  
10:15
- 1UA.4** [Volatile Chemical Product Contributions to the Urban Secondary Organic Aerosol Burden in the United States](#). SREEJITH SASIDHARAN, Charles He, Qi Li, David Cocker, Karl Seltzer, Brian McDonald, Havala Pye, Jeffrey R. Pierce, Shantanu Jathar, *Colorado State University*  
10:30
- 1UA.5** [Comparison of Organic Aerosol Composition and Source Distributions across Different Urban Microenvironments](#). SUNHYE KIM, Abhishek Anand, Pavithra Ethi Rajan, Albert A. Presto, *Carnegie Mellon University*  
10:45
- 1UA.6** [Long-Term Trends of Ambient PM: Concurrent Effects of Emissions and Dispersion](#). YUNLE CHEN, David Q. Rich, Philip K. Hopke, *University of Rochester*  
11:00

**1UA.7** [U.S. EPA Progress on Developing Performance Testing Protocols and Targets for Particulate Matter Air Sensors](#). RACHELLE  
11:15 DUVALL, Andrea Clements, Karoline Barkjohn, Samuel Frederick, *US EPA*

Tuesday 11:30 AM - 1:00 PM  
AS&T Editorial Board Lunch

Tuesday 11:30 AM - 1:00 PM  
Mentoring Program Lunch

Tuesday 12:00 PM - 1:00 PM  
Committee Meetings - Newsletter, Working Groups Chairs

Tuesday 12:00 PM - 1:00 PM  
Environmental Justice Book Club Discussion

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

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2AC AEROSOL CHEMISTRY II: POSTERS  
BALLROOM A/B

**2AC.1** [Automated Mechanism Reduction Algorithm Applied to Isoprene Chemistry](#). FORWOOD WISER, V. Faye McNeill, Daniel  
1:00 Westervelt, Arlene Fiore, Daven Henze, Siddhartha Sen, *Columbia University*

**2AC.2** [Measuring Photodegradation of Humic Substances with a Quartz Crystal Microbalance](#). MINGRUI SUN, Geoffrey Smith,  
1:00 *University of Georgia*

**2AC.3** [Identifying a Missing Link: Confirmation of the Structure and Origin of 4-hydroperoxy-3-methylbut-2-enal \(4-HPALD\) with an Authentic Standard](#). REBECCA RICE, Jin Yan, Sebastian Gerber, Stephan Graf, Michael Kamrath, Felipe Lopez-Hilfiker, Matthieu  
1:00 Riva, Zhenfa Zhang, Jason Surratt, Avram Gold, *University of North Carolina at Chapel Hill*

**2AC.5** [Effect of Aerosol Acidity on the Kinetics and Products of Heterogeneous Hydroxyl Radical Oxidation of Isoprene Epoxydiol-Derived Secondary Organic Aerosol](#). JIN YAN, N. Cazimir Armstrong, Alison Fankhauser, Madeline Cooke, Nicolas Aliaga  
1:00 Buchenau, Yao Xiao, Zhenfa Zhang, Andrew Lambe, Avram Gold, Andrew Ault, Jason Surratt, *University of North Carolina at Chapel Hill*

**2AC.6** [Revisiting the Simulation of Intermediate Volatility Compounds \(IVOCs\) in Chemical Transport Models](#). STELLA EFTYCHIA  
1:00 MANAVI, Spyros Pandis, *University of Patras, FORTH*

**2AC.8** [Relative Humidity Enhancement of New Particle Formation for a Variety of Biogenically - Derived Secondary Organic Aerosol at Atmospherically Relevant Mixing Ratios](#). AUSTIN FLUECKIGER, Giuseppe Petrucci, *The University of Vermont*

**2AC.9** [Observations of Gas and Particle Phase Composition of  \$\alpha\$ -Thujene Ozonolysis Products](#). MICHELIA DAM, Adam Thomas,  
1:00 James Smith, *University of California, Irvine*

**2AC.10** [Characterizing the Aging Rate Constant and Half-life Time of the Atmospheric Polystyrene \(PS\) Microplastics Particles \(MPP\)](#).  
1:00 SAHIR GAGAN, Ruizhe Liu, Sining Niu, Zhenli Lai, Andrew Lambe, Yuzhi Chen, Xingmao Ma, Yue Zhang, *Texas A&M University*

**2AC.11** [Measuring and Modeling Ultrafine Particle Growth by Isoprene Ozonolysis Secondary Organic Aerosol](#). MICHAEL S. TAYLOR,  
1:00 Murray Johnston, *University of Delaware*

**2AC.12** [The Effect of Initial Conditions on the Growth of Particulate Matter from Aromatic Hydrocarbons](#). ISSAK PROAÑO LÓPEZ,  
1:00 Murray Johnston, *University of Delaware*

- 2AC.13** [Identifying the Temporal Change and Impact of Liquid Water Content, Acidity, and Meteorological Conditions on Fine Particle Concentration and Composition in San Antonio, Texas.](#) FANGZHOU GUO, Alexander Bui, Benjamin Schulze, Chun-Ying Chao, Sergio Alvarez, Subin Yoon, Sujun Shrestha, Rebecca J. Sheesley, Sascha Usenko, James Flynn, Shan Zhou, Robert Griffin, *University of Houston*  
1:00
- 2AC.14** [The Fate of RO2 Radicals from  \$\alpha\$ -Pinene and Naphthalene Precursors under Constant Branching Ratio with Continues NOx Injection.](#) SAHAR GHADIMI, David R. Cocker III, *University of California, Riverside*  
1:00
- 2AC.15** [Ultrafine Aerosol Particle Formation and Impacts in Houston during TRACER.](#) JEREMY WAKEEN, Xuanlin Du, Sam O'Donnell, Jeffrey R. Pierce, Don Collins, James Smith, *University of California, Irvine*  
1:00
- 2AC.16** [Effects of Wet Removal on Aerosol Mass and Chemical Composition.](#) CHRISTOS STAMATIS, Graham Frazier, Raina Leneer, Gabriel Isaacman-VanWertz, *Virginia Tech*  
1:00
- 2AC.17** [Trapped in the Inversion Layer: Composition and Morphology of Single Aerosol Particles in the Urban Arctic Winter.](#) EMILY COSTA, Jessica Mirrielees, Jessie Creamean, Andrew Holen, Judy Wu, Swarup China, Kerri Pratt, *University of Michigan*  
1:00
- 2AC.18** [Particle-phase Diffusion Limitations in Fresh Isoprene Secondary Organic Aerosol.](#) YUZHONG CHEN, Rahul Zaveri, Zezhen Cheng, Gregory Vandergrift, Swarup China, Alla Zelenyuk, John Shilling, *Pacific Northwest National Laboratory*  
1:00
- 2AC.19** [Formation of Reactive Oxygen Species in Irradiated Mixtures of Biomass Burning Compounds.](#) LENA GERRITZ, Jinlai Wei, Sergey Nizkorodov, Manabu Shiraiwa, *University of California, Irvine*  
1:00
- 2AC.20** [Effect of Product Cross-Reactions from Oxidation of Cyclic and Acyclic Monoterpene Mixtures on Secondary Organic Aerosol.](#) SIJIA LIU, Sergey Nizkorodov, Celia Faiola, *University of California, Irvine*  
1:00
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2AE AEROSOL EXPOSURE II: POSTERS  
BALLROOM A/B

- 2AE.1** [Pesticides Concentrations in the Atmosphere of an Urban Area in Brazil - Risk Assessment for Human Health.](#) ALEINNYS YERA, *University of São Paulo*  
1:00
- 2AE.2** [Occupational Exposures from Fish Smoking in Coastal Ghana.](#) CHERYL WEYANT, Antwi-Boasiako Amoah, Ashley Bittner, Joseph Pedit, Samuel Codjoe, Pamela Jagger, *University of Michigan*  
1:00
- 2AE.3** [LPG Cooking as a Replacement for Charcoal: Impacts on Exposure to PM2.5 and Carbon Monoxide in Rwandan Homes.](#) CHERYL WEYANT, Joseph Pedit, Ashley Bittner, Sudhanshu Handa, Leena Nylander-French, Karin Yeatts, Pamela Jagger, *University of Michigan*  
1:00
- 2AE.4** [Concentration and Oxidative Potential of Fine Particulate Matter at the Major US-Mexico Port of Entry San Ysidro/El Chaparral.](#) RITA ZURITA, Penelope Quintana, Yanis Toledano-Magaña, Fernando Wakida, Lupita Montoya, Javier Castillo, *Universidad Autónoma de Baja California, México*  
1:00
- 2AE.6** [In Vivo Monitoring Air Pollution Health Impacts using Breath-borne VOCs.](#) LU ZHANG, Xinyue Li, Haoxuan Chen, Zhijun Wu, Min Hu, Maosheng Yao, *Peking University*  
1:00
- 2AE.7** [Potential for Exposure to Toluene Secondary Organic Aerosol and Health Effect.](#) HYEON-JU OH, Jiwoo Jeong, Yanfang Chen, Hwajin Kim, *Seoul National University*  
1:00
- 2AE.8** [Myth Versus Reality: Assessment of Ambient Air Quality as a Proxy for Personal Exposure for Health Risk Assessment in an Urban City of Hot Arid Climate - Doha, Qatar.](#) Maryam Yousuf Al-Shamlan, Tamer Nada, Abadllah J Alahmadi, Mohamed Salah Osman, AZHAR SIDDIQUE, *QEERI, Hamad Bin Khalifa University, Doha, Qatar*  
1:00

- 2AE.9** [Global vs. Local Dose Deliveries of Airborne Particles through Dosimetric Aerosol in Vitro Inhalation Device \(DAVID\)](#). SRIPRIYA NANNU SHANKAR, Amber O'Connor, Eric Le, Kiran Mital, Alex Theodore, Tara Sabo-Attwood, Gregory S. Lewis, Arantzazu Eiguren-Fernandez, Chang-Yu Wu, *University of Florida*  
1:00
- 2AE.10** [Ultrafine Particle Concentrations Downwind of Engineered Vegetation Belts along Highway Noise Barriers](#). ZHIYAO LI, Maryssa Loehr, Daniel Fleischer, Brent Bucknum, Ray Yeager, Aruni Bhatnagar, Jay R. Turner, *Washington University in St. Louis*  
1:00
- 2AE.11** [Revisiting Particle Emissions from Heated Cooking Oils](#). Mostafa Salmanimojaveri, Tomiris Madiyarova, Nadezhda Ushakova, Motahareh Naseri, Karina Yessengazyeva, Gulnur Sultanova, Enoch Adotey, Milad Malekipirbazari, Farzaneh Jafarigol, Gulnaz Zhemeny, MEHDI AMOUEI TORKMAHALLEH, *University of Illinois at Chicago*  
1:00
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## 2BA BIOAEROSOLS I:POSTERS

### BALLROOM A/B

- 2BA.1** [Comparison of Airborne Bacterial Diversity Collected by Passive and Active Air Sampling at Puy de Dôme, France](#). Kevin Dillon, Romie Tignat-Perrier, Muriel Joly, Sydonia Manibusan, Vincent Darbot, François Enault, Catherine Larose, Pierre Amato, GEDIMINAS MAINELIS, *Rutgers, The State University of New Jersey*  
1:00
- 2BA.2** [Passive Sampling to Track Pollen Concentration Across Urban and Rural Areas](#). CHAMARI MAMPAGE, Lillian Jones, Emma Schopen, Rachel Larson, Heather Sander, Thomas Peters, Elizabeth Stone, *University of Iowa*  
1:00
- 2BA.3** [Continuous Fluorescent Bioaerosol Measurements for 18 Months Combined with Filter Sampling Validation](#). MADELEINE PETERSSON SJÖGREN, Jonas Jakobsson, Malin Alsved, Thomas Bjerring Kristensen, Tina Santl-Temkiv, Jakob Löndahl, *Lund University, Sweden*  
1:00
- 2BA.4** [Characterization of Aerosol in Poultry Farms with Low-Cost Sensors and Research-Grade Instruments](#). Rowshon Afroz, Xinyang Guo, Chu-Wen Cheng, Sohaib Omar, Kerry Chen, Jason S. Olfert, Valerie Carney, Martin Zuidhof, RAN ZHAO, *University of Alberta*  
1:00
- 2BA.5** [Influence of UV Irradiation and Environmental Factors on the Size-Dependent Survivability of Bioaerosols](#). WEIXING HAO, Yang Wang, Yue-Wern Huang, *Missouri University of Science and Technology*  
1:00
- 2BA.6** [What is the Best Cleaning Method the Public Can Use to Remove Bacillus Spores from Indoor Surfaces?](#) JONATHAN THORNBURG, John Archer, Andrew Dart, Marshall Gray, M. Worth Calfee, *RTI International*  
1:00
- 2BA.7** [Antibiotic Resistance Genes in Air Near Farms](#). DAVID KORMOS, Gabriel Isaacman-VanWertz, Amy Pruden, Jactone Ogejo, Linsey Marr, *Virginia Tech*  
1:00
- 2BA.8** [Seasonal Impacts on Microbiome Diversity and Antibiotic Resistance Patterns in Aerosolized Bacteria in a Dairy Facility](#). HYOUNGMOOK PAK, Maria King, *Texas A&M University*  
1:00
- 2BA.9** [Agricultural Contributions to Fluorescent Bioaerosol Measured by the WIBS at the AGINSGP Campaign at the Southern Great Plains Site](#). DORIAN SCHWARTZ, Aleksandra Volkova, Gavin Cornwell, Isabelle Steinke, Susannah Burrows, J. Alex Huffman, *University of Denver*  
1:00
- 2BA.10** [Qualitative Analysis of Bioaerosol Chemical Composition and Shift by Means of 1HNMR](#). PALINA BAH DANOVICH, Kevin Axelrod, Andrey Khlystov, Vera Samburova, *Desert Research Institute*  
1:00
- 2BA.11** [Optimization of a Wetted Wall Cyclone for Pathogen Collection](#). SOOHWAN KIM, Natacha Ramiouille, Ardalan Javadi, Mike Farrell, Alexander Alexeev, David Hu, *Georgia Tech*  
1:00
- 2BA.12** [Assessment of the Effectiveness of a Hygroscopic Coating on the Conservation of MS2 Viability during Aerosol Sampling with MCE Filters](#). MO WASHEEM, William Vass, Sripriya Nannu Shankar, Yuetong Zhang, Morteza Alipanah, Z. Hugh Fan, John Lednicky, Chang-Yu Wu, *University of Florida*  
1:00

**2BA.13** [Impact of Chemically Reductive Trace Air Contaminants on Non-thermal Plasma Inactivation of Airborne Viruses.](#) Zhenyu Ma, Kenneth Chung, HEREK L. CLACK, *University of Michigan*  
1:00

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2BC SYMPOSIUM: BIOMASS COMBUSTION: OUTDOOR/INDOOR TRANSPORT AND INDOOR AIR QUALITY II: POSTERS

BALLROOM A/B

**2BC.1** [Developing and Testing Low-Cost Air Cleaners for Safer Spaces during Wildfires.](#) BRETT STINSON, Aurelie Laguerre, Elliott Gall, *Portland State University*  
1:00

**2BC.4** [Environmental Factors Governing Pre-ignition Release of Organic Matter in Combustion of Large Wood Samples.](#) JOHN FLYNN, Tami Bond, *Colorado State University*  
1:00

**2BC.5** [Characterization of Biomass Burning Influence in Houston and El Paso, TX Utilizing Aerosol Optical Properties and Offline Filter Analysis.](#) MACKENZIE GRAHAM, Manisha Mehra, Subin Yoon, James Flynn, Rebecca J. Sheesley, Sascha Usenko, *Baylor University*  
1:00

**2BC.6** [PM2.5 and BC Characteristics in the Sao Paulo Megacity, Southeastern Brazil.](#) CAROLINE FERNANDA HEI WIKUATS, Rafaela Squizzato, Thiago Nogueira, Edmilson Dias de Freitas, Maria de Fatima Andrade, *University of São Paulo*  
1:00

**2BC.7** [Identification of Individual Residential Wood Burning Aerosols and Secondary Aerosol Formation during Wintertime Fairbanks, Alaska.](#) ANDREW HOLEN, Judy Wu, Ellis Robinson, Karolina Cysneiros de Carvalho, Damien Ketcherside, Vanessa Selimovic, William Simpson, Lu Hu, Brent Williams, Peter F. DeCarlo, Kerri Pratt, *University of Michigan*  
1:00

**2BC.8** [Environmentally Persistent Free Radicals, Reactive Oxygen Species and Oxidative Potential of Particulate Matter: A Case Study in Fairbanks, Alaska.](#) SUKRITI KAPUR, Kasey Edwards, Ting Fang, Manabu Shiraiwa, *University of California, Irvine*  
1:00

**2BC.9** [Particle Number and Size of Emissions during Realistic Operation of Two Residential Cordwood-Fired Hydronic Heaters.](#) JAKE LINDBERG, Rebecca Trojanowski, Nicole Vitillo, Marilyn Wurth, Shida Tang, Gil H. LaDuke, Brian P. Frank, Patricia Fritz, Thomas Butcher, Devinder Mahajan, *Brookhaven National Labs*  
1:00

**2BC.10** [On the Image Processing Methods for Morphological Characterization of Biomass Smoke Particles.](#) HAMED NIKOOKAR, Timothy Sipkens, Steven Rogak, *University of British Columbia*  
1:00

**2BC.11** [Chemical Characteristics of Aerosol Particles and Surface Films during the CASA Field Campaign.](#) CHURCHILL WILKINSON, Delphine K. Farmer, Marina Vance, Dustin Poppendieck, Rachel O'Brien, *University of Michigan*  
1:00

**2BC.12** [Fine Particulate Matter Sources Identification through PMF-Hysplit Modeling Based on Metals and Carbonaceous Compounds.](#) RAFAELA SQUIZZATO, Caroline Fernanda Hei Wikuats, Thiago Nogueira, Edmilson Dias de Freitas, Maria de Fatima Andrade, *University of São Paulo*  
1:00

**2BC.13** [Determination of Polycyclic Aromatic Hydrocarbons from Wildfire Smoke on Indoor Surfaces.](#) Aurelie Laguerre, Brett Stinson, ELLIOTT GALL, *Portland State University*  
1:00

**2BC.14** [Collection and Characterization of Wildfire Smoke Particulate using Automated SEM Techniques.](#) Roger West, Traci Lersch, GARY CASUCCIO, *RJ Lee Group, Inc.*  
1:00

**2BC.15** [Increased Levels of Atmospheric Phosphorus and Other Nutrients Associated with Fires in the Western United States.](#) NICOLE OLSON, Katie Boaggio, R Byron Rice, Stephen LeDuc, Uma Shankar, *U.S. EPA*  
1:00

**2BC.16** [The Influence of Black Carbon Aerosols from Prescribed Fires on Regional Air Quality in the Southeast US.](#) DONGLI WANG, Ren Garity, Andrew Metcalf, *Clemson University*  
1:00

- 2BC.17** [Chemical Characterization of Particulate Organic Nitrogen Compounds Produced from Prescribed Burns of Managed and Unmanaged Western U.S. Forests](#). FARRAH HAERI, Daniel Foster, Deep Sengupta, Afsara Tasnia, Paul Van Rooy, Nathan Kreisberg, Lindsay Hatch, Christos Stamatis, Scott Stephens, John Battles, Robert York, Kelley Barsanti, Allen Goldstein, Coty Jen, *Carnegie Mellon University*  
1:00
- 2BC.18** [Chemical Composition of Individual Indoor Aerosols in Fairbanks, Alaska](#). LOGAN FORSHEE, Andrew Holen, Judy Wu, Ellis Robinson, Damien Ketcherside, Vanessa Selimovic, Sukriti Kapur, Karolina Cysneiros de Carvalho, William Simpson, Lu Hu, Brent Williams, Peter F. DeCarlo, Kerri Pratt, *University of Michigan*  
1:00
- 2BC.19** [Evaluation of Low-cost Aerosol and Gas Sensors for Real-time Measurements of Electronic Cigarette Exposure](#). SINAN SOUSAN, Dillon Streuber, Yoo Min Park, Vivien Coombs, Jack Pender, Eric Soule, *Department of Public Health, East Carolina University*  
1:00
- 2BC.20** [Understanding the contributions of different types of biomass combustion to ambient PM<sub>2.5</sub> and ozone in the United States using CMAQv5.3.3](#). JIAOYAN HUANG, Shih-Ying Chang, ShinMing Huang, Frederick Lurmann, *Sonoma Technology Inc.*  
1:00
- 2BC.21** [Cooking Stove Emission Transmission in the Rural Environment](#). YUCHENG HE, Sanika Nishandar, Marko Princevac, Rufus Edwards, *University of California, Riverside*  
1:00
- 2BC.22** [Relative Contribution to Light Absorption by Methanol-soluble and Methanol-insoluble Brown Carbon Emitted from Biomass Burning](#). Khairallah Atwi, Zezhen Cheng, Omar El Hajj, Charles Perrie, RAWAD SALEH, *University of Georgia*  
1:00

2CC AEROSOLS, CLOUDS, AND CLIMATE I: POSTERS

BALLROOM A/B

- 2CC.1** [Cloud Condensation Nuclei Activity and Hygroscopicity of Fresh Biomass Burning Particles as a Function of Burning Conditions](#). MEGAN MOUTON, MarkieSha James, Kotiba A. Malek, Rudra Pokhrel, Marc Fiddler, Akua Asa-Awuku, Solomon Bililign, *North Carolina A&T State University*  
1:00
- 2CC.2** [Sensitivity Analysis of Brown Carbon on Snow Albedo Using SNICAR Radiative Transfer Model](#). GANESH CHELLUBOYINA, Chenchong Zhang, Rajan K. Chakrabarty, *Washington University in St. Louis*  
1:00
- 2CC.3** [Hygroscopicity of Internally Mixed Ammonium Sulfate and Secondary Organic Aerosol Particles Formed at Low and High Relative Humidity](#). Patricia Razafindrambinina, Kotiba A. Malek, Joseph Dawson, Kristin DiMonte, Tim Raymond, DABRINA DUTCHER, Miriam Freedman, Akua Asa-Awuku, *Bucknell University*  
1:00
- 2CC.4** [Light Absorbing Aerosol-Cloud Interactions](#). SHREYA JOSHI, Claudio Mazzoleni, Timothy Onasch, Arthur J. Sedlacek, Raymond Shaw, Ian Helman, Susan Mathai, Thusitha Divisekara, Swarup China, Abu Sayeed Md Shawon, Laura Fierce, Yangang Liu, Lynn Mazzoleni, Simeon Schum, Will Cantrell, Jacob Kuntzleman, *Michigan Technological University*  
1:00
- 2CC.5** [Microorganisms in Fog and Aerosol at a Rural Site](#). THUONG CAO, Pierre Herckes, Ferran Garcia-Pichel, Derek Straub, *Arizona State University*  
1:00
- 2CC.6** [Organosulfates in Nascent and Aged Sea Spray Aerosols](#). DILINI KIRINDIGODA GAMAGE, Elias Hasenecz, Glorianne Dorcé, Kathryn Mayer, Jon Sauer, Christopher Lee, Kimberly Prather, Elizabeth Stone, *University of Iowa*  
1:00
- 2CC.7** [Measurement of Light-absorbing Iron Oxide Aerosols in Liquid Water with a Modified Single-Particle Soot Photometer](#). TATSUHIRO MORI, Yutaka Kondo, Kumiko Goto-Azuma, Nobuhiro Moteki, Atsushi Yoshida, Kaori Fukuda, Yoshimi Ogawa-Tsukagawa, Sho Ohata, Makoto Koike, *Keio University*  
1:00
- 2CC.8** [Identifying Better Indicators of Aerosol Wet Scavenging during Long-Range Transport](#). MIGUEL HILARIO, Avelino Arellano, Ali Behrangi, Ewan Crosbie, Josh DiGangi, Glenn Diskin, Michael Shook, Luke Ziemba, Armin Sorooshian, *University of Arizona*  
1:00

