

Guangwen Chen

List of Publications by Year in descending order

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109
papers

5,389
citations

57631

44
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91712

69
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110
all docs

110
docs citations

110
times ranked

3140
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancement of gas-liquid mass transfer and mixing in zigzag microreactor under ultrasonic oscillation. <i>Chemical Engineering Science</i> , 2022, 247, 117094.	1.9	17
2	Continuous synthesis of TiO ₂ -supported noble metal nanoparticles and their application in ammonia borane hydrolysis. <i>Chemical Engineering Science</i> , 2022, 251, 117479.	1.9	19
3	Effect of ultrasonic waveforms on gas-liquid mass transfer in microreactors. <i>AIChE Journal</i> , 2022, 68, .	1.8	8
4	The separation and enrichment of molecules with part amphipathy using a novel ultrasonic emulsion-enrichment method. <i>Chemical Engineering Journal</i> , 2022, 444, 136682.	6.6	5
5	Dean instability and vortex-induced mixing for two miscible fluids in T-micromixers. <i>Chemical Engineering and Processing: Process Intensification</i> , 2022, 176, 108975.	1.8	6
6	Ultrasonic emulsification: basic characteristics, cavitation, mechanism, devices and application. <i>Frontiers of Chemical Science and Engineering</i> , 2022, 16, 1560-1583.	2.3	16
7	Using expansion units to improve CO ₂ absorption for natural gas purification - A study on the hydrodynamics and mass transfer. <i>Chinese Journal of Chemical Engineering</i> , 2021, 29, 35-46.	1.7	2
8	Two-phase flow and mass transfer in microchannels: A review from local mechanism to global models. <i>Chemical Engineering Science</i> , 2021, 229, 116017.	1.9	81
9	Effect of mixing on mass transfer characterization in continuous slugs and dispersed droplets in biphasic slug flow microreactors. <i>Chemical Engineering Journal</i> , 2021, 406, 126885.	6.6	27
10	Hydrodynamics and mass transfer of Taylor bubbles flowing in non-Newtonian fluids in a microchannel. <i>Chemical Engineering Science</i> , 2021, 231, 116299.	1.9	16
11	Ultrasound-assisted gas-liquid mass transfer process in microreactors: The influence of surfactant, channel size and ultrasound frequency. <i>Chemical Engineering Journal</i> , 2021, 405, 126720.	6.6	25
12	A colorimetric technique to characterize mass transfer during liquid-liquid slug flow in circular capillaries. <i>MethodsX</i> , 2021, 8, 101346.	0.7	2
13	CFD Simulation of Internal Flow and Mixing within Droplets in a T-Junction Microchannel. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 6038-6047.	1.8	15
14	Numerical investigation on the hydrodynamics of Taylor flow in ultrasonically oscillating microreactors. <i>Chemical Engineering Science</i> , 2021, 235, 116477.	1.9	17
15	Effect of fluid viscosities on the liquid-liquid slug flow and pressure drop in a rectangular microreactor. <i>Chemical Engineering Science</i> , 2021, 241, 116697.	1.9	11
16	Role of ultrasonic oscillation in chemical processes in microreactors: A mesoscale issue. <i>Particology</i> , 2020, 48, 88-99.	2.0	33
17	Hydrodynamics and local mass transfer characterization under gas-liquid-liquid slug flow in a rectangular microchannel. <i>AIChE Journal</i> , 2020, 66, e16805.	1.8	15
18	Numerical Investigation of Gas-Liquid Reacting Flow in a Jet-Type Singlet Oxygen Generator. <i>Chemical Engineering and Technology</i> , 2020, 43, 1859-1865.	0.9	0

