

Xu-Cheng He

ACADEMY RESEARCH FELLOW / GROUP LEADER

University of Helsinki

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Education

University of Helsinki PHD ATMOSPHERIC SCIENCE (DISTINCTION) • Advisors: Prof. Markku Kulmala, Prof. Jasper Kirkby	<i>Finland</i> 2018.01 - 2021.09
University of Helsinki MSc ATMOSPHERIC SCIENCE	<i>Finland</i> 2015.08 - 2017.10
Yunnan University BSc ATMOSPHERIC SCIENCE	<i>China</i> 2011.09 - 2015.07

Professional Experience

2025.09-Present	Academy Research Fellow and group leader , University of Helsinki
2025.01-Present	co-PI for the CLOUD project , University of Helsinki
2025.01-2025.08	Academy post-doctoral researcher and sub-group leader , University of Helsinki
2023.01-2024.12	Visiting Researcher (simulation of aerosols) , University of Cambridge
2017.09-2024.12	CLOUD project coordinator for marine runs (3 mos. per year) , University of Helsinki and CERN
2022.03-2022.12	Visiting Researcher (global model training) , Carnegie Mellon University and Finnish Meteorological Institute
2020.09-2021.08	Visiting Researcher (operation of urban observatory) , Nanjing University and Beijing University of Chemical Technology
2016.06-2017.12	Research Assistant , University of Helsinki

Awards

2025	Airmodus best oral presentation award , The 22nd International Conference on Nucleation and Atmospheric Aerosols	€200
2023	Invited participant of the Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS XVII) , Brookhaven National Laboratory	
2022	Extraordinary Potential Prize of 2021 Chinese Government Award for Outstanding Self-financed Students Abroad (20 awardees globally) , Ministry of Education, China	\$10,000
2022	Dissertation prize, all faculties (4/500) , University of Helsinki	€4,000
2022	NOSA ECS Aerosologist award (Early Career Scientist) , Nordic Society for Aerosol Research	
2021	Outstanding thesis award , Doctoral school in Natural Sciences, University of Helsinki	€2,000
2015	International student grant , University of Helsinki	€1,500
2015	Best thesis award (1/43) , Yunnan University	
2012	Campus star in science and innovation (10/4000) , Yunnan University	¥2,000

Fellowships & Grants

2025-2028	ERC-boost funding for high quality applications , University of Helsinki	€50,000
2025-2029	Academy research fellowship , Research Council of Finland / University of Helsinki	€1,126,320
2025-2026	co-PI, Constraining the size distribution and chlorine production of ferric chloride aerosols for quantitative atmospheric methane removal , Spark Climate Solutions	\$299,248
2022-2025	Postdoctoral researcher fellowship , Research Council of Finland / University of Helsinki	€364,377
2022	Postdoctoral research grant , Jenny and Antti Wihuri foundation	€56,000
2018-2021	Doctoral school fellowship , University of Helsinki	ca. €108,000

Key publications

PUBLICATIONS AS A **CO-FIRST**[%] OR **CORRESPONDING AUTHOR**[#]

Summary: 6 manuscripts as (co-)first-author and 5 as last-author, in total 10 as corresponding author, including 2 in Science and 1 in Nature.

2025

X.-C. He[#], N.L. Abraham[#], H. Ding, ..., J. Weber, A.T. Archibald[#], H. Gordon, Evaluation of UKESM aerosol size and composition using ATom measurements indicates missing marine aerosol formation mechanisms. **Atmospheric Chemistry and Physics Discussions**. (2025).

R. Zhang, H.-B. Xie[#], F. Ma, R. Yin, J. Chen, **X.-C. He**, Quaternary Nucleation of Iodine and Sulfur Oxoacids in the Marine Atmosphere: Unexpected Role of Methanesulfonic Acid. **Journal of Geophysical Research: Atmosphere**. (2025).

2024

J. Shen[%], D.M. Russell[%], J. DeVivo^{%,#}, J. Kirkby[#], J. Curtius[#], **X.-C. He**[#], New particle formation from isoprene under upper tropospheric conditions. **Nature**. (2024).