- 2CC.9** [Investigating Vertical Profile of Black Carbon Containing Particles and Their Mixing State at the Southern Great Plains](#). SUSAN MATHAI, Zezhen Cheng, Nurun Nahar Lata, Darielle Dexheimer, Claudio Mazzoleni, Fan Mei, Swarup China, *Michigan Technological University*  
1:00
- 2CC.10** [Aging Induced Changes in Hygroscopicity and CCN Activity of Black Carbon Particles from Biomass Burning](#). OGOCHUKWU ENEKWIZU, Arthur J. Sedlacek, Ernie R. Lewis, *Brookhaven National Laboratory*  
1:00
- 2CC.11** [Supercooled Organics Inhibit Freezing](#). SAMANTHA GREENEY, Brianna Hendrickson, Jessica Mirrielees, Sarah Brooks, *Texas A&M University*  
1:00
- 2CC.12** [pH Dependence of Brown Carbon Absorbance in Cloud Water](#). CHRISTOPHER HENNIGAN, Sara Lance, Bryanna Boegner, Grace Bounds, Lucia Garcia, Michael McKee, Madison McLaren, Vikram Pratap, Jasper Reno, Shawn Serafin, *University of Maryland, Baltimore County*  
1:00
- 2CC.13** [Elucidating New Particle Formation in Complex Terrain during the Winter 2022 CFACT Campaign](#). Anna Gannet Hallar, Eric R. Pardyjak, Sebastian W. Hoch, Zhaoxia Pu, GERARDO CARRILLO-CARDENAS, *University of Utah*  
1:00
- 2CC.14** [Hygroscopicity of Polycatechol and Polyguaiacol Secondary Organic Aerosol in Sub- and Supersaturated Water Vapor Environments](#). KOTIBA A. MALEK, Kanishk Gohil, Hind Al-Abadleh, Akua Asa-Awuku, *University of Maryland*  
1:00
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2HA HEALTH-RELATED AEROSOLS II: POSTERS  
BALLROOM A/B

- 2HA.1** [Deposition Simulator for Tobacco Aerosol in the Human Respiratory System](#). AKINA MORI, Shigeaki Ito, Takashi Sekine, *Japan Tobacco Inc.*  
1:00
- 2HA.2** [Experimental Study on the Effects of Temperature and Humidity on the Deposition of Nebulized Droplets in a Simplified Mouth-Throat Airway Model](#). YUEYANG CAI, Huizhen Yang, Xiaole Chen, Ting Ding, *Nanjing Normal University*  
1:00
- 2HA.3** [Determining the Effect of Age and Head Position on Aerosol Delivery to Turbinate Regions of Human Intranasal Airways](#). JANA KESAVAN, Kristina Kuypers, Douglas Sommerville, Beth Laube, *US ARMY DEVCOM CBC, Aberdeen Proving Ground, Maryland*  
1:00
- 2HA.4** [Performance of Different Nebulizers for Bronchial Challenge Testing](#). TAEWON HAN, Jennifer Therkorn, Michael Falvo, Gediminas Mainelis, *Rutgers, The State University of New Jersey*  
1:00
- 2HA.5** [Exposure to Black Carbon and Deposition on Lungs](#). ABDULLAH KHAN, Sergej Semcuk, Lina Davulienė, Agnė Minderytė, Mehri Davtalab, Kamilė Kandrotaitė, Julija Pauraite, Inga Garbarienė, Vadimas Dudoitis, Kristina Plauškaitė, Steigvilė Byčėnienė, *SRI Center for Physical Sciences and Technology, Lithuania*  
1:00
- 2HA.7** [External Factors Modulating Vaping-Induced Thermal Degradation of Vitamin E Acetate](#). ALEXA CANCHOLA, Ruth Meletz, Siri Langmo, Michael Lum, Ying-Hsuan Lin, *University of California, Riverside*  
1:00
- 2HA.8** [Examining the Influence of Electronic Cigarette Aerosols on Cell Viability and Membrane Integrity for Lung Epithelial Cells](#). KAPIAMBA KASHALA FABRICE, Hsin-Yin Chuang, Yue-Wern Huang, Yang Wang, *Missouri University of Science and Technology*  
1:00
- 2HA.9** [Development of Openable Small Cyclone Device and Its Application to Particle Toxicity Assessment](#). NAKANO KOHEI, Hyunwoo Youn, Ayumi Iwata, Tomoaki Okuda, *Keio University*  
1:00
- 2HA.10** [Effect of Combustion Particle Morphology on Biological Responses in a Co-culture of Human Lung Epithelial and Macrophage-Like Cells](#). KAMALJEET KAUR, Raziye Mohammadpour, Hamid Ghandehari, Chris Reilly, Robert Paine, Kerry Kelly, *University of Utah*  
1:00
- 2HA.11** [Activity and Interaction of Iron, Copper, Lead and Other Metals in the Hydroxyl Radical and Dithiothreitol Assays under Physiological Conditions](#). JIAQI SHEN, Catherine Banach, Chris La, Suzanne E. Paulson, *University of California, Los Angeles*  
1:00

- 2HA.14** [Performance of N95 Filtering Facepiece Respirators Used with Skin Protectants: Manikin-based Study.](#) XINYI NIU, Sergey A. Grinshpun, Michael Yermakov, Roman Jandarov, Iliya Rivkin, *University of Cincinnati*  
1:00
- 2HA.15** [Assessment of PM Exposures during Commute in Megacity of Karachi, Pakistan.](#) HAIDER KHWAJA, Kamran Khan, Sumayya Saied, Azhar Siddique, Saiyada Masood, *University at Albany*  
1:00
- 2HA.16** [Fate of Inhaled Particles in the Lungs of Ferrets.](#) BAHMAN ASGHARIAN, Michael Oldham, Owen Price, *Applied Research Associates, Inc.*  
1:00
- 2HA.17** [Sars-Cov-2 Filter Forensics in Large, Multi-Story, Residential Buildings: Modeling and Experimental Results.](#) DAVID JARMA, Juan Pedro Maestre, Atila Novoselac, Kerry Kinney, *University of Texas at Austin*  
1:00
- 2HA.18** [Sources of Oxidative Potential \(OP\) of Ambient Fine Particulate Matter in the Midwestern United States.](#) Haoran Yu, Yixiang Wang, Joseph V. Puthussery, VISHAL VERMA, *University of Illinois Urbana-Champaign*  
1:00
- 2HA.19** [Gas-Particle Partitioning of Nicotine from Common Inhalation Tobacco Products.](#) CONOR A. RUZYCKI, Hammad Irshad, Jacob D. McDonald, Philip J. Kuehl, *Lovelace Biomedical*  
1:00
- 2HA.20** [Impact of Urban Air Quality on Health Studied at the Laboratory with the POLLURISK Platform: Preliminary Results of Innovative Studies of the H2020 REMEDIA Program.](#) PATRICE COLL, Sophie Lanone, Marion Blayac, Zhuyi Lu, Clement Buisson, Celine Yegen, Elie Al Marj, Juan Camilo Macias Rodriguez, Lucy Gerard, Aline Gratien, Mathieu Cazaunau, Cécile Gaimoz, Edouard Panguit, Antonin Bergé, Servanne Chevaillier, Gael Noyalet, Thomas Bertin, Inès Louison, Stephane Jamain, Audrey Der Vartanian, Laurent Boyer, Frederic Relaix, Geneviève Derumeaux, Emeric Cossart, Jean-François Doussin, *LISA UMR CNRS 7583, France*  
1:00
- 2HA.21** [Acute Cardiopulmonary Responses to Inhaled UFPs from Cooking in Healthy Volunteers: A Controlled Clinical Study.](#) Motahareh Naseri, Seyedeh Mohadeseh Kazemitabar, Seyedeh Ayeh Esmaili Talesh, Abilova Aigerim Sultanbekovna, Milad Malekipirbazari, Giorgio Buonanno, Luca Stabile, Flemming Cassee, Byron Crape, Dhawal Shah, MEHDI AMOUEI TORKMAHALLEH, *University of Illinois at Chicago*  
1:00

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2HS

- 2HS.1** [Defining the Discipline of Aerosol Science and its Relation to Other Scientific Disciplines: Text Analytics of Topics Making up the American Association for Aerosol Research.](#) SARAH PETTERS, Donald Dabdub, David R. Cocker III, Andrew Grieshop, Christine McCool, Nga Lee Ng, Amy P. Sullivan, *Aarhus University*  
1:00

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2IA INDOOR AEROSOLS I: POSTERS

BALLROOM A/B

- 2IA.1** [Increased JUUL Emissions from Initial Puffs after Removing and Reinserting Pod.](#) Eric Soule, SINAN SOUSAN, Dillon Streuber, Sarah Fresquez, Ronald Mooring, Rola Salman, Soha Talih, Jack Pender, *East Carolina University*  
1:00
- 2IA.2** [Laboratory and Field Evaluations of the GeoAir2 Air Quality Monitor for use in Indoor Environments.](#) Dillon Streuber, Yoo Min Park, SINAN SOUSAN, *East Carolina University*  
1:00
- 2IA.3** [Ionic Per- and Polyfluoroalkyl Substances \(PFAS\) in PM<sub>2.5</sub> from 10 Homes in North Carolina: Insights from the Indoor PFAS Assessment Campaign.](#) NAOMI CHANG, Clara Eichler, Daniel Amparo, Isabella Siesel, Jiaqi Zhou, Jason Surratt, Elaine Cohen Hubal, Glenn Morrison, Barbara Turpin, *UNC-Chapel Hill*  
1:00
- 2IA.4** [Indoor Ultrafine Particle Aerosol Transformation Process Considering Coagulation Effect during Emission Period.](#) SU-GWANG JEONG, Donghyun Rim, *Pennsylvania State University*  
1:00
- 2IA.5** [Aerosols Formed during Simulated Cannabis Vaping and Dabbing.](#) XIAOCHEN TANG, Clément Gambier, Vi Rapp, Marion Russell, Lara Gundel, Hugo Destailats, *Lawrence Berkeley National Laboratory*  
1:00

- 2IA.6** [Impacts of 3D Printing and Mitigation Strategies on Particle Exposures in School Environments.](#) QIAN ZHANG, Aika Davis, Marilyn Black, *Underwriters Laboratories Inc.*  
1:00
- 2IA.7** [Reducing Daily Exposure to Mobile Source Air Toxics by Improving Vehicle Cabin Air Quality.](#) HEEJUNG JUNG, *University of California, Riverside*  
1:00
- 2IA.8** [The Use of Artificial Fogs and Indoor Air Quality.](#) Xinyang Guo, Ya-Chun Chan, Toluwatise Ehindero, Chester Lau, RAN ZHAO, *University of Alberta*  
1:00
- 2IA.9** [Performance of Low-cost PurpleAir Sensor in Monitoring Indoor Aerosols.](#) SHINHYE LEE, Donghyun Rim, Myoungsok Yeo, *Architectural Engineering, Seoul National University*  
1:00
- 2IA.11** [Indoor PM2.5 Concentrations in Homes and Restaurants in Ethiopia.](#) Austin Heuer, Seblua Abebe, Nora Caballero, Margaret Hall, Ella Hein, Audrey Parrott, Alek Rabago, Diana Rodriguez, Mohammed Mehdi Shahid, Tsegaye Nega, DEBORAH GROSS, *Carleton College*  
1:00
- 2IA.12** [Making Aerosol Precautions for COVID-19 More Easily Accessible and Affordable to Everyone.](#) Sathyaraj Devabhaktuni, Sonam Devabhaktuni, DEVABHAKTUNI SRIKRISHNA, *Patient Knowhow, Inc.*  
1:00
- 2IA.14** [Effect of Corona Ionizers on Indoor Air Quality and Performance of HVAC Systems.](#) FRANCISCO ROMAY, Qisheng Ou, David Y. H. Pui, *University of Minnesota*  
1:00
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2PC SYMPOSIUM: AEROSOL PHYSICAL CHEMISTRY AND MICROPHYSICS I: POSTERS

BALLROOM A/B

- 2PC.1** [AMATI, a New Tool for Rapid Thermodynamic Calculations on Large Field Datasets.](#) PEDRO CAMPUZANO-JOST, Donna Sueper, Simon Clegg, Benjamin A. Nault, Hongyu Guo, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*  
1:00
- 2PC.2** [Probing the Vertical Profile of New Particle Formation and Growth in the Planetary Boundary Layer Using a Column Model with Surface- and Aircraft-Based Observations.](#) O'DONNELL SAMUEL, Ali Akherati, Charles He, Anna Hodshire, John Shilling, Chongai Kuang, Emma D'Ambro, Jerome Fast, Hubbe John, Michael Lawler, Ben H. Lee, Fan Mei, Siegfried Schobesberger, Stephen Springston, Joel A. Thornton, James Smith, Shantanu Jathar, Jeffrey R. Pierce, *Colorado State University*  
1:00
- 2PC.3** [Molecular Insights into the Black Carbon Aggregation Process and Phase-mixing State in Aerosol Droplets.](#) XIAOHAN LI, Ian Bourg, *Princeton University*  
1:00
- 2PC.4** [Predicted Impacts of Heterogeneous Chemical Pathways on Particulate Sulfur in Fairbanks, Alaska.](#) SARA FARRELL, Havala Pye, Robert Gilliam, George Pouliot, Deanna Huff, Golam Sarwar, William Vizuete, Kathleen Fahey, *University of North Carolina at Chapel Hill*  
1:00
- 2PC.5** [On the Role of Aerosol Morphology for the Heterogeneous Hydrolysis of N2O5.](#) YICEN LIU, Yu Yao, Jeffrey H. Curtis, Matthew West, Nicole Riemer, *University of Illinois at Urbana-Champaign*  
1:00
- 2PC.6** [Glass Transition Temperatures of Organic Mixtures from Isoprene Epoxydiol \(IEPOX\) Derived Secondary Organic Aerosols.](#) BO CHEN, Jessica Mirrielees, Yuzhi Chen, Zhenfa Zhang, Avram Gold, Jason Surratt, Yue Zhang, Sarah Brooks, *Texas A&M University*  
1:00
- 2PC.7** [Application of High Spectral Resolution Lidar \(HSRL\)-based Methods for Estimating PM2.5 during the KORUS-AQ Campaign.](#) BETHANY SUTHERLAND, Nicholas Meskhidze, Sharon P. Burton, Johnathan Hair, Chris Hostetler, Richard Ferrare, *NC State University*  
1:00
- 2PC.8** [Particle Turbulent Mass Flux Retrievals through Novel Remote Sensing Methodology.](#) AJMAL RASHEEDA SATHEESH, Sabin Kasparoglu, Bethany Sutherland, Nicholas Meskhidze, Markus Petters, *NC State University*  
1:00

- 2PC.9** [Inferring Viscosity of Individual Particles from Chemical Imaging](#). FELIPE RIVERA-ADORNO, Jay Tomlin, Matthew Fraund, Erick Morgan, Kevin Jankowski, Mihail Laskin, Ryan Moffet, Alexander Laskin, *Purdue University*  
1:00
- 2PC.10** [Modeling the Effects of Aerosol Phase States on the Deposition Ice Nucleation Ability of Biogenic Secondary Organic Aerosols \(SOA\)](#). ZHENLI LAI, Isabelle Steinke, Martin Wolf, Jiayun Zhao, Carolin Roesch, Xiaohong Liu, Zhenfa Zhang, Jason Surratt, Daniel Cziczko, Susannah Burrows, Yue Zhang, *Texas A&M University*  
1:00
- 2PC.12** [The Observations of Phase Separation & Hygroscopicity in Binary Mixtures](#). NAHIN FERDOUSI, Kotiba A. Malek, Kanishk Gohil, Qishen Huang, Miriam Freedman, Akua Asa-Awuku, *University of Maryland, College Park*  
1:00
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2SA SOURCE APPORTIONMENT II: POSTERS

BALLROOM A/B

- 2SA.1** [Issues with the OC and EC Fraction Data in Recent CSN Data](#). PHILIP K. HOPKE, Yunle Chen, David Q. Rich, Judith Chow, *University of Rochester*  
1:00
- 2SA.2** [Impacts of COVID-19 Pandemic on Concentrations and Sources of PM2.5 and VOCs in NYC Metro Area](#). MD. AYNUL BARI, Ethan Gerber, Wai Tung, Sanchita Paul, *University at Albany, SUNY*  
1:00
- 2SA.3** [Characterization of PM2.5 and PM10 near California Highways with a Focus on Non-Tailpipe Emissions](#). XIAOLIANG WANG, Steven Gronstal, Brenda Lopez, Heejung Jung, L.W. Antony Chen, Steven Sai Hang Ho, Judith Chow, John Watson, Chas Frederickson, David Mendez-Jimenez, Tianyi Ma, Ling Cobb, Qi Yao, Seungju Yoon, *Desert Research Institute*  
1:00
- 2SA.4** [Biomass Burning Emissions Are a Main Driver of the PM2.5 Pollution Problem in the San Joaquin Valley of California](#). JUSTIN TROUSDELL, Lijuan Li, Keming Pan, Qi Zhang, *University of California, Davis*  
1:00
- 2SA.5** [Transport and Transformation of Atmospheric Aerosol across Central Europe with Emphasis on Anthropogenic Sources \(TRACE\)](#). SHUBHI ARORA, *Leibniz Institute of Tropospheric Research*  
1:00
- 2SA.6** [Source Apportionment of PM2.5 in Ambient Concentration in Lahore, Pakistan](#). WAJIH UR REHMAN, *COMSATS University Islamabad*  
1:00
- 2SA.7** [Source Apportionment of Fine Aerosols \(PM2.5\) with a Bayesian Mixing Model for Major Sources over the Northeast Asia](#). JOOSUNG OH, Kyung Hwan Kim, Gwi-Nam Bae, *Korea Institute of Science and Technology (KIST)*  
1:00
- 2SA.8** [Source Apportionment of PM2.5 in Seoul, South Korea and Beijing, China Using Dispersion Normalized PMF](#). JIEUN PARK, Hyewon Kim, Youngkwon Kim, Jongbae Heo, Sang-Woo Kim, Kwon Ho Jeon, Seung-Muk Yi, Philip K. Hopke, *Harvard University*  
1:00
- 2SA.9** [Source Apportionment of PM2.5 using Dispersion Normalized Positive Matrix Factorization \(DN-PMF\) at Beijing and Baoding in China](#). ILHAN RYOO, Jieun Park, Taeyeon Kim, Jiwon Ryu, Yeonseung Cheong, Hyewon Park, Kwon Ho Jeon, Jae-Hyun Lim, Seung-Muk Yi, Sang-Rin Lee, *Seoul National University*  
1:00
- 2SA.10** [Real-time Analysis and Clustering of Single-particle Mass Spectrometer Data](#). Paul Haubenwallner, Ellen-Iva Rosewig, Robert Irsig, Johannes Passig, Sven Ehlert, Andreas Walte, RALF ZIMMERMANN, *Rostock University and Photonion GmbH*  
1:00
- 2SA.12** [Air Quality and Profile of Inorganic Composition of PM2.5 and Source Apportionment in Karachi, Pakistan](#). FATIM SANNOH, Zafar Fatmi, David Carpenter, Azhar Siddique, Kamran Khan, Jahan Zeb, Muhayatun Santoso, Mirza M. Hussain, Haider Khwaja, *University at Albany*  
1:00
- 2SA.13** [Developing and Testing Machine Learning Algorithms to Process SEM-EDX Images](#). BORIS GALVIS, Natali Zambrano, David Restrepo, Olga Lucia Quintero Montoya, Nestor Rojas, Elena Montilla Rosero, Jose Duque, *Universidad de La Salle*  
1:00
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2UA URBAN AEROSOLS II: POSTERS

BALLROOM A/B

- 2UA.2** [Organic and Elemental Carbon in the Urban Background in an Eastern Mediterranean City](#). Tareq Hussein, Xinyang Li, ZAID BAKRI, Andrés Alastuey, Sharif Arar, Afnan Al-Hunaiti, Mar Viana, Tuukka Petäjä, *Michigan Technological University*  
1:00
- 2UA.4** [Measurement of Secondary Aerosol Formation in Ambient Air using Portable Outdoor Chambers](#). XUANLIN DU, Alexander B. MacDonald, Ningjin Xu, Roya Bahreini, Don Collins, *University of California, Riverside*  
1:00
- 2UA.5** [Tropical Air Chemistry in Lagos, Nigeria](#). Abedola Odu-Onikosi, Pierre Herckes, Matthew Fraser, PHILIP K. HOPKE, John Ondov, Paul Solomon, Olalekan Popoola, George Hidy, *EnvironQuest*  
1:00
- 2UA.6** [Characteristics of Haze Episodes during Winter in Seoul, Korea 2021 Using an Aerosol Mass Spectrometer](#). KYUNG HWAN KIM, Su-Yeon Choi, Junwon Ko, Myeong Ha Lee, Hyoun Cher Jin, Seung-Bok Lee, Jin-young Kim, Gwi-Nam Bae, *Korea Institute of Science and Technology*  
1:00
- 2UA.7** [Measuring the Impacts of Bus Electrification Using a Low-Cost Sensor Network in Chicago, IL](#). JONATHAN LIU, Scott Counts, Madeleine Daepf, *University of California, Los Angeles*  
1:00
- 2UA.8** [2-Dimensional Model of SOA Formation from the Photooxidation of Linear Alkanes Using Volatility and Reactivity](#). AZAD MADHU, Myoseon Jang, David Deacon, *University of Florida*  
1:00
- 2UA.9** [Modeling Peroxy Radical \(RO<sub>2</sub>\) Fate and Secondary Organic Aerosol Formation during  \$\alpha\$ -Pinene Perturbation Experiments](#). JEAN RIVERA-RIOS, Masayuki Takeuchi, Havala Pye, Nga Lee Ng, *Georgia Institute of Technology*  
1:00
- 2UA.10** [Continuous Particle Number Concentration Determination of Ambient Air in Measurement Networks](#). Markus Pesch, Friedrich Schneider, Torsten Bayer, Michael Schöler, Katharina Roloff, GERHARD STEINER, *Grimm Aerosol Technik Airing*  
1:00
- 2UA.11** [Chemical Characterization of Ambient Aerosol during the 2022 ACROSS Campaign at the Urban Paris Site](#). Sydney Riley, DREW PRONOVOST, Lelia Hawkins, Ludovico Di Antonio, Astrid Beauville, Antonin Bergé, Mathieu Cazaunau, Pascale Chelin, Servanne Chevaillier, Anaïs Féron, Frank Maisonneuve, Christopher Cantrell, Vincent Michoud, Claudia Di Biago, Aline Gratien, *Harvey Mudd College*  
1:00
- 2UA.12** [Characterization of Microplastics in the Atmosphere in the Eastern United States](#). ALEXIS SMITH, Heather Neel, Danielle Haller, Marwa El-Sayed, Foram Madiyar, *Embry-Riddle Aeronautical University*  
1:00
- 2UA.13** [Development and Evaluation of a Multi-stage Cascade Impactor for the Collection of Ambient Particulate Matter on Gelatin Filter](#). Mohammad Aldekheel, Vahid Jalali Farahani, RAMIN TOHIDI, Constantinos Sioutas, *University of Southern California*  
1:00

Tuesday 3:00 PM - 3:30 PM

Coffee Break

Tuesday 3:30 PM - 5:00 PM

Session 3: Platform

3AC AEROSOL CHEMISTRY III: ANTHROPOGENIC AEROSOL SOURCES AND CHEMISTRY

BALLROOM C – Deborah Gross and Kayane Dingilian, chairs

- 3AC.1** [Quantifying the Chemical Composition and Mass Loading of Microplastic Submicron Particles \(MPPs\) in the Atmosphere using Real-time Aerosol Mass Spectrometry](#). SINING NIU, Ruizhe Liu, Sahir Gagan, Nicolas Aliaga Buchenau, Sarah Brooks, Jason Surratt, Xingmao Ma, Manjula Canagaratna, Yue Zhang, *Texas A&M University*  
3:30
- 3AC.2** [Airborne Microplastics in a Suburban Location in the Desert Southwest](#). KANCHANA CHANDRAKANTHAN, Pierre Herckes, *Arizona State University*  
3:45
- 3AC.3** [Source Characterization and Quantification of Atmospheric Nanoplastics](#). MICHAEL TAWADROUS, Arthur W. H. Chan, Alex Lee, *University of Toronto*  
4:00

- 3AC.4** [Organic Markers for the Detection of Ship Plumes in Single-particle Mass Spectrometry](#). JOHANNES PASSIG, Lukas Anders, 4:15 Julian Schade, Ellen-Iva Rosewig, Paul Haubenwallner, Robert Irsig, Sven Ehlert, Thorsten Streibel, Andreas Walte, Thomas Adam, Ralf Zimmermann, *Helmholtz Zentrum München and University of Rostock*
- 3AC.5** [Primary Emissions and Secondary Aerosol Formation from In-use Heavy-Duty Diesel and Natural Gas Vehicles](#). SAHAR 4:30 GHADIMI, Hanwei Zhu, David R. Cocker III, Thomas D. Durbin, Georgios Karavalakis, *University of California, Riverside*
- 3AC.6** [Exploring the Effects of Chemical Composition on Viscosity of Secondary Organic Aerosol from n-alkanes Oxidation](#). 4:45 TOMMASO GALEAZZO, Bernard Aumont, Manabu Shiraiwa, *University of California, Irvine*
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3AE AEROSOL EXPOSURE III: PUBLIC HEALTH IMPACTS & ENVIRONMENTAL JUSTICE  
302 B/C – Albert A. Presto and Ryan W. Drover, chairs

