

# CURRICULUM VITA

## Jingkun Jiang

Professor

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## Education

2008	Ph.D.	Energy, Environmental & Chemical Engineering	Washington University in St. Louis
		Advisor: Prof. Pratim Biswas	
2004	M.S.	Environmental Science and Engineering	Tsinghua University
		Advisor: Prof. Jiming Hao	
2002	B.S.	Environmental Science and Engineering	Tsinghua University
		(with honor)	

## Professional Experience

2020-2023	Vice Dean, School of Environment	Tsinghua University
2017- present	Professor	Tsinghua University
2010 - 2016	Associate Professor	Tsinghua University
2008 – 2010	Postdoctoral Research Associate	University of Minnesota
	Advisor: Prof. Peter McMurry	

## Summary of Research Activities

Aerosol formation in atmospheric environment and combustion systems; Air quality management; Aerosol instrumentation; Metagenomics of airborne microorganism; Aerosol nanotoxicology

## Selected Awards and Honors

- ES&T Letters Excellence in Review Award, 2020
- Faculty Teaching Award, Tsinghua University, 2016, 2017, 2018, 2019
- Smoluchowski Award, Gesellschaft für Aerosolforschung, 2018
- Asian Young Aerosol Scientist Award, Asian Aerosol Research Assembly, 2015
- Doctoral Dissertation Award, Air and Waste Management Association, 2009

## Selected Journal and Society services

- Editorial Board, Results in Engineering, 2021-present
- Editorial Board, Environmental Science & Technology Letters, 2020-present
- Editorial Board, Environmental Research, 2019-present
- Editor, Aerosol Science & Technology, 2016-present

- Fissan-Pui-TSI Award Committee, International Aerosol Research Assembly, 2018
- Technical Program Committee, 2018 International Aerosol Conference
- Guest Editor, Atmospheric Chemistry and Physics, 2017-2020
- Editorial Board, Journal of Aerosol Science, 2016-2019

### Teaching at Tsinghua

- Theory and Practice: Air, course for undergraduate student, 2021-present
- Air Quality Management, course for undergraduate student, 2013-present
- Aerosol Mechanics, course for graduate student, 2011-present
- Aerosol Measurement, course for graduate student, 2012-2016

### Peer-reviewed Journal Publications

1. Zhang, Y.; Li, D.; He, X. C.; Nie, W.; Deng, C.; Cai, R.; Liu, Y.; Guo, Y.; Liu, C.; Li, Y.; Chen, L.; Li, Y.; Hua, C.; Liu, T.; Wang, Z.; Xie, J.; Wang, L.; Petäjä, T.; Bianchi, F.; Qi, X.; Chi, X.; Paasonen, P.; Liu, Y.; Yan, C.; **Jiang, J.**; Ding, A.; Kulmala, M., Iodine oxoacids and their roles in sub-3nm particle growth in polluted urban environments. *Atmos. Chem. Phys.*, 2024. **24** (3): 1873-1893.
