Jorg ThÃ¶ming

List of Publications by Year
in descending order

128 papers	5,502 citations	117453 34 h-index	88477 70 g-index
129 all docs	129 docs citations	129 times ranked	6703 citing authors

#	Article	IF	Citations
1	Application of Spectroscopic Methods for Structural Analysis of Chitin and Chitosan. Marine Drugs, 2010, 8, 1567-1636.	2.2	815
2	Self-organization of imidazolium ionic liquids in aqueous solution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 329, 125-133.	2.3	342
3	Micelle formation of imidazolium ionic liquids in aqueous solution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 316, 278-284.	2.3	325
4	Primary biodegradation of ionic liquid cations, identification of degradation products of 1-methyl-3-octylimidazolium chloride and electrochemical wastewater treatment of poorly biodegradable compounds. Green Chemistry, 2008, 10, 214-224.	4.6	227
5	Progress in evaluation of risk potential of ionic liquidsâ€"basis for an eco-design of sustainable products. Green Chemistry, 2005, 7, 362.	4.6	215
6	Biomedical Activity of Chitin/Chitosan Based Materialsâ€"Influence of Physicochemical Properties Apart from Molecular Weight and Degree of N-Acetylation. Polymers, 2011, 3, 1875-1901.	2.0	213
7	Environmental and health impact assessment of Liquid Organic Hydrogen Carrier (LOHC) systems â€“ challenges and preliminary results. Energy and Environmental Science, 2015, 8, 1035-1045.	15.6	188
8	Thermodynamics of micellization of imidazolium ionic liquids in aqueous solutions. Journal of Colloid and Interface Science, 2009, 336, 111-116.	5.0	171
9	Ionic liquids as lubricants or lubrication additives: An ecotoxicity and biodegradability assessment. Chemosphere, 2012, 89, 1135-1141.	4.2	123
10	Biodegradability of 27 pyrrolidinium, morpholinium, piperidinium, imidazolium and pyridinium ionic liquid cations under aerobic conditions. Green Chemistry, 2014, 16, 2174-2184.	4.6	121
11	Predicting optimal temperature profiles in single-stage fixed-bed reactors for CO2-methanation. Chemical Engineering Science, 2015, 132, 59-71.	1.9	107
12	Safe-by-Design CuO NanoparticlesviaFe-Doping, Cuâ€“O Bond Length Variation, and Biological Assessment in Cells and Zebrafish Embryos. ACS Nano, 2017, 11, 501-515.	7.3	107
13	Synthesis of ionic liquids in micro-reactorsâ€"a process intensification study. Green Chemistry, 2007, 9, 1084.	4.6	85
14	An analytically predictive model for moderately rarefied gas flow. Journal of Fluid Mechanics, 2012, 698, 406-422.	1.4	73
15	Changes in zeta potential of imidazolium ionic liquids modified minerals â€“ Implications for determining mechanism of adsorption. Chemosphere, 2013, 90, 706-712.	4.2	71
16	Studies on acetylation patterns of different chitosan preparations. Carbohydrate Polymers, 2009, 78, 678-684.	5.1	66
17	Influences of use activities and waste management on environmental releases of engineered nanomaterials. Science of the Total Environment, 2015, 535, 160-171.	3.9	63
18	Toward the Proactive Design of Sustainable Chemicals: Ionic Liquids as a Prime Example. Chemical Reviews, 2021, 121, 13132-13173.	23.0	63

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19	Strategy to improve the characterization of chitosan for sustainable biomedical applications: SAR guided multi-dimensional analysis. Green Chemistry, 2009, 11, 498.	4.6	61
20	(Eco)toxicity of fluoro-organic and cyano-based ionic liquid anions. Chemical Communications, 2012, 48, 9382.	2.2	59
21	Ionic Liquids: Predictions of Physicochemical Properties with Experimental and/or DFT-Calculated LFER Parameters To Understand Molecular Interactions in Solution. Journal of Physical Chemistry B, 2011, 115, 6040-6050.	1.2	58