- 3AE.1** [PM2.5 and PM0.1 Exposure Analysis for Oregon's Clean Transportation Fuel Program: Public Health Impacts and Environmental Justice](#). YITING LI, Michael Kleeman, *University of California, Davis* 3:30
- 3AE.2** [Impacts of a Cookstove Intervention in Urban Zambia on Cooks' Personal Exposure to Carbon Monoxide and Particulate Matter](#). STEPHANIE PARSONS, Wesley Hayes, Joseph Pedit, Logan Richardson, Pamela Jagger, Andrew Grieshop, *North Carolina State University* 3:45
- 3AE.3** [The Pioneer Valley Healthy Air Network: Strategies for Establishing a Community-driven Low-cost Sensor Network](#). DONG 4:00 GAO, Jiarong Qi, Anna Woodroof, Mahea Heimuli, David Bloniarz, Alexander Sherman, Kayla Fennell, Samantha Hamilton, Yoni Glogower, Sarita Hudson, Krystal Godri Pollitt, *Yale University*
- 3AE.4** [Traffic and Cooking Emissions Drive Exposure Disparities to Airborne Fine Particles in the United States](#). PROVAT SAHA, Albert 4:15 A. Presto, Steven Hankey, Julian Marshall, Allen Robinson, *Carnegie Mellon University*
- 3AE.5** [Transformation of the Urban Transport Towards Low- and Zero-tailpipe Emission Technologies: Impacts on Commuter Exposure to Black Carbon, PM2.5, and UFP](#). RICARDO MORALES BETANCOURT, Boris Galvis, Olga Lucia Sarmiento, *Universidad de los Andes* 4:30
- 3AE.6** [Morphological Characterization and Mixing State of Size Segregated Aerosols in Northern India](#). HIMANSHI ROHRA, 4:45 Gursumeeran Satsangi, Ajay Taneja, *Savitribai Phule Pune University, Pune, India*
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3BC SYMPOSIUM: BIOMASS COMBUSTION: OUTDOOR/INDOOR TRANSPORT AND INDOOR AIR QUALITY III  
305 A/B – Douglas Collins and Liora Mael, chairs

- 3BC.1** [Characterizing the Impacts of Biomass Burning to Indoor and Outdoor Environments During Wintertime in Fairbanks, Alaska: An overview of the ALPACA House Measurements](#). PETER F. DECARLO, Ellis Robinson, Andrew Holen, Judy Wu, Kerri Pratt, Karolina Cysneiros de Carvalho, Brent Williams, Damien Ketcherside, Vanessa Selimovic, Robert J. Yokelson, Lu Hu, Ting Fang, Sukriti Kapur, Kasey Edwards, Manabu Shiraiwa, Kayane Dingilian, Yuhan Yang, Michael Battaglia, Rodney J. Weber, Tianren Wu, Dusan Licina, Jingqiu Mao, William Simpson, *Johns Hopkins University*. INVITED. 3:30
- 3BC.2** [Understanding Alaskan Wintertime Air Pollution: Outdoor-Indoor Transport and Phase Partitioning of Chemically Resolved Semi-Volatile Organic Compounds during the ALPACA 2022 Campaign](#). KAROLINA CYSNEIROS DE CARVALHO, Ellis Robinson, Andrew Holen, Judy Wu, Vanessa Selimovic, Damien Ketcherside, William Simpson, Lu Hu, Kerri Pratt, Peter F. DeCarlo, Robert J. Yokelson, Brent Williams, *Washington University in St. Louis* 3:45
- 3BC.3** [Coupled Indoor-Outdoor Aerosol Mass, Composition, and Size Measurements from a Residential Home in Fairbanks, Alaska during ALPACA 2022](#). ELLIS ROBINSON, Andrew Holen, Judy Wu, Kerri Pratt, Karolina Cysneiros de Carvalho, Brent Williams, Damien Ketcherside, Vanessa Selimovic, Robert J. Yokelson, Lu Hu, Ting Fang, Kasey Edwards, Sukriti Kapur, Manabu Shiraiwa, Kayane Dingilian, Yuhan Yang, Michael Battaglia, Rodney J. Weber, Tianren Wu, Dusan Licina, Jingqiu Mao, William Simpson, Peter F. DeCarlo, *Johns Hopkins University* 4:00

- 3BC.4** [Impact of Residential Wood Burning on Physical, Chemical, Optical, and Biological Characteristics of Subarctic Aerosols in Northpole, Alaska, during Wintertime.](#) RAGHU BETHA, Kaitlyn McKinney, Saravanan Kanagaratnam, Anastasia Hewitt, Srijan Aggarwal, Subhabrata Dev, Dominique Pride, *Texas Tech University*  
4:15
- 3BC.5** [Single Particle Emission Measurements of Black Carbon from Residential Wood Combustion.](#) REBECCA TROJANOWSKI, Arthur J. Sedlacek, Thomas Butcher, Ernie R. Lewis, Vasilis Fthenakis, *Brookhaven National Laboratory*  
4:30
- 3BC.6** [Black and Brown Carbon Emissions during Realistic Operation of Two Residential Cordwood-Fired Hydronic Heaters.](#) JAKE LINDBERG, Rebecca Trojanowski, Marilyn Wurth, Brian P. Frank, Shida Tang, Gil H. LaDuke, Thomas Butcher, Devinder Mahajan, *Brookhaven National Labs*  
4:45
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### 3HA HEALTH-RELATED AEROSOLS III: AEROSOL TOXICITY AND REACTIVITY

306 A/B/C – Kerry Kelly and Emily Franklin, chairs

- 3HA.1** [Characterization of Airborne Metals in a Pennsylvania Urban-Industrial Area: Polluted Background and Exposures to Fenceline Communities.](#) MINA TEHRANI, Edward Fortner, Benjamin Werden, Tara Yacovitch, Ellis Robinson, Roger Sheu, Scott Van Bramer, Thomas Burke, Kirsten Koehler, Keeve Nachman, Ana Rule, Peter F. DeCarlo, *Johns Hopkins University*  
3:30
- 3HA.2** [Measurement for Investigating Aerosol Toxicity, Using Centrifugal Classification of Suspended Particles for Cell Exposure and in Vitro Evaluation Using Thp-1 Macrophages.](#) KAKO OGANE, Ayumi Iwata, Tomoaki Okuda, *Keio University*  
3:45
- 3HA.3** [Ambient Particle Composition and Toxicity in 31 Major Cities in China.](#) LU ZHANG, Maosheng Yao, *Peking University*  
4:00
- 3HA.4** [Evaluation of PM<sub>2.5</sub>-induced Antioxidant Consumption and ROS Generation as a Proxy for the Aerosol Toxicity.](#) SUDHEER SALANA, Yixiang Wang, Vishal Verma, *University of Illinois at Urbana-Champaign*  
4:15
- 3HA.5** [Effects of Acidity and Photoirradiation on Reactive Oxygen Species Formation from Secondary Organic Aerosols.](#) Jinlai Wei, Ting Fang, MANABU SHIRAIWA, *University of California, Irvine*  
4:30
- 3HA.6** [Measuring Reactive Oxygen Species \(ROS\) Production of Particulate Matter through Air-Blood Barrier Array Module.](#) SEONGBIN JO, Hannah Viola, Liang-Hsin Chen, Taekyu Joo, Shuichi Takayama, Nga Lee Ng, *Georgia Institute of Technology*  
4:45
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### 3PC SYMPOSIUM: AEROSOL PHYSICAL CHEMISTRY AND MICROPHYSICS II

301 A/B – Sarah Suda Petters and Pedro Campuzano Jost, chairs

- 3PC.1** [Connecting the Hygroscopicity, Viscosity and Water Diffusivity of Internally Mixed Organic-Inorganic Aerosol.](#) JAMES F. DAVIES, Craig Sheldon, Jack Choczynski, Chelsea Price, Katie Morton, Ryan Davis, *University of California, Riverside*. INVITED.  
3:30
- 3PC.2** [The Effect of Particle Phase and Morphology on Its Evaporation Kinetics and Rates of Heterogeneous Reactions.](#) ALLA ZELENYUK, Jacqueline Wilson, Kaitlyn Suski, Manish Kumar Shrivastava, *Pacific Northwest National Laboratory*  
3:45
- 3PC.3** [Molecular Dynamics Simulations of the Microphysics of Liquid Water in Nano-aerosol Droplets.](#) XIAOHAN LI, Ian Bourg, *Princeton University*  
4:00
- 3PC.4** [Parameterization of Aerosol Size of Organic and Secondary Inorganic Aerosol for Efficient Representation of Global Aerosol Optical Properties.](#) HAIHUI ZHU, Randall Martin, Betty Croft, Shixian Zhai, Liam Bindle, Inderjeet Singh, Jeffrey R. Pierce, Chi Li, Deepangsu Chatterjee, *Washington University in St. Louis*  
4:15
- 3PC.5** [Particulate Matter Collected in an Impactor from a Euro VI Diesel Engine on Real-world Conditions: Physicochemical Characterization.](#) Camilo Zapata-Hernandez, Camilo Bernal, KAREN CACUA, *Instituto Tecnológico Metropolitano de Medellín*  
4:30
- 3PC.6** [Turbulent Flux Measurements and Transfer Velocity Estimates of Nucleation-sized Particles.](#) NICHOLAS MESKHIDZE, Ajmal Rasheeda Satheesh, Sabin Kasparoglu, Mohammad Maksimul Islam, Bethany Sutherland, Markus Petters, *NC State University*  
4:45

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3UA URBAN AEROSOLS III

302 A – Eben Cross and Reina Buenconsejo, chairs

- 3UA.1** [Ground-based Particulate Matter Monitoring Network for NASA's Multi-Angle Imager for Aerosols \(MAIA\) Investigation: Development Status and Preliminary Results](#). SINA HASHEMINASSAB, David Diner, Araya Asfaw, Jeff Blair, Ann Dillner, John Hall, Brent Holben, Richard Kleidman, Yang Liu, Christian L'Orange, Randall Martin, Brenna Walsh, *Jet Propulsion Laboratory*
- 3UA.2** [Design and Development of a Multi-Metal Mobile Platform \(MMMP\): Status Update and Preliminary Results](#). MOHAMMAD SOWLAT, Steven Boddeker, Avi Lavi, Christopher Lim, Sina Hasheminassab, Faraz Ahangar, Julia Montoya-Aguilera, Pami Mukherjee, Jamie Berg, Payam Pakbin, Andrea Polidori, *South Coast Air Quality Management District*
- 3UA.3** [In-vehicle Ultrafine Particles Exposure Measurements in a South Asian Mega City: Dhaka, Bangladesh](#). Shaikh Ashik-Un-Noor, Mustafizur Rahaman, Albert Presto, PROVAT SAHA, *Bangladesh University of Engineering & Technology*
- 3UA.4** [PM2.5 Sensor Intercomparisons and Regional Trend Assessments from Low-Cost Sensor Networks in Accra, Ghana and Lomé, Togo](#). GARIMA RAHEJA, Emmanuel Appoh, Ebenezer Appah-Sampong, Maxwell S. Sunu, John K. Nyante, Allison Felix Hughes, Celeste McFarlane, Rob Pinder, Stefani Penn, R. Subramanian, Michael Giordano, Levi Stanton, Daniel Westervelt, *Columbia University*
- 3UA.5** [Love My Air PM2.5 Sensor Network Analysis](#). TEHYA STOCKMAN, Aubrey Burgess, William Obermann, Brendan Lawlor, Shelly L. Miller, *University of Colorado Boulder*
- 3UA.6** [Wintertime Spatial Patterns of Particulate Matter in Fairbanks, AK during ALPACA 2022](#). ELLIS ROBINSON, William Simpson, Peter F. DeCarlo, *Johns Hopkins University*

Tuesday 5:00 PM - 6:00 PM

Working Group Meetings 1 - Atmospheric Chemistry, Combustion and Material Synthesis, Health-Related Aerosols, History of Aerosol Science, Instrumentation and Methods

Tuesday 6:00 PM - 8:00 PM

Welcome Reception

Tuesday 6:00 PM - 8:00 PM

Session 4: Meet the Job Seekers Poster

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4MJ MEET THE JOB SEEKERS: POSTERS

BALLROOM A/B

- 4MJ.1** [Jayashree Yalamanchili, PhD Candidate, University of Maryland, Baltimore County](#). JAYASHREE YALAMANCHILI, *University of Maryland, Baltimore County*
- 4MJ.3** [Tania Gautam, PhD Candidate Pursuing Industry/Government Postdoctoral Positions, Preferred Location: Colorado](#). TANIA GAUTAM, *University of Alberta*
- 4MJ.4** [Ravleen Kaur, PhD Candidate \(Analytical Chemistry\), Analytical Characterization and Method Development in R&D](#). RAVLEEN KAUR KOHLI, *University of California, Riverside*
- 4MJ.5** [Chun-Ning Mao, Graduate Assistant/PhD Candidate Looking for an Entry-level Engineering Job / Chemical Engineering](#). CHUN-NING MAO, *University of Maryland*
- 4MJ.6** [Madeleine Petersson Sjögren, PhD Student in Aerosol Technology, Lund University, Sweden, Looking for a Post-doctoral Position or Science Communication Work](#). MADELEINE PETERSSON SJÖGREN, *Lund University, Sweden*
- 4MJ.7** [Cheryl L. Weyant, Postdoctoral Researcher](#). CHERYL WEYANT, *University of Michigan*

- 4MJ.8** [Nirvan Bhattacharyya, PhD Candidate, University of Texas at Austin - Seeking a Postdoctoral Research Position.](#) NIRVAN BHATTACHARYYA, *University of Texas at Austin*  
6:00
- 4MJ.9** [Mariah Gnegy, Ph.D. Candidate at Virginia Tech Seeking Government or Industry Positions.](#) MARIAH GNEGY, *Virginia Tech*  
6:00
- 4MJ.10** [Alyssa Alsante, Ph.D. Candidate Pursuing a Postdoctoral Research Position.](#) ALYSSA ALSANTE, *Texas A&M University*  
6:00
- 4MJ.11** [Ningjin Xu, Ph.D. Candidate at UC, Riverside.](#) NINGJIN XU, *University of California, Riverside*  
6:00
- 4MJ.12** [Brianna Hendrickson, Ph.D. Candidate Pursuing an Industry Career or Postdoctoral Research Position.](#) BRIANNA HENDRICKSON, *Texas A&M University*  
6:00
- 4MJ.14** [Job Seeker Abstract - Devon Higgins.](#) DEVON HIGGINS, *University of Delaware*  
6:00
- 4MJ.15** [Yumeng Cui, Fifth-year Ph.D. Candidate, Research-related Job.](#) YUMENG CUI, *University of California, Riverside*  
6:00
- 4MJ.16** [Meet the Job Seekers-Ziyang \(Nancy\) Lei.](#) ZIYING LEI, *Texas A&M University*  
6:00
- 4MJ.17** [Omar El Hajj, Ph.D. in Engineering, Research Scientist/R&D/Post-Doctoral Position.](#) OMAR EL HAJJ, *University of Georgia*  
6:00
- 4MJ.18** [Yucheng He, 4th Year Ph.D. Candidate, Air Quality Agency.](#) YUCHENG HE, *University of California, Riverside*  
6:00
- 4MJ.19** [Emma Tackman, Graduate Research Assistant/PhD Sp 2023, Industry or Government Analytical/Environmental Chemist.](#) EMMA TACKMAN, *The Pennsylvania State University*  
6:00
- 4MJ.20** [Sanika Nishandar, 5th year Mechanical Engineering PhD Candidate, Aspiring R&D Scientist in Air Quality/Wildfires.](#) SANIKA NISHANDAR, *University of California, Riverside*  
6:00
- 4MJ.21** [Kanishk Gohil; Current: Ph.D. Candidate, University of Maryland; Desired: Postdoctoral Research Fellow.](#) KANISHK GOHIL, *University of Maryland*  
6:00
- 4MJ.22** [Payton Beeler, Ph.D. Student \(Washington University in St. Louis\), Government/Academia.](#) PAYTON BEELER, *Washington University in St. Louis*  
6:00
- 4MJ.23** [Sripriya Nannu Shankar, Graduate Research Assistant at University of Florida, Seeking a Postdoc or a Faculty Position in USA.](#) SRIPRIYA NANNU SHANKAR, *University of Florida*  
6:00
- 4MJ.24** [PhD candidate Sabin Kasparoglu, NCSU.](#) SABIN KASPAROGLU, *North Carolina State University*  
6:00
- 4MJ.25** [Lucy Nandy, Postdoctoral Scholar, Seeking Tenure-Track Position in Chemical/Mechanical/Civil and Environmental Engineering/Chemistry.](#) LUCY NANDY, *Pennsylvania State University*  
6:00

### Wednesday

Wednesday 6:30 AM - 7:30 AM  
AAAR 5k(ish) Fun Run/Walk

Wednesday 7:00 AM - 8:00 AM  
Committee Meetings - Finance

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

8:00 **Nonlinear Trajectory: From Aerosol Science to Environmental Public Health** Sarah Henderson, *British Columbia Centre for Disease Control*

**Moderator** Rachel O'Brien, *University of Michigan*

9:00 **Whitby and Mercer Awards Presentation, AS&T Outstanding Publication and Outstanding Reviewer Awards**

**Presentation** Jacky Rosati and Jonathan P. Reid, *U.S. Environmental Protection Agency, University of Bristol*

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 5: Platform

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5AC AEROSOL CHEMISTRY IV: ROLE OF WATER IN AEROSOL CHEMISTRY

*BALLROOM C* – Coty Jen and Taekyu Joo, chairs

**5AC.1** [Effects of Inorganic Salts and pH on the Gas-Aqueous Partitioning of Formic Acid](#). VIKRAM PRATAP, Rose Taylor, Joy Kiguru, 9:45 Shawn Serafin, Alyssa Burns, Annmarie Carlton, Christopher Hennigan, *University of Maryland, Baltimore County*

**5AC.2** [Effects of RH and UV Light on the Formation, Composition, and Aging of SOA Derived from the High-NO<sub>x</sub> Oxidation of Ethylbenzene by Chlorine Radical](#). LEIF JAHN, Lea Hildebrandt Ruiz, *University of Texas at Austin*  
10:00

**5AC.3** [Comparisons of Physical Properties and Compositions of Irradiated Carbonyl-containing Aqueous Aerosols and Aerosol Mimic Solutions](#). JOSEPH WOO, Katherine Pierre-Louis, Bruno Loyola San Martin, Erin O'Leary, Daphna Fertil, *Lafayette College*  
10:15

**5AC.4** [Relative Humidity Effects on the Oxidative Aging of Isoprene Epoxydiol-Derived Secondary Organic Aerosol](#). ALISON 10:30 FANKHAUSER, Madeline Cooke, Jin Yan, Cara Waters, Rebecca Parham, N. Cazimir Armstrong, Yao Xiao, Katherine Kolozsvari, Zhenfa Zhang, Avram Gold, Jason Surratt, Andrew Ault, *University of Michigan*

**5AC.5** [Estimated Timescales for Wet Deposition of Organic Compounds as a Function of Henry's Law Constants](#). CHENYANG BI, 10:45 Gabriel Isaacman-VanWertz, *Virginia Tech*

**5AC.6** [Secondary Organic Aerosol from Gas- and Aqueous-phase Oxidation of Volatile Organic Compounds in an Oxidation Flow Reactor](#). NINGJIN XU, Chen Le, Kunpeng Chen, Ying-Hsuan Lin, David R. Cocker III, Don Collins, *University of California, Riverside*  
11:00

**5AC.7** [Regional Modeling of SOA Formation Considering Aqueous Chemistry under Different Humidities](#). YUJIN JO, Myoseon Jang, 11:15 *University of Florida*

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5BC SYMPOSIUM: BIOMASS COMBUSTION: OUTDOOR/INDOOR TRANSPORT AND INDOOR AIR QUALITY IV

*305 A/B* – Elliot Gall and Kathryn Mayer, chairs

**5BC.1** [Surface Films as a Mediator of Long-Term Air Quality and Health Impacts of Wildfire Smoke Events](#). SARAH STYLER, Iris Chan, 9:45 Stephanie Schneider, Annie Cheng, *McMaster University*

**5BC.2** [Wildfire as a Source of Environmentally Persistent Free Radicals and Reactive Oxygen Species](#). Ting Fang, Brian Hwang, SUKRITI 10:00 KAPUR, Katherine Hopstock, Jinlai Wei, Sergey Nizkorodov, Manabu Shiraiwa, *University of California, Irvine*

**5BC.3** [Photolytic Mass Loss of Secondary Organic Aerosol \(SOA\) Derived from Biomass Burning Precursors in Different Relative Humidity](#). NARA SHIN, Yuchen Wang, Taekyu Joo, Pengfei Liu, Nga Lee Ng, *Georgia Institute of Technology*  
10:15

- 5BC.4** [Understanding the Contributions of Medium- and Long-range Atmospheric Transport of Biomass Burning to Organic Aerosols in Bogotá, Colombia](#). RICARDO MORALES BETANCOURT, Fernando Garcia-Menendez, Karen Ballesteros, Amy P. Sullivan, *Universidad de los Andes*  
10:30
- 5BC.5** [Multi-modal Mass Spectrometry Studies of Atmospheric Aerosol Aging](#). KYLA SIEMENS, Demetrios Pagonis, Hongyu Guo, Pedro Campuzano-Jost, Jose-Luis Jimenez, Alexander Laskin, *Purdue University*  
10:45
- 5BC.6** [Multi-Day Evolution of Organic Aerosol Mass and Composition from Biomass Burning Emissions](#). ABRAHAM DEARDEN, Ali Akherati, Charles He, Christopher Lim, David Hagan, Christopher Cappa, Jesse Kroll, Jeffrey R. Pierce, Shantanu Jathar, *Colorado State University*  
11:00
- 5BC.7** [Diffusion Coefficients and Phase Behavior of Biomass Burning Organic Aerosol](#). F. K. A. GREGSON, N. G. A. Gerrebos, C. E. Schwartz, S. Kamal, C. Carlsten, A. K. Bertram, *University of British Columbia*  
11:15
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#### 5HA HEALTH-RELATED AEROSOLS IV: TOXICITY AND LUNG DEPOSITION OF PARTICLES

306 A/B/C – Vishal Verma and Dong Gao, chairs

- 5HA.1** [The Effects of Photochemical Aging of Combustion Particles with Secondary Organic Aerosol Interactions on Cellular Toxicity](#). REUBEN ATTAH, Kamaljeet Kaur, Kerry Kelly, *University of Utah*  
9:45
- 5HA.2** [Estimation of Respiratory Deposited Doses for Metals in Submicron Aerosol Using Mobile Aerosol Lung Deposition Apparatus \(MALDA\)](#). JINHO LEE, Inkyu Han, Masoud Afshar, Wei-Chung Su, *University of Texas Health Science Center at Houston*  
10:00
- 5HA.3** [Examining the Oxidation State of the Metals in the Aerosols and Vape Liquid of Electronic Cigarettes](#). KAPIAMBA KASHALA FABRICE, Stephen Adom, Yue-Wern Huang, Yang Wang, *Missouri University of Science and Technology*  
10:15
- 5HA.4** [Predict Transport and Deposition of Multicomponent E-cigarette Aerosols in a Subject-specific Airway Model with Different Nicotine Forms: An in silico Study](#). Ted Sperry, Jianan Zhao, YU FENG, Chen Song, Zhiqiang Shi, *Oklahoma State University*  
10:30
- 5HA.5** [An Artificial Lung Model for Characterizing Deposition of E-cigarette Aerosols in Human Tracheobronchial Airways](#). HAOXUAN CHEN, Airi Harui, Yu Feng, Michael D. Roth, Yifang Zhu, *University of California, Los Angeles*  
10:45
- 5HA.6** [The Lobar Deposition of Little Cigar Smoke Particles in Sprague-Dawley Rat Lungs](#). KAISEN LIN, Christopher Wallis, Emily Wong, Patricia Edwards, Laura Van Winkle, Anthony S. Wexler, *University of California, Davis*  
11:00
- 5HA.7** [Detecting Lung Disease with Aerosolized Nanoparticles](#). MADELEINE PETERSSON SJÖGREN, Jonas Jakobsson, H. Laura Aaltonen, Amelia Grosso, Davide Piloni, Frederica Albicini, Erica Gini, Angelo G. Corsico, Per Wollmer, Jakob Löndahl, *Lund University, Sweden*  
11:15
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#### 5IM INSTRUMENTATION AND METHODS I: DMA

