

HANS MOOSMÜLLER

Research Professor and NSHE Regents' Researcher
Senior Director, DRI Wildland Fire Science Center (WFSC)
Editor, Aerosol Science and Technology (AS&T)
Fellow, American Association for Aerosol Research (AAAR)

Division of Atmospheric Sciences (DAS), Desert Research Institute (DRI)
Nevada System of Higher Education (NSHE)

EDUCATION

Ph.D.	Physics	1988	Colorado State University, Fort Collins, CO
DIPLOM (M.S.)	Physics	1982	Ludwigs-Maximilians Universität, München

RESEARCH EXPERIENCE

Dr. Moosmüller's interests include experimental and theoretical research in optical spectroscopy as well as its applications to atmospheric, aerosol, and climate physics. His research focuses on development and application of real time, *in situ* measurement methods for aerosol light absorption, scattering, extinction, and asymmetry parameter, and new optical remote sensing techniques. These measurement methods are being used for ambient air monitoring and vehicle, fugitive dust, and biomass burning emission studies. He also works on other aspects of wildland fires including emissions and their atmospheric aging and fire induced soil hydrophobicity. Other research topics include (1) aerosol optical properties and their origin in aerosol morphology and aerosol complex refractive index spectra, (2) measurement of snow surface albedo, and (3) the influence of aerosol deposition on snow surface albedo and energy balance and on efficiency of photovoltaic solar modules. Dr. Moosmüller has also participated in the planning, fieldwork, and data analysis of major air quality studies. During his first three years at DRI, he was responsible for the airborne ozone lidar research program under a cooperative agreement with the USEPA.

Before joining DRI, Dr. Moosmüller was at Colorado State University where he investigated Brillouin light scattering of spin waves and millimeter-wave effective line widths in thin metal films. He also did research on high-spectral-resolution lidar and coherent light scattering techniques. This work included the development of supersonic flow measurement techniques and the investigations of spectral line shapes. His earlier work at the Ludwigs-Maximilians Universität in Munich, Germany and the Max Planck Institute for Quantum Optics in Garching, Germany focused on laser remote sensing.

PROFESSIONAL EXPERIENCE

2015 – Present	Senior Director, DRI Wildland Fire Science Center (WFSC)
2013 – Present	NSHE Regents' Researcher Nevada System of Higher Education (NSHE)
2006 – Present	Graduate Faculty <i>Chemistry Department, University of Nevada, Reno, NV</i> <i>Chemical Physics Program, University of Nevada, Reno, NV</i> <i>Hydrologic Sciences Program, University of Nevada, Reno, NV</i>
2000 – Present	Research Professor <i>Desert Research Institute, University of Nevada System, Reno, NV</i>

- 1995 – Present Graduate Faculty
Physics Department, University of Nevada, Reno, NV
Atmospheric Sciences Program, University of Nevada, Reno, NV
- 1995 – 2000 Associate Research Professor
Desert Research Institute, University of Nevada System, Reno, NV
- 1991 – 1995 Assistant Research Professor
Desert Research Institute, University of Nevada System, Reno/Las Vegas, NV
- 1988 – 1990 Postdoctoral Research Associate
Magnetics Laboratory, Colorado State University, Fort Collins, CO
- 1982 – 1988 Graduate Research and Teaching Assistant
Geoscience Center, Nonlinear Optics Laboratory, and Physics Department, Colorado State University, Fort Collins, CO
- 1980 – 1982 Graduate Research Assistant
Physics Department, Ludwigs-Maximilians Universität, München, Germany and Max Planck Institute for Quantum Optics, Garching, Germany
- Summer 1979 Intern
IBM München, Germany
- Summer 1977 Intern
Bayer Dormagen, Germany

PROFESSIONAL ACTIVITIES

Honors

- Fellow of the American Association for Aerosol Research (AAAR) “honoring significant contributions by individuals to the discipline of aerosol science and technology, and service to AAAR.” (Since 2022).
- Eminent Scholar Mentoring Program of the University of Maryland, Baltimore County (UMBC) (Since 2022).
- Regents’ Researcher of the Nevada System of Higher Education (NSHE: UNLV, UNR, and DRI) “with one NSHE faculty member with a distinguished record in research named annually.” (Since 2013).

Awards

- Moosmüller, H. (2013). Benjamin Y. H. Liu Award of the American Association for Aerosol Research (AAAR) “recognizing outstanding contributions to aerosol instrumentation and experimental techniques.”
- Moosmüller, H. (2012). Nazir and Mary Ansari Medal for Excellence in Science “recognizing one Desert Research Institute (DRI) faculty member annually for outstanding contributions to science and entrepreneurship through (1) program building; (2) publications; and/or (3) patents and intellectual property.”
- Gillies, J. A., N. Lancaster, H. D. Kuhns, H. Moosmüller, E. McDonald, D. Gillette, and W. Nickling (2004). SERDP project (CP-1191) “Characterizing and Quantifying Local and Regional Particulate Matter Emissions from Department of Defense Installations”, SERDP Compliance Project of the Year.

Editorial Activities

- 2019 – Present Editorial Board Member, *Atmosphere* (ISSN 2073-4433).

- 2018 – Present Editor, *Aerosol Science and Technology (AS&T)*, Print ISSN 0278-6826 Online ISSN 1521-7388), the official journal of the American Society for Aerosol Research (AAAR).
- 2019 – 2020 Guest Editor, *Atmosphere* (ISSN 2073-4433): Special issue entitled "Impacts of Biomass Burning Smoke on Air Quality and Radiative Forcing and Climate".
- 2010 Guest Editor, *Atmospheric Chemistry and Physics (ACP)*, ISSN 1680-7316, eISSN 1680-7324): Special issue entitled "Measurement and Modeling of Aerosol Emissions from Biomass Burning".

Postdoctoral Advisor

- 2023 – Present Dr. Nicholas D. Beres
- 2023 – Present Dr. Prakash Gautam
- 2009 – 2010 Dr. Rajan K. Chakrabarty
Currently *Tenured Professor, Department of Energy, Environmental, and Chemical Engineering, Washington University in Saint Louis, Saint Louis, MO.*
- 2008 – 2010 Dr. Xavier Fain
Currently *Research Scientist – Glaciology and Paleoclimates at the Institut des Géosciences de l'Environnement (IGE), Comité National de la Recherche Scientifique (CNRS), Grenoble, France.*
- 2006 – 2007 Dr. Daniel Obrist
Currently *Vice Provost – Academic Personnel and Development, University of California, Division of Agriculture and Natural Resources (UC ANR).*
- 2003 - 2005 Dr. Claudio Mazzoleni
Currently *Tenured Professor, Physics Department, Michigan Technological University, Houghton, MI.*

Graduate Student Advisor

- 2018 – 2019 Ms. Megan Rennie (M.S. in Atmospheric Sciences, 2019).
Currently *Air Monitoring Scientist, Division of Air Quality, Utah Department of Environmental Quality, Salt Lake City, Utah.*
- 2011 – 2019 Dr. Nicholas D. Beres (Ph.D. in Atmospheric Sciences, 2019; M.S. in Atmospheric Sciences, 2014).
Currently *Postdoctoral Researcher, Desert Research Institute, Reno, NV.*
- 2016 – 2018 Ms. Michealene Iaukea-Lum (M.S. in Atmospheric Sciences, 2018).
Currently, *Associate Scientist II, Mauna Loa Observatory, CIRES/NOAA Global Monitoring Division (GMD), University of Colorado, Boulder, CO.*
- 2014 – 2017 Dr. Patricio G. Piedra (Ph.D. in Atmospheric Sciences, 2017).
Currently, *Senior Research Scientist, The Probitas Project Inc., Vienna, VA.*
- 2011 – 2014 Mr. Ian J. Arnold (M.S. in Physics, 2014).
Currently *Research Engineer, Precision Instrumentation Group, Wyant College of Optical Sciences, University of Arizona, Tucson, AZ.*
- 2009 – 2011 Dr. Guadalupe Paredes-Miranda (Ph.D. in Atmospheric Sciences, 2011).
Currently *Instructor, Department of Physics, University of Nevada, Reno, NV.*
- 2007 – 2011 Dr. Guoxun Tian (Ph.D. in Physics, 2011).
Currently *CEO MicroRobot LLC, Reno, NV.*

- 2004 – 2008 Dr. Rajan K. Chakrabarty (Ph.D. in Chemical Physics, 2008; M.S. in Atmospheric Sciences, 2006).
Currently *Tenured Professor, Department of Energy, Environmental, and Chemical Engineering, Washington University in Saint Louis, Saint Louis, MO.*
- 1999 – 2003 Dr. Claudio Mazzoleni (Ph.D. in Atmospheric Sciences, 2003).
Currently *Tenured Professor, Physics Department, Michigan Technological University, Houghton, MI.*
- 1999 – 2003 Dr. Ravi Varma (Ph.D. in Atmospheric Sciences, 2003).
Currently *Tenured Professor & Head, Department of Physics, Chair, Centre for International Relations, National Institute of Technology (NIT), Calicut, India.*
- 1994 – 1997 Dr. Joseph D. Vance (M.S. in Atmospheric Sciences, 1997).
Currently *CEO, EspyLux LLC, Reno, NV.*

Conferences

- Lecturer, *Winter School on Cryospheric Monitoring Techniques*, Universidad Tecnica Federico Santa Maria, Portillo, Chile, July 30 – August 2, 2024.
- Organizer, *International Workshop on Emissions, Atmospheric Processing, and Health Effects of Wildland Fires*, Las Vegas, NV, March 20, 2024.
- Moderator, Inaugural Lundgren-Marple Lecture: Synergies Between Aerosol Measurements from Satellites and In-Situ at the Nose Level, Vanderlei Martins, University of Maryland, Baltimore County, *41st Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 2–6, 2023.
- Chair, Session on Optical Properties, Radiative Forcing, & Climate II, *13th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, July 9-12, 2023
- Chair, Session on Source Apportionment & Characterization II, *13th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, July 9-12, 2023.
- Chair, Session on Secondary Organic Aerosols (SOA), *13th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, July 9-12, 2023.
- Scientific Committee, *13th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, July 9-12, 2023.
- Chair, Session 12AP Aerosol Physics III. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14-18, 2019.
- Mentor, Helping Graduate Students to Improve their Presentation Skills. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14-18, 2019.
- Convener and Chair, Session 7 on Optical Properties of Carbonaceous Aerosols, Radiative Forcing, and Climate, *12th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA 2019)*, Vienna, Austria, April 3-6, 2019.
- Scientific Committee, *12th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA 2019)*, Vienna, Austria, April 3-6, 2019.
- Judge, Student Poster Competition. *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2-7, 2018.
- Chair, Aerosol Physics Session VII. *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2-7, 2018.

Faculty, Tutorial on Aerosol Optics: Fundamentals and Instrumentation (2 Hour Tutorial, jointly with C. Sorensen). *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2-7, 2018.

Chair, Session on Atmospheric Remote Sensing. *Joint Meeting of 17th Electromagnetic and Light Scattering Conference (ELS-XVII) and 11th Conference on Laser-Light and Interactions with Particles (LIP2018)*, Texas A&M University, College Station, TX, March 4-9, 2018.

Chair, Session F-I: Monsoons, Biomass Burning, etc. *Fourth Santa Fe Climate Conference on Global & Regional Climate Change*, Santa Fe, NM, February 5-10, 2017.

Chair, Session T-IV: Climate Change and Tropical Cyclones. *Fourth Santa Fe Climate Conference on Global & Regional Climate Change*, Santa Fe, NM, February 5-10, 2017.

Judge, Student Poster Competition. *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 17-21, 2016.

Faculty, Tutorial on Aerosol Optics: Theory, Measurement, and Application (2 Hour Tutorial, jointly with C. Sorensen). *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 17-21, 2016.

Chair, Session 3IM: Instrumentation and Methods III. *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 17-21, 2016.

Faculty, Tutorial on Contemporary Aerosol Optics (4-hour tutorial, jointly with R. K. Chakrabarty and R. Washenfelder). *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26-30, 2016.

Panelist, Evolving Issues in Air Quality Related to a Changing Climate. *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26-30, 2016.

Executive Committee, *11th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 10-13, 2015.

Chair, Session 5: Aerosol Optical Properties and Brown Carbon, *11th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 10-13, 2015.

Chair, Session 6: Contemporary and Historical Concentration Trends, *11th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 10-13, 2015.

Chair, Session 12: Carbonaceous Aerosols in the Atmosphere. *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20-24, 2014.

Chair, Session 2AP: Aerosol Physics. *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20-24, 2014.

Chair, Session 2: Black Carbon Definition and Measurement Approaches. *International Council on Clean Transportation (ICCT) Technical Workshop on Marine Black Carbon Emissions: Identifying Research Gaps*. Ottawa, Canada, September 9-10, 2014.

Technical Program Committee, *Aerosol and Atmospheric Optics: Visibility and Air Pollution, A&WMA Visibility Specialty Conference*, Whitefish, MT, September 24-29, 2012.

Faculty, Tutorial on Contemporary Aerosol Optics (4-hour tutorial, jointly with R. K. Chakrabarty). *Aerosol and Atmospheric Optics: Visibility and Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24-28, 2012.

Panelist, Promise and Problems of Advanced Particulate Monitoring and Analysis Methods for Routine Networks. *Aerosol and Atmospheric Optics: Visibility and Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24-28, 2012.

Chair, Session 8: Aerosol – Optical Relationships, *Aerosol and Atmospheric Optics: Visibility and Air Pollution, A&WMA Visibility Specialty Conference*, Whitefish, MT, September 24-29, 2012.

Chair, Session 7: Satellite and Other Remote Sensing Applications to Haze/Aerosol Monitoring, *Aerosol and Atmospheric Optics: Visibility and Air Pollution, A&WMA Visibility Specialty Conference*, Whitefish, MT, September 24-29, 2012.

Chair, Poster Session PII. *Third Santa Fe Conference on Global and Regional Climate Change*, Santa Fe, NM, October 31 - November 3, 2011.

Conference Advisory Committee, *Optics'11: A Conference on Light*, National Institute of Technology Calicut and Optical Society of India (OSI), Calicut, India, May 23-25, 2011.

Chair, Session A23C. Biomass Burning: New Findings and Analyses from Multiple Perspectives III (7 presentations), *2010 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 13-17, 2010.

Chair, Session 4B. Recent Advances in Biomass Burning Emissions – Source Modeling and Measurement/Aerosol Exposure (7 presentations), *Annual Meeting of the American Association for Aerosol Research (AAAR)*, Minneapolis, MN, October 26-30, 2009.

Chair, Poster Session 3B. Recent Advances in Biomass Burning Emissions – Wildfire Emissions and Impacts (17 presentations), *Annual Meeting of the American Association for Aerosol Research (AAAR)*, Minneapolis, MN, October 26-30, 2009.

Chair, Session 2B. Recent Advances in Biomass Burning Emissions – Wildfire Emissions and Impacts (6 presentations), *Annual Meeting of the American Association for Aerosol Research (AAAR)*, Minneapolis, MN, October 26-30, 2009.

Chair, Session 1B. Recent Advances in Biomass Burning Emissions – Aerosol Characterization (7 presentations), *Annual Meeting of the American Association for Aerosol Research (AAAR)*, Minneapolis, MN, October 26-30, 2009.

Organizer, Special Symposium on Recent Advances in Biomass Burning Emission Measurement and Modeling, *Annual Meeting of the American Association for Aerosol Research (AAAR)*, Minneapolis, MN, October 26-30, 2009.

Technical Program Committee, *Annual Meeting of the American Association for Aerosol Research (AAAR)*, Minneapolis, MN, October 26-30, 2009.

Chair, Biomass Burning Emissions Session, *Aerosol and Atmospheric Optics: Visual Air Quality and Radiation Balance Conference*, Air & Waste Management Association, Moab, UT, April 28 - May 2, 2008.

Chair, Poster/Oral Session, *Aerosol Workshop on Climate Prediction Uncertainties, Second International Conference on Global Warming and the Next Ice Age*, Santa Fe, NM, July 17-21, 2006.

Chair, Aerosols and Climate Session, *Second International Conference on Global Warming and the Next Ice Age*, Santa Fe, NM, July 17-21, 2006.

Chair, Mercury Detection Session, *61st Northwest Regional Meeting of the American Chemical Society*, Reno, NV, June 25-28, 2006.

Chair, Atmospheric Science Session, *61st Northwest Regional Meeting of the American Chemical Society*, Reno, NV, June 25-28, 2006.

Chair, Session 2, Optical Monitoring Methods, *Regional and Global Perspectives on Haze: Causes, Consequences, and Controversies (Visibility Specialty Conference)*, Asheville, NC, October 25-29, 2004.

Topic Leader, Topic #8: What New and Innovative Sampling, Analytical, and Interpretive Techniques are Needed to Determine the Properties and Sources of Carbonaceous Aerosol in the Atmosphere? *International Workshop for the Development of Research Strategies for the Sampling and Analysis of Organic and Elemental Carbon Fractions in Atmospheric Aerosol (OC/EC Workshop)*, Durango, CO, March 4-5, 2003.

Chair, Session 106: Remote Sensing of Chemical Species in the Atmosphere, *87th Annual Meeting of the Air & Waste Management Association*, Cincinnati, OH, June 19-24, 1994.

Chair, Session 21: Atmospheric Spectroscopy and Source Emissions Characterization, *II, International Symposium on Optical Sensing for Environmental Monitoring*, Atlanta, GA, October 12-14, 1993.

