Claudia Mignani

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EDUCATION:

PhD	**University of Basel, Switzerland**, Environmental Sciences (with honors) Thesis: Ice formation at moderate supercooling in mixed-phase clouds and its link to precipitation	2021
MSc	**Swiss Federal Institute of Technology (ETH) Zürich, Switzerland**, Environmental Sciences, Major in Atmosphere and Climate, Minor in Biogeochemistry	2014
BSc	**ETH Zürich, Switzerland**, Environmental Sciences	2012

PROFESSIONAL EXPERIENCE:

Postdoctoral fellow, **Colorado State University (CSU)**, USA	04/2022 – Present
Research Assistant, **University of Basel**, Switzerland	04/2017 – 11/2021
Scientist (60%), **Swiss Federal Laboratories for Materials Science and Technology (EMPA)**, Switzerland	06/2016 – 03/2017
Visitor Guide (40%), **Swiss Science Center Technorama**, Switzerland	05/2016 – 03/2017
Project Assistant, **MSB Climate Science Communication GmbH**, Switzerland	08/2015 – 05/2016
Natural Catastrophe Modelling Analyst, **PartnerRe**, Switzerland	02/2015 – 07/2015

PEER-REVIEWED PUBLICATIONS:

Mignani, C., Zimmermann, L., Kivi, R., Berne, A., and Conen, F.: Snowfall in Northern Finland derives mostly from ice clouds, *Atmos. Chem. Phys*, 22, 13551–13568, https://doi.org/10.5194/acp-22-13551-2022, **2022**.

Wieder, J., Ihn, N., **Mignani, C.**, Haarig, M., Bühl, J., Seifert, P., Engelmann, R., Ramelli, F., Kanji, Z. A., Lohmann, U., and Henneberger, J.: Retrieving ice-nucleating particle concentration and ice multiplication factors using active remote sensing validated by in situ observations, *Atmos. Chem. Phys.*, 22, 9767-9797, https://doi.org/10.5194/acp-22-9767-2022, **2022**.

Conen, F., Einbock, A., **Mignani, C.**, and Hüglin, C.: Measurement report: Ice-nucleating particles active $\geq -15\,^{\circ}\mathrm{C}$ in free tropospheric air over western Europe, *Atmos. Chem. Phys.*, 22, 3433–3444, https://doi.org/10.5194/acp-22-3433-2022, **2022**.

Wieder, J., **Mignani, C.**, Schär, M., Roth, L., Sprenger, M., Henneberger, J., Lohmann, U., Brunner, C., and Kanji, Z. A.: Unveiling atmospheric transport and mixing mechanisms of ice-nucleating particles over the Alps, *Atmos. Chem. Phys.*, 22, 3111–3130, https://doi.org/10.5194/acp-22-3111-2022, **2022**.
Georgakaki, P., Bougiatioti, A., Wieder, J., **Mignani, C.**, Ramelli, F., Kanji, Z. A., Henneberger, J., Hervo, M., Berne, A., Lohmann, U., and Nenes, A.: On the drivers of droplet variability in Alpine mixed-phase clouds, *Atmos. Chem. Phys.*, 21, 10993–11012, https://doi.org/10.5194/acp-21-10993-2021, **2021**.

Ramelli, F., Henneberger, J., David, R. O., Bühl, J., Radenz, M., Seifert, P., Wieder, J., Lauber, A., Pasquier, J. T., Engelmann, R., **Mignani, C.**, Hervo, M., and Lohmann, U.: Microphysical investigation of the seeder and feeder region of an Alpine mixed-phase cloud, *Atmos. Chem. Phys.*, 21, 6681–6706, https://doi.org/10.5194/acp-21-6681-2021, **2021**.

Miller, A. J.*, Brennan, K. P.*, **Mignani, C.**, Wieder, J., David, R. O., and Borduas-Dedekind, N.: Development of the drop Freezing Ice Nuclei Counter (FINC) and use of soluble lignin as an atmospheric ice nucleation standard, *Atmos. Meas. Tech.*, 14, 3131–3151, https://doi.org/10.5194/amt-14-3131-2021, **2021**. (* *These authors contributed equally to this work.*)

Lauber, A., Henneberger, J., **Mignani, C.**, Ramelli, F., Pasquier, J. T., Wieder, J., Hervo, M., and Lohmann, U.: Continuous secondary ice production initiated by updrafts through the melting layer in mountainous regions, *Atmos. Chem. Phys.*, 21, 3855–3870, https://doi.org/10.5194/acp-21-3855-2021, **2021**.

