Xiangrui Kong

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RESEARCH AREA & MAIN CAPABILITIES

Research Area	Surface Science; Water Chemistry; Atmospheric Chemistry; Molecular Dynamics and Kinetics
Experimental	Synchrotron-based Techniques; Molecular Beam
Modeling	Thermodynamics; Kinetics; Molecular Dynamics

ACADEMIC & WORK HISTORY

2018 – present	Senior Researcher	University of Gothenburg (Sweden)
2018 – 2022	Adjunct Professor	Northwest University (China)
2017	Researcher	Oulu University (Finland)
2015 – 2017	Postdoc	Paul Scherrer Institute (Switzerland)
2016 – 2017	Visiting Scholar	Massachusetts Institute of Technology (US)
2014 – 2015	Visiting Scholar	Czech Academy of Science (Czech Republic)
2015	PhD in Chemistry	University of Gothenburg (Sweden)

LIST OF GRANTED FUNDING

Total amount of granted funding (as PI): 9.7 MSEK

2024 – 2027	EU MSCA COFUND	Surface Chemistry	1.5 MSEK	PI
2024 – 2026	Carl Tryggers Stiftelse Grant	Water-on Surface Catalysis	266 kSEK	PI
2024 – 2025	Adlerbert Research Foundation Grant	Isotope research	55 kSEK	PI
2023 – 2024	Nordic Centre Event Grant	Marine Aerosol	60 kSEK	PI
2022 – 2025	VR Starting Grant	Aerosol Surface Catalysis	6 MSEK	PI
2020 – 2023	STINT Joint China-Sweden	Water Interaction with SOA	1 MSEK	PI
2020 – 2023	NSFC Grant	Aerosol Interface	1 MSEK	PI
2017 – 2018	STINT Initiation	Salt and Ice	150 kSEK	PI
2015 – 2017	VR Internation Postdoc	Ice Surface Disorder	2.1 MSEK	PI
2015 – 2017	VR Internation Postdoc	Ice Surface Disorder	2.1 MSEK	PI

Total amount of granted funding (as co-PI): 4.2 MSEK

2023 – 2026	STINT Joint China-Sweden	Vehicular Emission	1 MSEK	PI: Mattias Hallquist
2016 – 2019	VR Project Grant	Molecular Beam	3.2 MSEK	PI: Jan Pettersson

PUBLICATIONS AND PRESENTATIONS

Publications	63 peer-reviewed articles (1 *Science*)
Presentations	18 invited oral presentations at conferences and academic institutions
Citation report	h-index=18, i10-index=30, 733 citations (Google Scholar, December 2024)

TEACHING

2022 – 2024	Course Leader	Aerosols	GU
2019 – 2024	Lecturer	Aerosols	GU
2022	Lecturer	Environmental Chemistry	GU
2023	Lecturer	Methods to Study Molecules, Proteins, and Cells	GU
2023	Lecturer	Pharmaceutical Aerosols	Swedish Inhalation Network
2010 – 2014	Lab Assistant	General Chemistry	GU

MEMBERSHIPS OF SCIENTIFIC AND EDUCATIONAL SOCIETIES

2023 –	Steering group member and university representative of PRISMAS program, MAX IV	Sweden
2023 –	Evaluator for Axel Adler Scholarship	Sweden
2023 –	Evaluator for Utställningen Unga Forskare|The Swedish Federation of Young Scientists	Sweden
2023 –	Institutional coordinator for Erasmus Mundus Joint Program application	EU
2022 –	Institutional coordinator for ABS Network	Nordic countries
2022 –	Coordinator of Master Program – Atmosphere, Climate and Ecosystem (ACE), GU	Sweden
2022 –	Vice-coordinator of ClimBEco Graduate Research School	Sweden
2018 –	Associated member, Finnish Synchrotron Radiation Users Organization (FSRUO)	Finland
2015 –	Founding member, Martina Roeselova memorial fellowship	Czech Republic

SUPERVISION AND HOSTS FOR VISITORS

Supervisor for PhD students
PRISMAS student, 2025–, GU
Dr. Sofia Johansson, 2015–2020, GU
Dr. Dimitri Castarède, 2016 - 2021, GU
Dr. Yaxin Ge, 2018–2022, GU
Dr. Viktor Andersson, 2018–2023, GU
Dr. Luis Santos, 2018–2024, GU
Mr. Nicolas Fauré, 2021–, GU

