

# Program

**Sunday, August 26, 2018**

17:00 – 21:00    Registration  
from 18:30        *BUFFET SUPPER / Informal get together*

**Monday, August 27, 2018**

07:30              *BREAKFAST*  
08:45 – 09:00    Scientific organizers    **Opening and welcome**

## **Aerosol Physical Chemistry (APC)**

09:00 – 09:40    Christian George        **Photosensitized reactions at the  
air/water interface**

09:40 – 10:20    Kevin Wilson            **The Interfacial Chemistry of Organic  
Aerosols and Cloud Droplets**

10:20 – 10:50    *COFFEE BREAK*

10:50 – 11:30    Allan Bertram            **Diffusion coefficients in organic-water  
matrices and comparison with Stokes-  
Einstein predictions**

11:30 – 12:10    Margaret Tolbert        **Looking for Water on Mars: One Drop  
at a Time**

12:10 – 12:20    **Conference Photo**

12:20              *LUNCH*

13:40 – 14:10    **General Discussion APC**

# Program

**Monday, August 27, 2018**

## **Aerosol Nucleation (Nuc)**

14:10 – 14:50	Jasper Kirkby	<b>New insights from CLOUD on biogenic new particle formation in pristine to polluted environments</b>
14:50 – 15:30	Joachim Curtius	<b>Aerosol formation in the Amazon region: From the Boundary Layer to deep convective outflow - Molecular insights from the CLOUD experiment</b>
15:30 – 16:10	Hanna Vehkamäki	<b>Model and experiments to characterise cluster fragmentation inside an Atmospheric Pressure interface Time Of Flight (APi-TOF) mass spectrometer</b>
16:10 – 16:40	<i>COFFEE BREAK</i>	
16:40 – 17:20	Christopher Johnson	<b>Disentangling the Roles of Structure, Composition, and Intermolecular Interactions in New Particle Formation</b>
17:20 – 18:00	<b>General Discussion Nuc</b>	
18:30	<i>DINNER</i>	

# Program

**Tuesday, August 28, 2018**

08:00            *BREAKFAST*

## **Aerosols as Ice Nucleating Particles (Ice)**

- |               |                               |  |
|---------------|-------------------------------|--|
| 09:00 – 09:40 | Angelos Michaelides           | <b>Cold water and ice: Molecular level insight from computer simulations</b>   |
| 09:40 – 10:20 | Claudia Marcolli              | <b>Ice nucleation: thermodynamic vs. molecular control</b>   |
| 10:20 – 10:50 | <i>COFFEE BREAK</i>           |  |
| 10:50 – 11:30 | Alexei Kiselev                | <b>To freeze or not to freeze: competition between dynamic wetting and heterogeneous freezing in supercooled water droplet</b> |
| 11:30 – 12:10 | Barbara Wyslouzil             | <b>Ice nucleation at the edge of no-man's land</b>   |
| 12:10         | <i>LUNCH</i>                  |  |
| 13:40 – 14:10 | <b>General Discussion Ice</b> |  |
| 14:10 – 14:30 | Peter Alpert                  | <b>Direct Imaging of Molecular Diffusion and Reaction in Aerosol Particles</b>   |
| 14:30 – 14:50 | Cari Dutcher                  | <b>Using Microfluidic to Study Thermodynamics and Phase of Single Aqueous Aerosol Droplets</b>                                 |
| 14:50 – 15:10 | Tillmann Buttersack           | <b>On the freezing behavior of small supercooled and hypercooled water droplets</b>  |
| 15:10 – 15:30 | Monica Passananti             | <b>Key components in new particle formation: sulfuric acid clusters with guanidine and diamines</b>                            |
| 15:30 – 15:50 | Tim Esser                     | <b>A High Resolution Cryogenic Single Nanoparticle Mass Spectrometer</b>   |
| 15:50 – 16:10 | Mario Nachbar                 | <b>Heterogeneous ice cloud formation at extreme conditions</b>   |

