Curriculum Vitae – Ulrich Pöschl

Personal Data

Date of birth	9 October 1969
Place of birth	Klagenfurt am Wörthersee, Austria
Work address	Max Planck Institute for Chemistry Hahn-Meitner-Weg 1, 55128 Mainz, Germany Tel/Fax: +49-6131-305-7000/7111 Email: u.poschl@mpic.de Office: poschl-office@mpic.de Web: www.mpic.de/3784916/profile-poeschl

Professional Career

since 2012 ***Max Planck Institute for Chemistry*** *(MPIC), Mainz, Germany.*
Director of the newly founded Multiphase Chemistry Department.
Managing director/deputy managing director of the Institute (rotating).

since 2007 ***Johannes Gutenberg University*** *(JGU), Mainz, Germany.*
Faculty member, Department of Chemistry, Pharmacy and Geosciences.
Habilitation & venia legendi in Geochemistry.

2005 - 2012 ***Max Planck Institute for Chemistry*** *(MPIC), Mainz, Germany.*
Research group leader, Biogeochemistry Department (M.O. Andreae).

1999 - 2005 ***Technical University of Munich*** *(TUM), München, Germany.*
Head of an independent junior research group and lecturer at the Institute of Hydrochemistry (R. Niessner). Habilitation & venia legendi in Chemistry.

1997 - 1998 ***Max Planck Institute for Chemistry*** *(MPIC), Mainz, Germany.*
Research scientist with Nobel laureate P.J. Crutzen, Atmospheric Chemistry Department.

1996 - 1997 ***Massachusetts Institute of Technology*** *(MIT), Cambridge, MA, USA.*
Postdoctoral fellow with Nobel laureate M.J. Molina, Atmospheric Chemistry Laboratory & Center for Global Change Science, Departments of Chemistry and of Earth, Atmospheric & Planetary Sciences.

1993 - 1996 ***Technical University of Graz*** *(TU Graz), Austria.*
Research assistant with K. Hassler, Institute of Inorganic Chemistry.

Education

1993 - 1995 ***Doctoral Studies in Chemistry****, Technical University of Graz, Austria.*
Dissertation at the Institute of Inorganic Chemistry (K. Hassler): 'Synthesis, spectroscopy, and structure of selectively functionalized cyclosilanes'; graduation with distinction ('sub auspiciis praesidentis').

1991 - 1993 ***Diploma Studies in French****, Karl Franzens University of Graz, Austria.*
Institute of Romance Languages: language & conversation courses.

1988 - 1993 ***Diploma Studies in Technical Chemistry,*** *Technical University of Graz, Austria.*
Diploma thesis at the Institute of Inorganic Chemical Technology (G. Herzog): 'Thermoelectricity of oxidic semiconductor ceramics'; graduation with distinction.

1980 - 1988 ***Secondary School****, Bundesgymnasium Völkermarkter Ring, Klagenfurt, Austria.*
Foreign language focus (English, French, Latin); graduation with distinction.

Awards & Honors

2014 - 2025 Highly Cited Researcher, Web of Science.

2023 Union Fellow, American Geophysical Union (AGU).

2015 Copernicus Medal, Copernicus Gesellschaft.

2012 Pius XI Gold Medal, Pontifical Academy of Sciences.

2005 Union Service Award, European Geosciences Union.

2000 Young Scientist Award, German Federal Ministry of Education and Research.

1996 'Promotio sub auspiciis praesidentis', Austrian President. Schrödinger Fellowship, Austrian Science Foundation. Research Awards of the Austrian Federal Minister of Arts and Science, the Industrial Union of Carinthia, and the Josef Krainer Foundation.

1991 - 1994 Student & research scholarships of the Technical University of Graz, the Pro Scientia Foundation, and the Austrian Science Foundation.

Teaching & Mentoring

Lecturer for undergraduate students; advisor and mentor for over a hundred graduate students and postdoctoral researchers at MPIC and JGU Mainz (since 2005), TU München (1999-2005), TU Wien (2000-2003), many of whom are now faculty members/senior scientists at leading scientific institutions around the world (over 20; ~50% female, ~50% international).

Co-Chair/Chair of the Paul Crutzen Graduate School at the Max Planck Institute for Chemistry (PCGS, since 2012); Steering committee member (since 2012) and Speaker (2020-2022) of the Max Planck Graduate Center with the Johannes Gutenberg University Mainz (MPGC).

Research Leadership & Expeditions

Principal investigator, steering committee member, and (co-)coordinator in several dozens of major international research collaborations, expeditions, and projects with competitive funding (e.g., BMBF, DFG, FWF, EC/EU, MPG; AFO 2000/CARBAERO, AMAZE-08, EUCAARI, PEGASOS, BACCHUS; MC34EARTH, MAC-AIR; Amazon Tall Tower Observatory, ATTO; S/Y Eugen Seibold, SYES; High-Altitude and Long-Range Research Aircraft, HALO: ACRIDICON-CHUVA, EMERGE-ASIA/EU, BLUESKY, CAFE-AFRICA, CAFE-BRAZIL, CAFE-PACIFIC, HALO-South etc.).

