

EDUCATION

Institution	Degree	Field	Year
Institute for Atmospheric and Climate Science, Swiss Federal Institute of Technology (ETH), Switzerland	Ph.D.	Atmospheric Science & Chemistry	2003
Ruprecht-Karls-University of Heidelberg/Max-Planck-Institute for Nuclear Physics, Germany	M.Sc. (<i>Diploma</i>)	Physics	1999
Ruprecht-Karls-University of Heidelberg, Germany	Spanish language certification	Spanish	1998
Ruprecht-Karls-University of Heidelberg, Germany	Suppl. Studies in Environ. Science.	Environmental Sciences	1996
Ruprecht-Karls-University of Heidelberg, Germany	B.Sc. (<i>Pre-Diploma</i>)	Physics	1994

LIST OF POSITIONS

Full-Time Teaching / Research Institution	Academic Rank & Field	Date
Stony Brook University, NY, USA	Full Professor Atmospheric Science	1/2017-present
Stony Brook University, NY, USA	Affiliated Faculty & Chemistry Department	12/2015-present
Max-Planck-Institute for Chemistry, Mainz, Germany	Visiting Professor & Multiphase Chemistry	9/2014-12/2014
Institute of Organic Chemistry and Biochemistry, Academy of Sciences, Prague, Czech Republic	Visiting Professor & Molecular Dynamics	5/2014-8/2014
Stony Brook University, NY, USA	Associate Professor & Atmospheric Science & Chemistry	2012-present
Stony Brook University, NY, USA	Assistant Professor & Atmospheric Science & Chemistry	2007
University of British Columbia, Vancouver, Canada. (Prof. Dr. Allan K. Bertram)	Postdoctoral Research Associate & Chemistry	2003 - 2006
Swiss Federal Institute of Technology (ETH), Zurich, Switzerland. (Prof. Dr. Thomas Peter)	Postdoctoral Research Associate & Atmospheric Chemistry	2003

Daniel A. Knopf

School of Marine and Atmospheric Sciences
Stony Brook University

Max-Planck-Institute for Nuclear Physics,
Division of Atmospheric Physics, Heidelberg,
Germany. (Prof. Dr. Konrad Mauersberger)

Research Assistant &
Atmospheric Physics and
Chemistry

1999

OTHER PROFESSIONAL EXPERIENCE

1. Swiss Federal Institute of Technology (ETH), Zurich, Switzerland: teaching assistant, 10/2000 - 04/2003.
2. Max-Planck-Institute for Nuclear Physics, Heidelberg, Germany: research assistant responsible for operation of particle accelerator, 01/1998 - 04/1999.
3. SAP Inc., Walldorf, Germany: research assistant responsible for complex data networks, 02/1995 - 08/1997.
4. Vögele Inc., Mannheim, Germany: operation of computer numerical control (CNC) metal processing machines, summer 1991-1996.

PH.D. THESIS AND ADVISOR:

Knopf, D. A., Thermodynamic Properties and Nucleation Processes of Upper Tropospheric and Lower Stratospheric Aerosol Particles. ETH Zürich, Switzerland, 2003.

Advisor: *Prof. Dr. Thomas Peter* and *Dr. Thomas Koop*

M.SC. THESIS AND ADVISOR

Knopf, D. A., Calibration of an Aerosol-Beam-Mass-Spectrometer with definite Sulfuric-Acid-Water-Aerosols. Ruprecht-Karls-University of Heidelberg/Max-Planck-Institute for Nuclear Physics, Germany, 1999.

