Otmar Schmid

List of Publications by Year
in descending order

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71 papers	5,321 citations	117625 34 h-index	91884 69 g-index
75 all docs	75 docs citations	75 times ranked	6828 citing authors

#	Article	IF	Citations
1	Optical properties of humic-like substances (HULIS) in biomass-burning aerosols. Atmospheric Chemistry and Physics, 2006, 6, 3563-3570.	4.9	566
2	Quantitative Evaluation of Cellular Uptake and Trafficking of Plain and Polyethylene Glycolâ€Coated Gold Nanoparticles. Small, 2010, 6, 1669-1678.	10.0	313
3	Spectral light absorption by ambient aerosols influenced by biomass burning in the Amazon Basin. I: Comparison and field calibration of absorption measurement techniques. Atmospheric Chemistry and Physics, 2006, 6, 3443-3462.	4.9	285
4	Surface area is the biologically most effective dose metric for acute nanoparticle toxicity in the lung. Journal of Aerosol Science, 2016, 99, 133-143.	3.8	283
5	In-vitro cell exposure studies for the assessment of nanoparticle toxicity in the lungâ€"A dialog between aerosol science and biology. Journal of Aerosol Science, 2011, 42, 668-692.	3.8	264
6	Mass spectrometric analysis and aerodynamic properties of various types of combustion-related aerosol particles. International Journal of Mass Spectrometry, 2006, 258, 37-49.	1.5	260
7	Optical properties and chemical composition of the atmospheric aerosol in urban Guangzhou, China. Atmospheric Environment, 2008, 42, 6335-6350.	4.1	248
8	Nasal high flow clears anatomical dead space in upper airway models. Journal of Applied Physiology, 2015, 118, 1525-1532.	2.5	216
9	A dose-controlled system for air-liquid interface cell exposure and application to zinc oxide nanoparticles. Particle and Fibre Toxicology, 2009, 6, 32.	6.2	199
10	Nasal high flow reduces dead space. Journal of Applied Physiology, 2017, 122, 191-197.	2.5	168
11	Effects and uptake of gold nanoparticles deposited at the airâ€"liquid interface of a human epithelial airway model. Toxicology and Applied Pharmacology, 2010, 242, 56-65.	2.8	167
12	Aerosol optical properties in a rural environment near the mega-city Guangzhou, China: implications for regional air pollution, radiative forcing and remote sensing. Atmospheric Chemistry and Physics, 2008, 8, 5161-5186.	4.9	150
13	Exposure of silver-nanoparticles and silver-ions to lung cells in vitro at the air-liquid interface. Particle and Fibre Toxicology, 2013, 10, 11.	6.2	118
14	Inflammatory and Oxidative Stress Responses of an Alveolar Epithelial Cell Line to Airborne Zinc Oxide Nanoparticles at the Air-Liquid Interface: A Comparison with Conventional, Submerged Cell-Culture Conditions. BioMed Research International, 2013, 2013, 1-12.	1.9	118
15	Measurement Techniques for Respiratory Tract Deposition of Airborne Nanoparticles: A Critical Review. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2014, 27, 229-254.	1.4	111
16	Deducing in Vivo Toxicity of Combustion-Derived Nanoparticles from a Cell-Free Oxidative Potency Assay and Metabolic Activation of Organic Compounds. Environmental Health Perspectives, 2009, 117, 54-60.	6.0	97
17	Efficient Bioactive Delivery of Aerosolized Drugs to Human Pulmonary Epithelial Cells Cultured in Airâ€"Liquid Interface Conditions. American Journal of Respiratory Cell and Molecular Biology, 2014, 51, 526-535.	2.9	92
18	An in vitro testing strategy towards mimicking the inhalation of high aspect ratio nanoparticles. Particle and Fibre Toxicology, 2014, 11, 40.	6.2	91

