

SEMINAR SERIES 2023 - 2024

SOUTHERN ONTARIO CENTRE FOR ATMOSPHERIC AEROSOL RESEARCH
UNIVERSITY OF TORONTO

Into the Mist: Sea Spray Aerosol Molecular Composition, Viscosity, and Multiphase Chemistry



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The phase state or viscosity of aerosols plays a crucial role in various atmospheric processes, including ice nucleation, water absorption, and heterogeneous reaction kinetics. Despite its significance, limited research has explored the viscosity of sea spray aerosol (SSA), which represents the largest annual mass flux of naturally occurring aerosols globally. Combining online high-resolution mass spectrometry aerosol composition measurements with particle bounce, my group studies the molecular drivers of SSA viscosity and its effects on multiphase oxidation processes. In this talk, I will highlight our efforts in determining (1) the viscosity and molecular composition of SSA across distinct biologically-active periods of a phytoplankton bloom, (2) size-dependent SSA viscosity, and the role of cation-organic interactions driving differences in viscosity with particle size, and (3) viscosity impacts on the photochemical and heterogeneous oxidation kinetics of plastic additives in SSA mimics in the presence of model photosensitizers.

Wednesday, February 7, 2024 3:00PM - 4:00PM EST

Join Us Online: **MS Teams Meeting** - Click [HERE](#) to join
Meeting ID: 270 738 871 285
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