Select Committees and Working Groups

Vice-Chair, History of Aerosol Science Working Group, American Association for Aerosol Research (AAAR) (2024-2025).

Outstanding Publication Award Committee, Aerosol Science and Technology, American Association for Aerosol Research (AAAR) (2021 – present).

Science Team, NASA Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) Mission (2020 – present).

Outstanding Reviewer Award Committee, Aerosol Science and Technology, American Association for Aerosol Research (AAAR) (2018 – present).

Chair, Appraisal Panel for Los Alamos National Laboratory (LANL) Laboratory Directed Research and Development (LDRD), *Hot Smoke-Dust Signatures to Predict Nuclear Fallout and Winter* (2021 – 2023).

Desert Research Institute's Division of Atmospheric Sciences Division Advisory Group (DAG) (2020 – 2023).

Chair, Desert Research Institute's External Review Committee (2019 – 2020).

Chair, Publication Committee, American Association for Aerosol Research (AAAR) (2016 – 2017).

Chair, Desert Research Institute's Sabbatical Leave Committee (2016 – 2017).

Desert Research Institute's Sabbatical Leave Committee (2014 – 2017).

Publication Committee, American Association for Aerosol Research (AAAR) (2014 – 2017).

Nevada Space Grant Consortium (2014 – 2015).

External Review Committee Sandia National Laboratory SL12-SAM Solids, DOE's Defense Nuclear Nonproliferation Research and Development (2013).

Board of Directors, American Association for Aerosol Research (AAAR) (2012 – 2015).

Desert Research Institute's Promotion Committee (2011 – 2013).

Curriculum Committee, Atmospheric Sciences Program, University of Nevada, Reno (2012).

External Review Committee, Los Alamos National Laboratory (LANL) Laboratory Directed Research and Development (LDRD), Multi-Scale Science Framework for Climate Treaty Verification: Attributing and Tracking Greenhouse Gas Fluxes Using Co-Emitted Signatures (2011 – 2012).

External Review Committee, Los Alamos National Laboratory (LANL) Laboratory Capability Review of Sensors, Remote Sensing, and Sensor Systems (SRS³) (2011).

Science Team, NASA's GLORY Mission (2010 – 2014).

External Review Committee, Los Alamos National Laboratory (LANL) Laboratory Directed Research and Development (LDRD), Resolving the Aerosol-Climate-Water Puzzle (2005 – 2007).

Adjunct Science Team, Department of Energy's Atmospheric Science Program (2005 – 2010).

Chair, Bylaws Committee, Atmospheric Sciences Program, University of Nevada, Reno (2005 – 2008).

Chair, Desert Research Institute's Emeritus Committee (2008 – 2009).

Desert Research Institute's Emeritus Committee (2006 – 2009).

Desert Research Institute's Research Affairs Council (2003 – 2007).

Chair, Desert Research Institute, Division of Atmospheric Sciences' Promotion Committee (2003 – 2006).

Desert Research Institute, Division of Atmospheric Sciences' Promotion Committee (2001 – present).

Desert Research Institute's Library Committee (2002 – 2008).

Desert Research Institute's Senior Research Council (2000 – present).

Air & Waste Management Association's Technical Committee AB-2, Chemistry (1993 – 2002).

Desert Research Institute's Faculty Senate (1998 – 2001).

American Meteorological Society's Committee on Laser Atmospheric Studies (1995 – 1998).

Manuscript Review

1. Aerosol and Air Quality Research (TAAR)
2. Aerosol Science and Engineering (Springer)
3. Aerosol Science and Technology (AAAR; Taylor & Francis)
4. Air Quality, Atmosphere, and Health (Springer)
5. Analytical Chemistry (ACS)
6. American Chemical Society (ACS) Books
7. American Institute of Aeronautics and Astronautics (AIAA) Journal
8. Applied Optics (OSA)
9. Applied Sciences (MDPI)
10. Atmosphere (MDPI)
11. Atmospheric Chemistry and Physics (EGU; Copernicus)
12. Atmospheric Environment (Elsevier)
13. Atmospheric Measurement Techniques (EGU; Copernicus)
14. Atmospheric Pollution Research (Elsevier)
15. Atmospheric Research (Elsevier)
16. Bulletin of the American Meteorological Society (AMS)
17. Chemosphere (Elsevier)
18. Climate (MDPI)
19. Combustion and Flame (Elsevier)
20. Computers and Electronics in Agriculture (Elsevier)
21. Current Climate Change Reports (Springer)
22. Current Opinion in Chemical Engineering (Elsevier)
23. Earth and Space Chemistry (ACS)
24. Earth and Space Science (AGU; Wiley)
25. Elementa: Science of the Anthropocene (UC Press)
26. Energies (MDPI)
27. Environment International (Elsevier)

28. Environmental Engineering Science (Mary Ann Liebert)
29. Environmental Monitoring and Assessment (Springer)
30. Environmental Nanotechnology, Monitoring & Management (Elsevier)
31. Environmental Pollution (Elsevier)
32. Environmental Research Letters (IOP)
33. Environmental Science and Pollution Research (Springer)
34. Environmental Science and Technology (ACS)
35. Environmental Science and Technology Letters (ACS)
36. Environmental Science: Atmospheres (The Royal Society of Chemistry)
37. Environmental Science: Processes & Impacts (The Royal Society of Chemistry)
38. European Journal of Remote Sensing (AIT; Taylor & Francis)
39. Fire (MDPI)
40. Fire Ecology (Springer)
41. Forests (MDPI)
42. Geophysical Research Letters (AGU; Wiley)
43. Geoscientific Model Development (EGU; Copernicus)
44. Geotechnical Testing Journal (ASTM)
45. Institute of Electrical and Electronics Engineers (IEEE) Access
46. Jordan Journal of Physics (Yarmouk University)
47. Journal of Aerosol Science (Elsevier)
48. Journal of Applied Meteorology (AMS)
49. Journal of Atmospheric and Oceanic Technology (AMS)
50. Journal of Colloid and Interface Science (Elsevier)
51. Journal of Environmental Management (Elsevier)
52. Journal of Geophysical Research (AGU; Wiley)
53. Journal of Hazardous Materials (Elsevier)
54. Journal of Optics (IOP)
55. Journal of Physical Chemistry (ACS)
56. Journal of Physics D: Applied Physics (IOP)
57. Journal of Quantitative Spectroscopy and Radiative Transfer (Elsevier)
58. Journal of the Air & Waste Management Association (A&WMA; Taylor & Francis)
59. Measurement Science and Technology (IOP)
60. Minerals (MDPI)
61. Mining, Metallurgy & Exploration (SME; Springer)
62. Nature Communications (Nature)
63. Nature Communications Earth & Environment (Nature)
64. Nature Geoscience (Nature)
65. Nature Scientific Reports (Nature)
66. Optics and Laser Technology (Elsevier)
67. Optics Express (OSA)
68. Optics Letters (OSA)
69. Optik: International Journal for Light and Electron Optics (Elsevier)
70. Particuology (Elsevier)
71. Proceedings of the National Academy of Sciences (National Academy of Sciences)
72. Process Safety and Environmental Protection (Elsevier)
73. Radiation Physics and Chemistry (Elsevier)

74. Remote Sensing (MDPI)
75. Remote Sensing of the Environment (Elsevier)
76. Science of the Total Environment (Elsevier)
77. Scientific Data (Nature)
78. Sensors (MDPI)
79. Sensors and Actuators (Elsevier)
80. Sensor Letters (ASP)
81. Society for Mining, Metallurgy, and Exploration Transactions (SME)
82. Society of Automotive Engineers Transactions (SAE)
83. Sustainability (MDPI)
84. Tellus (IMI; Taylor & Francis)
85. Toxics (MDPI)

Proposal Review

International Agencies and Organizations:

1. Austrian Academy of Sciences (ÖAW)
2. Austrian Science Fund (FWF)
3. Chilean National Commission for Scientific and Technological Research (CONICYT)
4. Czech Science Foundation (GAČR)
5. ETH Zürich Research Commission
6. European Strategy Forum for Research Infrastructure (ESFRI), Strategic Working Group Environment (SWG ENV)
7. French National Research Agency (ANR)
8. Global Center for Food Systems Innovation (GCFSI)
9. Israel Science Foundation (ISF)
10. National Research Council of Canada (NRC)
11. Natural Environmental Research Council, UK
12. Polish National Science Center (Narodowe Centrum Nauki - NCN), Poland
13. Swedish Research Council
14. Swiss National Science Foundation

Other Agencies and Organizations:

15. MacArthur Foundation, Fellows Program
16. Maryland Industrial Partnerships Program (MIPS)
17. Research Corporation
18. U.S. Civilian Research and Development Foundation

U.S. Department of Defense (DoD):

19. Army Research Office (ARO)
20. Department of Defense (DoD), EPSCoR Program

U.S. Department of Energy (DoE):

21. Department of Energy (DoE)
22. Department of Energy (DoE), SBIR
23. Los Alamos National Laboratory (LANL)
24. Sandia National Laboratories (SNL)

U.S. National Aeronautics and Space Administration (NASA):

25. NASA Earth Science Fellowship Program

26. NASA EPSCoR Programs (National, Nevada, Montana)
27. NASA Atmospheric Composition Modeling and Analysis Program (ACMAP) Review Panel
28. NASA Atmospheric Composition Campaign Data Analysis and Modeling (ACCDAM) Review Panel
29. NASA Future Investigators in NASA Earth and Space Science and Technology (FINESST) Review Panel
30. NASA Laboratory Science ROSES Review Panel
31. NASA Space Grant Graduate Fellowships
32. NASA Space Grant RISE and HOP Scholarship Review Panel
33. NASA Space Grant Panel on Informal Education Programs
34. NASA Space Grant Panel on Research Infrastructure Building

U.S. National Oceanic and Atmospheric Administration (NOAA):

35. National Oceanic and Atmospheric Administration (NOAA)
36. National Oceanic and Atmospheric Administration (NOAA), SBIR

U.S. National Science Foundation (NSF):

37. NSF Atmospheric Chemistry Program
38. NSF CAREER Program
39. NSF Climate and Large-Scale Dynamics (CLD) Program
40. NSF EMpowering BRoader Academic Capacity and Education (EMBRACE) Program
41. NSF EPSCoR Program
42. NSF Excellence in Research (EiR) Program
43. NSF Major Research Instrumentation (MRI) Program
44. NSF Office of Polar Programs (OPP)
45. NSF Physical and Dynamic Meteorology (PDM) Program
46. NSF Postdoctoral Fellowships

Membership

1. American Association for Aerosol Research (AAAR)

PUBLICATIONS (Google Scholar h-index = 59, i10-index = 129, citations = 13,398)

Peer Reviewed Publications

- 155) Moosmüller, H. J. B. Maughan, P. Gautam, and C. M. Sorensen (2024). A Mixing Rule for Imaginary Parts of Refractive Indices of Aerosols or Colloids in the Rayleigh Regime. *J. Quant. Spectrosc. Radiat. Transfer*, accepted for publication (28-Oct-2024, JQSRT-D-24-00250R1).
- 154) Gautam, P., H. Moosmüller, J. B. Maughan, and C. M. Sorensen (2024). Sensitivity of Backscattering to Spherical Particle Physical Properties: Size, Refractive Index, and Shape Deviations. *J. Quant. Spectrosc. Radiat. Transfer*, **329**, 109204 (7 pages), doi.org/10.1016/j.jqsrt.2024.109204.
- 153) Choi, M., A. Lyapustin, G. L. Schuster, S. Go, Y. Wang, S. Korokin, R. Kahn, J. S. Reid, E. J. Hyer, T. F. Eck, M. Chin, D. J. Diner, O. Kalashnikova, O. Dubovik, J. Kim, and H. Moosmüller (2024). Light-Absorbing Black Carbon and Brown Carbon Components of Smoke Aerosol from DSCOVER EPIC Measurements over North America and Central Africa. *Atmos. Chem. Phys.*, **24**, 10543-10565, doi.org/10.5194/acp-24-10543-2024.
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- 567) Sorensen, C. M., P. Gautam, S. Labidi, J. B. Maughan, K. Ehlers, and H. Moosmüller (2024). Measuring Complex Particulate Refractive Index Spectra. *42nd Annual Conference of the American Association for Aerosol Research*, Albuquerque, NM, October 21–25, 2024.
- 566) Moosmüller, H. (2024 Oral). Darwin’s Dust and the Search for Signs of Past Life on Mars. *42nd Annual Conference of the American Association for Aerosol Research*, Albuquerque, NM, October 21–25, 2024.
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- 542) Ottaviani, M., K. Piziak, S. Modafferi, M. Kharlov, J. Chowdhary, H. Moosmüller, and G. Schuster (2023 Poster). A Machine-Learning Approach to Oil Spill Detection from Photopolarimetric PACE Satellite Data. *2023 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 11–15, 2023.
- 541) Vahdat-Aboueshagh, H., S. A. McKenna, H. Moosmüller, G. F.S. Boisramé, and Brad Sion (2023 Oral). Calculation of Burn Severity Based on Physics of Wildfires. *2023 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 11–15, 2023.
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- 538) Moosmüller, H. (2023 Poster). Darwin's Dust and the Search for Signs of Ancient Life on Mars. *41st Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 2–6, 2023.
- 537) Moosmüller, H., G. L. Schuster, E. V. Chemyakin, S. A. Stamnes, and J. Chowdhary (2023 Oral). Black Carbon Aerosols Properties for Remote Sensing and Radiative Forcing Applications. *41st Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 2–6, 2023.
- 536) Virkkula, A., J. Svensson, K. Luoma, D. Li, O. Meinander, A. Kontu, O. Sippula, O. Norvapalo, J. Jänis, P. Dagsson-Waldhauserová, and H. Moosmüller (2023 Poster). An Overview of the Soot-on-Snow (SoS) Campaigns in Finland in 2011–2023. *European Aerosol Science Conference 2023 (EAC 2023)*, Malaga, Spain, September 3–8, 2023.
- 535) Heiblum, R., A. Kohen, A. Lavi, D. Drehler, R. Zidon, M. Guter, K. Goldman, Y. Karmon, D. Campbell, H. Moosmüller, and E. Weinroth (2023 Oral). Use of High Resolution Qualified Environmental Crowdsourcing Data from Mobile Phones for Validation of Numerical Mesoscale and Building Scale CFD Urban Models. *11th International Conference on Urban Climate (ICUC11)*, Sydney, Australia, August 28 – September 1, 2023.
- 534) Rocha-Lima, A., H. Moosmüller, J. Carty, A. Puthukkudy, and J. V. Martins (2023 Poster). Optical Characterization of Lunar Dust Simulants. *International Conference on Aeolian Research (ICAR XI)*, Las Cruces, NM, July 9–14, 2023.

- 533) Moosmüller, H., G. L. Schuster, E. V. Chemyakin, S. A. Stamnes, and J. Chowdhary (2023 Oral). Optical Properties of Black Carbon Aerosols Needed for Remote Sensing and Radiative Forcing Applications. *13th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, July 9–12, 2023.
- 532) Moosmüller, H., N. D. Beres, M. Lapuerta, and F. Cereceda-Balic (2020 Poster). Snow Surface Albedo Sensitivity to Black Carbon: Radiative Transfer Modelling. *13th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, July 9–12, 2023.
- 531) Moosmüller, H., J. Svensson, K. Luoma, D. Li, O. Meinander, A. Kontu, O. Sippula, O. Norvapalo, J. Jänis, P. Dagsson-Waldhauserová, and A. Virkkula (2023 Oral). The 2023 Soot-on-Snow Campaign in Finland: Study Design and First Results. *13th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, July 9–12, 2023.
- 530) Rocha-Lima, A., J. Carty, A. Puthukkudy, J. V. Martins, and H. Moosmüller (2023 Poster). Assessing the Size-resolved Grain Density and Optical Properties of Atmospheric Dust Particles. *Dust 2023 - 5th International Conference on Atmospheric Dust*, Bari, Italy, May 22–25, 2023.
- 529) Samburova, V., M. Berli, B. Sion, and H. Moosmüller (2023 Oral). Changes in Soil Water Repellency Caused by Four 2021-2022 Western U.S. Mega Fires. *8th International Wildland Fire Conference*, Porto, Portugal, May 16–19, 2023.
- 528) Raeofy, Y., V. Samburova, M. Berli, E. Schneider, C. Rüger, and H. Moosmüller (2023 Poster). Hyperspectral Reflectance of Pre- and Post-Fire Soils: Toward Remote Sensing of Fire-Induced Soil Hydrophobicity. *20th Electromagnetic and Light Scattering Conference (ELS-XX)*, Almuñecar, Spain, May 14–19, 2023.
- 527) Raeofy, Y., V. Samburova, M. Berli, B. Sion, and H. Moosmüller (2023 Poster). Hyperspectral Reflectance of Pre- and Post-Fire Soils: Toward Remote Sensing of Fire-Induced Soil Hydrophobicity. *2023 Nevada Space Grant and NASA EPSCoR Statewide Meeting*, Carson City, NV, April 28, 2023.
- 526) Raeofy, Y., V. Samburova, M. Berli, B. Sion, and H. Moosmüller (2023 Poster). Hyperspectral Reflectance of Pre- and Post-Fire Soils: Toward Remote Sensing of Fire-Induced Soil Hydrophobicity. *Desert Research Institute Graduate Student Poster Competition*, Reno, NV, April 10, 2023.
- 525) Moosmüller, H., J. Svensson, and A. Virkkula (2023 Oral, **invited**). Dust in the Wind: Entrained Mineral Dust on Earth, Moon, and Mars *plus* Novel Instrumentation for Investigating Aerosol - Snow Optical Interactions. *Seminar, Finish Meteorological Institute (FMI)*, Helsinki, Finland, March 31, 2023.
- 524) Chowdhary, J., H. Moosmüller, G. Schuster, S. Stamnes, E. Chemyakin, and M. Ottaviani (2023 Oral, **invited**). Remote Sensing of Atmosphere-Ocean Systems in the UV Spectrum: Modeling Absorption by BrC, Phytoplankton, Dust, and BC. NASA PACE Science and Application Team Meeting 2023, San Diego, CA, February 27 – March 1, 2023.
- 523) Sadrian, M. R., W. M. Calvin, J. P. Engelbrecht, and H. Moosmüller (2022). Transmission Spectra and Derived Imaginary Refractive Indices for Soil Samples from

