

Michiel T Kreutzer

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3075408/publications.pdf>

Version: 2024-02-01

110
papers

5,746
citations

70961

41
h-index

79541

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 SiO ₂ on TiO ₂ (P25) nanoparticles. <i>Chemical Engineering Journal Advances</i> , 2022, 10, 100288.	2.4	12
2	Actin networks regulate the cell membrane permeability during electroporation. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2021, 1863, 183468.	1.4	36
3	Fedâ€Batch Droplet Nanobioreactor for Controlled Growth of <i>Cyberlindnera (Pichia) jadinii</i> : A Proofâ€Ofâ€Concept Demonstration. <i>Advanced Materials Technologies</i> , 2021, 6, 2100083.	3.0	1
4	Influence of initial film radius and film thickness on the rupture of foam films. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	1
5	DNA-membrane complex formation during electroporation is DNA size-dependent. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2020, 1862, 183089.	1.4	19
6	Synthesis of a Rationally Designed Multi-Component Photocatalyst Pt:SiO ₂ :TiO ₂ (P25) with Improved Activity for Dye Degradation by Atomic Layer Deposition. <i>Nanomaterials</i> , 2020, 10, 1496.	1.9	3
7	Assessing the Role of Pt Clusters on TiO ₂ (P25) on the Photocatalytic Degradation of Acid Blue 9 and Rhodamine B. <i>Journal of Physical Chemistry C</i> , 2020, 124, 8269-8278.	1.5	30
8	Scalable microfluidic droplet on-demand generator for non-steady operation of droplet-based assays. <i>Lab on A Chip</i> , 2020, 20, 1398-1409.	3.1	8
9	Thermal fluctuations in capillary thinning of thin liquid films. <i>Journal of Fluid Mechanics</i> , 2019, 876, 1090-1107.	1.4	12
10	Response of an actin network in vesicles under electric pulses. <i>Scientific Reports</i> , 2019, 9, 8151.	1.6	43
11	Control over the formation of supramolecular material objects using reactionâ€diffusion. <i>Soft Matter</i> , 2019, 15, 4276-4283.	1.2	17
12	Photocatalytic Reactor Design: Guidelines for Kinetic Investigation. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 5349-5357.	1.8	59
13	Tailoring the multiphase flow pattern of gas and liquid through micro-packed bed of pillars. <i>Reaction Chemistry and Engineering</i> , 2019, 4, 838-851.	1.9	7
14	DNA translocation to giant unilamellar vesicles during electroporation is independent of DNA size. <i>Soft Matter</i> , 2019, 15, 9187-9194.	1.2	8
15	Breakup of elongated droplets in microfluidic T-junctions. <i>Physical Review Fluids</i> , 2019, 4, .	1.0	15
16	Nanoparticle sintering in atomic layer deposition of supported catalysts: Kinetic modeling of the size distribution. <i>Catalysis Today</i> , 2018, 316, 51-61.	2.2	44
17	The role of gel-phase domains in electroporation of vesicles. <i>Scientific Reports</i> , 2018, 8, 4758.	1.6	21
18	From Single Atoms to Nanoparticles: Autocatalysis and Metal Aggregation in Atomic Layer Deposition of Pt on TiO ₂ Nanopowder. <i>Small</i> , 2018, 14, e1800765.	5.2	50