302 B/C – Markus Petters and Geoffrey Smith, chairs

- 5IM.1** [Quantifying Residence Times in Neutralizers to Improve Temporal Resolution of Measurements](#). ROBERT T. NISHIDA, Mino Woo, Tyler J. Johnson, Jason S. Olfert, *University of Alberta*  
9:45
- 5IM.2** [Measuring Size Distributions of Atmospheric Aerosols Using Natural Air Ions](#). YIRAN LI, Xiaotong Chen, Jingkun Jiang, *Tsinghua University, China*  
10:00
- 5IM.3** [Effects of Gas-Phase Components on Measurement of Secondary Organic Aerosol Size Distribution](#). YUANLONG HUANG, John Seinfeld, Richard Flagan, *California Institute of Technology*  
10:15
- 5IM.4** [Performance Comparison of TSI's New Wide-Range and Established Long Differential Mobility Analyzer](#). Justin S. Koczak, ANDREA J. TIWARI, Torsten Tritscher, Sebastian H. Schmitt, Timothy Wright, Markus Petters, *TSI Incorporated*  
10:30

- 5IM.5** [Comparison of 100 nm Monodisperse Particle Size Measured by Four Accurate Methods](#). Kaleb Duelge, GEORGE MULHOLLAND, Vince Hackley, Natalia Farkas, John Kramar, Michael Zachariah, Keiji Takahata, Hiromu Sakurai, Kensei Ehara, *National Institute of Standards and Technology*
- 5IM.6** [Assessment of Scanning Mobility Particle Sizer \(SMPS\) for Online Monitoring of Delivered Dose in an in Vitro Aerosol Exposure System](#). SRIPRIYA NANNU SHANKAR, Kiran Mital, Eric Le, Gregory S. Lewis, Arantzazu Eiguren-Fernandez, Tara Sabo-Attwood, Chang-Yu Wu, *University of Florida*
- 5IM.7** [A High Resolution Differential Mobility Analyzer with Extended Size Range for Viral Particle Studies](#). LUIS-JAVIER PEREZ-LORENZO, Jerzy Kozlowski, Juan Fernandez de la Mora, *Yale University*
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5PC SYMPOSIUM: AEROSOL PHYSICAL CHEMISTRY AND MICROPHYSICS III

301 A/B – Cari Dutcher and Amanda Frossard, chairs

- 5PC.1** [The Role of Water Vapor on Photo-bleaching of Organic Aerosol Particles](#). RACHEL O'BRIEN, Hongmin Yu, Alexandra Klodt, Laurel Nicks, Natalie Warren, Churchill Wilkinson, Marley Adamek, Monica Dibley, Christopher Lim, Carolyn Jordan, Bruce Anderson, Christopher Cappa, Jesse Kroll, Sergey Nizkorodov, *University of Michigan*. INVITED.
- 5PC.2** [Parametrization of Acid-Base Dissociation for Atmospheric Nanoparticle Growth Predictions](#). PAULUS BAUER, Sabrina Chee, Nanna Myllys, James Smith, Kelley Barsanti, *University of California, Riverside & Irvine*
- 5PC.3** [Constraints on the Role of Laplace Pressure in Multiphase Reactions and Viscosity of Organic Aerosols](#). SARAH PETERS, *Aarhus University*
- 5PC.4** [Ozonolysis of Aqueous Iodide at the Air-Water Interface Studied by Single Microdroplet Mass Spectrometry](#). ALEXANDER PROPHET, Kevin R. Wilson, *Lawrence Berkeley National Laboratory*
- 5PC.5** [Optical-Trapping, Single-Particle Reactor for the Study of Surface and Heterogeneous Chemistry of Mercury](#). CHUJI WANG, Yukai Ai, Yong-Le Pan, Gorden Videen, *Mississippi State University*
- 5PC.6** [Collisions of Picoliter Droplets With a Surface](#). LAUREN MCCARTHY, Jim Walker, Jonathan P. Reid, *University of Bristol*
- 5PC.7** [The Use of Transmission Electron Microscopy with Scanning Mobility Particle Size Spectrometry for an Enhanced Understanding of the Physical Characteristics of Aerosol Particles Generated with a Flow Tube Reactor](#). EMMA TACKMAN, Devon Higgins, Murray Johnston, Miriam Freedman, *The Pennsylvania State University*
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5UA URBAN AEROSOLS IV

302 A – Michael Kleeman and Daniel Westervelt, chairs

- 5UA.1** [Modeling Formation of Secondary Organic Aerosol from the Photooxidation of Naphthalene](#). SANGHEE HAN, Myoseon Jang, *University of Florida*
- 5UA.2** [Secondary Particulate Matter Formed in a Flow Reactor from Gas- and Aqueous-phase Chemistry of Ambient Air in Riverside, California](#). NINGJIN XU, Alexander B. MacDonald, Xuanlin Du, Roya Bahreini, Don Collins, *University of California, Riverside*
- 5UA.3** [PM<sub>2.5</sub> Impacts from the Historic Ship Backlog at the Ports of Los Angeles and Long Beach](#). XIANG LI, Ranil Dhammapala, Melissa Maestas, Nico Schulte, Scott A. Epstein, *South Coast Air Quality Management District*
- 5UA.4** [Revealing Nighttime Construction-related Activities from a Distributed Air Quality Sensor Network](#). Jintao Gu, Bo Yuan, Jiajun Gu, Shaojun Zhang, Ye Wu, K. MAX ZHANG, *Cornell University*

- 5UA.5** [Comprehensive Chemical Characterization of Particle Emissions from Urban Cured-In-Place-Pipe Installations](#). BRIANNA PETERSON, Ana Morales, Christopher P. West, Jay Tomlin, Felipe Rivera-Adorno, Steven Sharpe, Yoorae Noh, Pritee Pahari, Andrew Whelton, Alexander Laskin, *Purdue University*  
10:45
- 5UA.6** [New Particle Formation from the Road Surface](#). HINRICH GROTHE, Ayse Nur Koyun, Juergen Gratzl, Camile Bocaniciu, Hemanjali Vemuri, *TU Wien, Institute of Materials Chemistry, Vienna, Austria*  
11:00
- 5UA.7** [The Impact of the Sea Breeze on Particulate Matter Chemical Composition and Concentration in Houston](#). CHUN-YING CHAO, Wei Li, Yuxuan Wang, Robert Griffin, *Rice University*  
11:15

Wednesday 11:30 AM - 1:00 PM  
AAAR Board of Directors Luncheon

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

Wednesday 12:00 PM - 1:00 PM  
Committee Meetings - Education

Wednesday 12:00 PM - 1:00 PM  
How to Build a Community of Scholars in AAAR for Community-Engaged Research Panel Discussion

Wednesday 1:00 PM - 3:00 PM  
Session 6: Platform

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6AC AEROSOL CHEMISTRY V: BIOGENIC SOA  
BALLROOM C – Chris Hennigan and Alison Fankhauser, chairs

- 6AC.1** [Secondary Organic Aerosol Formation from Photooxidation of Oxygenated Monoterpenes in Simple and Complex Chemical Systems](#). CELIA FAIOLA, Farzaneh Khalaj, Shan Gu, Véronique Perraud, Leah Williams, Jordan Krechmer, Andrew Lambe, *University of California, Irvine*  
1:00
- 6AC.2** [Molecular and Structural Characterization of Isomeric Compounds in Atmospheric Aerosols Using Ion Mobility Spectrometry – Mass Spectrometry](#). CHRISTOPHER P. WEST, Daniela Mesa Sanchez, Ana Morales, Yun-Jung Hsu, Jackson Ryan, Andrew Darmody, Lyudmila Slipchenko, Julia Laskin, Alexander Laskin, *Purdue University*  
1:15
- 6AC.3** [OH-initiated Photooxidation of Gas-phase Monoterpene-derived Hydroxy Nitrates](#). NGA LEE NG, Yuchen Wang, Masayuki Takeuchi, *Georgia Institute of Technology*  
1:30
- 6AC.4** [Chemical and Optical Properties of SOA from the Oxidation of Volatile Organic Compound Mixtures](#). YUMENG CUI, Kunpeng Chen, Ying-Hsuan Lin, Roya Bahreini, *University of California, Riverside*  
1:45
- 6AC.5** [Secondary Organic Aerosol Mass Yields and Composition from NO<sub>3</sub> Oxidation of  \$\alpha\$ -pinene and  \$\Delta\$ -carene: Effect of RO<sub>2</sub> Radical Fate](#). DOUGLAS DAY, Juliane Fry, Hyun-Gu Kang, Jordan Krechmer, Benjamin Ayres, Natalie Keehan, Samantha Thompson, Weiwei Hu, Pedro Campuzano-Jost, Jason Schroder, Harald Stark, Marla DeVault, Paul Ziemann, Kyle Zarzana, Robert Wild, William Dubè, Steven S. Brown, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*  
2:00
- 6AC.6** [Estimates of IEPOX Based SOA Formation in CMAQ 5.3.2 Using Updated Kinetics and Thermodynamics](#). JAIME GREEN, Yuzhi Chen, Jason Surratt, William Vizuete, *University of North Carolina at Chapel Hill*  
2:15
- 6AC.7** [Elucidation of the Structures and Formation Mechanism of Dimer Esters in  \$\alpha\$ -Pinene and  \$\beta\$ -Pinene Secondary Organic Aerosol](#). CHRISTOPHER KENSETH, Nicholas Hafeman, Samir Rezgui, Yuanlong Huang, Nathan Dalleska, Brian Stoltz, John Seinfeld, *California Institute of Technology*  
2:30

**6AC.8** [Effects of Isoprene on Biogenic New Particle Formation from Pre-Nucleation to CCN Sizes](#). LEE TISZENKEL, Asadullah Shoaib, Yue Zhao, Yue Zhang, Shanhu Lee, *University of Alabama Huntsville*

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6BA BIOAEROSOLS II

306 A/B/C – Jana Kesavan and Meiyi Zhang, chairs

**6BA.1** [Characterization of Single Fungal Aerosol Particles in a Reactive Atmospheric Environment Using Optical Trapping- Raman Spectroscopy](#). YUKAI AI, Chuji Wang, Yong-Le Pan, Gordon Videen, *Mississippi State University*

**6BA.2** [Development of an Aggressive-Air Activity-based Air Sampling System for Collection of Bioaerosols in Outdoor Areas](#). JOHN ARCHER, M. Worth Calfee, Adam Hook, Robert Yaga, William Schoppman, Jerome Gilberry, *US EPA*

**6BA.3** [Effect of Barrier on Spatial Distribution of Simulated Respiratory Particles in a Room](#). MARIAH GNEGY, Chase Gohlke, Linsey Marr, *Virginia Tech*

**6BA.4** [Pollen Effects on Health and Cloud Formation](#). BRIANNA HENDRICKSON, Sarah Brooks, Yingxiao Zhang, Allison Steiner, *Texas A&M University*

**6BA.5** [Influence of Weather Conditions on Size-resolved Bioaerosols near Livestock Farms](#). NOHHYEON KWAK, Erin Cortus, Carol Cardona, Kristelle Mendoza, Veronica Tonnell, Jiayu Li, *University of Minnesota*

**6BA.6** [Bioaerosol Sources and Sinks in Northern Alaska: a Microbiome Study](#). MARINA NIETO-CABALLERO, Jessie Creamean, Thomas C. J. Hill, Kevin R. Barry, Christina S. McCluskey, Thomas A. Douglas, Paul DeMott, Sonia Kreidenweis, *Colorado State University*

**6BA.7** [Molecular Changes in Bacteria after Aerosolization Leading to Antimicrobial Resistance](#). BROOKE SMITH, Maria King, *Texas A&M University*

**6BA.8** [Single Viable Bioaerosol Particle Discerning Using Naked Eye Assisted with Laser Trapping and Microwaving](#). XINYUE LI, Maosheng Yao, *Peking University*

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6CC AEROSOLS, CLOUDS, AND CLIMATE II

302 A – Markus Petters and Margaret House, chairs

**6CC.1** [Water Uptake of Monoterpene Aerosol Mixtures: Towards a Central Value](#). Bret Hatzinger, Ziheng Zeng, Tim Raymond, DABRINA DUTCHER, *Bucknell University*

**6CC.2** [The Hygroscopicity of Functionalized Insoluble Aerosol Surfaces](#). CHUN-NING MAO, Kanishk Gohil, Akua Asa-Awuku, *University of Maryland*

**6CC.3** [Effects of Mixing State on Water-Uptake Properties of Binary Mixtures](#). Patricia Razafindrambina, Kotiba A. Malek, Kristin DiMonte, Joseph Dawson, TIM RAYMOND, Dabrina Dutcher, Miriam Freedman, Akua Asa-Awuku, *University of Maryland*

**6CC.4** [Quantifying Activation of Aerosol Particles with LES-driven Parcel Simulations](#). LAURA FIERCE, Jesse Andersen, Will Cantrell, Jerome Fast, Claudio Mazzoleni, Mikhail Ovchinnikov, Raymond Shaw, Fan Yang, *Pacific Northwest National Laboratory*

**6CC.5** [Size-Resolved Aerosol Composition over the Arctic Reveals Cloud Processed Aerosol In-Cloud and above Cloud](#). NURUN NAHAR LATA, Zezhen Cheng, Darielle Dexheimer, Fan Mei, Swarup China, *Pacific Northwest National Laboratory*

**6CC.6** [Quantification of Vanadium in Non-Refractory Marine Boundary Layer Particles: Impacts of Heavy Fuel Ships on Particulate Matter \(PM\) in the Remote Central Pacific](#). MAYA ABOU-GHANEM, Daniel Murphy, Gregory Schill, Michael Lawler, *National Oceanic and Atmospheric Administration*

- 6CC.7** [Significant Spatial Gradients in New Particle Formation Frequency in Greece during Summer](#). ANDREAS AKTYPIS, David Patoulias, Christos Kaltsonoudis, Angeliki Matrali, Christina Vasilakopoulou, Nikolaos Mihalopoulos, Panagiotis Kalkavouras, Aikaterini Bougiatioti, Nikos Kalivitis, Konstantinos Eleftheriadis, Stergios Vratolis, Maria Gini, Athanasios Kouras, Mihalis Lazaridis, Sofia-Eirini Chatoutsidou, Athanasios Nenes, Spyros Pandis, *University of Patras, Greece*  
2:30
- 6CC.8** [Southern Ocean \(50°S-68°S, 63°E-150°E\) Boundary Layer CCN-active Aerosols Latitudinal and Seasonal Distribution during the MARCUS](#). QING NIU, Greg McFarquhar, Connor Flynn, *University of Oklahoma*  
2:45
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#### 6IA INDOOR AEROSOLS II: INDOOR AEROSOL CHEMISTRY

305 A/B – Xiaoyu Liu and Sabrina Westgate, chairs

- 6IA.1** [Simulated Epidermal Formation of Tobacco-Specific Nitrosamines \(TSNAs\) from the Nitrosation of Nicotine with Atmospheric HONO](#). XIAOCHEN TANG, Peyton Jacob III, Christopher Havel, Marion Russell, Neal Benowitz, Lara Gundel, Hugo Destailats, *Lawrence Berkeley National Laboratory*  
1:00
- 6IA.2** [Measurements of Indoor Ammonia and Amines With a Chemical Ionization Mass Spectrometer](#). LEE TISZENKEL, Shanhu Lee, *University of Alabama Huntsville*  
1:15
- 6IA.3** [Secondary Organic Aerosol Formation from Cl-Initiated Oxidation of Limonene under Indoor and Outdoor Lighting Conditions](#). PEARL ABUE, Pawel K. Misztal, Lea Hildebrandt Ruiz, *The University of Texas at Austin*  
1:30
- 6IA.4** [Modeling Transformations in Indoor Inorganic Aerosol Composition and Concentrations When Passing through an HVAC System with ISORROPIA](#). BRYAN BERMAN, Bryan Cummings, Xinxu Tian, Peter F. DeCarlo, Shannon Capps, Michael Waring, *Drexel University*  
1:45
- 6IA.5** [Reactive Oxygen Species on Indoor Surfaces](#). ZHENDUO YAO, Glenn Morrison, Ryan Moravec, *UNC-Chapel Hill*  
2:00
- 6IA.6** [Predicting Floor-Based Variability in Composition and Concentration of Indoor Aerosol of Outdoor Origin in a High-Rise Multi-Family Building](#). XINXU TIAN, Bryan Cummings, Michael Waring, Marianne Touchie, Peter F. DeCarlo, *Johns Hopkins University*  
2:15
- 6IA.7** [Dynamics of Particle- and Gas-Phase Total Water-Soluble Organic Carbon at the CASA Indoor Air Study](#). MARC WEBB, Glenn Morrison, Naomi Chang, Karsten Baumann, Marina Vance, Delphine K. Farmer, Dustin Poppendieck, Barbara Turpin, *University of North Carolina at Chapel Hill*  
2:30
- 6IA.8** [Profiles of Neutral, Volatile Per- and Polyfluoroalkyl Substances \(PFAS\) in Residential Indoor Air and Particle Samples From the Indoor PFAS Assessment Campaign](#). CLARA EICHLER, Naomi Chang, Elaine Cohen Hubal, Jiaqi Zhou, Jason Surratt, Glenn Morrison, Barbara Turpin, *UNC-Chapel Hill*  
2:45
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#### 6IM INSTRUMENTATION AND METHODS II: LOW-COST SENSORS

302 B/C – Robert Nishida and Sabin Kasparoglu, chairs

- 6IM.1** [Understanding the Source Components Captured by the Purple Air Network](#). VIJAY KUMAR, Dinushani Senarathna, Supraja Gurajala, William Olsen, Shantanu Sur, Sumona Mondal, Suresh Dhaniyala, *Clarkson University*  
1:00
- 6IM.2** [Portable, Low-cost Samplers for Distributed Sampling of Aerosols and Reactive Gases](#). JAMES HURLEY, Alejandra Caceres, Ksenia Onufrieva, Gabriel Isaacman-VanWertz, *Virginia Tech*  
1:15
- 6IM.3** [Precision and Accuracy of PM2.5 Monitors: Impacts on Air Sensor Evaluations](#). KAROLINE BARKJOHN, Andrea Clements, Amara Holder, Robert Vanderpool, Brett Gantt, Tim Hanley, *US Environmental Protection Agency*  
1:30
- 6IM.4** [Performance of Plantower PMS Sensors and the Alphasense Optical Particle Counter for Measuring PM10 Concentration in the Laboratory and Field](#). KERRY KELLY, Kamaljeet Kaur, Ross Whitaker, *University of Utah*  
1:45

- 6IM.5** [Mobile Monitoring of PM<sub>2.5</sub> - Insights from On-road Comparisons with MetOne BAM 1020 and Teledyne T640 FEMs.](#) 2:00 ANDREW WHITEHILL, Melissa Lunden, Brian LaFranchi, Paul Solomon, Surender Kaushik, *United States Environmental Protection Agency*
- 6IM.6** [Performance of Nephelometric and OPC-based Lower-Cost Monitors in Dusty and Desert-Influenced Environments.](#) R. 2:15 SUBRAMANIAN, Mohammed Ayoub, Shamjad Moosakutty, Rami Alfara, *Qatar Environment & Energy Research Institute*
- 6IM.7** [Personal Exposure using Low Cost PM Sensors in Low Income Denver Communities.](#) MARYAM ANIYA KHALILI, Nicholas Clements, Sophie Dolores Castillo, Dulce Gonzalez-Beltran, Allison Heckman, Tim Herwig, Marisa Westbrook, Valentina Serrano-Salomon, Omar Hammad, Esther Sullivan, Shivakant Mishra, Shelly L. Miller, *University of Colorado Boulder*
- 6IM.8** [An Automated Size and Time-resolved Aerosol Collector \(STAC\) and Integrated Sensors for Atmospheric Studies.](#) ZEZHEN 2:45 CHENG, Andrey Liyu, Darielle Dexheimer, Nurun Nahar Lata, Casey Michael Longbottom, Gourihar Kulkarni, Fan Mei, Swarup China, *Pacific Northwest National Laboratory*
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6PC SYMPOSIUM: AEROSOL PHYSICAL CHEMISTRY AND MICROPHYSICS IV

301 A/B – Alla Zelenyuk and Felipe A. Rivera-Adorno, chairs

- 6PC.1** [Molecular Drivers of Nascent and Aged Marine Aerosol Phase States.](#) JONATHAN SLADE, Paul Tumminello, Samantha Kruse, 1:00 Karen Lopo Zepeda, *University of California San Diego*. INVITED.
- 6PC.2** [Vertical Gradient of Aerosol Phase State over Stratified Alaskan-Arctic.](#) NURUN NAHAR LATA, Zezhen Cheng, Susan Mathai, 1:15 Darielle Dexheimer, Fan Mei, Swarup China, *Pacific Northwest National Laboratory*
- 6PC.3** [Surfactant Properties Influence Hygroscopic Growth of Submicron and Supermicron Model Sea Salt Particles.](#) AMANDA 1:30 FROSSARD, Rachel Bramblett, Ben Swanson, *University of Georgia*
- 6PC.4** [Solid Organic-coated Ammonium Sulfate Particles at High Relative Humidity in the Summertime Arctic Atmosphere.](#) ANDREW 1:45 AULT, Rachel Kirpes, Ziyang Lei, Matthew Fraund, Matthew Gunsch, Nathaniel May, Tate Barrett, Claire Moffett, Andrew Schauer, Becky Alexander, Lucia Upchurch, Swarup China, Patricia Quinn, Ryan Moffet, Alexander Laskin, Rebecca J. Sheesley, Kerri Pratt, *University of Michigan*
- 6PC.5** [Phase, Morphology, and Water Uptake Measurements of Mixed Salt Nano-Nuclei Found in Kidney Stones.](#) DEWANSH 2:00 RASTOGI, Kanishk Gohil, Kotiba A. Malek, Chao Peng, Mingjin Tang, Akua Asa-Awuku, *University of Maryland College Park*
- 6PC.6** [Impacts of Non-ideal Mixing and Phase State on Equilibration Timescales of Secondary Organic Aerosol Partitioning.](#) 2:15 MEREDITH SCHERVISH, Manabu Shiraiwa, *University of California, Irvine*
- 6PC.7** [Effects of Organic Water on Inorganic Aerosol Thermodynamics.](#) Stylianos Kakavas, Athanasios Nenes, SPYROS PANDIS, 2:30 *University of Patras*
- 6PC.8** [A Step-wise Hydration Model of Organics and Electrolytes.](#) ANTHONY S. WEXLER, *University of California, Davis* 2:45

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

Wednesday 3:30 PM - 5:00 PM  
Session 7: Platform

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7AC AEROSOL CHEMISTRY VI: BROWN CARBON AND BIOMASS BURNING AEROSOLS

BALLROOM C – Jason Surratt and Chenyang Bi, chairs

- 7AC.1** [Struvite-Catalyzed Photochemical Reactions of Aqueous-Phase Guaiacyl Acetone and 3,4-Dimethoxybenzaldehyde.](#) MARIA 3:30 MISOVICH, Manoj Silva, Robert Blakeslee, Jonas Baltrusaitis, Alexander Laskin, *Purdue University*

- 7AC.2** [Phase Morphology and Optical Properties of Brown Carbon Containing Aerosol Particles](#). Chelsea Price, JAMES F. DAVIES, 3:45 Thomas Preston, Roya Bahreini, *University of California Riverside*
- 7AC.3** [Evaporation of Volatile Components Transforms Optical Properties and Composition of Aged BrC Aerosol](#). DIEGO CALDERON-ARRIETA, Ana Morales, Anusha P.S. Hettiyadura, Chunlin Li, Taylor Estock, Yinon Rudich, Alexander Laskin, *Purdue University*
- 7AC.4** [Heterogeneous Chemistry on Biomass Burning Aerosol: Aircraft Measurements of N<sub>2</sub>O<sub>5</sub> and ClNO<sub>2</sub> during FIREX-AQ](#). Zachary Decker, STEVEN S. BROWN, Kenneth Aikin, Ilann Bourgeois, Pedro Campuzano-Jost, Matthew Coggon, Josh DiGangi, Glenn Diskin, Frank Flocke, Alessandro Franchin, Carley D. Fredrickson, Georgios Gkatzelis, Hongyu Guo, Sam Hall, Hannah Halliday, Katherine L. Hayden, Christopher D. Holmes, Jose-Luis Jimenez, Melinda Beaver, Ann M. Middlebrook, D. D. Montzka, Richard Moore, J. Andrew Neuman, John Nowak, et al., *National Oceanic and Atmospheric Administration*
- 7AC.5** [Secondary Organic Bulk and Molecular Aerosol Yields and Product Identification and Quantification using HPLC technique from the OH and NO<sub>3</sub> initiated Photooxidation of 5 BBVOCs](#). MELINDA SCHUENEMAN, Douglas Day, Demetrios Pagonis, Pedro Campuzano-Jost, Seonsik Yun, Olivia Jenks, Dongwook Kim, Marla DeVault, Paul Ziemann, Joost de Gouw, Jose-Luis Jimenez, *CIRES, University of Colorado, Boulder*
- 7AC.6** [Effects of Humidity on Secondary Organic Aerosol Formation from Furanoid Oxidation with Hydroxyl Radicals](#). TAEKYU JOO, Jean Rivera-Rios, Tori Hass-Mitchell, Jo Machesky, Drew Gentner, Matthew Alvarado, Nga Lee Ng, *Georgia Institute of Technology*
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#### 7CC AEROSOLS, CLOUDS, AND CLIMATE III