- Globally Important Dust Generating Regions. *2022 Fall Meeting of the American Geophysical Union*, Chicago, IL, December 12–16, 2022.
- 522) Chowdhary, J., H. Moosmüller, G. Schuster, S. Starnes, E. Chemyakin, and M. Ottaviani (2022). PACE UV-VIS Polarimetric Remote Sensing of Atmosphere-Ocean Systems: Sensitivity to Variations in Brown Carbon. *2022 Fall Meeting of the American Geophysical Union*, Chicago, IL, December 12–16, 2022.
- 521) Samburova, V., B. Sion, P. Bahdanovich, K. Axelrod, Y. Raefy, M. Berli, and H. Moosmüller (2022, **invited**). Physical and Chemical Characterization of Post-Fire Soil Samples (2021-2022 Mega-Fires). *DRI's Division of Atmospheric Sciences Science Talks*, Desert Research Institute, Reno and Las Vegas, NV, December 9, 2022.
- 520) Moosmüller, H. (2022, **invited**). NASA Funding Opportunities and Proposal Writing. *DRI Early Career Faculty Grant Writing Workshop*. Desert Research Institute, Reno, NV, November 14, 2022.
- 519) Moosmüller, H., N. D. Beres, J. Svensson, A. Virkkula, M. Lapuerta, and F. Cereceda-Balic (2022, **invited**). Development of Novel Instrumentation for Investigating Aerosol - Snow Optical Interactions. *Workshop Internacional: "Impactos Antrópicos y Naturales sobre la Criósfera en un Clima Cambiante: Consecuencias Hidrológicas"*, Valparaiso, Chile, October 28, 2022.
- 518) Moosmüller, H. (2022, **invited**). Dust in the Wind: Thoughts on Entrained Mineral Dust, Life, and the Universe. *Distinguished Speaker Seminar and Eminent Scholar Mentoring Program of the Department of Physics, University of Maryland, Baltimore County (UMBC)*, Baltimore, MD, October 26, 2022.
- 517) Metzdorff, A., T. Gorena, X. Fadic, M. F. Ruggeri, T. R. Bolaño-Ortiz, L. Castro, R. Flores, P. Sills, M. Lapuerta, R. Ballesteros, S. González-Correa, H. Moosmüller, E. Pinilla, L. Calvo, C. Miro, and F. Cereceda-Balic (2022). Determination of Ion and Trace Metal Concentrations in Surface Snow of the El Yeso Hydrological Sub-Basin (Nunatak-2). *Environmental and Analytical Chemistry Meeting (EQAA) of the Environmental and Analytical Chemistry Division (DQAA) of the Chilean Chemical Society (SChQ)*, Iquique, Chile, October 18–21, 2022.
- 516) Trejo, F. M., M. F. Ruggeri, T. R. Bolaño-Ortiz, X. Fadic, T. G. Hernandez, L. Castro, R. Flores, M. Lapuerta, S. González-Correa, R. Ballesteros, H. Moosmüller, E. Pinilla, L. Calvo, C. Miro, and F. Cereceda-Balic (2022). Comparative Study of Reference Materials for Enrichment Factor Calculation in Sources Estimation Through Analysis of Elements (XRF/ICP-MS) in Soil and Snow Samples from Portillo, Central Andes, Chile. *Environmental and Analytical Chemistry Meeting (EQAA) of the Environmental and Analytical Chemistry Division (DQAA) of the Chilean Chemical Society (SChQ)*, Iquique, Chile, October 18–21, 2022.
- 515) Ruggeri, M. F., T. R. Bolaño-Ortiz, T. Gorena, X. Fadic, P. Sills, M. Lapuerta, R. Ballesteros, S. González-Correa, H. Moosmüller, and F. Cereceda-Balic (2022). Black Carbon Determination in Snow Samples Collected in the Yeso River Basin of the Chilean Central Andes During Winters 2020 and 2021: First Results. *Environmental and Analytical Chemistry Meeting (EQAA) of the Environmental and Analytical Chemistry Division (DQAA) of the Chilean Chemical Society (SChQ)*, Iquique, Chile, October 18–21, 2022.

- 514) Trejo, F. M., M. F. Ruggeri, T. R. Bolaño-Ortiz, X. Fadic, T. G. Hernandez, L. Castro, R. Flores, M. Lapuerta, S. González-Correa, R. Ballesteros, H. Moosmüller, and F. Cereceda-Balic (2022). Anthropogenic Impact of Aerosols on Change in Albedo and Surface Retreat of Paloma Norte and Yeso Glaciers, Central Andes, Chile. *Environmental and Analytical Chemistry Meeting (EQAA) of the Environmental and Analytical Chemistry Division (DQAA) of the Chilean Chemical Society (SChQ)*, Iquique, Chile, October 18–21, 2022.
- 513) Samburova, V., H. Moosmüller, P. Bahdanovich, K. Axelrod, B. Sion, and M. Berli, (2022, **invited**). Seeking Answers from the Wild-Fire Ashes. *Analytische Chemie & Aerosol Science Seminar*, Institut für Chemie, Universität Rostock, Rostok, Germany, October 18, 2022.
- 512) Chowdhary, J., H. Moosmüller, G. Schuster, S. Stamnes, E. Chemyakin, and M. Ottaviani (2022). PACE UV-VIS Polarimetric Remote Sensing of the Atmosphere: Modeling Scattering and Absorption by Brown Carbon. *Third Conference on Advancement of Polarimetric Observations (Apolo-2022)*, Silver Springs, MD, August 9–12, 2022.
- 511) Chowdhary, J., H. Moosmüller, G. Schuster, K. Tsigaridis, M. Ottaviani, and S. Stamnes (2022). Polarimetric Remote Sensing of the Atmosphere in the UV-VIS Spectrum: Modeling Scattering and Absorption by Brown Carbon. *International Radiation Symposium (IRS 2022)*, Thessaloniki, Greece, July 4–8, 2022.
- 510) Colarco, P. R., P. Castellanos, R. C. Levy, R. L. Miller, M. Chin, R. A. Kahn, O. Kempainen, E. P. Nowotnick, R. Espinosa, H. Yu, M. D. Smith, S. Guzewich, A. Rocha-Lima, H. Moosmüller, P. Ginoux, Z. Kipling, A. Benedetti, S. Rémy, O. Jorba, C. P. García-Pando, T. Tanaka, J. S. Reid, P. Xian, M. Brooks, J. McQueen, B. Baker, R. Kouznetsov, and S. Bauer (2022, **invited**). A Review of the Treatment of Dust Optical Properties in Earth System Modeling. *Director's Seminar, Sciences and Exploration Directorate (SED), hosted by Earth Sciences Division, NASA Goddard Space Flight Center (GSFC)*, Greenbelt, MD, July 1, 2022.
- 509) Levy, R., P. Castellanos, P. R. Colarco, R. L. Miller, E. P. Nowotnick, R. Espinosa, R. A. Kahn, R. C. Levy, H. Yu, M. Chin, O. Kempainen, S. Guzewich, M. D. Smith, A. Rocha-Lima, H. Moosmüller, D. Giles, Y. Zhou, J. Lee, Y. Wang, and H. Jethva (2022, **invited**). Comparing Assumed Dust Optical Properties in Goddard-Based Satellite Algorithms. *Director's Seminar, Sciences and Exploration Directorate (SED), hosted by Earth Sciences Division, NASA Goddard Space Flight Center (GSFC)*, Greenbelt, MD, July 1, 2022.
- 508) Castellanos, P., R. L. Miller, E. P. Nowotnick, R. Espinosa, R. A. Kahn, R. C. Levy, H. Yu, M. Chin, P. R. Colarco, O. Kempainen, S. Guzewich, M. D. Smith, A. Rocha-Lima, and H. Moosmüller (2022, **invited**). Challenges in Characterizing Dust Aerosol Properties for Earth and Planetary Science Applications: A Goddard Science Task Group Review. *Director's Seminar, Sciences and Exploration Directorate (SED), hosted by Earth Sciences Division, NASA Goddard Space Flight Center (GSFC)*, Greenbelt, MD, July 1, 2022.
- 507) Moosmüller, H., (2022, **invited**). UAV-based Characterization of Wildland Fires and Their Impacts. *Workshop on Collecting and Processing UAV (Drone)-Based Radiometry Data for Watershed Studies*, Desert Research Institute, Las Vegas, NV, May 17-18, 2022.

- 506) Etyemezian, V., N. Kumar, H. Moosmüller, J. Miller, T. Minor, and D. McEvoy (2022, **invited**). Cross-Divisional Collaboration. *DRI Lunch and Learn*, Desert Research Institute, Reno & Las Vegas, NV, April 25, 2022.
- 505) Moosmüller, H. F. Hosseinpour, L. Fenstermaker, and E. M. Wilcox (2022, **invited**). NASA Funding Opportunities and RFP Process. *DRI Lunch and Learn*, Desert Research Institute, Reno & Las Vegas, NV, April 20, 2022.
- 504) Colarco, P. R., P. Castellanos, R. C. Levy, R. L. Miller, M. Chin, R. A. Kahn, O. Kempainen, E. P. Nowottnick, R. Espinosa, H. Yu, M. D. Smith, S. Guzewich, A. Rocha-Lima, H. Moosmüller, P. Ginoux, Z. Kipling, A. Benedetti, S. Rémy, O. Jorba, C. P. García-Pando, T. Tanaka, J. S. Reid, P. Xian, M. Brooks, J. McQueen, B. Baker, R. Kouznetsov, S. Bauer, A. da Silva, B. Holben, and A. Darmanov (2022, **invited**). The June 2020 Extreme Dust Event and a Review of the Treatment of Dust Optical Properties in Earth System Modeling. *Seminar, Atmospheric Sciences Department, Texas A&M University*, Online, January 26, 2022.
- 503) Colarco, P. R., P. Castellanos, R. C. Levy, R. A. Kahn, R. L. Miller, M. Chin, E. P. Nowottnick, R. Espinosa, A. Rocha-Lima, O. Kempainen, M. D. Smith, S. Guzewich, H. Yu, H. Moosmüller, P. Ginoux, Z. Kipling, A. Benedetti, S. Rémy, S. Bauer, O. Jorba, C. P. García-Pando, T. Tanaka, J. S. Reid, P. Xian, M. Brooks, J. McQueen, B. Baker, and R. Kouznetsov (2022, **invited**). A Review of the Treatment of Dust Optical Properties in Earth System Modeling. *102nd Annual Meeting of the American Meteorological Society 102nd Annual Meeting of the American Meteorological Society (AMS)*, Online, January 23–27, 2022.
- 502) Samburova, V., D. Sengupta, C. Bhattarai, H. Moosmüller, and A. Y. Khlystov (2021). Comprehensive Analysis of Organic Species in Fresh and Aged Biomass-Burning Emissions. *International Chemical Congress of Pacific Basin Societies (PacifiChem)*, Online, December 16–21, 2021.
- 501) Chowdhary, J., H. Moosmüller, G. Schuster, S. Stamnes, and M. Ottaviani (2021). Polarimetric Remote Sensing of the Atmosphere in the UV-VIS Spectrum: Modeling Scattering and Absorption by Brown Carbon. *2021 Fall Meeting of the American Geophysical Union*, New Orleans, LA, December 13–17, 2021.
- 500) Castellanos, P., M. Chin, P. R. Colarco, R. Espinosa, S. Guzewich, R. Kahn, R. C. Levy, A. Rocha-Lima, R. L. Miller, H. Moosmüller, E. P. Nowottnick, M. D. Smith, and H. Yu (2021). A Review of Dust Optical Properties used in Earth and Mars System Modeling, as well as Remote Sensing Applications. *2021 Fall Meeting of the American Geophysical Union*, New Orleans, LA, December 13–17, 2021.
- 499) Minatre, K. L., M. M. Arienzo, H. Moosmüller, and S. Y. Maezumi (2021). Reconstructing Fire Temperature Using Infrared Spectroscopy of Charcoal Materials. *2021 Fall Meeting of the American Geophysical Union*, New Orleans, LA, December 13–17, 2021.
- 498) Wilcox, E. and H. Moosmüller (2021). SBIR/STTR Grant Opportunities. *DRI Lunch-Time Seminar*, Desert Research Institute, Reno and Las Vegas, NV, December 6, 2021.
- 497) Samburova, V., M. Berli, B. Sion, and H. Moosmüller (2021). Sampling and Chemical Analysis of Post-Fire Soil Samples (Dixie and Caldor Fires). *DRI's Division of Atmospheric Sciences Science Talks*, Desert Research Institute, Reno and Las Vegas, NV, November 30, 2021.

- 496) Colarco, P. R., P. Castellanos, M. Chin, R Espinosa, S Guzewich, R. Kahn, R. C. Levy, A. Rocha-Lima, R. L. Miller, H. Moosmüller, E. P. Nowottnick, M. D. Smith, and H. Yu (2021). A Review of the Treatment of Dust Optical Properties in Earth System Modeling. *20th AEROCOM Workshop*, Online, October 11–15, 2021.
- 495) Chowdhary, J., H. Moosmüller, G. Schuster, L. Liu, K. Tsigaridis, M. Ottaviani, and S. Stamnes (2021). Polarimetric Remote Sensing of the Atmosphere in the UV-VIS Spectrum: Modeling Scattering and Absorption by Brown Carbon. *19th Electromagnetic and Light Scattering Conference (ELS-XIX)*, Online, July 12–16, 2021.
- 494) Saftner, D., F. Hosseinpour, L. Fenstermaker, H. Moosmüller, and E. Wilcox (2021, **invited**). NASA Proposal Writing Workshop. *NV Space Grant and NASA EPSCoR Statewide Virtual Meeting*, Reno and Las Vegas, NV, April 30, 2021.
- 493) Saftner, D., B. Sion, F. Hosseinpour, L. Fenstermaker, H. Moosmüller, and E. Wilcox (2021, **invited**). NASA Proposal Writing Workshop. *Nevada System of Higher Education (NSHE) Webinar*, Reno and Las Vegas, NV, February 18, 2021.
- 492) Moosmüller, H. (2021, **invited**). Nevada’s Current NSF EPSCoR Research Infrastructure Improvement (RII) Track 1 Proposal: Harnessing the Data Revolution for Fire Science. *DRI Lightning Lunches*, Reno and Las Vegas, NV, January 12, 2021.
- 491) Khlystov, A. Y., V. Samburova, D. Sengupta, C. Bhattarai, K. Axelrod, D. Staten, S. Lu, A. C. Watts, and H. Moosmüller (2021, **invited**). What’s in the Smoke? Chemical Composition of Smoke and its Effect on Climate and Health. *DRI Lightning Lunches*, Reno and Las Vegas, NV, January 12, 2021.
- 490) Ruggeri, M., T. R. Bolaño-Ortiz, M. Lapuerta, H. Moosmüller, V Vidal, and F. Cereceda-Balic (2020). Reduction of Atmospheric BC Levels in the Chilean Central Andes: An Unexpected Impact of COVID-19. *2020 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 7–11, 2020.
- 489) Beres, N. D., D. Sengupta, V. Samburova, A. Khlystov, and H. Moosmüller (2020). Deposition of Brown Carbon onto Snow: Changes of Snow Optical and Radiative properties. *General Assembly of the European Geosciences Union (EGU 2020)*, Vienna, Austria, May 4–8, 2020.
- 488) Moosmüller, H. (2019, **invited**). Aerosol Optics, Radiative Forcing, and Climate Change. *Vienna Doctoral School in Physics (VDSP) Science Day, University of Vienna*, Vienna, Austria, December 12, 2019.
- 487) Moosmüller, H. (2019, **invited**). Complex Refractive Index and Aerosol Optics. *Aerosol Seminar Class, Department of Physics, University of Vienna*, Vienna, Austria, December 11, 2019.
- 486) Watts, A. C., V. Samburova, H. Moosmüller, A. Y. Khlystov, D. Sengupta, and C. Bhattarai (2019). Selecting Important Fuels for Biomass Emissions Research. *8th International Fire Ecology and Management Congress*, Tucson, AZ, November 18–22, 2019.
- 485) Sorensen, C. M., J. Maughan, and H. Moosmüller (2019). Spherical Particle Absorption over a Broad Range of Imaginary Refractive Index. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14–18, 2019.
- 484) Moosmüller, H., R. Giri, M. Berg, and C. M. Sorensen (2019). Black Metal

