Taotao Fu

List of Publications by Year
in descending order

127 papers	3,081 citations	159585 30 h-index	206112 48 g-index
127 all docs	127 docs citations	127 times ranked	1607 citing authors

#	ARTICLE	IF	CITATIONS
1	Formation characteristics of Taylor bubbles in a T-junction microchannel with chemical absorption. Chinese Journal of Chemical Engineering, 2022, 46, 214-222.	3.5	4
2	Formation dynamics and size prediction of bubbles for slurry system in T-shape microchannel. Chinese Journal of Chemical Engineering, 2022, 45, 153-161.	3.5	3
3	Formation of droplets of shearâ€thinning<scp>nonâ€Newtonian</scp>fluids in a stepâ€emulsification microdevice. AICHE Journal, 2022, 68, e17395.	3.6	11
4	Dynamics of droplet formation and mechanisms of satellite droplet formation in T-junction microchannel. Chemical Engineering Science, 2022, 248, 117217.	3.8	18
5	Local deformation and coalescence between two equal-sized droplets in a cross-focused microchannel. Chemical Engineering Journal, 2022, 430, 133087.	12.7	7
6	Comparison of formation of bubbles and droplets in step-emulsification microfluidic devices. Journal of Industrial and Engineering Chemistry, 2022, 106, 469-481.	5.8	9
7	Coalescence dynamics of two droplets in T-junction microchannel with a lantern-shaped expansion chamber. Journal of the Taiwan Institute of Chemical Engineers, 2022, 131, 104193.	5.3	3
8	Distribution of liquidâ€"liquid two-phase flow in branching T-junction microchannels. Chemical Engineering Journal, 2022, 431, 133939.	12.7	3
9	Performance and pressure drop of<scp>CO₂</scp>absorption into taskâ€specific and halideâ€free ionic liquids in a microchannel. AICHE Journal, 2022, 68, .	3.6	10
10	Volumetric and Viscometric Properties of Sugar Alcohols in Glycylglycineâ€"Water Mixtures from 293.15 to 333.15 K. Journal of Chemical & Engineering Data, 2022, 67, 305-320.	1.9	2
11	Early stage of externally driven filling of viscous fluids within a microfluidic pore-doublet network. Physics of Fluids, 2022, 34, .	4.0	3
12	Bubble dynamics and mass transfer enhancement in splitâ€"andâ€"recombine (SAR) microreactor with rapid chemical reaction. Separation and Purification Technology, 2022, 287, 120573.	7.9	11
13	Effects of the resultant force due to two-phase density difference on droplet formation in a step-emulsification microfluidic device. Journal of Industrial and Engineering Chemistry, 2022, 110, 564-575.	5.8	1
14	Distribution of liquid-liquid two-phase flow and droplet dynamics in asymmetric parallel microchannels. Chemical Engineering Journal, 2022, 441, 136027.	12.7	13
15	Effect of solvent on CO2 absorption performance in the microchannel. Journal of Molecular Liquids, 2022, 357, 119133.	4.9	8
16	Self-assembly of droplet swarms and its feedback on droplet generation in a step-emulsification microdevice with parallel microchannels. Chemical Engineering Science, 2022, 256, 117685.	3.8	6
17	Stability and uniformity of gasâ€"liquid two-phase flow in shear-thinning fluids in parallelized microchannels. Chemical Engineering Journal, 2022, 444, 136679.	12.7	7
18	Gas-liquid hydrodynamics with different liquid viscosities in a split-and-recombine microchannel. Chemical Engineering and Processing: Process Intensification, 2022, 177, 108988.	3.6	4

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19	Formation of viscoelastic droplets in a stepâ€emulsification microdevice. AIChE Journal, 2022, 68, .	3.6	9
20	Effects of gas concentration on hydrodynamics of gas absorption in a microchannel. AIChE Journal, 2022, 68, .	3.6	3
