

# **The 6th International Workshop on Heterogeneous Kinetics**

## **Related to Atmospheric Aerosols**

### **Background and Objectives:**

Atmospheric aerosols are key players of air pollution and climate change. It becomes clear that heterogeneous reactions on the surface of aerosol particles and the reactions in the liquid phase impact on air quality and climate change. However, we still lack the information on the heterogeneous kinetics related to atmospheric aerosols based on field observation, laboratory studies, and model simulation. The objectives of this series of the workshops are to exchange the most recent findings in the areas of the heterogeneous/multiphase kinetics related to atmospheric aerosols, to narrow the gaps in the understanding of the roles of atmospheric aerosols on air pollution and climate change, and to discuss future research priorities and collaborations.

The first workshop was held in August 9-10, 2015, Beijing, China. We have invited many keynote speakers so far: Prof. Neil Donahue (Carnegie Mellon University), Prof. Vicki Grassian (UC San Diego), Prof. Veronica Vaida (University of Colorado), Dr. Kevin R. Wilson (Lawrence Berkeley National Laboratory), Prof. Yinon Rudich (Weizmann Institute of Science), Prof. Christian George (IRCELYON), Prof. Jonathan P. D. Abbatt (University of Toronto), Prof. Hartmut Herrmann (TROPOS), Prof. Andrew Ault (University of Michigan).

### **Topics:**

Formation mechanisms of secondary organic aerosols (SOA); Multiphase reactions; Chemistry of the gas-liquid interface; Atmospheric fates of reactive oxygen species including highly oxygenated molecules (HOM)

### **Schedule:**

**September 13 (Monday), 2021, Online**

CST 13:00-17:00

(JST 14:00-18:00)

### **Access:**

Online (Zoom meeting, maximum 100 people on a first-come first-served basis)

<https://us02web.zoom.us/j/84097589041?pwd=YjRBRE9lbXowTVU2Z1h5RlplTzJyZz09>

NOTE: Please indicate your affiliation as well as your name when you enter. If the information is incomplete, we may not permit your attendance.

**Program:**

**Opening Remarks**

13:00-13:10 (CST)

**Prof. Hajime Akimoto** (National Institute for Environmental Studies, NIES)

**First session (Chair: Prof. Mikinori Kuwata, Peking University)**

13:10-13:30

**Dr. Shinichi Enami** (NIES)

*Fates of terpenoid-derived hydroperoxides in atmospheric condensed phases*

13:30-13:50

**Prof. Yue Zhao** (Shanghai Jiao Tong University)

*Molecular reactivity of organic peroxides in monoterpene-derived secondary organic aerosol*

13:50-14:10

**Prof. Defeng Zhao** (Fudan University)

*Highly oxygenated organic nitrates formed from  $\beta$ -pinene oxidation by  $\text{NO}_3$  radical*

14:10-14:30

**Prof. Tetsuya Hama** (University of Tokyo)

*OH radical formation following photodissociation of liquid organic surfactant*

**Break**

14:30-14:40

**Second session (Chair: Prof. Yosuke Sakamoto, Kyoto University)**

14:40-15:00 (CST)

**Prof. Mikinori Kuwata** (Peking University)

*The critical role of highly oxygenated organic molecules (HOM) on CCN activity of  $\alpha$ -pinene SOA particles*

15:00-15:20

**Dr. Jiaru Li** (Kyoto University)

*Effects of heterogeneous radical loss on ozone production in Kyoto, a case study in Japan*

15:20-15:40

**Prof. Jianhuai Ye** (Southern University of Science and Technology)

*Heterogeneous oxidation of atmospheric sulfur dioxide and effects on aerosol optical properties*

15:40-16:00

**Prof. Tengyu Liu** (Nanjing University)

*Multiphase oxidation of sulfur dioxide in deliquesced aerosol particles*

16:00-16:20

**Prof. Shinnosuke Ishizuka** (Nagoya University)

*Hydration mediates oligomerization at acidic water surfaces*

#### **Closing Remarks**

16:20-16:30

**Prof. Tong Zhu** (Peking University)

#### **Organizer:**

Shinichi Enami, Mikinori Kuwata, Yosuke Sakamoto, Satoshi Inomata, Tong Zhu

#### **Endorsed by:**

International Global Atmospheric Chemistry (IGAC)