2. Li, Z.; Zhao, B.; Yin, D.; Wang, S.; Qiao, X.; **Jiang, J.**; Li, Y.; Shen, J.; He, Y.; Chang, X.; Li, X.; Liu, Y.; Li, Y.; Liu, C.; Qi, X.; Chen, L.; Chi, X.; Jiang, Y.; Li, Y.; Wu, J.; Nie, W.; Ding, A., Modeling the Formation of Organic Compounds across Full Volatility Ranges and Their Contribution to Nanoparticle Growth in a Polluted Atmosphere. *Environmental Science & Technology*, 2024. **58** (2): 1223-1235.
3. Yin, R.; Li, X.; Yan, C.; Cai, R.; Zhou, Y.; Kangasluoma, J.; Sarnela, N.; Lampilahti, J.; Petäjä, T.; Kerminen, V. M.; Bianchi, F.; Kulmala, M.; **Jiang\*, J.**, Revealing the sources and sinks of negative cluster ions in an urban environment through quantitative analysis. *Atmos. Chem. Phys.*, 2023. **23** (9): 5279-5296.
4. Zhang, C.; Hai, S.; Gao, Y.; Wang, Y.; Zhang, S.; Sheng, L.; Zhao, B.; Wang, S.; **Jiang, J.**; Huang, X.; Shen, X.; Sun, J.; Lupascu, A.; Shrivastava, M.; Fast, J. D.; Cheng, W.; Guo, X.; Chu, M.; Ma, N.; Hong, J.; Wang, Q.; Yao, X.; Gao, H., Substantially positive contributions of new particle formation to cloud condensation nuclei under low supersaturation in China based on numerical model improvements. *Atmos. Chem. Phys.*, 2023. **23**(18): 10713-10730.
5. Yan, C.; Tham, Y. J.; Nie, W.; Xia, M.; Wang, H.; Guo, Y.; Ma, W.; Zhan, J.; Hua, C.; Li, Y.; Deng, C.; Li, Y.; Zheng, F.; Chen, X.; Li, Q.; Zhang, G.; Mahajan, A. S.; Cuevas, C. A.; Huang, D. D.; Wang, Z.; Sun, Y.; Saiz-Lopez, A.; Bianchi, F.; Kerminen, V.-M.; Worsnop, D. R.; Donahue, N. M.; **Jiang, J.**; Liu, Y.; Ding, A.; Kulmala, M., Increasing contribution of nighttime nitrogen chemistry to wintertime haze formation in Beijing observed during COVID-19 lockdowns. *Nature Geoscience*, 2023. **16** (11): 975-981.
6. Xiang, S.; Zhang, S.; Yu, Y. T.; Wang, H.; Shen, Y.; Zhang, Q.; Wang, Z.; Wang, D.; Tian, M.; Wang, J.; Yin, H.; **Jiang, J.**; Wu, Y., Evaluation of the Relationship between Meteorological Variables and NO<sub>x</sub> Emission Factors Based on Plume-Chasing Measurements. *ACS ES&T Engineering*, 2023. **3** (3): 417-426.
7. Wu, D.; Zheng, H.; Li, Q.; Wang, S.; Zhao, B.; Jin, L.; Lyu, R.; Li, S.; Liu, Y.; Chen, X.; Zhang, F.; Wu, Q.; Liu, T.; **Jiang, J.**; Wang, L.; Li, X.; Chen, J.; Hao, J., Achieving health-