Supervisor for Master students
Msc. Sofia Johansson, 2014, GU
Msc. Jun Li, 2020–2022, NWU (*Excellent Thesis Award*)
Msc. Wanyu Liu, 2020–2022, NWU (*Excellent Thesis Award*)
Msc. Yuhe Qiu, 2022–2023, NWU
Ms. Yuxin Hao, 2022– 2024, NWU
Mr. Wandera Kisimbiri, 2023–2024, GU
Mr. Don Mahesh Wickramanayake, 2023 –, GU

Host for visiting scholars to GU
Prof. Zhijun Wu (Peking University), 04/2024
Prof. Jianfei Peng (Nankai University), 04/2024
Prof. Wei Hu (Tianjin University), 08/2024
Dr. Jie Chen (ETH Zurich), 10/2023 - 11/2023
Prof. Sen Wang (Northwest Uni), 2020 - 2021

GRANTED ACCESSES TO LARGE-SCALE SCIENTIFIC RESEARCH FACILITIES

2023	EU ATMO-ACCESS network (CESAM chamber)	France	1
2016 – 2024	Swiss Light Source Synchrotron	Switzerland	8
2020 – 2024	MAX IV National Laboratory Synchrotron	Sweden	9
2018 – 2024	National Institutes of Natural Sciences UVSOR Synchrotron	Japan	14
2023 – 2024	SOLEIL Synchrotron	France	1
2024	DESIREE Double Ring Facility	Sweden	1

ACADEMIC EVALUATION

Ph.D. Evaluation Committee	1 Ph.D. defense (France) in 2022
Proposals (Reviewer)	NSFC since 2020; SNSF in 2020
Master Scholarship (Reviewer)	Axel Adler Scholarship since 2023
Journal Reviewer	ACS, RCS, Elsevier, etc.

ORGANIZED WORKSHOPS AND CONFERENCES

2024	Main organizer	Nordic Center Sweden-China workshop	Qingdao, CN	(~20 participants)
2024	Co-convener	Session at EGU 2024	Vienna, AU	(~50 participants)
2023	Main organizer	GU & Peking University STINT Workshop	Beijing, CN	(~30 participants)
2023	Main organizer	ClimBEco summer meeting	Kristineberg, SE	(~40 participants)
2023	Main organizer	ClimBEco MAX IV tour	Lund, SE	(~40 participants)
2021	Main organizer	GU & Peking University STINT Workshop	online	(~200 participants)
2020	Main organizer	GU & Peking University STINT Workshop 2020	online	(~30 participants)
2017	Main organizer	GU & MIT STINT Workshop 2017	Gothenburg, SE	(~30 participants)

INDIVIDUAL FELLOWSHIPS, AWARDS AND SCHOLARSHIPS

2024	Adlerbert Research Foundation Grant	Sweden
2022	ERC Starting Grant Interviewee	EU
2022 – 2025	Swedish Research Council (vetenskapsrådet, VR) starting grant fellowship	Sweden
2015 – 2017	Swedish Research Council (vetenskapsrådet, VR) international postdoc fellowship	Sweden
2017	International Union of Geodesy and Geophysics (IUGG)/International Association of Meteorology and Atmospheric Sciences (IAMAS) grant	USA
2016, 2023	The Royal Society of Arts and Sciences in Gothenburg (KVVS) scholarship x2	Sweden
Since 2015	Wenner-Gren Stiftelserna grant x4	Sweden
2014	International Global Atmospheric Chemistry (IGAC) grant	International
2013	Ångpanneföreningens Forskningsstiftelse grant	Sweden
2013	National Science Foundation Office of Polar Programs grant	USA
2012	International Association of Cryospheric Sciences (IACS) grant	International
2012, 2014	Kunt och Alice Wallenbergs Stiftelse travel grant x2	Sweden
2011	Adlerbertska stipendiestiftelsen scholarship x3	Sweden
2000	National Volleyball Second-level Athlete	China