Advisor: *Prof. Dr. Konrad Mauersberger*

LIST OF HONORS, AWARDS, RECOGNITIONS

1. The European Geosciences Union Atmospheric Chemistry and Physics highlighted the publication by Ohneiser et al. entitled "Australian wildfire smoke in the stratosphere: the decay phase in 2020/2021 and impact on ozone depletion".
2. Featured Scientist Profile "Daniel Knopf: Unraveling the Ice Nucleation Puzzle" by U.S. Department of Energy Atmospheric System Research Program. <https://asr.science.energy.gov/news/program-news/post/14630>.
3. Several published highlights by U.S. Department of Energy Atmospheric Radiation Measurement and Atmospheric System Research Programs regarding the first attempted aerosol-ice formation closure field study.
4. Faculty Achievement Award 2015 by Stony Brook University.
5. Invited EMSL Director's Distinguished Lecture "The Grand Challenge of Atmospheric Ice Nucleation: What Can Be Learned from Particle Freezing Studies and How", Richland, WA, March 17, 2014.
6. Named as Wiley Research Fellow by Environmental Molecular Sciences Laboratory at Pacific Northwest National Laboratory, USA, 2013.
7. Recipient of the IOCB Sabbatical Visit Program Fellowship by the Institute of Organic Chemistry and Biochemistry (IOCB), Academy of Sciences, Czech Republic, 2013.
8. Recipient of complimentary European Geophysical Union membership in appreciation to EGU-related activities, 2013.
9. Invited speaker at the Telluride Workshop: Aerosol and Clouds, USA, 2012.
10. Invited speaker at the Bioaerosol Effects on Clouds Workshop, Steamboat Springs, USA, 2012.
11. Invited speaker at the Gordon Research Conference "Water and Aqueous Solutions", Holderness, USA, 2010.

12. Recipient of National Science Foundation (NSF) Faculty Early Career Development (CAREER) Program, 2009.
13. Invited participant in the Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS), Yellowstone National Park, USA, 2003.
14. The EGU highlighted the publication by Knopf et al., *Atmos. Chem. Phys.* (2002) as one of the major scientific issues in current research on polar stratospheric clouds, *The Eggs*, 6, 2003.

PROFESSIONAL SERVICE OUTSIDE UNIVERSITY

1. Session chair at the Molecular Understanding of Atmospheric Aerosols 2022 meeting, Lake Arrowhead, California, 2022.
2. Session chair at International Chemical Congress of Pacific Basin Societies (PACIFICHEM), Honolulu, 2021.
3. Session chair at American Physical Society Meeting, 2020.
4. Editorial Advisory Board Member of the Asian Journal of Atmospheric Environment, 2019.
5. Lecturer at the EMSL/ARM Aerosol Summer School. Organized by Environmental Molecular Sciences Laboratory at Pacific Northwest National Laboratory, Richland, July 15-19, USA, 2019.
6. Lecturer at the "Third Sino-European School on Atmospheric Chemistry (SESAC3)". Organized by Fudan University in Shanghai, November 21-30, 2017.
7. Session organizer "Chemical processes involving atmospherically relevant trace gases, aerosols and clouds" for American Chemical Society National Meeting, Boston, 2015.
8. Session organizer "Multiphase chemical processes on atmospheric aerosol (natural and anthropogenic) and/or environmental surfaces" for American Geophysical Union Fall Meeting, San Francisco, 2014.
9. Elected member of the EMSL User Executive Committee (UEC) representing user science in the Atmospheric Aerosol Systems Science Theme, 2014-2017.
10. Co-Editor and guest editor of the journal *Atmospheric Chemistry and Physics* of the European Geosciences Union, 2010-present.
11. Reviewer of *Chem. Soc. Rev.*, *Proc. Natl. Acad. Sci. USA*, *Nature Journals*, *J. Phys. Chem. A & B*, *ACS Earth Space Chem.*, *Anal. Chem.*, *Environ. Sci. Technol.*, *Environ. Sci. Technol. Lett.*, *Geophys. Res. Lett.*, *J. Geophys. Res. (Atmospheres, Planets)*, *Atmos. Chem. Phys.*, *Env. Res. Lett.*, *Phys. Chem. Chem. Phys.*, *Chemosphere*, *Atmos. Env.*, *Atmos. Res.*, *Aerosol Sci. Technol.*, *Environ. Sci. Atmos.*, *J. Atmos. Sci.*, *Env. Sci. Atmos.*, *Environ. Health Insights*, *Am. J. Prev. Med. Focus*, *Langmuir*, *J. Raman Spectros. J. Meteorol. Soc. Jpn.*, *J. Atmos. Chem.*, *Americas Cambridge University Press*.
12. Editorial Board Member (Hindawi Publishing Corporation) of "Datasets International – Dataset Papers in Geosciences" and "Physical Chemistry" until 2014.
13. Editorial Board Member (Scientific Research Publishing) of "Atmospheric and Climate Sciences" until 2015.
14. Session organizer and chair "Atmospheric Ice Nucleation" for American Geophysical Union Fall Meeting 2011.
15. Reviewer of Grant Applications for the National Science Foundation, Department of Energy, and National Oceanic and Atmospheric Administration.
16. Reviewer of Environmental Molecular Sciences Laboratory user proposals.
17. Poster judge at the Gordon Research Conference "Water and Aqueous Solutions", 2010. Co-chair at the meetings of the American Chemical Society (2011), American Physical Society (2008), American Association for Aerosol Research - International Aerosol Conference (2006), American Association for Aerosol Research (2005).
18. Professional Associations: European Geophysical Union, American Chemical Society, American Geophysical Union.