- Nanoparticles from Abrasion Processes in Our Everyday Lives: Bicycle Chains, Rock Climbing Ropes, and Motor Oil. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14–18, 2019.
- 483) Wang, X., H. Zhou, W. P. Arnott, M. E. Mayer, S. Taylor, H. Firouzkouhi, H. Moosmüller, J. C. Chow, and J. G. Watson (2019). Characterization of Smoke for Spacecraft Fire Safety. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14–18, 2019.
- 482) Moosmüller, H. A. Mehadi, D. E. Campbell, W. Ham, D. Schweizer, L. Tarnay, and J. Hunter (2019). Laboratory and Field Evaluation of Real-time and Near Real-time PM_{2.5} Smoke Monitors. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14–18, 2019.
- 481) Samburova, V., D. Sengupta, C. Bhattarai, A. C. Watts, H. Moosmüller, and A. Y. Khlystov (2019). Analysis of Unidentified Organic Species in Fresh and Aged Biomass-Burning Emissions Generated under Controlled Conditions. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14–18, 2019.
- 480) Rennie, M., D. Sengupta, V. Samburova, A. Khlystov, and H. Moosmüller (2019). Optical, Physical, and Chemical Properties of Emissions from Open Combustion of Cheatgrass (*Bromus Tectorum*). *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14–18, 2019.
- 479) Iaukea-Lum, M., D. Sengupta, V. Samburova, A. Y. Khlystov, A. C. Watts, W. P. Arnott, and H. Moosmüller (2019). Optical Characterization of Fresh and Photochemically-Aged Aerosols Emitted from Laboratory Siberian Peat Burning. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14–18, 2019.
- 478) Sengupta, D., C. Bhattarai, V. Samburova, A. C. Watts, H. Moosmüller, and A. Y. Khlystov (2019). Polar Fraction of Semi-Volatile Organic Compounds in Biomass-Burning Emissions and Their Chemical Transformations during Aging with an Oxidation Flow Reactor. *37th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 14–18, 2019.
- 477) Cereceda-Balic, F., V. Vidal, H. Moosmüller, and M. Lapuerta (2019). Long-Time Atmospheric Monitoring Data, Snow Albedo and BC in Snow Measured in Portillo, Los Andes Mountains, Chile. *Air & Waste Management Association's 112th Conference & Exhibition (ACE 2019)*, Québec City, QC, Canada, June 25–28, 2019.
- 476) Schloesser, H., P. Fournier, and H. Moosmüller (2019). Integrating Sphere-Based Nephelometer for UAS Applications. Atmospheric Radiation Measurement (ARM)/Atmospheric System Research (ASR) Joint User Facility/Principal Investigator Meeting, Rockville, MD, June 10–13, 2019.
- 475) Moosmüller, H. (2019, **invited**). Mineral Dust Optical Properties and Radiative Forcings. *DRI Lightning Lunches*, Reno, NV, June 3, 2019.
- 474) Nelson, K. N., A. C. Watts, J. Boehmler, V. Samburova, A. Y. Khlystov, C. Bhattarai, H. Moosmüller, and E. Wilcox (2019). Development of a Compact, Portable Smoke Emissions Sampling Instrument Appropriate for Use with Small Unmanned Aircraft Systems (UAS). *6th Fire Behavior and Fuels Conference of the International Association of Wildland Fire (IAWF)*, Albuquerque, NM, April 29 – May 3, 2019.
- 473) Wang, X., H. Zhou, W. P. Arnott, M. E. Mayer, S. Taylor, H. Firouzkouhi, H.

- Moosmüller, J. C. Chow, and J. G. Watson (2019). Smoke Characterization for Spacecraft Fire Safety. *Nevada NASA EPSCoR and Space Grant Statewide Meeting*, Reno, NV, April 26, 2019.
- 472) Khlystov, A., V. Samburova, D. Sengupta, C. Bhattarai, A. C. Watts, and H. Moosmüller (2019). Emission Factors and Chemical Composition of Laboratory-Generated Fresh and Aged Biomass Burning Aerosols. *12th International Conference on Carbonaceous Particles in the Atmosphere ICCPA*, Vienna, Austria, April 3–6, 2019.
- 471) Moosmüller, H., R. Giri, M. Berg, and C. M. Sorensen (2019). Do All Black Particles Contain Black Carbon? *12th International Conference on Carbonaceous Particles in the Atmosphere ICCPA*, Vienna, Austria, April 3–6, 2019.
- 470) Rennie, M., D. Sengupta, V. Samburova, A. Khlystov, and H. Moosmüller (2019). Optical Properties of Aerosol Emitted from the Open Combustion of Cheatgrass (*Bromus Tectorum*). *12th International Conference on Carbonaceous Particles in the Atmosphere ICCPA*, Vienna, Austria, April 3–6, 2019.
- 469) Iaukea-Lum, M., D. Sengupta, V. Samburova, A. Y. Khlystov, A. C. Watts, W. P. Arnott, and H. Moosmüller (2019). Optical Characterization of Fresh and Photochemically-Aged Aerosols Emitted from Laboratory Siberian Peat Burning. *12th International Conference on Carbonaceous Particles in the Atmosphere ICCPA*, Vienna, Austria, April 3–6, 2019.
- 468) Beres, N. D., D. Sengupta, V. Samburova, A. Khlystov, and H. Moosmüller (2019). Modification of Snow Surface Reflectivity Spectra through Brown Carbon Aerosol Deposition. *12th International Conference on Carbonaceous Particles in the Atmosphere ICCPA*, Vienna, Austria, April 3–6, 2019.
- 467) Rennie, M. and H. Moosmüller (2019). Imaginary Refractive Index Spectrum of Hematite: A Novel Determination Using a Nano-Particle Colloid. 99th Annual Meeting of the American Meteorological Society (AMS), Phoenix, AZ, January 6–10, 2019.
- 466) Mazzoleni, C., H. Moosmüller, and H. Kuhns (2018, **invited**). Monitoring Automotive PM Emissions with Lidar. *Xth Workshop on Lidar Measurements in Latin America (WLMLA)*, Universidad Nacional de Columbia, Medellin, Columbia, November 19–23, 2018.
- 465) Moosmüller, H. (2018, **invited**). Aerosol Optics, Radiative Forcing, and Climate Change. *NASA/UAH Earth & Atmospheric Science Seminar and UAH Workshop on Aerosol Optics & Polarimetry*, University of Alabama Huntsville (UAH), Huntsville, AL, October 10, 2018.
- 464) Moosmüller, H. (2018, **invited**). Aerosol Optics. *Guest Lecture in Aerosol and Clouds Graduate Class, Department of Atmospheric Sciences, University of Alabama Huntsville (UAH)*, Huntsville, AL, October 10, 2018.
- 463) Mehadi, A., H. Moosmüller, D. E. Campbell, W. Ham, J. Hunter, L. Tarnay, D. Schweizer and C. Pearson (2018). Evaluation and Use of Sensors for Monitoring Smoke Impacts of Wildfires and Prescribed Burns. *Air Sensors International Conference (ASIC)*, Oakland, CA, September 12–14, 2018.
- 462) Wang, X., W. P. Arnott, H. Zhou, S. J. Taylor, J. C. Chow, H. Moosmüller, M. E. Meyer, and J. G. Watson (2018). Microsensor Smoke Detection for Spacecraft Fire Safety. *Air Sensors International Conference (ASIC)*, Oakland, CA, September 12–14, 2018.

- 461) Moosmüller, H. and C. Sorensen (2018, **invited**). Aerosol Optics: Fundamentals and Instrumentation (Two Hour Tutorial). *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2–7, 2018.
- 460) Moosmüller, H. and H. Schloesser (2018). Signal Detection for the Measurement of Aerosol Scattering Coefficients with an Integrating Nephelometer. *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2–7, 2018.
- 459) Sengupta, D., V. Samburova, C. Bhattarai, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, and A. Y. Khlystov (2018). Chemical Composition of Semi-Volatile Organic Compounds from Fresh and Laboratory-Aged Biomass Burning Particles. *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2–7, 2018.
- 458) Moosmüller, H. and C. M. Sorensen (2018). Single Scattering Albedo of Homogeneous, Spherical Particles in the Transition Region. *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2–7, 2018.
- 457) Sengupta, D., L. Gao, E. Wilcox, N. D. Beres, C. Bhattarai, V. Samburova, A. C. Watts, A. Y. Khlystov, and H. Moosmüller (2018). Estimation of Snow Albedo Reduction by Light Absorbing Impurities Using a Monte Carlo Radiative Transfer Model. *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2–7, 2018.
- 456) Moosmüller, H. and E. S. Zubko (2018). Single Scattering Albedo of Agglomerated Debris Particles and Homogeneous Spheres: A Comparison. *10th International Aerosol Conference (IAC 2018)*, St. Louis, MO, September 2–7, 2018.
- 455) Mazzoleni, L., E. Kirillova, S. Schum, M. Khaksari, D. Sengupta, C. Bhattarai, V. Samburova, A. C. Watts, H. Moosmüller, and A. Khlystov (2018, **invited**). Water-Soluble Aerosol Organic Matter from Wildland Fire Emissions as Observed using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry. *Goldschmidt 2018*, Boston, MA, August 12–17, 2018.
- 454) Nelson, K. N., A. C. Watts, V. Samburova, A. Y. Khlystov, C. Bhattarai, H. Moosmüller, E. Wilcox, and M. Giordano (2018). An Emissions Sampling Payload for Use with Small Unmanned Aircraft Systems (sUAS). *6th Meeting of the International Society for Atmospheric Research using Remotely Piloted Aircraft (ISARRA 2018)*, Boulder, CO, July 9–12, 2018.
- 453) Moosmüller, H. (2018, **invited**). Aerosol Optics, Radiative Forcing, and Climate Change. *Department of Physics Colloquium, Kansas State University*, Manhattan, KS, April 30, 2018.
- 452) Sengupta, D., L. Gao, N. D. Beres, C. Bhattarai, E. Wilcox, V. Samburova, A. C. Watts, A. Y. Khlystov, and H. Moosmüller (2018). Estimation of Snow Albedo Reduction by Light Absorbing Impurities Using a Monte Carlo Radiative Transfer Model. *Joint Meeting of 17th Electromagnetic and Light Scattering Conference (ELS-XVII) and 11th Conference on Laser-Light and Interactions with Particles (LIP2018)*, Texas A&M University, College Station, TX, March 4–9, 2018.
- 451) Moosmüller, H. and E. S. Zubko (2018). Single Scattering Albedo of Agglomerated Debris Particles and Homogeneous Spheres: A Comparison. *Joint Meeting of 17th Electromagnetic and Light Scattering Conference (ELS-XVII) and 11th Conference on Laser-Light and Interactions with Particles (LIP2018)*, Texas A&M University, College Station, TX, March 4–9, 2018.

- 450) Piedra, P. G., A. Kalume, Y. Pan, G. Videen, and H. Moosmüller (2018). Deep Learning for Optical Characterization of Individual Laser-Trapped Particles. *Joint Meeting of 17th Electromagnetic and Light Scattering Conference (ELS-XVII) and 11th Conference on Laser-Light and Interactions with Particles (LIP2018)*, Texas A&M University, College Station, TX, March 4–9, 2018.
- 449) Moosmüller, H. and C. M. Sorensen (2018). Single Scattering Albedo of Homogeneous, Spherical Particles in the Transition Region. *Joint Meeting of 17th Electromagnetic and Light Scattering Conference (ELS-XVII) and 11th Conference on Laser-Light and Interactions with Particles (LIP2018)*, Texas A&M University, College Station, TX, March 4–9, 2018.
- 448) Sengupta, D., L. Gao, E. Wilcox, N. D. Beres, H. Moosmüller, and A. Y. Khlystov (2017). Estimation of Snow Albedo Reduction by Light Absorbing Impurities Using Monte Carlo Radiative Transfer Model. *2017 Fall Meeting of the American Geophysical Union*, New Orleans, LA, December 14–18, 2017.
- 447) Beres, N. D., D. Sengupta, V. Samburova, A. Y. Khlystov, and H. Moosmüller (2017). Brown Carbon Spectral Signatures in Snow Surface Reflectivity. *2017 Fall Meeting of the American Geophysical Union*, New Orleans, LA, December 14–18, 2017.
- 446) Chung, C. E., A. Hoffer, N. D. Beres, H. Moosmüller, C. Liu, M. C. Green, S.-W. Kim, J. P. Engelbrecht, and A. Gelencsér (2017). Near-Infrared Light Absorption by Brown Carbon in the Ambient Atmosphere. *2017 Fall Meeting of the American Geophysical Union*, New Orleans, LA, December 14–18, 2017.
- 445) Murray, A. E., G. Ferrell, A. Harpold, E. Hausrath, H. Moosmüller, D. Obrist, R. Schumer, and S. Tyler (2017). Building Capacity in Interdisciplinary Snow Sciences for a Changing World. *2017 Annual Nevada NASA Space Grant and EPSCoR Statewide Meeting*, Las Vegas, NV, October 20, 2017.
- 444) Sengupta, D., V. Samburova, C. Bhattarai, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, and A. Y. Khlystov (2017). Light Absorption of Polar and Non-Polar Aerosols in Fresh and Aged Biomass-Burning Emissions. *36th Annual Conference of the American Association for Aerosol Research*, Rayleigh, NC, October 16–20, 2017.
- 443) Bhattarai, C., V. Samburova, D. Sengupta, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, and A. Y. Khlystov (2017). Physical and Chemical Characterization of Fresh and Aged Emissions from Open Combustion of Biomass Fuels. *36th Annual Conference of the American Association for Aerosol Research*, Rayleigh, NC, October 16–20, 2017.
- 442) Kirillova, E. N., V. Samburova, D. Sengupta, H. Moosmüller, A. Y. Khlystov, and L. R. Mazzoleni (2017). Molecular Characterization of Water-Soluble Organic Carbon (WSOC) from Biomass Burning of Wildland Fuels Using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry. *36th Annual Conference of the American Association for Aerosol Research*, Rayleigh, NC, October 16–20, 2017.
- 441) Beres, N. D., D. Sengupta, V. Samburova, A. Y. Khlystov, and H. Moosmüller (2017). Influence of Brown Carbon Aerosol Deposition on Snow Surface Reflection Spectra. *36th Annual Conference of the American Association for Aerosol Research*, Rayleigh, NC, October 16–20, 2017.
- 440) Llanza, L. R., P. G. Piedra, and H. Moosmüller (2017). Experimental Determination of Optical Losses due to Absorbing and Non-Absorbing Particles Deposited onto Solar

- Cells. *36th Annual Conference of the American Association for Aerosol Research*, Raleigh, NC, October 16–20, 2017.
- 439) Iaukea-Lum, M., C. Bhattarai, D. Sengupta, P. G. Piedra, J. Connolly, V. Samburova, A. Y. Khlystov, A. C. Watts, and H. Moosmüller (2017). Three-Wavelength Optical Characterization of Fresh and Photochemically-Aged Aerosols from Siberian Peat Burning. *36th Annual Conference of the American Association for Aerosol Research*, Raleigh, NC, October 16–20, 2017.
- 438) Piedra, P. G., L. R. Llanza, and H. Moosmüller (2017). Optical Losses due to Aerosol Deposition on Solar Cells: Two-Stream Theory vs. Spectrophotometer Measurements. *36th Annual Conference of the American Association for Aerosol Research*, Raleigh, NC, October 16–20, 2017.
- 437) Moosmüller, H. and C. M. Sorensen (2017). Single Scattering Albedo of Homogeneous, Spherical Particles in the Small and Large Particle Limit. *36th Annual Conference of the American Association for Aerosol Research*, Raleigh, NC, October 16–20, 2017.
- 436) Piedra, P. G., L. R. Llanza, and H. Moosmüller (2017). Towards Predicting PV Panel Power Transmission in Dusty Environments. *Graduate Student Spotlight Talk, NSF EPSCoR Nexus Collaboration and Integration Meeting*, Reno and Las Vegas, NV, June 16, 2017.
- 435) Kirillova, E. N., V. Samburova, C. Bhattarai, D. Sengupta, H. Moosmüller, A. Y. Khlystov, and L. R. Mazzoleni (2017). Molecular Characterization of Water-Soluble Organic Carbon (WSOC) from Biomass Burning Aerosol Using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry. *65th ASMS Conference on Mass Spectrometry and Allied Topics*, Indianapolis, IN, June 4–8, 2017.
- 434) Bhattarai, C., D. Sengupta, V. Samburova, A. C. Watts, H. Moosmüller, and A. Y. Khlystov (2017). Physical and Chemical Characterization of Fresh and Aged Emissions from Open Combustion of Biomass. *Desert Research Institute Graduate Student Poster Competition*, Reno, NV, May 3, 2017.
- 433) Sengupta, D., V. Samburova, C. Bhattarai, C. M. Iaukea-Lum, A. C. Watts, H. Moosmüller, and A. Y. Khlystov (2017). Light Absorption of Polar and Non-Polar Aerosol Components from Laboratory Biomass Combustion. *Desert Research Institute Graduate Student Poster Competition*, Reno, NV, May 3, 2017.
- 432) Piedra, P. G., L. R. Llanza, and H. Moosmüller (2017). Optical Losses due to Particles on Solar Cells: Two Stream Theory vs. Spectrophotometric Measurements. *Solar Energy-Water-Environment Nexus in Nevada Annual Meeting*, Las Vegas, NV, March 27–29, 2017.
- 431) Llanza, L. R., P. G. Piedra, and H. Moosmüller (2017). Degradation of Photovoltaic Solar Energy Production due to Deposition of Absorbing and Non-Absorbing Mineral Dust. *Solar Energy-Water-Environment Nexus in Nevada Annual Meeting*, Las Vegas, NV, March 27–29, 2017.
- 430) Moosmüller, H. and C. M. Sorensen (2017). Large and Small Particle Limits of Single Scattering Albedo for Homogeneous, Spherical Particles. *16th Electromagnetic and Light Scattering Conference (ELS-XVI)*, University of Maryland, College Park, MD, March 19–25, 2017.
- 429) Llanza, L. R., P. G. Piedra, and H. Moosmüller (2017). Optical Losses due to Particles on Solar Cells: Experimental Scattering and Absorption Spectra for Absorbing and Non-