POPULAR SCIENCE CONTRIBUTION

2024 **MAX IV News Science Highlights**, “Effects of salt particles on climate studied at MAX IV”
2023 **Sweden Radio Interview**, “This is how Sweden's most expensive research apparatus works - Max IV in Lund”.
2023 **MAX IV News Science Highlights**, “A cloudy route for shipping in the Arctic”.
2022 **Royal Society of Chemistry**, “Kong Xiangrui's team at the University of Gothenburg Environ. Sci.: Atmos. | Simulating the surface solvation of Martian salts at extremely low relative humidity”.
2022 **MAX IV News Science Highlights**, “Salts of the Earth aid understanding of Martian salt chemistry”.
2021 **Phys.org**, “Unexpected chemical reaction may offer new industrial applications”.
2021 **Forskning.se**, “Nyupptäckt kemi kan användas för avloppsrening”.
2021 **Nature Middle East**, “Atmospheric aerosols spring a chemical surprise”.
2021 **GU news**, “Oväntad upptäckt kan ge nya industriella tillämpningar”.
2019 **National University Entrance Examination of China**, Chemistry (10 million participating students)
2018 **Golden Key Science and Technology Competition in China**, Chemistry.
2018 **X-MOL**, “HCl, strong or weak acid?”.

INVITED TALKS AT INTERNATIONAL CONFERENCES AND WORKSHOPS

2024 Nov	X-ray & Neutron Spectroscopy, Scattering, and Imaging in Atmospheric Chemistry	Villigen, Switzerland
2024 Sept	Nordic Centre International Workshop on Heterogeneous Chemistry on Atmospheric Aerosols	Qingdao, China
2024 Apr	European Geosciences Union (EGU) General Assembly 2024	Vienna, Austria
2024 Apr	A Molecular Level Understanding of Atmospheric Aerosols (MUOAA 2024) Conference	Corsica, France
2024 Mar	Tianjin University (TJU) Seminar	Tianjin, China
2024 Mar	Nankai University (NKU) Seminar	Tianjin, China
2024 Jan	35th MAX IV User Meeting	Lund, Sweden
2023 Sept	15th International Conference on the Physics and Chemistry of Ice (PCI-2023)	Sapporo, Japan
2023 Aug	China-Sweden Symposium on Hygroscopicity of Particulate Matter and Atmospheric Ice Nuclei	Beijing, China
2022 Jun	National Center for Atmospheric Research (NCAR) seminar	Boulder, Colorado, USA
2022 Jun	Swedish Chemical Society (SCS) Annual Conference	Linköping, Sweden
2022 May	A Molecular Level Understanding of Atmospheric Aerosols (MUOAA 2022) Conference	Los Angeles, CA, USA
2021 Nov	The 27th Conference on Atmospheric Environment Science and Technology	Beijing, China (Virtual)
2021 Nov	Swedish Gasification Center Annual Conference	Stockholm, Sweden
2021 Nov	Paul Scherrer Institute LUC Seminar	Villigen, Switzerland
2020 Nov	Sweden-China Ice Nucleation Workshop	Beijing, China (Virtual)
2019 Oct	Innovation Forum at the Northwest University of China	Xi'an, China
2019 Oct	Special Seminar at the Institute of Earth Environment, Chinese Academy of Science	Xi'an, China

