Xunli Zhang

List of Publications by Year
in descending order

101 papers	4,114 citations	109321 35 h-index	123424 61 g-index
104 all docs	104 docs citations	104 times ranked	4640 citing authors

#	Article	IF	Citations
1	Micro reactors: principles and applications in organic synthesis. Tetrahedron, 2002, 58, 4735-4757.	1.9	456
2	Micromixing Within Microfluidic Devices. Topics in Current Chemistry, 2011, 304, 27-68.	4.0	292
3	Microfluidic and lab-on-a-chip preparation routes for organic nanoparticles and vesicular systems for nanomedicine applications. Advanced Drug Delivery Reviews, 2013, 65, 1496-1532.	13.7	196
4	Effects of Microwave Dielectric Heating on Heterogeneous Catalysis. Catalysis Letters, 2003, 88, 33-38.	2.6	171
5	Applications of microwave dielectric heating in environment-related heterogeneous gas-phase catalytic systems. Inorganica Chimica Acta, 2006, 359, 3421-3433.	2.4	160
6	A Review of Biodegradable Natural Polymer-Based Nanoparticles for Drug Delivery Applications. Nanomaterials, 2020, 10, 1970.	4.1	156
7	Apparent equilibrium shifts and hot-spot formation for catalytic reactions induced by microwave dielectric heating. Chemical Communications, 1999, , 975-976.	4.1	132
8	Cold sodium hydroxide/urea based pretreatment of bamboo for bioethanol production: Characterization of the cellulose rich fraction. Industrial Crops and Products, 2010, 32, 551-559.	5.2	132
9	Microwave assisted catalytic reduction of sulfur dioxide with methane over MoS2 catalysts. Applied Catalysis B: Environmental, 2001, 33, 137-148.	20.2	91
10	Monitoring of chemical reactions within microreactors using an inverted Raman microscopic spectrometer. Electrophoresis, 2003, 24, 3239-3245.	2.4	88
11	Carbon Dioxide Reforming of Methane with Pt Catalysts Using Microwave Dielectric Heating. Catalysis Letters, 2003, 88, 129-139.	2.6	83
12	Biogenic Nanoparticles: Synthesis, Characterisation and Applications. Applied Sciences (Switzerland), 2021, 11, 2598.	2.5	79
13	Characterization of cellular chemical dynamics using combined microfluidic and Raman techniques. Analytical and Bioanalytical Chemistry, 2008, 390, 833-840.	3.7	73
14	Materials Matter in Microfluidic Devices. MRS Bulletin, 2006, 31, 95-99.	3.5	65
15	Oscillatory behaviour during the oxidation of methane over palladium metal catalysts. Applied Catalysis A: General, 2003, 240, 183-197.	4.3	62
16	UV and visible light screening by individual sporopollenin exines derived from Lycopodium clavatum (club moss) and Ambrosia trifida (giant ragweed). Journal of Photochemistry and Photobiology B: Biology, 2011, 102, 209-217.	3.8	58
17	Attachment and detachment of living cells on modified microchannel surfaces in a microfluidic-based lab-on-a-chip system. Chemical Engineering Journal, 2008, 135, S82-S88.	12.7	54
18	Review of the Development of Methods for Characterization of Microspheres for Use in Embolotherapy: Translating Bench to Cathlab. Advanced Healthcare Materials, 2017, 6, 1601291.	7.6	54