- oriented air pollution control requires integrating unequal toxicities of industrial particles. *Nature Communications*, 2023. **14**(1): 6491.
8. William, J. L.; Wenwen, L.; Xiaozhou, H.; Peipei, L.; Qihui, W.; Zhiqiang, W.; Yun, T.; Shuhui, S.; Gary, W.; Jian, L.; **Jingkun, J.**; Qiang, W.; Mingkun, L.; Juncai, M.; Xiaozhong, P.; Yixue, L.; Baoxu, H.; Yigang, T.; Jun, H.; Guizhen, W., Back to Science in Searching for SARS-CoV-2 Origins. *China CDC Weekly*, 2023. **5**,(14): 315-317.
  9. Wang, Y.; Ma, Y.; Yan, C.; Yao, L.; Cai, R.; Li, S.; Lin, Z.; Zhao, X.; Yin, R.; Deng, C.; Kangasluoma, J.; He, X.-C.; Hakala, S.; Fan, X.; Chen, S.; Ma, Q.; Kerminen, V.-M.; Petäjä, T.; Xin, J.; Wang, L.; Liu, B.; Wang, W.; Ge, M.; **Jiang, J.**; Liu, Y.; Bianchi, F.; Chu, B.; Donahue, N. M.; Martin, S. T.; He, H.; Kulmala, M., Sulfur Dioxide Transported From the Residual Layer Drives Atmospheric Nucleation During Haze Periods in Beijing. *Geophysical Research Letters*, 2023. **50** (6): e2022GL100514.
  10. Wang, J.; Wang, J.; Cai, R.; Liu, C.; **Jiang, J.**; Nie, W.; Wang, J.; Moteki, N.; Zaveri, R. A.; Huang, X.; Ma, N.; Chen, G.; Wang, Z.; Jin, Y.; Cai, J.; Zhang, Y.; Chi, X.; Holanda, B. A.; Xing, J.; Liu, T.; Qi, X.; Wang, Q.; Pöhlker, C.; Su, H.; Cheng, Y.; Wang, S.; Hao, J.; Andreae, M. O.; Ding, A., Unified theoretical framework for black carbon mixing state allows greater accuracy of climate effect estimation. *Nature Communications*, 2023. **14**(1): 2703.
  11. Qiao, X.; Li, X.; Yan, C.; Sarnela, N.; Yin, R.; Guo, Y.; Yao, L.; Nie, W.; Huang, D.; Wang, Z.; Bianchi, F.; Liu, Y.; Donahue, N. M.; Kulmala, M.; **Jiang\*, J.**, Precursor apportionment of atmospheric oxygenated organic molecules using a machine learning method. *Environmental Science: Atmospheres*, 2023. **3** (1): 230-237.
  12. Peng, C.; Deng, C.; Lei, T.; Zheng, J.; Zhao, J.; Wang, D.; Wu, Z.; Wang, L.; Chen, Y.; Liu, M.; **Jiang, J.**; Ye, A.; Ge, M.; Wang, W., Measurement of atmospheric nanoparticles: Bridging the gap between gas-phase molecules and larger particles. *Journal of Environmental Sciences*, 2023. **123**: 183-202.
  13. Liu, H.; Wu, L.; Liu, B.; Xu, K.; Lei, W.; Deng, J.; Rong, X.; Du, P.; Wang, L.; Wang, D.; Zhang, X.; Su, C.; Bi, Y.; Chen, H.; Liu, W. J.; Qi, J.; Cui, Q.; Qi, S.; Fan\*, R.; **Jiang\*, J.**; Wu\*, G.; Gao\*, G. F.; Wang\*, Q., Two pan-SARS-CoV-2 nanobodies and their multivalent derivatives effectively prevent Omicron infections in mice. *Cell Reports Medicine*, 2023. **4** (2): 100918.
  14. Lin, Y.; He, X.; Lei, W.; Jia, Z.; Liu, J.; Huang, C.; **Jiang, J.**; Wang, Q.; Li, F.; Ma, W.; Liu, M.; Gao, G. F.; Wu, G.; Liu, J., Cold-chain-based epidemiology: Scientific evidence and logic in introduction and transmission of SARS-CoV-2. *Global Transitions*, 2023. **5**: 170-181.
  15. Liang, C.; Wang, S.; Hu, R.; Huang, G.; Xie, J.; Zhao, B.; Li, Y.; Zhu, W.; Guo, S.; **Jiang, J.**; Hao, J., Molecular tracers, mass spectral tracers and oxidation of organic aerosols emitted from cooking and fossil fuel burning sources. *Sci Total Environ.*, 2023. **868**: 161635.
  16. Li\*, Z.; Tian, E.; Wang, S.; Ye, M.; Li, S.; Wang, Z.; Ma, Z.; Jiang, G.; Tang, C.; Liu, K.; **Jiang\*, J.**, Single-atom catalysts: promoters of highly sensitive and selective sensors. *Chemical Society Reviews*, 2023. **52** (15): 5088-5134.
  17. Li, Y.; Shen, J.; Zhao\*, B.; Cai, R.; Wang, S.; Gao, Y.; Shrivastava, M.; Gao, D.; Zheng, J.; Kulmala, M.; **Jiang\*, J.**, A dynamic parameterization of sulfuric acid–dimethylamine nucleation and its application in three-dimensional modeling. *Atmos. Chem. Phys.*, 2023. **23** (15): 8789-8804.