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19	The effect of liquid viscosity and modeling of mass transfer in gas-liquid slug flow in a rectangular microchannel. <i>AICHE Journal</i> , 2020, 66, e16934.	1.8	31
20	Microfluidic synthesis of ultrasmall Co nanoparticles over reduced graphene oxide and their catalytic properties. <i>AICHE Journal</i> , 2020, 66, e16950.	1.8	10
21	Manipulation of gas-liquid-liquid systems in continuous flow microreactors for efficient reaction processes. <i>Journal of Flow Chemistry</i> , 2020, 10, 103-121.	1.2	39
22	Theoretical approach to CO ₂ absorption in microreactors and reactor volume prediction. <i>Chemical Engineering and Processing: Process Intensification</i> , 2020, 150, 107904.	1.8	6
23	Continuous Synthesis of Reduced Graphene Oxide-Supported Bimetallic NPs in Liquid-Liquid Segmented Flow. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 8456-8468.	1.8	8
24	Mass transfer in liquid-liquid Taylor flow in a microchannel: Local concentration distribution, mass transfer regime and the effect of fluid viscosity. <i>Chemical Engineering Science</i> , 2020, 223, 115734.	1.9	42
25	Gas-liquid hydrodynamics and mass transfer in microreactors under ultrasonic oscillation. <i>Chemical Engineering Journal</i> , 2020, 397, 125411.	6.6	31
26	Acoustic cavitation and ultrasound-assisted nitration process in ultrasonic microreactors: The effects of channel dimension, solvent properties and temperature. <i>Chemical Engineering Journal</i> , 2019, 374, 68-78.	6.6	45
27	Characteristics of gas-liquid Taylor flow with different liquid viscosities in a rectangular microchannel. <i>Chemical Engineering Journal</i> , 2019, 373, 437-445.	6.6	41
28	Ethylene/ethane absorption with AgNO ₃ solutions in ultrasonic microreactors. <i>Chemical Engineering and Processing: Process Intensification</i> , 2019, 137, 137-147.	1.8	11
29	Ultrasonic Enhancement of CO ₂ Desorption from MDEA Solution in Microchannels. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 1711-1719.	1.8	17
30	Hydrodynamics and mass transfer characteristics of liquid-liquid slug flow in microchannels: The effects of temperature, fluid properties and channel size. <i>Chemical Engineering Journal</i> , 2019, 358, 794-805.	6.6	82
31	Facile Preparation of <i>N</i> -Alkyl-2-pyrrolidones in a Continuous-Flow Microreactor. <i>Organic Process Research and Development</i> , 2018, 22, 504-511.	1.3	8
32	Continuous Synthesis of Ag/AgCl/ZnO Composites Using Flow Chemistry and Photocatalytic Application. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 3263-3273.	1.8	40
33	Template-free synthesis of Co ₃ O ₄ nanorings and their catalytic application. <i>CrystEngComm</i> , 2018, 20, 679-688.	1.3	11
34	Kinetics study of heterogeneous continuous-flow nitration of trifluoromethoxybenzene. <i>Reaction Chemistry and Engineering</i> , 2018, 3, 379-387.	1.9	24
35	Formation of liquid-liquid slug flow in a microfluidic T-junction: Effects of fluid properties and leakage flow. <i>AICHE Journal</i> , 2018, 64, 346-357.	1.8	59
36	Liquid-liquid two-phase flow in ultrasonic microreactors: Cavitation, emulsification, and mass transfer enhancement. <i>AICHE Journal</i> , 2018, 64, 1412-1423.	1.8	63