- Absorbing Mineral Dust. *16th Electromagnetic and Light Scattering Conference (ELS-XVI)*, University of Maryland, College Park, MD, March 19–25, 2017.
- 428) Piedra, P. G., L. R. Llanza, and H. Moosmüller (2017). Optical Losses due to Particles on Solar Cells: DDA-Substrate Calculations and Experimental Validation. *16th Electromagnetic and Light Scattering Conference (ELS-XVI)*, University of Maryland, College Park, MD, March 19–25, 2017.
- 427) Piedra, P. G., L. R. Llanza, N. Beres, and H. Moosmüller (2017, **invited**). Towards Predicting Solar Panel Efficiency in Dusty Planetary Environments. *National Council of NASA Space Grant Directors' Spring Meeting*, Arlington, VA, March 2–4, 2017.
- 426) Watts, A. C., L. F. Fenstermaker, E. M. Wilcox, H. Moosmüller, J. L. Huntington, T. B. Minor, L. M. Ronchetti, L. S. Sessions, K. L. Stewart-Carrico, M. L. Pitchford, B. A. Ramsey, A. W. Gertler, J. M. Thomas, E. Oppenheim, J. C. Frayer, and J. R. Broglio (2017, **invited**). Re-Launching UAS Capabilities at DRI. *DRI's Division of Atmospheric Sciences Science Talks*, Desert Research Institute, Reno, NV, February 23, 2017.
- 425) Moosmüller, H. (2017, **invited**). Aerosol Optics, Climate Change, and Satellite Remote Sensing. *Fourth Santa Fe Climate Conference*, Santa Fe, NM, February 5–10, 2017.
- 424) Gyawali, M., R. L. N. Yatavelli, A. C. Watts, V. Samburova, R. K. Chakrabarty, L.–W. A. Chen, I. J. Arnold, X. Wang, A. Y. Khlystov, and H. Moosmüller (2017). Optical Properties of Aerosols Emitted from Laboratory Peat Combustion. *Fourth Santa Fe Climate Conference*, Santa Fe, NM, February 5–10, 2017.
- 423) Engelbrecht, J. P., H. Moosmüller, R. K. M. Jayanty, and G. Casuccio (2017). Optical Properties of Suspended Mineral Dusts from Desert Source Regions. *Fourth Santa Fe Climate Conference*, Santa Fe, NM, February 5–10, 2017.
- 422) Moosmüller, H. (2017, **invited**). Aerosol Optics, Climate Change, and Satellite Remote Sensing. *Environmental Sciences Graduate Program Seminar, University of California, Riverside (UCR)*, Riverside, CA, January 20, 2017.
- 421) Drinovec, L., A. Gregorič, P. Zotter, R. Wolf, E. A. Bruns, A. S. H. Prévôt, J.-E. Petit, O. Favez, J. Sciare, I. J. Arnold, R. K. Chakrabarty, H. Moosmüller, A. Filep, G. Močnik (2016). Measuring Aerosol Black Carbon Age with Aethalometers. *Conference of the Indian Aerosol Science and Technology Association (IASTA) on Aerosols and Climate Change: Insights and Challenges*, Ahmedabad, India, December 6–8, 2016.
- 420) Llanza, L. R., P. G. Piedra, and H. Moosmüller (2016). Optimization of Cleaning Schedules of Solar Cells: Degradation due to Absorbing and Non-Absorbing Particles. *Student World Water Forum*, Reno, NV, November 17–18, 2016.
- 419) Mehadi, A., and H. Moosmüller (2016). Laboratory and Field Evaluation of Real-time and Near Real-time PM_{2.5} Smoke Monitors. *2nd International Smoke Symposium of the International Association of Wildland Fire*, Long Beach, CA, November 14–17, 2016.
- 418) Khlystov, A., V. Samburova, J. Connolly, C. Bhattarai, D. Sengupta, A. C. Watts, and H. Moosmüller (2016). Brown Carbon Aerosol in Fresh and Aged Biomass Burning Emissions: Contribution of Individual Compounds. *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 17–21, 2016.
- 417) Bhattarai, C., V. Samburova, H. Moosmüller, and A. Y. Khlystov (2016). Characterization of Aerodyne Potential Aerosol Mass Oxidative Flow Reactor. *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR,

October 17–21, 2016.

- 416) Sengupta, D., V. Samburova, C. Bhattarai, M. Iaukea-Lum, A. C. Watts, H. Moosmüller, and A. Y. Khlystov (2016). Contribution of Water-Soluble “Brown Carbon” Organic Species to Light Absorption Biomass-Burning Aerosols. *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 17–21, 2016.
- 415) Piedra, P. G. and H. Moosmüller (2016). The Role of Aerosols in Degrading Solar Panels: Exploring the Dependency of Size and Absorptivity. *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 17–21, 2016.
- 414) Moosmüller, H., M. Iaukea-Lum, J. C. LaCombe, and E. Wang (2016). A New Concept for Aerosol Satellite Remote Sensing in the Twilight Zone. *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 17–21, 2016.
- 413) Moosmüller, H. and C. Sorensen (2016, **invited**). Aerosol Optics: Theory, Measurement, and Application (Two Hour Tutorial). *35th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 17–21, 2016.
- 412) Khlystov, A. Y., V. Samburova, J. Connolly, C. Bhattarai, D. Sengupta, A. C. Watts, and H. Moosmüller (2016). Contribution of Different Chemical Species to Brown Carbon Aerosol in Biomass Burning Emissions. *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26–30, 2016.
- 411) Moosmüller, H. (2016). Aerosol Optics, Radiative Forcing, and Climate Change. *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26–30, 2016.
- 410) Engelbrecht, J. P., H. Moosmüller, R. K. M. Jayanty, and G. Casuccio (2016). Optical Properties of Suspended Mineral Dusts from Desert Source Regions. *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26–30, 2016.
- 409) Gyawali, M., R. L. N. Yatavelli, A. C. Watts, V. Samburova, R. K. Chakrabarty, L.–W. A. Chen, I. J. Arnold, X. Wang, A. Y. Khlystov, and H. Moosmüller (2016). Optical Properties of Aerosols Emitted from Laboratory Peat Combustion. *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26–30, 2016.
- 408) Hassan, T., H. Moosmüller, and C. E. Chung (2016). Coefficients of an Analytical Aerosol Forcing Equation Determined with a Monte-Carlo Radiation Model. *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26–30, 2016.
- 407) Moosmüller, H., M. Iaukea-Lum, J. C. LaCombe, and E. Wang (2016). TwilightSat: A New Concept for Optical Satellite Remote Sensing of Atmospheric Aerosols. *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26–30, 2016.
- 406) Carrico, C. M., J. Hand, S. M. Raffuse, S. Suda-Petters, A. G. Hallar, and H. Moosmüller (2016, **invited**). Evolving Issues in Air Quality Related to a Changing Climate. *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26–30, 2016.
- 405) Moosmüller, H., R. K. Chakrabarty, and R. Washenfelder (2016, **invited**). Contemporary

- Aerosol Optics (Half Day Course). *Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance*, Air & Waste Management Association, Jackson Hole, WY, September 26–30, 2016.
- 404) Moosmüller, H. (2016, **invited**). Graduate Students and Proposal Writing. *Desert Research Institute Fall 2016 Graduate Student Orientation*, Reno, NV, September 6, 2016.
- 403) Moosmüller, H. (2016, **invited**). Aerosol Optics, Radiative Forcing, and Climate Change. *Workshop Internacional: El Desafío de Caracterizar las Emisiones Provenientes de la Combustión de Diesel/Biodiesel en Chile y su Impacto en la Calidad del Aire*, Santiago, Chile, August 22, 2016.
- 402) Watts, A. C., H. Moosmüller, V. Samburova, A. Y. Khlystov, J. Molzan, D. Sengupta, C. Bhattarai, R. L. N. Yatavelli, I. J. Arnold, B. Zielinska, M. Gyawali, R. K. Chakrabarty, J. D. Knue, J. Chow, X. Wang, L.-W. A. Chen, A. Tsibart, and G. Engling (2016). Detailed Analyses of Emissions from Peat Combustion across Biomes. *15th International Peat Congress (IPC)*, Sarawak, Malaysia, August 15–19, 2016.
- 401) Samburova, V., M. McDaniel, R. L. N. Yatavelli, M. Gyawali, R. K. Chakrabarty, A. C. Watts, J. D. Knue, A. Cunningham, J. Connolly, A. Khlystov, H. Moosmüller, and B. Zielinska (2014). Analysis of PAHs in Biomass Burning Emissions of Five Different Fuels. *109th Annual Conference of the Air & Waste Management Association (A&WMA)*, New Orleans, LA, June 20–23, 2016.
- 400) Lee, J. and H. Moosmüller (2016). Polarization Based Photothermal Interferometry Combined with Phase Sensitive Detection for Measurement of Black Carbon. *7th International Workshop on Laser-Induced Incandescence*. Tahoe City, CA, June 19–23, 2016.
- 399) Piedra, P. G. and H. Moosmüller (2016). The Role of Aerosols in Degrading Solar Panels: Exploring the Dependency of Size and Absorptivity. *DRI's Division of Atmospheric Sciences Science Talks*, Desert Research Institute, Reno, NV, June 14, 2016.
- 398) Engelbrecht, J. P., H. Moosmüller, S. L. Pincock, R. K. M. Jayanty, and G. Casuccio (2016). Mineralogical and Physical Interrelationships of Airborne Mineral Dusts Controlling their Optical Properties, *DUST 2016: 2nd International Conference on Atmospheric Dust*, Castellaneta Marina, Italy, June 12–17, 2016.
- 397) Chaney, M. C., M. L. Higham, N. D. Beres, H. Moosmüller, E. M. Hausrath, and A. E. Murray (2016). Temporal and Spatial Distributions of Snow Microbiota in the Sierra During a Low Snow Deposition Year. *13th Annual College of Science and Mathematics Student Research Conference*, Cal Poly State University, San Luis Obispo, CA, May 16–17, 2016.
- 396) Liddle, M., J. Lewis, and H. Moosmüller (2016). What Are These Big Pressure Waves Doing? Prediction and Effects on Seasonal Weather. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Reno, NV, April 29, 2016.
- 395) Moosmüller, H. (2016, **invited**). NASA Proposal Development and Current Research Opportunities in Space and Earth Sciences (ROSES). *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Reno, NV, April 29, 2016.
- 394) Sengupta, D., J. Connolly, C. Bhattarai, V. Samburova, H. Moosmüller, and A. Y. Khlystov (2016). Brown Carbon Emissions from Laboratory Biomass Burning and Their

- Atmospheric Aging. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Reno, NV, April 29, 2016.
- 393) Beres, N. D., D. Sengupta, E. M. Hausrath, A. E. Murray, and H. Moosmüller (2016). Determining the Influence of Aerosol Deposition on the Biological, Geochemical, and Radiative Properties of Snowpack. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Reno, NV, April 29, 2016.
- 392) Chaney, M. C., M. L. Higham, N. D. Beres, H. Moosmüller, E. M. Hausrath, and A. E. Murray (2016). Temporal and Spatial Distributions of Snow Microbiota in the Sierra During a Low Snow Deposition Year. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Reno, NV, April 29, 2016.
- 391) Moosmüller, H. (2016, **invited**). Climate Change, Aerosols, and Their Satellite Remote Sensing. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Reno, NV, April 29, 2016.
- 390) Connolly, J. I., V. Samburova, H. Moosmüller, and A. Y. Khlystov (2016). Analysis of Absorption Spectra of Polycyclic Aromatic Hydrocarbons in Gaseous- and Particle-Phase Emissions from Peat Fuel Combustion under Controlled Conditions. *Desert Research Institute Graduate Student Poster Competition*, Reno, NV, April 18, 2016.
- 389) Beres, N. D., H. Moosmüller, and J. Dozier (2016). Aerosol Characterization and New Instrumentation for Better Understanding Snow Radiative Properties. *Desert Research Institute Graduate Student Poster Competition*, Reno, NV, April 18, 2016.
- 388) Piedra, P. G. and H. Moosmüller (2016). Estimating Solar Panel Degradation due to Aerosol Deposition using Discrete Dipole Approximation. 2016 Solar Energy-Water-Environment Nexus in Nevada Annual Meeting, Reno, NV, March 13–15, 2016.
- 387) Piedra, P. G., H. Moosmüller, V. R. Etyemezian, G. Nikolich, S. Steinberg, and J. Sylva (2016). Dust Deposition and Impact on Panels/Mirrors. *Nevada Solar Energy, Water, and Environment Nexus Collaboration and Integration Meeting*, Las Vegas, NV, January 15, 2016.
- 386) Connolly, J. I., V. Samburova, H. Moosmüller, and A. Y. Khlystov (2015). Analysis of Absorption Spectra of Polycyclic Aromatic Hydrocarbons in Gaseous- and Particle-Phase Emissions from Peat Fuel Combustion under Controlled Conditions. *2015 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 14–18, 2015.
- 385) Beres, N. D., H. Moosmüller, and J. Dozier (2015). Aerosol Characterization and New Instrumentation for Better Understanding Snow Radiative Properties. *2015 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 14–18, 2015.
- 384) Molzan, J. L., N. D. Beres, A. C. Watts, V. Samburova, and H. Moosmüller (2015). Optical Properties of Black and Brown Carbon Aerosols from Laboratory Combustion of Wildland Fuels. *2015 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 14–18, 2015.
- 383) Piedra, P. G., N. D. Beres, H. Moosmüller, W. P. Arnott, and V. R. Etyemezian (2015). Solar Panel Optical Degradation under Monte Carlo Modeled Dust Deposition. *American Physical Society Meeting 2015 – Far West Section*, Long Beach, CA, October 29–31, 2015.
- 382) Khlystov, A. Y., V. Samburova, M. Gyawali, R. L. N. Yatavelli, R. K. Chakrabarty, A. C. Watts, J. D. Knue, A. E. Cunningham, J. Connolly, H. Moosmüller, and B. K.

- Zielinska (2015). Detailed Analysis of Brown Carbon Constituents in Biomass Burning Emissions. *34th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 12–16, 2015.
- 381) Gyawali, M., A. C. Watts, V. Samburova, R. K. Chakrabarty, J. D. Knue, L.–W. A. Chen, I. J. Arnold, X. Wang, A. Y. Khlystov, J. C. Chow, B. K. Zielinska, J. G. Watson, and H. Moosmüller (2015). Optical Properties of Aerosols Emitted from Laboratory Peat Combustion. *34th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 12–16, 2015.
- 380) Engelbrecht, J. P., H. Moosmüller, S. L. Pincock, D. E. Campbell, R. K. M. Jayanty, and G. Casuccio (2015). Optical Properties of Suspended Mineral Dusts from Desert Source Regions. *34th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 12–16, 2015.
- 379) Moosmüller, H. (2015). Aerosol Optics, Radiative Forcing, and Climate Change. *34th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 12–16, 2015.
- 378) Hassan, T., H. Moosmüller, and C. E. Chung (2015). Coefficients of an Analytical Aerosol Forcing Equation Determined with a Monte-Carlo Radiation Model. *34th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 12–16, 2015.
- 377) Beres, N. D., P. G. Piedra, V. R. Etyemezian, W. P. Arnott, and H. Moosmüller (2015). Mineral Dust Deposition and Solar Cell Spectral Performance. *34th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 12–16, 2015.
- 376) Molzan, J. L., N. D. Beres, A. C. Watts, V. Samburova, and H. Moosmüller (2015). Optical Properties of Aerosols from Laboratory Combustion of Wildland Fuels. *2015 Tahoe Science Conference*, Reno, NV, September 21–23, 2015.
- 375) Moosmüller, H. (2015). TwilightSat: A New Concept for Optical Satellite Remote Sensing of Atmospheric Aerosols. *NASA Workshop on Quality Assurance for Academic Space Projects*, Huntsville, AL, September 1, 2015.
- 374) Moosmüller, H. (2015, **invited**). Aerosol Optics, Climate Change, and Satellite Remote Sensing. *Earth Science Seminar Series, NASA Ames Research Center*, Mountain View, CA, August 14, 2015.
- 373) Lee, J. and H. Moosmüller (2015). An Instrument for Measuring Aerosol Light Absorption Using a Photothermal Interferometry. *11th International Conference on Carbonaceous Particles in the Atmosphere*, Berkeley, CA, August 10–13, 2015.
- 372) Močnik, G., L. G. Drinovec, J.-E. Petit, O. Favez, J. Sciare, P. Zotter, A. S. H. Prévôt, R. Wolf, I. J. Arnold, R. K. Chakrabarty, H. Moosmüller, A. Gregorič, M. Remškar, J. Vaupotič, and A. D. A. Hansen (2015). Interpretation of the Loading Effect in Absorption Filter Photometers – Dual Spot Aethalometer Measurements. *11th International Conference on Carbonaceous Particles in the Atmosphere*, Berkeley, CA, August 10–13, 2015.
- 371) Hassan, T., H. Moosmüller, and C. E. Chung (2015). Coefficients of an Analytical Aerosol Forcing Equation Determined with a Monte-Carlo Radiation Model. *11th International Conference on Carbonaceous Particles in the Atmosphere*, Berkeley, CA,