PATENT

1. Orlov, A., Ramakrishnan, G., Grubb, R., Knopf, D. A., Method for preparing chemical/surface modified nano crystalline cellulose. The Research Foundation for the State University of New York, Serial No. 62/069,046 filed in the U.S. Patent & Trademark Office, October 27, 2014.

EDITOR OF REFEREED REVIEW ARTICLES

1. Korolev, A., Leisner, T., Review of experimental studies of secondary ice production, *Atmos. Chem. Phys.*, 20, 11767-11797, 2020.
2. Marcolli, C., Nagare, B., Welti, A., Lohmann, U., Ice nucleation efficiency of AgI: review and new insights, *Atmos. Chem. Phys.*, 16, 8915-8937, 2016.
3. Ladino Moreno, L. A., Stetzer, O., Lohmann, U., Contact freezing: a review of experimental studies, *Atmos. Chem. Phys.*, 13, 9745-9769, 2013.

GUEST EDITOR

- *Atmospheric Chemistry and Physics* Special Issue “*Chemistry, microphysics and dynamics of the polar stratosphere: ozone loss and climate-chemistry interactions*”, 2010-2016. Guest editor with R. Müller, F. Khosrawi, and M. von Hobe.
- *Atmospheric Chemistry and Physics* Special Issue “*Multiphase chemistry of secondary aerosol formation under severe haze*”, 2017-present. Guest editor with H. Su, A. Ding, J. K. Jiang, J. Wang.
- *Atmospheric Chemistry and Physics* Special Issue “*Fifth International Workshop on Ice Nucleation (FIN) (ACP/AMT inter-journal SI)*”, 2018-present. Guest editor with J. Abbatt, M. Krämer, A. K. Bertram.

REFEREED ARTICLES (Google Scholar h-index: 39, ORCID: 0000-0001-7732-3922)

REFEREED REVIEW ARTICLES (*: corresponding author, underline: student of my group)

1. Knopf*, D. A., Alpert, P. A., and Wang, B., The Role of Organic Aerosol in Atmospheric Ice Nucleation: A Review, *ACS Earth and Space Chemistry*, 2 (3), 168–202, 2018.
2. Laskin*, A., Gilles, M. K., Knopf, D. A., Wang, B., China, S., Progress in the Analysis of Complex Atmospheric Particles, *Annu. Rev. Anal. Chem.*, 9, 117-143, 2016.