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37	Bubble splitting under gas-liquid-liquid three-phase flow in a double T-junction microchannel. <i>AIChE Journal</i> , 2018, 64, 376-388.	1.8	19
38	Continuous Synthesis of Highly Uniform Noble Metal Nanoparticles over Reduced Graphene Oxide Using Microreactor Technology. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 8719-8726.	3.2	17
39	Multiphase processes with ionic liquids in microreactors: hydrodynamics, mass transfer and applications. <i>Chemical Engineering Science</i> , 2018, 189, 340-359.	1.9	83
40	Intensification of liquid-liquid two-phase mass transfer by oscillating bubbles in ultrasonic microreactor. <i>Chemical Engineering Science</i> , 2018, 186, 122-134.	1.9	55
41	Toward the Efficient Synthesis of Pseudoionone from Citral in a Continuous-Flow Microreactor. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 11288-11298.	1.8	20
42	Heat Transfer Characteristics of CO ₂ Desorption from N-Methyldiethanolamine Solution in a Microchannel Reactor. <i>Chemical Engineering and Technology</i> , 2018, 41, 1398-1405.	0.9	15
43	Ethylene/ethane separation and mass transfer characteristics through absorption by AgNO ₃ solutions in microchannels. <i>Chemical Engineering and Processing: Process Intensification</i> , 2018, 130, 110-118.	1.8	9
44	Experimental and kinetic study of the nitration of 2-ethylhexanol in capillary microreactors. <i>Chemical Engineering and Processing: Process Intensification</i> , 2017, 117, 179-185.	1.8	41
45	Intensified CO ₂ absorption in a microchannel reactor under elevated pressures. <i>Chemical Engineering Journal</i> , 2017, 319, 179-190.	6.6	47
46	Process Development and Scale-up of the Continuous Flow Nitration of Trifluoromethoxybenzene. <i>Organic Process Research and Development</i> , 2017, 21, 1843-1850.	1.3	49
47	Bubble/droplet formation and mass transfer during gas-liquid-liquid segmented flow with soluble gas in a microchannel. <i>AIChE Journal</i> , 2017, 63, 1727-1739.	1.8	33
48	Mixing and residence time distribution in ultrasonic microreactors. <i>AIChE Journal</i> , 2017, 63, 1404-1418.	1.8	75
49	Desorption of carbon dioxide from aqueous MDEA solution in a microchannel reactor. <i>Chemical Engineering Journal</i> , 2017, 307, 776-784.	6.6	25
50	Microfluidic synthesis of Ag@Cu ₂ O core-shell nanoparticles with enhanced photocatalytic activity. <i>Journal of Colloid and Interface Science</i> , 2017, 486, 16-26.	5.0	66
51	Cyclization of Pseudoionone Catalyzed by Sulfuric Acid in a Microreactor. <i>Chemical Engineering and Technology</i> , 2016, 39, 849-856.	0.9	11
52	Chemical Engineering in China. <i>Chemical Engineering and Technology</i> , 2016, 39, 806-806.	0.9	0
53	Development of a Continuous-Flow Microreactor for Asymmetric Epoxidation of Electron-Deficient Olefins. <i>Synthesis</i> , 2016, 48, 2653-2658.	1.2	13
54	Continuous synthesis of hedgehog-like Ag-ZnO nanoparticles in a two-stage microfluidic system. <i>RSC Advances</i> , 2016, 6, 45503-45511.	1.7	24

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55	Facile Synthesis of Co ₃ O ₄ with Different Morphologies via Oxidation Kinetic Control and Its Application in Hydrogen Peroxide Decomposition. <i>Crystal Growth and Design</i> , 2016, 16, 6286-6293.	1.4	12
56	High throughput preparation of magnesium hydroxide flame retardant via microreaction technology. <i>RSC Advances</i> , 2016, 6, 92670-92681.	1.7	15
57	Development of a Continuous-Flow Microreactor for Asymmetric Sulfoxidation Using a Biomimetic Manganese Catalyst. <i>Advanced Synthesis and Catalysis</i> , 2016, 358, 667-671.	2.1	27
58	Hydrodynamics and mass transfer of oscillating gas-liquid flow in ultrasonic microreactors. <i>AIChE Journal</i> , 2016, 62, 1294-1307.	1.8	68
59	On the leakage flow around gas bubbles in slug flow in a microchannel. <i>AIChE Journal</i> , 2015, 61, 3964-3972.	1.8	46
60	A high-power ultrasonic microreactor and its application in gas-liquid mass transfer intensification. <i>Lab on A Chip</i> , 2015, 15, 1145-1152.	3.1	76
61	A self-sustained, complete and miniaturized methanol fuel processor for proton exchange membrane fuel cell. <i>Journal of Power Sources</i> , 2015, 287, 100-107.	4.0	10
62	Gas-liquid flow and mass transfer in a microchannel under elevated pressures. <i>Chemical Engineering Science</i> , 2015, 123, 137-145.	1.9	78
63	An experimental study on the numbering-up of microchannels for liquid mixing. <i>Lab on A Chip</i> , 2015, 15, 179-187.	3.1	53
64	Numerical simulation of Taylor bubble formation in a microchannel with a converging shape mixing junction. <i>Chemical Engineering Journal</i> , 2015, 262, 616-627.	6.6	47
65	Effect of Viscosity on the Hydrodynamics of Liquid Processes in Microchannels. <i>Chemical Engineering and Technology</i> , 2014, 37, 427-434.	0.9	37
66	The effect of system pressure on gas-liquid slug flow in a microchannel. <i>AIChE Journal</i> , 2014, 60, 1132-1142.	1.8	60
67	An online method to measure mass transfer of slug flow in a microchannel. <i>Chemical Engineering Science</i> , 2014, 112, 15-24.	1.9	106
68	A Numerical Study on Liquid Mixing in Multichannel Micromixers. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 390-401.	1.8	42
69	High-Throughput Preparation of Monodispersed Layered Double Hydroxides via Microreaction Technology. <i>Journal of Flow Chemistry</i> , 2014, 4, 164-167.	1.2	12
70	Process analysis on CO ₂ absorption by monoethanolamine solutions in microchannel reactors. <i>Chemical Engineering Journal</i> , 2013, 225, 120-127.	6.6	51
71	Highly efficient synthesis of cyclic carbonate with CO ₂ catalyzed by ionic liquid in a microreactor. <i>Green Chemistry</i> , 2013, 15, 446-452.	4.6	108
72	Formation characteristics of Taylor bubbles in a microchannel with a converging shape mixing junction. <i>Chemical Engineering Journal</i> , 2013, 223, 99-109.	6.6	33