#	ARTICLE	IF	CITATIONS
19	Oriented Attachment and Nanorod Formation in Atomic Layer Deposition of TiO ₂ on Graphene Nanoplatelets. <i>Journal of Physical Chemistry C</i> , 2018, 122, 19981-19991.	1.5	10
20	Evolution of nonconformal Landau-Levich-Bretherton films of partially wetting liquids. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	16
21	Modeling the size distribution in a fluidized bed of nanopowder. <i>Powder Technology</i> , 2017, 312, 347-353.	2.1	13
22	Modeling the size distribution in a fluidized bed of nanopowder. <i>Environmental Science: Nano</i> , 2017, 4, 670-678.	2.2	4
23	Understanding and Controlling the Aggregative Growth of Platinum Nanoparticles in Atomic Layer Deposition: An Avenue to Size Selection. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 975-983.	2.1	98
24	Microcapsules with a permeable hydrogel shell and an aqueous core continuously produced in a 3D microdevice by all-aqueous microfluidics. <i>RSC Advances</i> , 2017, 7, 11331-11337.	1.7	39
25	Tuning roughness and gloss of powder coating paint by encapsulating the coating particles with thin Al ₂ O ₃ films. <i>Powder Technology</i> , 2017, 318, 401-410.	2.1	18
26	Elastic instabilities during the flow of hydrolyzed polyacrylamide solution in porous media: effect of pore-shape and salt. <i>Soft Matter</i> , 2017, 13, 765-775.	1.2	85
27	Polymer conformation during flow in porous media. <i>Soft Matter</i> , 2017, 13, 8745-8755.	1.2	47
28	Low-temperature atomic layer deposition delivers more active and stable Pt-based catalysts. <i>Nanoscale</i> , 2017, 9, 10802-10810.	2.8	19
29	Modeling and simulation of diffusion-convection-reaction in heterogeneous nanochannels using OpenFOAM. <i>AIP Conference Proceedings</i> , 2016, , .	0.3	0
30	Deposition Mechanism of Aluminum Oxide on Quantum Dot Films at Atmospheric Pressure and Room Temperature. <i>Journal of Physical Chemistry C</i> , 2016, 120, 4266-4275.	1.5	29
31	Scaling of mixing time for droplets of different sizes traveling through a serpentine microchannel. <i>RSC Advances</i> , 2016, 6, 98812-98815.	1.7	19
32	Characterization of the Stratified Morphology of Nanoparticle Agglomerates. <i>Journal of Physical Chemistry C</i> , 2016, 120, 20446-20453.	1.5	11
33	Contact mechanics of highly porous oxide nanoparticle agglomerates. <i>Journal of Nanoparticle Research</i> , 2016, 18, 200.	0.8	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. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 807, 108-113.	0.7	9
35	Calculating the volume of elongated bubbles and droplets in microchannels from a top view image. <i>RSC Advances</i> , 2015, 5, 16042-16049.	1.7	48
36	Modeling the precursor utilization in atomic layer deposition on nanostructured materials in fluidized bed reactors. <i>Chemical Engineering Journal</i> , 2015, 268, 384-398.	6.6	44

#	ARTICLE	IF	CITATIONS
37	Gas-Phase Deposition of Ultrathin Aluminium Oxide Films on Nanoparticles at Ambient Conditions. <i>Materials</i> , 2015, 8, 1249-1263.	1.3	39
38	A numerical technique to simulate display pixels based on electrowetting. <i>Microfluidics and Nanofluidics</i> , 2015, 19, 465-482.	1.0	47
39	Droplets on Inclined Plates: Local and Global Hysteresis of Pinned Capillary Surfaces. <i>Physical Review Letters</i> , 2014, 113, 066104.	2.9	24
40	Inhibition of a Gold-Based Catalyst in Benzyl Alcohol Oxidation: Understanding and Remediation. <i>Catalysts</i> , 2014, 4, 89-115.	1.6	40
41	Diffusion limitations in stagnant photocatalytic reactors. <i>Chemical Engineering Journal</i> , 2014, 247, 314-319.	6.6	4
42	Scale-Up Study of a Multiphase Photocatalytic Reactorâ€™ Degradation of Cyanide in Water over TiO_2 . <i>Environmental Science & Technology</i> , 2014, 48, 1574-1581.	4.6	46
43	Design and characterization of bubble-splitting distributor for scaled-out multiphase microreactors. <i>Chemical Engineering Journal</i> , 2014, 236, 545-554.	6.6	52
44	Benchmark numerical simulations of segmented two-phase flows in microchannels using the Volume of Fluid method. <i>Computers and Fluids</i> , 2013, 86, 28-36.	1.3	179
45	A capillary bioreactor to increase methane transfer and oxidation through Taylor flow formation and transfer vector addition. <i>Chemical Engineering Journal</i> , 2013, 217, 91-98.	6.6	23
46	Increasing the stability of high contraction ratio flow of Boger fluids by pre-deformation. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 196, 27-35.	1.0	11
47	Dynamics of droplet breakup in a T-junction. <i>Journal of Fluid Mechanics</i> , 2013, 717, .	1.4	110
48	Bubbles scatter light, yet that does not hurt the performance of bubbly slurry photocatalytic reactors. <i>Chemical Engineering Science</i> , 2013, 100, 506-514.	1.9	12
49	On the fabrication of PDMS micromodels by rapid prototyping, and their use in twoâ€™phase flow studies. <i>Water Resources Research</i> , 2013, 49, 2056-2067.	1.7	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. <i>Biomicrofluidics</i> , 2012, 6, 22007-2200711.	1.2	73
52	Photocatalytic-reactor efficiencies and simplified expressions to assess their relevance in kinetic experiments. <i>Chemical Engineering Journal</i> , 2012, 207-208, 607-615.	6.6	35
53	Liquidâ€™Liquid Flow in a Capillary Microreactor: Hydrodynamic Flow Patterns and Extraction Performance. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 1015-1026.	1.8	136
54	Rapid microfluidic screening of CO ₂ solubility and diffusion in pure and mixed solvents. <i>Lab on A Chip</i> , 2012, 12, 3387.	3.1	55