Community Service & Societal Engagement

Initiator/co-founder (2000/2001), chief executive editor (2001-2022), advisory board member (since 2022) for the first scientific open access journal with public peer review & interactive online discussion, Atmospheric Chemistry and Physics (ACP). Initiator and executive editor (since 2020) of the virtual interdisciplinary geoscience highlight magazine EGU Letters (EL). Advisor/facilitator for the launch and operation of dozens of other interactive open access journals of the European Geosciences Union (EGU) and other organizations/initiatives (Copernicus, SciPost Physics etc.).

Division president (2003-2007), council member (2003-2014), and publications committee chair (2006-2014), European Geosciences Union (EGU).

Contributor/co-organizer (since 2003) and (co-)chair (since 2015) for the Berlin Open Access Conferences and the international initiative Open Access 2020 (OA2020).

Scientific Advisory Board Member, ChemRxiv (since 2018).

Session (co-)chair/(co-)convener at scientific workshops and conferences (e.g., AGU, EGU, EAC).

Scientific Advisory Board Member, Karl Popper Foundation, University of Klagenfurt (since 2023).

Consortium Council Member, Environmental Research Station Schneefernerhaus (UFS, since 2023).

University Council Member, University of Augsburg (since 2023).

Scientific Advisory Board Member, Interdisciplinary Centre for Ecosystem Services and Biodiversity, Carinthia University of Applied Sciences (since 2025).

Reviewer, host, and reference for national and international scientific institutions, award, appointment, and promotion committees, journals/magazines, and funding agencies (e.g., DFG, ERC, FWF, MPG, NERC, SNF, Chinese Scholarship Council, Francqui Foundation, Humboldt Foundation).

Expert contributor/advisor in working groups, project teams, and workshops addressing societal challenges: research, integration, recommendations, and outreach related to air quality effects on climate, public health, and disease transmission (e.g., ‘Clean Air’, Leopoldina; ‘Classrooms’, AcaTech; ‘Ventilation’, UBA-IRK; COVID-19 Future Operations Platform, ventilation-mainz.de).

Publications & Citations

Lead/co-author of over 400 peer-reviewed scientific journal articles that received over 65000 citations with an h-index of 130 according to Google Scholar (>44000 citations, h-index 111, Web of Science). Honored as Highly Cited Researcher every year since 2014 for exceptionally high proportions of hot/highly cited articles (top 0.1/1%, Web of Science). Several hundred contributions to conferences, proceedings, and books. Full publication lists & statistics:

www.mpic.de/5808384/PoschlUlrich-PublicationList.pdf

www.webofscience.com/wos/author/record/849640

scholar.google.com/citations?user=czxG87cAAAAJ

Selected Publications

underlined: student, postdoc, senior scientist from Pöschl group/department; * corresponding author

Berkemeier*, T., Pöschl, U.: Carbon Nanoparticle Oxidation by NO2 and O2: Chemical Kinetics and Reaction Pathways, ***Angewandte Chemie*** *Int. Ed.*, 63, e202413325, 2024.

Pöhlker*, M.L., C. Pöhlker, J. Quaas, J. Mülmenstädt, A. Pozzer, M.O. Andreae, P. Artaxo, K. Block, H. Coe, B. Ervens, P. Gallimore, C.J. Gaston, S.S. Gunthe, S. Henning, H. Herrmann, O.O. Krüger, G. Mc Figgans, L. Poulain, S.S. Raj, E. Reyes-Villegas, H.M. Royer, D. Walter, Y. Wang, U. Pöschl: Global organic and inorganic aerosol hygroscopicity and its effect on radiative forcing. ***Nature Communications***, 14, 6139, 2023.

Su, H., Y. Cheng*, U. Pöschl: New Multiphase Chemical Processes Influencing Atmospheric Aerosols, Air Quality, and Climate in the Anthropocene. ***Accounts of Chemical Research***, 53, 2034-2043, 2020.

Pöschl*, U.: Air Pollution, Oxidative Stress, and Public Health in the Anthropocene. In: Health of People, Health of Planet & Our Responsibility, ***Springer***, doi:10.1007/978-3-030-31125-4_7, 2020.

Reinmuth-Selzle*, K., C.J. Kampf*, K. Lucas, N. Lang-Yona, J. Fröhlich-Nowoisky, M. Shiraiwa, P.S.J. Lakey, S. Lai, F. Liu, A. T. Kunert, K. Ziegler, F. Shen, R. Sagarbanti, B. Weber, I. Bellinghausen, J. Saloga, M. G. Weller, A. Duschl, D. Schuppan, U. Pöschl*: Air Pollution and Climate Change Effects on Allergies in the Anthropocene: Abundance, Interaction, and Modification of Allergens and Adjuvants. ***Environmental Science and Technology***, 51, 4119-4141, 2017.

Fröhlich-Nowoisky*, J., C.J. Kampf, B. Weber, J.A. Huffman, C. Pöhlker, M.O. Andreae, N. Lang-Yona, S.M. Burrows, S.S. Gunthe, W. Elbert, H. Su, P. Hoor, E. Thines, T. Hoffmann, V.R. Després, U. Pöschl*: Bioaerosols in the Earth system: Climate, health, and ecosystem interactions, ***Atmospheric Research***, 346-376, 2016.