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19	Comparison of three methods of fractal analysis applied to soot aggregates from wood combustion. Journal of Aerosol Science, 2006, 37, 820-838.	3.8	89
20	Seasonal and Diurnal Variation of PM_{2.5} Apparent Particle Density in Urban Air in Augsburg, Germany. Environmental Science & Technology, 2008, 42, 5087-5093.	10.0	81
21	The composition of cigarette smoke determines inflammatory cell recruitment to the lung in COPD mouse models. Clinical Science, 2014, 126, 207-221.	4.3	76
22	Bridging the Gap Between Science and Clinical Efficacy: Physiology, Imaging, and Modeling of Aerosols in the Lung. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2016, 29, 107-126.	1.4	70
23	On the effective density of non-spherical particles as derived from combined measurements of aerodynamic and mobility equivalent size. Journal of Aerosol Science, 2007, 38, 431-443.	3.8	66
24	Effects of physicochemical properties of TiO2 nanomaterials for pulmonary inflammation, acute phase response and alveolar proteinosis in intratracheally exposed mice. Toxicology and Applied Pharmacology, 2020, 386, 114830.	2.8	66
25	On the pivotal role of dose for particle toxicology and risk assessment: exposure is a poor surrogate for delivered dose. Particle and Fibre Toxicology, 2017, 14, 52.	6.2	51
26	A comprehensive screening platform for aerosolizable protein formulations for intranasal and pulmonary drug delivery. International Journal of Pharmaceutics, 2017, 532, 537-546.	5.2	50
27	Innovative preclinical models for pulmonary drug delivery research. Expert Opinion on Drug Delivery, 2020, 17, 463-478.	5.0	45
28	Inflammatory Response to TiO 2 and Carbonaceous Particles Scales Best with BET Surface Area. Environmental Health Perspectives, 2007, 115, A290-1; author reply A291-2.	6.0	44
29	Three-Dimensional Quantitative Co-Mapping of Pulmonary Morphology and Nanoparticle Distribution with Cellular Resolution in Nondissected Murine Lungs. ACS Nano, 2019, 13, 1029-1041.	14.6	42
30	Quartz crystal microbalances (QCM) are suitable for real-time dosimetry in nanotoxicological studies using VITROCELLÂ®Cloud cell exposure systems. Particle and Fibre Toxicology, 2020, 17, 44.	6.2	41
31	Evolution of Bioengineered Lung Models: Recent Advances and Challenges in Tissue Mimicry for Studying the Role of Mechanical Forces in Cell Biology. Advanced Functional Materials, 2019, 29, 1903114.	14.9	40
32	Quality control and quality assurance for particle size distribution measurements at an urban monitoring station in Augsburg, Germany. Journal of Environmental Monitoring, 2008, 10, 1017.	2.1	38
33	Early pulmonary response is critical for extra-pulmonary carbon nanoparticle mediated effects: comparison of inhalation versus intra-arterial infusion exposures in mice. Particle and Fibre Toxicology, 2017, 14, 19.	6.2	38
34	Model for the Deposition of Aerosol Particles in the Respiratory Tract of the Rat. I. Nonhygroscopic Particle Deposition. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2008, 21, 291-308.	1.4	37
35	Drug Delivery to Paranasal Sinuses Using Pulsating Aerosols. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2014, 27, 255-263.	1.4	37
36	A Bioinspired in vitro Lung Model to Study Particokinetics of Nano-/Microparticles Under Cyclic Stretch and Air-Liquid Interface Conditions. Frontiers in Bioengineering and Biotechnology, 2021, 9, 616830.	4.1	37

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37	Efficient internalization and intracellular translocation of inhaled gold nanoparticles in rat alveolar macrophages. Nanomedicine, 2012, 7, 855-865.	3.3	35
38	Flow Structure and Particle Deposition Analyses for Optimization of a Pressurized Metered Dose Inhaler (pMDI) in a Model of Tracheobronchial Airway. European Journal of Pharmaceutical Sciences, 2021, 164, 105911.	4.0	32
39	Ranking of nanomaterial potency to induce pathway perturbations associated with lung responses. NanoImpact, 2019, 14, 100158.	4.5	30
40	Occupational and consumer risk estimates for nanoparticles emitted by laser printers. Journal of Nanoparticle Research, 2010, 12, 91-99.	1.9	28
41	In vivo Dynamic Phase-Contrast X-ray Imaging using a Compact Light Source. Scientific Reports, 2018, 8, 6788.	3.3	28
42	A Biomimetic, Copolymeric Membrane for Cellâ€Stretch Experiments with Pulmonary Epithelial Cells at the Airâ€Liquid Interface. Advanced Functional Materials, 2021, 31, 2004707.	14.9	28
43	Visualizing treatment delivery and deposition in mouse lungs using in vivo x-ray imaging. Journal of Controlled Release, 2019, 307, 282-291.	9.9	27
44	Pulmonary toxicity of Fe2O3, ZnFe2O4, NiFe2O4 and NiZnFe4O8 nanomaterials: Inflammation and DNA strand breaks. Environmental Toxicology and Pharmacology, 2020, 74, 103303.	4.0	27
45	Generation and characterization of stable, highly concentrated titanium dioxide nanoparticle aerosols for rodent inhalation studies. Journal of Nanoparticle Research, 2011, 13, 511-524.	1.9	26
46	Effects of ultrafine particles on the allergic inflammation in the lung of asthmatics: results of a double-blinded randomized cross-over clinical pilot study. Particle and Fibre Toxicology, 2014, 11, 39.	6.2	26
47	Derivation of the Density and Refractive Index of Organic Matter and Elemental Carbon from Closure between Physical and Chemical Aerosol Properties. Environmental Science & Technology, 2009, 43, 1166-1172.	10.0	25
48	Retained particle surface area dose drives inflammation in rat lungs following acute, subacute, and subchronic inhalation of nanomaterials. Particle and Fibre Toxicology, 2021, 18, 29.	6.2	25
49	Large eddy simulations of airflow and particle deposition in pulsating bi-directional nasal drug delivery. Physics of Fluids, 2020, 32, .	4.0	24
50	Chemical Investigation of Eight Different Types of Carbonaceous Particles Using Thermoanalytical Techniques. Environmental Science & Technology, 2007, 41, 8406-8411.	10.0	23
51	Simulation of patient-specific bi-directional pulsating nasal aerosol dispersion and deposition with clockwise 45Â° and 90Â° nosepieces. Computers in Biology and Medicine, 2020, 123, 103816.	7.0	22
52	Multimodal Precision Imaging of Pulmonary Nanoparticle Delivery in Mice: Dynamics of Application, Spatial Distribution, and Dosimetry. Small, 2019, 15, e1904112.	10.0	21
53	Development of a dynamic in vitro stretch model of the alveolar interface with aerosol delivery. Biotechnology and Bioengineering, 2021, 118, 690-702.	3.3	19
54	Biokinetics of Aerosolized Liposomal Ciclosporin A in Human Lung Cells In Vitro Using an Air-Liquid Cell Interface Exposure System. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2017, 30, 411-424.	1.4	18