22	Thermoeconomic optimization of vertical ground-source heat pump systems through nonlinear integer programming. Applied Energy, 2014, 114, 492-503.	5.1	54
23	In silicomodelling for predicting the cationic hydrophobicity and cytotoxicity of ionic liquids towards theLeukemiarat cell line,Vibrio fischeriandScenedesmus vacuolatusbased on molecular interaction potentials of ions. SAR and QSAR in Environmental Research, 2013, 24, 863-882.	1.0	51
24	Influence of the Hofmeister anions on self-organization of 1-decyl-3-methylimidazolium chloride in aqueous solutions. Journal of Colloid and Interface Science, 2011, 362, 415-422.	5.0	49
25	Electrochemical oxidation of imidazolium-based ionic liquids: The influence of anions. Chemical Engineering Journal, 2012, 198-199, 338-345.	6.6	47
26	Anaerobic biodegradability of ionic liquid cations under denitrifying conditions. Green Chemistry, 2010, 12, 620.	4.6	46
27	Advanced oxidation process for the removal of ionic liquids from water: The influence of functionalized side chains on the electrochemical degradability of imidazolium cations. Separation and Purification Technology, 2012, 101, 26-33.	3.9	44
28	Membrane partitioning of ionic liquid cations, anions and ion pairsÂâ€“ÂEstimating the bioconcentration potential of organic ions. Environmental Pollution, 2017, 228, 378-389.	3.7	44
29	Dielectrophoretically intensified cross-flow membrane filtration. Journal of Membrane Science, 2009, 336, 71-78.	4.1	43
30	Predictability of silver nanoparticle speciation and toxicity in ecotoxicological media. Environmental Science: Nano, 2017, 4, 1470-1483.	2.2	43
31	Predicting the Critical Micelle Concentrations of Aqueous Solutions of Ionic Liquids and Other Ionic Surfactants. Chemistry - A European Journal, 2009, 15, 8880-8885.	1.7	41
32	Biodegradability of fluoroorganic and cyano-based ionic liquid anions under aerobic and anaerobic conditions. Green Chemistry, 2012, 14, 410-418.	4.6	39
33	ECO-design of reuse and recycling networks by multi-objective optimization. Journal of Cleaner Production, 2005, 13, 1492-1503.	4.6	38
34	Hazard assessment of quinaldine-, alkylcarbazole-, benzene- and toluene-based liquid organic hydrogen carrier (LOHCs) systems. Energy and Environmental Science, 2019, 12, 366-383.	15.6	36
35	Electrochemically enhanced oxidation reactions in sandy soil polluted with mercury. Science of the Total Environment, 2000, 261, 137-147.	3.9	34
36	A fouling suppression system in submerged membrane bioreactors using dielectrophoretic forces. Journal of Environmental Sciences, 2015, 29, 139-145.	3.2	33

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37	NMR imaging of gas phase hydrogenation in a packed bed flow reactor. Applied Catalysis A: General, 2015, 502, 340-349.	2.2	32
38	Coupled conjugate heat transfer and heat production in open-cell ceramic foams investigated using CFD. International Journal of Heat and Mass Transfer, 2019, 139, 600-612.	2.5	32
39	Recovery of ionic liquids from wastewater: Aggregation control for intensified membrane filtration. Desalination, 2008, 224, 52-56.	4.0	31
40	Intensification of cross-flow membrane filtration using dielectrophoresis with a novel electrode configuration. Journal of Membrane Science, 2013, 448, 256-261.	4.1	31
41	Electrochemical Behavior of Single CuO Nanoparticles: Implications for the Assessment of their Environmental Fate. Small, 2018, 14, e1801765.	5.2	30