PUBLICATION LIST

1. N. Fauré, J. Chen, L. Artiglia, M. Ammann, T. Bartels-Rausch, Z.A. Kanji, S. Wang, J.B.C. Pettersson, E.S. Thomson, I. Gladich, and X.R. Kong*, Formation of Sodium Chloride on the Surface of Sulfate-Rich Gobi Desert Salt in Response to Water Adsorption, *ACS EST Air*, 1 (**2024**), 1373 – 1382. DOI: https://pubs.acs.org/doi/10.1021/acsestair.4c00092
2. Y.J. Shang, L.J. Li, T.T. Sun, X.R. Kong, S. Wang, and M. Hallquist, Characterization and Seasonal Variation of PM2.5 Composition in Xi'an, Northwest China: Oxygenated and Nitrogenous Organic Aerosol, *ACS Earth Space Chem*., 8 (**2024**), 1370 – 1384. DOI: https://doi.org/10.1021/acsearthspacechem.4c00042
3. Y.X. Hao, Y.H. Qiu, J. Li, W.Y. Liu, L.X.D. Chen, X.Y. Zhang, M.J. Tang, Z.C. Niu, S. Wang, X.R. Kong*, Hygroscopic Properties of Plateau Surface Salts: Insights from Chemical Composition and Isotope Signatures, *ACS Earth Space Chem.*, 8 (**2024**), 1111 – 1121. DOI: https://pubs.acs.org/doi/10.1021/acsearthspacechem.4c00028
4. X.R. Kong*, C. Wu, H.R. Mishra, Y.X. Hao, M. Cazaunau, A. Bergé, E. Pangui, R. Faust; W.Y. Liu, J. Li, S. Wang, B. Picquet-Varrault, M. Hallquist, Impact of SO_2 and light on chemical morphology and hygroscopicity of natural salt aerosols, *Atmos. Environ*., 322 (**2024**), 120373. DOI: https://doi.org/10.1016/j.atmosenv.2024.120373
5. L.F.E.d. Santos, K. Salo, X.R. Kong, M. Hartmann, J. Sjoblom, and E.S. Thomson, Effects of present international marine fuel regulations on ship exhaust particles: Physicochemical properties, cloud activity and emission factors, *JGR: Atmospheres,* 129 (**2024**): e2023JD040389. DOI: https://doi.org/10.1029/2023JD040389
6. M. Priestley, X.R. Kong, X.Y. Pei, R.K. Pathak, K. Davidsson, J.B.C. Pettersson; M. Hallquist, Volatility measurements of oxygenated volatile organics from fresh and aged residential wood burning emissions, *ACS Earth Space Chem.*, 8 (**2024**), 159-173. DOI: https://doi.org/10.1021/acsearthspacechem.3c00066
7. V. Andersson, X.R. Kong, H. Leion, T. Mattisson, J.B.C. Pettersson, Gaseous alkali interactions with ilmenite, manganese oxide and calcium manganite under chemical looping combustion conditions, *Fuel Process. Technol.*, 254 (**2024**), 108029. DOI: https://doi.org/10.1016/j.fuproc.2023.108029
8. V. Andersson, X.R. Kong, J.B.C. Pettersson, Online speciation of alkali compounds by temperature-modulated surface ionization: Method development and application to thermal conversion, *Energy & Fuel*, 38 (**2024**), 2046-2057. DOI: https://doi.org/10.1021/acs.energyfuels.3c04218
9. V. Andersson, I. Staničić, X.R. Kong, H. Leion, T. Mattisson and J.B.C. Pettersson, Alkali desorption from ilmenite oxygen carrier particles used in biomass combustion, *Fuel*, 359 (**2024**), 130400. DOI: https://doi.org/10.1016/j.fuel.2023.130400