- August 10–13, 2015.
- 370) Gyawali, M., R. L. N. Yatavelli, A. C. Watts, V. Samburova, R. K. Chakrabarty, J. D. Knue, L.–W. A. Chen, I. J. Arnold, X. Wang, A. Y. Khlystov, J. C. Chow, B. K. Zielinska, J. G. Watson, and H. Moosmüller (2015). Optical Properties of Aerosol Emissions from Laboratory Peat Combustion. *11th International Conference on Carbonaceous Particles in the Atmosphere*, Berkeley, CA, August 10–13, 2015.
- 369) Moosmüller, H. (2015). Aerosol Optics, Radiative Forcing, and Climate Change. *11th International Conference on Carbonaceous Particles in the Atmosphere*, Berkeley, CA, August 10–13, 2015.
- 368) Samburova, V., M. Gyawali, R. L. N. Yatavelli, R. K. Chakrabarty, A. C. Watts, J. D. Knue, A. Cunningham, J. Connolly, A. Y. Khlystov, H. Moosmüller, and B. Zielinska (2014). Analysis of Polycyclic Aromatic Hydrocarbons in Gaseous- and Particle-Phase Emissions from Peat Fuel Combustion under Controlled Conditions. *108th Annual Conference of the Air & Waste Management Association (A&WMA)*, Raleigh, NC, June 22–25, 2015.
- 367) Engelbrecht, J. P., H. Moosmüller, S. L. Pincock, D. E. Campbell, R. K. M. Jayanty, and G. Casuccio. Optical Properties of Suspended Mineral Dusts from Desert Source Regions. *15th Electromagnetic and Light Scattering (ELS) Conference*, Leipzig, Germany, June 21–26, 2015.
- 366) Gyawali, M., R. L. N. Yatavelli, A. C. Watts, V. Samburova, R. K. Chakrabarty, J. D. Knue, L.–W. A. Chen, I. J. Arnold, X. Wang, A. Y. Khlystov, J. C. Chow, B. K. Zielinska, J. G. Watson, and H. Moosmüller. Optical Properties of Emissions from Laboratory Peat Combustion. *15th Electromagnetic and Light Scattering (ELS) Conference*, Leipzig, Germany, June 21–26, 2015.
- 365) Hassan, T., H. Moosmüller, and C. E. Chung (2015). Using Monte-Carlo Radiation Model to Determine the Coefficients of an Analytical Aerosol Forcing Equation. *15th Electromagnetic and Light Scattering (ELS) Conference*, Leipzig, Germany, June 21–26, 2015.
- 364) Moosmüller, H. (2015, **invited**). Aerosol Optics, Radiative Forcing, and Climate Change. *15th Electromagnetic and Light Scattering (ELS) Conference*, Leipzig, Germany, June 21–26, 2015.
- 363) Piedra, P. G. and H. Moosmüller, (2015). Discrete Dipole Approximation Estimating Solar Panel Degradation due to Dust Deposition. *Desert Research Institute Graduate Student Poster Competition*, Reno, NV, May 20, 2015.
- 362) Loria, S. M., H. Holmes, W. P. Arnott, H. Moosmüller, B. Echevarria, and A. Limming (2015, **third prize**). Spatial Investigation of Columnar AOD and Near-Surface PM_{2.5} Concentrations During the 2013 American and Yosemite Rim Fires. *Desert Research Institute Graduate Student Poster Competition*, Reno, NV, May 20, 2015.

- 361) Fenstermaker, L., D. Obrist, S. Tyler, E. M. Hausrath, G. Ferrell, I. McCubbin, H. Moosmüller, A. E. Murray, R. Schumer (2015, **invited**). Building Capacity in Interdisciplinary Snow Sciences for a Changing World. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Las Vegas, NV, April 30 – May 1, 2015.
- 360) Beres, N. D. and H. Moosmüller (2015). New Instrumentation for Snow Radiative Properties. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Las Vegas, NV, April 30 – May 1, 2015.
- 359) Bartlett, C. L., E. M. Hausrath, A. E. Murray, O. Tschauner, and H. Moosmüller (2015). Mineralogy of Mineral Dust and Biominerals in Snow and Implications for Potential Biosignatures. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Las Vegas, NV, April 30 – May 1, 2015.
- 358) Beres, N. D., J. Dozier, and H. Moosmüller (2015). Aerosol Characterization for Studying Changes in Snow Albedo. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Las Vegas, NV, April 30 – May 1, 2015.
- 357) Kreidberg, R. and H. Moosmüller (2015, **invited**). Planning, Poetry, and Pots of Gold: A Proposal Development Workshop. *Nevada NASA EPSCoR and Space Grant Consortium Annual Meeting*, Las Vegas, NV, April 30 – May 1, 2015.
- 356) Liddle, M. B., H. Moosmüller, and J. M. Lewis (2015). Persistent Wave Structures and Western Droughts. *83rd Western Snow Conference*, Grass Valley, CA, April 20–23, 2015.
- 355) Beres, N. D. and H. Moosmüller (2015). New Instrumentation for Snow Radiative Properties. *83rd Western Snow Conference*, Grass Valley, CA, April 20–23, 2015.
- 354) Moosmüller, H. (2015). Snow Albedo, Radiative Forcing, and Climate Change. *83rd Western Snow Conference*, Grass Valley, CA, April 20–23, 2015.
- 353) Beres, N. D., J. Dozier, and H. Moosmüller (2015). Aerosol Characterization for Studying Changes in Snow Albedo. *83rd Western Snow Conference*, Grass Valley, CA, April 20–23, 2015.
- 352) Hausrath, E. M., C. L. Bartlett, A. E. Murray, H. Moosmüller, and O. Tschauner (2015, **invited**). Dust on Snow — Implications for Nutrients and Albedo. *University of Nevada Reno (UNR) Snow Hydrology Seminar (GEOL 701Z)*, Reno, NV, March 25, 2015.
- 351) Moosmüller, H. (2015, **invited**). Snow Albedo, Radiative Forcing, and Climate Change. *University of Nevada Reno (UNR) Snow Hydrology Seminar (GEOL 701Z)*, Reno, NV, February 11, 2015.
- 350) Gyawali, M., R. K. Chakrabarty, R. L. N. Yatavelli, L.–W. A. Chen, J. Knue, V. Samburova, A. C. Watts, H. Moosmüller, W. P. Arnott, X. Wang, B. Zielinska, J. C. Chow, J. G. Watson, A. Tsibart (2014). Strong Wavelength Dependence of Aerosol Light Absorption from Peat Combustion. *2014 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 15–19, 2014.
- 349) Johnson, M. M., R. L. N. Yatavelli, L.–W. A. Chen, M. Gyawali, W. P. Arnott, X. Wang, R. K. Chakrabarty, H. Moosmüller, J. G. Watson, and J. C. Chow (2014). Multi-Wavelength Characterization of Brown and Black Carbon from Filter-Based Samples. *2014 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 15–19, 2014.
- 348) Knue, J., R. L. N. Yatavelli, L.–W. A. Chen, V. Samburova, M. Gyawali, A. C. Watts, R.

- K. Chakrabarty, H. Moosmüller, X. Wang, B. Zielinska, J. C. Chow, J. G. Watson, and A. Tsibert (2014). A Comparison of Mass-based Emission Factors from Laboratory Combustion of Boreal and Sub-Tropical Peat. *2014 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 15–19, 2014.
- 347) Engelbrecht, J. P., H. Moosmüller, S. L. Pincock, R. K. M. Jayanty, and Gary Casuccio (2014). Mineralogical, Chemical, and Optical Interrelationships of Airborne Mineral Dusts. *2014 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 15–19, 2014.
- 346) Loria, S. M., H. Holmes, W. P. Arnott, H. Moosmüller, B. Echevarria, and A. Limming (2014). Spatial Investigation of Columnar AOD and Near-Surface PM_{2.5} Concentrations During the 2013 American and Yosemite Rim Fires. *2014 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 15–19, 2014.
- 345) Lee, J. and H. Moosmüller (2014). Light Absorption Measurement Using Non-Filter Techniques: Interferometric & Photoacoustic Techniques. *International Workshop on Environment & Engineering (IWEE2014)*, Tsukuba City, Ibaraki, Japan, November 19–20, 2014.
- 344) Chakrabarty, R. K., I. V. Novoselov, N. D. Beres, H. Moosmüller, C. B. Stipe, and C. M. Sorensen (2014). Gravity-Induced Trapping and Aerogelation of Nanoparticles in Flame Reactors. *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20–24, 2014.
- 343) Yatavelli, R. L. N., R. K. Chakrabarty, M. Gyawali, J. Knue, G. Engling, H. Moosmüller, D. E. Rhode, L.–W. A. Chen, X. Wang, J. C. Chow, and J. G. Watson (2014). Emissions from Burning Incense and Dung: Two Unregulated Sources of Brown Carbon in Asia. *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20–24, 2014.
- 342) Drinovec, L., G. Močnik, I. Arnold, R. K. Chakrabarty, A. D. A. Hansen, and H. Moosmüller (2014). Optical Properties of Primary Combustion Aerosols. *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20–24, 2014.
- 341) Yatavelli, R. L. N., L.–W. A. Chen, J. Knue, V. Samburova, M. Gyawali, A. Watts, R. K. Chakrabarty, H. Moosmüller, X. Wang, B. Zielinska, J. C. Chow, and J. G. Watson (2014). Mass- and Energy-Based Emission Factors and Gas-Particle Partitioning of Intermediate-Volatility and Semi-Volatile Organic Compounds from Laboratory Combustion of Boreal and Sub-Tropical Peat. *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20–24, 2014.
- 340) Watts, A. C., R. K. Chakrabarty, V. Samburova, and H. Moosmüller, (2014). Climatic Implications of Peat Fire Emissions. *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20–24, 2014.
- 339) Engelbrecht, J. P., H. Moosmüller, S. L. Pincock, D. E. Campbell, R. K. Chakrabarty, R. K. M. Jayanty, and Gary Casuccio (2014). Optical Properties of Suspended Mineral Dusts from Desert Source Region. *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20–24, 2014.
- 338) Chakrabarty, R. K., N. D. Beres, H. Moosmüller, S. China, C. Mazzoleni, M. K. Dubey, L. Liu, M. I. Mishchenko (2014). How Well Do Laboratory Studies Represent

- Microphysical Properties of Soot Emitted from Wildfires? *33rd Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20–24, 2014.
- 337) Siegel, B., N. D. Beres, J. P. Engelbrecht, and H. Moosmüller (2014). Light Extinction Caused by Dust Deposition on Photovoltaic Cells. *Desert Research Institute, NSHE Bright Stars Undergraduate Presentations*, Reno, NV, September 10, 2014.
- 336) Moosmüller, H. (2014, **invited**). Black Carbon Definition and Measurement Approaches: Background and Overview. *International Council on Clean Transportation (ICCP) Technical Workshop on Marine Black Carbon Emissions: Identifying Research Gaps*. Ottawa, Canada, September 9–10, 2014.
- 335) Drinovec, L., G. Močnik, I. Arnold, R. Chakrabarty, and H. Moosmüller (2014). Optical Properties of Primary Combustion Aerosols. *2014 International Aerosol Conference (IAC2014)*. Busan, Korea, August 28 – September 2, 2014.
- 334) Siegel, B., N. D. Beres, J. P. Engelbrecht, and H. Moosmüller (2014). Light Extinction Caused by Dust Deposition on Photovoltaic Cells. *University of Nevada, Reno 2014 Undergraduate Research Summer Poster Session*, Reno, NV, August 13, 2014.
- 333) Chakrabarty, R. K., N. D. Beres, H. Moosmüller, S. China, C. Mazzoleni, M. K. Dubey, L. Liu, M. I. Mishchenko (2014). The Superaggregates Form of Soot from Wildfires and its Impact on Direct Radiative Forcing. *Goldschmidt2014*, Sacramento, CA, June 8–13, 2014.
- 332) Engelbrecht, J. P., H. Moosmüller, S. L. Pincock, R. K. M. Jayanty, and G. Casuccio (2014). Mineralogical, Chemical, and Optical Interrelationships of Re-Suspended Mineral Dusts from Global Source Regions. *DUST 2014, International Conference on Atmospheric Dust*, Castellaneta Marina, Taranto, Italy, June 1–6, 2014.
- 331) Lee, J. and H. Moosmüller (2014). Optical Homodyne Interferometry for Sensitive Detection of Refractive Index Change. *9th International Conference on Optics-Photonics Design & Fabrication (ODF '14)*, Itabashi, Tokyo, Japan, February 12–14, 2014.
- 330) Mazzoleni, C., S. China, N. Sharma, K. Gorkowski, M. K. Dubey, A. C. Aiken, R. A. Zaveri, N. Salvadori, R. K. Chakrabarty, H. Moosmüller, T. B. Onasch, S. Herndon, L. R. Williams, S. Liu, K. Dzepina, D. Helmig, J. Hueber, P. J. Fialho, L. R. Mazzoleni, S. Kumar, M. Dziobak, K. Wright (2013). Evolution of Soot Morphology and Mixing State in the Atmosphere. *2013 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 9–13, 2013.
- 329) Engelbrecht, J. P., H. Moosmüller, S. L. Pincock, R. K. M. Jayanty, and G. Casuccio (2013). Mineralogical, Chemical, and Optical Interrelationships of Mineral Dusts from Desert Source Regions. *2013 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 9–13, 2013.
- 328) Beres, N. D., R. K. Chakrabarty, H. Moosmüller, L. Liu, and M. I. Mishchenko (2013). Atmospheric Soot Superaggregates: Implications for Health and Radiative Forcing. *DRI's Division of Atmospheric Sciences Science Talks*, Desert Research Institute, Reno, NV, November 13, 2013.
- 327) Kleinman, L., A. J. Sedlacek, W. P. Arnott, P. Buseck, P. Davidovits, E. Lewis, W. Lin, H. Moosmüller, T. Onasch, J. Shilling, J. Wang, R. Yokelson, R. Zaveri (2013). Biomass Burn Observation Project (BBOP). *Annual Fall Working Group Meeting of the Department of Energy Atmospheric System Research Program*, Rockville, MD,

- November 4–8, 2013.
- 326) Arnold, I. J., H. Moosmüller, N. Sharma, and C. Mazzoleni (2013). Development of a Supercontinuum-Based Photoacoustic Spectrometer for Characterization of Atmospheric Aerosol Optics. *Optical Society of America (OSA) Meeting on Optical Instrumentation for Energy and Environmental Applications (E2)*, Tucson, AZ, November 3–6, 2013.
 - 325) Beres, N. D., I. J. Arnold, R. K. Chakrabarty, H. Moosmüller, P. S. Praveen, V. Ramanathan, W. P. Arnott, J. Schauer, and Ö. Gustafsson (2012). Properties of Carbonaceous Aerosols during CARDEX 2012: An Instrument Intercomparison. *32nd Annual Conference of the American Association for Aerosol Research*, Portland, OR, September 30 – October 4, 2013.
 - 324) Novosselov, I., C. Stipe, R. K. Chakrabarty, and H. Moosmüller (2013). Modeling of Nanoparticle Synthesis in Inverted Flames. *32nd Annual Conference of the American Association for Aerosol Research*, Portland, OR, September 30 – October 4, 2013.
 - 323) China, S., C. Mazzoleni, M. Dubey, R. Chakrabarty, H. Moosmüller, P. Arnott, T. Onasch, and S. Herndon (2013). Morphology and Mixing State of Atmospheric Aerosol in Mexico City. *32nd Annual Conference of the American Association for Aerosol Research*, Portland, OR, September 30 – October 4, 2013.
 - 322) Arnold, I. J., H. Moosmüller, N. Sharma, and C. Mazzoleni (2013). Beam Characteristics of Fiber-Based Supercontinuum Light Sources with Mirror- and Lens-Based Beam Collimators. *32nd Annual Conference of the American Association for Aerosol Research*, Portland, OR, September 30 – October 4, 2013.
 - 321) Moosmüller, H. and J. P. Engelbrecht (2013). Complex Refractive Index of Hematite in the Visible and Near Visible: A Review. *32nd Annual Conference of the American Association for Aerosol Research*, Portland, OR, September 30 – October 4, 2013.
 - 320) Sharma, N., I. Arnold, H. Moosmüller, W. P. Arnott, and C. Mazzoleni (2013). A Novel Multi-Wavelength Photoacoustic-Nephelometer Instrument Using a Supercontinuum Light Source for Absorption and Scattering Measurements of Atmospheric Aerosols. *32nd Annual Conference of the American Association for Aerosol Research*, Portland, OR, September 30 – October 4, 2013.
 - 319) Arnold, I. J., C. Berger, H. Moosmüller, N. Sharma, and C. Mazzoleni (2013). The Iron Lung: A Device for the Continuous Delivery of Fine Particulate Matter. *32nd Annual Conference of the American Association for Aerosol Research*, Portland, OR, September 30 – October 4, 2013.
 - 318) Moosmüller, H. and J. P. Engelbrecht (2013). Dust Direct Radiative Forcing and the Complex Refractive Index of Hematite. *Goldschmidt 2013*, Florence, Italy, August 25–30, 2013.
 - 317) Pierce, A., D. Obrist, C. W. Moore, and H. Moosmüller (2013). Atmospheric Mercury Concentration Measurements and Eddy Covariance Flux Measurements Using Cavity Ring-Down Spectroscopy. *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, Scotland, July 28 – August 2, 2013.
 - 316) Venables, D. S., S. B. Darby, A. Pierce, C. W. Moore, H. Moosmüller, and D. Obrist (2013). The Role of BrO in the Oxidation of GEM: A Chamber Investigation at Close-to-Representative Concentrations. *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, Scotland, July 28 – August 2, 2013.