21	Slug bubble deformation and its influence on bubble breakup dynamics in microchannel. Chinese Journal of Chemical Engineering, 2022, 50, 66-74.	3.5	1
22	Bubble formation in high-viscosity liquids in step-emulsification microdevices. Journal of Industrial and Engineering Chemistry, 2022, 114, 221-232.	5.8	2
23	Intensification of gas-liquid two-phase flow and mass transfer in microchannels by sudden expansions. Chemical Engineering Science, 2021, 229, 116040.	3.8	22
24	Formation and uniformity of bubbles in highly viscous fluids in symmetric parallel microchannels. Chemical Engineering Science, 2021, 230, 116166.	3.8	17
25	Hydrodynamics and gas-liquid mass transfer in a cross-flow T-junction microchannel: Comparison of two operation modes. Separation and Purification Technology, 2021, 255, 117697.	7.9	13
26	Volumetric and Viscometric Properties of Maltitol in Glycylglycine Aqueous Solutions at <i>T</i> = 293.15â€"333.15 K. Journal of Chemical & Engineering Data, 2021, 66, 360-367.	1.9	7
27	The breakup dynamics and mechanism of viscous droplets in Y-shaped microchannels. Chemical Engineering Science, 2021, 231, 116300.	3.8	22
28	Mesoscale effect on bubble formation in stepâ€emulsification devices with two parallel microchannels. AIChE Journal, 2021, 67, .	3.6	5
29	Bubble formation in a step-emulsification microdevice: hydrodynamic effects in the cavity. Journal of Industrial and Engineering Chemistry, 2021, 94, 127-133.	5.8	4
30	Coalescence dynamics of two droplets of different viscosities in T-junction microchannel with a funnel-typed expansion chamber. Chinese Journal of Chemical Engineering, 2021, 38, 43-52.	3.5	2
31	Mass transfer of chemical absorption of CO2 in a serpentine minichannel. Chemical Engineering Journal, 2021, 414, 128791.	12.7	29
32	Dynamics of non-Newtonian droplet breakup with partial obstruction in microfluidic Y-junction. Chemical Engineering Science, 2021, 240, 116696.	3.8	12
33	Enhancement of gas-liquid mass transfer by nanofluids in a microchannel under Taylor flow regime. International Journal of Heat and Mass Transfer, 2021, 176, 121435.	4.8	19
34	Mass transfer enhancement of CO2 absorption into [Bmim][BF4] aqueous solution in microchannels by heart-shaped grooves. Chemical Engineering and Processing: Process Intensification, 2021, 167, 108536.	3.6	13
35	The breakup dynamics of bubbles stabilized by nanoparticles in a microfluidic Y-junction. Chemical Engineering Science, 2021, 245, 116867.	3.8	14
36	Bubble formation in T-junctions within parallelized microchannels: Effect of viscoelasticity. Chemical Engineering Journal, 2021, 426, 131783.	12.7	15

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37	Effects on droplet generation in step-emulsification microfluidic devices. Chemical Engineering Science, 2021, 246, 116959.	3.8	13
38	Mechanism of bubble formation in stepâ€emulsification devices. AIChE Journal, 2020, 66, e16777.	3.6	15
39	Enhancement of gas-liquid mass transfer in microchannels by rectangular baffles. Separation and Purification Technology, 2020, 236, 116306.	7.9	15
40	Volumetric and Viscometric Properties for Binary and Ternary Solutions of Diethylenetriamine, <i>N</i>,<i>N</i>-Diethylethanolamine, and Water. Journal of Chemical & Engineering Data, 2020, 65, 239-254.	1.9	2
41	An effective method to facile coalescence of microdroplet in the symmetrical T-junction with expanded convergence. Chemical Engineering Science, 2020, 213, 115389.	3.8	14
42	Flow Distribution and Mass Transfer of Gasâ€"Liquid Flow in Parallel Microchannels with Different Tree-Shaped Distributors: Halving-Width versus Constant-Width. Industrial & Engineering Chemistry Research, 2020, 59, 1327-1335.	3.7	7