42	Assessing the Role of Pt Clusters on TiO₂ (P25) on the Photocatalytic Degradation of Acid Blue 9 and Rhodamine B. Journal of Physical Chemistry C, 2020, 124, 8269-8278.	1.5	30
43	On the Effect of Enhanced Mass Transfer on Side Reactions in Capillary Microreactors during Highâ€Temperature Synthesis of an Ionic Liquid. Chemical Engineering and Technology, 2009, 32, 1717-1723.	0.9	28
44	Evaluation of different heat extraction strategies for shallow vertical ground-source heat pump systems. Applied Energy, 2015, 149, 259-271.	5.1	27
45	Insulator-based dielectrophoresis in viscous mediaâ€"Simulation of particle and droplet velocity. Journal of Electrostatics, 2007, 65, 452-458.	1.0	26
46	Molecular dynamics simulations on scattering of single Ar, N2, and CO2 molecules on realistic surfaces. Computers and Fluids, 2014, 97, 31-39.	1.3	26
47	In silico prediction of linear free energy relationship descriptors of neutral and ionic compounds. RSC Advances, 2015, 5, 80634-80642.	1.7	25
48	Bridging the scales in high-throughput dielectrophoretic (bio-)particle separation in porous media. Scientific Reports, 2018, 8, 10480.	1.6	25
49	On conformational analysis of chitosan. Carbohydrate Polymers, 2011, 84, 1237-1243.	5.1	24
50	Intrinsically green iron oxide nanoparticles? From synthesis via (eco-)toxicology to scenario modelling. Nanoscale, 2013, 5, 1034-1046.	2.8	24
51	The gas flow diode effect: theoretical and experimental analysis of moderately rarefied gas flows through a microchannel with varying cross section. Microfluidics and Nanofluidics, 2015, 18, 391-402.	1.0	24
52	Microparticle trajectories in a high-throughput channel for contact-free fractionation by dielectrophoresis. Chemical Engineering Science, 2016, 153, 34-44.	1.9	24
53	Full-field analysis of gas flow within open-cell foams: comparison of micro-computed tomography-based CFD simulations with experimental magnetic resonance flow mapping data. Experiments in Fluids, 2020, 61, 1.	1.1	24
54	Determination of the pattern of acetylation of low-molecular-weight chitosan used in biomedical applications. Journal of Pharmaceutical and Biomedical Analysis, 2009, 50, 587-590.	1.4	23

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55	Electrodeless dielectrophoresis: Impact of geometry and material on obstacle polarization. Electrophoresis, 2016, 37, 291-301.	1.3	23
56	High-throughput dielectrophoretic filtration of sub-micron and micro particles in macroscopic porous materials. Analytical and Bioanalytical Chemistry, 2020, 412, 3903-3914.	1.9	23
57	3D characterization of gas phase reactors with regularly and irregularly structured monolithic catalysts by NMR imaging and modeling. Catalysis Today, 2018, 310, 176-186.	2.2	22
58	Structure-heat transport analysis of periodic open-cell foams to be used as catalyst carriers. Chemical Engineering Research and Design, 2021, 166, 209-219.	2.7	22
59	Dielectrophoretic Gold Particle Separation. Separation Science and Technology, 2008, 43, 3842-3855.	1.3	21
60	Determination of the pattern of acetylation of chitosan samples: Comparison of evaluation methods and some validation parameters. International Journal of Biological Macromolecules, 2009, 45, 56-60.	3.6	21
61	Influence of heat treatment on the microstructure and corrosion resistance of martensitic stainless steel. AIP Advances, 2019, 9, .	0.6	21
62	Pareto-optimal design and assessment of monolithic sponges as catalyst carriers for exothermic reactions. Chemical Engineering Journal, 2019, 359, 496-504.	6.6	21
63	TBT-contaminated Sediments: Treatment in a Pilot Scale (9 pp). Journal of Soils and Sediments, 2005, 5, 21-29.	1.5	20