#	ARTICLE	IF	CITATIONS
55	Transport Limitations during Phase Transfer Catalyzed Ethyl-Benzene Oxidation: Facts and Fictions of Halide Catalysis. ACS Catalysis, 2012, 2, 1421-1424.	5.5	8
56	All-aqueous core-shell droplets produced in a microfluidic device. Soft Matter, 2011, 7, 9878.	1.2	89
57	Monodisperse hydrogel microspheres by forced droplet formation in aqueous two-phase systems. Lab on A Chip, 2011, 11, 620-624.	3.1	130
58	Monolithic Catalysts and Reactors. Advances in Catalysis, 2011, 54, 249-327.	0.1	46
59	Micromolding of solvent resistant microfluidic devices. Lab on A Chip, 2011, 11, 2035.	3.1	26
60	Heterogeneously Catalyzed Continuous-Flow Hydrogenation Using Segmented Flow in Capillary Columns. ChemCatChem, 2011, 3, 1155-1157.	1.8	47
61	Reaction-diffusion analysis for one-step plasma etching and bonding of microfluidic devices. Applied Physics Letters, 2011, 98, 174102.	1.5	4
62	Mechanism of Laccase-TEMPO-Catalyzed Oxidation of Benzyl Alcohol. ChemCatChem, 2010, 2, 827-833.	1.8	77
63	Volatile tracer dispersion in multi-phase packed beds. Chemical Engineering Science, 2010, 65, 3972-3985.	1.9	8
64	Dynamics of droplet formation at T-shaped nozzles with elastic feed lines. Microfluidics and Nanofluidics, 2010, 8, 497-507.	1.0	27
65	Weakly bound capping agents on gold nanoparticles in catalysis: Surface poison?. Journal of Catalysis, 2010, 271, 104-114.	3.1	111
66	Catalyst performance changes induced by palladium phase transformation in the hydrogenation of benzonitrile. Journal of Catalysis, 2010, 274, 176-191.	3.1	55
67	Product desorption limitations in selective photocatalytic oxidation. Catalysis Today, 2010, 155, 302-310.	2.2	18
68	Synthesis of Anisotropic Gold Nanoparticles by Electro spraying into a Reductive-Surfactant Solution. Chemistry of Materials, 2010, 22, 1656-1663.	3.2	19
69	Transient Behavior and Stability in Miniaturized Multiphase Packed Bed Reactors. Industrial & Engineering Chemistry Research, 2010, 49, 1033-1040.	1.8	40
70	Predictive model for the size of bubbles and droplets created in microfluidic T-junctions. Lab on A Chip, 2010, 10, 2513.	3.1	210
71	Flows around Confined Bubbles and Their Importance in Triggering Pinch-Off. Physical Review Letters, 2009, 103, 214501.	2.9	126
72	Avoiding segregation during the loading of a catalyst-inert powder mixture in a packed micro-bed. Applied Catalysis A: General, 2009, 365, 110-121.	2.2	29