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55	Investigation of Volatility Method for Measuring Aqueous Sulfuric Acid on Mixed Aerosols. Aerosol Science and Technology, 2002, 36, 877-889.	3.1	17
56	Methodology for Particle Characterization in the Exhaust Flows of Gas Turbine Engines. Aerosol Science and Technology, 2004, 38, 1108-1122.	3.1	16
57	Performance Evaluation of a Fast Mobility-Based Particle Spectrometer for Aircraft Exhaust. Journal of Propulsion and Power, 2009, 25, 628-634.	2.2	15
58	Aggregates Associated with Instability of Antibodies during Aerosolization Induce Adverse Immunological Effects. Pharmaceutics, 2022, 14, 671.	4.5	15
59	Gold nanoparticle aerosols for rodent inhalation and translocation studies. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	14
60	Quantitative detection of drug dose and spatial distribution in the lung revealed by Cryoslicing Imaging. Journal of Pharmaceutical and Biomedical Analysis, 2015, 102, 129-136.	2.8	14
61	Prediction of Chronic Inflammation for Inhaled Particles: the Impact of Material Cycling and Quarantining in the Lung Epithelium. Advanced Materials, 2020, 32, e2003913.	21.0	14
62	Pulsatile Bi-Directional Aerosol Flow Affects Aerosol Delivery to the Intranasal Olfactory Region: A Patient-Specific Computational Study. Frontiers in Pharmacology, 2021, 12, 746420.	3.5	11
63	A drug screen with approved compounds identifies amlexanox as a novel Wnt/Î²â€catenin activator inducing lung epithelial organoid formation. British Journal of Pharmacology, 2021, 178, 4026-4041.	5.4	10
64	Gender specific airway gene expression in COPD sub-phenotypes supports a role of mitochondria and of different types of leukocytes. Scientific Reports, 2021, 11, 12848.	3.3	8
65	Organâ€Restricted Vascular Delivery of Nanoparticles for Lung Cancer Therapy. Advanced Therapeutics, 2020, 3, 2000017.	3.2	7
66	Validation of in vitro models for smoke exposure of primary human bronchial epithelial cells. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2022, 322, L129-L148.	2.9	6
67	Aerosolâ€“Cell Exposure System Applied to Semi-Adherent Cells for Aerosolization of Lung Surfactant and Nanoparticles Followed by High Quality RNA Extraction. Nanomaterials, 2022, 12, 1362.	4.1	6
68	Anatomical considerations for inhaled aerosol deposition modeling: Methods, applications, challenges and opportunities. Journal of Aerosol Science, 2021, 156, 105786.	3.8	2
69	Calibration of gas flow meters using choked flow and an evacuated vessel. Measurement Science and Technology, 2021, 32, 105105.	2.6	0
70	In vivo x-ray imaging of the respiratory system using synchrotron sources and a compact light source. , 2019, , .		0
71	Disease Prediction: Prediction of Chronic Inflammation for Inhaled Particles: the Impact of Material Cycling and Quarantining in the Lung Epithelium (Adv. Mater. 47/2020). Advanced Materials, 2020, 32, .	21.0	0