

EDUCATION

| Institution | Degree | Field | Year |
|---|-------------------------------------|--|------|
| Institute for Atmospheric and Climate Science, Swiss Federal Institute of Technology (ETH), Switzerland | Ph.D. | Atmospheric Science & Environmental Sciences | 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 |

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|---|---|------|
| Swiss Federal Institute of Technology (ETH), Zurich, Switzerland. (Prof. Dr. Thomas Peter) | Postdoctoral Research Associate & Atmospheric Chemistry | 2003 |
| 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. Atmosphere ice nucleation review article in *Nature Reviews Physics* was highlighted in the U.S. DOE ARM Annual Report 2023
2. Recipient of complimentary European Geophysical Union membership in appreciation of service as EGU journal editor, 2022 and 2023.
3. The journal *Nature* highlighted the publication by Mamouri et al. entitled "Wildfire smoke triggers cirrus formation: lidar observations over the eastern Mediterranean". November 23, 2023.
4. Invited plenary speaker at the 21st International Conference on Nucleation & Atmospheric Aerosols (ICNAA 2023), Brisbane, Australia, July 27, 2023.
5. The European Geosciences Union highlighted the *Atmospheric Chemistry and Physics* publication by Ohneiser et al. entitled "Australian wildfire smoke in the stratosphere: the decay phase in 2020/2021 and impact on ozone depletion". June 9, 2022.
6. 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>, 2021.

7. 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, 2019 to 2021.
8. Knopf, D. A., "What laboratory experiments can tell us about atmospheric ice nucleation". Presented at the Workshop: A Molecular Understanding of Atmospheric Aerosols, Santa Cruz, August 30, 2016.
9. Faculty Achievement Award 2015 by Stony Brook University.
10. 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.
11. Named as Wiley Research Fellow by Environmental Molecular Sciences Laboratory at Pacific Northwest National Laboratory, USA, 2013.
12. Recipient of the IOCB Sabbatical Visit Program Fellowship by the Institute of Organic Chemistry and Biochemistry (IOCB), Academy of Sciences, Czech Republic, 2013.
13. Recipient of complimentary European Geophysical Union membership in appreciation of EGU-related activities, 2013.
14. Invited speaker at the Telluride Workshop: Aerosol and Clouds, USA, 2012.
15. Invited speaker at the Bioaerosol Effects on Clouds Workshop, Steamboat Springs, USA, 2012.
16. Invited speaker at the Gordon Research Conference "Water and Aqueous Solutions", Holderness, USA, 2010.
17. Recipient of National Science Foundation (NSF) Faculty Early Career Development (CAREER) Program, 2009.
18. Stony Brook University's nominee to the Packard Foundation Fellowships in Science and Engineering, 2009.
19. Invited participant in the Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS), Yellowstone National Park, USA, 2003.
20. 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. Organized (with two co-chairs) the U.S. DOE funded international ASR Workshop "New Directions in Atmospheric Ice Processes Research", Pacific Northwest National Laboratory, Richland, Washington, October 25-27, 2023.
2. Invited to participate in U.S. DOE "ALS Science Visioning Workshops", Lawrence Berkeley National Laboratory, Berkeley, September 13-15, 2023.
3. Session chair at the Molecular Understanding of Atmospheric Aerosols 2022 meeting, Lake Arrowhead, California, 2022.
4. Organizer of International NSLS-II Users Meeting Workshop "What is BEST for Atmospheric Sciences?". Brookhaven National Laboratory, Upton, New York, May 26, 2022.
5. Session chair at International Chemical Congress of Pacific Basin Societies (PACIFICHEM), Honolulu, 2021.
6. Session chair at American Physical Society Meeting, 2020.
7. Organizer of Planning Meeting for New Instrumentation at NSLS-II "Scanning Transmission X-ray Microscopy for Biological Environmental, and Aerosol Research". Brookhaven National Laboratory, Upton, New York, October 2, 2020.
8. Editorial Advisory Board Member of the Asian Journal of Atmospheric Environment, 2019-present.

9. 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.
10. Co-organizer and co-chair of ice nucleation breakout session at annual U.S. DOE ASR/ARM PI Meeting, involved in white paper drafting of several ASR and ARM related activities, 2017-present.
11. Lecturer at the "Third Sino-European School on Atmospheric Chemistry (SESAC3)". Organized by Fudan University in Shanghai, November 21-30, 2017.
12. Session organizer "Chemical processes involving atmospherically relevant trace gases, aerosols and clouds" for American Chemical Society National Meeting, Boston, 2015.
13. Session organizer "Multiphase chemical processes on atmospheric aerosol (natural and anthropogenic) and/or environmental surfaces" for American Geophysical Union Fall Meeting, San Francisco, 2014.
14. Elected member of the EMSL User Executive Committee (UEC) representing user science in the Atmospheric Aerosol Systems Science Theme, 2014-2017.
15. Editor and guest editor of the journal *Atmospheric Chemistry and Physics* of the European Geosciences Union, 2010-present.
16. 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.*, *J. Phys. Chem. 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.*, *Environ. Sci.*, *Environ. Health Insights*, *Am. J. Prev. Med. Focus*, *Langmuir*, *J. Raman Spectros.* *J. Meteorol. Soc. Jpn.*, *J. Atmos. Chem.*, *Americas Cambridge University Press*.
17. Editorial Board Member (Hindawi Publishing Corporation) of "Datasets International – Dataset Papers in Geosciences" and "Physical Chemistry", terminated 2014.
18. Editorial Board Member (Scientific Research Publishing) of "Atmospheric and Climate Sciences", terminated 2015.
19. Session organizer and chair "Atmospheric Ice Nucleation" for American Geophysical Union Fall Meeting 2011.
20. Reviewer of Grant Applications for the National Science Foundation, Department of Energy, and National Oceanic and Atmospheric Administration.
21. Reviewer of Environmental Molecular Sciences Laboratory user proposals.
22. 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).
23. Professional Associations: European Geophysical Union, American Chemical Society, American Geophysical Union.