B. Rörup, **X.-C. He**[#], J. Shen^{%,#}, ..., R. Volkamer, D. Worsnop, K. Lehtipalo, Temperature, humidity, and ionisation effect of iodine oxoacid nucleation. **Environmental Science: Atmosphere**. (2024).

Y. Zhang[%], D. Li[%], **X.-C. He**^{%,#}, ..., J. Jiang, A. Ding, M. Kulmala, Iodine oxoacids and their roles in sub-3 nanometer particle growth in polluted urban environments. **Atmospheric Chemistry & Physics**. (2024).

2023

X.-C. He[#], M. Simon, S. Iyer, H.-B. Xie[#], ..., N.M. Donahue, M. Sipilä[#], M. Kulmala[#], Iodine oxoacids enhance nucleation of sulfuric acid particles in the atmosphere. **Science**. (2023).

X.-C. He[#], J. Shen[#], S. Iyer^{%,#}, ..., J. Mikkilä, M. Sipilä, J. Kangasluoma, Characterisation of gaseous iodine species detection using the multi-scheme chemical ionisation inlet 2 with bromide and nitrate chemical ionisation methods. **Atmospheric Measurement Techniques**. (2023).

F. Ma, H.-B. Xie[#], R. Zhang^{%,#}, ..., M. Engsvang, J. Elm, **X.-C. He**[#], Enhancement of Atmospheric Nucleation Precursors on Iodic Acid Induced Nucleation: Predictive Model and Mechanism. **Environmental Science and Technology**. (2023).

2022

H. Finkenzeller^{%,#}, S. Iyer[%], **X.-C. He**^{%,#}, ..., T. Kurten[#], M. Rissanen, R.V. Volkamer[#], The gas-phase formation mechanism of iodic acid as an atmospheric aerosol source. **Nature Chemistry**. (2022).

R. Zhang, H.-B. Xie[#], F. Ma^{%,#}, ..., M. Sipilä, M. Kulmala, **X.-C. He**[#], Critical Role of Iodous Acid in Neutral Iodine Oxoacid Nucleation. **Environmental Science & Technology**. 56, 14166-14177 (2022).

2021

M. Wang[%], **X.-C. He**^{%,#}, H. Finkenzeller, S. Iyer, D. Chen^{%,#}, ..., M. Rissanen, R. Volkamer, Y. J. Tham[#], N. M. Donahue, M. Sipilä, Measurement of iodine species and sulfuric acid using bromide chemical ionization mass spectrometers. **Atmospheric Measurement Techniques**. 14, 4187-4202 (2021).

X.-C. He[#], Y. J. Tham, L. Dada, M. Wang, H. Finkenzeller^{%,#}, ..., N. M. Donahue, R. Volkamer, J. Kirkby[#], D. R. Worsnop, M. Sipilä[#], Role of iodine oxoacids in atmospheric aerosol nucleation. **Science**. 371, 589-595 (2021).

X.-C. He[#], S. Iyer, M. Sipilä, A. Ylisirniö, M. Peltola^{%,#}, ..., V.-M. Kerminen, R. C. Flagan, J. Kirkby[#], T. Kurtén, M. Kulmala, Determination of the collision rate coefficient between charged iodic acid clusters and iodic acid using the appearance time method. **Aerosol Science & Technology**. 55, 231-242 (2021).

Y. J. Tham, **X.-C. He**, Q. Li, C. A. Cuevas, J. Shen, ..., M. Kulmala, C. O'Dowd, M. Dal Maso, A. Saiz-Lopez[#], M. Sipilä[#], Direct field evidence of autocatalytic iodine release from atmospheric aerosol. **Proceedings of the National Academy of Sciences**. 118 (2021).

2020

M. Wang[%], W. Kong[%], R. Marten, **X.-C. He**, ..., J.H. Seinfeld, I. El-Haddad, R.C. Flagan, N.M. Donahue[#], Rapid growth of new atmospheric particles by nitric acid and ammonia condensation. **Nature**. 581 (2020).

