Panagiota Angeli

List of Publications by Year
in descending order

124 papers	5,167 citations	94269 37 h-index	91712 69 g-index
126 all docs	126 docs citations	126 times ranked	3230 citing authors

#	Article	IF	Citations
1	Mixing characteristics of T-type microfluidic mixers. Journal of Micromechanics and Microengineering, 2001, 11, 126-132.	1.5	301
2	Gasâˆ'Liquid and Gasâˆ'Liquidâˆ'Solid Microstructured Reactors:Â Contacting Principles and Applications. Industrial & Engineering Chemistry Research, 2005, 44, 9750-9769.	1.8	269
3	Flow structure in horizontal oilâ€"water flow. International Journal of Multiphase Flow, 2000, 26, 1117-1140.	1.6	250
4	Flow regimes for adiabatic gasâ€"liquid flow in microchannels. Chemical Engineering Science, 2009, 64, 2749-2761.	1.9	229
5	Technology and Applications of Microengineered Reactors. Chemical Engineering Research and Design, 2002, 80, 3-30.	2.7	199
6	Hydrodynamics of Taylor flow in small channels: A Review. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2008, 222, 737-751.	1.1	178
7	Flow distribution in different microreactor scale-out geometries and the effect of manufacturing tolerances and channel blockage. Chemical Engineering Journal, 2004, 101, 379-390.	6.6	173
8	Experimental studies on the dual continuous flow pattern in oilâ€"water flows. International Journal of Multiphase Flow, 2004, 30, 139-157.	1.6	156
9	Effect of channel size on mass transfer during liquidâ€"liquid plug flow in small scale extractors. Chemical Engineering Journal, 2015, 262, 785-793.	6.6	151
10	Pressure gradient in horizontal liquidâ€"liquid flows. International Journal of Multiphase Flow, 1999, 24, 1183-1203.	1.6	142
11	In situ diagnostic techniques for characterisation of polymer electrolyte membrane water electrolysers â€" Flow visualisation and electrochemical impedance spectroscopy. International Journal of Hydrogen Energy, 2014, 39, 4468-4482.	3.8	136
12	Drop size distributions in horizontal oil-water dispersed flows. Chemical Engineering Science, 2000, 55, 3133-3143.	1.9	129
13	Mass transfer during Taylor flow in microchannels with and without chemical reaction. Chemical Engineering Journal, 2010, 160, 873-881.	6.6	112
14	Flow patterns and pressure drop of ionic liquidâ€"water two-phase flows in microchannels. International Journal of Multiphase Flow, 2013, 54, 1-10.	1.6	100
15	Mixing patterns in water plugs during water/ionic liquid segmented flow in microchannels. Chemical Engineering Science, 2012, 80, 334-341.	1.9	93
16	Phase inversion in dispersed liquidâ€"liquid flows. Experimental Thermal and Fluid Science, 2005, 29, 331-339.	1.5	87
17	Upward and downward inclination oilâ€"water flows. International Journal of Multiphase Flow, 2006, 32, 413-435.	1.6	82
18	Transition between stratified and non-stratified horizontal oilâ€"water flows. Part I: Stability analysis. Chemical Engineering Science, 2007, 62, 2915-2928.	1.9	74