# Program

**Tuesday, August 28, 2018**

16:10            *COFFEE BREAK*

16:40 – 18:00    **Poster Session 1: Experimental Topics**

18:30 – 20:00    *DINNER*

20:00 – 21:30    **Poster Session 1 continued**

# Program

Wednesday, August 29, 2018

08:00            *BREAKFAST*

## **Aerosol optics (Opt)**

09:00 – 09:40    Yinon Rudich            **Relationships between molecular composition change and organic aerosol optical properties**

09:40 – 10:20    Ruth Signorell            **Multistep processes during efflorescence/deliquescence of single, optically trapped aerosol particles**

10:20 – 10:50    *COFFEE BREAK*

10:50 – 11:30    Jean-Pierre Wolf            **Nucleation and Dissipation of Fog with Ultrashot Lasers**

11:30 – 12:10    Jonathan Reid            **The Evolving Optical Properties of Organic Aerosol Particles**

12:10            *LUNCH*

13:40 – 14:10    **General Discussion Opt**

14:10 – 18:00    **Excursion**

19:00            *HERAEUS DINNER at the Physikzentrum  
(cold & warm buffet, free beverages)*

# Program

Thursday, August 30, 2018

08:00            *BREAKFAST*

## **Fundamentals of Secondary Organic Aerosols (SOA)**

09:00 – 09:40    Andrew Ault            **Modification of Aerosol Phase, Acidity, and Structure by Heterogeneous and Multiphase Chemistry**

09:40 – 10:20    Thomas Berkemeier    **Formation and evaporation of organic aerosol from a kinetic modeling perspective**

10:20 – 10:50    *COFFEE BREAK*

10:50 – 11:30    Hartmut Herrmann    **Multiphase Chemistry Contributions to SOA Formation**

11:30 – 12:10    **General Discussion SOA**

12:10            *LUNCH*

13:40 – 14:00    Theo Kurtén            **Computational insights into formation mechanisms and properties of atmospheric autoxidation products**

14:00 – 14:20    Andreas Zuend            **Development of a predictive aerosol viscosity model**

14:20 – 14:40    Josip Lovric            **Water interactions with an organic nopinone surface: a combined theoretical and experimental study**

14:40 – 15:00    Bingbing Wang            **Micro-spectroscopic characterization of particles generated from mesocosm and collected over South China Sea**

15:00 – 15:20    Antoine Roose            **Experimental and theoretical investigation of HO<sub>2</sub> sticking on dicarboxylic acid aerosols**

# Program

Thursday, August 30, 2018

## Emerging Technologies for Determination of Molecular Structure (ETech)

- |               |  |   |
|---------------|--|---|
| 15:30 – 16:10 | Christian Pfrang                             | Small-angle X-ray scattering of self-assembled lyotropic phases in single aerosol particles |
| 16:10 – 16:40 | <i>COFFEE BREAK</i>                          |   |
| 16:40 – 18:00 | <b>Poster Session 2 : Theoretical Topics</b> |   |
| 18:30 – 20:00 | <i>DINNER</i>                                |   |
| 20:00 – 21:30 | <b>Poster Session 2 : continued</b>          |   |

# Program

Friday, August 31, 2018

08:00            *BREAKFAST*

## **Emerging Technologies for Determination of Molecular Structure (ETech)**

09:00 – 09:40    Nonne Prisle            **Exploring the potential for synchrotron radiation based methods to study organic aerosol-water interactions directly at the molecular level**

09:40 – 10:20    Markus Amman            **Perspective of X-ray excited electron spectroscopy to probe chemistry and structure at the surface of aerosol proxies**

10:20 – 10:50    *COFFEE BREAK*

10:50 – 11:30    Michael Fárnik            **Uptake of atmospheric molecules on acid clusters**

11:30 – 12:10    **General Discussion ETech**

12:10            *LUNCH*

13:40 – 14:10    Scientific organizers    **Poster Awards  
and  
Final / General Discussion**

### ***End of the seminar and Departure***

*Please note that there will be **no** dinner at the Physikzentrum on Friday evening for participants leaving the next morning.*