10. V. Andersson, X.R. Kong, H. Leion, T. Mattisson and J.B.C. Pettersson, Design and first application of a novel laboratory reactor for alkali studies in chemical looping applications, *Fuel Process. Technol.*, 252 (**2023**), 107988. DOI: https://doi.org/10.1016/j.fuproc.2023.107988
11. X.R. Kong, I. Staničić, V. Andersson, T. Mattisson, and J.B.C. Pettersson, Phase recognition in SEM-EDX chemical paps using positive matrix factorization, *Elsevier MethodsX*, 11 (**2023**), 102384. DOI: https://doi.org/10.1016/j.mex.2023.102384
12. X.R. Kong*, I. Gladich, N. Fauré, E.S. Thomson, J. Chen, L. Artiglia, M. Ammann, T. Bartels-Rausch, Z.A. Kanji, and J.B.C. Pettersson, Adsorbed water promotes chemically active environments on the surface of sodium chloride, *J. Phys. Chem. Lett.,* 14 (**2023**), 6151–6156. DOI: https://doi.org/10.1021/acs.jpclett.3c00980 (Cover paper & *ACS Editors' Choice* Paper)
13. X.R. Kong*, M. Priestley, X.Y. Pei, Y.S. Zhu, Z.J. Wu, M. Hu, T. Ohigashi, H. Yuzawa, R.K. Pathak, J.B.C. Pettersson, and M. Hallquist, Chemical mapping of potassium-containing particles from residential biomass burning and in ambient air, *AIP Conference Proceedings*, 2990 (**2023**), 020003. DOI: https://doi.org/10.1063/5.0168163
14. M. Priestley, X.Y. Pei, T. Ohigashi, H. Yuzawa, J.B.C. Pettersson, R.K. Pathak, M. Hallquist, and X.R. Kong*, Transformation of morphological and chemical properties by coating materials on soot, *AIP Conference Proceedings*, 2990 (**2023**), 020004. DOI: https://doi.org/10.1063/5.0168166
15. S.M. Ding, Y.X. Ge, E. Kantarelis, X.R. Kong, J.B.C. Pettersson, and Klas Engvall, Time-resolved alkali release during steam gasification of char in a fixed bed reactor, *Fuel*, 356 (**2023**), 129528. DOI: https://doi.org/10.1016/j.fuel.2023.129528.
16. Y.X. Ge, S.M. Ding, W.N. Zhang, X.R. Kong, E. Kantarelis, K. Engvall, and J.B.C. Pettersson, Impacts of fresh bed materials on alkali release and fuel conversion rate during wood pyrolysis and char gasification, *Fuel*, 353 (**2023**), 129161. DOI: https://doi.org/10.1016/j.fuel.2023.129161.
17. Y.X. Ge, S.M. Ding, X.R. Kong, E. Kantarelis, K. Engvall, and J.B.C. Pettersson, Online monitoring of alkali release during co-pyrolysis/gasification of forest and agricultural waste: Element migration and synergistic effects, *Biomass and Bioenergy*, 172 (**2023**), 106745. DOI: https://doi.org/10.1016/j.biombioe.2023.106745
18. M. Priestley, X.R. Kong, X.Y. Pei, J. Hammes, D. Bäckström, R.K. Pathak, J.B.C. Pettersson, M. Hallquist, Pros and cons of wood and pellet stoves for residential heating from an emissions perspective, *RSC Environ. Sci.: Atmos.*, 3 (**2023**), 717-730. DOI: https://doi.org/10.1039/D2EA00022A

