

AS3.9 : Atmospheric Surface Science and Ice Particles

Link: <https://meetingorganizer.copernicus.org/EGU2020/displays/36881>

Session Date:

Wed, 06 May, 16:15–18:00 (+ 30 min open discussion)

Conveners / Chairs:



A. Abdelmonem
1 (KIT, Germany)



Hinrich Grothe
(TU Wien, Austria)



Christian Rolf
(FZ-Jülich, Germany)



Odran Sourdeval
(Univ.-Lille, France)



Sylvia Sullivan
(KIT, Germany)

Session summary

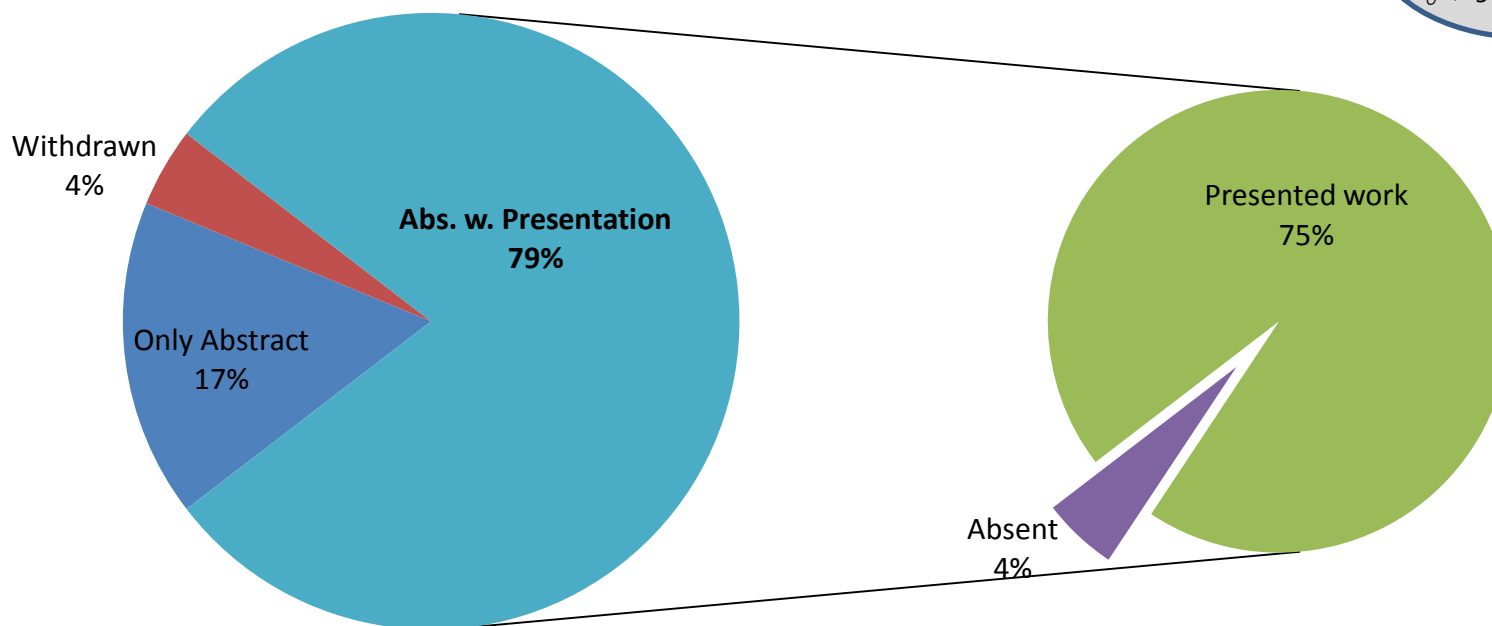
General Summary:

- ***Atmospheric Surface Science and Ice Particles*** session chat took place on Wed, 06 May, 16:15–18:30 (CEST).
- Presentations were actively and professionally discussed.
- Presentations were discussed in the order of appearance displayed in the program.
- 20 of 24 Authors have uploaded their presentation materials in form of ppt, pdf or MP4 formats before the session date.
- Audience viewed the uploaded presentations and prepared some triggering questions in advance.
- Presenters initiated their discussions by posting a Short Summary of their display.
- A significant number of valuable questions and answers were exchanged during the session.
- The audience adhered well to the chat rules that made the discussion fluid and fruitful.

