

# Technologies to Understand the Role of Complexity in Atmospheric Aerosol



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Aerosol particles are ubiquitous components of the earth's atmosphere. They affect the earth's radiative balance through scattering and absorption of radiation, and are also widely acknowledged as key determinants of air quality. Comprised of both inorganic and organic compounds, the latter could potentially comprise millions of compounds. Over many years the global research community have developed modelling and measurement capabilities designed to better understand their evolution and impacts. With these, we continue to hypothesise and identify new processes and molecular species deemed important. This, however, presents challenges that require novel technological developments. Atmospheric science is reaching a crossroad of exploration. Attempts to address climatic and health impacts implies improving the knowledge on aerosol composition and properties yet, sooner or later, we must take decisions on what to do with the complexity of both. Presently, I feel we do not have appropriate technologies or model development ethos to answer this. In this talk, I will present developments in a range of areas that attempt to address this challenge in a holistic way.

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**11:30 a.m.**



**Conference Room, 3/F,  
Mong Man Wai Building**



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