

Curriculum Vitae

Otmar Schmid Dr.
d.o.b. December 12th, 1964, in Augsburg, Germany

University Education

2000 Doctorate Physics, Missouri University of Science and Technology, USA (MS&T)
1987–1994 Diploma (now Master of Science) of Physics, Ludwig-Maximilians-University Munich (LMU)

Scientific Career

Since 2018 Principal Investigator of the German Center for Lung Research (DZL)
Since 2009 Head, Research Group on Pulmonary Aerosol Delivery of Institute of Lung Health and Immunity (LHI), Comprehensive Pneumology Center Munich (CPC-M), Helmholtz Zentrum Munich – German Center for Environmental Health (HMGU)
2006-2022 Adjunct Assistant Professor, Chemistry Department, Missouri University of Science and Technology, USA (MS&T)
2005-2009 Senior Scientist, Institute for Inhalation Biology, Helmholtz Center Munich – German Center for Environmental Health (HMGU)
2004-2005 Head, Research Group on Aerosol Science and Technology, Institute of Biogeochemistry, Max Planck Institute for Chemistry, Mainz (MPIC)
2002-2004 Postdoctoral Fellow, Institute of Biogeochemistry, Max Planck Institute for Chemistry, Mainz, Germany (MPIC)
2001-2002 Postdoctoral Fellow, Mechanical and Materials Engineering Department, University of Denver, Denver, CO, USA (DU)
2000-2001 Postdoctoral Fellow, Physics Department, Cloud and Aerosol Science Laboratory, Missouri University of Science and Technology, USA (MS&T)

Awards and Honors

2025 Dr. Lin Yang (Ph.D. student/postdoc in Schmid lab) – Scientific excellence prize for experimental lung research from the German Association of Pneumology (DGP)
2023 Dr. Ali Doryab (Ph.D. student/postdoc in Schmid Lab) Early Career Investigator Award from the International Society of BioFabrication (ISBF)
2022 Dr. Ali Doryab (Ph.D. student/postdoc in Schmid Lab) - Young Investigators Award of German Center for Lung Research (DZL), Disease Area Diffuse Parenchymal Lung Disease (DPLD)
2018-2022 Elected to Board of Association for Aerosol Research (GAeF)
2015-2019 Elected to Board of International Society of Aerosols in Medicine (ISAM)
2010-2014 Elected to Board of Association for Aerosol Research (GAeF)
2007 US Environmental Protection Agency (US-EPA) Climate Protection Award 2007 (as member of Science Team Joint Strike Fighter Emissions Test Development Program)
2002 National Aeronautics and Space Administration (NASA) Group Achievement Award 2002 (as member of the Science Team of Cirrus Regional Study of Tropical Anvils and Cirrus Layers – Florida Area Cirrus Experiment (CRYSTAL-FACE))

Citation Record

Total citations: 10,451; h-index: 51; h-index since 2017: 37 (Google Scholar March 16th, 2025)

Top-10 selected Publications

Yang Y, Liu Q, Kumar P, Sengupta A, Farnoud A, Shen R, Trofimova D, Ziegler S, Davoudi N, Doryab A, Yildirim AÖ, Diefenbacher M, Schiller H, Razansky D, Piraud M, Burgstaller G, Kreyling WG, Isensee F, Rehberg M, Stoeger T, **Schmid O**. LungVis 1.0: an automatic AI-powered 3D imaging ecosystem unveils

spatial profiling of nanoparticle delivery and acinar migration of lung macrophages. **Nat Comm** 2024; 15:10138. doi: [10.1038/s41467-024-54267-1](https://doi.org/10.1038/s41467-024-54267-1).

Doryab A, Taskin MB, Stahlhut P, Groll J, **Schmid O**, Real-time measurement of cell mechanics as a clinically relevant readout of an in vitro lung fibrosis model established on a bioinspired basement membrane. **Adv Mater** 2022; 34:e2205083. doi: [10.1002/adma.202205083](https://doi.org/10.1002/adma.202205083).

Doryab A, Heydarian M, Yildirim AÖ, Hilgendorff A, Behr J, **Schmid O**. Breathing-induced stretch enhances the efficacy of an inhaled and orally delivered anti-fibrosis drug in vitro. **J Drug Deliv Sci Technol** 2023; 82:104316. doi: [10.1016/j.jddst.2023.104316](https://doi.org/10.1016/j.jddst.2023.104316).

Möller W, Celik G, Feng S, Bartenstein P, Meyer G, Eickelberg O, **Schmid O**, Tatkov S. Nasal high flow clears anatomical dead space in upper airway models. **J Appl Physiol** 2015; 118:1525–1532; doi: [10.1152/jappphysiol.00934.2014](https://doi.org/10.1152/jappphysiol.00934.2014).

Schmid O, Stoeger T. Surface area is the biologically most effective dose metric for acute nanoparticle toxicity in the lung. **J Aerosol Sci** 2016; 99:133-143; doi: [10.1016/j.jaerosolsci.2015.12.006](https://doi.org/10.1016/j.jaerosolsci.2015.12.006).

Secher T, Bodier-Montagutelli E, Parent C, Bouvart L, Cortes M, Ferreira M, MacLoughlin R, Ilango G, **Schmid O**, Respaud R, Heuzé-Vourc'h N. Aggregates associated with instability of antibodies during aerosolization induce adverse immunological effects. **Pharmaceutics** 2022; 14:671. doi: [10.3390/pharmaceutics14030671](https://doi.org/10.3390/pharmaceutics14030671).

Sedaghat M, Farnoud A, **Schmid O**, Abouali O. Nonlinear simulation of mucociliary clearance: A three-dimensional study. **J Non-Newton Fluid Mech** 2022; 300:104727. doi: [10.1016/j.jnnfm.2021.104727](https://doi.org/10.1016/j.jnnfm.2021.104727).

Gradl R, Morgan KS, Dierolf M, Jud C, Hehn L, Günther B, Möller W, Kutschke D, Yang L, Stoeger T, Münzel D, Gleich B, Achterhold K, **Schmid O**, Pfeiffer F. Dynamic in vivo chest x-ray dark field imaging in mice. **IEEE Trans Med Imaging** 2019; 38(2):649-656. doi: [10.1109/TMI.2018.2868999](https://doi.org/10.1109/TMI.2018.2868999).

Lenz AG., Stoeger T, Cei D, Schmidmeir M, Semren N, Burgstaller G, Lentner B, Eickelberg O, Meiners S, **Schmid O**. Efficient bioactive delivery of aerosolized drugs to human pulmonary epithelial cells cultured at air-liquid interface conditions. **Am J Resp Cell Mol Biol** 2014; 51:526–535. doi: [10.1165/rcmb.2013-0479OC](https://doi.org/10.1165/rcmb.2013-0479OC).

Ahookhosh K, Saidi M, Mohammapourfard M, Aminfar H, Hamishehkar H, Farnoud A, **Schmid O**. Flow Structure and Particle Deposition Analyses using a Pressurized Metered Dose Inhaler (pMDI) in a Model of Tracheobronchial Airway. **Eur J Pharm Sci** 2021; 164:105911. doi: [10.1016/j.ejps.2021.105911](https://doi.org/10.1016/j.ejps.2021.105911).