

Jorg ThÃ¶ming

List of Publications by Year in descending order

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128
papers

5,502
citations

117571

34
h-index

88593

70
g-index

129
all docs

129
docs citations

129
times ranked

6703
citing authors

#	ARTICLE	IF	CITATIONS
1	Spatially resolved direct gas-phase thermometry in chemical reactors using NMR. Chemical Engineering Journal, 2022, 433, 133583.	6.6	7
2	The flow topology transition of liquid–liquid Taylor flows in square microchannels. Experiments in Fluids, 2022, 63, 1.	1.1	5
3	Magnetic Resonance Imaging for Non-invasive Study of Hydrodynamics Inside Gas–Liquid Taylor Flows. Chemical Engineering and Technology, 2021, 44, 465-476.	0.9	8
4	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
5	Full-Field Comparison of MRV and CFD of Gas Flow through Regular Catalytic Monolithic Structures. Processes, 2021, 9, 566.	1.3	4
6	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
7	A large fixed bed reactor for MRI <i>operando</i> experiments at elevated temperature and pressure. Review of Scientific Instruments, 2021, 92, 043711.	0.6	8
8	Separating microparticles by material and size using dielectrophoretic chromatography with frequency modulation. Scientific Reports, 2021, 11, 16861.	1.6	10
9	Potential of the Red Alga <i>Dixonella grisea</i> for the Production of Additives for Lubricants. Plants, 2021, 10, 1836.	1.6	3
10	Toward the Proactive Design of Sustainable Chemicals: Ionic Liquids as a Prime Example. Chemical Reviews, 2021, 121, 13132-13173.	23.0	63
11	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
12	CFD Simulations of Radiative Heat Transport in Open-Cell Foam Catalytic Reactors. Catalysts, 2020, 10, 716.	1.6	15
13	Surface Functionalization of Mesoporous Membranes: Impact on Pore Structure and Gas Flow Mechanisms. ACS Applied Materials & Interfaces, 2020, 12, 39388-39396.	4.0	2
14	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
15	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
16	Assessing the Role of Pt Clusters on TiO ₂ (P25) on the Photocatalytic Degradation of Acid Blue 9 and Rhodamine B. Journal of Physical Chemistry C, 2020, 124, 8269-8278.	1.5	30
17	Refractive index matching (RIM) using double-binary liquid–liquid mixtures. Experiments in Fluids, 2020, 61, 1.	1.1	7
18	Aerosol classification by dielectrophoresis: a theoretical study on spherical particles. Scientific Reports, 2020, 10, 10617.	1.6	3