43	Density, viscosity and excess properties of N, N-dimethylethanolamine +2-(ethylamino) ethanol +H2O at TÂ=Â(293.15 to 333.15) K. Journal of Molecular Liquids, 2020, 319, 114095.	4.9	5
44	Microfluidic step emulsification techniques based on spontaneous transformation mechanism: A review. Journal of Industrial and Engineering Chemistry, 2020, 92, 18-40.	5.8	24
45	Distribution of gas-liquid two-phase flow in parallel microchannels with the splitting of the liquid feed. Chemical Engineering Journal, 2020, 398, 125630.	12.7	19
46	Gas-liquid distribution and mass transfer of CO2 absorption into sodium glycinate aqueous solution in parallel multi-channel microreactor. International Journal of Heat and Mass Transfer, 2020, 157, 119943.	4.8	11
47	Interaction and drag coefficient of three horizontal bubbles with different sizes rising in the shear-thinning fluids. International Journal of Multiphase Flow, 2020, 125, 103214.	3.4	3
48	Controllable Droplet Coalescence in the T-Junction Microchannel with a Funnel-Typed Expansion Chamber. Industrial & Engineering Chemistry Research, 2020, 59, 10298-10307.	3.7	5
49	CO₂ Absorption by Liquid Films under Taylor Flow in Serpentine Minichannels. Industrial & Engineering Chemistry Research, 2020, 59, 12250-12261.	3.7	9
50	Pressure drop model of gas-liquid flow with mass transfer in tree-typed microchannels. Chemical Engineering Journal, 2020, 397, 125340.	12.7	16
51	An effective hybrid solvent of MEA/DEEA for CO2 absorption and its mass transfer performance in microreactor. Separation and Purification Technology, 2020, 242, 116795.	7.9	38
52	Bubble formation in a step-emulsification microdevice with parallel microchannels. Chemical Engineering Science, 2020, 224, 115815.	3.8	9
53	Interfacial dynamics of the core-annular flow for glycerolâ€"water solution / ionic liquid ([BMIM][PF6]) two-phase flow in a microfluidic flow-focusing junction. Journal of the Taiwan Institute of Chemical Engineers, 2019, 98, 45-52.	5.3	5
54	Dynamics and mass transfer characteristics of CO2 absorption into MEA/[Bmim][BF4] aqueous solutions in a microchannel. Separation and Purification Technology, 2019, 210, 541-552.	7.9	31

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55	Volumetric and viscometric properties of binary and ternary mixtures of monoethanolamine, 2-(diethylamino) ethanol and water from (293.15 to 333.15) K. Journal of Chemical Thermodynamics, 2019, 138, 350-365.	2.0	20
56	Dynamics and interfacial evolution for bubble breakup in shear-thinning non-Newtonian fluid in microfluidic T-junction. Chemical Engineering Science, 2019, 208, 115158.	3.8	11
57	Dynamics and modelling of bubble formation in asymmetric parallel microchannels. Chemical Engineering Science: X, 2019, 4, 100039.	1.5	4
58	Manipulable Formation of Ferrofluid Droplets in Y-Shaped Flow-Focusing Microchannels. Industrial & Engineering Chemistry Research, 2019, 58, 19226-19238.	3.7	15
59	Mass-Transfer Characteristics of CO₂ Absorption into Aqueous Solutions of <i>N</i>-Methyldiethanolamine + Diethanolamine in a T-Junction Microchannel. ACS Sustainable Chemistry and Engineering, 2019, 7, 4368-4375.	6.7	22
60	Hydrodynamics and mass transfer of gas-liquid flow in a tree-shaped parallel microchannel with T-type bifurcations. Chemical Engineering Journal, 2019, 373, 1203-1211.	12.7	45
61	The effect of liquid viscosity on bubble formation dynamics in a flow-focusing device. International Journal of Multiphase Flow, 2019, 117, 206-211.	3.4	7
62	Breakup dynamics of elastic droplet and stretching of polymeric filament in a T-junction. Chemical Engineering Science, 2019, 206, 212-223.	3.8	15