19. N. Fauré, J. Chen, L. Artiglia, M. Ammann, T. Bartels-Rausch, J. Li, W.Y. Liu, S. Wang, Z.A. Kanji, J.B.C. Pettersson, I. Gladich, E. Thomson and X.R. Kong*, Unexpected behavior of chloride and sulfate ions upon surface solvation of Martian salt analogue, *ACS Earth Space Chem.*, 7 (**2023**), 350-359. DOI: https://doi.org/10.1021/acsearthspacechem.2c00204.
20. Y.X. Ge, S.M. Ding, W.N. Zhang, X.R. Kong, K. Engvall, J.B.C. Pettersson, Effect of fresh bed materials on alkali release and thermogravimetric behavior during straw gasification, *Fuel*, 336 (**2023**), 127143. DOI: https://doi.org/10.1016/j.fuel.2022.127143.
21. L.F.E.D. Santos, K. Salo, X.R. Kong, J. Noda, T.B. Kristensen, T. Ohigashi, and E.S. Thomson, Changes in CCN activity of ship exhaust particles induced by fuel sulfur content reduction and wet scrubbing, *Environ. Sci.: Atmos.*, 3 (**2023**), 182-195. DOI: 10.1039/D2EA00081D.
22. Y.X. Ge, S.M. Ding, X.R. Kong, E. Kantarelis, K. Engvall, M. Öhman and J.B.C. Pettersson, Effects of used bed materials on char gasification: investigating the role of element migration using online alkali measurements, *Fuel Process. Technol.*, 238 (**2022**), 107491. DOI: https://doi.org/10.1016/j.fuproc.2022.107491
23. Y.X. Ge, S.M. Ding, X.R. Kong, E. Kantarelis, K. Engvall, and J.B.C. Pettersson, Real-time monitoring of alkali release during CO_2 gasification of different types of biochar, *Fuel*, 327 (**2022**), 125102. DOI: https://doi.org/10.1016/j.fuel.2022.125102.
24. V. Andersson, Y. Ge, X.R. Kong and J.B.C. Pettersson, A novel method for on-line characterization of alkali release and thermal stability of materials used in thermochemical conversion processes, *Energies*, 15 (**2022**), 4365. DOI: https://doi.org/10.3390/en15124365
25. J. Li, W.Y. Liu, D. Castarède, W.J. Gu, L.J. Li, T. Ohigashi, G.Q. Zhang, M.J. Tang, E.S. Thomson, M. Hallquist, S. Wang, X.R. Kong*, Hygroscopicity and Ice Nucleation Properties of Dust/Salt Mixtures Originating from the Source of East Asian Dust Storms, *Front. Environ. Sci.*, 10 (**2022**), 897127. DOI: 10.3389/fenvs.2022.897127
26. X.R. Kong*, S.Y. Zhu, A. Shavorskiy, J. Li, W.Y. Liu, P. Corral Arroyo, R. Signorell, S. Wang, and J.B.C. Pettersson, Surface Solvation of Martian Analogous Salts at Low Relative Humilities, *Environ. Sci.: Atmos.*, 2 (**2022**), 137-145. DOI: https://doi.org/10.1039/D1EA00092F
27. X.R. Kong*, J. Dou, S.Z. Chen, B.B. Wang and Z.J. Wu, Progress of Synchrotron-based Research on Atmospheric Science, *Progress in Chemistry*, 34 (**2022**), 963-972. DOI: 10.7536/PC210438
28. V. Andersson, A.H. Soleimanisalim, X.R. Kong, H. Leion, T. Mattisson and J.B.C. Pettersson, Alkali Interactions with a Calcium Manganite Oxygen Carrier used in Chemical Looping Combustion, *Fuel Process. Technol.*, 227 (**2021**), 107099. DOI: https://doi.org/10.1016/j.fuproc.2021.107099
29. S.Z. Chen, L. Artiglia, F. Orlando, J. Edebeli, X.R. Kong, H.Y. Yang, A. Boucly, P. Corral Arroyo, N. Prisle, and M. Ammann, Impact of Tetrabutylammonium on the Oxidation of Bromide by Ozone, *ACS Earth Space Chem., 5* (**2021**), 3008-3021. DOI: https://doi.org/10.1021/acsearthspacechem.1c00233
30. X.R. Kong*, D. Castarède, A. Boucly, L. Artiglia, M. Ammann, E.S. Thomson, I. Gladich, and J.B.C. Pettersson, A Surface-Promoted Redox Reaction Occurs Spontaneously on Solvating Inorganic Aerosol Surfaces, *Science*, 374 (**2021**), 747-752. DOI: https://doi.org/10.1126/science.abc5311
31. J. Li, W.Y. Liu, L.J. Li, W.J. Gu, X.Y. Zhang, M. Hallquist, M.J. Tang, S. Wang, X.R. Kong*, Hygroscopicity of Fresh and Aged Salt Mixtures from Saline Lakes, *Atmosphere*, 12 (**2021**), 1203. DOI: https://doi.org/10.3390/atmos12091203
32. X.R. Kong*, J. Lovrić, S.M. Johansson, N. Prisle, and J.B.C. Pettersson, Dynamics and Sorption Kinetics of Methanol Monomers and Clusters on Nopinone Surfaces, *J. Phys. Chem. A*, 125 (**2021**), 6263-6272. DOI: https://doi.org/10.1021/acs.jpca.1c02309