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73	Gas-liquid two-phase flow in microchannel at elevated pressure. <i>Chemical Engineering Science</i> , 2013, 87, 122-132.	1.9	67
74	Safe, efficient and selective synthesis of dinitro herbicides via a multifunctional continuous-flow microreactor: one-step dinitration with nitric acid as agent. <i>Green Chemistry</i> , 2013, 15, 91-94.	4.6	62
75	The ozone mass transfer characteristics and ozonation of pentachlorophenol in a novel microchannel reactor. <i>Chemical Engineering Journal</i> , 2012, 210, 374-384.	6.6	29
76	Enhancement of catalytic activity over TiO ₂ -modified Al ₂ O ₃ and ZnO-Cr ₂ O ₃ composite catalyst for hydrogen production via dimethyl ether steam reforming. <i>Applied Catalysis A: General</i> , 2012, 433-434, 26-34.	2.2	38
77	A simple and efficient synthesis protocol for sulfonation of nitrobenzene under solvent-free conditions via a microreactor. <i>RSC Advances</i> , 2012, 2, 5637.	1.7	25
78	Influence of hydrodynamics on liquid mixing during Taylor flow in a microchannel. <i>AIChE Journal</i> , 2012, 58, 1660-1670.	1.8	52
79	Hydrogen production by steam reforming of dimethyl ether over ZnO-Al ₂ O ₃ bi-functional catalyst. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 8360-8369.	3.8	35
80	Process Characteristics of CO ₂ Absorption by Aqueous Monoethanolamine in a Microchannel Reactor. <i>Chinese Journal of Chemical Engineering</i> , 2012, 20, 111-119.	1.7	67
81	The intensification of rapid reactions for multiphase systems in a microchannel reactor by packing microparticles. <i>AIChE Journal</i> , 2011, 57, 1409-1418.	1.8	47
82	Ideal micromixing performance in packed microchannels. <i>Chemical Engineering Science</i> , 2011, 66, 2912-2919.	1.9	66
83	High-temperature steam reforming of methanol over ZnO-Al ₂ O ₃ catalysts. <i>Applied Catalysis B: Environmental</i> , 2011, 101, 409-416.	10.8	56
84	Flow distribution and mass transfer in a parallel microchannel contactor integrated with constructal distributors. <i>AIChE Journal</i> , 2010, 56, 298-317.	1.8	53
85	Effect of surface properties on the flow characteristics and mass transfer performance in microchannels. <i>Chemical Engineering Science</i> , 2010, 65, 1563-1570.	1.9	64
86	Liquid-liquid two-phase flow and mass transfer characteristics in packed microchannels. <i>Chemical Engineering Science</i> , 2010, 65, 3947-3956.	1.9	133
87	Optimization design of microchannel heat sink geometry for high power laser mirror. <i>Applied Thermal Engineering</i> , 2010, 30, 1644-1651.	3.0	16
88	Thermal Performance of Crossflow Microchannel Heat Exchangers. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 6215-6220.	1.8	25
89	Investigation of Nitration Processes of iso-Octanol with Mixed Acid in a Microreactor. <i>Chinese Journal of Chemical Engineering</i> , 2009, 17, 412-418.	1.7	45
90	Hydrodynamics and mass transfer of gas-liquid flow in a falling film microreactor. <i>AIChE Journal</i> , 2009, 55, 1110-1120.	1.8	67