63	Effects of the Gas Feed on Bubble Formation in a Microfluidic T-Junction: Constant-Pressure versus Constant-Flow-Rate Injection. Industrial & Engineering Chemistry Research, 2019, 58, 10092-10105.	3.7	27
64	Pressure drop of single phase flow in microchannels and its application in characterizing the apparent rheological property of fluids. Microfluidics and Nanofluidics, 2019, 23, 1.	2.2	8
65	Enhancement effect and mechanism of gas-liquid mass transfer by baffles embedded in the microchannel. Chemical Engineering Science, 2019, 201, 264-273.	3.8	35
66	Mass transfer characteristics of CO2 absorption into 2-amino-2-methyl-1-propanol non-aqueous solution in a microchannel. Journal of Industrial and Engineering Chemistry, 2019, 75, 194-201.	5.8	30
67	Dynamics and formation of alternating droplets under magnetic field at a T-junction. Chemical Engineering Science, 2019, 200, 248-256.	3.8	10
68	Dynamics of partially obstructed breakup of bubbles in microfluidic Yâ€junctions. Electrophoresis, 2019, 40, 376-387.	2.4	9
69	The effect of flow distribution on mass transfer of gas-liquid two-phase flow in two parallelized microchannels in a microfluidic loop. International Journal of Heat and Mass Transfer, 2019, 130, 266-273.	4.8	18
70	3D simulation of interaction and drag coefficient of bubbles continuously rising with equilateral triangle arrangement in shear-thinning fluids. International Journal of Multiphase Flow, 2019, 110, 69-81.	3.4	7
71	Asymmetrical breakup and size distribution of droplets in a branching microfluidic T-junction. Korean Journal of Chemical Engineering, 2019, 36, 21-29.	2.7	14
72	Mass transfer characteristics of CO2 absorption into 1-butyl-3-methylimidazolium tetrafluoroborate aqueous solution in microchannel. International Journal of Heat and Mass Transfer, 2019, 128, 1064-1071.	4.8	35

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73	Inertio-capillary cross-streamline drift of droplets in Poiseuille flow using dissipative particle dynamics simulations. Soft Matter, 2018, 14, 2267-2280.	2.7	12
74	Formation of droplet and â€œstring of sausagesâ€• for water-ionic liquid ([BMIM][PF6]) two-phase flow in a flow-focusing device. Chemical Engineering and Processing: Process Intensification, 2018, 125, 8-17.	3.6	21
75	Breakup dynamics for droplet formation in shear-thinning fluids in a flow-focusing device. Chemical Engineering Science, 2018, 176, 66-76.	3.8	38
76	Micro-magnetofluidics of ferrofluid droplet formation in a T-junction. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 537, 572-579.	4.7	27
77	Computational Fluid Dynamics Simulation of Generation and Coalescence of Bubbles in Nonâ€Newtonian Fluids. Chemical Engineering and Technology, 2018, 41, 541-552.	1.5	2
78	Interfacial dynamics of the â€œsausageâ€• wave for glycerol-water solution/ionic liquid ([BMIM][PF6]) two-phase flow in a microfluidic flow-focusing junction. Chemical Engineering and Processing: Process Intensification, 2018, 133, 294-302.	3.6	5
79	Formation dynamics of elastic droplets in a microfluidic T-junction. Chemical Engineering Research and Design, 2018, 139, 188-196.	5.6	23
80	Numbering-up strategies of micro-chemical process: Uniformity of distribution of multiphase flow in parallel microchannels. Chemical Engineering and Processing: Process Intensification, 2018, 132, 148-159.	3.6	30
81	Dynamics of droplet breakup and formation of satellite droplets in a microfluidic T-junction. Chemical Engineering Science, 2018, 188, 158-169.	3.8	53