64	Nanofiltration of bivalent nickel cations â€" model parameter determination and process simulation. Desalination, 2008, 224, 12-17.	4.0	20
65	In situ analysis of gas phase reaction processes within monolithic catalyst supports by applying NMR imaging methods. Catalysis Today, 2016, 273, 91-98.	2.2	20
66	Influence of geometry and material of insulating posts on particle trapping using positive dielectrophoresis. Journal of Chromatography A, 2017, 1483, 127-137.	1.8	20
67	An approach to improve the separation of solidâ€“liquid suspensions in inclined plate settlers: CFD simulation and experimental validation. Water Research, 2011, 45, 3541-3549.	5.3	19
68	Thinking in Terms of Structure-Activity-Relationships (T-SAR): A Tool to Better Understand Nanofiltration Membranes. Membranes, 2011, 1, 162-183.	1.4	19
69	Oxygen feed membranes in autothermal steam-reformers â€" A robust temperature control. Fuel, 2010, 89, 1257-1264.	3.4	18
70	The contribution of diffusion to gas microflow: An experimental study. Physics of Fluids, 2012, 24, .	1.6	18
71	Fouling suppression in submerged membrane bioreactors by obstacle dielectrophoresis. Journal of Membrane Science, 2018, 549, 466-473.	4.1	18
72	Interactions between reaction kinetics in ATR-reactors and transport mechanisms in functional ceramic membranes: A simulation approach. Chemical Engineering Journal, 2008, 142, 225-238.	6.6	16

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73	Recovery of submicron particles using high-throughput dielectrophoretically switchable filtration. Separation and Purification Technology, 2014, 132, 728-735.	3.9	16
74	Applicability of Single and Sequential Extractions for Assessing the Potential Mobility of Heavy Metals in Contaminated Soils. Clean - Soil, Air, Water, 1998, 26, 338-343.	0.8	15
75	Dielectrophoresis in aqueous suspension: impact of electrode configuration. Microfluidics and Nanofluidics, 2014, 17, 499-507.	1.0	15
76	CFD Simulations of Radiative Heat Transport in Open-Cell Foam Catalytic Reactors. Catalysts, 2020, 10, 716.	1.6	15
77	Detoxification of tributyltin contaminated sediments by an electrochemical process. Science of the Total Environment, 2001, 266, 265-271.	3.9	14
78	Reduction of Tributyltin (TBT) and Other Organic Pollutants of Concern in Contaminated Sediments by means of an Electrochemical Oxidation. Clean - Soil, Air, Water, 2002, 30, 87-93.	0.8	13
79	Bioproduction of antimicrobial compounds by using marine filamentous cyanobacterium cultivation. Journal of Applied Phycology, 2011, 23, 811-818.	1.5	13
80	Detection of Bioactive Exometabolites Produced by the Filamentous Marine Cyanobacterium Geitlerinema sp.. Marine Biotechnology, 2012, 14, 436-445.	1.1	13
81	Determination of LFER Descriptors of 30 Cations of Ionic Liquidsâ€"Progress in Understanding Their Molecular Interaction Potentials. ChemPhysChem, 2012, 13, 780-787.	1.0	13
82	Catalytically active perrhenate based ionic liquids: a preliminary ecotoxicity and biodegradability assessment. New Journal of Chemistry, 2015, 39, 5431-5436.	1.4	13
83	Modeling the Excess Velocity of Low-Viscous Taylor Droplets in Square Microchannels. Fluids, 2019, 4, 162.	0.8	13
84	Multiscale modeling of monolithic sponges as catalyst carrier for the methanation of carbon dioxide. Chemical Engineering Science: X, 2019, 2, 100016.	1.5	13
85	Biodegradation potential of cyano-based ionic liquid anions in a culture of Cupriavidus spp. and their in vitro enzymatic hydrolysis by nitrile hydratase. Environmental Science and Pollution Research, 2014, 21, 9495-9505.	2.7	12