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19	Contrast agent-free sonoporation: The use of an ultrasonic standing wave microfluidic system for the delivery of pharmaceutical agents. Biomicrofluidics, 2011, 5, 44108-4410815.	2.4	53
20	Oscillatory behaviour observed in the rate of oxidation of methane over metal catalysts. Catalysis Today, 2005, 105, 283-294.	4.4	51
21	Dynamic changes in gas-liquid mass transfer during Taylor flow in long serpentine square microchannels. Chemical Engineering Science, 2018, 182, 17-27.	3.8	51
22	Mechanism of co-nanoprecipitation of organic actives and block copolymers in a microfluidic environment. Nanotechnology, 2012, 23, 375602.	2.6	50
23	Oxidative coupling of methane using microwave dielectric heating. Applied Catalysis A: General, 2003, 249, 151-164.	4.3	49
24	Novel inorganic polymer derived microreactors for organic microchemistry applications. Lab on A Chip, 2008, 8, 1454.	6.0	49
25	Further Studies on Oscillations over Nickel Wires During the Partial Oxidation of Methane. Catalysis Letters, 2003, 86, 235-243.	2.6	48
26	A Bioengineered Three-Dimensional Cell Culture Platform Integrated with Microfluidics To Address Antimicrobial Resistance in Tuberculosis. MBio, 2017, 8, .	4.1	47
27	Rate oscillations during partial oxidation of methane over chromelâ€“alumel thermocouples. Catalysis Letters, 2001, 72, 147-152.	2.6	42
28	Optimised production of multifunctional microfibres by microfluidic chip technology for tissue engineering applications. Lab on A Chip, 2011, 11, 1776.	6.0	42
29	Microwave Dielectric Heating Behavior of Supported MoS2and Pt Catalysts. Industrial & Engineering Chemistry Research, 2001, 40, 2810-2817.	3.7	41
30	Oscillatory Behavior During the Partial Oxidation of Methane Over Nickel Foils. Catalysis Letters, 2002, 83, 149-155.	2.6	40
31	Investigating the Flow Dynamics in the Obstructed and Stented Ureter by Means of a Biomimetic Artificial Model. PLoS ONE, 2014, 9, e87433.	2.5	40
32	Continuous-flow production of polymeric micelles in microreactors: Experimental and computational analysis. Journal of Colloid and Interface Science, 2011, 357, 243-251.	9.4	39
33	Continuous flow separation of particles within an asymmetric microfluidic device. Lab on A Chip, 2006, 6, 561.	6.0	38
34	Benefits of polidocanol endovenous microfoam (VarithenaÂ®) compared with physician-compounded foams. Phlebology, 2016, 31, 283-295.	1.2	38
35	Electrokinetic control of a chemical reaction in a lab-on-a-chip micro-reactor: measurement and quantitative modellingElectronic supplementary information (ESI) available. The first video file (run2) Tj ETQq1 1 0.784314 rgBT /Overlo absorbance. The sequence shows the PADA injection followed by reaction when the 'flow' mode is restarted. The second file (run2 Complex 550nm.avi) shows the corresponding image sequence recorded at 550 nm where the co. Lab on A Chip, 2002, 2, 102.	6.0	36
36	Oscillatory behaviour during the partial oxidation of methane over cobalt wires and foils. Applied Catalysis A: General, 2003, 248, 129-142.	4.3	35

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37	Influence of Hydrodynamic Conditions on Quantitative Cellular Assays in Microfluidic Systems. Analytical Chemistry, 2007, 79, 7139-7144.	6.5	35
38	Production of polymeric micelles by microfluidic technology for combined drug delivery: Application to osteogenic differentiation of human periodontal ligament mesenchymal stem cells (hPDLSCs). International Journal of Pharmaceutics, 2013, 440, 195-206.	5.2	35
39	A microfluidic-based system for analysis of single cells based on Ca2+ flux. Electrophoresis, 2006, 27, 5093-5100.	2.4	33
40	Dielectric Properties of MoS2 and Pt Catalysts: Effects of Temperature and Microwave Frequency. Catalysis Letters, 2002, 84, 225-233.	2.6	32
41	Continuous-Flow Production of Liposomes with a Millireactor under Varying Fluidic Conditions. Pharmaceutics, 2020, 12, 1001.	4.5	32
42	Particle Accumulation in Ureteral Stents Is Governed by Fluid Dynamics: <i>In Vitro</i> Study Using a â€œStent-on-Chipâ€•Model. Journal of Endourology, 2018, 32, 639-646.	2.1	30
43	Reducing deposition of encrustation in ureteric stents by changing the stent architecture: A microfluidic-based investigation. Biomicrofluidics, 2019, 13, 014101.	2.4	30
44	Quantitative 3-dimensional profiling of channel networks within transparent â€˜lab-on-a-chipâ€™ microreactors using a digital imaging method. Lab on A Chip, 2001, 1, 66-71.	6.0	29
45	Capillary-Driven Flow Microfluidics Combined with Smartphone Detection: An Emerging Tool for Point-of-Care Diagnostics. Diagnostics, 2020, 10, 509.	2.6	29
46	Efficient NIR light blockage with matrix embedded silver nanoprism thin films for energy saving window coating. Journal of Materials Chemistry C, 2016, 4, 1584-1588.	5.5	28
47	Microbial tribology and disruption of dental plaque bacterial biofilms. Wear, 2013, 306, 276-284.	3.1	27
48	Quantitative Comparison between Microfluidic and Microtiter Plate Formats for Cell-Based Assays. Analytical Chemistry, 2008, 80, 179-185.	6.5	24
49	A microfluidic device for the characterisation of embolisation with polyvinyl alcohol beads through biomimetic bifurcations. Biomedical Microdevices, 2012, 14, 153-163.	2.8	23
50	Microfluidics-based continuous flow formation of triangular silver nanoprisms with tuneable surface plasmon resonance. Journal of Materials Chemistry C, 2013, 1, 7540.	5.5	23
51	Generation and Trapping of Ketenes in Flow. European Journal of Organic Chemistry, 2015, 2015, 1491-1499.	2.4	23
52	Comparison of microsphere penetration with LC Bead LUMIâ„¢ versus other commercial microspheres. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 78, 46-55.	3.1	23
53	Microfluidics as an Emerging Platform for Tackling Antimicrobial Resistance (AMR): A Review. Current Analytical Chemistry, 2020, 16, 41-51.	1.2	21
54	Electrical currents and liquid flow rates in micro-reactors. Lab on A Chip, 2001, 1, 115.	6.0	20

