

Atmospheric chemistry in cold environments

17-19 February 2025 | London, UK



Faraday
Discussions

Day 1

11:00	Registration and refreshments
12:00	Lunch
12:45	Welcome and introductions Thorsten Bartels-Rausch, <i>Chair of Scientific Committee</i>
12:55	Outline of Discussion format <i>Royal Society of Chemistry Publishing Editors</i>
13:00	Introductory Lecture – Spiers Memorial Lecture (Session chair: Thorsten Bartels-Rausch) TBC
	Role of trace gases in particle and ice nucleation and growth (Session chair: Thorsten Bartels-Rausch)
14:00	Particle growth facilitated by multiphase chemistry in a cold and dark urban environment Jingqiu Mao <i>University of Alaska Fairbanks, United States</i>
14:05	Discussion
14:30	Refreshments
	Multiphase chemistry of aerosol, clouds, and snow (Session chair: Dwayne Heard)
15:00	In situ measurements of gas-particle partitioning of organic compounds in Fairbanks Barbara D'Anna <i>LCE, France</i>
15:05	Ozonolysis of linoleic acid monolayers in multi-component films at the air-water interface at 3 ± 1 °C and 21 ± 1 °C. Christian Pfrang <i>University of Birmingham, UK</i>
15:10	Unraveling aqueous alcohol freezing : new theoretical tools from graph theory to extract molecular processes in MD simulations Celine Toubin <i>University of Lille, France</i>
15:15	Discussion
16:30	Lightning presentations (by invitation of the Scientific Committee)
17:00	Poster session and wine reception
19:00	Close

Day 2

	Atmospheric processing, transport and chemical transformations of trace gases in cold regions (Session chair: Natasha Garner)
09:00	TBC Hugh Coe <i>University of Manchester, UK</i>
09:05	Direct observations of 2-methyltetrols in Amazon air at high altitudes Claudia Mohr <i>Paul Scherrer Institute, Switzerland</i>
09:10	Chemistry and impact of oxidized organic molecules in the free troposphere: direct observations from mountain tops Qiaozhi Zha <i>Nanjing University, China</i>
09:15	Transport of biogenic particles in the Himalayan valleys Giancarlo Ciarelli <i>University of Helsinki, Finland</i>
09:20	Discussion
11:00	Refreshments (Session chair: Megan Willis)
11:30	What are the sources of atmospheric iodine to the polar regions? Lucy Carpenter <i>University of York, UK</i>
11:35	The distribution of volatile organic compounds (VOCs) over the Southern Ocean Saewung Kim <i>University of California, United States</i>
11:40	Processes regulating the sources and sinks of ammonia in the Canadian Arctic Jen Murphy <i>University of Toronto, Canada</i>
11:45	Discussion
13:00	Lunch

	Atmosphere-surface interactions and heterogenous processes in cold environments (Session chair: Bill Simpson)
14:00	TBC Kerri Pratt <i>University of Michigan, United States</i>
14:05	Impacts of NO₂ emissions on downwind bromine chemistry: insights from 5 years of MAX-DOAS observations at Utqiagvik Alaska Peter Peterson <i>Whittier College, United States</i>
14:10	Discussion
15:00	Refreshments (Session chair: Paul Zieger)
15:30	Impact of snow chemistry on air pollution in cold polluted environments <u>Jonas Kuhn</u> ; Jochen Stutz <i>University of California, United States</i>
15:35	Why are we still experiencing very large ozone depletion in the polar lower stratosphere? <u>Martyn Chipperfield</u> ; Saffron Heddell <i>University of Leeds, UK</i>
15:40	Discussion
	Aerosol-cloud interactions in cold regions (Session chair: Natasha Garner)
16:30	Terrestrial and marine sources of ice nucleating particles in the Eurasian Arctic Zamin A Kanji <i>ETH Zurich, Switzerland</i>
16:35	A comprehensive characterisation of natural aerosol sources in the high Arctic during the onset of sea ice melt Paul Zieger <i>Stockholm University, Sweden</i>
16:40	Discussion
17:30	Close of sessions
18:30	Pre-dinner drinks
19:00	Conference dinner

Day 3

	Multiphase chemistry of aerosol, clouds, and snow (Session chair: Thorsten Bartels-Rausch)
09:00	Elucidating how trace gases interact with ice surfaces utilizing sum frequency generation <u>Jenée Cyran</u> <i>Boise State University, United States</i>
09:05	Acid-base chemistry of ammonia at the ice-vapor interface <u>Clemens Richter</u> <i>Fritz-Haber-Institute of the Max-Planck Society, Germany</i>
09:10	Trapping intermediates of the NO₂ hydrolysis reaction on ice <u>Patrick Ayotte</u> <i>Université de Sherbrooke, Canada</i>
09:15	Discussion
10:30	Refreshments
	Emissions of trace gases and aerosol and atmospheric mixing/transport (Session Chair: Bill Simpson)
11:00	Connectivity of the sea ice pore space - insights from microstructure observations and directed percolation theory <u>Sönke Maus</u> <i>Norwegian University of Science and Technology (NTNU), Norway</i>
11:05	Modeling attainment in Fairbanks, Alaska for winter-time PM 2.5 24-hour non-attainment area using the CMAQ (Community Multi-Scale Air Quality) model <u>Deanna Huff</u> ; <u>Thomas Carlson</u> <i>State of Alaska - Department of Environmental Conservation, United States</i>
11:10	Low-cost electrochemical gas sensing of vertical differences in wintertime air composition (CO, NO, NO₂, O₃) in Fairbanks, Alaska <u>Tjarda Roberts</u> <i>CNRS/ENS, France</i>
11:15	Discussion
12:30	Concluding Remarks Lecture (Session chair: Thorsten Bartels-Rausch) <u>Markus Ammann</u> <i>Paul Scherrer Institute, Switzerland</i>
13:00	Acknowledgements
13:15	Close of meeting and lunch

Presenting authors are indicated in the programme by an underline. The affiliation is for the presenting author. If the presenting author of your paper has changed since abstract selection please email events@rsc.org. **Please note that this is a draft programme and timings may change.**