Session summary

Session Statistics:

- Total number of original session Abstract: 25
- **Abstracts with uploaded presentation material:** 20
 - 18 Presented during the session
 - 2 Absent during the session
- Abstracts without uploaded presentation material: 4
- Withdrawn Abstracts: 1



Status of the Displays

In the following, the status of the session Displays are classified as follows:

A- Fully presented (Authors uploaded presentation materials and discussed them during the session)

B- Partially Presented (Authors uploaded presentation materials but didn't discussed them during the session)

C- Not presented (No presentation material has been uploaded before the session)

D- Withdrawn (the Abstract has been drawn before the session)

Status of the Displays

A- Fully presented:

D3118 | EGU2020-12385 | **solicited**

[The Portable Ice Nucleation Experiment chamber \(PINE\): laboratory characterization and field test for its semi-automated ice-nucleating particle measurements in the Southern Great Plains](#)

Naruki Hiranuma, Hemanth S. Vepuri, Larissa Lacher, Jens Nadolny, and Ottmar Möhler

D3120 | EGU2020-7609

[Laboratory Experiments on the Droplet Shattering Secondary Ice Production Mechanism](#)

Alice Keinert, Judith Kleinheins, Dominik Spannagel, Alexei Kiselev, and Thomas Leisner

D3121 | EGU2020-20623

[Chemical insights into the ice nucleating ability of macromolecules in immersion freezing](#)

Nadine Borduas-Dedekind, Anna Miller, Sophie Bogler, and Jon Went

D3124 | EGU2020-13167

[The hydrogen bonding structure of adsorbed water on silver iodide and Feldspar minerals](#)

Markus Ammann, Huanyu Yang, Luca Artiglia, and Anthony Boucly

D3125 | EGU2020-255

[Lignin's ability to nucleate ice via immersion freezing](#)

Sophie Bogler and Nadine Borduas-Dedekind

Status of the Displays

A- Fully presented:

D3126 | EGU2020-630

[Development of drop freezing ice nucleation chamber \(FINC\), validation using lignin, and application to organic matter samples](#)

Anna Miller, Killian Brennan, Jörg Wieder, Claudia Mignani, Assaf Zipori, and Nadine Borduas-Dedekind

D3127 | EGU2020-1518

[Surface modification of bioaerosol by physical, chemical, and biological ageing processes](#)

Minghui Zhang, Amina Khaled, Pierre Amato, Anne-Marie Delort, and Barbara Ervens

D3128 | EGU2020-2889

[Thermal imaging of a shattering freezing water droplet](#)

Judith Kleinheins, Alexei Kiselev, Alice Keinert, and Thomas Leisner

D3129 | EGU2020-5820

[Solid-gas interactions in the eruption plume can both depress and enhance volcanic ash ice-nucleating activity](#)

Elena Maters, Ana Casas, Corrado Cimorelli, Donald Dingwell, and Benjamin Murray

D3130 | EGU2020-7064

[Biological ice nucleation particles in the urban atmosphere of two megacities Beijing and Tianjin in North China](#)

Wei Hu, Shu Huang, Jie Chen, Jingchuan Chen, Xiangyu Pei, Zhijun Wu, and Pingqing Fu

Status of the Displays

A- Fully presented:

D3131 | EGU2020-7758

[Towards understanding heterogeneous ice nucleation on realistic silver iodide surfaces from atomistic simulation](#)