INVITED REFEREED ARTICLES (*: corresponding author, underline: student of my group)

1. Charnawskas, J. C., Alpert, P. A., Lambe, A. T., Berkemeier, T., O'Brien, R. E., Massoli, P., Onasch, T. B., Shiraiwa, M., Moffet, R. C., Gilles, M. K., Davidovits, P., Worsnop, D. R., Knopf*, D. A., Condensed-phase biogenic-anthropogenic interactions with implications for cold cloud formation, *Farad. Discuss.*, 200, 165-194, 2017.
2. Isaacman-VanWertz, G., Massoli, P., O'Brien, R. E., Nowak, J. B., Canagaratna, M. R., Jayne, J. T., Worsnop, D. R., Su, L., Knopf, D. A., Misztal, P. K., Arata, C., Goldstein, A. H., Kroll*, J. H., Using advanced mass spectrometry techniques to fully characterize atmospheric organic carbon: current capabilities and remaining gaps, *Farad. Discuss.*, 200, 579-598, 2017.
3. Knopf*, D. A., Alpert, P. A., A Water Activity Based Model of Heterogeneous Ice Nucleation Kinetics for Freezing of Water and Aqueous Solution Droplets, *Farad. Discuss.*, 165, 513-534, 2013.
4. Alpert, P. A., Aller, J. Y., Knopf*, D. A., Initiation of the Ice Phase by Marine Biogenic Surfaces in Supersaturated Gas and Supercooled Aqueous Phases. Special issue “Physics and Chemistry of Water and Ice” of *Phys. Chem. Chem. Phys.*, 13, 19882-19894, 2011.

5. Knopf*, D. A., Lopez, M. D., Homogeneous Ice Freezing Temperatures and Ice Nucleation Rates of Aqueous Ammonium Sulfate and Aqueous Levoglucosan Particles for Relevant Atmospheric Conditions. Special issue "Physical Chemistry of Aerosols" of *Phys. Chem. Chem. Phys.*, 11, 8056–8068, 2009.

REFEREED ARTICLES (*: corresponding author, underline: student of my group)