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19	Polarizability-Dependent Sorting of Microparticles Using Continuous-Flow Dielectrophoretic Chromatography with a Frequency Modulation Method. <i>Micromachines</i> , 2020, 11, 38.	1.4	8
20	Pore-scale analysis of axial and radial dispersion coefficients of gas flow in macroporous foam monoliths using NMR-based displacement measurements. <i>Chemical Engineering Journal</i> , 2020, 388, 124234.	6.6	8
21	High-throughput dielectrophoretic filtration of sub-micron and micro particles in macroscopic porous materials. <i>Analytical and Bioanalytical Chemistry</i> , 2020, 412, 3903-3914.	1.9	23
22	Diffusion weighted magnetic resonance imaging for temperature measurements in catalyst supports with an axial gas flow. <i>Reaction Chemistry and Engineering</i> , 2019, 4, 1844-1853.	1.9	4
23	Influence of heat treatment on the microstructure and corrosion resistance of martensitic stainless steel. <i>AIP Advances</i> , 2019, 9, .	0.6	21
24	Modeling the Excess Velocity of Low-Viscous Taylor Droplets in Square Microchannels. <i>Fluids</i> , 2019, 4, 162.	0.8	13
25	Hazard assessment of quinaldine-, alkylcarbazole-, benzene- and toluene-based liquid organic hydrogen carrier (LOHCs) systems. <i>Energy and Environmental Science</i> , 2019, 12, 366-383.	15.6	36
26	Coupled conjugate heat transfer and heat production in open-cell ceramic foams investigated using CFD. <i>International Journal of Heat and Mass Transfer</i> , 2019, 139, 600-612.	2.5	32
27	Multiscale modeling of monolithic sponges as catalyst carrier for the methanation of carbon dioxide. <i>Chemical Engineering Science: X</i> , 2019, 2, 100016.	1.5	13
28	Insulator-based dielectrophoresis for fouling suppression in submerged membranes bioreactors: Impact of insulators shape and dimensions. <i>Separation and Purification Technology</i> , 2019, 213, 507-514.	3.9	4
29	Pareto-optimal design and assessment of monolithic sponges as catalyst carriers for exothermic reactions. <i>Chemical Engineering Journal</i> , 2019, 359, 496-504.	6.6	21
30	Impact of Pulsed Dielectrophoretic Supply on the Function of Microorganisms in Membrane Bioreactors. <i>Journal of Environmental Engineering, ASCE</i> , 2018, 144, 04018017.	0.7	2
31	Fouling suppression in submerged membrane bioreactors by obstacle dielectrophoresis. <i>Journal of Membrane Science</i> , 2018, 549, 466-473.	4.1	18
32	3D characterization of gas phase reactors with regularly and irregularly structured monolithic catalysts by NMR imaging and modeling. <i>Catalysis Today</i> , 2018, 310, 176-186.	2.2	22
33	Numerical study on the effect of insulator size and shape on fouling suppression by electrodeless dielectrophoresis in submerged membrane bioreactors. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	1
34	Spatially Resolved Characterization of the Gas Propagator in Monolithic Structured Catalysts Using NMR Diffusiometry. <i>Chemical Engineering and Technology</i> , 2018, 41, 1871-1880.	0.9	4
35	Electrochemical Behavior of Single CuO Nanoparticles: Implications for the Assessment of their Environmental Fate. <i>Small</i> , 2018, 14, e1801765.	5.2	30
36	Bridging the scales in high-throughput dielectrophoretic (bio-)particle separation in porous media. <i>Scientific Reports</i> , 2018, 8, 10480.	1.6	25

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37	Influence of geometry and material of insulating posts on particle trapping using positive dielectrophoresis. <i>Journal of Chromatography A</i> , 2017, 1483, 127-137.	1.8	20
38	Experimental Assessment of an Innovative Device to Mimic Bubble Swarm Turbulence. <i>Chemical Engineering and Technology</i> , 2017, 40, 1466-1474.	0.9	3
39	Predictability of silver nanoparticle speciation and toxicity in ecotoxicological media. <i>Environmental Science: Nano</i> , 2017, 4, 1470-1483.	2.2	43
40	Membrane partitioning of ionic liquid cations, anions and ion pairs—Estimating the bioconcentration potential of organic ions. <i>Environmental Pollution</i> , 2017, 228, 378-389.	3.7	44
41	Emulation of Bubble-Induced Turbulence Using Randomly Moving Particles in a Grid-Structure. <i>Chemical Engineering and Technology</i> , 2017, 40, 1502-1511.	0.9	6
42	Safe-by-Design CuO Nanoparticles via Fe-Doping, Cu–O Bond Length Variation, and Biological Assessment in Cells and Zebrafish Embryos. <i>ACS Nano</i> , 2017, 11, 501-515.	7.3	107
43	The influence of the functional group density on gas flow and selectivity: Nanoscale interactions in alkyl-functionalized mesoporous membranes. <i>Microporous and Mesoporous Materials</i> , 2017, 237, 38-48.	2.2	8
44	In situ analysis of gas phase reaction processes within monolithic catalyst supports by applying NMR imaging methods. <i>Catalysis Today</i> , 2016, 273, 91-98.	2.2	20
45	Coatings of active and heat-resistant cobalt-aluminium xerogel catalysts. <i>Journal of Colloid and Interface Science</i> , 2016, 477, 64-73.	5.0	4
46	Microparticle trajectories in a high-throughput channel for contact-free fractionation by dielectrophoresis. <i>Chemical Engineering Science</i> , 2016, 153, 34-44.	1.9	24
47	A physical explanation of the gas flow diode effect. <i>Microfluidics and Nanofluidics</i> , 2016, 20, 1.	1.0	9
48	Applying Alkyl-Chain Surface Functionalizations in Mesoporous Inorganic Structures: Their Impact on Gas Flow and Selectivity Depending on Temperature. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 26938-26947.	4.0	7
49	Electrodeless dielectrophoresis: Impact of geometry and material on obstacle polarization. <i>Electrophoresis</i> , 2016, 37, 291-301.	1.3	23
50	Delayed binary and multicomponent gas diffusion in conical tubes. <i>Chemical Engineering Science</i> , 2016, 148, 93-107.	1.9	1
51	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. <i>Microporous and Mesoporous Materials</i> , 2015, 217, 253-261.	2.2	10
52	A fouling suppression system in submerged membrane bioreactors using dielectrophoretic forces. <i>Journal of Environmental Sciences</i> , 2015, 29, 139-145.	3.2	33
53	Influences of use activities and waste management on environmental releases of engineered nanomaterials. <i>Science of the Total Environment</i> , 2015, 535, 160-171.	3.9	63
54	Multicomponent gas diffusion in nonuniform tubes. <i>AIChE Journal</i> , 2015, 61, 1404-1412.	1.8	6