2019

D. Zhao, R. Yang[#], Y. Tao, W.K. Zhang and **X.-C. He**, Objective detection of the Kunming quasi-stationary front. **Theoretical and Applied Climatology**. 138 (2019).

2017

S. Iyer[#], **X.-C. He**, N. Hyyttinen, T. Kurtén[#] and M.P. Rissanen, Computational and Experimental Investigation of the Detection of HO₂ Radical and the Products of Its Reaction with Cyclohexene Ozonolysis Derived RO₂ Radicals by an Iodide-Based Chemical Ionization Mass Spectrometer. **The Journal of Physical Chemistry A**. 121 (2017).

F. Bianchi[#], O. Garmash, **X.-C. He**, ..., M. Kulmala, M. Ehn and H. Junninen, The role of highly oxygenated molecules (HOMs) in determining the composition of ambient ions in the boreal forest. **Atmospheric Chemistry and Physics**. 17 (2017).

Total publication count: 52. Total citations: Researchgate (1,988), Google scholar (2,113).

Presentations

SELECTED INVITED TALKS

2025.05. Invited seminar, **University of Reading**, UK

2025.03. Invited seminar, **University of Cambridge**, UK

2025.02. Invited seminar, **California Institute of Technology**, USA

2024.06. Invited seminar, **University of Helsinki**, Finland

2024.05. Invited seminar, **Max Planck Institute for Chemistry**, Germany

2024.04. Invited seminar, **Massachusetts Institute of Technology**, USA

2024.04. Invited seminar, **SOLAS open seminar series**

2024.03. Invited seminar, **University of Cambridge**, UK

2024.01. Invited seminar, **University of Birmingham**, UK

2022.08. Invited speaker, **Gordon Research Conference**, Italy

2022.05. Invited talk, **Carnegie Mellon University**, USA

2021.01. Invited talk, **Nanjing University**, China

CONTRIBUTED PRESENTATIONS

American Meteorological Society annual meeting (session co-chair, 2025, 2024, 2023)

Atmospheric Chemistry Colloquium for Emerging Senior Scientists (Invited, 2023)

Gordon Research Conference - Molecular and Ionic Clusters (Invited talk, 2022)

Gordon Research Conference - Atmospheric Chemistry (Poster, 2025, 2023)

European Geosciences Union General Assembly (Talk, 2021, 2020)

International Aerosol Conference (Talk, 2023; Poster, 2017)

European Aerosol Conference (Talk, 2024, 2022; Poster, 2019)

International Conference on Nucleation and Atmospheric Aerosols (Talk, 2025, 2023; Poster, 2017)

International Conference on Aerosol Cycle (Talk, 2017)

Free Radical Symposium (Poster, 2017)

Surface Ocean Lower Atmosphere Study (Poster, 2019)

Cryosphere and Atmospheric Chemistry (Poster, 2017)

Teaching Experience

2024 **Tropospheric Atmospheric Chemistry**, Guest Lecturer

*University of
Helsinki*

2024 **Synthesis of physical chemistry, experiments, observations and models to understand atmospheric particle formation and climate impact**, Guest Lecturer

*University of
Helsinki*

2019 **Climate science at high latitudes: eScience for linking Arctic measurements and modeling**, Teaching Assistant

*University of
Helsinki*

2018 **Formation and growth of atmospheric aerosols**, Teaching Assistant

*University of
Helsinki*

Outreach & Professional Development

CONFERENCE CHAIR

2022-present **Formation and impacts of atmospheric aerosols and cloud condensation nuclei: experiment, observation, and modeling**, Co-chair *American Meteorological Society Annual Meeting*

2025 **Young Principal Investigators session**, Chair *International Conference on Nucleation and Atmospheric Aerosols*

MANUSCRIPT PEER REVIEW

Science, One Earth, Environmental Science & Technology, Environmental Science & Technology Letters, Environmental Science & Technology Air, Atmospheric Chemistry and Physics, Geophysical Research Letters, Journal of Geophysical Research: Atmospheres.