82	Manipulation of microdroplets at a T-junction: Coalescence and scaling law. Journal of Industrial and Engineering Chemistry, 2018, 65, 272-279.	5.8	15
83	Gas-liquid two-phase flow in a square microchannel with chemical mass transfer: Flow pattern, void fraction and frictional pressure drop. International Journal of Heat and Mass Transfer, 2018, 127, 484-496.	4.8	39
84	Velocity Evolution for the Coalescence of Two In-Line Bubbles Rising in Non-Newtonian Fluids. Theoretical Foundations of Chemical Engineering, 2018, 52, 459-464.	0.7	5
85	Critical condition for bubble breakup in a microfluidic flow-focusing junction. Chemical Engineering Science, 2017, 164, 178-187.	3.8	20
86	Breakup dynamics of ferrofluid droplet in a microfluidic T-junction. Journal of Industrial and Engineering Chemistry, 2017, 54, 408-420.	5.8	19
87	Experimental investigation on gas-liquid mass transfer with fast chemical reaction in microchannel. International Journal of Heat and Mass Transfer, 2017, 114, 83-89.	4.8	38
88	The minimum in-line coalescence height of bubbles in non-Newtonian fluid. International Journal of Multiphase Flow, 2017, 92, 161-170.	3.4	18
89	Selfâ€similar breakup of viscoelastic thread for droplet formation in flowâ€focusing devices. AIChE Journal, 2017, 63, 5196-5206.	3.6	19
90	Volumetric and Viscometric Properties of Alcohol Amines + Ethanol Binary Mixtures. Journal of Chemical & Engineering Data, 2017, 62, 3261-3273.	1.9	7

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91	Dynamics of bubble formation in highly viscous liquids in a flow-focusing device. Chemical Engineering Science, 2017, 172, 278-285.	3.8	30
92	Microfluidics in CO2 Capture, Sequestration, and Applications. , 2016, , .		5
93	Newtonian and Nonâ€Newtonian Flows in Microchannels: Inline Rheological Characterization. Chemical Engineering and Technology, 2016, 39, 987-992.	1.5	15
94	Breakup dynamics for highâ€viscosity droplet formation in a flowâ€focusing device: Symmetrical and asymmetrical ruptures. AICHE Journal, 2016, 62, 325-337.	3.6	52
95	Breakup dynamics for droplet formation in a flow-focusing device: Rupture position of viscoelastic thread from matrix. Chemical Engineering Science, 2016, 153, 255-269.	3.8	33
96	Dynamics of bubble breakup at a T junction. Physical Review E, 2016, 93, 022802.	2.1	22
97	Experimental investigation on the breakup dynamics for bubble formation in viscous liquids in a flow-focusing device. Chemical Engineering Science, 2016, 152, 516-527.	3.8	14
98	Breakup dynamics of slender droplet formation in shear-thinning fluids in flow-focusing devices. Chemical Engineering Science, 2016, 144, 75-86.	3.8	46
99	Magnetofluidic control of the breakup of ferrofluid droplets in a microfluidic Y-junction. RSC Advances, 2016, 6, 778-785.	3.6	21
100	Threeâ€dimensional numerical simulation of coalescence and interactions of multiple horizontal bubbles rising in shearâ€thinning fluids. AICHE Journal, 2015, 61, 3528-3546.	3.6	18
101	Dynamics of bubble breakup with partly obstruction in a microfluidic T-junction. Chemical Engineering Science, 2015, 132, 128-138.	3.8	37
102	Bubble breakup with permanent obstruction in an asymmetric microfluidic <scp>T</scp>â€junction. AICHE Journal, 2015, 61, 1081-1091.	3.6	31
103	Bubble formation and breakup dynamics in microfluidic devices: A review. Chemical Engineering Science, 2015, 135, 343-372.	3.8	128
104	Shear-induced tail breakup of droplets (bubbles) flowing in a straight microfluidic channel. Chemical Engineering Science, 2015, 135, 61-66.	3.8	14
105	Flow patterns of liquidâ€"liquid two-phase flow in non-Newtonian fluids in rectangular microchannels. Chemical Engineering and Processing: Process Intensification, 2015, 91, 114-120.	3.6	64