Bernhard Reischl, Golnaz Roudsari, Siiri Turtola, Olli Pakarinen, and Hanna Vehkamäki

D3132 | EGU2020-8279

[A spectroscopic view of mineral aerosol surface aging under atmospheric conditions](#)

Ahmed Abdelmonem, Johannes Lützenkirchen, Sanduni Ratnayake, and Naruki Hiranuma

D3133 | EGU2020-11569

[The Surface of Tree Tissues as Source of Extractable Ice Nucleating Macromolecules during Rainfall Events](#)

Hinrich Grothe, Teresa M. Seifried, Paul Bieber, and Laura Felgitsch

D3134 | EGU2020-12099

[Development, Characterization and Testing of a Drone-based Sampling Method for Investigations of Ice-Nucleating Particles](#)

Paul Bieber, Teresa M. Seifried, Jürgen Gratzl, Julia Burkart, Anne Kasper-Giebl, David G. Schmale III, and Hinrich Grothe

D3136 | EGU2020-13437

[Comparison of INP Parameterizations for Dust Minerals in Climatological Simulations With a Global Model](#)

Jan Perlwitz, Daniel Knopf, and Ron Miller

Status of the Displays

A- Fully presented:

D3138 | EGU2020-19008

[Effect of water confinement on heterogeneous ice nucleation](#)

Olli Pakarinen, Golnaz Roudsari, Bernhard Reischl, and Hanna Vehkamäki

D3141 | EGU2020-21557

[The ice-nucleating efficacy of glacial dust from the Copper River, Alaska](#)

Sarah Barr, Bethany Wyld, Natalie Ratcliffe, Jim McQuaid, and Benjamin Murray

D3142 | EGU2020-22458

[The sensitivity of ice-nucleating minerals to heat and implications for the detection of biogenic ice-nucleating particles](#)

Martin Ian Daily, Thomas Francis Whale, and Benjamin John Murray

Status of the Displays

B- Partially Presented:

D3122 | EGU2020-4158

[Radiative forcing of anthropogenic aerosols on cirrus clouds using a hybrid ice nucleation scheme](#)

Jialei Zhu and Joyce E. Penner

D3140 | EGU2020-20274

[The genesis of an ice sample matters!](#)

Dominik Heger

Status of the Displays

C- Not presented:

D3123 | EGU2020-16445

[The seasonal cycle of biogenic ice-nucleating particles in a boreal forest environment](#)

Julia Schneider, Kristina Höhler, Paavo Heikkilä, Jorma Keskinen, Barbara Bertozzi, Tobias Schorr, Nsikanabasi Umo, Franziska Vogel, Zoé Brasseur, Yusheng Wu, Simo Hakala, Jonathan Duplissy, Tuukka Petäjä, Michael P. Adams, Benjamin J. Murray, Kimmo Korhonen, Erik S. Thomson, Dimitri Castarède, Thomas Leisner, and Ottmar Möhler

D3135 | EGU2020-12357

[Ice nucleation by black carbon particles in the cirrus regime: dominated by pore condensation and freezing or deposition ice nucleation?](#) not presented

Cuiqi Zhang, Yue Zhang, Martin Wolf, Longfei Chen, and Daniel Cziczo

D3137 | EGU2020-16462

[Do the rain microphysics provide information on the overlying ice cloud?](#) not presented

Kamil Mroz, Alessandro Battaglia, Stefan Kneifel, and Jose Dias Neto

D3139 | EGU2020-19183

[Influence of organic and biogenic substances on the ice nucleation properties of mineral dust particles](#)

Kristian Klumpp, Claudia Marcolli, and Thomas Peter

Status of the Displays

D- Withdrawn:

D3119 | EGU2020-11259

Thermodynamic and Kinetic controls to the ice nucleation rate (withdrawn)

Donifan Barahona

The conveners are grateful to all presenters as well as audience. Without your great contributions and interactions the session wouldn't come to this successful end.

Thank you again!