Cheng*, Y., G. Zhen, C. Wie, Q. Mu, B. Zheng, ZB. Wang, M. Gao, Q. Zhang, K. He*, G. Carmichael, U. Pöschl*, H. Su*: Reactive nitrogen chemistry in aerosol water as a source of sulfate during haze events in China, ***Science Advances***, 2, e1601530, 2016.

Cheng*, Y., H. Su*, T. Koop, E.F. Mikhailov, U. Pöschl*: Size dependence of phase transitions in aerosol nanoparticles, ***Nature Communications***, 6, 5923, 2015.

Pöschl*, U., Shiraiwa*, M.: Multiphase Chemistry at the Atmosphere−Biosphere Interface Influencing Climate and Public Health in the Anthropocene, ***Chemical Reviews***, 4440-4475, 2015.

Elbert, W., Weber*, B., Burrows, S., Steinkamp, J., Büdel, B., Andreae, M.O., Pöschl*, U.: Contribution of cryptogamic covers to the global cycles of carbon and nitrogen, ***Nature Geoscience***, 459-462, 2012.

Shiraiwa*, M., Pfrang, C., Koop, T., Pöschl, U.: Kinetic multilayer model of gas-particle interactions in aerosols and clouds (KM-GAP): linking condensation, evaporation and chemical reactions of organics, oxidants and water, ***Atmospheric Chemistry and Physics***, 12, 2777-2794, 2012.

Pöschl*, U.: Multi-stage open peer review: scientific evaluation integrating the strengths of traditional peer review with the virtues of transparency and self-regulation, ***Frontiers in Computational Neuroscience***, DOI: 10.3389/fncom.2012.00033, 2012.

Pöhlker, C., K.T. Wiedemann, B. Sinha, M. Shiraiwa, S.S. Gunthe, M. Smith, H. Su, P. Artaxo, Q. Chen, Y. Cheng, W. Elbert, M.K. Gilles, A.L.D. Kilcoyne, R.C. Moffet, M. Weigand, S.T. Martin, U. Pöschl*, M.O. Andreae: Biogenic potassium salt particles as seeds for secondary organic aerosol in the Amazon, ***Science***, 337, 1075-1078, 2012.

Su*, H., Y. Cheng*, R. Oswald, T. Behrendt, I. Trebs, F.X. Meixner, M.O. Andreae, P. Cheng, Y. Zhang, U. Pöschl*: Soil nitrite as a source of atmospheric HONO and OH radicals. ***Science***, 333, 1616-1618, 2011.

Shiraiwa*, M., Ammann, M., Koop, T., Pöschl, U: Gas uptake and chemical aging of semi-solid organic aerosol particles, ***Proceedings of the National Academy of Sciences***, 108, 11003-11008, 2011.

Shiraiwa, M., Sosedova, Y., Rouvière, A., Yang, H, Zhang, Y., Abbatt, J.P.D., Ammann, M., Pöschl*, U.: The role of longlived reactive oxygen intermediates in the reaction of ozone with aerosol particles, ***Nature Chemistry***, 3, 291-295, 2011.

Pöschl*, U., Martin*, S.T., Sinha, B., Chen, Q., Gunthe, S.S., Huffman, J.A., Borrmann, S., Farmer, D.K., Garland, R.M., Helas, G., Jimenez, J.L., King, S.M., Manzi, A., Mikhailov, E., Pauliquevis, T., Petters, M.D., Prenni, A.J., Roldin, P., Rose, D., Schneider, J., Su, H., Zorn, S.R., Artaxo, P., Andreae, M.O.: Rainforest aerosols as biogenic nuclei of clouds and precipitation in the Amazon. ***Science***, 329, 1513-1516, 2010.

Fröhlich-Nowoisky, J., Pickersgill, D.A., Després, R.V., Pöschl*, U.: High diversity of fungi in air particulate matter, ***Proceedings of the National Academy of Sciences***, 106, 12814-12819, 2009.

Pöschl*, U., Y. Rudich, M. Ammann: Kinetic model framework for aerosol and cloud surface chemistry and gas-particle interactions - Part 1: General equations, parameters, and terminology, ***Atmospheric Chemistry and Physics***, 7, 5989-6023, 2007.

Franze, T., M. G. Weller, R. Niessner, U. Pöschl*: Protein nitration by polluted air. ***Environmental Science & Technology***, 39, 1673-1678, 2005.

Pöschl*, U.: Atmospheric aerosols: composition, transformation, climate and health effects, ***Angewandte Chemie*** *Int. Ed.*, 117, 7520-7540, 2005.

Pöschl*, U., T. Letzel, C. Schauer, R. Niessner: Interaction of ozone and water vapor with spark discharge soot aerosol particles coated with benzo[a]pyrene: O3 and H2O adsorption, benzo[a]pyrene degradation and atmospheric implications. ***Journal of Physical Chemistry*** *A*, 105, 4029-4041, 2001.