86	Simplification of a Sequential Extraction Scheme To Determine the Mobilisable Heavy Metal Pool in Soils. Clean - Soil, Air, Water, 2001, 29, 197.	0.8	11
87	Optimal Design of Zero-Water Discharge Rinsing Systems. Environmental Science & Technology, 2002, 36, 1107-1112.	4.6	11
88	Green nanoparticle production using micro reactor technology. Journal of Physics: Conference Series, 2011, 304, 012074.	0.3	11
89	Biodegradability of Ionic Liquids â€“ Test Procedures and Structural Design. Chemie-Ingenieur-Technik, 2011, 83, 1454-1467.	0.4	11
90	Improving the quality of nanoparticle production by using a new biphasic synthesis in a slug flow microreactor. Chemical Engineering Journal, 2013, 228, 1083-1091.	6.6	11

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91	Predicting and eliminating Joule heating constraints in large dielectrophoretic IDE separators. Chemical Engineering Science, 2015, 137, 235-242.	1.9	11
92	ECO-optimization of pre-treatment processes in metal finishing. Computers and Chemical Engineering, 2006, 30, 587-598.	2.0	10
93	Porous ceramic monoliths assembled from microbeads with high specific surface area for effective biocatalysis. RSC Advances, 2013, 3, 13381.	1.7	10
94	A comparative experimental study on the deviation of the ideal selectivity in HDTMS-functionalized and untreated ceramic structures with pores in the upper mesoporous range. Microporous and Mesoporous Materials, 2015, 217, 253-261.	2.2	10
95	Separating microparticles by material and size using dielectrophoretic chromatography with frequency modulation. Scientific Reports, 2021, 11, 16861.	1.6	10
96	On hydrodynamic optimisation of multi-channel counter-flow lamella settlers and separation efficiency of cohesive particles. Chemical Engineering and Processing: Process Intensification, 2008, 47, 90-100.	1.8	9
97	Quantitative Analysis of Molecular Interaction Potentials of Ionic Liquid Anions Using Multiâ€Functionalized Stationary Phases in HPLC. ChemPhysChem, 2014, 15, 2351-2358.	1.0	9
98	A physical explanation of the gas flow diode effect. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	9
99	Analysis of the diodic effect of flows of rarefied gases in tapered rectangular channels. Vacuum, 2015, 120, 147-154.	1.6	8
100	The influence of the functional group density on gas flow and selectivity: Nanoscale interactions in alkyl-functionalized mesoporous membranes. Microporous and Mesoporous Materials, 2017, 237, 38-48.	2.2	8
101	Polarizability-Dependent Sorting of Microparticles Using Continuous-Flow Dielectrophoretic Chromatography with a Frequency Modulation Method. Micromachines, 2020, 11, 38.	1.4	8
102	Pore-scale analysis of axial and radial dispersion coefficients of gas flow in macroporous foam monoliths using NMR-based displacement measurements. Chemical Engineering Journal, 2020, 388, 124234.	6.6	8
103	Magnetic Resonance Imaging for Nonâ€invasive Study of Hydrodynamics Inside Gasâ€Liquid Taylor Flows. Chemical Engineering and Technology, 2021, 44, 465-476.	0.9	8
104	A large fixed bed reactor for MRI operando experiments at elevated temperature and pressure. Review of Scientific Instruments, 2021, 92, 043711.	0.6	8
105	Applying Alkyl-Chain Surface Functionalizations in Mesoporous Inorganic Structures: Their Impact on Gas Flow and Selectivity Depending on Temperature. ACS Applied Materials & Interfaces, 2016, 8, 26938-26947.	4.0	7
106	Refractive index matching (RIM) using double-binary liquidâ€“liquid mixtures. Experiments in Fluids, 2020, 61, 1.	1.1	7