302 A – Shantanu Jathar and Tim Raymond, chairs

- 7CC.1** [Ice nucleation of Organic and Inorganic Components of a Marine Coccolithophore \(\*Emiliana huxleyi\*\) and a Coccolithovirus](#). 3:30 ALYSSA ALSANTE, Daniel Thornton, Sarah Brooks, Jessica Mirrielees, Elise Wilbourn, Brianna Hendrickson, Benjamin Diaz, Kay Bidle, *Texas A&M University*
- 7CC.2** [Detonation Soot as an Ice Nucleating Particle \(INP\)](#). SETH THOMPSON, Sarah Brooks, *Texas A&M University* 3:45
- 7CC.3** [Characteristics and Sources of Ice Nucleating Particles in the North-Western Himalayas](#). SHWETA YADAV, Nathaniel Curtis, Rebecca Venezia, Kiran Kumari, Sunandan Mahant, Ankit Tandon, Bruce Moffett, Ryan Paerl, Markus Petters, *Central University of Jammu, India* 4:00
- 7CC.4** [Optical Characterization of Polluted Atmospheric Aerosols Generated in a Tabletop Chamber](#). CHRISTIAN PATTYN, Jake Zenker, Lekha Patel, Andres Sanchez, Andrew Glen, Brian Bentz, Jeremy Wright, *Sandia National Laboratories* 4:15
- 7CC.5** [The OH Burst from Aerosols at the DOE Southern Great Plain ARM site](#). JIAQI SHEN, Catherine Banach, Suzanne E. Paulson, *University of California, Los Angeles* 4:30
- 7CC.6** [Thermodynamically Constrained Fire Radiative Power Retrieval Approach for Estimating Wildfire Emissions during the 2019 FIREX-AQ Campaign](#). CHENCHONG ZHANG, Nishit Shetty, Benjamin Sumlin, Rajan K. Chakrabarty, *Washington University in St. Louis* 4:45
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#### 7IA INDOOR AEROSOLS III: OCCUPATIONAL AND IN-HOME EXPOSURES

305 A/B – Mark Hernandez and Bryan Berman, chairs

- 7IA.1** [Impacts of Professional Cleaning Activities on Indoor Particulate Matter Following a Wildfire Event](#). Avery Hatch, LIORA MAEL, Marina Vance, *University of Colorado Boulder* 3:30
- 7IA.2** [Estimating Airborne Concentration of SARS-CoV-2 RNA Using Quantitative Filter Forensics](#). Zoe Hoskin, Jeffrey Siegel, SARAH HAINES, *University of Toronto* 3:45

- 71A.3** [Bioaerosol Control in Urban Elementary School Classrooms with In-room HEPA Supplements: Distribution of Effectiveness, Contribution to Room-Air Mixing and Acoustic Envelope Assessment.](#) Odessa M. Gomez, Halle Sago, Anna Segur, Sylvia Akol, MARK HERNANDEZ, *University of Colorado, Boulder*  
4:00
- 71A.4** [Impact of Operating Room Ventilation on Particle Elimination in Proximity under Realistic Settings.](#) MUCHUAN NIU, Haoxuan Chen, Jonathan Liu, Chi-hong Tseng, John Shin, Nir Hoftman, Yifang Zhu, *University of California, Los Angeles*  
4:15
- 71A.5** [Fixed and Adaptive Concentration Threshold for Particle Filtration Systems.](#) Alexander Mendell, Alexander Olson, JEFFREY SIEGEL, *University of Toronto*  
4:30
- 71A.6** [Mixing and Dispersion of Aerosols in Multi-Zone Residences.](#) MENGJIA TANG, Daniel Rush, Sangeetha Kumar, Atila Novoselac,  
4:45 *The University of Texas at Austin*
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71D SYMPOSIUM: AEROSOL SCIENCE OF INFECTIOUS DISEASES: WHAT WE HAVE LEARNED AND STILL NEED TO KNOW ABOUT TRANSMISSION, PREVENTION, AND THE ONE HEALTH CONCEPT I: SOURCES AND EMISSION MECHANISMS  
306 A/B/C – Alex Huffman and Maria King, chairs

- 71D.1** [Evolution of SARS-CoV-2 Shedding in Exhaled Breath Aerosols.](#) KRISTEN K. COLEMAN, Jianyu Lai, Sheldon Tai, Jennifer German, Filbert Hong, Barbara J. Albert, Yi Esparza, Aditya Kiran Srikakulapu, Maria Schanz, Isabel Sierra Maldonado, Molly Oertel, Naja Fadul, Louie Gold, Stuart Weston, Kathleen McPhaul, Matthew B. Frieman, Donald K. Milton, *University of Maryland School of Public Health*  
3:30
- 71D.2** [Absolute Respiratory Particle Number and Mass Exhalation Rates and Size Distributions during Breathing and Vocalizing.](#) Justice Archer, Henry Symons, Lauren McCarthy, Joshua Harrison, Christopher Orton, Natalie Watson, William Browne, Ben Moseley, Kier Philip, James Calder, Pallav Shah, Declan Costello, Bryan R. Bzdek, JONATHAN P. REID, *University of Bristol*  
3:45
- 71D.3** [Say It Don't Spray It! Large Droplet Emissions from Speaking, Singing, and Playing Wind Instruments.](#) KY TANNER, Kristen Good, Dan Goble, Nicholas Good, Amy Keisling, Christian L'Orange, Emily Morton, Rebecca Phillips, John Volckens, *Colorado State University*  
4:00
- 71D.4** [Characterizing and Comparing Respiratory Aerosol Emission for Pre-adolescent, Adolescent, and Adults during Sustained Phonation.](#) MAHENDER SINGH RAWAT, Mehtap Agirsoy, Tanvir Ahmed, Byron D. Erath, Goodarz Ahmadi, Dinushani Senarathna, Sumona Mondal, Andrea Ferro, *Clarkson University*  
4:15
- 71D.5** [Estimation of Direct Human Contribution to the Aerobiome Composition of Indoor Environments.](#) AUSTIN MARSHALL, Suresh Dhaniyala, Shantanu Sur, *Clarkson University*  
4:30
- 71D.6** [Viable SARS-CoV-2 Delta Variant Detected in Aerosols in a Residential Setting with a Self-Isolating College Student with COVID-19.](#) WILLIAM VASS, John Lednický, Sripriya Nannu Shankar, Z. Hugh Fan, Arantzazu Eiguren-Fernandez, Chang-Yu Wu, *University of Florida*  
4:45
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71M INSTRUMENTATION AND METHODS III: CONDENSATION AND COUNTING  
302 B/C – Andrea Tiwari and Sripriya Nannu Shankar, chairs

- 71M.1** [A Community Ice Nucleation Cold Stage Instrument for Research and Teaching.](#) MARKUS PETERS, Sunandan Mahant, Shweta Yadav, Tommy Kessler, Eva Kjærsgaard, Mads Jensen, Merete Bilde, *North Carolina State University*  
3:30
- 71M.2** [A New Size-fractionated Liquid Collection of Viable Airborne Particles: The BioCascade Impactor.](#) Stavros Amanatidis, Nathan Kreisberg, ARANTZAZU EIGUREN-FERNANDEZ, *Aerosol Dynamics Inc.*  
3:45
- 71M.3** [A Cost-Effective Tabletop Chamber to Evaluate Cloud Microphysical and Optical Properties.](#) JAKE ZENKER, Christian Pattyn, Lekha Patel, Jeremy Wright, Andres Sanchez, Brian Bentz, Andrew Glen, *Sandia National Laboratories*  
4:00

- 7IM.4** [Practical Characterization of a Novel Moderated Water Condensation Growth Tube Bioaerosol Sampler](#). DOMINICK HESKETT, 4:15 Tim Gordon, Braden Stump, Patricia Keady, *Aerosol Devices Inc.*
- 7IM.5** [Characterization of the MAGIC CPC to Measure Nanometric Carbonaceous Aerosols Sampled from a Sooting Laminar Premixed Flame](#). FARNAZ KHOSRAVI, Arantzazu Eiguren-Fernandez, Gregory S. Lewis, Michel Attoui, Francesco Carbone, *University of Connecticut*
- 7IM.6** [Evaluation of a Condensation Particle Counter Method for Measuring Sulfuric Acid Vapor Concentrations](#). DOMINIC 4:45 CASALNUOVO, Darren Cheng, Coty Jen, *Carnegie Mellon University*

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7PC SYMPOSIUM: AEROSOL PHYSICAL CHEMISTRY AND MICROPHYSICS V  
301 A/B – Chuji Wang and Alexander Prophet, chairs

- 7PC.1** [The Physical and Chemical Nature of Ice Nucleating Macromolecules](#). HINRICH GROTHE, *TU Wien, Institute of Materials Chemistry, Vienna, Austria* 3:30
- 7PC.2** [Influence of Surface Properties on Heterogeneous Ice Nucleation in Synthesized Crystalline, Porous Materials](#). LUCY NANDY, 3:45 Katie Marak, Miriam Freedman, *Pennsylvania State University*
- 7PC.3** [Effect of Acidity and Liquid-Liquid Phase Separation on Heterogeneous Ice Nucleation](#). ZIYING LEI, Sarah Brooks, *Texas A&M University* 4:00
- 7PC.4** [Experimental Verification of Classical Heterogeneous Nucleation Theory with Perfect Wetting, with a Variable Saturation Scanning Condensation Particle Sizer \(VSCPS\)](#). LUIS-JAVIER PEREZ-LORENZO, Michel Attoui, Charles Brock, Juan Fernandez de la Mora, *Yale University* 4:15
- 7PC.5** [Particle Formation via Droplet Drying: Observing Morphological Evolution and Measuring Aerodynamic Diameter](#). DANIEL 4:30 HARDY, Jim Walker, Pascal Lemaitre, Jonathan P. Reid, *University of Bristol*
- 7PC.6** [Experimental Investigations of Equilibrium and Dynamic Picoliter Droplet Surface Tension](#). BRYAN R. BZDEK, Alison Bain, Lara 4:45 Lalemi, *University of Bristol*

Wednesday 5:00 PM - 6:00 PM

Working Group Meetings 2 - Aerosol Physics, Atmospheric Aerosols, Bioaerosols, Control Technology, Indoor Aerosols and Aerosol Exposure

Wednesday 6:00 PM - 7:00 PM

Annual Business Meeting

## Thursday

Thursday 7:00 AM - 8:00 AM

Committee Meetings - Conference, Publications, Representation and Equity Affairs

Thursday 8:00 AM - 9:15 AM

Plenary III: Friedlander Lecture

8:00 **Friedlander Lecture: The Secret Lives of Filters** Jeffrey Siegel, *University of Toronto*

**Moderator** Linsey Marr, *Virginia Tech*

9:00 **Friedlander and Sinclair Awards Presentation** Jacky Rosati, *U.S. Environmental Protection Agency*

Thursday 9:00 AM - 4:00 PM

Exhibits Open

Thursday 9:15 AM - 9:45 AM

Coffee Break

Thursday 9:45 AM - 11:30 AM

Session 8: Platform

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8AC AEROSOL CHEMISTRY VII: GENERAL AEROSOL CHEMISTRY

BALLROOM C – Bryan Bzdek and Jean Rivera-Rios, chairs

- 8AC.1** [Understanding Secondary Organic Aerosol Formation of Isoprene and Nitrate Radical Reactions: Role of Oxidants.](#)  
9:45 TIANCHANG XU, Masayuki Takeuchi, Nga Lee Ng, *Georgia Institute of Technology*
- 8AC.2** [Modeled Impact of Deposition on the Oxidation Pathways of Common Reactive Precursors.](#) GABRIEL ISAACMAN-VANWERTZ,  
10:00 Chenyang Bi, *Virginia Tech*
- 8AC.3** [Tight Coupling of Surface and In-Plant Biochemistry and Convection Governs Key Fine Particulate Components over the Amazon Rainforest.](#) MANISHKUMAR SHRIVASTAVA, Quazi Rasool, Bin Zhao, Mega Octaviani, Rahul Zaveri, Alla Zelenyuk, Brian Gaudet, John Shilling, Johannes Schneider, Christiane Schulz, Ying Liu, Scot T. Martin, Jianhuai Ye, Alex Guenther, Rodrigo Souza, Martin Zoeger, Martin Wendisch, Ulrich Pöschl, *Pacific Northwest National Laboratory*
- 8AC.4** [Insights into the Alkene Triol Conundrum: Characterization and Quantitation of Isoprene-Derived C<sub>5</sub>H<sub>10</sub>O<sub>3</sub> Reactive Uptake Products.](#) MOLLY FRAUENHEIM, Melinda Beaver, John Offenberg, Zhenfa Zhang, Jason Surratt, Avram Gold, *University of North Carolina at Chapel Hill*
- 8AC.5** [Secondary Organic Aerosol Formation from Photooxidation of Acyclic Terpenes in an Oxidation Flow Reactor.](#) SHAN GU,  
10:45 Farzaneh Khalaj, Véronique Perraud, Celia Faiola, *University of California, Irvine*
- 8AC.6** [Cl Oxidation in Chamber and Flow Reactors: SOA Formation, Composition, and Gas Phase Chemistry.](#) NIRVAN  
11:00 BHATTACHARYYA, Pearl Abue, Leif Jahn, Kristi McPherson, Eunha Kang, William Brune, Pawel K. Misztal, Anita Avery, Andrew Lambe, Lea Hildebrandt Ruiz, *University of Texas at Austin*
- 8AC.7** [Atmospheric Nucleation Potential Model for Complex Mixtures.](#) Jack Johnson, Dominic Casalnuovo, Darren Cheng, COTY JEN,  
11:15 *Carnegie Mellon University*
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8CO COMBUSTION I

301 A/B – George Kelesidis and Claire Fortenberry, chairs

- 8CO.1** [Modeling Coagulation, Aggregation and Gelation in High Volume Fraction Aerosols using Langevin Dynamics Simulations.](#)  
9:45 RANGANATHAN GOPALAKRISHNAN, Zhibo Liu, Vikram Suresh, Zachary Perry, *The University of Memphis*. INVITED.
- 8CO.2** [Analysis of Nascent Soot Particles from Acetylene Pyrolysis: A Molecular Modeling Perspective.](#) KHALED MOSHARRAF MUKUT,  
10:15 Anindya Ganguly, Eirini Goudeli, Somesh Roy, *Marquette University*
- 8CO.3** [High-throughput Generation of Aircraft-like Soot.](#) GEORGIOS A. KELESIDIS, Una Trivanovic, Sotiris Pratsinis, *ETH Zurich, Switzerland*
- 8CO.4** [Investigating the Effects of the Air-to-Fuel Ratio and Fuel Type on the Formation of Environmentally Persistent Free Radicals in Combustion Particles.](#) DESIREE SARMIENTO, Brian Majestic, *University of Denver*
- 8CO.5** [Ions Generated from a Premixed Methane-air Flame: Mobility Size Distributions and Charging Characteristics.](#) CHANAKYA  
11:00 BAGYA RAMESH, Yang Wang, *Missouri University of Science and Technology*
- 8CO.6** [Modeling Characterization of Smoke Particle Transport and Fate in Lunar Gravity.](#) CLAIRE FORTENBERRY, David Urban, Gary  
11:15 Ruff, *NASA Glenn Research Center*
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8IA INDOOR AEROSOLS IV: LOW-COST SENSORS AND NOVEL MEASUREMENT TECHNIQUES

305 A/B – Xiaochen Tang and Clara Eichler, chairs

- 8IA.1** [Long-term Indoor-outdoor PM2.5 Measurements at Three California Sites](#). LANCE WALLACE, Wayne Ott, *Stanford University*  
9:45
- 8IA.2** [Cleaning the Indoor Air with Low-Cost DIY Air Cleaners](#). Nirmala Thomas Myers, Taewon Han, Kevin Dillon, GEDIMINAS MAINELIS, *Rutgers, The State University of New Jersey*  
10:00
- 8IA.3** [A Field Study to Characterize Human Emissions in Indoor Air](#). CHETHANI ATHUKORALA, Suresh Dhaniyala, *Clarkson University*  
10:15
- 8IA.4** [Using a Network of Low-Cost Sensors to Characterize Seasonal, Building, and Occupancy Patterns in Indoor Air Quality Across a University Campus](#). SABRINA WESTGATE, Nga Lee Ng, *Georgia Institute of Technology*  
10:30
- 8IA.5** [Using Low-cost Sensors to Assess the Impact of Outdoor Air Pollution on Indoor Air Quality of Buildings with Intake of 100% Ambient Air](#). DANIEL ALVARADO-VELEZ, Sabrina Westgate, Eben Cross, David Hagan, Nga Lee Ng, *Georgia Institute of Technology*  
10:45
- 8IA.6** [Residential Radon Measurements in Puerto Rico](#). LUPITA MONTOYA, Marc Menetrez, Oleg Povetko, Jacky Rosati Rowe, Pedro Tarafa, *US Environmental Protection Agency*  
11:00
- 8IA.7** [Estimating Air Exchange Rate using Concentration Time Series Data based on Unsupervised Learning](#). Bowen Du, JEFFREY SIEGEL, *University of Toronto*  
11:15
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8ID SYMPOSIUM: AEROSOL SCIENCE OF INFECTIOUS DISEASES: WHAT WE HAVE LEARNED AND STILL NEED TO KNOW ABOUT TRANSMISSION, PREVENTION, AND THE ONE HEALTH CONCEPT II: MITIGATION STRATEGIES

306 A/B/C – Joshua Santarpia and Justin Taylor, chairs

- 8ID.1** [Fitted Facemask Containment: Importance for Determining Transmission of Virus-Laden Aerosols](#). WILLIAM BENNETT, Steven Prince, Kirby Zeman, James Samet, *University of North Carolina at Chapel Hill*  
9:45
- 8ID.2** [Filtration Efficiencies of FFP2 and Surgical Masks After Their Regeneration Using Methods Available in Common Households](#). RICARDO TISCHENDORF, Hans-Joachim Schmid, *University of Paderborn, Germany*  
10:00
- 8ID.3** [Survival of Aerosolized SARS-CoV-2 on Masks](#). JIN PAN, Aaron Prussin II, Seth Hawks, Nisha Duggal, Linsey Marr, *Virginia Tech*  
10:15
- 8ID.4** [Ventilation, Air Filtration and Universal Masking to Reduce Exposure to Respiratory Aerosols in a Simulated Classroom](#). WILLIAM LINDSLEY, Raymond Derk, Jayme Coyle, Francoise Blachere, Stephen Martin, Jr., Kenneth R. Mead, Donald Beezhold, John Noti, *National Institute for Occupational Safety and Health*  
10:30
- 8ID.5** [Ventilation and COVID-19 Risk Reduction](#). V. FAYE MCNEILL, Richard Corsi, J. Alex Huffman, Cathleen King, Robert Klein, Michael Lamore, Shelly L. Miller, Nga Lee Ng, Paula Olsiewski, Krystal Godri Pollitt, Rachel Segalman, Alex Sessions, Todd Squires, Sabrina Westgate, *Columbia University*  
10:45
- 8ID.6** [Application of Portable Air Cleaners to Control the Presence of SARS-CoV-2 Aerosols in Homes of COVID-19 Infected Adults](#). GEDIMINAS MAINELIS, Nirmala Thomas Myers, Robert Laumbach, Kathleen Black, Pamela Ohman-Strickland, Shahnaz Alimokhtari-V, Alicia Legard, Adriana De Resende, Leonardo Calderón, Frederic T. Lu, Howard Kippen, *Rutgers, The State University of New Jersey*  
11:00
- 8ID.7** [Evaluation of Secondary Chemistry due to Disinfection of Indoor Air with Germicidal Ultraviolet Lamps](#). ZHE PENG, Shelly L. Miller, Jose-Luis Jimenez, *University of Colorado Boulder*  
11:15
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8IM INSTRUMENTATION AND METHODS IV: PARTICLE COMPOSITION I

302 B/C – Anita Avery and Gunnar Brown, chairs

- 8IM.1** [Development of a DART-HRMS Method to Characterize Chemical Composition of Microplastic Particles](#). EMILY HALPERN, 9:45 Christopher P. West, Alexander Laskin, *Purdue University*
- 8IM.2** [Calibration of the Aerodyne Aerosol Mass Spectrometer with Total Particulate Nitrogen and Carbon Measurements](#). ANN M. MIDDLEBROOK, 10:00 Derek J. Price, Allison Piasecki, Rishabh U. Shah, Katherine L. Hayden, James B. Burkholder, James M. Roberts, *NOAA ESRL CSL*
- 8IM.3** [Activation of Single Aerosol Particles into Droplets with Immediate Capture into an Open Channel Microfluidic Device](#). WENDY 10:15 FLORES-BRITO, Thomas Brubaker, Shelley Anna, Ryan Sullivan, *Carnegie Mellon University*
- 8IM.4** [Novel Laser Ionization Techniques for Single-particle Mass Spectrometry Reveal the Distribution of Key Compounds for Health Effects on Individual Particles](#). Johannes Passig, Julian Schade, Robert Irsig, Thomas Kröger-Badge, Sven Ehlert, Andreas Walte, RALF ZIMMERMANN, *Rostock University and Photonion GmbH*
- 8IM.5** [Chemical Characterization of Gas-phase and Condensed Organics on a Molecular Composition Level by a Next Generation PTR-MS Instrument](#). MARKUS MUELLER, Tobias Reinecke, Zsolt Dányi, Markus Leiminger, Klaus Winkler, Todd Rogers, Alfons Jordan, *IONICON Analytik GmbH, Innsbruck, Austria*
- 8IM.6** [Evaluating Quantification Capabilities of a New Higher-Resolution Aerosol Chemical Speciation Monitor for Long-Term Measurements of Non-Refractory Aerosol](#). BENJAMIN A. NAULT, Manjula Canagaratna, Philip Croteau, Edward Fortner, Andrew Lambe, Harald Stark, Donna Sueper, Leah Williams, Douglas Worsnop, John Jayne, *Aerodyne Research, Inc.*
- 8IM.7** [High Chemical Resolution Analysis of Atmospheric Organic Aerosol Using a Novel Thermal Desorption Gas Chromatograph infiTof Mass Spectrometer \(TD-GC-infTof\)](#). MICHAEL WALKER, Siqin He, Minoru Kano, Brent Williams, *Washington University in St. Louis*
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#### 8RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS I

302 A – Cassandra Gaston and Ningjin Xu, chairs

- 8RA.1** [Small Particle Growth Observations at the U.S. DOE Southern Great Plains Field Site using Ambient Air Captive Aerosol Chambers](#). ZIHAN ZHU, Xuanlin Du, Don Collins, *University of California, Riverside* 9:45
- 8RA.2** [Marine Submicron Aerosols from the Gulf of Mexico: Polluted and Acidic with Rapid Production of Sulfate and Organosulfates](#). 10:00 SHAN ZHOU, Fangzhou Guo, Subin Yoon, Sergio Alvarez, Sujan Shrestha, James Flynn, Sascha Usenko, Rebecca J. Sheesley, Robert Griffin, *Rice University*
- 8RA.3** [Mass Spectral Characterization of Size Resolved Atmospheric Aerosol Particles Collected from Skidaway Island, GA](#). TRET 10:15 BURDETTE, Rachel Bramblett, Kathryn Zimmermann, Amanda Frossard, *University of Georgia*
- 8RA.4** [Chemical Characterization of Individual Sea Spray Aerosol Particles from the Arctic and North Atlantic Regions](#). JESSICA 10:30 MIRRIELEES, Rachel Kirpes, Amanda Grannas, Vanessa Boschi, Nurun Nahar Lata, Swarup China, Patricia Matrai, Andrew Ault, Kerri Pratt, *University of Michigan*
- 8RA.5** [Multi-year Gas and Particle Sensor Observations in Rural and Urban Malawi](#). ASHLEY BITTNER, Eben Cross, David Hagan, Jared 10:45 Bowden, Jason West, Tim Glotfelty, Andrew Grieshop, *North Carolina State University*
- 8RA.6** [Aerosol Properties and Processes in the Eastern North Atlantic](#). JIAN WANG, Guangjie Zheng, Yang Wang, Meinrat O. Andreae, 11:00 Michael Jensen, Daniel Knopf, Chongai Kuang, Alexander Laskin, Alyssa Matthews, Fan Mei, Ryan Moffet, Arthur J. Sedlacek, John Shilling, Amy P. Sullivan, Jason Tomlinson, Janek Uin, Daniel Veghte, Rodney J. Weber, Rob Wood, Maria Zawadowicz, *Washington University in St. Louis*
- 8RA.7** [Evaluation of High-resolution GEOS-Chem Nested Grid Simulations over Africa Using a Novel Surface PM2.5 Dataset](#). DANIEL 11:15 WESTERVELT, Garima Raheja, Kokou Sabi, Emmanuel Appoh, Allison Felix Hughes, Benjamin Yang, Paulson Kasereka, *Columbia University*