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91	Intensification of liquid-liquid two-phase mass transfer by gas agitation in a microchannel. <i>AIChE Journal</i> , 2009, 55, 1948-1958.	1.8	106
92	An experimental study of air-water Taylor flow and mass transfer inside square microchannels. <i>Chemical Engineering Science</i> , 2009, 64, 3697-3708.	1.9	175
93	Testing and Design of a Microchannel Heat Exchanger with Multiple Plates. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 4535-4541.	1.8	24
94	Influence of precursors on the catalytic activity of alumina for bio-ethanol dehydration in microchannel reactors. <i>International Journal of Global Warming</i> , 2009, 1, 456.	0.2	1
95	A high throughput methodology for continuous preparation of monodispersed nanocrystals in microfluidic reactors. <i>Chemical Engineering Journal</i> , 2008, 135, 209-215.	6.6	82
96	An experimental investigation of gas-liquid two-phase flow in single microchannel contactors. <i>Chemical Engineering Science</i> , 2008, 63, 4189-4202.	1.9	158
97	Gas-Liquid Microreaction Technology: Recent Developments and Future Challenges. <i>Chinese Journal of Chemical Engineering</i> , 2008, 16, 663-669.	1.7	89
98	Liquid-liquid two-phase mass transfer in the T-junction microchannels. <i>AIChE Journal</i> , 2007, 53, 3042-3053.	1.8	203
99	Methanol oxidation reforming over a ZnO-Cr ₂ O ₃ /CeO ₂ -ZrO ₂ /Al ₂ O ₃ catalyst in a monolithic reactor. <i>Catalysis Today</i> , 2007, 125, 97-102.	2.2	15
100	Gas phase partial oxidation of toluene over modified V ₂ O ₅ /TiO ₂ catalysts in a microreactor. <i>Chemical Engineering Journal</i> , 2007, 127, 39-46.	6.6	33
101	Pd-Zn/Cu-Zn-Al catalysts prepared for methanol oxidation reforming in microchannel reactors. <i>Catalysis Today</i> , 2007, 120, 63-70.	2.2	39
102	Catalytic dehydration of bioethanol to ethylene over TiO ₂ / γ -Al ₂ O ₃ catalysts in microchannel reactors. <i>Catalysis Today</i> , 2007, 125, 111-119.	2.2	184
103	Hydrodynamics and mass transfer characteristics in gas-liquid flow through a rectangular microchannel. <i>Chemical Engineering Science</i> , 2007, 62, 2096-2108.	1.9	435
104	Methanol-steam reforming over a ZnO-Cr ₂ O ₃ /CeO ₂ -ZrO ₂ /Al ₂ O ₃ catalyst. <i>Chemical Engineering Journal</i> , 2006, 119, 93-98.	6.6	48
105	Liquid-liquid two-phase flow patterns in a rectangular microchannel. <i>AIChE Journal</i> , 2006, 52, 4052-4060.	1.8	284
106	Gas phase catalytic partial oxidation of toluene in a microchannel reactor. <i>Catalysis Today</i> , 2005, 110, 171-178.	2.2	38
107	NO _x storage-reduction over Pt/Mg-Al-O catalysts with different Mg/Al atomic ratios. <i>Korean Journal of Chemical Engineering</i> , 2004, 21, 595-600.	1.2	9
108	CO selective oxidation in a microchannel reactor for PEM fuel cell. <i>Chemical Engineering Journal</i> , 2004, 101, 101-106.	6.6	99

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109	Pressure drops of single and two-phase flows through T-type microchannel mixers. Chemical Engineering Journal, 2004, 102, 11-24.	6.6	54