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19	Effect of drag-reducing polymers on horizontal oilâ€“water flows. Journal of Petroleum Science and Engineering, 2007, 57, 334-346.	2.1	72
20	Effect of channel size on liquidâ€liquid plug flow in small channels. AICHE Journal, 2016, 62, 315-324.	1.8	71
21	Dioxouranium(VI) extraction in microchannels using ionic liquids. Chemical Engineering Journal, 2013, 227, 151-157.	6.6	69
22	CFD simulations of the effect of inlet conditions on Taylor flow formation. International Journal of Heat and Fluid Flow, 2008, 29, 1603-1611.	1.1	68
23	Investigation on heavy crude-water two phase flow and related flow characteristics. International Journal of Multiphase Flow, 2011, 37, 1156-1164.	1.6	64
24	Intensified Eu(III) extraction using ionic liquids in small channels. Chemical Engineering Science, 2016, 143, 276-286.	1.9	64
25	Effect of surfactant on emulsification in microchannels. Chemical Engineering Science, 2018, 176, 139-152.	1.9	63
26	Drop size distribution in highly concentrated liquid-liquid dispersions using a light back scattering method. Journal of Chemical Technology and Biotechnology, 2005, 80, 545-552.	1.6	60
27	On the formation of Taylor bubbles in small tubes. Chemical Engineering Science, 2006, 61, 6653-6666.	1.9	59
28	Experimental and numerical hydrodynamic studies of ionic liquid-aqueous plug flow in small channels. Chemical Engineering Journal, 2017, 328, 717-736.	6.6	58
29	Effect of Inlet Conditions on Taylor Bubble Length in Microchannels. Heat Transfer Engineering, 2011, 32, 1117-1125.	1.2	57
30	Experimental study on interfacial waves in stratified horizontal oilâ€“water flow. International Journal of Multiphase Flow, 2011, 37, 930-940.	1.6	54
31	Droplet size and velocity profiles in liquidâ€“liquid horizontal flows. Chemical Engineering Science, 2004, 59, 3105-3115.	1.9	50
32	Pressure drop and holdup predictions in horizontal oilâ€“water flows for curved and wavy interfaces. Chemical Engineering Research and Design, 2015, 93, 55-65.	2.7	48
33	Extraction of dioxouranium(VI) in small channels using ionic liquids. Chemical Engineering Research and Design, 2013, 91, 681-687.	2.7	47
34	A model for predicting axial mixing during gasâ€“liquid Taylor flow in microchannels at low Bodenstein numbers. Chemical Engineering Journal, 2004, 101, 391-396.	6.6	46
35	Experimental and CFD studies of power consumption in the agitation of highly viscous shear thinning fluids. Chemical Engineering Research and Design, 2017, 119, 171-182.	2.7	42
36	Experimental studies on droplet formation in a flow-focusing microchannel in the presence of surfactants. Chemical Engineering Science, 2019, 195, 507-518.	1.9	42

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37	Transition between stratified and non-stratified horizontal oilâ€“water flows. Part II: Mechanism of drop formation. Chemical Engineering Science, 2007, 62, 2929-2940.	1.9	40
38	Evaluation of drop size distribution from chord length measurements. AIChE Journal, 2006, 52, 931-939.	1.8	39
39	Effect of drag reducing polymer on horizontal liquidâ€“liquid flows. Experimental Thermal and Fluid Science, 2015, 64, 164-174.	1.5	37
40	Experimental investigations of nonâ€Newtonian/Newtonian liquidâ€liquid flows in microchannels. AIChE Journal, 2017, 63, 3599-3609.	1.8	37
41	On the effect of surfactants on drop coalescence at liquid/liquid interfaces. Chemical Engineering Science, 2017, 161, 215-227.	1.9	35
42	A PIV investigation of the effect of disperse phase fraction on the turbulence characteristics of liquidâ€“liquid mixing in a stirred tank. Chemical Engineering Science, 2016, 152, 528-546.	1.9	34
43	A methodology for predicting phase inversion during liquidâ€“liquid dispersed pipeline flow. Chemical Engineering Research and Design, 2009, 87, 318-324.	2.7	33
44	Effect of dispersed holdup on drop size distribution in oilâ€“water dispersions: Experimental observations and population balance modeling. Chemical Engineering Science, 2014, 105, 22-31.	1.9	33
45	Bubble growth rate from stainless steel substrate and needle nozzles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 384, 240-247.	2.3	32
46	Prediction of phase inversion in agitated vessels using a two-region model. Chemical Engineering Science, 2005, 60, 3487-3495.	1.9	31
47	Observations on single drop formation from a capillary tube at low flow rates. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 334, 197-202.	2.3	30
48	Optical measurements in evolving dispersed pipe flows. Experiments in Fluids, 2017, 58, 1.	1.1	27
49	Phase Inversion and Associated Phenomena in Oil-Water Vertical Pipeline Flow. Canadian Journal of Chemical Engineering, 2006, 84, 94-107.	0.9	26
50	Effect of glycerol on the binary coalescence of water drops in stagnant oil phase. Chemical Engineering Research and Design, 2009, 87, 1640-1648.	2.7	26
51	Interfacial characteristics of stratified liquidâ€“liquid flows using a conductance probe. Experiments in Fluids, 2013, 54, 1.	1.1	26
52	An experimental study on the drop/interface partial coalescence with surfactants. Physics of Fluids, 2017, 29, .	1.6	26
53	Scale-down studies on the hydrodynamics of two-liquid phase biocatalytic reactors. Bioprocess and Biosystems Engineering, 2002, 25, 143-153.	1.7	25
54	Population balance modelling of phase inversion in liquidâ€“liquid pipeline flows. Chemical Engineering Science, 2006, 61, 4994-4997.	1.9	25