- 315) Darby, S. B., A. Pierce, C. W. Moore, H. Moosmüller, D. S. Venables, and D. Obrist (2013). An Atmospheric Simulation Chamber Study of the Temperature Dependence of Bromine-Initiated Mercury Oxidation. *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, Scotland, July 28 – August 2, 2013.
- 314) Loria, S. M., W. P. Arnott, H. Moosmüller, and D. Colucci (2013). Evaluation of Air Pollution Applications of AERONET and MODIS Aerosol Column Optical Depth by Comparison with In Situ Measurements of Aerosol Light Scattering and Absorption for Reno, NV, USA. *DRI Graduate Student Poster Competition*, Reno, NV, May 23, 2013.
- 313) Kleinman, L., A. J. Sedlacek, W. P. Arnott, P. Buseck, P. Davidovits, E. Lewis, J. Gaffney, W. Lin, H. Moosmüller, T. Onasch, J. Shilling, J. Wang, R. Yokelson, R. Zaveri (2013). Biomass Burn Observation Project (BBOP). *Annual Science Team Meeting of the Department of Energy Atmospheric System Research Program*, Potomac, MD, March 18–21, 2013.
- 312) Rainwater, B., W. P. Arnott, H. Moosmüller, and D. Karr (2012). Automated Solar Tracking Spectrophotometer for Remote Sensing of Column Aerosol Optical Depth. *2012 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 3–7, 2012.
- 311) Sumlin, B., W. P. Arnott, and H. Moosmüller (2012). Evaluating the Use of MODIS AOD for Air Quality Determination by Comparison with the Vertical Distribution of Aerosol Light Scattering Coefficient Obtained with a Balloon-Borne Nephelometer. *2012 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 3–7, 2012.
- 310) Loria, S. M., W. P. Arnott, H. Moosmüller, and D. Colucci (2012). Evaluation of Air Pollution Applications of AERONET and MODIS Aerosol Column Optical Depth by Comparison with In Situ Measurements of Aerosol Light Scattering and Absorption for Reno, NV, USA. *2012 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 3–7, 2012.
- 309) Sharma, N., I. J. Arnold, H. Moosmüller, W. P. Arnott, and C. Mazzoleni (2012). Broadband Measurement of Black Carbon Absorption and Scattering Using a Supercontinuum Integrated Photoacoustic and Nephelometer Instrument. *2012 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 3–7, 2012.
- 308) Moosmüller, H., A. Aiken, M. K. Dubey, G. Frey, B. Garro, and J. P. Engelbrecht (2012). Laboratory Measurement of the Optical Properties of Hematite and Desert Dust Aerosols to Assess Their Climate Forcing. *2012 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 3–7, 2012.
- 307) Chakrabarty, R. K., N. D. Beres, H. Moosmüller, F. Bender, V. Ramanathan (2012). Radiative Properties of Black Carbon Superaggregates in South East Asian Outflow. *2012 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 3–7, 2012.
- 306) Beres, N. D., I. J. Arnold, R. K. Chakrabarty, H. Moosmüller, P. S. Praveen, V. Ramanathan, W. P. Arnott, J. Schauer, and Ö. Gustafsson (2012). Absorption of Carbonaceous Aerosols during CARDEX 2012: An Instrument Intercomparison. *2012 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 3–7, 2012.

- 305) Moosmüller, H. (2012, **invited**). Beyond the Greenhouse Effect: How Aerosol and Snow Albedo Affects Climate Change. *Nevada NSF EPSCoR Climate Change Seminar*, Las Vegas, NV, October 31, 2012.
- 304) Moosmüller, H., A. Aiken, M. K. Dubey, G. Frey, B. Garro, and J. P. Engelbrecht (2012). Optical Properties of Hematite and Fine Desert Dust Aerosols. *31th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 8–12, 2012.
- 303) Arnold, I., H. Moosmüller, N. Sharma, C. Mazzoleni, and W. P. Arnott (2012). Toward In-Situ Characterization of Aerosol Optics with a Supercontinuum Light Source Covering Most of the Solar Spectrum. *31th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 8–12, 2012.
- 302) Beres, N. D., R. K. Chakrabarty, H. Moosmüller, F. Bender, V. Ramanathan (2012). Carbonaceous Superaggregates in South East Asian Outflow. *31th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 8–12, 2012.
- 301) Chakrabarty, R. K., C. B. Stipe, and H. Moosmüller (2012). Flame Synthesis of Aerosol Gels. *31th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 8–12, 2012.
- 300) Moosmüller, H. and R. K. Chakrabarty (2012, **invited**). Tutorial on Contemporary Aerosol Optics (4-hour tutorial). *Aerosol and Atmospheric Optics: Visibility and Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24–28, 2012.
- 299) Moosmüller, H. (2012, **invited**). Possibilities and Potential for Additional Optical Characterization of Particulate Matter. Panel Discussion: Promise and Problems of Advanced Particulate Monitoring and Analysis Methods for Routine Networks. *Aerosol and Atmospheric Optics: Visibility and Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24-28, 2012.
- 298) Chakrabarty, R. K., M. A. Garro, E. M. Wilcox, and H. Moosmüller (2012). The Brahmaputra River Valley: A Regional Hotspot of Black Carbon Emissions. *Aerosol and Atmospheric Optics: Visibility and Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24-28, 2012.
- 297) Moosmüller, H. and W. P. Arnott (2012). Photoacoustic Measurements for the IMPROVE Program. *Aerosol and Atmospheric Optics: Visibility and Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24-28, 2012.
- 296) Moosmüller, H., J. P. Engelbrecht, M. Skiba, G. Frey, R. K. Chakrabarty, and W. P. Arnott (2012). Single Scattering Albedo of Fine Mineral Dust Aerosols Controlled by Iron Concentration. *Aerosol and Atmospheric Optics: Visibility and Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24-28, 2012.
- 295) Arnold, I., H. Moosmüller, N. Sharma, C. Mazzoleni, and W. P. Arnott (2012). Development of a Supercontinuum Photoacoustic Aerosol Absorption and Albedo Spectrometer for the Characterization of Aerosol Optics. *Aerosol and Atmospheric Optics: Visibility and Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24-28, 2012.
- 294) Moosmüller, H., R. K. Chakrabarty, and W. P. Arnott (2012, **invited**). Review of Aerosol Light Absorption Measurement. *Aerosol and Atmospheric Optics: Visibility and*

- Air Pollution*, Air & Waste Management Association, Whitefish, MT, September 24-28, 2012.
- 293) Colucci, D., W. P. Arnott, H. Moosmüller, and S. M. Loria (2012). Using HYSPLIT Back Trajectories to Help Understand Aerosol Optical Depth Measurements: A Case Study of Shifting Winds. *University of Nevada Reno, Annual Undergraduate Research Summer Poster Session*, Reno, NV, August 13, 2012.
- 292) Sumlin, B., W. P. Arnott, and H. Moosmüller (2012). Atmospheric Aerosol Characterization via Autonomous Airborne Instrumentation. *University of Nevada Reno, Annual Undergraduate Research Summer Poster Session*, Reno, NV, August 13, 2012.
- 291) Loria, S. M., W. P. Arnott, H. Moosmüller, and D. Colucci (2012). Worldwide Aerosol Optical Depth Assessed Using the Aerosol Robotic Network (AERONET) Measurements. *2012 Unidata Users Workshop: Navigating Earth System Science Data*, NCAR, Boulder, CO, July 9-13, 2012.
- 290) Pierce, A., D. Obrist, H. Moosmüller, and C. Moore (2012). Cavity Ring-Down Spectroscopy (CRDS) System for Measuring Atmospheric Mercury Using Differential Absorption. *DRI's Division of Atmospheric Sciences Science Talks*, Desert Research Institute, Reno, NV, May 16, 2012.
- 289) Pierce, A., D. Obrist, H. Moosmüller, and C. Moore (2012). Cavity Ring-Down Spectroscopy (CRDS) System for Measuring Atmospheric Mercury Using Differential Absorption. *2012 General Assembly of the European Geosciences Union (EGU)*, Vienna, Austria, April 22-27, 2012.
- 288) Chakrabarty, R. K., M. Gallaspy, and H. Moosmüller (2012, **invited**). Interpreting the Far-Field Scattering Pattern of a Homogeneous Sphere in Q -Space. *LIP 2012 – Laser Interactions with Particles*, Rouen, France, March 26-30, 2012.
- 287) Loria, S. M., W. P. Arnott, H. Moosmüller, B. Sumlin, and D. Karr (2011). Comparison of Atmospheric Column Optical Depth Measurements for Urban Reno, NV with Three Different Sun Photometers and In Situ Measurements Combined with Boundary Layer Height Estimation. *2011 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 5-9, 2011.
- 286) Sumlin, B., D. Karr, S. M. Loria, M. Gyawali, W. P. Arnott, and H. Moosmüller (2011). Boundary Layer Aerosol Characterization via Autonomous Airborne Instrumentation. *University of Nevada, Reno, College of Science Student Poster Competition*, Reno, NV, November 28, 2011.
- 285) Moosmüller, H., C. Mazzoleni, I. Arnold, R. K. Chakrabarty, and W. P. Arnott (2011). Development of a Supercontinuum Photoacoustic Aerosol Absorption and Albedo Spectrometer for the Characterization of Aerosol Optics. *Third Santa Fe Conference on Global and Regional Climate Change*, Santa Fe, NM, October 31 - November 3, 2011.
- 284) Moosmüller, H. (2011, **invited**). Aerosol Optics, Radiative Forcing, and Climate Change. *Third Santa Fe Conference on Global and Regional Climate Change*, Santa Fe, NM, October 31 - November 3, 2011.
- 283) Moosmüller, H., R. K. Chakrabarty, and W. P. Arnott (2011). Measurement of Mineral Dust Light Absorption. *First International Workshop on the Long-Range Transport and Impacts of African Dust on the Americas*, San Juan, Puerto Rico, October 6-7, 2011.
- 282) Moosmüller, H., J. Engelbrecht, W. P. Arnott, G. Frey, R. K. Chakrabarty, and M. Skiba

- (2011). Single Scattering Albedo of Fine Mineral Dust Aerosols Controlled by Iron Concentration. *First International Workshop on the Long-Range Transport and Impacts of African Dust on the Americas*, San Juan, Puerto Rico, October 6-7, 2011.
- 281) Garro, M. A., R. K. Chakrabarty, H. Moosmüller, S. Chancellor, and C. M. Herald (2011). Demonstration of *FracMAP*: A Graphical User-Interactive Package for Performing Simulation and Morphological and Optical Microanalysis of Fractal-Like Aerosol Agglomerates. *30th Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 3-7, 2011.
- 280) Chakrabarty, R. K., M. A. Garro, S. Chancellor, H. Moosmüller, C. M. Herald, and K. M. Ehlers (2011). Obtaining Three-Dimensional Fractal Properties of Aggregates from their Two-Dimensional Images: Determining the Most Reliable Techniques. *30th Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 3-7, 2011.
- 279) Gallaspy, M., R. K. Chakrabarty, and H. Moosmüller (2011). Mie Scattering in Q -Space: Interpreting the Patterns Using Debye Series Analysis. *30th Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 3-7, 2011.
- 278) Loria, S. M., W. P. Arnott, H. Moosmüller, and J. L. Molzan (2011). Comparison of Atmospheric Column Optical Depth for Urban Reno NV Measured In Situ by Photoacoustic and Nephelometer Instruments, Ground Based Sun Photometers, and Retrievals Using the MODIS Instrument Data from the Terra and Aqua Satellites. *30th Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 3-7, 2011.
- 277) Moosmüller, H., R. K. Chakrabarty, and W. P. Arnott (2011). Aerosols Emitted from Open Biomass Burning: Optical and Structural Properties. *DRI's Division of Atmospheric Sciences Science Talks*, Desert Research Institute, Reno, NV, August 16, 2011.
- 276) Sumlin, B., D. Karr, W. P. Arnott, G. Tian, and H. Moosmüller (2011). Theory, Design, and Potential Commercial and Industrial Applications of Microcontroller-Based Photoacoustic Trace Gas and Aerosol Sensors. University of Nevada Reno, Annual Undergraduate Research Summer Poster Session, Reno, NV, August 11, 2011.
- 275) Karr, D., B. Sumlin, S. M. Loria, W. P. Arnott, and H. Moosmüller (2011). Measurement Accuracy and Potential Commercial Application of Handheld Sun Photometers. University of Nevada Reno, Annual Undergraduate Research Summer Poster Session, Reno, NV, August 11, 2011.
- 274) Moosmüller, H., J. Engelbrecht, R. K. Chakrabarty, and W. P. Arnott (2011, **invited**). Laboratory Aerosol Characterization and More. *NASA GLORY Mission Science Team Meeting*, NASA Goddard Institute for Space Studies (GISS), New York, NY, August 10-12, 2011.
- 273) Pierce, A., X. Fäin, D. Obrist, and H. Moosmüller (2011). Atmospheric Mercury Concentration Measurements Using Cavity Ring-Down Spectroscopy. *10th International Conference on Mercury as a Global Pollutant*, Halifax, Nova Scotia, Canada, July 24-29, 2011.
- 272) Chakrabarty, R. K., H. Moosmüller, L.-W. A. Chen, K. Lewis, W. P. Arnott, C. Mazzoleni, M. Dubey, C. E. Wold, W. M. Hao, and S. M. Kreidenweis (2011). Brown

- Carbon Emissions from Smoldering Biomass Combustion. *10th International Conference on Carbonaceous Particles in the Atmosphere*, Vienna, Austria, June 26-29, 2011.
- 271) Moosmüller, H., C. Mazzoleni, I. Arnold, R. K. Chakrabarty, and W. P. Arnott (2011). Supercontinuum Photoacoustic Aerosol Absorption and Albedo Spectrometer for Characterizing Carbonaceous Aerosol Optics. *10th International Conference on Carbonaceous Particles in the Atmosphere*, Vienna, Austria, June 26-29, 2011.
- 270) Moosmüller, H., R. K. Chakrabarty, K. M. Ehlers, and W. P. Arnott (2011). Absorption Ångström Coefficient, Brown Carbon, and Aerosols: Basic Concepts, Bulk Matter, and Spherical Particles. *10th International Conference on Carbonaceous Particles in the Atmosphere*, Vienna, Austria, June 26-29, 2011.
- 269) Chakrabarty, R. K., H. Moosmüller, L. Liu, M. I. Mishchenko, and W. P. Arnott (2011). Fractal Morphology of Carbonaceous Aerosols and Global Radiative Forcing. *10th International Conference on Carbonaceous Particles in the Atmosphere*, Vienna, Austria, June 26-29, 2011.
- 268) Chakrabarty, R. K., M. A. Garro, S. Chancellor, H. Moosmüller, C. M. Herald, and K. M. Ehlers (2011). Determining the Most Reliable Technique for Obtaining Three-Dimensional Fractal Dimension of Soot Aggregates from their Two-Dimensional Images. *10th International Conference on Carbonaceous Particles in the Atmosphere*, Vienna, Austria, June 26-29, 2011.
- 267) Chakrabarty, R. K., H. Moosmüller, and C. B. Stipe (2011). One-Step Continuous Flame Synthesis of Carbon Aerogels. *10th International Conference on Carbonaceous Particles in the Atmosphere*, Vienna, Austria, June 26-29, 2011.
- 266) Moosmüller, H. (2011, **invited**). Measurements Needs and Capabilities for Aerosol Optics. *Department of Physics and Joint Center for Earth Systems Technology, University of Maryland, Baltimore County (UMBC)*, Baltimore, MD, March 31, 2011.
- 265) Moosmüller, H. (2011, **invited**). Aerosol Optics, Radiative Forcing, and Visibility Impairment: Measurement Needs and Capabilities. *National Institute of Standards and Technology (NIST)*, Gaithersburg, MD, March 30, 2011.
- 264) Moosmüller, H. (2011, **invited**). Aerosol Optics, Satellite Remote Sensing, and Climate Change: Properties of Combustion and Mineral Dust Aerosols. *NASA Goddard Space Flight Center (GSFC) AeroCenter Seminar*, Greenbelt, MD, March 29, 2011.
- 263) Frey, G., K. M. Ehlers, R. K. Chakrabarty, and H. Moosmüller (2011). Morphology and Optical Properties of Combustion Aerosols: Experiment, Theory, and Mathematics. *2011 Mathematical Association of America, Northern California, Nevada, and Hawaii Section Meeting*, Santa Rosa, CA, February 26, 2011.
- 262) Moosmüller, H. (2011, **invited**). Aerosol Light Absorption and Climate Change: Properties of Combustion and Mineral Dust Aerosols. *Scripps Institution of Oceanography, University of California, San Diego*, La Jolla, CA, January 21, 2011.
- 261) Moosmüller, H. (2011, **invited**). Measurements of Aerosol Optical Properties for Radiative Forcing and Visibility Research. *Crocker Nuclear Laboratory, University of California, Davis*, Davis, CA, January 13, 2011.
- 260) Kreidenweis, S. M., J. L. Collett, Jr., H. Moosmüller, W. P. Arnott, W. M. Hao, W. C. Malm (2010). Overview of the Fire Lab at Missoula Experiments (FLAME). *2010 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 13-17, 2010.