FUNDING REVIEW

National Science Foundation (USA)

SERVICE

2017-present: Run leader for the marine and polar aerosol formation program at the CLOUD project, CERN

2023-present: Coordinator for the modelling group at the CLOUD project, CERN

Supervision & Mentoring

2018.05- 2023.04	Jiali Shen , Co-supervised doctoral student (graduated with a distinction)	University of Helsinki
2023.02- present	Wenjuan Yu , Co-supervised doctoral student	University of Helsinki
2017.09- 2024.06	Rima Baalbaki , Mentor for part of her doctoral study since 2021.09	University of Helsinki
2018.05- 2024.06	Birte Rörup , Mentor for her doctoral study	University of Helsinki Beijing
2018.09- 2022.05	Ying Zhang , Mentor for her M.Sc. degree since 2021.01	University of Chemical Technology Nanjing
2017.09- 2024.08	Duzitian Li , Mentor for his B.Sc. and M.Sc. degrees since 2020.10	University

Media Coverage

- Dec 2023 **Chemistry World**, Iodine compounds accelerate cloud formation over oceans and the poles
- Oct 2021 **Sciencepost**, L'émission d'iode par l'océan, une influence inattendue sur la banquise arctique
- June 2021 **Lab Manager**, The Impact of Clouds on Climate Change
- Feb 2021 **The Atlantic**, The Arctic Has a Cloud Problem
- Feb 2021 **SCIENMAG**, Climate research: rapid formation of iodine particles over the Arctic
- Feb 2021 **PHYS.ORG**, CLOUD at CERN reveals the role of iodine acids in atmospheric aerosol formation
- Feb 2021 **ScienceDaily**, How iodine-containing molecules contribute to the formation of atmospheric aerosols, affect climate

Full publications

- [1] Federico Bianchi et al. "The role of highly oxygenated molecules (HOMs) in determining the composition of ambient ions in the boreal forest". In: *Atmospheric Chemistry and Physics* 17.22 (Nov. 20, 2017), pp. 13819–13831. ISSN: 1680-7324. DOI: 10.5194/acp-17-13819-2017. URL: <https://acp.copernicus.org/articles/17/13819/2017/> (visited on 08/18/2021).
- [2] Xu-Cheng He. "From the measurement of halogenated species to iodine particle formation". PhD thesis. Helsinki: University of Helsinki, Aug. 27, 2017. 71 pp. URL: <https://helda.helsinki.fi/handle/10138/229173>.
- [3] Siddharth Iyer et al. "Computational and Experimental Investigation of the Detection of HO₂ Radical and the Products of Its Reaction with Cyclohexene Ozonolysis Derived RO₂ Radicals by an Iodide-Based Chemical Ionization Mass Spectrometer". In: *The Journal of Physical Chemistry A* 121.36 (Sept. 14, 2017), pp. 6778–6789. ISSN: 1089-5639, 1520-5215. DOI: 10.1021/acs.jpca.7b01588. URL: <http://pubs.acs.org/doi/10.1021/acs.jpca.7b01588> (visited on 05/15/2018).
- [4] Katrianne Lehtipalo et al. "Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors". In: *Science Advances* 4.12 (Dec. 2018), eaau5363. ISSN: 2375-2548. DOI: 10.1126/sciadv.aau5363. URL: <http://advances.sciencemag.org/lookup/doi/10.1126/sciadv.aau5363> (visited on 11/24/2019).
- [5] Dominik Stolzenburg et al. "Rapid growth of organic aerosol nanoparticles over a wide tropospheric temperature range". In: *Proceedings of the National Academy of Sciences* 115.37 (Sept. 11, 2018), pp. 9122–9127. ISSN: 0027-8424, 1091-6490. DOI: 10.1073/pnas.1807604115. URL: <http://www.pnas.org/lookup/doi/10.1073/pnas.1807604115> (visited on 12/09/2019).