33. V. Andersson, A.H. Soleimanisalim, X.R. Kong, F. Hildor, H. Leion, T. Mattisson and J.B.C. Pettersson, Alkali-Wall Interactions in a Laboratory-Scale Reactor for Chemical Looping Combustion Studies, *Fuel Process. Technol.*, 217 (**2021**), 106828. DOI: https://doi.org/10.1016/j.fuproc.2021.106828
34. W. Liu, J. Li, W. Gu, L. Santos, J. Boman, X. Zhang, M. Tang, S. Wang and X.R. Kong*, Chemical and Hygroscopic Characterization of Surface Salts in Qaidam Basin: Implications for Climate Impacts on Planet Earth and Mars, *ACS Earth Space Chem.*, 5 (**2021**), 651-662. DOI: https://doi.org/10.1021/acsearthspacechem.0c00339
35. T. Bartels-Rausch, X.R. Kong, F. Orlando, L. Artiglia, A. Waldner, T. Huthwelker and M. Ammann, Interfacial Supercooling and the Precipitation of Hydrohalite in Frozen NaCl Solutions by X-ray Absorption Spectroscopy, *The Cryosphere*, 15 (**2021**), 2001-2021. DOI: https://doi.org/10.5194/tc-15-2001-2021
36. D. Schlesinger, S.J. Lowe, T. Olenius, X.R. Kong, J.B.C. Pettersson and I. Riipinen, A Molecular Perspective on Water Vapour Accommodation into Ice and its Dependence on Temperature, *J. Phys. Chem. A.*, 124 (**2020**), 10879-10889. DOI: https://pubs.acs.org/doi/10.1021/acs.jpca.0c09357
37. X.R. Kong* and J.B.C. Pettersson, Ordinal Analysis Applied to the Results of Positive Matrix Factorization of Chemical Ionization Mass Spectrometry Data, *MethodsX*, 7 (**2020**), 101170. DOI: https://doi.org/10.1016/j.mex.2020.101170
38. X.R. Kong*, C.M. Salvador, S. Carlsson, R. Pathak, K.O. Davidsson, M. Le Breton, S.M. Gaita, K. Mitra, Å.M. Hallquist, M. Hallquist, and J.B.C. Pettersson, Molecular Characterization of Emissions from a Residential Wood Burning Boiler, *Sci. Total Environ.*, 754 (**2020**), 142143. DOI: https://doi.org/10.1016/j.scitotenv.2020.142143
39. S.M. Johansson, J. Lovrić, X.R. Kong, E. S. Thomson, M. Hallquist, and J.B.C. Pettersson, Experimental and Computational Study of Water Interactions with Condensed Nopinone Surfaces at Atmospherically Relevant Conditions, *J. Phys. Chem. A.*, 124 (**2020**) 3652-3661. DOI: https://doi.org/10.1021/acs.jpca.9b10970
40. X.R. Kong*, D. Castarede, A. Boucly, L. Artiglia, M. Ammann, T. Bartels-Rausch, E. Thomson, and J.B.C. Pettersson, Reversible Physisorbed and Chemisorbed Water on Alkaline Organic Salt Surface at Atmospheric Conditions, *J. Phys. Chem. C*, 124 (**2020**), 5263-5269. DOI: https://doi.org/10.1021/acs.jpcc.0c00319
41. J. Noda, R. Bergström, X.R. Kong, T. L. Gustafsson, B. Kovacevik, M. Svane, and J.B.C. Pettersson, Aerosol from Biomass Combustion in Northern Europe: Influence of Meteorological Conditions and Air Mass History, *Atmosphere*, 10 (**2019**), 789. DOI: https://doi.org/10.3390/atmos10120789
42. F. Orlando, L. Artiglia, H. Yang, X.R. Kong, K. Roy, A. Waldner, S. Chen, T. Bartels-Rausch and M. Ammann, Disordered Adsorbed Water Layers on TiO_2 Nanoparticles under Subsaturated Humidity Conditions at 235 K, *J. Phys. Chem. Lett.*, 10 (**2019**), 7433-7438. DOI: https://doi.org/10.1021/acs.jpclett.9b02779
43. X.R. Kong*, E. Thomson, N. Marković, and J.B.C. Pettersson, Dynamics and Kinetics of Methanol - Graphite Interactions at Low Surface Coverage, *ChemPhysChem*, 20 (**2019**), 2171-2178. (Cover Paper). DOI: https://doi.org/10.1002/cphc.201900457
44. S.M. Johansson, J. Lovrić, X.R. Kong, E.S. Thomson, P. Papagiannakopoulos, C. Toubin and J.B.C. Pettersson, Understanding Water Interactions with Organic Surfaces: Environmental Molecular Beam and Theoretical Studies of the Water – Butanol System, *Phys. Chem. Chem. Phys.*, 21 (**2019**), 1141-1151. DOI: https://doi.org/10.1039/C8CP04151B
45. X.R. Kong*, C. Toubin, A. Habartova, E. Pluharova, M. Roeselova and J.B.C. Pettersson, Rapid Water Transport through Organic Layers on Ice, *J. Phys. Chem. A,* 122 (**2018**), 4861-4868. DOI: https://doi.org/10.1021/acs.jpca.8b01951
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