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55	Mithramycin encapsulated in polymeric micelles by microfluidic technology as novel therapeutic protocol for beta-thalassemia. International Journal of Nanomedicine, 2012, 7, 307.	6.7	20
56	Improved Process for Pilot-Scale Synthesis of Danshensu ((Â±)-DSS) and Its Enantiomer Derivatives. Organic Process Research and Development, 2014, 18, 1667-1673.	2.7	19
57	Impact of Yttrium-90 Microsphere Density, Flow Dynamics, and Administration Technique on Spatial Distribution: Analysis Using an In Vitro Model. Journal of Vascular and Interventional Radiology, 2017, 28, 260-268.e2.	0.5	19
58	The effect of ultrasound-related stimuli on cell viability in microfluidic channels. Journal of Nanobiotechnology, 2013, 11, 20.	9.1	18
59	The role of clinically-relevant parameters on the cohesiveness of sclerosing foams in a biomimetic vein model. Journal of Materials Science: Materials in Medicine, 2015, 26, 258.	3.6	18
60	Easy-to-perform and cost-effective fabrication of continuous-flow reactors and their application for nanomaterials synthesis. New Biotechnology, 2018, 47, 1-7.	4.4	17
61	Dynamic Coupling of Mass Transfer and Chemical Reaction for Taylor Flow along a Serpentine Microchannel. Industrial & Engineering Chemistry Research, 2020, 59, 9279-9292.	3.7	17
62	Design and Fabrication of Capillary-Driven Flow Device for Point-Of-Care Diagnostics. Biosensors, 2020, 10, 39.	4.7	16
63	Droplet Interfaced Parallel and Quantitative Microfluidic-Based Separations. Analytical Chemistry, 2015, 87, 3895-3901.	6.5	15
64	Bacteria and nanosilver: the quest for optimal production. Critical Reviews in Biotechnology, 2019, 39, 272-287.	9.0	15
65	Glycoprotein- and Lectin-Based Approaches for Detection of Pathogens. Pathogens, 2020, 9, 694.	2.8	15
66	Thermal performance and physicochemical stability of silver nanoprism-based nanofluids for direct solar absorption. Solar Energy, 2020, 199, 366-376.	6.1	15
67	Dynamic characterization of nanoparticles production in a droplet-based continuous flow microreactor. Chemical Engineering Research and Design, 2019, 144, 247-257.	5.6	14
68	COVID-19 Crisis Creates Opportunity towards Global Monitoring & Surveillance. Pathogens, 2021, 10, 256.	2.8	13
69	The role of acoustofluidics in targeted drug delivery. Biomicrofluidics, 2015, 9, 052609.	2.4	12
70	Silver nanofluids based broadband solar absorber through tuning nanosilver geometries. Solar Energy, 2020, 208, 515-526.	6.1	12
71	Fine tuning of surface properties of SiO2 nanoparticles for the regulation of Pickering emulsions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 592, 124603.	4.7	11
72	Hydrodynamic characterization of continuous flow of Pickering droplets with solid nanoparticles in microchannel reactors. Chemical Engineering Science, 2021, 245, 116838.	3.8	11