106	Bubble coalescence in non-Newtonian fluids in a microfluidic expansion device. Chemical Engineering and Processing: Process Intensification, 2015, 97, 38-44.	3.6	22
107	Active control of ferrofluid droplet breakup dynamics in a microfluidic T-junction. Microfluidics and Nanofluidics, 2015, 18, 19-27.	2.2	48
108	Critical lengths for the transition of bubble breakup in microfluidic T-junctions. Chemical Engineering Science, 2014, 111, 244-254.	3.8	37

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109	Pinch-off mechanism for Taylor bubble formation in a microfluidic flow-focusing device. Microfluidics and Nanofluidics, 2014, 16, 1047-1055.	2.2	22
110	Hydrodynamic feedback on bubble breakup at a Tâ€junction within an asymmetric loop. AICHE Journal, 2014, 60, 1920-1929.	3.6	47
111	Systematic Study on the Coalescence and Breakup Behaviors of Multiple Parallel Bubbles Rising in Power-law Fluid. Industrial & Engineering Chemistry Research, 2014, 53, 4850-4860.	3.7	32
112	Scaling of the bubble formation in a flow-focusing device: Role of the liquid viscosity. Chemical Engineering Science, 2014, 105, 213-219.	3.8	49
113	Bubble coalescence at a microfluidic T-junction convergence: from colliding to squeezing. Microfluidics and Nanofluidics, 2014, 16, 275-286.	2.2	26
114	Ferrofluid droplet formation and breakup dynamics in a microfluidic flow-focusing device. Soft Matter, 2013, 9, 9792.	2.7	64
115	Numerical simulation of the interactions between three equal-interval parallel bubbles rising in non-Newtonian fluids. Chemical Engineering Science, 2013, 93, 55-66.	3.8	47
116	The Drag Coefficient and the Shape for a Single Bubble Rising in Non-Newtonian Fluids. Journal of Fluids Engineering, Transactions of the ASME, 2012, 134, .	1.5	17
117	Study on the mass transfer of bubble swarms in three different rheological fluids. International Journal of Heat and Mass Transfer, 2012, 55, 6010-6016.	4.8	12
118	Asymmetrical breakup of bubbles at a microfluidic T-junction divergence: feedback effect of bubble collision. Microfluidics and Nanofluidics, 2012, 13, 723-733.	2.2	37
119	Droplet formation and breakup dynamics in microfluidic flow-focusing devices: From dripping to jetting. Chemical Engineering Science, 2012, 84, 207-217.	3.8	224
120	Breakup dynamics of slender bubbles in nonâ€newtonian fluids in microfluidic flowâ€focusing devices. AICHE Journal, 2012, 58, 3560-3567.	3.6	44
121	Gasâ€"liquid flow stability and bubble formation in non-Newtonian fluids in microfluidic flow-focusing devices. Microfluidics and Nanofluidics, 2011, 10, 1135-1140.	2.2	34
122	Dynamics of bubble breakup in a microfluidic T-junction divergence. Chemical Engineering Science, 2011, 66, 4184-4195.	3.8	106
123	Bubble formation in non-Newtonian fluids in a microfluidic T-junction. Chemical Engineering and Processing: Process Intensification, 2011, 50, 438-442.	3.6	34
124	Scaling the formation of slug bubbles in microfluidic flow-focusing devices. Microfluidics and Nanofluidics, 2010, 8, 467-475.	2.2	61
125	Measurement and Correlation of Pressure Drop for Gas-Liquid Two-phase Flow in Rectangular Microchannels. Chinese Journal of Chemical Engineering, 2010, 18, 940-947.	3.5	12
126	Squeezing-to-dripping transition for bubble formation in a microfluidic T-junction. Chemical Engineering Science, 2010, 65, 3739-3748.	3.8	163

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127	Bubble formation and breakup mechanism in a microfluidic flow-focusing device. Chemical Engineering Science, 2009, 64, 2392-2400.	3.8	117