Thursday 11:30 AM - 1:00 PM  
AS&T Editorial Advisory Board Lunch

Thursday 11:30 AM - 12:00 PM  
Box Lunch

Thursday 12:00 PM - 1:00 PM  
Committee Meetings - Bylaws, Early Career, Long-Range Planning

Thursday 12:00 PM - 5:00 PM  
EPA Tours

Thursday 12:00 PM - 1:00 PM  
Representation and Equity Affairs Program

Thursday 12:00 PM - 1:00 PM  
ASCENT Meeting and Discussion

Thursday 1:00 PM - 3:00 PM  
Session 9: Poster

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9AC AEROSOL CHEMISTRY VIII: POSTERS

BALLROOM A/B

- 9AC.1** [The Hygroscopicity of Functionalized Insoluble Aerosol Surfaces.](#) CHUN-NING MAO, Kanishk Gohil, Akua Asa-Awuku, 1:00 *University of Maryland*
- 9AC.2** [Effects of NO<sub>x</sub> on the Formation of Reactive Oxygen Species and Environmentally Persistent Free Radicals from Biogenic and Anthropogenic Secondary Organic Aerosols.](#) KASEY EDWARDS, Alexandra Klodt, Tommaso Galeazzo, Meredith Schervish, Jinlai Wei, Ting Fang, Bernard Aumont, Sergey Nizkorodov, Manabu Shiraiwa, *University of California, Irvine*
- 9AC.3** [The Chemical Fate of Sulfur in Thiophene against Nitrate Radical Oxidation.](#) MICHAEL LUM, Kunpeng Chen, Alexander B. MacDonald, Nilofar Raeofy, Raphael Mayorga, Haofei Zhang, Roya Bahreini, Ying-Hsuan Lin, *University of California, Riverside*
- 9AC.4** [Unexpected Reduction of Phenolic SOA Formation in the Presence of Electrolytic Inorganic Seed.](#) JIWON CHOI, Myoseon Jang, *University of Florida*
- 9AC.5** [Acid-Base Interaction of Nicotine With Benzoic Acid in Vaping Aerosols, Studied with X-Ray Spectroscopy.](#) HASHINI WEERARATNA, Xiaochen Tang, Oleg Kostko, Vi Rapp, Lara Gundel, Hugo Destailats, Musahid Ahmed, *Lawrence Berkeley National Laboratory*
- 9AC.6** [Laboratory Investigation of ClNO<sub>2</sub> Production from Environmental Samples Collected Near the Great Salt Lake.](#) JAMES CHRISTIE, Sean O'Connell-Lopez, Kevin Perry, Kerri Pratt, Cassandra Gaston, *University of Miami*
- 9AC.7** [Simultaneously Characterizing the Volatility Distribution and Phase State of Laboratory-Generated and Ambient Aerosol Particles with a Vocus Chemical Ionization Mass Spectrometer.](#) SINING NIU, Jordan Krechmer, Harald Stark, Yue Zhang, *Texas A&M University*
- 9AC.8** [The Relationship of Air Pollution Sources and the Oxidative Potential of Particulate Matter \(PM\) in Different Cities Around the World.](#) VAHID JALALI FARAHANI, Constantinos Sioutas, Ramin Tohidi, Abdulmalik Altuwayjiri, *University of Southern California*
- 9AC.9** [Roles of Sulfuric Acid, Ammonia, and Amines on New Particle Formation in Kent, Ohio.](#) Buddhi Pushpawela, SHANHU LEE, Lee Tiszenkel, *The University of Alabama in Huntsville*
- 9AC.10** [Molecular Chemical Speciation of HOMs in Urban Aerosols with FIGAERO CI-API-TOF and LC-ESI-Orbitrap High-Resolution Mass Spectrometers.](#) LEE TISZENKEL, Asadullah Shoaib, Sameera White, Rachel Hurley, Yue Zhang, Shanhu Lee, *University of Alabama Huntsville*

- 9AC.11** [Synthesis of Oxidation Products from Biogenic Volatile Organic Compounds in the Atmosphere: A Review](#). SAHIR GAGAN, 1:00 Kumar Sarang, Ruizhe Liu, Yue Zhang, *Texas A&M University*
- 9AC.12** [Understanding the Atmospheric Chemistry and Physicochemical Properties of Secondary Aerosol Formation from Gas- and Aqueous-phase Oxidation of Methylated Selenium Species](#). NINGJIN XU, Yumeng Cui, Michael Lum, Ying Zhou, Roya Bahreini, Ying-Hsuan Lin, Don Collins, *University of California, Riverside*
- 9AC.13** [Multi-Phase Product Distribution of Cl-Initiated VOC Oxidation](#). HANNAH KENAGY, Lesly Franco Deloya, Jesse Kroll, 1:00 *Massachusetts Institute of Technology*
- 9AC.14** [Biofuel-Specific Molecular Composition of Organic Aerosol in Biomass Burning Smoke](#). KYLA SIEMENS, Theo Paik, August Li, 1:00 Felipe Rivera-Adorno, Jay Tomlin, Rajan K. Chakrabarty, Alexander Laskin, *Purdue University*
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#### 9AP AEROSOL PHYSICS I: POSTERS

##### BALLROOM A/B

- 9AP.1** [Improved Discrete Random Walk Model for Turbulent Tracking of Particle Transport](#). SREEKESH KOOKKAL, Suresh Dhaniyala, 1:00 *Clarkson University*
- 9AP.2** [An Exploration of the Effects of Rayleigh-Benard Turbulence on the Dry Deposition of Aerosols in the Pi Chamber](#). JACOB KUNTZLEMAN, Abu Sayeed Md Shawon, Ian Helman, Prasanth Prabhakaran, Raymond Shaw, Will Cantrell, *Michigan Technological University*
- 9AP.3** [Observation of Atmospheric Particle Electrostatic Charging States in Urban and Rural Regions](#). YUTO ISHII, Tatsuhiro Mori, 1:00 Ayumi Iwata, Atsushi Matsuki, Tomoaki Okuda, *Keio University*
- 9AP.4** [Constraining the Particle-Scale Diversity of Black Carbon Light Absorption using a Unified Framework](#). PAYTON BEELER, Rajan 1:00 K. Chakrabarty, *Washington University in St. Louis*
- 9AP.5** [Cost-Effective Real-Time Sensing of Speciated Fine Particulate Matter Air Pollution Using Advanced Machine Learning Techniques](#). SINA HASHEMINASSAB, David Diner, Richard Flagan, Meredith Franklin, Michael Garay, Hyung Joo Lee, *Jet Propulsion Laboratory*
- 9AP.6** [Characterization of the New UCR Fixed-volume Chamber](#). QI LI, Thomas Eckel, Chen Le, Huawei Li, Sahar Ghadimi, Ryan W. 1:00 Drover, Daniel Gonzalez, David R. Cocker III, *University of California, Riverside*
- 9AP.7** [Influence of Biomass Burning Events on Aerosol Optical Depth in Sao Paulo, Brazil](#). MARIA OLIVEIRA, Regina Maura Miranda, 1:00 *University of São Paulo*
- 9AP.8** [Investigation of the Charging State of Radioactive Cs Particles Using Kelvin Probe Force Microscopy](#). YUKIMI SHINKE, Ayumi 1:00 Iwata, Keiichi Kurosawa, Makoto Inagaki, Shun Sekimoto, Koichi Takamiya, Yuichi Oki, Tsutomu Ohtsuki, Yasuhito Igarashi, Tomoaki Okuda, *Keio University*
- 9AP.9** [Simulation of Air Flow in a Nose-Only Inhalation Exposure System Using Ansys CFD](#). SEONGGI MIN, Dong-Jin Yang, Jae-Hyun 1:00 Kim, Susan Chemerynski, Steven Yee, *CTP/FDA*
- 9AP.10** [Simulating Combined Translation and Rotation of Arbitrary Shaped Aerosol Particles using Hamilton's Quaternions](#). MRITTIKA 1:00 ROY, Zhibo Liu, Ranganathan Gopalakrishnan, *University of Memphis*
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#### 9CA CARBONACEOUS AEROSOLS I: POSTERS

##### BALLROOM A/B

- 9CA.1** [Impacts of the COVID-19 Pandemic on Ambient Concentrations and Sources of Black Carbon in the United States](#). Marco 1:00 Eugene, SANCHITA PAUL, Md. Aynul Bari, *University at Albany, SUNY*

- 9CA.2** [Spatiotemporal Analysis of Black Carbon Sources: Case of Santiago, Chile](#). Jessika Rodriguez, HECTOR JORQUERA, *Pontificia Universidad Catolica de Chile*  
1:00
- 9CA.3** [PM2.5 Brown Carbon in Water and Methanol Extracts: Measurement and Estimation of Contributions to Fine Particle Light Absorption over Bhopal, Central India](#). ANKUR BHARDWAJ, Ramya Sunder Raman, Manju Galodiya, *Indian Institute of Science Education and Research Bhopal*  
1:00
- 9CA.4** [Alternative Approach for the in-situ Measurement of Absorption Enhancement of Atmospheric Black Carbon Due to Atmospheric Mixing](#). ASHISH SONI, Tarun Gupta, *Indian Institute of Technology Kanpur*  
1:00
- 9CA.5** [Carbonaceous Aerosol Analysis Tool CAAT Software Package For Data Analysis](#). KLEMEN KUNSTELJ, Matej Zemljak, Matic Ivančič, Asta Gregorič, Martin Rigler, *Aerosol d.o.o.*  
1:00
- 9CA.6** [Implementation of the Reactive Organic Carbon Framework for U.S. Mobile Source Emissions](#). BENJAMIN MURPHY, Darrell Sonntag, Karl Seltzer, Havala Pye, Claudia Toro, Evan Murray, *U.S. EPA*  
1:00
- 9CA.7** [Application of the Community Regional Atmospheric Chemistry Multiphase Mechanism \(CRACMM\) to Simulation of Air Quality in the Northeast USA](#). BRYAN PLACE, Karl Seltzer, Chris Allen, Benjamin Murphy, K. Wyatt Appel, Ivan Piletic, Emma D'Ambro, Rebecca Schwantes, Matthew Coggon, Sara Farrell, Emily Saunders, Lu Xu, Golam Sarwar, William Hutzell, William R. Stockwell, Ana Torres-Vasquez, Jonathan Pleim, Havala Pye, *United States Environmental Protection Agency*  
1:00
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9CM CONTROL AND MITIGATION TECHNOLOGY I: POSTERS

BALLROOM A/B

- 9CM.1** [Effect of Flow Oscillation on the Loading Performance of Respirator Filter Media](#). PENG WANG, Da-Ren Chen, *Virginia Commonwealth University*  
1:00
- 9CM.3** [On the Impact of COVID-19 Pandemic Lockdowns on Atmospheric Particulate Matter in the United States](#). DEVONNE FRIDAY, *Embry-Riddle Aeronautical University*  
1:00
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9CO COMBUSTION II: POSTERS

BALLROOM A/B

- 9CO.2** [The Effect of Blending with Octane Boosters on Aerosol Formation in Low-Temperature Combustion of n-Heptane](#). OMAR EL HAJJ, Brandon Rotavera, Rawad Saleh, *University of Georgia*  
1:00
- 9CO.3** [Mechanisms of Soot Aggregate Restructuring and Compaction](#). JOEL CORBIN, Robin Modini, Martin Gysel, Timothy Sipkens, *Paul Scherrer Institute*  
1:00
- 9CO.4** [Determination of Potential Genotoxicity Effect in Male Wistar Rats Exposed to Gasoline Generator Emissions](#). GODSON ANA, Oluwayemisi Adeegbe, Solomon Owumi, *University of Ibadan*  
1:00
- 9CO.5** [Effect of Maturity on the Measurements of Soot Volume Fraction by the Auto-compensating Laser-induced Incandescence Technique](#). FENGSHAN LIU, Jerome Yon, Felipe Escudero, Andrés Fuentes, Timothy Sipkens, Joel Corbin, Gregory Smallwood, *National Research Council Canada*  
1:00
- 9CO.6** [Climate and Health Implications of Adopting Modern Household Cooking Fuels on a Global Scale](#). EMILY FLOESS, Katherine Landesman, Annelise Gill-Wiehl, Rob Bailis, Elisa Puzzolo, Dan Pope, Andrew Grieshop, *North Carolina State University*  
1:00
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9EI SYMPOSIUM: AEROSOL SOURCES AND CONSTITUENTS OF EMERGING IMPORTANCE AND THEIR IMPACTS ACROSS SPATIAL SCALES I: POSTERS

BALLROOM A/B

- 9EI.1** [Understanding the Biology of the Air: The NSF Biology Integration Institute, Regional OneHealth Aerobiome Discovery Network \(BROADN\)](#). Susan VandeWoude, Sonia Kreidenweis, Kenneth F. Reardon, Angela Bosco-Lauth, Eugene F. Kelly, Tami Bond, Brad Borlee, Amy Charkowski, PAUL DEMOTT, Noah Fierer, Jan Leach, Sheryl Magzamen, Jessica Metcalf, Stephen Reynolds, Joshua Schaeffer, Jane Stewart, Pankaj Trivedi, Diana Wall, Stephen Archer, Susannah Tringe, Jeni Cross, Erin Doyle, Amaya GarciaCostas, Franziska Sandmeier, Shirley Vincent, *Colorado State University*  
1:00
- 9EI.2** [Organic Composition of Aerosol Particles Generated from the Wear of Automotive Brake Pads](#). ADAM THOMAS, Maxwell Lee, Véronique Perraud, Lisa Wingen, Paulus Bauer, Michelia Dam, Barbara Finlayson-Pitts, James Smith, *University of California, Irvine*  
1:00
- 9EI.3** [Chemical Composition of Secondary Organic Aerosol Produced from the Oxidation of Representative Volatile Chemical Products](#). LU XU, Matthew Coggon, Chelsea Stockwell, Carsten Warneke, Allison Piasecki, Ann M. Middlebrook, Abraham Dearden, Shantanu Jathar, Cort Zang, Tucker Melles, Megan Willis, Katelyn Rediger, Delphine K. Farmer, *CU CIRES - NOAA ESRL*  
1:00
- 9EI.4** [Production of SOA from Hydroxyl Radical Oxidation of Two Cyanobacterial-derived BVOCs, Geosmin and 2-Methylisoborneol](#). HALEY E. PLAAS, Jin Yan, N. Cazimir Armstrong, Hans W. Paerl, Jason Surratt, *UNC Chapel Hill*  
1:00
- 9EI.5** [The Role of Phase-state for Deposition of Per- and Polyfluoroalkyl Substances \(PFAS\)](#). EMMA D'AMBRO, Benjamin Murphy, Jesse Bash, Havala Pye, *U.S. Environmental Protection Agency*  
1:00
- 9EI.6** [Machine Learning-Enhanced Chemical Characterization of Organic Emissions from the Coastal Ocean](#). EMILY FRANKLIN, Sarah Amiri, Daniel Crocker, Clare Morris, Kathryn Mayer, Jon Sauer, Robert Weber, Christopher Lee, Francesca Malfatti, Christopher Cappa, Timothy Bertram, Kimberly Prather, Allen Goldstein, *University of California, Berkeley*  
1:00
- 9EI.7** [Morphology and Hygroscopicity of Nanoplastics in Sea Spray Determined by Humidified Tandem Differential Mobility Analysis Coupled to High-Resolution Time-of-Flight Aerosol Mass Spectrometry](#). SARAH PETERS, Eva Kjærgaard, Freja Hasager, Andreas Massling, Marianne Glasius, Merete Bilde, *Aarhus University*  
1:00

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9ID SYMPOSIUM: AEROSOL SCIENCE OF INFECTIOUS DISEASES: WHAT WE HAVE LEARNED AND STILL NEED TO KNOW ABOUT TRANSMISSION, PREVENTION, AND THE ONE HEALTH CONCEPT III: POSTERS  
BALLROOM A/B

- 9ID.1** [Face Mask Fit Modifications to Reduce the Expulsion of Respiratory Aerosols](#). FRANCOISE BLACHERE, William Lindsley, Raymond Derk, Jayme Coyle, Angela Lemons, Matthew Duling, Brenda Boutin, Theresa Boots, James Harris, Donald Beezhold, John Noti, *National Institute for Occupational Safety and Health*  
1:00
- 9ID.3** [Potential Long Term Exposure to Indoor Volatile Organic Compounds from Disinfecting Wipes](#). HAN N. HUYNH, Runzeng Liu, Qifan Liu, Jonathan Abbatt, *University of Toronto, Canada*  
1:00
- 9ID.4** [Evaluation of PM<sub>2.5</sub> in Indoor and Outdoor Orchestra Setting Using Low-Cost PM Sensor Network during Live Orchestra Performance](#). SHRUTI CHOUDHARY, Stephen Liang, Pratim Biswas, *University of Miami*  
1:00
- 9ID.5** [The Filtration Efficiency of Surgical Masks for Expiratory Aerosol and Droplets Generated by Vocal Exercises](#). Alicja Szczepanska, Joshua Harrison, Justice Archer, LAUREN MCCARTHY, Brian Saccente-Kennedy, Ruth Epstein, James Calder, Jonathan P. Reid, Bryan R. Bzdek, *University of Bristol*  
1:00
- 9ID.6** [Influence of Human Activities and Occupancy on Emissions of Indoor Particles and Their Potential Contribution to Fomites](#). P. S. GANESH SUBRAMANIAN, Joseph V. Puthussery, Yuqing Mao, Thanh H. Nguyen, Ty Newell, Vishal Verma, *University of Illinois Urbana-Champaign*  
1:00
- 9ID.7** [Development of an Environmental Monitor for Real-Time SARS-CoV-2 Detection](#). JOSEPH V. PUTHUSSERY, Nishit Shetty, Benjamin Sumlin, Dishit Ghumra, Carla M. Yuede, John Cirrito, Rajan K. Chakrabarty, *Washington University in St. Louis*  
1:00
- 9ID.8** [Detection of SARS-CoV-2 Aerosols in Testing Clinics](#). SARAH J. STEIN, Ashley R. Ravnholdt, Vicki Herrera, Danielle Rivera, Paul Williams, Joshua Santarpi, *University of Nebraska Medical Center*  
1:00

- 9ID.9** [Robust Measurement of Particle Filtration Efficiencies: Evaluated Quantities and Experimental Sensitivities](#). TIMOTHY SIPKENS, 1:00 Joel Corbin, Gregory Smallwood, Andrew Oldershaw, Ian Leroux, Jalal Norooz Oliiae, Fengshan Liu, Thierry Lavoie, Triantafillos Koukoulas, Richard Green, Prem Lobo, *National Research Council Canada*
- 9ID.10** [Binding Behavior of Spike Protein and Receptor Binding Domain of the SARS-CoV-2 Virus at Different Environmental Conditions](#). MEIYI ZHANG, Haoqi Wang, Emma Foster, Zivko Nikolov, Sandun Fernando, Maria King, *Texas A&M University* 1:00
- 9ID.11** [Mucin Transiently Mitigates the Loss of Coronavirus Infectivity in Artificial Saliva](#). ROBERT ALEXANDER, Jianghan Tian, Allen E. Haddrell, Henry Oswin, Daniel Hardy, Edward Neal, Mara Otero-Fernandez, Jamie Mann, Tristan Cogan, Adam Finn, Andrew Davidson, Darryl Hill, Jonathan P. Reid, *University of Bristol* 1:00
- 9ID.12** [Detection of Pathogen Sequences in Bioaerosols of Wastewater](#). DAVID ALBURY, Namrita Dhillon, James Brayer, Hugh Olsen, Miten Jain, Norman Kado, *InnovaPrep LLC* 1:00
- 9ID.13** [Assessing Indoor Air Quality in Educational Buildings Using a Low-Cost Sensor Network](#). JIANING BAO, Nigel Kaye, Ehsan Mousavi, Christopher Post, Vincent Blouin, Andrew Metcalf, *Clemson University* 1:00
- 9ID.14** [Latitude and Weather Influence Incidence of Legionnaires' in the US](#). REESE BARRETT, Dewansh Rastogi, Akua Asa-Awuku, *University of Maryland, College Park* 1:00
- 9ID.15** [Assessment of Best-Selling Respirators and Masks: Do We Have Acceptable Respiratory Protection for the Next Pandemic?](#) Omar Chaaban, Jo Anne Balanay, SINAN SOUSAN, *Department of Public Health, East Carolina University* 1:00
- 9ID.16** [Simulation of Exhaled Droplets and Their Evolution in Common Indoor Environments](#). SANIKA NISHANDAR, Yucheng He, Marko Princevac, Rufus Edwards, *University of California, Riverside* 1:00
- 9ID.17** [Sampling and Detection of Sars-Cov-2 Aerosol in Well and Poorly Ventilated Places and Its Exposure Risks: A Review of Field Sampling Studies](#). YUETONG ZHANG, Sripriya Nannu Shankar, William Vass, John Lednicki, Z. Hugh Fan, Duzgun Agdas, Chang-Yu Wu, *University of Florida* 1:00
- 9ID.18** [Size-Fractionated Bioaerosol Collection in Liquid Medium with a Novel BioCascade Impactor](#). YUQIAO CHEN, Jiayi Chen, Sripriya Nannu Shankar, Stavros Amanatidis, Arantzazu Eiguren-Fernandez, John Lednicki, Chang-Yu Wu, *University of Florida* 1:00
- 9ID.19** [Measurement of Airborne Virus \(Influenza A\) Concentration before and after Resuspension Activity](#). MAHENDER SINGH RAWAT, Andrea Ferro, *Clarkson University* 1:00

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#### 9IM INSTRUMENTATION AND METHODS V: POSTERS

##### BALLROOM A/B

- 9IM.1** [Assessing Air-Quality of Delaware by Integarting Satellite Observations with Field Measurements](#). AI Alexis, Yue An, Zayna Juracka, Zakaria Juracka, Ryan Bischof, MOHAMMAD KHAN, *Delaware State University* 1:00
- 9IM.2** [A Multi-angle Optical Particle Sizer to Improve In Situ PM2.5 Characterisation](#). SETH ARTHUR-HASTIE, Katherine Manfred, *The University of York* 1:00
- 9IM.3** [Response of Two Total Carbon Analyzers to Various Aerosols](#). JOEL CORBIN, Daniel Clavel, Timothy Sipkens, Gregory Smallwood, *National Research Council Canada* 1:00
- 9IM.4** [A Continuous Flow Microfluidic Based Instrument for Measuring Ice Nucleating Particles](#). ETHAN EMERSON, Kate Patterson, Matt Freer, Ben Swanson, Andrew Metcalf, Russell Perkins, Jessie Creamean, Paul DeMott, Gavin McMeeking, *Handix Scientific* 1:00
- 9IM.5** [A Low-Cost Particle Sensor Grid for Aerosol Wind Tunnel Studies](#). BOBBY GUILFOIL, Suresh Dhaniyala, *Clarkson University* 1:00