#	ARTICLE	IF	CITATIONS
73	Catalyst testing in a multiple-parallel, gas-liquid, powder-packed bed microreactor. Applied Catalysis A: General, 2009, 365, 199-206.	2.2	40
74	Kinetic and deactivation modelling of biphenyl liquid-phase hydrogenation over bimetallic Pt-Pd catalyst. Applied Catalysis B: Environmental, 2009, 88, 213-223.	10.8	27
75	Dispersion and Holdup in Multiphase Packed Bed Microreactors. Chemical Engineering and Technology, 2008, 31, 1130-1139.	0.9	37
76	Velocity fluctuations of segmented flow in microchannels. Chemical Engineering Journal, 2008, 135, S159-S165.	6.6	66
77	Tuning the support adsorption properties of Pd/SiO ₂ by silylation to improve the selective hydrogenation of aromatic ketones. Journal of Catalysis, 2008, 257, 55-63.	3.1	27
78	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.	1.0	11
79	Sample Dispersion for Segmented Flow in Microchannels with Rectangular Cross Section. Analytical Chemistry, 2008, 80, 1558-1567.	3.2	64
80	Kinetics of the Wet Oxidation of Phenol over an Fe/Activated Carbon Catalyst. International Journal of Chemical Reactor Engineering, 2007, 5, .	0.6	2
81	Enhancement of Catalyst Performance Using Pressure Pulses on Macroporous Structured Catalysts. Industrial & Engineering Chemistry Research, 2007, 46, 8574-8583.	1.8	17
82	Bottom-mounted ATR probes: Pitfalls that arise from gravitational effects. Catalysis Today, 2007, 126, 184-190.	2.2	7
83	$\frac{1}{4}$ PIV study of the formation of segmented flow in microfluidic T-junctions. Chemical Engineering Science, 2007, 62, 7505-7514.	1.9	247
84	Gas-Liquid Mass Transfer in Benchscale Stirred Tanks Fluid Properties and Critical Impeller Speed for Gas Induction. Industrial & Engineering Chemistry Research, 2006, 45, 4574-4581.	1.8	36
85	Shouldn't catalysts shape up?. Catalysis Today, 2006, 111, 111-118.	2.2	97
86	Structured Reactors for Enzyme Immobilization. Chemical Engineering Research and Design, 2006, 84, 390-398.	2.7	30
87	Monoliths as Biocatalytic Reactors: Smart Gas-Liquid Contacting for Process Intensification. ChemInform, 2006, 37, no.	0.1	0
88	Potential application of monolith packed columns as bioreactors, control of biofilm formation. Biotechnology and Bioengineering, 2006, 93, 238-245.	1.7	29
89	Fast gas-liquid-solid reactions in monoliths: A case study of nitro-aromatic hydrogenation. Catalysis Today, 2005, 105, 421-428.	2.2	28
90	Biofilm growth pattern in honeycomb monolith packings: Effect of shear rate and substrate transport limitations. Catalysis Today, 2005, 105, 448-454.	2.2	39

#	ARTICLE	IF	CITATIONS
91	Scaling down trickle bed reactors. <i>Catalysis Today</i> , 2005, 106, 227-232.	2.2	43
92	Multiphase monolith reactors: Chemical reaction engineering of segmented flow in microchannels. <i>Chemical Engineering Science</i> , 2005, 60, 5895-5916.	1.9	540
93	Inertial and interfacial effects on pressure drop of Taylor flow in capillaries. <i>AIChE Journal</i> , 2005, 51, 2428-2440.	1.8	365
94	The pressure drop experiment to determine slug lengths in multiphase monoliths. <i>Catalysis Today</i> , 2005, 105, 667-672.	2.2	34
95	Hydrodynamic properties of a novel "open wall" monolith reactor. <i>Catalysis Today</i> , 2005, 105, 385-390.	2.2	10
96	Combined Hydrogenation and Isomerization under Diffusion Limiting Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 9668-9675.	1.8	7
97	Scaling-up Multiphase Monolith Reactors: Linking Residence Time Distribution and Feed Maldistribution. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 4898-4913.	1.8	72
98	Axial Mixing in Monolith Reactors: Effect of Channel Size. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 2046-2057.	1.8	18
99	Monoliths as Biocatalytic Reactors: Smart Gas-Liquid Contacting for Process Intensification. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 9646-9652.	1.8	34
100	Structured reactors for enzyme immobilization: advantages of tuning the wall morphology. <i>Chemical Engineering Science</i> , 2004, 59, 5027-5033.	1.9	45
101	Monolithic Catalysts as an Alternative to Slurry Systems: Hydrogenation of Edible Oil. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 2337-2344.	1.8	59
102	Is a monolithic loop reactor a viable option for Fischer-Tropsch synthesis?. <i>Chemical Engineering Science</i> , 2003, 58, 583-591.	1.9	60
103	Catalysis Engineering on Three Levels. <i>International Journal of Chemical Reactor Engineering</i> , 2003, 1, .	0.6	1
104	Pressure Drop of Taylor Flow in Capillaries: Impact of Slug Length. , 2003, , 519.		4
105	Monolithic catalysts as more efficient three-phase reactors. <i>Catalysis Today</i> , 2001, 66, 157-165.	2.2	71
106	Gas-liquid mass transfer of aqueous Taylor flow in monoliths. <i>Catalysis Today</i> , 2001, 69, 51-55.	2.2	89
107	Hydrodynamic aspects of the monolith loop reactor. <i>Chemical Engineering Science</i> , 2001, 56, 805-812.	1.9	127
108	Monolithic catalysts as efficient three-phase reactors. <i>Chemical Engineering Science</i> , 2001, 56, 823-829.	1.9	155

#	ARTICLE	IF	CITATIONS
109	Mass transfer characteristics of three-phase monolith reactors. Chemical Engineering Science, 2001, 56, 6015-6023.	1.9	237
110	The Focused Action of Surface Tension Versus the Brute Force of Turbulenceâ€“ Scaleable Microchannel-Based Process Intensification using Monoliths. , 0, , 149-164.		0