- [6] Qing Ye et al. “Molecular Composition and Volatility of Nucleated Particles from α -Pinene Oxidation between $-50\text{ }^{\circ}\text{C}$ and $+25\text{ }^{\circ}\text{C}$ ”. In: *Environmental Science & Technology* 53.21 (Nov. 5, 2019), pp. 12357–12365. ISSN: 0013-936X, 1520-5851. DOI: 10.1021/acs.est.9b03265. URL: <https://pubs.acs.org/doi/10.1021/acs.est.9b03265> (visited on 09/08/2021).
- [7] Di Zhao et al. “Objective detection of the Kunming quasi-stationary front”. In: *Theoretical and Applied Climatology* 138.3 (Nov. 2019), pp. 1405–1418. ISSN: 0177-798X, 1434-4483. DOI: 10.1007/s00704-019-02894-w. URL: <http://link.springer.com/10.1007/s00704-019-02894-w> (visited on 09/08/2021).
- [8] Martin Heinritzi et al. “Molecular understanding of the suppression of new-particle formation by isoprene”. In: *Atmospheric Chemistry and Physics* 20.20 (Oct. 20, 2020), pp. 11809–11821. ISSN: 1680-7324. DOI: 10.5194/acp-20-11809-2020. URL: <https://acp.copernicus.org/articles/20/11809/2020/> (visited on 09/08/2021).
- [9] Mario Simon et al. “Molecular understanding of new-particle formation from α -pinene between -50 and $+25\text{ }^{\circ}\text{C}$ ”. In: *Atmospheric Chemistry and Physics* 20.15 (Aug. 3, 2020), pp. 9183–9207. ISSN: 1680-7324. DOI: 10.5194/acp-20-9183-2020. URL: <https://acp.copernicus.org/articles/20/9183/2020/> (visited on 09/08/2021).
- [10] Dominik Stolzenburg et al. “Enhanced growth rate of atmospheric particles from sulfuric acid”. In: *Atmospheric Chemistry and Physics* 20.12 (June 25, 2020), pp. 7359–7372. ISSN: 1680-7324. DOI: 10.5194/acp-20-7359-2020. URL: <https://www.atmos-chem-phys.net/20/7359/2020/> (visited on 07/19/2020).
- [11] Mingyi Wang et al. “Photo-oxidation of Aromatic Hydrocarbons Produces Low-Volatility Organic Compounds”. In: *Environmental Science & Technology* 54.13 (July 7, 2020), pp. 7911–7921. ISSN: 0013-936X, 1520-5851. DOI: 10.1021/acs.est.0c02100. URL: <https://pubs.acs.org/doi/10.1021/acs.est.0c02100> (visited on 09/08/2021).
- [12] Mingyi Wang et al. “Rapid growth of new atmospheric particles by nitric acid and ammonia condensation”. In: *Nature* 581.7807 (May 2020), pp. 184–189. ISSN: 0028-0836, 1476-4687. DOI: 10.1038/s41586-020-2270-4. URL: <http://www.nature.com/articles/s41586-020-2270-4> (visited on 07/19/2020).
- [13] Yonghong Wang et al. “Formation of highly oxygenated organic molecules from chlorine-atom-initiated oxidation of α -pinene”. In: *Atmospheric Chemistry and Physics* 20.8 (Apr. 30, 2020), pp. 5145–5155. ISSN: 1680-7324. DOI: 10.5194/acp-20-5145-2020. URL: <https://acp.copernicus.org/articles/20/5145/2020/> (visited on 09/08/2021).
- [14] Lisa J. Beck et al. “Differing Mechanisms of New Particle Formation at Two Arctic Sites”. In: *Geophysical Research Letters* 48.4 (Feb. 28, 2021). ISSN: 0094-8276, 1944-8007. DOI: 10.1029/2020GL091334. URL: <https://onlinelibrary.wiley.com/doi/10.1029/2020GL091334> (visited on 09/17/2021).
- [15] Runlong Cai et al. “Impacts of coagulation on the appearance time method for new particle growth rate evaluation and their corrections”. In: *Atmospheric Chemistry and Physics* 21.3 (Feb. 16, 2021), pp. 2287–2304. ISSN: 1680-7324. DOI: 10.5194/acp-21-2287-2021. URL: <https://acp.copernicus.org/articles/21/2287/2021/> (visited on 09/08/2021).
- [16] Lucía Caudillo et al. “Chemical composition of nanoparticles from α -pinene nucleation and the influence of isoprene and relative humidity at low temperature”. In: *Atmospheric Chemistry and Physics* 21.22 (Nov. 25, 2021), pp. 17099–17114. ISSN: 1680-7324. DOI: 10.5194/acp-21-17099-2021. URL: <https://acp.copernicus.org/articles/21/17099/2021/> (visited on 11/25/2021).
- [17] Biwu Chu et al. “Particle growth with photochemical age from new particle formation to haze in the winter of Beijing, China”. In: *Science of The Total Environment* 753 (Jan. 2021), p. 142207. ISSN: 00489697. DOI: 10.1016/j.scitotenv.2020.142207. URL: <https://linkinghub.elsevier.com/retrieve/pii/S0048969720357363> (visited on 09/08/2021).
- [18] Xu-Cheng He. “Iodine oxoacids in atmospheric aerosol formation : from chamber simulations to field observations”. PhD thesis. Helsinki: University of Helsinki, Aug. 23, 2021. 72 pp. URL: <https://helda.helsinki.fi/handle/10138/332625?locale-attribute=en>.
- [19] Xu-Cheng He et al. “Determination of the collision rate coefficient between charged iodine acid clusters and iodine acid using the appearance time method”. In: *Aerosol Science and Technology* 55.2 (Feb. 1, 2021),