107	Heat Transport in Open-Cell Foams: CFD Analysis of Artificial Heat Sources vs Fully Resolved Exothermal Reactions. Industrial & Engineering Chemistry Research, 2021, 60, 4542-4551.	1.8	7
108	Spatially resolved direct gas-phase thermometry in chemical reactors using NMR. Chemical Engineering Journal, 2022, 433, 133583.	6.6	7

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109	Efecto del catiÃ³n, del aniÃ³n y del co-iÃ³n sobre la agregaciÃ³n de lÃquidos iÃ³nicos en soluciÃ³n acuosa. Quimica Nova, 2010, 33, 1703-1708.	0.3	6
110	Multicomponent gas diffusion in nonuniform tubes. AICHE Journal, 2015, 61, 1404-1412.	1.8	6
111	Emulation of Bubbleâ€Induced Turbulence Using Randomly Moving Particles inÂaÂGridÂStructure. Chemical Engineering and Technology, 2017, 40, 1502-1511.	0.9	6
112	Effect of Heat Treatment of Martensitic Stainless Steel on Passive Layer Growth Kinetics Studied by Electrochemical Impedance Spectroscopy in Conjunction with the Point Defect Model. Corrosion and Materials Degradation, 2020, 1, 77-91.	1.0	6
113	Dynamic simulation of rinsing and regeneration networks based on high pressure RO. Desalination, 2007, 207, 45-58.	4.0	5
114	The flow topology transition of liquidâ€“liquid Taylor flows in square microchannels. Experiments in Fluids, 2022, 63, 1.	1.1	5
115	Coatings of active and heat-resistant cobalt-aluminium xerogel catalysts. Journal of Colloid and Interface Science, 2016, 477, 64-73.	5.0	4
116	Spatially Resolved Characterization of the Gas Propagator in Monolithic Structured Catalysts Using NMR Diffusiometry. Chemical Engineering and Technology, 2018, 41, 1871-1880.	0.9	4
117	Diffusion weighted magnetic resonance imaging for temperature measurements in catalyst supports with an axial gas flow. Reaction Chemistry and Engineering, 2019, 4, 1844-1853.	1.9	4
118	Insulator-based dielectrophoresis for fouling suppression in submerged membranes bioreactors: Impact of insulators shape and dimensions. Separation and Purification Technology, 2019, 213, 507-514.	3.9	4
119	Full-Field Comparison of MRV and CFD of Gas Flow through Regular Catalytic Monolithic Structures. Processes, 2021, 9, 566.	1.3	4
120	Experimental Assessment of an Innovative Device to Mimic Bubble Swarm Turbulence. Chemical Engineering and Technology, 2017, 40, 1466-1474.	0.9	3
121	Influence of Pressure, Velocity and Fluid Material on Heat Transport in Structured Open-Cell Foam Reactors Investigated Using CFD Simulations. ChemEngineering, 2020, 4, 61.	1.0	3
122	Aerosol classification by dielectrophoresis: a theoretical study on spherical particles. Scientific Reports, 2020, 10, 10617.	1.6	3
123	Potential of the Red Alga Dixoniella grisea for the Production of Additives for Lubricants. Plants, 2021, 10, 1836.	1.6	3
124	Impact of Pulsed Dielectrophoretic Supply on the Function of Microorganisms in Membrane Bioreactors. Journal of Environmental Engineering, ASCE, 2018, 144, 04018017.	0.7	2
125	Surface Functionalization of Mesoporous Membranes: Impact on Pore Structure and Gas Flow Mechanisms. ACS Applied Materials & Interfaces, 2020, 12, 39388-39396.	4.0	2
126	Delayed binary and multicomponent gas diffusion in conical tubes. Chemical Engineering Science, 2016, 148, 93-107.	1.9	1

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127	Numerical study on the effect of insulator size and shape on fouling suppression by electrodeless dielectrophoresis in submerged membrane bioreactors. AIP Conference Proceedings, 2018, , .	0.3	1
128	Simulation of a membrane bioreactor for regeneration of degreasing systems. Journal of Chemical Technology and Biotechnology, 2006, 81, 841-850.	1.6	0