1. Ohneiser*, K., Ansmann, A., Kaifler, B., Chudnovsky, A., Barja, B., Knopf, D. A., Kaifler, N., Baars, H., Seifert, P., Villanueva, D., Jimenez, C., Radenz, M., Engelmann, R., Veselovskii, I., Zamorano, F., Australian wildfire smoke in the stratosphere: the decay phase in 2020/2021 and impact on ozone depletion, *Atmos. Chem. Phys.*, 22, 7417–7442, 2022.
2. Knopf*, D. A., Charnawskas, J. C., Wang, P., Wong, B., Tomlin, J. M., Jankowski, K. A., Fraund, M., Veghte, D. P., China, S., Laskin, A., Moffet, R. C., Gilles, M. K., Aller, J. Y., Marcus, M. A., Raveh-Rubin, S., Wang, J., Micro-spectroscopic and freezing characterization of ice-nucleating particles collected in the marine boundary layer in the eastern North Atlantic, *Atmos. Chem. Phys.*, 22, 5377–5398, 2022.
3. Yuen, J. G., Marshilok, A. C., Benziger, P. T., Yan, S., Cello, J., Stackhouse, C. A., Kisslinger, K., Bock, D. C., Takeuchi, E. S., Takeuchi, K. J., Wang, L., Babu, S., Itzkowitz, G., Thanassi, D., Knopf*, D. A., Shroyer*, K. R., Dry heat sterilization as a method to recycle N95 respirator masks: the importance of fit, *PLOS ONE*, 17, 1932–6203, 2022.
4. Tomlin, J. M., Jankowski, K. A., Veghte, D. P., China, S., Wang, P., Fraund, M., Weis, J., Zheng, G., Wang, Y., Rivera-Adorno, F., Raveh-Rubin, S., Knopf, D. A., Wang, J., Gilles, M. K., Moffet, R. C., Laskin*, A., Impact of dry intrusion events on the composition and mixing state of particles during the winter Aerosol and Cloud Experiment in the Eastern North Atlantic (ACE-ENA), *Atmos. Chem. Phys.*, 21, 18123–18146, 2021.
5. Knopf*, D. A., Ammann*, M., Technical note: Adsorption and desorption equilibria from statistical thermodynamics and rates from transition state theory, *Atmos. Chem. Phys.*, 21, 15725–15753, 2021.
6. Wang, Y., Zheng, G., Jensen, M. P., Knopf, D. A., Laskin, A., Matthews, A. A., Mechem, D., Mei, F., Moffet, R., Sedlacek, A. J., Shilling, J. E., Springston, S., Sullivan, A., Tomlinson, J., Veghte, D., Weber, R., Wood, R., Zawadowicz, M. A., Wang*, J., Vertical profiles of trace gas and aerosol properties over the eastern North Atlantic: variations with season and synoptic condition, *Atmos. Chem. Phys.*, 21, 11079–11098, 2021.
7. Ye, Q., Goss, M. B., Isaacman-VanWertz, G., Zaytsev, A., Massoli, P., Lim, C., Croteau, P., Canagaratna, M., Knopf, D. A., Keutsch, F. N., Heald, C. L., Kroll*, J. H., Organic Sulfur Products and Peroxy Radical Isomerization in the OH Oxidation of Dimethyl Sulfide, *ACS Earth Space Chem.*, 5, 8, 2013–2020, 2021.
8. Wang*, J., Wood, R., Jensen, M. P., Chiu, C., Liu, Y., Lamer, K., Desai, N., Giangrande, S. E., Knopf, D. A., Kollias, P., Laskin, A., Liu, X., Lu, C., Mechem, D., Mei, F., Starzec, M., Tomlinson, J., Wang, Y., Yum, S. S., Zheng, G., Aiken, A. L., Azevedo, E. B., Blanchard, Y., China, S., Dong, X., Gallo, F., Gao, S., Ghatge, V. P., Glienke, S., Goldberger, L., Hardin, J. C., Kuang, C., Luke, E. P., Matthews, A. A., Miller, M. A., Moffet, R., Pekour, M., Schmid, B., Sedlacek, A. J., Shaw, R. A., Shilling, J. E., Sullivan, A., Suski, K., Veghte, D. P., Weber, R., Wyant, M., Yeom, J., Zawadowicz, M., Zhang, Z., Aerosol and Cloud Experiments in the Eastern North Atlantic (ACE-ENA), *B. Am. Meteorol. Soc.*, 103, 2, E619–E641, 2021.
9. Knopf*, D. A., Barry, K. R., Brubaker, T. A., Jahl, L. G., Jankowski, K. A. L., Li, J., Lu, Y., Monroe, L. W., Moore, K. A., Rivera-Adorno, F. A., Saucedo, K. A., Shi, Y., Tomlin, J. M., Vepuri, H. S. K., Wang, P., Lata, N. N., Levin, E. J. T., Creamean, J. M., Hill, T. C. J., China, S., Alpert, P. A., Moffet, R. C., Hiranuma, N., Sullivan, R. C., Fridlind, A. M., West,