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55	NMR imaging of gas phase hydrogenation in a packed bed flow reactor. Applied Catalysis A: General, 2015, 502, 340-349.	2.2	32
56	Analysis of the diodic effect of flows of rarefied gases in tapered rectangular channels. Vacuum, 2015, 120, 147-154.	1.6	8
57	Catalytically active perrhenate based ionic liquids: a preliminary ecotoxicity and biodegradability assessment. New Journal of Chemistry, 2015, 39, 5431-5436.	1.4	13
58	Predicting and eliminating Joule heating constraints in large dielectrophoretic IDE separators. Chemical Engineering Science, 2015, 137, 235-242.	1.9	11
59	Environmental and health impact assessment of Liquid Organic Hydrogen Carrier (LOHC) systems – challenges and preliminary results. Energy and Environmental Science, 2015, 8, 1035-1045.	15.6	188
60	Predicting optimal temperature profiles in single-stage fixed-bed reactors for CO ₂ -methanation. Chemical Engineering Science, 2015, 132, 59-71.	1.9	107
61	Evaluation of different heat extraction strategies for shallow vertical ground-source heat pump systems. Applied Energy, 2015, 149, 259-271.	5.1	27
62	In silico prediction of linear free energy relationship descriptors of neutral and ionic compounds. RSC Advances, 2015, 5, 80634-80642.	1.7	25
63	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
64	Recovery of submicron particles using high-throughput dielectrophoretically switchable filtration. Separation and Purification Technology, 2014, 132, 728-735.	3.9	16
65	Dielectrophoresis in aqueous suspension: impact of electrode configuration. Microfluidics and Nanofluidics, 2014, 17, 499-507.	1.0	15
66	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
67	Biodegradability of 27 pyrrolidinium, morpholinium, piperidinium, imidazolium and pyridinium ionic liquid cations under aerobic conditions. Green Chemistry, 2014, 16, 2174-2184.	4.6	121
68	Thermoeconomic optimization of vertical ground-source heat pump systems through nonlinear integer programming. Applied Energy, 2014, 114, 492-503.	5.1	54
69	Quantitative Analysis of Molecular Interaction Potentials of Ionic Liquid Anions Using Multi-Functionalized Stationary Phases in HPLC. ChemPhysChem, 2014, 15, 2351-2358.	1.0	9
70	Molecular dynamics simulations on scattering of single Ar, N ₂ , and CO ₂ molecules on realistic surfaces. Computers and Fluids, 2014, 97, 31-39.	1.3	26
71	Changes in zeta potential of imidazolium ionic liquids modified minerals – Implications for determining mechanism of adsorption. Chemosphere, 2013, 90, 706-712.	4.2	71
72	Intrinsically green iron oxide nanoparticles? From synthesis via (eco-)toxicology to scenario modelling. Nanoscale, 2013, 5, 1034-1046.	2.8	24

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73	Intensification of cross-flow membrane filtration using dielectrophoresis with a novel electrode configuration. <i>Journal of Membrane Science</i> , 2013, 448, 256-261.	4.1	31
74	Improving the quality of nanoparticle production by using a new biphasic synthesis in a slug flow microreactor. <i>Chemical Engineering Journal</i> , 2013, 228, 1083-1091.	6.6	11
75	Porous ceramic monoliths assembled from microbeads with high specific surface area for effective biocatalysis. <i>RSC Advances</i> , 2013, 3, 13381.	1.7	10
76	<i>In silico</i> modelling for predicting the cationic hydrophobicity and cytotoxicity of ionic liquids towards the <i>Leukemia</i> rat cell line, <i>Vibrio fischeri</i> and <i>Scenedesmus vacuolatus</i> based on molecular interaction potentials of ions. <i>SAR and QSAR in Environmental Research</i> , 2013, 24, 863-882.	1.0	51
77	The contribution of diffusion to gas microflow: An experimental study. <i>Physics of Fluids</i> , 2012, 24, .	1.6	18
78	An analytically predictive model for moderately rarefied gas flow. <i>Journal of Fluid Mechanics</i> , 2012, 698, 406-422.	1.4	73
79	Ionic liquids as lubricants or lubrication additives: An ecotoxicity and biodegradability assessment. <i>Chemosphere</i> , 2012, 89, 1135-1141.	4.2	123
80	Biodegradability of fluoroorganic and cyano-based ionic liquid anions under aerobic and anaerobic conditions. <i>Green Chemistry</i> , 2012, 14, 410-418.	4.6	39
81	Electrochemical oxidation of imidazolium-based ionic liquids: The influence of anions. <i>Chemical Engineering Journal</i> , 2012, 198-199, 338-345.	6.6	47
82	Advanced oxidation process for the removal of ionic liquids from water: The influence of functionalized side chains on the electrochemical degradability of imidazolium cations. <i>Separation and Purification Technology</i> , 2012, 101, 26-33.	3.9	44
83	(Eco)toxicity of fluoro-organic and cyano-based ionic liquid anions. <i>Chemical Communications</i> , 2012, 48, 9382.	2.2	59
84	Detection of Bioactive Exometabolites Produced by the Filamentous Marine Cyanobacterium <i>Geitlerinema</i> sp.. <i>Marine Biotechnology</i> , 2012, 14, 436-445.	1.1	13
85	Determination of LFER Descriptors of 30 Cations of Ionic Liquids – Progress in Understanding Their Molecular Interaction Potentials. <i>ChemPhysChem</i> , 2012, 13, 780-787.	1.0	13
86	Biomedical Activity of Chitin/Chitosan Based Materials – Influence of Physicochemical Properties Apart from Molecular Weight and Degree of N-Acetylation. <i>Polymers</i> , 2011, 3, 1875-1901.	2.0	213
87	An approach to improve the separation of solid – liquid suspensions in inclined plate settlers: CFD simulation and experimental validation. <i>Water Research</i> , 2011, 45, 3541-3549.	5.3	19
88	Thinking in Terms of Structure-Activity-Relationships (T-SAR): A Tool to Better Understand Nanofiltration Membranes. <i>Membranes</i> , 2011, 1, 162-183.	1.4	19
89	Green nanoparticle production using micro reactor technology. <i>Journal of Physics: Conference Series</i> , 2011, 304, 012074.	0.3	11
90	Ionic Liquids: Predictions of Physicochemical Properties with Experimental and/or DFT-Calculated LFER Parameters To Understand Molecular Interactions in Solution. <i>Journal of Physical Chemistry B</i> , 2011, 115, 6040-6050.	1.2	58