Mignani, C., Wieder, J., Sprenger, M. A., Kanji, Z. A., Henneberger, J., Alewell, C., and Conen, F.: Towards parametrising atmospheric concentrations of ice-nucleating particles active at moderate supercooling, *Atmos. Chem. Phys*, 21, 657–664, https://doi.org/10.5194/acp-21-657-2021, **2021**.

Creamean, J. M., **Mignani, C.**, Bukowiecki, N., and Conen, F.: Using freezing spectra characteristics to identify ice-nucleating particle populations during the winter in the Alps, *Atmos. Chem. Phys.*, 19, 8123-8140, https://doi.org/10.5194/acp-19-8123-2019, **2019**.

Mignani, C., Creamean, J. M., Zimmermann, L., Alewell, C., and Conen, F.: New type of evidence for secondary ice formation at around $-15\,^\circ$C in mixed-phase clouds, *Atmos. Chem. Phys.*, 19, 877–886, https://doi.org/10.5194/acp-19-877-2019, **2019**.

Publications are also listed on my Google Scholar page.

CONFERENCE PRESENTATIONS:

Ice-nucleating particle characteristics observed in air and rain at a Semi-Arid Grassland Site in Colorado, *103rd American Meteorological Society Annual Meeting*, Denver, USA and online, **2023** (Link to the abstract).

Matching crystal habits and radiosonde profiles in Northern Finland. Oral presentation, *European Geosciences Union General Assembly*, online, **2021** (Link to the abstract and the display material).

Ice formation in precipitating Arctic clouds as indicated by crystal habits and coinciding radiosonde profiles, Oral presentation, *101st American Meteorological Society Annual Meeting*, online, **2021** (Link to the abstract and the recorded presentation).

Towards parametrising atmospheric concentrations of ice-nucleating particles active at moderate supercooling, Oral presentation, hold virtually. *3rd Ice Nucleation Colloquium*, **2020** (Link to the presentation slides, and the Colloquium website).

Probing secondary ice formation at around −15 °C in mixed-phase clouds, Oral presentation. *European Geosciences Union General Assembly*, Vienna, Austria, **2019** (Link to the abstract).

Analysis of Arctic Ice-nucleating particles by Electron Microscopy, Oral presentation. *Nano Imaging User Event 2019*, Basel, Switzerland, **2019** (Link to the newsletter with the abstract).

Probing secondary ice formation at around −15 °C in mixed phase clouds, Poster presentation. *20th Swiss Global Change Day*, Bern, Switzerland, **2019** (Link to the website).

Examining single snow crystals for ice nucleating particles, Poster presentation. *BACCHUS Final Meeting*, Zurich, Switzerland, **2018** (Link to the website).

A case study of biological ice-nucleating particles in the Arctic, Oral presentation. *6th Workshop on Microphysics of Ice Clouds*, Vienna, Austria, **2018** (Link to the book of abstracts).

A case study of biological ice-nucleating particles in the Arctic, Poster presentation. *INUIT Final Conference and 2nd Atmospheric Ice Nucleation Conference*, Grasellenbach, Germany, **2018** (Link to the website).

GRANT:

Postdoc.Mobility Fellowship, Swiss National Science Foundation, 2021
CHF 110'000.

TEACHING AND MENTORING EXPERIENCE:

Co-advisor, University of Basel, Switzerland; CSU, USA 2017 – ongoing
1 PhD, 2 MSc, and 3 BSc students.

Guest Lecturer, University of Basel, Switzerland 11/2020
Course: Atmospheric chemistry, climate, and air pollution (58428-01), two hours, virtually.

Voluntary Lecturer, Solidaritätsnetz Zurich, Switzerland 12/2014 – 06/2015
German (A1 level) classes for women, weekly classes.

Teaching Assistant, ETH Zürich, Switzerland 09/2010 – 09/2013
Tutorial in Chemistry I and II (529-2001-02L, 529-2002-02L), weekly classes.

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