- M., Riemer, N., Laskin, A., DeMott, P. J., Liu, X., Aerosol–Ice Formation Closure: A Southern Great Plains Field Campaign, *B. Am. Meteorol. Soc.*, 102, 10, E1952–E1971, 2021.
10. Ansmann*, A., Ohneiser, K., Mamouri, R.-E., Knopf, D. A., Veselovskii, I., Baars, H., Engelmann, R., Foth, A., Jimenez, C., Seifert, P., Barja, B., Tropospheric and stratospheric wildfire smoke profiling with lidar: mass, surface area, CCN, and INP retrieval, *Atmos. Chem. Phys.*, 21, 9779–9807, 2021.
 11. Li, J., Knopf*, D. A., Representation of Multiphase OH Oxidation of Amorphous Organic Aerosol for Tropospheric Conditions, *Environ. Sci. Technol.*, 55, 11, 7266–7275, 2021.
 12. Patade*, S., P., Phillips, V. T. J., Amato, P., Bingemer, H. G., Burrows, S. M., DeMott, P. J., Goncalves, F. I. T., Knopf, D. A., Morris, C. E., Alwmark, C., Artaxo, P., Pöhlker, C., Schrod, J., Weber, B., Empirical formulation for multiple groups of primary biological ice nucleating particles from field observations over Amazonia, *J. Atmos. Sci.*, 78, 7, 2195–2220, 2021.
 13. Zaytsev, A., Breitenlechner, M., Novelli, A., Fuchs, H., Knopf, D. A., Kroll, J. H., Keutsch*, F. N., Application of chemical derivatization techniques combined with chemical ionization mass spectrometry to detect stabilized Criegee intermediates and peroxy radicals in the gas phase, *Atmos. Meas. Tech.*, 14, 2501–2513, 2021.
 14. Silber*, I., Fridlind, A. M., Verlinde, J., Ackerman, A. S., Cesana, G. V., Knopf, D. A., The prevalence of precipitation from polar supercooled clouds, *Atmos. Chem. Phys.*, 21, 3949–3971, 2021.
 15. Li, J., Forrester, S. M., Knopf*, D. A., Heterogeneous oxidation of amorphous organic aerosol surrogates by O₃, NO₃, and OH at typical tropospheric temperatures, *Atmos. Chem. Phys.*, 20, 6055–6080, 2020.
 16. Knopf*, D. A., Alpert, P., Zipori, A., Reicher, N., Rudich*, Y., Stochastic nucleation processes and substrate abundance explain time-dependent freezing in supercooled droplets, *npj Climate and Atmospheric Science*, 3, 2, 2020.
 17. Zipori, A., Reicher, N., Erel, Y., Rosenfeld, R., Sandler, A., Knopf, D. A., Rudich*, Y., The role of secondary ice processes in mid-latitude continental clouds, *J. Geophys. Res.*, 123, 22, 12762–12777, 2018.
 18. Isaacman-VanWertz*, G., Massoli, P., O'Brien, R., Lim, C., Franklin, J. P., Moss, J. A., Hunter, J. F., Nowak, J. B., Canagaratna, M. R., Misztal, P. K., Arata, C., Roscioli, J. R., Herndon, S. T., Onasch, T. B., Lambe, A. T., Jayne, J. T., Su, L., Knopf, D. A., Goldstein, A. H., Worsnop, D. R., Kroll*, J. H., Chemical evolution of atmospheric organic carbon over multiple generations of oxidation, *Nat. Chem.*, 10, 462–468, 2018.
 19. Fan*, S., Knopf, D. A., Heymsfield, A. H., Donner, L. J., Modeling of Aircraft Measurements of Ice Crystal Concentration in the Arctic and a Parameterization for Mixed-Phase Cloud, *J. Atmos. Sci.*, 74, 3799–3814, 2017.
 20. China*, S., Alpert*, P. A., Zhang, B., Schum, S., Dzepina, K., Wright, K., Owen, R. C., Fialho, P., Mazzoleni, L. R., Mazzoleni, C., Knopf, D. A., Ice cloud formation potential by free tropospheric particles from long-range transport over the Northern Atlantic Ocean, *J. Geophys. Res.*, 122, 5, 3065–3079, 2017.
 21. Aller*, J. Y., Radway, J. C., Kilthau, W. P., Bothe, D. W., Wilson, T. W., Vaillancourt, R. D., Quinn, P. K., Coffman, D. J., Murray, B. J., Knopf*, D. A., Size resolved characterization of the polysaccharidic and proteinaceous components of Sea Spray Aerosol, *Atmos. Environ.*, 154, 331–347, 2017.
 22. Slade, J. H., M. Shiraiwa, A. Arangio, H. Su, U. Pöschl, J. Wang, Knopf*, D. A., Cloud droplet activation through oxidation of organic aerosol influenced by temperature and particle phase state, *Geophys. Res. Lett.*, 44, 1583–1591, 2017.