- pp. 231–242. ISSN: 0278-6826. DOI: 10.1080/02786826.2020.1839013. URL: <https://doi.org/10.1080/02786826.2020.1839013>.
- [20] Xu-Cheng He et al. “Role of iodine oxoacids in atmospheric aerosol nucleation”. In: *Science* 371.6529 (2021), pp. 589–595. ISSN: 0036-8075. DOI: 10.1126/science.abe0298. URL: <https://science.sciencemag.org/content/371/6529/589>.
- [21] Clémence Rose et al. “Investigation of several proxies to estimate sulfuric acid concentration under volcanic plume conditions”. In: *Atmospheric Chemistry and Physics* 21.6 (Mar. 24, 2021), pp. 4541–4560. ISSN: 1680-7324. DOI: 10.5194/acp-21-4541-2021. URL: <https://acp.copernicus.org/articles/21/4541/2021/> (visited on 09/08/2021).
- [22] Mihnea Surdu et al. “Molecular characterization of ultrafine particles using extractive electrospray time-of-flight mass spectrometry”. In: *Environmental Science: Atmospheres* (2021), 10.1039/D1EA00050K. ISSN: 2634-3606. DOI: 10.1039/D1EA00050K. URL: <http://xlink.rsc.org/?DOI=D1EA00050K> (visited on 09/08/2021).
- [23] Yee Jun Tham et al. “Direct field evidence of autocatalytic iodine release from atmospheric aerosol”. In: *Proceedings of the National Academy of Sciences* 118.4 (Jan. 26, 2021), e2009951118. ISSN: 0027-8424, 1091-6490. DOI: 10.1073/pnas.2009951118. URL: <http://www.pnas.org/lookup/doi/10.1073/pnas.2009951118> (visited on 06/09/2021).
- [24] Mingyi Wang et al. “Measurement of iodine species and sulfuric acid using bromide chemical ionization mass spectrometers”. In: *Atmospheric Measurement Techniques* 14.6 (June 7, 2021), pp. 4187–4202. ISSN: 1867-8548. DOI: 10.5194/amt-14-4187-2021. URL: <https://amt.copernicus.org/articles/14/4187/2021/> (visited on 06/09/2021).
- [25] Mao Xiao et al. “The driving factors of new particle formation and growth in the polluted boundary layer”. In: *Atmospheric Chemistry and Physics* 21.18 (Sept. 27, 2021), pp. 14275–14291. ISSN: 1680-7324. DOI: 10.5194/acp-21-14275-2021. URL: <https://acp.copernicus.org/articles/21/14275/2021/> (visited on 12/13/2021).
- [26] Chao Yan et al. “The Synergistic Role of Sulfuric Acid, Bases, and Oxidized Organics Governing New-Particle Formation in Beijing”. In: *Geophysical Research Letters* 48.7 (Apr. 16, 2021). ISSN: 0094-8276, 1944-8007. DOI: 10.1029/2020GL091944. URL: <https://onlinelibrary.wiley.com/doi/10.1029/2020GL091944> (visited on 02/20/2023).
- [27] Lisa J. Beck et al. “Diurnal evolution of negative atmospheric ions above the boreal forest: from ground level to the free troposphere”. In: *Atmospheric Chemistry and Physics* 22.13 (July 5, 2022), pp. 8547–8577. ISSN: 1680-7324. DOI: 10.5194/acp-22-8547-2022. URL: <https://acp.copernicus.org/articles/22/8547/2022/> (visited on 07/09/2022).
- [28] Qinyi Li et al. “Role of Iodine Recycling on Sea-Salt Aerosols in the Global Marine Boundary Layer”. In: *Geophysical Research Letters* 49.6 (Mar. 28, 2022). ISSN: 0094-8276, 1944-8007. DOI: 10.1029/2021GL097567. URL: <https://onlinelibrary.wiley.com/doi/10.1029/2021GL097567> (visited on 04/25/2022).
- [29] Ruby Marten et al. “Survival of newly formed particles in haze conditions”. In: *Environmental Science: Atmospheres* (2022), 10.1039/D2EA00007E. ISSN: 2634-3606. DOI: 10.1039/D2EA00007E. URL: <http://xlink.rsc.org/?DOI=D2EA00007E> (visited on 04/25/2022).
- [30] Jiali Shen et al. “High Gas-Phase Methanesulfonic Acid Production in the OH-Initiated Oxidation of Dimethyl Sulfide at Low Temperatures”. In: *Environmental Science & Technology* 56.19 (Oct. 4, 2022), pp. 13931–13944. ISSN: 0013-936X, 1520-5851. DOI: 10.1021/acs.est.2c05154. URL: <https://pubs.acs.org/doi/10.1021/acs.est.2c05154> (visited on 01/30/2023).
- [31] Roseline C. Thakur et al. “An evaluation of new particle formation events in Helsinki during a Baltic Sea cyanobacterial summer bloom”. In: *Atmospheric Chemistry and Physics* 22.9 (May 17, 2022), pp. 6365–6391. ISSN: 1680-7324. DOI: 10.5194/acp-22-6365-2022. URL: <https://acp.copernicus.org/articles/22/6365/2022/> (visited on 05/20/2022).
- [32] Mingyi Wang et al. “Synergistic HNO₃-H₂SO₄-NH₃ upper tropospheric particle formation”. In: *Nature* 605.7910 (May 19, 2022), pp. 483–489. ISSN: 0028-0836, 1476-4687. DOI: 10.1038/s41586-022-04605-4. URL: <https://www.nature.com/articles/s41586-022-04605-4> (visited on 05/20/2022).