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73	A SARS-Cov-2 sensor based on upconversion nanoparticles and graphene oxide. RSC Advances, 2022, 12, 18445-18449.	3.6	11
74	<i>In situ</i> microspectroscopic monitoring within a microfluidic reactor. RSC Advances, 2014, 4, 14569-14572.	3.6	9
75	Spatiotemporal dynamics of doxorubicin elution from embolic beads within a microfluidic network. Journal of Controlled Release, 2015, 214, 62-75.	9.9	9
76	Continuous flow nitration of 3-[2-chloro-4-(trifluoromethyl) phenoxy] benzoic acid and its chemical kinetics within droplet-based microreactors. Chemical Engineering Science, 2022, 255, 117657.	3.8	9
77	Microwave assisted heterogeneous catalysis: effects of varying oxygen concentrations on the oxidative coupling of methane. Reaction Kinetics and Catalysis Letters, 2009, 98, 287-302.	0.6	8
78	Microfluidic-based measurements of cytochrome P450 enzyme activity of primary mammalian hepatocytes. Analyst, The, 2010, 135, 1282.	3.5	8
79	A Microfluidic-Based Arteriolar Network Model for Biophysical and Bioanalytical Investigations. Current Analytical Chemistry, 2013, 9, 47-59.	1.2	8
80	Continuous flow production of size-controllable niosomes using a thermostatic microreactor. Colloids and Surfaces B: Biointerfaces, 2019, 182, 110378.	5.0	8
81	A novel biomimetic analysis system for quantitative characterisation of sclerosing foams used for the treatment of varicose veins. Journal of Materials Science: Materials in Medicine, 2013, 24, 1417-1423.	3.6	7
82	Decarbonising heating and hot water using solar thermal collectors coupled with thermal storage: The scale of the challenge. Energy Reports, 2020, 6, 25-34.	5.1	7
83	3D printed reactor-in-a-centrifuge (RIAC): Making flow-synthesis of nanoparticles pump-free and cost-effective. Chemical Engineering Journal, 2021, 425, 130656.	12.7	7
84	Microfluidic reactors for controlled synthesis of polymeric micelles. Journal of Controlled Release, 2010, 148, e25-e26.	9.9	6
85	Oscillations of methane oxidation over metallic nickel surfaces. Reaction Kinetics, Mechanisms and Catalysis, 2012, 107, 245-252.	1.7	6
86	Physical Vein Models to Quantify the Flow Performance of Sclerosing Foams. Frontiers in Bioengineering and Biotechnology, 2019, 7, 109.	4.1	6
87	Dynamics and controllability of droplet fusion under gasâ€“liquidâ€“liquid three-phase flow in a microfluidic reactor. RSC Advances, 2020, 10, 14322-14330.	3.6	6
88	Monitoring of liquid flow through microtubes using a micropressure sensor. Chemical Engineering Research and Design, 2009, 87, 19-24.	5.6	5
89	In vitro and ex vivo evaluation of the biological performance of sclerosing foams. Scientific Reports, 2019, 9, 9880.	3.3	5
90	Design and Fabrication of Optical Flow Cell for Multiplex Detection of Î²-lactamase in Microchannels. Micromachines, 2020, 11, 385.	2.9	5

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91	An artificial model for studying fluid dynamics in the obstructed and stented ureter. , 2013, 2013, 5335-8.		4
92	Process optimization for the production of alginate microparticles containing wjmscs by a design of experiments (doe) approach. Journal of Controlled Release, 2010, 148, e76-e77.	9.9	3
93	Production of low cost microfluidic chips by a â€œshrinkingâ€•approach: Applications to emulsion and microparticle production. Journal of Controlled Release, 2010, 148, e26-e28.	9.9	3
94	Oscillation dynamics of embolic microspheres in flows with red blood cell suspensions. Journal of Applied Physics, 2012, 112, 124701.	2.5	3
95	Editorial (Mini Hot-Topic: Bioanalysis in Microscale Bioengineering). Current Analytical Chemistry, 2012, 9, 1-1.	1.2	3
96	The temperature stability and development of a broadband silver nanofluid for solar thermal applications. Energy Reports, 2021, 7, 87-96.	5.1	2
97	Editorial (Mini Hot-Topic: Bioanalysis in Microscale Bioengineering). Current Analytical Chemistry, 2013, 9, 1-1.	1.2	0
98	Capillary-driven flow microfluidics devices for point-of-care diagnostics. , 0, , .		0
99	Lab-on-a-Chip Microreactors. , 2008, , 1721-1737.		0
100	A Microfluidic-Based Arteriolar Network Model for Biophysical and Bioanalytical Investigations. Current Analytical Chemistry, 2012, 9, 47-59.	1.2	0
101	ENHANCED PATHOGEN DETECTION AND CELL CONCENTRATION USING ACOUSTOPHORETIC DEPOSITION ON SURFACES. , 0, , .		0