23. Moffet*, R. C., O'Brien, R. E., Alpert, P. A., Kelly, S. T., Pham, D. Q., Gilles, M. K., Knopf, D. A., Laskin, A., Morphology and mixing of black carbon particles collected in central California during the CARES field study, *Atmos. Chem. Phys.*, 16, 14515-14525, 2016.
24. Wang*, B., Knopf, D. A., China, S., Arey, B. W., Harder, T. H., Gilles, M. K., Laskin, A., Direct Observation of Ice Nucleation Events on Individual Atmospheric Particles, *Phys. Chem. Chem. Phys.*, 18, 29721–29731, 2016.
25. Pandey, R., Usui, K., Livingstone, R. A., Fischer, S. A., Pfaendtner, J., Backus, E. H. G., Nagata, Y., Fröhlich-Nowoisky, J., Schmöser, L., Mauri, S., Scheel, J. F., Knopf, D. A., Pöschl, U., Bonn, M., Weidner*, T., Ice-nucleating bacteria control the order and dynamics of interfacial water, *Sci. Adv.*, 2:e1501630, 2016.
26. Alpert*, P. A., Knopf*, D. A., Analysis of isothermal and cooling-rate-dependent immersion freezing by a unifying stochastic ice nucleation model, *Atmos. Chem. Phys.*, 16, 2083-2107, 2016.
27. Ladino*, L. A., Yakobi-Hancock, J. D., Kilthau, W. P., Mason, R. H., Si, M., Li, J., Miller, L. A., Schiller, C. L., Huffman, J. A., Aller, J. Y., Knopf, D. A., Bertram, A. K., Abbatt, J. P. D., Addressing the ice nucleating abilities of marine aerosol: A combination of deposition mode laboratory and field measurements, *Atmos. Env.*, 132, 1-10, 2016.
28. O'Brien, R. E., Wang, B., Laskin, A., Riemer, N., West, M., Zhang, Q., Sun, Y., Yu, X.-Y., Alpert, P., Knopf, D. A., Gilles, M. K., Moffet*, R. C., Chemical imaging of ambient aerosol particles: Observational constraints on mixing state parameterization, *J. Geophys. Res.*, 120, 18, 9591–9605, 2015.
29. Alpert, P. A., Kilthau, W. P., Bothe, D. W., Radway, J. C., Aller*, J. Y., Knopf*, D. A., The influence of marine microbial activities on aerosol production: A laboratory mesocosm study, *J. Geophys. Res.*, 120, 17, 8841–8860, 2015.
30. Slade, J. H., Thalman, R., Wang, J., Knopf*, D. A., Chemical aging of single and multicomponent biomass burning aerosol surrogate particles by OH: implications for cloud condensation nucleus activity, *Atmos. Chem. Phys.*, 15, 10183–10201, 2015.
31. Forrester, S. M., Knopf*, D. A., Corrigendum to "Photosensitized heterogeneous oxidation kinetics of biomass burning aerosol surrogates by ozone using an irradiated rectangular channel flow reactor", *Atmos. Chem. Phys.*, 15, 4043–4043, 2015.
32. Wilson*, T.W., Ladino*, L. A., Alpert, P. A., Breckels, M. N., Brooks, I. M., Browse, J., Burrows, S. M., Carslaw, K. S., Huffman, J. A., Judd, C., Kilthau, W. P., Mason, R. H., McFiggans, G., Miller, L. A., Najera, J. Polishchuk, E., Rae, S., Schiller, C. L., Si, M., Vergara Temprado, J., Whale, T. F., Wong, J. P. S., Wurl, O., Yakobi-Hancock, J. D., Abbatt, J. P. D., Aller, J. Y., Bertram, A. K., Knopf, D. A., Murray, B. J., A marine biogenic source of atmospheric ice nucleating particles, *Nature*, 525, 234–238, 2015.
33. Knopf*, D. A., Pöschl, U. Shiraiwa*, M., Radial Diffusion and Penetration of Gas Molecules and Aerosol Particles through Laminar Flow Reactors, Denuders, and Sampling Tubes, *Anal. Chem.*, 87 (7), 3746–3754, 2015.
34. Arangio, A. M., Slade, J. H., Berkemeier, T., Pöschl, U., Knopf*, D. A., Shiraiwa*, M., Multiphase Chemical Kinetics of OH Radical Uptake by Molecular Organic Markers of Biomass Burning Aerosols: Humidity and Temperature Dependence, Surface Reaction, and Bulk Diffusion, *J. Phys. Chem. A*, 119 (19), 4533–4544, 2015.
35. Knopf*, D. A., Alpert, P. A., Wang, B., O'Brien, R. E., Kelly, S. T., Laskin, A., Gilles, M. K., Moffet, R. C., Micro-Spectroscopic Imaging and Characterization of Individually Identified Ice Nucleating Particles from a Case Field Study, *J. Geophys. Res.*, 119, 17, 10365–10381, 2014.
36. Slade, J. H. and Knopf*, D. A., Multiphase OH oxidation kinetics of organic aerosol: The role of particle phase state and relative humidity, *Geophys. Res. Lett.*, 41, 5297–5306, 2014.

