

4<sup>th</sup> World Congress on

# MASS SPECTROMETRY

June 19-21, 2017 London, UK

*Jianmin Chen*

Fudan University, China

## Tropospheric multiphase chemistry elevated by diverse mass-spectrometric techniques

Recently, multifarious mass-spectrometric techniques (MAF) have been rapidly developed and applied to tropospheric multiphase chemistry. They play an important role in the studies of secondary aerosol formation, chemical components, atmospheric oxidation, haze episodes and cloud condensation nuclei (CCN), which impact many aspects of air quality, health and global climate. Here, a variety of MST is introduced to investigate multiphase chemistry in ambient air and laboratory studies: Secondary organic aerosols (SOA) formation was investigated by single particle ToF mass spectrometry from  $\alpha$ -pinene-ozone system with seed aerosols in an aerosol chamber; particulate nitrate formation was firstly explored by aerosol ToF mass spectrometry. High molecular weight species were observed in urban Shanghai aerosols; desorption electrospray ionization mass spectrometry has been applied for the first time to the analysis of SVOCs in atmospheric aerosols and only a 1  $\mu$ L droplet sample is needed for analysis without or with little pretreatment; UHPLC coupled with Orbitrap MS was used in PM<sub>2.5</sub> analysis. About 200 formulas of organosulfates were found including dozens of formulas of nitrooxy organosulfates with various numbers of isomers. Interest is increasing in MST combined with hygroscopic and optical techniques to explore atmospheric process and radiative forcing.

## Biography

Jianmin Chen has completed his PhD at Fudan University. He is an atmospheric Scientist, distinguished Professor and Director of Shanghai Key Laboratory of Atmospheric Particle Pollution and Prevention, and International Collaboration Base of Climate and Environment (Ministry of Science and Technology of China) at Fudan University. He was a Visiting Associate Professor at University of Pittsburgh from 1996 to 1997, and regularly Visiting Scientist at z. He has published more than 180 pre-reviewed papers in Geoscience and Chemistry journals such as *Chem. Rev.*, *J. Amer. Chem. Soc.*, *Atmos. Chem. Phys.*, *Environ Sci. Technol.* and *J. Geophys. Res.*, and serving as an Associate Editor of *Sci. Total Environ.*, and board members of *Aerosol Air Qual. Res.*, *J. Environ. Sci.* and *Adv. Environ. Research*.

[jmchen@fudan.edu.cn](mailto:jmchen@fudan.edu.cn)

## Notes: