Michiel T Kreutzer

List of Publications by Year
in descending order

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111 papers	5,746 citations	71102 41 h-index	79698 73 g-index
117 all docs	117 docs citations	117 times ranked	5166 citing authors

#	Article	IF	Citations
1	Mechanistic insight into the improved photocatalytic degradation of dyes for an ultrathin coating of SiO2 on TiO2 (P25) nanoparticles. Chemical Engineering Journal Advances, 2022, 10, 100288.	5.2	12
2	Actin networks regulate the cell membrane permeability during electroporation. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183468.	2.6	36
3	Fedâ€Batch Droplet Nanobioreactor for Controlled Growth of Cyberlindnera (Pichia) jadinii : A Proofâ€Ofâ€Concept Demonstration. Advanced Materials Technologies, 2021, 6, 2100083.	5.8	1
4	Influence of initial film radius and film thickness on the rupture of foam films. Physical Review Fluids, 2021, 6, .	2.5	1
5	DNA-membrane complex formation during electroporation is DNA size-dependent. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183089.	2.6	19
6	Synthesis of a Rationally Designed Multi-Component Photocatalyst Pt:SiO2:TiO2(P25) with Improved Activity for Dye Degradation by Atomic Layer Deposition. Nanomaterials, 2020, 10, 1496.	4.1	3
7	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.	3.1	30
8	Scalable microfluidic droplet on-demand generator for non-steady operation of droplet-based assays. Lab on A Chip, 2020, 20, 1398-1409.	6.0	8
9	Thermal fluctuations in capillary thinning of thin liquid films. Journal of Fluid Mechanics, 2019, 876, 1090-1107.	3.4	12
10	Response of an actin network in vesicles under electric pulses. Scientific Reports, 2019, 9, 8151.	3.3	43
11	Control over the formation of supramolecular material objects using reactionâ€“diffusion. Soft Matter, 2019, 15, 4276-4283.	2.7	17
12	Photocatalytic Reactor Design: Guidelines for Kinetic Investigation. Industrial & Engineering Chemistry Research, 2019, 58, 5349-5357.	3.7	59
13	Tailoring the multiphase flow pattern of gas and liquid through micro-packed bed of pillars. Reaction Chemistry and Engineering, 2019, 4, 838-851.	3.7	7
14	DNA translocation to giant unilamellar vesicles during electroporation is independent of DNA size. Soft Matter, 2019, 15, 9187-9194.	2.7	8
15	Breakup of elongated droplets in microfluidic T-junctions. Physical Review Fluids, 2019, 4, .	2.5	15
16	Nanoparticle sintering in atomic layer deposition of supported catalysts: Kinetic modeling of the size distribution. Catalysis Today, 2018, 316, 51-61.	4.4	44
17	The role of gel-phase domains in electroporation of vesicles. Scientific Reports, 2018, 8, 4758.	3.3	21
18	From Single Atoms to Nanoparticles: Autocatalysis and Metal Aggregation in Atomic Layer Deposition of Pt on TiO₂ Nanopowder. Small, 2018, 14, e1800765.	10.0	50

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19	Oriented Attachment and Nanorod Formation in Atomic Layer Deposition of TiO₂ on Graphene Nanoplatelets. Journal of Physical Chemistry C, 2018, 122, 19981-19991.	3.1	10
20	Evolution of nonconformal Landau-Levich-Bretherton films of partially wetting liquids. Physical Review Fluids, 2018, 3, .	2.5	16
21	Modeling the size distribution in a fluidized bed of nanopowder. Powder Technology, 2017, 312, 347-353.	4.2	13
22	Modeling the size distribution in a fluidized bed of nanopowder. Environmental Science: Nano, 2017, 4, 670-678.	4.3	4
23	Understanding and Controlling the Aggregative Growth of Platinum Nanoparticles in Atomic Layer Deposition: An Avenue to Size Selection. Journal of Physical Chemistry Letters, 2017, 8, 975-983.	4.6	98
24	Microcapsules with a permeable hydrogel shell and an aqueous core continuously produced in a 3D microdevice by all-aqueous microfluidics. RSC Advances, 2017, 7, 11331-11337.	3.6	39
25	Tuning roughness and gloss of powder coating paint by encapsulating the coating particles with thin Al 2 O 3 films. Powder Technology, 2017, 318, 401-410.	4.2	18
26	Elastic instabilities during the flow of hydrolyzed polyacrylamide solution in porous media: effect of pore-shape and salt. Soft Matter, 2017, 13, 765-775.	2.7	85
27	Polymer conformation during flow in porous media. Soft Matter, 2017, 13, 8745-8755.	2.7	47
28	Low-temperature atomic layer deposition delivers more active and stable Pt-based catalysts. Nanoscale, 2017, 9, 10802-10810.	5.6	19
29	Modeling and simulation of diffusion-convection-reaction in heterogeneous nanochannels using OpenFOAM. AIP Conference Proceedings, 2016, , .	0.4	0
30	Deposition Mechanism of Aluminum Oxide on Quantum Dot Films at Atmospheric Pressure and Room Temperature. Journal of Physical Chemistry C, 2016, 120, 4266-4275.	3.1	29
31	Scaling of mixing time for droplets of different sizes traveling through a serpentine microchannel. RSC Advances, 2016, 6, 98812-98815.	3.6	19
32	Characterization of the Stratified Morphology of Nanoparticle Agglomerates. Journal of Physical Chemistry C, 2016, 120, 20446-20453.	3.1	11
33	Contact mechanics of highly porous oxide nanoparticle agglomerates. Journal of Nanoparticle Research, 2016, 18, 200.	1.9	26
34	Enhancing the activation of silicon carbide tracer particles for PEPT applications using gas-phase deposition of alumina at room temperature and atmospheric pressure. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 807, 108-113.	1.6	9
35	Calculating the volume of elongated bubbles and droplets in microchannels from a top view image. RSC Advances, 2015, 5, 16042-16049.	3.6	48
36	Modeling the precursor utilization in atomic layer deposition on nanostructured materials in fluidized bed reactors. Chemical Engineering Journal, 2015, 268, 384-398.	12.7	44

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37	Gas-Phase Deposition of Ultrathin Aluminium Oxide Films on Nanoparticles at Ambient Conditions. Materials, 2015, 8, 1249-1263.	2.9	39
38	A numerical technique to simulate display pixels based on electrowetting. Microfluidics and Nanofluidics, 2015, 19, 465-482.	2.2	47
39	Droplets on Inclined Plates: Local and Global Hysteresis of Pinned Capillary Surfaces. Physical Review Letters, 2014, 113, 066104.	7.8	24
40	Inhibition of a Gold-Based Catalyst in Benzyl Alcohol Oxidation: Understanding and Remediation. Catalysts, 2014, 4, 89-115.	3.5	40
41	Diffusion limitations in stagnant photocatalytic reactors. Chemical Engineering Journal, 2014, 247, 314-319.	12.7	4
42	Scale-Up Study of a Multiphase Photocatalytic Reactorâ€"Degradation of Cyanide in Water over TiO₂. Environmental Science & Technology, 2014, 48, 1574-1581.	10.0	46
43	Design and characterization of bubble-splitting distributor for scaled-out multiphase microreactors. Chemical Engineering Journal, 2014, 236, 545-554.	12.7	52
44	Benchmark numerical simulations of segmented two-phase flows in microchannels using the Volume of Fluid method. Computers and Fluids, 2013, 86, 28-36.	2.5	179
45	A capillary bioreactor to increase methane transfer and oxidation through Taylor flow formation and transfer vector addition. Chemical Engineering Journal, 2013, 217, 91-98.	12.7	23
46	Increasing the stability of high contraction ratio flow of Boger fluids by pre-deformation. Journal of Non-Newtonian Fluid Mechanics, 2013, 196, 27-35.	2.4	11
47	Dynamics of droplet breakup in a T-junction. Journal of Fluid Mechanics, 2013, 717, .	3.4	110
48	Bubbles scatter light, yet that does not hurt the performance of bubbly slurry photocatalytic reactors. Chemical Engineering Science, 2013, 100, 506-514.	3.8	12
49	On the fabrication of PDMS micromodels by rapid prototyping, and their use in twoâ€phase flow studies. Water Resources Research, 2013, 49, 2056-2067.	4.2	76
50	Modeling of low-capillary number segmented flows in microchannels using OpenFOAM. , 2012, , .		5
51	Slow growth of the Rayleigh-Plateau instability in aqueous two phase systems. Biomicrofluidics, 2012, 6, 22007-2200711.	2.4	73
52	Photocatalytic-reactor efficiencies and simplified expressions to assess their relevance in kinetic experiments. Chemical Engineering Journal, 2012, 207-208, 607-615.	12.7	35
53	Liquidâ€"Liquid Flow in a Capillary Microreactor: Hydrodynamic Flow Patterns and Extraction Performance. Industrial & Engineering Chemistry Research, 2012, 51, 1015-1026.	3.7	136
54	Rapid microfluidic screening of CO2 solubility and diffusion in pure and mixed solvents. Lab on A Chip, 2012, 12, 3387.	6.0	55

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55	Transport Limitations during Phase Transfer Catalyzed Ethyl-Benzene Oxidation: Facts and Fictions of â€œHalide Catalysisâ€. ACS Catalysis, 2012, 2, 1421-1424.	11.2	8
56	All-aqueous core-shell droplets produced in a microfluidic device. Soft Matter, 2011, 7, 9878.	2.7	89
57	Monodisperse hydrogel microspheres by forced droplet formation in aqueous two-phase systems. Lab on A Chip, 2011, 11, 620-624.	6.0	130
58	Contributors to the Netherlands issue. Lab on A Chip, 2011, 11, 1993.	6.0	0
59	Monolithic Catalysts and Reactors. Advances in Catalysis, 2011, 54, 249-327.	0.2	46
60	Micromolding of solvent resistant microfluidic devices. Lab on A Chip, 2011, 11, 2035.	6.0	26
61	Heterogeneously Catalyzed Continuousâ€Flow Hydrogenation Using Segmented Flow in Capillary Columns. ChemCatChem, 2011, 3, 1155-1157.	3.7	47
62	Reaction-diffusion analysis for one-step plasma etching and bonding of microfluidic devices. Applied Physics Letters, 2011, 98, 174102.	3.3	4
63	Mechanism of Laccaseâ€“TEMPOâ€Catalyzed Oxidation of Benzyl Alcohol. ChemCatChem, 2010, 2, 827-833.	3.7	77
64	Volatile tracer dispersion in multi-phase packed beds. Chemical Engineering Science, 2010, 65, 3972-3985.	3.8	8
65	Dynamics of droplet formation at T-shaped nozzles with elastic feed lines. Microfluidics and Nanofluidics, 2010, 8, 497-507.	2.2	27
66	Weakly bound capping agents on gold nanoparticles in catalysis: Surface poison?. Journal of Catalysis, 2010, 271, 104-114.	6.2	111
67	Catalyst performance changes induced by palladium phase transformation in the hydrogenation of benzonitrile. Journal of Catalysis, 2010, 274, 176-191.	6.2	55
68	Product desorption limitations in selective photocatalytic oxidation. Catalysis Today, 2010, 155, 302-310.	4.4	18
69	Synthesis of Anisotropic Gold Nanoparticles by Electrospraying into a Reductive-Surfactant Solution. Chemistry of Materials, 2010, 22, 1656-1663.	6.7	19
70	Transient Behavior and Stability in Miniaturized Multiphase Packed Bed Reactors. Industrial & Engineering Chemistry Research, 2010, 49, 1033-1040.	3.7	40
71	Predictive model for the size of bubbles and droplets created in microfluidic T-junctions. Lab on A Chip, 2010, 10, 2513.	6.0	210
72	Flows around Confined Bubbles and Their Importance in Triggering Pinch-Off. Physical Review Letters, 2009, 103, 214501.	7.8	126

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73	Avoiding segregation during the loading of a catalystâ€“inert powder mixture in a packed micro-bed. Applied Catalysis A: General, 2009, 365, 110-121.	4.3	29
74	Catalyst testing in a multiple-parallel, gasâ€“liquid, powder-packed bed microreactor. Applied Catalysis A: General, 2009, 365, 199-206.	4.3	40
75	Kinetic and deactivation modelling of biphenyl liquid-phase hydrogenation over bimetallic Ptâ€“Pd catalyst. Applied Catalysis B: Environmental, 2009, 88, 213-223.	20.2	27
76	Dispersion and Holdup in Multiphase Packed Bed Microreactors. Chemical Engineering and Technology, 2008, 31, 1130-1139.	1.5	37
77	Velocity fluctuations of segmented flow in microchannels. Chemical Engineering Journal, 2008, 135, S159-S165.	12.7	66
78	Tuning the support adsorption properties of Pd/SiO2 by silylation to improve the selective hydrogenation of aromatic ketones. Journal of Catalysis, 2008, 257, 55-63.	6.2	27
79	Infinite Dilution Binary Diffusion Coefficients of Hydrotreating Compounds in Tetradecane in the Temperature Range from (310 to 475) K. Journal of Chemical & Engineering Data, 2008, 53, 439-443.	1.9	11
80	Sample Dispersion for Segmented Flow in Microchannels with Rectangular Cross Section. Analytical Chemistry, 2008, 80, 1558-1567.	6.5	64
81	Kinetics of the Wet Oxidation of Phenol over an Fe/Activated Carbon Catalyst. International Journal of Chemical Reactor Engineering, 2007, 5, .	1.1	2
82	Enhancement of Catalyst Performance Using Pressure Pulses on Macroporous Structured Catalysts. Industrial & Engineering Chemistry Research, 2007, 46, 8574-8583.	3.7	17
83	Bottom-mounted ATR probes: Pitfalls that arise from gravitational effects. Catalysis Today, 2007, 126, 184-190.	4.4	7
84	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si25.gif" display="inline" overflow="scroll"><mml:mi mathvariant="normal">Î¼</mml:mi></mml:math>-PIV study of the formation of segmented flow in microfluidic T-junctions. Chemical Engineering Science, 2007, 62, 7505-7514.	3.8	247
85	Gasâ^'Liquid Mass Transfer in Benchscale Stirred TanksFluid Properties and Critical Impeller Speed for Gas Induction. Industrial & Engineering Chemistry Research, 2006, 45, 4574-4581.	3.7	36
86	Shouldnâ€™t catalysts shape up?. Catalysis Today, 2006, 111, 111-118.	4.4	97
87	Structured Reactors for Enzyme Immobilization. Chemical Engineering Research and Design, 2006, 84, 390-398.	5.6	30
88	Monoliths as Biocatalytic Reactors: Smart Gasâ€”Liquid Contacting for Process Intensification. ChemInform, 2006, 37, no.	0.0	0
89	Potential application of monolith packed columns as bioreactors, control of biofilm formation. Biotechnology and Bioengineering, 2006, 93, 238-245.	3.3	29
90	Fast gasâ€“liquidâ€“solid reactions in monoliths: A case study of nitro-aromatic hydrogenation. Catalysis Today, 2005, 105, 421-428.	4.4	28

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91	Biofilm growth pattern in honeycomb monolith packings: Effect of shear rate and substrate transport limitations. Catalysis Today, 2005, 105, 448-454.	4.4	39
92	Scaling down trickle bed reactors. Catalysis Today, 2005, 106, 227-232.	4.4	43
93	Multiphase monolith reactors: Chemical reaction engineering of segmented flow in microchannels. Chemical Engineering Science, 2005, 60, 5895-5916.	3.8	540
94	Inertial and interfacial effects on pressure drop of Taylor flow in capillaries. AICHE Journal, 2005, 51, 2428-2440.	3.6	365
95	The pressure drop experiment to determine slug lengths in multiphase monoliths. Catalysis Today, 2005, 105, 667-672.	4.4	34
96	Hydrodynamic properties of a novel â€˜open wallâ€™ monolith reactor. Catalysis Today, 2005, 105, 385-390.	4.4	10
97	Combined Hydrogenation and Isomerization Combined Hydrogenation and Isomerization under Diffusion Limiting Conditions. Industrial & Engineering Chemistry Research, 2005, 44, 9668-9675.	3.7	7
98	Scaling-up Multiphase Monolith Reactors:Â Linking Residence Time Distribution and Feed Maldistribution. Industrial & Engineering Chemistry Research, 2005, 44, 4898-4913.	3.7	72
99	Axial Mixing in Monolith Reactors:Â Effect of Channel Size. Industrial & Engineering Chemistry Research, 2005, 44, 2046-2057.	3.7	18
100	Monoliths as Biocatalytic Reactors:Â Smart Gasâ€“Liquid Contacting for Process Intensification. Industrial & Engineering Chemistry Research, 2005, 44, 9646-9652.	3.7	34
101	Structured reactors for enzyme immobilization: advantages of tuning the wall morphology. Chemical Engineering Science, 2004, 59, 5027-5033.	3.8	45
102	Monolithic Catalysts as an Alternative to Slurry Systems:Â Hydrogenation of Edible Oil. Industrial & Engineering Chemistry Research, 2004, 43, 2337-2344.	3.7	59
103	Is a monolithic loop reactor a viable option for Fischerâ€“Tropsch synthesis?. Chemical Engineering Science, 2003, 58, 583-591.	3.8	60
104	Catalysis Engineering on Three Levels. International Journal of Chemical Reactor Engineering, 2003, 1, .	1.1	1
105	Pressure Drop of Taylor Flow in Capillaries: Impact of Slug Length. , 2003, , 519.		4
106	Monolithic catalysts as more efficient three-phase reactors. Catalysis Today, 2001, 66, 157-165.	4.4	71
107	Gasâ€“liquid mass transfer of aqueous Taylor flow in monoliths. Catalysis Today, 2001, 69, 51-55.	4.4	89
108	Hydrodynamic aspects of the monolith loop reactor. Chemical Engineering Science, 2001, 56, 805-812.	3.8	127

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109	Monolithic catalysts as efficient three-phase reactors. Chemical Engineering Science, 2001, 56, 823-829.	3.8	155
110	Mass transfer characteristics of three-phase monolith reactors. Chemical Engineering Science, 2001, 56, 6015-6023.	3.8	237
111	The Focused Action of Surface Tension Versus the Brute Force of Turbulenceâ€“ Scaleable Microchannel-Based Process Intensification using Monoliths. , 0, , 149-164.		0