- 259) Pierce, A., X. Fain, H. Moosmüller, and D. Obrist (2010). Atmospheric Mercury Concentration Measurements Using Cavity Ring-Down Spectroscopy. *2010 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 13-17, 2010.
- 258) Paredes-Miranda, G., W. P. Arnott, and H. Moosmüller (2010). Characterization and Scaling of Black Carbon Aerosol Concentration with City Population Based on In-Situ Measurements and Analysis. *2010 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 13-17, 2010.
- 257) Chakrabarty, R. K., H. Moosmüller, M. A. Garro, B. A. Garro, S. Chancellor, and C. M. Herald (2010). Best Practices for Accurate Characterization of Morphological and Optical Properties of Fractal-Like Black Carbon Aggregates. *2010 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 13-17, 2010.
- 256) China, S., C. Mazzoleni, M. Dubey, R. K. Chakrabarty, H. Moosmüller, T. Onasch, S. Herndon (2010). Temporal and Spatial Variation of Morphological Descriptors for Atmospheric Aerosols Collected in Mexico City. *2010 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 13-17, 2010.
- 255) Salvadori, N., S. China, J. Cook, H. Moosmüller, H. D. Kuhns, C. Mazzoleni (2010). On-Road Measurement of Particulate Matter Emissions from Vehicles: Particle Concentration, Size Distribution, and Morphology. *2010 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 13-17, 2010.
- 254) Moosmüller, H., R. K. Chakrabarty, K. Lewis, M. Gyawali, C. Mazzoleni, M. Dubey, S. M. Kreidenweis, and W. P. Arnott (2010, **invited**). Optical and Structural Properties of Aerosols Emitted from Open Biomass Burning. *2010 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 13-17, 2010.
- 253) Chakrabarty, R. K., M. A. Garro, B. Garro, S. Chancellor, H. Moosmüller, and C. Herald (2010). Two-Dimensional Fractal Dimension Analysis of Agglomerates: Determining the Most Reliable Technique. *29th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 25-29, 2010.
- 252) Gyawali, M., W. P. Arnott, R. Zavari, C. Song, H. Moosmüller, L. Liu, M. I. Mishchenko (2010). First Photoacoustic Aerosol Optics Measurements at 355 nm; Comparison with Visible and Near IR for Laboratory Generated and Winter Time Urban Ambient Aerosols. *29th Annual Conference of the American Association for Aerosol Research*, Portland, OR, October 25-29, 2010.
- 251) Moosmüller, H. (2010, **invited**). Aerosols and Climate Change: Beyond the Whitehouse Effect. *Colloquium of the Physics Department, Michigan Technological University*, Houghton, MI, September 30, 2010.
- 250) Frey, G., R. K. Chakrabarty, K. M. Ehlers, and H. Moosmüller (2010, **Award for Best Poster Presentation**). Morphology of Carbonaceous Aerosols Emitted from the Combustion of Various Mid-Latitudinal Wildland Fuels. *Nevada Undergraduate Research Symposium 2010 (NURS-10) of the Nevada National Science Foundation's EPSCoR Climate Change Project*, Reno, NV, April 13-14, 2010.
- 249) Chakrabarty, R. K., H. Moosmüller, M. A. Garro, J. G. Slowik, E. S. Cross, J.-H. Han, and P. Davidovits (2010). Comparison of *In Situ* Measurements and Rayleigh-Debye-Gans Theory for Optical Properties of Flame Generated Monodisperse Soot Particles. *U.S. EPA Workshop on Addressing Black Carbon and Ozone as Short-Lived Climate*

- Forcers*, Chapel Hill, NC, March 3-4, 2010.
- 248) Moosmüller, H., W. P. Arnott, L.-W. A. Chen, D. Obrist, R. K. Chakrabarty, C. E. Wold, W. M. Hao, and S. M. Kreidenweis (2010). Particle Emissions from Flaming and Smoldering Laboratory Combustion of Wildland Fuels. *U.S. EPA Workshop on Addressing Black Carbon and Ozone as Short-Lived Climate Forcers*, Chapel Hill, NC, March 3-4, 2010.
- 247) Lewis, K., W. P. Arnott, and H. Moosmüller (2010). Multiwavelength Photoacoustic Measurements of Light Absorption and Scattering by Biomass Smoke. *U.S. EPA Workshop on Addressing Black Carbon and Ozone as Short-Lived Climate Forcers*, Chapel Hill, NC, March 3-4, 2010.
- 246) Chakrabarty, R. K., H. Moosmüller, H., L.-W. A. Chen, C. Mazzoleni, P. Chylek, M. Dubey, W. P. Arnott, K. Lewis, and W. M. Hao (2010). Determination of Effective Refractive Indices of Aerosols Emitted from High-Moisture-Content Biomass Combustion Using Mie Theory. *U.S. EPA Workshop on Addressing Black Carbon and Ozone as Short-Lived Climate Forcers*, Chapel Hill, NC, March 3-4, 2010.
- 245) Tian, G., H. Moosmüller, and W. P. Arnott (2010). Calibration of Photoacoustic Aerosol Absorption Measurements with Oxygen A-Band Spectroscopy. *U.S. EPA Workshop on Addressing Black Carbon and Ozone as Short-Lived Climate Forcers*, Chapel Hill, NC, March 3-4, 2010.
- 244) Chakrabarty, R. K., M. A. Garro, H. Moosmüller, and C. Herald (2010). *FracMAP: A Graphical User-Interactive Package for Performing Simulation and Morphological Analysis of Fractal-Like Aerosol Agglomerates*. *U.S. EPA Workshop on Addressing Black Carbon and Ozone as Short-Lived Climate Forcers*, Chapel Hill, NC, March 3-4, 2010.
- 243) Moosmüller, H. (2010, **invited**). Emission of Light Absorbing Carbonaceous Particles from Biomass Burning. *U.S. EPA Workshop on Addressing Black Carbon and Ozone as Short-Lived Climate Forcers*, Chapel Hill, NC, March 3-4, 2010.
- 242) Moosmüller, H. and R. K. Chakrabarty (2010). Measurement of Physical Aerosol Properties: Motivation, Aerosol Types, and Instruments. *Scope of Work Meeting with USACHPPM for Federal Initiative on Mineral Dust Monitoring*, Desert Research Institute, Nevada System of Higher Education, Reno, NV, February 24-25, 2010.
- 241) Moosmüller, H., X. Fain, and D. Obrist (2010). Sensitive and Time-Resolved Measurement of Gaseous Elemental Mercury Concentrations and Fluxes with Cavity Ring-Down Spectroscopy. *Science Talk, Division of Atmospheric Sciences, Desert Research Institute, Nevada System of Higher Education*, Reno, NV, February 9, 2010.
- 240) Tian, G., H. Moosmüller, and W. P. Arnott (2010). Aerosol Asymmetry Parameter g: Instrument Description and Initial Measurements. *Annual State of Nevada NSF EPSCoR Climate Change Conference*, Las Vegas, NV, February 2, 2010.
- 239) Moosmüller, H. and D. Dubois (2010, **invited**). Modification of Snow Albedo by Aerosol Deposition. *Annual State of Nevada NSF EPSCoR Climate Change Conference*, Las Vegas, NV, February 2, 2010.
- 238) Kreidenweis, S. M., P. J. DeMott, M. D. Petters, A. J. Prenni, C. M. Carrico, C. E. Wold, J. L. Collett, Jr., H. Moosmüller, W. C. Malm, and W. M. Hao (2010). Ice nucleation Behavior of Particles Generated in Open Burning of Biomass. *90th American*

- Meteorological Society Annual Meeting*, Atlanta, GA, January 17-21, 2010.
- 237) Arnott, W. P., M. Gyawali, K. Lewis, and H. Moosmüller (2009). Wavelength Dependence of Aerosol Light Absorption in Urban and Biomass Burning Impacted Conditions: An Integrative Perspective. *2009 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 14-18, 2009.
- 236) Kreidenweis, S. M., G. R. McMeeking, W. P. Arnott, S. Baker, C. M. Carrico, J. C. Chow, J. L. Collett, Jr., W. M. Hao, A. S. Holden, T. W. Kirchstetter, E. J. T. Levin, K. A. Lewis, L. Mack, W. C. Malm, H. Moosmüller, A. P. Sullivan, and C. E. Wold (2009). The Fire Lab at Missoula Experiment (FLAME): Measurements of Trace Gases and Aerosols during the Open Combustion of Biomass in the Laboratory. *4th International Fire Ecology and Management Congress: Fire as a Global Process*, Savannah, GA, November 30 - December 4, 2009.
- 235) Lewis, J. M., D. W. Martin, R. M. Rabin, and H. Moosmüller (2009, **invited**). Verner Suomi: Pragmatic Visionary. *50th Anniversary Meteorological Satellite Experiment Symposium*, Madison, WI, November 2, 2009.
- 234) Malm, W. C., J. L. Collett, Jr., S. M. Kreidenweis, B. A. Schichtel, H. Moosmüller, W. M. Hao, and C. M. Carrico (2009, **invited**). Measurements Needed to Understand the Role of Biomass Burning within the Regulatory Framework of the Environmental Protection Agency and the Federal Land Managing Community. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 233) Moosmüller, H., J. Engelbrecht, W. P. Arnott, J. A. Gillies, and M. Skiba (2009). Single Scattering Albedo of Fine Mineral Dust Aerosols Controlled by Iron Concentration. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 232) Tian, G., H. Moosmüller, and W. P. Arnott (2009). Measuring the Aerosol Asymmetry Parameter g : Instrument Description and Initial Measurements. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 231) Tian, G., H. Moosmüller, and W. P. Arnott (2009). Calibration of Photoacoustic Aerosol Absorption Measurements with Simultaneous Spectroscopy of the Oxygen A-Band. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 230) Gyawali, M., W. P. Arnott, and H. Moosmüller (2009). Wavelength Dependence of Aerosol Light Absorption: Diurnal and Seasonal Variation in Reno, NV. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 229) Chakrabarty, R. K., H. Moosmüller, W. P. Arnott, M. A. Garro, G. Tian, J. G. Slowik, E. S. Cross, J.-H. Han, P. Davidovits, T. B. Onasch, and D. R. Worsnop (2009). Low Fractal Dimension Carbonaceous Aggregates from a Premixed Flame. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.

- 228) Chakrabarty, R. K., H. Moosmüller, L.-W. A. Chen, W. P. Arnott, K. A. Lewis, C. Mazzoleni, M. Dubey, C. E. Wold, W. M. Hao, and S. M. Kreidenweis (2009). Brown Carbon in Smoldering Biomass Aerosols. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 227) Chakrabarty, R. K., S. Chancellor, H. Moosmüller, C. M. Herald, and K. M. Ehlers (2009). Morphological Analysis of Fractal-Like Aerosol Agglomerates in Two and Three Dimensions. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 226) Mack, L., T. Lee, J.-L. Jimenez, S. M. Kreidenweis, J. L. Collett, Jr., H. Moosmüller, C. E. Wold, J. R. Kimmel, T. B. Onasch, W. M. Hao, and W. C. Malm (2009). Elemental Analysis of Aerosol Mass Spectrometer Measurements of Laboratory Biomass Burning Aerosols. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 225) Levin, E. J. T., L. Mack, C. M. Carrico, G. R. McMeeking, S. M. Kreidenweis, C. E. Wold, H. Moosmüller, W. P. Arnott, W. M. Hao, J. L. Collett, Jr., and W. C. Malm (2009). Optical Properties of Biomass Burning Smoke Aerosols. *28th Annual Conference of the American Association for Aerosol Research*, Minneapolis, MN, October 26-30, 2009.
- 224) Arnott, W. P. and H. Moosmüller (2009). Multispectral Photoacoustic Analysis of Atmospheric Aerosol. *15th International Conference on Photoacoustic and Photothermal Phenomena*, Leuven, Belgium, July 19-23, 2009.
- 223) Moosmüller, H., X. Fain, and D. Obrist (2009). Cavity Ring-Down Spectroscopy for Measurement of Gaseous Elemental Mercury Concentrations and Fluxes. *9th International Conference on Mercury as a Global Pollutant*, Guiyang, China, June 7-12, 2009.
- 222) Gyawali, M., W. P. Arnott, I. Arnold, K. A. Lewis, G. Paredes-Miranda, H. Moosmüller, R. K. Chakrabarty, G. Kok, J. W. Walker, and D. Baumgardner (2009). Wavelength Dependence of Aerosol Light Absorption. *Annual Science Team Meeting of the Department of Energy Atmospheric Science Program (DOE ASP)*, Santa Fe, NM, February 25–27, 2009.
- 221) Moosmüller, H. (2009, **invited**). Measurement of Aerosol Optical Properties: Principles and Applications. *Seminar, National Space Science and Technology Center, University of Alabama in Huntsville*, Huntsville, AL, February 18, 2009.
- 220) Obrist, D., J. Fritsche, X. Fain, and H. Moosmüller (2008). Ecosystem Level Mercury Exchange. *National Science Foundation (NSF) Workshop on Reducing the Uncertainty in Measurements of Atmospheric Mercury*, Seattle, WA, October 23-25, 2008.
- 219) Mack, L., D. Obrist, H. Moosmüller, K. A. Lewis, W. P. Arnott, G. R. McMeeking, E. J. T. Levin, S. M. Kreidenweis, C. E. Wold, W. M. Hao, J. L. Collett, Jr., and W. C. Malm (2008). Optical Closure Experiments for Biomass Smokes Aerosols. *27th Annual Conference of the American Association for Aerosol Research*, Orlando, FL, October 20-24, 2008.
- 218) Paredes-Miranda, G., W. P. Arnott, and H. Moosmüller (2008). Photoacoustic and Aethalometer Measurements of Aerosol Light Absorption in the Presence of Secondary Organic Aerosol: Mexico City, Las Vegas and Reno, Nevada, and the DOE ARM Site In

- Oklahoma. *9th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 12-14, 2008.
- 217) Chakrabarty, R. K., H. Moosmüller, H., L.-W. A. Chen, C. Mazzoleni, P. Chylek, M. Dubey, W. P. Arnott, K. Lewis, and W. M. Hao (2008). Morphology and Effective Refractive Indices of Aerosols Emitted from High-Moisture-Content Biomass Combustion. *9th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 12-14, 2008.
- 216) Chakrabarty, R. K., M. A. Garro, H. Moosmüller, and C. Herald (2008). *FracMAP: A Graphical User-Interactive Package for Performing Simulation and Morphological Analysis of Fractal-Like Aerosol Agglomerates*. *9th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 12-14, 2008.
- 215) Tian, G., H. Moosmüller, and W. P. Arnott (2008). Calibration of Photoacoustic Aerosol Absorption Measurements with Oxygen A-Band Spectroscopy. *9th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 12-14, 2008.
- 214) Lewis, K., W. P. Arnott, and H. Moosmüller (2008). Photoacoustic Evidence for Strong Spectral Variation of Biomass Smoke Light Absorption and Single Scattering Albedo. *9th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 12-14, 2008.
- 213) McMeeking, G. R., A. P. Sullivan, P. J. DeMott, S. M. Kreidenweis, J. L. Collett, Jr., T. W. Kirchstetter, M. M. Lunden, H. Moosmüller, W. P. Arnott, K. Lewis, W. M. Hao, and W. C. Malm (2008). The Light Attenuation Spectral Dependence of Organic Carbon Emitted by Biomass Burning. *9th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 12-14, 2008.
- 212) McMeeking, G. R., C. M. Carrico, M. D. Petters, M. Parsons, A. J. Prenni, A. P. Sullivan, P. J. DeMott, S. M. Kreidenweis, J. L. Collett, Jr., T. W. Kirchstetter, M. M. Lunden, H. Moosmüller, W. P. Arnott, K. Lewis, S. Baker, C. E. Wold, W. M. Hao, and W. C. Malm (2008). Characterization of Emissions from the Laboratory Combustion of Wildland Plant Species. *9th International Conference on Carbonaceous Particles in the Atmosphere (ICCPA)*, Berkeley, CA, August 12-14, 2008.
- 211) Moosmüller, H. (2008). Mercury and Chemical Imaging Sensor Research at the Desert Research Institute. *Advisory Board Meeting of NSF EPSCoR RING-TRUE III Sensor Technology*, Reno, NV, July 30, 2008.
- 210) Moosmüller, H. (2008, **invited**). Light Absorption. *Conference on “Light Scattering: Mie and More – Commemorating 100 Years Mie’s 1908 Publications”*, *Gesellschaft für Aerosol Forschung (GAEF) Annual Meeting*, Karlsruhe, Germany, July 3-4, 2008.
- 209) Chakrabarty, R. K., H. Moosmüller, H., L.-W. A. Chen, C. Mazzoleni, P. Chylek, M. Dubey, W. P. Arnott, K. Lewis, and W. M. Hao (2008). Determination of Effective Refractive Indices of Aerosols Emitted from High-Moisture-Content Biomass Combustion Using Mie Theory. *Conference on “Light Scattering: Mie and More – Commemorating 100 Years Mie’s 1908 Publications”*, *Gesellschaft für Aerosol Forschung (GAEF) Annual Meeting*, Karlsruhe, Germany, July 3-4, 2008.
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