18. Li, Y.; Hao, J.; **Jiang\*, J.**, Improving the performance of portable aerosol size spectrometers for building dense monitoring networks. *Environmental Science: Atmospheres*, 2023. **3**(2): 338-346.
19. Li, X.; Chen, Y.; Li, Y.; Cai, R.; Li, Y.; Deng, C.; Wu, J.; Yan, C.; Cheng, H.; Liu, Y.; Kulmala, M.; Hao, J.; Smith\*, J. N.; **Jiang\*, J.**, Seasonal variations in composition and sources of atmospheric ultrafine particles in urban Beijing based on near-continuous measurements. *Atmos. Chem. Phys.*, 2023. **23** (23): 14801-14812.
20. Li, X.; Cai, R.; Hao, J.; Smith\*, J. N.; **Jiang\*, J.**, Online detection of airborne nanoparticle composition with mass spectrometry: Recent advances, challenges, and opportunities. *TrAC Trends in Analytical Chemistry*, 2023. **166**: 117195.
21. Li, C.; Zhao, Y.; Li, Z.; Liu, L.; Zhang, X.; Zheng, J.; Kerminen, V.-M.; Kulmala, M.; **Jiang, J.**; Cai, R.; Xiao, H., The dependence of new particle formation rates on the interaction between cluster growth, evaporation, and condensation sink. *Environmental Science: Atmospheres*, 2023. **3** (1): 168-181.
22. Li, C.; Li, Y.; Li, X.; Cai, R.; Fan, Y.; Qiao, X.; Yin, R.; Yan, C.; Guo, Y.; Liu, Y.; Zheng, J.; Kerminen, V. M.; Kulmala, M.; Xiao\*, H.; **Jiang\*, J.**, Comprehensive simulations of new particle formation events in Beijing with a cluster dynamics–multicomponent sectional model. *Atmos. Chem. Phys.*, 2023. **23** (12): 6879-6896.
23. Ji, J. S.; Xia, Y.; Liu, L.; Zhou, W.; Chen, R.; Dong, G.; Hu, Q.; **Jiang, J.**; Kan, H.; Li, T.; Li, Y.; Liu, Q.; Liu, Y.; Long, Y.; Lv, Y.; Ma, J.; Ma, Y.; Pelin, K.; Shi, X.; Tong, S.; Xie, Y.; Xu, L.; Yuan, C.; Zeng, H.; Zhao, B.; Zheng, G.; Liang, W.; Chan, M.; Huang, C., China's public health initiatives for climate change adaptation. *The Lancet Regional Health - Western Pacific*, 2023. **40**: 100965.
24. Guo, Y.; Deng, C.; Ovaska, A.; Zheng, F.; Hua, C.; Zhan, J.; Li, Y.; Wu, J.; Wang, Z.; Xie, J.; Zhang, Y.; Liu, T.; Zhang, Y.; Song, B.; Ma, W.; Liu, Y.; Yan, C.; **Jiang, J.**; Kerminen, V. M.; Xia, M.; Nieminen, T.; Du, W.; Kokkonen, T.; Kulmala, M., Measurement report: The 4-year variability and influence of the Winter Olympics and other special events on air quality in urban Beijing during wintertime. *Atmos. Chem. Phys.*, 2023. **23**(12): 6663-6690.
25. Deng, J.; Wang, S.; Zhang, J.; Zhang, Y.; **Jiang, J.**; Gu, Y.; Han, T.; Feng, L.; Gao, J.; Duan, L., Suggestion on further strengthening ultra-low emission standards for PM emission from coal-fired power plants in China. *Journal of Environmental Sciences*, 2023. **123**: 203-211.
26. Chen, Y.; Deng, C.; Lei, T.; Li, J.; Lian, C.; Li, Y.; Zheng, J.; Zhao, J.; Wang, D.; Wu, Z.; Wang, L.; Li, L.; Li, H.; Gao, J.; **Jiang, J.**; Ge, M.; Wang, W., Size-dependent chemical composition of atmospheric nanoparticles in urban Beijing during springtime. *Atmospheric Environment*, 2023. **310**: 119970.
27. Zhu, S.; Yan, C.; Zheng, J.; Chen, C.; Ning, H.; Yang, D.; Wang, M.; Ma, Y.; Zhan, J.; Hua, C.; Yin, R.; Li, Y.; Liu, Y.; **Jiang, J.**; Yao, L.; Wang, L.; Kulmala, M.; Worsnop, D. R., Observation and Source Apportionment of Atmospheric Alkaline Gases in Urban Beijing. *Environmental Science & Technology*, 2022. **56**(24): 17545-17555.
28. Zhang, J.; Wang, Y.; Teng, X.; Liu, L.; Xu, Y.; Ren, L.; Shi, Z.; Zhang, Y.; **Jiang, J.**; Liu, D.; Hu, M.; Shao, L.; Chen, J.; Martin, S. T.; Zhang, X.; Li, W., Liquid-liquid phase separation reduces radiative absorption by aged black carbon aerosols. *Communications Earth & Environment*, 2022. **3** (1): 128.