- [33] Yonghong Wang et al. “Molecular Composition of Oxygenated Organic Molecules and Their Contributions to Organic Aerosol in Beijing”. In: *Environmental Science & Technology* 56.2 (Jan. 18, 2022), pp. 770–778. ISSN: 0013-936X, 1520-5851. DOI: 10.1021/acs.est.1c05191. URL: <https://pubs.acs.org/doi/10.1021/acs.est.1c05191> (visited on 02/28/2022).
- [34] Chao Yan et al. “The effect of COVID-19 restrictions on atmospheric new particle formation in Beijing”. In: *Atmospheric Chemistry and Physics* 22.18 (Sept. 19, 2022), pp. 12207–12220. ISSN: 1680-7324. DOI: 10.5194/acp-22-12207-2022. URL: <https://acp.copernicus.org/articles/22/12207/2022/> (visited on 01/17/2023).
- [35] Rongjie Zhang et al. “Critical Role of Iodous Acid in Neutral Iodine Oxoacid Nucleation”. In: *Environmental Science & Technology* 56.19 (Oct. 4, 2022), pp. 14166–14177. ISSN: 0013-936X, 1520-5851. DOI: 10.1021/acs.est.2c04328. URL: <https://pubs.acs.org/doi/10.1021/acs.est.2c04328> (visited on 10/07/2022).
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