- 9IM.6** [Performance Evaluation of an Aerosol Collection Device for Bioaerosol Characterization](#). HUNTER HARDY, Kavindra Kumaragama, Suresh Dhaniyala, *Clarkson University*  
1:00
- 9IM.7** [New Insights into the Composition of Organics in the Atmosphere Enabled by Advanced Processing Techniques for Existing Chromatographic Datasets](#). SUNGWOO KIM, Lindsay Yee, Allen Goldstein, Nathan Kreisberg, Susanne Hering, Gabriel Isaacman-VanWertz, *Virginia Tech*  
1:00
- 9IM.8** [A Bipolar Chemical Ionization Mass Spectrometer for the Detection of Aerosol Precursors](#). Markus Leiminger, Tobias Reinecke, MARKUS MUELLER, Tobias Fügenschuh, Zsolt Dányi, Alfons Jordan, *Ionicon Analytik GmbH, Austria*  
1:00
- 9IM.9** [Advancements to the Handix Scientific Continuous Flow Diffusion Chamber](#). EZRA LEVIN, Gavin McMeeking, Russell Perkins, Matt Freer, Anna Hodshire, Anna Gannet Hallar, Tom Ramin, *Handix Scientific*  
1:00
- 9IM.10** [An Intercomparison of Instruments Measuring Carbonaceous Aerosol Light Absorption](#). AUGUST LI, Rajan K. Chakrabarty, *Washington University in St. Louis*  
1:00
- 9IM.11** [Light Obscuration to Monitor Aerosol Delivery from Dry Powder Inhalers](#). SARA MALONEY, Lynn Davis, Anthony Hickey, *RTI International*  
1:00
- 9IM.12** [Development of a Machine-Learning Model for Prediction of the Aerosol Scattering Ångström Exponent \(S<sub>ÅE</sub>\) from Purple Air Sensor Data](#). ZACHARY MCQUEEN, Ryan Poland, Geoffrey Smith, *University of Georgia*  
1:00
- 9IM.14** [Quantitative Chemical Assay of Nanogram-Level PM Using Aerosol Mass Spectrometry Coupled with an Isotopically Labeled Internal Standard: Application to Samples Collected from Uncrewed Aerial Systems](#). CHRISTOPHER NIEDEK, Fan Mei, Maria Zawadowicz, Zihua Zhu, Beat Schmid, Qi Zhang, *University of California, Davis*  
1:00
- 9IM.15** [Towards Minimizing Turbulence in Aircraft Inlets](#). NAGARAJAN RADHAKRISHNAN, Suresh Dhaniyala, *Clarkson university*  
1:00
- 9IM.16** [A Flexible Tool for Retrieving and Working with PurpleAir Sensor Data](#). GEOFFREY SMITH, *University of Georgia*  
1:00
- 9IM.17** [Leveraging Machine Vision in a Liquid Level Controller for Long-Term Aerosol Capture with a Water Condensation Growth Tube Sampler](#). BRADEN STUMP, Panupoan Xiong, Dominick Heskett, Greg Brandes, Patricia Keady, Arantzazu Eiguren-Fernandez, Nathan Kreisberg, *Aerosol Devices Inc.*  
1:00
- 9IM.18** [Laboratory Determination of Gravimetric Correction Factors for Real-time Area Measurements of Electronic Cigarette Aerosols](#). SINAN SOUSAN, Jack Pender, Dillon Streuber, Meaghan Haley, Will Shingleton, Eric Soule, *East Carolina University*  
1:00
- 9IM.19** [An Inter-laboratory and Inter-instrumental Comparison of Elemental Loadings on PM<sub>2.5</sub> Samples from the Chemical Speciation Network \(CSN\)](#). COLLEEN MARCIEL ROSALES, Frank Weber, Tracy Dombek, Nicholas Spada, Nicole Hyslop, *University of California, Davis*  
1:00
- 9IM.20** [An Approach for Characterizing the Transmission Efficiency of Charged Aerosols through Static Dissipative Tubes Subject to Favorable and Adverse Axial Electric Fields](#). FARNAZ KHOSRAVI, Francesco Carbone, *University of Connecticut*  
1:00
- 9IM.21** [Scattering Channel Truncation in CAPS PM<sub>ss</sub>a Monitor](#). Brian Heffernan, Stephen Jones, Fred Bacon, Andrew Freedman, TIMOTHY ONASCH, *Aerodyne Research, Inc.*  
1:00
- 9IM.22** [A Solution to New Mobility Particle Sizing Instrumentation and CCN Measurement using Scanning Mobility CCN Analysis \(SMCA\)](#). Kanishk Gohil, Nahin Ferdousi, AKUA ASA-AWUKU, *University of Maryland, College Park*  
1:00
- 9IM.23** [A New Oxidation Flow Reactor for Secondary Aerosol Formation Studies](#). MARKUS NIKKA, Esa Luntta, Oskari Vainio, Erkki Lamminen, Anssi Arffman, *Dekati Ltd.*  
1:00

- 9IM.25** [Improving Single-Particle Chemical Composition Analysis through Homogenization of an Excimer Ablation Laser Beam.](#)  
1:00 WENDY FLORES-BRITO, Coty Jen, Ryan Sullivan, *Carnegie Mellon University*
- 9IM.27** [Coupling of a Thermal-optical Carbon Analyser \(TOCA\) to High Resolution EI/PI Mass Spectrometry: Unravelling the Molecular Organic Signature and Oxidation State of Aerosol Samples.](#) RALF ZIMMERMANN, Hendryk Czech, Kevin Schnepel, Marco Schmidt, Patrick Martens, Thorsten Streibel, Judith Chow, John Watson, Andreas Walte, Sven Ehlert, *Helmholtz Zentrum München and University of Rostock*
- 9IM.28** [Dependence of Pulse Height Distribution on Particle Size, Composition, and Concentration for 1-7 nm Particles.](#) DARREN CHENG, Chongai Kuang, Coty Jen, *Carnegie Mellon University*
- 9IM.29** [Low-Cost Black Carbon Detection from Beta Attenuation Monitors Using Image Reflectance Based Method.](#) ABHISHEK ANAND, Albert Presto, Suryaprakash Kompalli, Eniola Ajiboye, *Carnegie Mellon University*
- 9IM.30** [A Novel Approach to Calibrate a Photoacoustic Absorption Spectrometer using Monodispersed Gold Nanoshell.](#) YINGJIE SHEN, Shane Murphy, Matthew Burkhart, Gavin McMeeking, Bryan Rainwater, *University of Wyoming*
- 9IM.31** [First Results from the Groundbased Fog and Aerosol Spectrometer.](#) DARREL BAUMGARDNER, Dagen Hughes, Paul Zieger, Mike Carrabus, Almuth Neuberger, *Droplet Measurement Technologies*
- 9IM.32** [Real-Time Non-invasive Measurements of Aerosol Flow in the Laboratory.](#) JULIE PONGETTI, Nick Collings, Jonathan Symonds, Chris Nickolaus, *Cambustion Ltd*
- 9IM.33** [Using the Aerodynamic Aerosol Classifier \(AAC\) as a Low-Pass Separator.](#) JULIE PONGETTI, Chris Nickolaus, Jonathan Symonds, *Cambustion Ltd*
- 9IM.34** [Surface Enhanced Optical- and Atomic Force Microscope- Photothermal Infrared and Raman Microspectroscopy Enables Observation of Individual Ultrafine Aerosol Particles.](#) YAO XIAO, Ziyang Lei, Andrew Ault, *University of Michigan*
- 9IM.35** [The Effect of Filter Storage Techniques on Thermal and Optical Degradation of Combustion Aerosol Samples.](#) CHASE GLENN, Omar El Hajj, Kruthika Kumar, Rawad Saleh, *University of Georgia*
- 9IM.36** [Comparison of Aerosol Loss Effects in a Continuous-Flow Atmospheric Chamber Under Different Operational Configurations.](#) 1:00 KATHERINE PIERRE-LOUIS, Erin O'Leary, Bruno Loyola San Martin, Joseph Woo, *Lafayette College*
- 9IM.37** [Calibration of a Single-Particle Soot Photometer with Different Soot Surrogates.](#) JAMES HENRY, Dongli Wang, Andrew Metcalf, *Clemson University*
- 9IM.38** [Aerosol Raman Spectrometer for Near Real-time Measurement of Aerosols with High Specificity in Workplace Atmospheres.](#) 1:00 Surendra Devarakonda, Orthodoxia Zervaki, PRAMOD KULKARNI, *Centers for Disease Control and Prevention, NIOSH*
- 9IM.39** [Determining Glass Transition Temperatures of Individual Isoprene-Derived Secondary Organic Aerosol Particles.](#) KATHERINE KOLOZSVARI, Yao Xiao, Alison Fankhauser, Jin Yan, Madeline Cooke, Cara Waters, Rebecca Parham, N. Cazimir Armstrong, Zhenfa Zhang, Avram Gold, Jason Surratt, Andrew Ault, *University of Michigan*
- 9IM.40** [Field Demonstration of a Wearable Particulate Matter and Volatile Organic Compound Monitor.](#) JESSICA TRYNER, Emilio Molina Rueda, Jane Andales, Casey Quinn, Christian L'Orange, Ellison Carter, John Volckens, *Colorado State University*
- 9IM.41** [Insoluble Residues from Isoprene-Derived Secondary Organic Aerosol Determined by Nanoparticle Tracking Analysis and Microspectroscopy Techniques.](#) REBECCA PARHAM, Alison Fankhauser, Jia Shi, Madeline Cooke, Jin Yan, Cara Waters, Yao Xiao, Katherine Kolozsvari, N. Cazimir Armstrong, Zhenfa Zhang, Avram Gold, Jason Surratt, Andrew Ault, *University of Michigan*

- 9IM.42** [Evaluation of Oligomeric Content in Secondary Organic Aerosol Using Matrix-Assisted Laser Desorption Mass Spectrometry \(MALDI-MS\)](#). CARA WATERS, Madeline Cooke, Alison Fankhauser, Jin Yan, Rebecca Parham, Katherine Kolozsvari, Yao Xiao, N. Cazimir Armstrong, Zhenfa Zhang, Avram Gold, Jason Surratt, Andrew Ault, *University of Michigan*  
1:00
- 9IM.43** [Numerical Assessment of Particle Collection Efficiency of an Adaptor Connecting a Viable Virus Aerosol Sampler and a Point-of-Care Detector](#). AMIN SHIRKHANI, Sripriya Nannu Shankar, Carlos Mazanas, Z. Hugh Fan, Chang-Yu Wu, *University of Florida*  
1:00
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9NM NANOPARTICLES AND MATERIAL SYNTHESIS I: POSTERS

BALLROOM A/B

- 9NM.1** [Antimicrobial Spray-dried Nanoparticles-in-Microspheres](#). ALBERTO BALDELLI, Hale Oguzlu, Hashem Etayash, Robert Hancock, Feng Jiang, Anubhav Pratap-Singh, *The University of British Columbia*  
1:00
- 9NM.3** [Prediction of Mass Yield, Morphology and Composition of Soot Particles Generated by Pyrolysis of Methane](#). MOHAMMAD ADIB, Mohammad Reza Kholghy, *Carleton University*  
1:00
- 9NM.4** [Aerosol Synthesis of Metal-Organic Frameworks Under Low Pressures](#). JIANPING CHEN, Zan Zhu, Da-Ren Chen, Wei-Ning Wang, *Virginia Commonwealth University*  
1:00
- 9NM.5** [A Wide Range \(0.32° to 177.6°\), Multi-angle Light Scattering Setup and Concomitant Analysis Method](#). Prakash Gautam, CHRISTOPHER M. SORENSEN, *Kansas State University*  
1:00
- 9NM.6** [A Facility to Mass Produce Multilayer Graphene and Carboxylate Graphene](#). CHRISTOPHER M. SORENSEN, Stephen Corkill, Ray Estes, Shusil Sigdel, Justin P. Wright, Arjun Nepal, Stefan Bossmann, Russell Reynolds, *Hydrograph Clean Power, Inc.*  
1:00
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9RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS II: POSTERS

BALLROOM A/B

- 9RA.1** [Why Is the Copious Aerosol Observed in the Boundary Layer in June at Ascension Island So Highly Absorbing of Sunlight?](#) AMIE DOBRACKI, Paquita Zuidema, Arthur J. Sedlacek, Maria Zawadowicz, *University of Miami*  
1:00
- 9RA.2** [Aerosol Properties over the Remote Marine Western North Atlantic Ocean during NAAMES](#). FRANCESCA GALLO, Kevin Sanchez, Bruce Anderson, Matthew Brown, Ewan Crosbie, Carolyn Jordan, Claire Robinson, Taylor Shingler, Michael Shook, Thornton Matthew, Elizabeth Wiggins, Ryan Winslow, Luke Ziemba, Richard Moore, *NASA Langley*  
1:00
- 9RA.3** [The Use of Federal Reference Sensors, Satellite-Based Instrument Measurements, and Low-Cost Sensors for Temporal and Spatial Analysis of Air Quality in South Carolina](#). ABI ROBERTS, Christopher Post, Andrew Metcalf, *Clemson University*  
1:00
- 9RA.4** [Reconciling Emissions Models with Observed Variability in BVOC Concentrations](#). DEBORAH F. MCGLYNN, Namrata Shanmukh Panji, Laura E. R. Barry, Xi Yang, Manuel Lerda, Sally Pusede, Gabriel Isaacman-VanWertz, *Virginia Tech*  
1:00
- 9RA.5** [Measuring Wet Deposition of Semi-Volatile Organic Compounds in and near a Virginia Forest](#). RAINA LENEAR, Christos Stamatis, Graham Frazier, Gabriel Isaacman-VanWertz, *Virginia Tech*  
1:00
- 9RA.6** [Effect of Precipitation on the Emissions of BVOCs and Their Potential Aerosol Formation](#). NAMRATA SHANMUKH PANJI, Deborah F. McGlynn, Laura E. R. Barry, Sally Pusede, Gabriel Isaacman-VanWertz, *Virginia Tech*  
1:00
- 9RA.7** [Chemical Characterization of Seasonal Brown Carbon in the Indo-Gangetic Plain](#). POOJA CHAUDHARY, Kyla Siemens, Christopher P. West, Baerbel Sinha, Alexander Laskin, *Purdue University*  
1:00
- 9RA.8** [Comparison of Fine Particulate Nitrate Formation in the Presence of Excess Ammonia at Livestock and Crop Agricultural Sites in Summer](#). JOONWOO KIM, Jiho Jang, Dahye Oh, Haebum Lee, Taewoong Gong, Kihong Park, *Gwangju Institute of Science and Technology*  
1:00

- 9RA.10** [Chemical Characterization of Brown Carbon in Atmosphere and Snowpack from the Rocky Mountains](#). STEVEN SHARPE, 1:00 Felipe Rivera-Adorno, Jay Tomlin, Erik Hulm, Ryan Moffet, Alexander Laskin, *Purdue University*
- 9RA.11** [Quantifying Aerosol Diversity of an Arctic Oil Field on a Single Particle Level](#). JUDY WU, Jun Liu, Matthew Gunsch, Jessica Mirrielees, Claire Moffett, Rebecca J. Sheesley, Qi Zhang, Swarup China, Kerri Pratt, *University of Michigan*
- 9RA.12** [Impacts of Automated Isoprene Chemical Mechanism Reduction on SOA Chemistry and Air Quality in GEOS-Chem](#). 1:00 BENJAMIN YANG, Forwood Wiser, V. Faye McNeill, Arlene Fiore, Daniel Westervelt, *Columbia University*
- 9RA.13** [SAIL-NET: Investigating Spatial Variability of Aerosol and Cloud Nuclei in Mountainous Terrain](#). Anna Hodshire, EZRA LEVIN, 1:00 Gavin McMeeking, Bryan Rainwater, Ethan Emerson, Nicholas Good, Kate Patterson, Tom Ramin, *Handix Scientific*

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

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

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10AC AEROSOL CHEMISTRY IX: INORGANIC AND ORGANIC SULFUR CHEMISTRY  
BALLROOM C – Christos Stomatis and Leif Jahn, chairs

- 10AC.1** [Organosulfate Formation in Proxies for Aged Sea Spray Aerosol: Reactive Uptake of Isoprene Epoxydiols to Acidic Sodium Sulfate](#). MADELINE COOKE, Ziyang Lei, Yuzhi Chen, N. Cazimir Armstrong, Yue Zhang, Nicolas Aliaga Buchenau, Isabel Ledsky, Jamy Lee, Avram Gold, Zhenfa Zhang, Jason Surratt, Andrew Ault, *University of Michigan*
- 10AC.2** [Characterization of S\(IV\) Species and Sulfate in PM<sub>2.5</sub> in Fairbanks, Alaska using Ion Chromatography](#). KAYANE DINGILIAN, 3:45 Michael Battaglia, James Campbell, Jingqiu Mao, Rodney J. Weber, *Georgia Institute of Technology*
- 10AC.3** [HMS/Sulfate Ratio as a Constraint on Aqueous Sulfur Chemistry Under Cold and Dark Conditions](#). JAMES CAMPBELL, Michael Battaglia, Kayane Dingilian, Jason St. Clair, Meeta Cesler-Maloney, William Simpson, Athanasios Nenes, Rodney J. Weber, Jingqiu Mao, *University of Alaska Fairbanks*
- 10AC.4** [Role of Methane Sulfonic Acid in Sulfuric Acid-Base Nucleation](#). JACK JOHNSON, Coty Jen, *Carnegie Mellon University*
- 4:15
- 10AC.5** [Isoprene Epoxydiol-Derived Sulfated and Non-Sulfated Oligomers Suppress Particulate Mass Loss during Oxidative Aging of Secondary Organic Aerosol](#). N. CAZIMIR ARMSTRONG, Yuzhi Chen, Tianqu Cui, Yue Zhang, Zhenfa Zhang, Barbara Turpin, Man Nin Chan, Avram Gold, Andrew Ault, Jason Surratt, *UNC-Chapel Hill*
- 4:30
- 10AC.6** [The Potential Environmental and Climate Impacts of Stratospheric Aerosol Injection: A Review](#). HAN N. HUYNH, V. Faye McNeill, *Columbia University*
- 4:45

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10AP AEROSOL PHYSICS II  
305 A/B – Matthew Berg and Provat Saha, chairs

- 10AP.1** [Ice Nucleation Activity and Effloresced Particle Morphology of Model Marine Aerosol Systems in a Microfluidic Device](#). 3:30 MARGARET HOUSE, Cari Dutcher, *University of Minnesota*
- 10AP.2** [Color Imaging of Aerosol Particles with Backscatter Multiple Wavelength Digital Holography](#). RAMESH GIRI, Matthew J Berg, 3:45 *Kansas State University*
- 10AP.3** [Looking Back and Forward – from the Environmental Chamber to Particle Loss Correction](#). CHEN LE, Qi Li, Ningjin Xu, Huawei Li, Don Collins, David Cocker, *University of California, Riverside*
- 4:00

- 10AP.4** [Geometric Model for Predicting the Morphology Evolution of a Multiparticle Agglomerate during Simultaneous Reaction and Sintering](#). SUJIT MODI, Onochie Okonkwo, Hao Zhou, Shaline Kavadiya, Marcus Foston, Pratim Biswas, *Washington University in St Louis*  
4:15
- 10AP.5** [Estimation of Effective Density and Fractal Dimension of Secondarily Produced Brown Carbon Particles](#). ALEXANDER B. MACDONALD, Nilofar Raeofy, Kunpeng Chen, Haofei Zhang, Ying-Hsuan Lin, Roya Bahreini, *University of California, Riverside*  
4:30
- 10AP.6** [Aerosol Deposition in 90-Degree Circular Tube Bends with Laminar Flows: Effects of Inertial Impaction and Gravitational Settling](#). JAMES Q. FENG, *Optomec, Inc.*  
4:45
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10CM CONTROL AND MITIGATION TECHNOLOGY II  
302 B/C – Yu Feng and Peng Wang, chairs

- 10CM.1** [Effects of Different Dust Suppression Approaches on Ambient Aerosols](#). JASON MIECH, Pierre Herckes, Matthew Fraser, *Arizona State University*  
3:30
- 10CM.2** [Spray Droplet Size in Liquid Sheets Containing Surfactants and Oil Emulsions](#). IAROSLAV MAKHNENKO, Long Nguyen, Cari Dutcher, Christopher J. Hogan, Elizabeth Alonzi, Christine Colby, Steven Fredericks, *University of Minnesota*  
3:45
- 10CM.3** [Suppressing Spread of Viral Sneeze Droplets Using Transparent Curtains in Large Food Processing Facilities](#). SUNIL KUMAR, Maria King, David Klassen, *Texas A&M University*  
4:00
- 10CM.4** [Aerosol Dispersion of Submicrometer Particles in an Aircraft Cabin](#). Stephanie Vannarath, Peter Kim, Mitchell Ford, Arvind Santhanakrishnan, Yu Feng, CHANGJIE CAI, *The University of Oklahoma Health Sciences Center*  
4:15
- 10CM.5** [Improvement of Air Quality in Vehicles – Simulation of Two Different Use Cases of HEPA Filtration](#). Matisse Lesage, David Chalet, Jérôme Migaud, Christoph Krautner, SHIKHAR ARORA, Nilesh Tharval, Martin Lehmann, *MANN+HUMMEL GmbH*  
4:30
- 10CM.6** [Particulate and Gaseous Emissions from Tier II and III Diesel Engines on Ocean-Going Vessels](#). THOMAS ECKEL, Ryan W. Drover, J. Wayne Miller, David R. Cocker III, *University of California, Riverside*  
4:45
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10EI SYMPOSIUM: AEROSOL SOURCES AND CONSTITUENTS OF EMERGING IMPORTANCE AND THEIR IMPACTS ACROSS SPATIAL SCALES II: IMPACTS OF HARMFUL ALGAL BLOOMS, THE AIRBORNE MICROBIOME, AND DUST  
301 A/B – Havalá Pye and Drew Gentner, chairs

- 10EI.1** [Aerosolization of Toxins from Harmful Algal Blooms in Freshwater and Saltwater](#). HOSEIN FOROUTAN, Charbel Harb, Landon Bilyeu, Regina Hanlon, Shane Ross, David Schmale, *Virginia Tech*. INVITED.  
3:30
- 10EI.2** [Emissions of Harmful Algal Bloom Toxins in Freshwater Aerosol](#). NICOLE OLSON, Nathaniel May, Madeline Cooke, Jia Shi, Johnna Birbeck, Judy Westrick, Andrew Ault, Kerri Pratt, *University of Michigan*  
3:45
- 10EI.3** [Harmful Cyanobacterial Aerosolization Dynamics in the Airshed of a Eutrophic Estuary](#). HALEY E. PLAAS, Ryan Paerl, Karsten Baumann, Nathan S. Hall, Colleen Karl, Kimberly Pependorf, Malcolm A. Barnard, Naomi Chang, Nathaniel Curtis, Hwa Huang, Olivia Mathieson, Joel Sanchez, Daniela Maizel, Amy Bartenfelder, Jeremy Braddy, Karen Rossignol, Randolph Sloup, Hans W. Paerl, *UNC Chapel Hill*  
4:00
- 10EI.4** [Elucidating the Extent of Dust Aging at Miami and Barbados](#). HALEY ROYER, Michael Sheridan, Hope Elliott, Zihua Zhu, Andrew Ault, Nurun Nahar Lata, Zezhen Cheng, Swarup China, Cassandra Gaston, *University of Miami*  
4:15
- 10EI.5** [On the Transatlantic Journey of Microorganisms Onboard Aeolian Dust Aerosols - A Statistical Analysis of Source, Destination, Routes, and Conditions along the Way](#). ALI HOSSEIN MARDI, Armin Sorooshian, Miguel Hilario, Hossein Dadashazar, Hosein Foroutan, *Virginia Tech*  
4:30

**10EI.6** [Aerosolized Algal Toxins in South Florida, Health Impacts, and Exposure Mitigation Strategies](#). CASSANDRA GASTON, Kimberly Pependorf, Haley Royer, Raymond Leibensperger III, Michael Sheridan, Jiaming Hu, Kaycie Lanpher, Daniela Maizel, Grace Zhai, Helena Solo-Gabriele, Larry Brand, Alberto Caban-Martinez, *University of Miami*. INVITED.  
4:45

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10ID SYMPOSIUM: AEROSOL SCIENCE OF INFECTIOUS DISEASES: WHAT WE HAVE LEARNED AND STILL NEED TO KNOW ABOUT TRANSMISSION, PREVENTION, AND THE ONE HEALTH CONCEPT IV: SAMPLING AND DETECTION

306 A/B/C – Shanna Ratnesar-Shumate and Jin Pan, chairs

**10ID.1** [Transmission of SARS-CoV-2 in the Workplace: Key Findings from a Rapid Review of the Literature](#). JENNIE COX, Brian Christensen, Nancy Burton, Kevin Dunn, Mikaela Finnegan, Ana Ruess, Cherie Estill, *NIOSH, CDC*  
3:30

**10ID.2** [SARS-CoV-2 Detection in Air Samples from Inside Heating, Ventilation, and Air Conditioning \(HVAC\) Systems-COVID Surveillance in Student Dorms](#). SINAN SOUSAN, Ming Fan, Kathryn Outlaw, Sydney Williams, Rachel Roper, *East Carolina University*  
3:45

**10ID.3** [Multiplexed Virus Detection at the Point-of-Care \(POC\) by a Valve-Enabled Sample Preparation Device with Isothermal Amplification](#). Carlos Mazanas, Md. Mahbulul Alam, Julia Loeb, John Lednicki, CHANG-YU WU, Z. Hugh Fan, *University of Florida*  
4:00