37. Forrester, S. M., Knopf*, D. A., Photosensitised heterogeneous oxidation kinetics of biomass burning aerosol surrogates by ozone using an irradiated rectangular channel flow reactor, *Atmos. Chem. Phys.*, 13, 6507–6522, 2013.
38. Rigg, Y. J., Alpert, P. A., Knopf*, D. A., Immersion freezing of water and aqueous ammonium sulphate droplets initiated by Humic Like Substances as a function of water activity, *Atmos. Chem. Phys.*, 13, 6603–6622, 2013.
39. Slade, J. H., Knopf*, D. A., Heterogeneous OH oxidation of biomass burning organic aerosol surrogate compounds: Assessment of volatilisation products and the role of OH concentration on the reactive uptake kinetics, *Phys. Chem. Chem. Phys.*, 15 (16), 5898–5915, 2013.
40. Wang, B., Laskin, A., Roedel, T., Gilles, M. K., Moffet, R. C., Tivanski, A. V., Knopf*, D. A., Heterogeneous ice nucleation and water uptake by field-collected atmospheric particles below 273 K, *J. Geophys. Res.*, 117, D00V19, 2012.
41. Wang, B., Lambe, A. T., Massoli, P., Onasch, T. B., Davidovits, P., Worsnop, D. R., Knopf*, D. A., The deposition ice nucleation and immersion freezing potential of amorphous secondary organic aerosol: Pathways for ice and mixed-phase cloud formation, *J. Geophys. Res.*, 117, D16, D16209, 2012.
42. Shiraiwa, M., Pöschl, U., Knopf*, D. A., Multiphase Chemical Kinetics of NO₃ Radicals Reacting with Organic Aerosol Components from Biomass Burning. *Environ. Sci. Technol.*, 46, 6630–6636, 2012.
43. Knopf*, D. A., Forrester, S. M., Slade, J. H., Heterogeneous oxidation kinetics of organic biomass burning aerosol surrogates by O₃, NO₂, N₂O₅, and NO₃. *Phys. Chem. Chem. Phys.*, 13, 21050–21062, 2011.
44. Alpert, P. A., Aller, J. Y., Knopf*, D. A., Ice nucleation from aqueous NaCl droplets with and without marine diatoms, *Atmos. Chem. Phys.*, 11, 5539–5555, 2011.
45. Knopf*, D. A., Forrester, S. M., Freezing of Water and Aqueous NaCl Droplets Coated by Organic Monolayers as a Function of Surfactant Properties and Water Activity, *J. Phys. Chem. A*, 115, 5579–5591, 2011.
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1. Knopf*, D. A., Forrester, S. M., Slade, J. H., Chemical aging of biomass burning aerosol surrogates due to oxidation by O₃, NO₂, NO₃, and N₂O₅. ACS National Meeting, Denver, *Abstracts of Papers of the Amer. Chem. Soc.*, 242, 259–ENVR, 2011.
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INVITED SYMPOSIA PRESENTATIONS	30+
INVITED SEMINAR PRESENTATIONS	50+
SYMPOSIA, CONFERENCE, AND WORKSHOP PRESENTATIONS	190+