29. Yang, D.; Zhu, S.; Ma, Y.; Zhou, L.; Zheng, F.; Wang, L.; **Jiang, J.**; Zheng, J., Emissions of Ammonia and Other Nitrogen-Containing Volatile Organic Compounds from Motor Vehicles under Low-Speed Driving Conditions. *Environmental Science & Technology*, 2022. **56** (9): 5440-5447.
30. Yan, C.; Shen, Y.; Stolzenburg, D.; Dada, L.; Qi, X.; Hakala, S.; Sundström, A. M.; Guo, Y.; Lipponen, A.; Kokkonen, T. V.; Kontkanen, J.; Cai, R.; Cai, J.; Chan, T.; Chen, L.; Chu, B.; Deng, C.; Du, W.; Fan, X.; He, X. C.; Kangasluoma, J.; Kujansuu, J.; Kurppa, M.; Li, C.; Li, Y.; Lin, Z.; Liu, Y.; Liu, Y.; Lu, Y.; Nie, W.; Pulliainen, J.; Qiao, X.; Wang, Y.; Wen, Y.; Wu, Y.; Yang, G.; Yao, L.; Yin, R.; Zhang, G.; Zhang, S.; Zheng, F.; Zhou, Y.; Arola, A.; Tamminen, J.; Paasonen, P.; Sun, Y.; Wang, L.; Donahue, N. M.; Liu, Y.; Bianchi, F.; Daellenbach, K. R.; Worsnop, D. R.; Kerminen, V. M.; Petäjä, T.; Ding\*, A.; **Jiang\***, **J.**; Kulmala\*, M., The effect of COVID-19 restrictions on atmospheric new particle formation in Beijing. *Atmos. Chem. Phys.*, 2022. **22** (18): 12207-12220.
31. Wang, J.; Xing, J.; Wang, S.; Mathur, R.; Wang, J.; Zhang, Y.; Liu, C.; Pleim, J.; Ding, D.; Chang, X.; **Jiang, J.**; Zhao, P.; Sahu, S. K.; Jin, Y.; Wong, D. C.; Hao, J., The pathway of impacts of aerosol direct effects on secondary inorganic aerosol formation. *Atmos. Chem. Phys.*, 2022. **22** (8): 5147-5156.
32. Tuovinen, S.; Cai, R.; Kerminen, V. M.; **Jiang, J.**; Yan, C.; Kulmala, M.; Kontkanen, J., Survival probabilities of atmospheric particles: comparison based on theory, cluster population simulations, and observations in Beijing. *Atmos. Chem. Phys.*, 2022. **22** (22): 15071-15091.
33. Nie, W.; Yan, C.; Huang, D. D.; Wang, Z.; Liu, Y.; Qiao, X.; Guo, Y.; Tian, L.; Zheng, P.; Xu, Z.; Li, Y.; Xu, Z.; Qi, X.; Sun, P.; Wang, J.; Zheng, F.; Li, X.; Yin, R.; Dallenbach, K. R.; Bianchi, F.; Petäjä, T.; Zhang, Y.; Wang, M.; Schervish, M.; Wang, S.; Qiao, L.; Wang, Q.; Zhou, M.; Wang, H.; Yu, C.; Yao, D.; Guo, H.; Ye, P.; Lee, S.; Li, Y. J.; Liu, Y.; Chi, X.; Kerminen, V.-M.; Ehn, M.; Donahue, N. M.; Wang, T.; Huang, C.; Kulmala, M.; Worsnop, D.; **Jiang\***, **J.**; Ding\*, A., Secondary organic aerosol formed by condensing anthropogenic vapours over China's megacities. *Nature Geoscience*, 2022. **15**(4): 255-261.
34. Ma, L.; Zhang, Y.; Lin, Z.; Zhou, Y.; Yan, C.; Zhang, Y.; Zhou, W.; Ma, W.; Hua, C.; Li, X.; Deng, C.; Qi, Y.; Dada, L.; Li, H.; Bianchi, F.; Petäjä, T.; Kangasluoma, J.; **Jiang, J.**; Liu, S.; Hussein, T.; Kulmala, M.; Liu, Y., Deposition potential of 0.003–10 µm ambient particles in the humidified human respiratory tract: Contribution of new particle formation events in Beijing. *Ecotoxicology and Environmental Safety*, 2022. **243**: 114023.
35. Li, Y.; Chen, X.; **Jiang\***, **J.**, Measuring size distributions of atmospheric aerosols using natural air ions. *Aerosol Science and Technology*, 2022. **56** (7): 655-664.
36. Li, X.; Li, Y.; Cai, R.; Yan, C.; Qiao, X.; Guo, Y.; Deng, C.; Yin, R.; Chen, Y.; Li, Y.; Yao, L.; Sarnela, N.; Zhang, Y.; Petäjä, T.; Bianchi, F.; Liu, Y.; Kulmala, M.; Hao, J.; Smith\*, J. N.; **Jiang\***, **J.**, Insufficient Condensable Organic Vapors Lead to Slow Growth of New Particles in an Urban Environment. *Environmental Science & Technology*, 2022. **56** (14): 9936-9946.
37. Li, M.; Yu, S.; Chen, X.; Li, Z.; Zhang, Y.; Song, Z.; Liu, W.; Li, P.; Zhang, X.; Zhang, M.; Sun, Y.; Liu, Z.; Sun, C.; **Jiang, J.**; Wang, S.; Murphy, B. N.; Alapaty, K.; Mathur, R.; Rosenfeld, D.; Seinfeld, J. H., Impacts of condensable particulate matter on atmospheric organic aerosols and fine particulate matter (PM<sub>2.5</sub>) in China. *Atmos. Chem. Phys.*, 2022. **22** (17): 11845-11866.