**10ID.4** [Effect of Deposition Methods \(Pipette vs Aerosol\) on the Amount of Transfer of DNA attached Polystyrene Latex Bead](#). Maria King, Jana Kesavan, VIOLETTE RAMIREZ, *Texas A&M University*  
4:15

**10ID.5** [Investigation of Novel Active and Passive Samplers to Detect SARS-CoV-2 Surrogates](#). DAVID ALBURTY, David Goad, Pamela Murowchick, Andrew Page, Sydonia Manibusan, Gediminas Mainelis, *InnovaPrep LLC*  
4:30

**10ID.6** [Development of a Breathalyzer for Rapid Detection of SARS-CoV-2 Variants](#). DISHIT GHUMRA, Nishit Shetty, Benjamin Sumlin, Carla M. Yuede, John Cirrito, Rajan K. Chakrabarty, *Washington University in St. Louis*  
4:45

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10RA REMOTE AND REGIONAL ATMOSPHERIC AEROSOLS III

302 A – Nathan Kreisberg and Vikram Pratap, chairs

**10RA.1** [Functional Group Composition of Organic Aerosols in the IMPROVE Network](#). ANN DILLNER, Dominique Young, Sean Raffuse, *University of California, Davis*  
3:30

**10RA.2** [Concentration of Terpenoid Oxidation Products in Aerosol in the Southeastern U.S. and the Role of Different BVOC Classes](#). GRAHAM FRAZIER, Gabriel Isaacman-VanWertz, *Virginia Tech*  
3:45

**10RA.3** [Process-Level Representation of Organic Aerosols in a Regional Climate Model \(WRF-Chem\): Processes, Parameterizations, and Predictions for GoAmazon](#). Charles He, Kelsey Bilsback, ManishKumar Shrivastava, Rahul Zaveri, Christopher Cappa, John Seinfeld, Jeffrey R. Pierce, SHANTANU JATHAR, *Colorado State University*  
4:00

**10RA.4** [The 3rd ARM Mobile Facility in the Southeast United States: Current Plans for Science-Driven Facility Siting, Configuration, Instrumentation, and Outreach](#). CHONGAI KUANG, Scott Giangrande, Shawn Serbin, *Brookhaven National Laboratory*  
4:15

**10RA.5** [Numerical Investigation of Dry Deposition of Dust Particles on Leaves of Coniferous Plants during Dust Storms](#). Rahul Tarodiya, BORIS KRASOVITOV, Natan Kleeorin, Avi Levy, Itzhak Katra, *Ben-Gurion University of the Negev, Israel*  
4:30

**10RA.6** [Correcting for Biases in Filter-Based Aerosol Light Absorption Measurements at the ARM Southern Great Plains Site](#). JOSHIN KUMAR, Theo Paik, Nishit Shetty, Patrick Sheridan, Manvendra Dubey, Allison Aiken, Rajan K. Chakrabarty, *Washington University in St. Louis*  
4:45

Thursday 5:00 PM - 6:30 PM  
Technical Program Committee Meeting

Thursday 5:00 PM - 6:00 PM  
Refreshment Break

Thursday 6:00 PM - 8:00 PM

Panel 1 - Lesson Learned from the COVID- 19 Pandemic and Panel 2 - Gaps in the Aerosol Science Identified During the COVID-19 Pandemic

Friday

Friday 7:00 AM - 8:00 AM

Committee Meetings - Development, Membership

Friday 8:00 AM - 9:15 AM

Session 11: Platform

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11AC AEROSOL CHEMISTRY X: PHYSICAL PROPERTIES OF OA

BALLROOM C – Han Huynh and Rachel Davey, chairs

**11AC.1** [Phase State and Relative Humidity Regulate the Heterogeneous Oxidation Kinetics and Pathways of Organic-Inorganic Mixed Aerosol](#). CHUANYANG SHEN, Wen Zhang, Haofei Zhang, *University of California, Riverside*  
8:00

**11AC.2** [Hybrid Water Activity – A Novel Framework for CCN Analysis of Sparingly Water Soluble Organic Aerosols](#). KANISHK GOHIL, Chun-Ning Mao, Dewansh Rastogi, Chao Peng, Mingjin Tang, Akua Asa-Awuku, *University of Maryland*  
8:15

**11AC.3** [Growth Rate Dependence of Secondary Organic Aerosol on Seed Particle Size, Composition, and Phase](#). DEVON HIGGINS, Michael S. Taylor, Justin Krasnomowitz, Murray Johnston, *University of Delaware*  
8:30

**11AC.4** [Effect of Condensed-Phase Photochemistry on the Viscosity of Atmospheric Secondary Organic Aerosol Particles](#). Vahe Baboosian, Giuseppe Crescenzo, Yuanzhou Huang, Fabian Mahrt, Manabu Shiraiwa, A. K. Bertram, SERGEY NIZKORODOV, *University of California, Irvine*  
8:45

**11AC.5** [Particles' Phase State Variability in the North Atlantic Free Troposphere during Summertime Determined by Different Atmospheric Transport Patterns and Sources](#). ZEZHEN CHENG, Megan Morgenstern, Bo Zhang, Matthew Fraund, Nurun Nahar Lata, Rhenton Brimberry, Matthew A. Marcus, Lynn Mazzoleni, Paulo Fialho, Silvia Henning, Birgit Wehner, Claudio Mazzoleni, Swarup China, *Pacific Northwest National Laboratory*  
9:00

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11CA CARBONACEOUS AEROSOLS II

302 A – Shannon Capps and Yumeng Cui, chairs

**11CA.1** [Properties of Biomass Burning Organic Aerosol from Fuel Species in the Southern Great Plains](#). ELIJAH SCHNITZLER, Katrina Betz, Colton Calvert, Elevia Bruce, Troye Jirka, Nathan Huskins, *Oklahoma State University*  
8:00

**11CA.2** [Brown Carbon Light Absorption from Wildfire Plumes Related to Low-volatility Organic and Nitrogen-containing Organic Compounds](#). NISHIT SHETTY, Pai Liu, Yutong Liang, Benjamin Sumlin, Conner Daube, Scott Herndon, Allen Goldstein, Rajan K. Chakrabarty, *Washington University in St. Louis*  
8:15

**11CA.3** [Carbonaceous Aerosol Fingerprint from Wildfires in California between 2018 and 2022 Using an Advanced Total Carbon - Black Carbon \(TC-BC\) Method](#). MATIC IVANČIČ, Asta Gregorič, Gašper Lavrič, Bálint Alföldy, Irena Ježek, Sina Hasheminassab, Payam Pakbin, Faraz Ahangar, Mohammad Sowlat, Steven Boddeker, Jack Connor, Charity Garland, Jonathan P. Bower, Martin Rigler, *Aerosol d.o.o.*  
8:30

**11CA.4** [Aqueous Processing of Water-soluble Organic Compounds in the Eastern United States during Winter](#). MARWA EL-SAYED, Christopher Hennigan, *Embry-Riddle Aeronautical University*  
8:45

**11CA.5** [Cloud Condensation Nuclei \(CCN\) Activity of Black Carbon Mixed with Low Aqueous Solubility Organics](#). KANISHK GOHIL, Reese Barrett, Dewansh Rastogi, Chun-Ning Mao, Akua Asa-Awuku, *University of Maryland College Park*

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11EI SYMPOSIUM: AEROSOL SOURCES AND CONSTITUENTS OF EMERGING IMPORTANCE AND THEIR IMPACTS ACROSS SPATIAL SCALES III: VOLATILE CHEMICAL PRODUCTS AND THEIR INFLUENCE ON AIR QUALITY  
301 A/B – Lu Xu and Haley Plaas, chairs

**11EI.1** [Secondary Organic Aerosol and Gas-Phase Products from Chlorine-Initiated Oxidation of Decamethylcyclotrasiloxane \(D5\)](#). KRISTI MCPHERSON, Nirvan Bhattacharyya, Lea Hildebrandt Ruiz, Pawel K. Misztal, *University of Texas at Austin*

**11EI.2** [Primary and Secondary Organic Aerosol Formation from Asphalt Pavements](#). MACKENZIE HUMES, Jo Machesky, Drew Gentner, Sunhye Kim, Oladayo Oladeji, Neil Donahue, Albert A. Presto, *Carnegie Mellon University*

**11EI.3** [Anthropogenic Secondary Organic Aerosol and Ozone from Asphalt-Related Emissions](#). KARL SELTZER, Venkatesh Rao, Havalala Pye, Benjamin Murphy, Bryan Place, Peeyush Khare, Drew Gentner, Chris Allen, David Cooley, Rich Mason, Marc Houyoux, *U.S. EPA*

**11EI.4** [Formation of Secondary Organic Aerosol from Paint Emissions](#). REINA BUENCONSEJO, Yuyang Peng, Ryan Ward, Benjamin Schulze, Jennifer Kaiser, Nga Lee Ng, John Seinfeld, *California Institute of Technology*

**11EI.5** [Secondary Organic Aerosol from Oxygenated Precursors: Mass Yields, Composition, and Parameters for Chemical Transport Models](#). SHANTANU JATHAR, Abraham Dearden, Allison Piasecki, Ann M. Middlebrook, Katelyn Rediger, Matthew Coggon, Cort Zang, Tucker Melles, Megan Willis, Chelsea Stockwell, Lu Xu, Carsten Warneke, Rebecca Schwantes, Brian McDonald, Christopher Cappa, Delphine K. Farmer, *Colorado State University*

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11ID SYMPOSIUM: AEROSOL SCIENCE OF INFECTIOUS DISEASES: WHAT WE HAVE LEARNED AND STILL NEED TO KNOW ABOUT TRANSMISSION, PREVENTION, AND THE ONE HEALTH CONCEPT V: MODELING OF TRANSMISSION, TRANSPORT, AND REMOVAL  
306 A/B/C – Linsey Marr and C.Y. Wu, chairs

**11ID.1** [Heterogeneity in Airborne Transmission of COVID-19 by Respiratory Aerosols](#). PRASAD KASIBHATLA, *Duke University*  
8:00

**11ID.2** [Simulating Near-field Enhancement in Airborne Transmission with a Quadrature-based Model](#). LAURA FIERCE, Alison Robey, Cathrine Hamilton, *Pacific Northwest National Laboratory*  
8:15

**11ID.3** [Modeling of Virus-contained Particle Removal in a Classroom Using Portable Air Purifiers](#). BO YANG, Andy Fox, John Zhang, David Buckley, Dong Fu, Qihong Nie, Ali Amadeh, *3M Company*  
8:30

**11ID.4** [Mucin Transiently Mitigates the Loss of Coronavirus Infectivity in Artificial Saliva](#). ROBERT ALEXANDER, Jianghan Tian, Allen E. Haddrell, Henry Oswin, Daniel Hardy, Edward Neal, Mara Otero-Fernandez, Jamie Mann, Tristan Cogan, Adam Finn, Andrew Davidson, Darryl Hill, Jonathan P. Reid, *University of Bristol*  
8:45

**11ID.5** [Optimized Design to Reduce Environmental Effects on Bioaerosols](#). Meiyi Zhang, Tatiana Baig, BROOKE SMITH, Hyoungmook Pak, Gabriela Ramos, Violette Ramirez, Sunil Kumar, David Klassen, Maria King, *Texas A&M University*  
9:00

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11IM INSTRUMENTATION AND METHODS VI: OPTICAL METHODS  
302 B/C – James Radney and Vijay Kumar, chairs

**11IM.1** [Culebra Aerosol Research Lidar Project, Description and First Results](#). JENS LAUTENBACH, Pedrina Terra, Josef Hoeffner, *Arecibo Observatory - University of Central Florida*  
8:00

**11IM.2** [Detection of Bioaerosol Based on Single Particle Differential Circular Polarization Scattering](#). YONG-LE PAN, Aimable Kalume, Jessica Arnold, Chuji Wang, Joshua Santarpia, *U.S. Army Research Laboratory*  
8:15

- 11IM.3** [Simultaneous Scaling of Spatiotemporal Representativeness for Concentration Mapping and Microphysical Properties Measurement of Aerosols](#). Daniel Cantin, OVIDIU PANCRATI, Denis Panneton, Pascal Dufour, Jonathan Fortin, Daniel Landry, Jean-François Cormier, François Châteauneuf, *INO*  
8:30
- 11IM.4** [Characterization of an Augmented Version of the Printed Optical Particle Spectrometer for Integration into Multi-Instrument Aerosol Sampling Systems](#). SABIN KASPAROGLU, Mohammad Maksimul Islam, Nicholas Meskhidze, Markus Petters, *North Carolina State University*  
8:45
- 11IM.5** [Where'd Those Particles Come From? Impactor Non-idealities, Multiple Charging, and Optical Measurement Biases](#). JAMES RADNEY, Chun-Ning Mao, Akua Asa-Awuku, Christopher Zangmeister, *National Institute of Standards and Technology*  
9:00
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#### 11NM NANOPARTICLES AND MATERIAL SYNTHESIS II

305 A/B – Ricardo Tischendorf and Onochie Okonkwo, chairs

- 11NM.1** [Aerosol Synthesis of MOFs-based Functional Materials: Fundamentals and Applications](#). WEI-NING WANG, *Virginia Commonwealth University*. INVITED.  
8:00
- 11NM.2** [Exploring the Role of Nanoscale Catalysts Synthesized via Spray Flame Aerosol Reactor for Single Step CO<sub>2</sub> Hydrogenation to Dimethyl Ether](#). ONOCHIE OKONKWO, Komal Tripathi, Sonal Asthana, Yiming Xi, Sujit Modi, Kamal Kishore Pant, Pratim Biswas, *University of Miami*  
8:30
- 11NM.3** [Flame-based Aerosol Synthesis of High Entropy Oxide Nanoparticles](#). Shuo Liu, MARK SWIHART, *University at Buffalo - SUNY*  
8:45
- 11NM.4** [Influence of Atomization on the Particle Formation in Spray Flames](#). RICARDO TISCHENDORF, Fabian Fröde, Temistocle Grenga, Heinz Pitsch, Manuel Reddemann, Reinhold Kneer, Hans-Joachim Schmid, Sophie Dupont, *University of Paderborn, Germany*  
9:00

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

Friday 9:45 AM - 10:45 AM  
Session 12: Platform

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#### 12CA CARBONACEOUS AEROSOLS III

302 A – Yuanlong Huang and Meredith Schervish, chairs

- 12CA.1** [Linking Gas, Particulate, and Toxic Endpoints to Air Emissions In The Community Regional Atmospheric Chemistry Multiphase Mechanism \(CRACMM\)](#). HAVALA PYE, Bryan Place, Benjamin Murphy, Karl Seltzer, Chris Allen, Ivan Piletic, Emma D'Ambro, Rebecca Schwantes, Matthew Coggon, Sara Farrell, Emily Saunders, Lu Xu, Golam Sarwar, William Hutzell, Kristen Foley, George Pouliot, William R. Stockwell, *United States Environmental Protection Agency*  
9:45
- 12CA.2** [Particle Inhalation Triggered Reactivation of Latent Virus Infections - A New Link Between Air Pollution and the Development of Chronic Lung Disease?](#) Lianyong Han, Verena Haefner, Ali Oender Yildirim, Annette Peters, Heiko Adler, TOBIAS STOEGER, *Helmholtz Zentrum München, Germany*  
10:00
- 12CA.3** [The Mobility Diameter of Soot Determines Its Angular Light Scattering Distribution](#). GEORGIOS A. KELESIDIS, Patrizia Crepaldi, Martin Allemann, Aleksandar Duric, Sotiris Pratsinis, *ETH Zurich, Switzerland*  
10:15
- 12CA.4** [Black Carbon Aerosol Number and Mass Concentration Measurements by Picosecond Short-range Elastic Backscatter Lidar](#). ROMAIN CEOLATO, Andres Bedoya Velasquez, Frederic Fossard Fossard, Vincent Mouysset, Lucas Paulien, Sidonie Lefebvre, Claudio Mazzoleni, Christopher M. Sorensen, Matthew Berg, Jerome Yon, *ONERA*  
10:30
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12EI SYMPOSIUM: AEROSOL SOURCES AND CONSTITUENTS OF EMERGING IMPORTANCE AND THEIR IMPACTS ACROSS SPATIAL

SCALES IV: EMERGING TECHNIQUES, SOURCES, AND INSIGHTS

301 A/B – Albert A. Presto and Nicole Olson, chairs

- 12EI.1** [Uncovering Global-Scale Risks From the Atmospheric Oxidation of Particle Bound Commercial Chemicals in Air](#). JOHN LIGGIO, 9:45 Qifan Liu, Li Li, Tom Harner, Xianming Zhang, Amandeep Saini, Hayley Hung, Wenlong Li, Chunyan Hao, Patrick Lee, Jeremy Wentzell, Shao-Meng Li, *Environment and Climate Change Canada*. INVITED.
- 12EI.2** [Teaching an Old Dog a New Trick: Detecting Nanoplastics in Water using Aerosol Metrology](#). JAMES RADNEY, Christopher 10:00 Zangmeister, Kurt Benkstein, Berc Kalanyan, *National Institute of Standards and Technology*
- 12EI.3** [Morphology and Hygroscopicity of Nanoplastics in Sea Spray Determined by Humidified Tandem Differential Mobility Analysis Coupled to High-Resolution Time-of-Flight Aerosol Mass Spectrometry](#). SARAH PETERS, Eva Kjærsgaard, Freja Hasager, 10:15 Andreas Massling, Marianne Glasius, Merete Bilde, *Aarhus University*
- 12EI.4** [Missing Intermediate- and Semi-Volatile Secondary Organic Aerosol Precursors Comprise the Majority of Total Gas-Phase Organic Carbon Emissions from Oil Sands Operations](#). DREW GENTNER, Megan He, John Liggio, Jenna Ditto, Lexie Gardner, 10:30 Tori Hass-Mitchell, Christina Chen, Peeyush Khare, Jo Machesky, Bugra Sahin, John Fortner, Katherine L. Hayden, Jeremy Wentzell, Richard Mittermeier, Amy Leithead, Patrick Lee, Andrea Darlington, Samar Moussa, Shao-Meng Li, *Yale University*
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12HS HISTORY OF AEROSOL SCIENCE I

BALLROOM C – R. Subramanian and Suresh Dhaniyala, chairs

- 12HS.1** [Health Effects of Emissions of Internal Combustion Engines: Success Story Joining Science, Technological Developments and Policy](#). ROGER MCCLELLAN, *Independent Advisor, Toxicology and Risk Analysis* 9:45
- 12HS.2** [Turn on the Light: The Evolution of Aerobiology and Airborne Disease Studies in the United States Before Aerosols, 1930-1955](#). GERARD FITZGERALD, *Independent Scholar* 10:00
- 12HS.3** [Evolution of AAAR Topics over the Past 40 Years: An Automated Analysis](#). Brandon Beattie, Supraja Gurajala, SURESH 10:15 DHANIYALA, *Clarkson University*
- 12HS.4** [The Creation and Evolution of Aerosol Science and Technology](#). PHILIP K. HOPKE, *Clarkson University and University of Rochester* 10:30
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12ID SYMPOSIUM: AEROSOL SCIENCE OF INFECTIOUS DISEASES: WHAT WE HAVE LEARNED AND STILL NEED TO KNOW ABOUT TRANSMISSION, PREVENTION, AND THE ONE HEALTH CONCEPT VI: ENVIRONMENTAL FACTORS AND INFECTIVITY

306 A/B/C – Kristen Coleman and John Lednický, chairs

- 12ID.1** [Chronic Ambient Air Pollution and Acute COVID-19 Disease Severity or Death among Confirmed Cases in Southern California](#). 9:45 Michael Jerrett, MICHAEL KLEEMAN, Yiting Li, Yusheng Zhao, Anikender Kumar, Jason Su, Claudia Nau, Deborah Young, Rebecca Butler, Christina Batteate, Richard Burnett, *University of California, Davis*
- 12ID.2** [Environmental Stability of Enveloped Viruses is Impacted by the Initial Size of Droplets](#). Andrea French, ALEXANDRA 10:00 LONGEST, Jin Pan, Peter Vikesland, Nisha Duggal, Seema Lakdawala, Linsey Marr, *Virginia Tech*
- 12ID.3** [Detailed Exploration into the Underlying Physicochemical Properties of Aerosol that Govern How Long SARS-CoV-2 Remains Infectious in the Aerosol Phase](#). ALLEN E. HADDRELL, Mara Otero-Fernandez, Henry Oswin, Tristan Cogan, Jamie Mann, 10:15 Thomas Hilditch, Jiangnan Tian, Daniel Hardy, Darryl Hill, Adam Finn, Andrew Davidson, Jonathan P. Reid, *University of Bristol*
- 12ID.4** [Nasal Delivery of Encapsulated Recombinant ACE2 as a Prophylactic Drug for SARS-CoV-2](#). ALBERTO BALDELLI, Hale Oguzlu, 10:30 Yigong Guo, Hui Xin Ong, Daniela Traini, Anubhav Pratap-Singh, *The University of British Columbia*
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12IM INSTRUMENTATION AND METHODS VII: PARTICLE COMPOSITION II

302 B/C – Benjamin Nault and Purushottam Kumar, chairs

- 12IM.1** [Characterization of Ambient Metal Particles in Real Time Using Atomic Emission Spectroscopy: Urban and Rural Environments.](#)  
9:45 Hanyang Li, Leonardo Mazzei, Christopher Wallis, ANTHONY S. WEXLER, *University of California, Davis*
- 12IM.2** [External Proton Induced Gamma and X-Ray Emission \(PIGE and PIXE\) for Elemental Analysis of Dust Pollutants.](#) GUNNAR BROWN,  
10:00 William Kacey, Graham Peaslee, *University of Notre Dame*
- 12IM.3** [Validation and Demonstration of the “Chemspot” Instrument for Measuring Aerosol Composition.](#) PURUSHOTTAM KUMAR,  
10:15 James Hurley, Nathan Kreisberg, Braden Stump, Pat Keady, Susanne Hering, Andrew Grieshop, Gabriel Isaacman-VanWertz,  
*Virginia Tech*
- 12IM.4** [A Stable Water Dispersed Calibrant for Refractory Black Carbon \(rBC\) in the Soot Particle Aerosol Mass Spectrometer \(SP-AMS\).](#)  
10:30 ANITA AVERY, Edward Fortner, Leah Williams, Arthur J. Sedlacek, Shreya Joshi, Claudio Mazzoleni, Timothy Onasch, *Aerodyne Research, Inc.*
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12NM NANOPARTICLES AND MATERIAL SYNTHESIS III  
305 A/B – Shalinee Kavadiya and Evangelos Stefanidis, chairs

- 12NM.1** [Mass Production of Multilayer Graphene via Chamber Explosion.](#) CHRISTOPHER M. SORENSEN, Justin P. Wright, Shusil Sigdel,  
9:45 Arjun Nepal, Stephen Corkill, Jun Li, Ranjith Divigalpitiya, Stefan Bossmann, *Kansas State University*
- 12NM.2** [The Release and Resuspension of Airborne Nanoparticles from Nano-enabled Consumer Sprays.](#) RUIKANG HE, Jie Zhang,  
10:00 Gediminas Mainelis, *Rutgers, The State University of New Jersey*
- 12NM.3** [In-Situ Laser Diagnostics of Metal Nanoparticles during Their Flame Synthesis in the Reactive Spray Deposition Technology.](#)  
10:15 EVANGELOS K. STEFANIDIS, Thomas A Ebaugh, Stoyan Bliznakov, Leonard Bonville, Radenka Maric, Francesco Carbone,  
*University of Connecticut*
- 12NM.4** [Aerosol-based 3D Printing to Improve Resolution and Simplicity.](#) SHALINEE KAVADIYA, Pratim Biswas, *University of Miami*  
10:30

## Friday 11:00 AM - 12:30 PM Plenary IV

- 11:00 **AAAR's First 40 Years: Its Origins and Evolution** Susanne Hering, *Aerosol Dynamics, Inc.*  
**Moderator** Cliff Davidson, *Syracuse University*
- 12:00 **Student Poster and Oral Platform Competition Award Presentation** Melissa Galloway and Andrew Metcalf, *Lafayette College, Clemson University*
- 12:05 **Fine Particle Arts Competition Award Presentation** Shantanu Jathar, *Colorado State University*
- 12:10 **Announcement of Juan de la Mora Prize** James Radney, *National Institute of Standards and Technology*
- 12:15 **Concluding Remarks and Preview for 2023** Amy P. Sullivan and Andrew Grieshop, 2022 and 2023 Conference Chair, *Colorado State University, North Carolina State University*

## Friday 12:30 PM - 4:00 PM AAAR Board of Directors Meeting