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91	Bioproduction of antimicrobial compounds by using marine filamentous cyanobacterium cultivation. Journal of Applied Phycology, 2011, 23, 811-818.	1.5	13
92	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
93	Biodegradability of Ionic Liquids – Test Procedures and Structural Design. Chemie-Ingenieur-Technik, 2011, 83, 1454-1467.	0.4	11
94	On conformational analysis of chitosan. Carbohydrate Polymers, 2011, 84, 1237-1243.	5.1	24
95	Oxygen feed membranes in autothermal steam-reformers – A robust temperature control. Fuel, 2010, 89, 1257-1264.	3.4	18
96	Efecto del cati3n, del ani3n y del co-i3n sobre la agregaci3n de l3quidos i3nicos en soluci3n acuosa. Quimica Nova, 2010, 33, 1703-1708.	0.3	6
97	Application of Spectroscopic Methods for Structural Analysis of Chitin and Chitosan. Marine Drugs, 2010, 8, 1567-1636.	2.2	815
98	Anaerobic biodegradability of ionic liquid cations under denitrifying conditions. Green Chemistry, 2010, 12, 620.	4.6	46
99	On the Effect of Enhanced Mass Transfer on Side Reactions in Capillary Microreactors during High-Temperature Synthesis of an Ionic Liquid. Chemical Engineering and Technology, 2009, 32, 1717-1723.	0.9	28
100	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
101	Dielectrophoretically intensified cross-flow membrane filtration. Journal of Membrane Science, 2009, 336, 71-78.	4.1	43
102	Thermodynamics of micellization of imidazolium ionic liquids in aqueous solutions. Journal of Colloid and Interface Science, 2009, 336, 111-116.	5.0	171
103	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
104	Studies on acetylation patterns of different chitosan preparations. Carbohydrate Polymers, 2009, 78, 678-684.	5.1	66
105	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
106	Strategy to improve the characterization of chitosan for sustainable biomedical applications: SAR guided multi-dimensional analysis. Green Chemistry, 2009, 11, 498.	4.6	61
107	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
108	Nanofiltration of bivalent nickel cations – model parameter determination and process simulation. Desalination, 2008, 224, 12-17.	4.0	20

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109	Recovery of ionic liquids from wastewater: Aggregation control for intensified membrane filtration. Desalination, 2008, 224, 52-56.	4.0	31
110	Self-organization of imidazolium ionic liquids in aqueous solution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 329, 125-133.	2.3	342
111	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
112	Micelle formation of imidazolium ionic liquids in aqueous solution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 316, 278-284.	2.3	325
113	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
114	Dielectrophoretic Gold Particle Separation. Separation Science and Technology, 2008, 43, 3842-3855.	1.3	21
115	Synthesis of ionic liquids in micro-reactors—a process intensification study. Green Chemistry, 2007, 9, 1084.	4.6	85
116	Dynamic simulation of rinsing and regeneration networks based on high pressure RO. Desalination, 2007, 207, 45-58.	4.0	5
117	Insulator-based dielectrophoresis in viscous media—Simulation of particle and droplet velocity. Journal of Electrostatics, 2007, 65, 452-458.	1.0	26
118	ECO-optimization of pre-treatment processes in metal finishing. Computers and Chemical Engineering, 2006, 30, 587-598.	2.0	10
119	Simulation of a membrane bioreactor for regeneration of degreasing systems. Journal of Chemical Technology and Biotechnology, 2006, 81, 841-850.	1.6	0
120	ECO-design of reuse and recycling networks by multi-objective optimization. Journal of Cleaner Production, 2005, 13, 1492-1503.	4.6	38
121	TBT-contaminated Sediments: Treatment in a Pilot Scale (9 pp). Journal of Soils and Sediments, 2005, 5, 21-29.	1.5	20
122	Progress in evaluation of risk potential of ionic liquids—basis for an eco-design of sustainable products. Green Chemistry, 2005, 7, 362.	4.6	215
123	Optimal Design of Zero-Water Discharge Rinsing Systems. Environmental Science & Technology, 2002, 36, 1107-1112.	4.6	11
124	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
125	Detoxification of tributyltin contaminated sediments by an electrochemical process. Science of the Total Environment, 2001, 266, 265-271.	3.9	14
126	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

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127	Electrochemically enhanced oxidation reactions in sandy soil polluted with mercury. Science of the Total Environment, 2000, 261, 137-147.	3.9	34
128	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