PROFESSIONAL MEMBERSHIPS

1. American Geophysical Union
2. European Geophysical Union
3. American Chemical Society
4. American Meteorological Society

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*”, 2011-2016. 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*”, 2018-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 PUBLICATIONS (Google Scholar h-index: 44, ORCID: 0000-0001-7732-3922)

REFEREED BOOK CHAPTER (*: corresponding author)

1. Knopf*, D. A., Microanalysis Techniques to Study Atmospheric Ice Nucleation in Microanalysis and Atmospheric Particles: Techniques and Applications in Climate Change and Air Quality, Ed. Conny, J. M., *AGU Books*, 2023, 10.22541/essoar.169089365.50240296/v1, *accepted*.

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

1. Knopf*, D. A. and Alpert, P. A., Atmospheric Ice Nucleation, *Nat. Rev. Phys.*, 5, 203–217, 2023.
2. 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.
3. 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. Knopf*, D. A., Ammann, M., Berkemeier, T., Pöschl, U., Shiraiwa*, Desorption Lifetimes and Activation Energies Influencing Gas-Surface Interactions and Multiphase Chemical Kinetics, *Atmos. Chem. Phys.*, 24, 3445–3528, 2024.
2. Mamouri, R.-E., Ansmann, A., Ohneiser, K., Knopf, D. A., Nisantzi, A., Bühl, J., Engelmann, R., Skupin, A., Seifert, P., Baars, H., Ene, D., Wandinger, U., Hadjimitsis, D., Wildfire smoke triggers cirrus formation: lidar observations over the eastern Mediterranean, *Atmos. Chem. Phys.*, 23, 14097–14114, 2023. *Highlighted by Journal Nature.*
3. Knopf*, D. A., Silber, I., Riemer, N., Fridlind, A. M., Ackerman, A. S., A 1D Model for Nucleation of Ice From Aerosol Particles: An Application to a Mixed-Phase Arctic Stratus Cloud Layer, *J. Adv. Model. Earth Sy.*, 15, e2023MS003663, 2023.
4. Ansmann*, A., Ohneiser, K., Engelmann, R., Radenz, M., Griesche, H., Hofer, J., Althausen, D., Creamean, J. M., Boyer, M. C., Knopf, D. A., Dahlke, S., Maturilli, M., Gebauer, H., Bühl, J., Jimenez, C., Seifert, P., Wandinger, U., Annual cycle of aerosol properties over the central Arctic during MOSAiC 2019–2020 – light-extinction, CCN, and INP levels from the boundary layer to the tropopause, *Atmos. Chem. Phys.*, 23, 12821–12849, 2023.
5. Knopf*, D. A., Wang, P., Wong, B., Tomlin, J. M., Veghte, D. P., Lata, N. N., China, S., Laskin, A., Moffet, R. C., Aller, J. Y., Marcus, M. A., Wang, J., Micro-spectroscopic and freezing characterization of airborne-collected aerosol and ice-nucleating particles in the Eastern North Atlantic, *Atmos. Chem. Phys.*, 23, 8659–8681, 2023.
6. Alpert*, P. A., Kilthau, W. P., O'Brien, R. E., Moffet, R. C., Gilles, M. K., Wang, B., Laskin, A., Aller, J. Y., Knopf*, D. A., Ice nucleating agents in sea spray aerosol identified and quantified with a holistic multimodal freezing model, *Sci. Advances*, 8, eabq6842, 2022.
7. Ansmann*, A., Ohneiser, K., Chudnovsky, A., Knopf, D. A., Eloranta, E. W., Villanueva, D., Seifert, P., Radenz, M., Barja, B., Zamorano, F., Jimenez, C., Engelmann, R., Baars, H., Griesche, H., Hofer, J., Althausen, D., Wandinger, U., Ozone depletion in the Arctic and Antarctic stratosphere induced by wildfire smoke, *Atmos. Chem. Phys.*, 22, 11701–11726, 2022.
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., Ghate, 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, 2022.
9. 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. *Highlighted by Atmos. Chem. Phys. Executive Editor.*

10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. [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.
19. 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.
20. 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.
21. 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.

22. [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.
23. 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.
24. 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.
25. 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.
26. 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.
27. 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.
28. 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.
29. [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.
30. 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.
31. 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.
32. Pandey, R., Usui, K., Livingstone, R. A., Fischer, S. A., Pfaendtner, J., Backus, E. H. G., Nagata, Y., Fröhlich-Nowoisky, J., Schmüser, 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.
33. 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.
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PRESENTATIONS

INVITED SYMPOSIA PRESENTATIONS 40+

INVITED SEMINAR PRESENTATIONS 50+

SYMPOSIA, CONFERENCE, AND WORKSHOP PRESENTATIONS 200+