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39. Kulmala, M.; Cai, R.; Stolzenburg, D.; Zhou, Y.; Dada, L.; Guo, Y.; Yan, C.; Petäjä, T.; **Jiang, J.**; Kerminen, V.-M., The contribution of new particle formation and subsequent growth to haze formation. *Environmental Science: Atmospheres*, 2022. **2**(3): 352-361.
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41. Guo, Y.; Yan, C.; Liu, Y.; Qiao, X.; Zheng, F.; Zhang, Y.; Zhou, Y.; Li, C.; Fan, X.; Lin, Z.; Feng, Z.; Zhang, Y.; Zheng, P.; Tian, L.; Nie, W.; Wang, Z.; Huang, D.; Daellenbach, K. R.; Yao, L.; Dada, L.; Bianchi, F.; **Jiang, J.**; Liu, Y.; Kerminen, V. M.; Kulmala, M., Seasonal variation in oxygenated organic molecules in urban Beijing and their contribution to secondary organic aerosol. *Atmos. Chem. Phys.*, 2022. **22**(15): 10077-10097.
42. Deng, C.; Li, Y.; Yan, C.; Wu, J.; Cai, R.; Wang, D.; Liu, Y.; Kangasluoma, J.; Kerminen, V. M.; Kulmala, M.; **Jiang\*, J.**, Measurement report: Size distributions of urban aerosols down to 1nm from long-term measurements. *Atmos. Chem. Phys.*, 2022. **22** (20): 13569-13580.
43. Cai, R.; Yin, R.; Yan, C.; Yang, D.; Deng, C.; Dada, L.; Kangasluoma, J.; Kontkanen, J.; Halonen, R.; Ma, Y.; Zhang, X.; Paasonen, P.; Petäjä, T.; Kerminen, V.-M.; Liu, Y.; Bianchi, F.; Zheng, J.; Wang, L.; Hao, J.; Smith, J. N.; Donahue, N. M.; Kulmala\*, M.; Worsnop, D. R.; **Jiang\*, J.**, The missing base molecules in atmospheric acid–base nucleation. *National Science Review*, 2022. **9** (10): nwac137.
44. Cai, R.; Häkkinen, E.; Yan, C.; **Jiang, J.**; Kulmala, M.; Kangasluoma, J., The effectiveness of the coagulation sink of 3–10nm atmospheric particles. *Atmos. Chem. Phys.*, 2022. **22** (17): 11529-11541.
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46. An, Z.; Li, X.; Yuan, Y.; Duan, F.; **Jiang\*, J.**, Large contribution of non-priority PAHs in atmospheric fine particles: Insights from time-resolved measurement and nontarget analysis. *Environment International*, 2022. **163**: 107193.
47. Hakala, S., V. Vakkari, F. Bianchi, L. Dada, C. Deng, K. R. Dällenbach, Y. Fu, **J. Jiang, J.** Kangasluoma, J. Kujansuu, Y. Liu, T. Petäjä, L. Wang, C. Yan, M. Kulmala and P. Paasonen. Observed coupling between air mass history, secondary growth of nucleation mode particles and aerosol pollution levels in Beijing. *Environmental Science: Atmospheres*, 2022, **2**: 146-164.
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49. Zhang, D., Y. Yang, M. Li, Y. Lu, Y. Liu, **J. Jiang**, R. Liu, J. Liu, X. Huang, G. Li and J. Qu. Ecological Barrier Deterioration Driven by Human Activities Poses Fatal Threats to Public Health due to Emerging Infectious Diseases. *Engineering*, 2022. **10**: 155-166.

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51. Wang, J., S. Wang, J. Wang, Y. Hua, C. Liu, J. Cai, Q. Xu, X. Xu, S. Jiang, G. Zheng, **J. Jiang**, R. Cai, W. Zhou, G. Chen, Y. Jin, Q. Zhang and J. Hao. Significant Contribution of Coarse Black Carbon Particles to Light Absorption in North China Plain. *Environmental Science & Technology Letters*, 2022. **9**(2): 134-139.
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