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55	Axial mass transfer in Taylor flow through circular microchannels. AICHE Journal, 2007, 53, 1413-1428.	1.8	24
56	Low Inclination Oilâ€water Flows. Canadian Journal of Chemical Engineering, 2004, 82, 303-315.	0.9	24
57	Mean and turbulent fluctuating velocities in oilâ€"water vertical dispersed flows. Chemical Engineering Science, 2007, 62, 1199-1214.	1.9	23
58	Liquid-liquid dispersions in intensified impinging-jets cells. Chemical Engineering Science, 2017, 171, 149-159.	1.9	22
59	Sample Pulse Broadening in Taylor Flow Microchannels for Screening Applications. Chemical Engineering and Technology, 2005, 28, 509-514.	0.9	21
60	Design of a mesh microreactor for even flow distribution and narrow residence time distribution. Chemical Engineering Journal, 2008, 135, S259-S269.	6.6	21
61	Studies of plug formation in microchannel liquidâ€"liquid flows using advanced particle image velocimetry techniques. Experimental Thermal and Fluid Science, 2015, 69, 99-110.	1.5	21
62	The nonlinear analysis of horizontal oil-water two-phase flow in a small diameter pipe. International Journal of Multiphase Flow, 2017, 92, 39-49.	1.6	21
63	Laser induced fluorescence studies on the distribution of surfactants during drop/interface coalescence. Physics of Fluids, 2019, 31, .	1.6	21
64	Comparison of surfactant mass transfer with drop formation times from dynamic interfacial tension measurements in microchannels. Journal of Colloid and Interface Science, 2022, 605, 204-213.	5.0	21
65	The design of a continuous reactor for fluorous biphasic reactions under pressure and its use in alkene hydroformylationElectronic supplementary information (ESI) available: Fig. S1: Photograph of the continuous flow reactor. See http://www.rsc.org/suppdata/dt/b4/b404760e/. Dalton Transactions, 2004, , 2062.	1.6	20
66	Surfactant effects on the coalescence of a drop in a Hele-Shaw cell. Physical Review E, 2016, 94, 033101.	0.8	20
67	Computational fluid dynamic studies of mixers for highly viscous shear thinning fluids and PIV validation. Chemical Engineering Science, 2018, 179, 133-149.	1.9	20
68	Review and perspectives of AFM application on the study of deformable drop/bubble interactions. Advances in Colloid and Interface Science, 2015, 225, 88-97.	7.0	19
69	Intensified extraction of uranium(VI) in impinging-jets contactors. Chemical Engineering Journal, 2018, 342, 251-259.	6.6	19
70	Studies on mass transfer of europium(III) in micro-channels using a micro Laser Induced Fluorescence technique. Chemical Engineering Journal, 2019, 372, 1154-1163.	6.6	19
71	Silica Nanoparticles for Micro-Particle Imaging Velocimetry: Fluorosurfactant Improves Nanoparticle Stability and Brightness of Immobilized Iridium(III) Complexes. Langmuir, 2013, 29, 14701-14708.	1.6	18
72	Predictive model for the scale-out of small channel two-phase flow contactors. Chemical Engineering Journal, 2018, 351, 589-602.	6.6	18

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73	Intensified Liquid-Liquid Extraction Technologies in Small Channels: A Review. Johnson Matthey Technology Review, 2019, 63, 299-310.	0.5	16
74	Separated oil-water flows with drag reducing polymers. Experimental Thermal and Fluid Science, 2019, 102, 467-478.	1.5	16
75	Mathematical Modeling for the Design and Scale-Up of a Large Industrial Aerosol-Assisted Chemical Vapor Deposition Process under Uncertainty. Industrial & Engineering Chemistry Research, 2020, 59, 1249-1260.	1.8	16
76	Flow pattern transition in liquid-liquid flows with a transverse cylinder. International Journal of Multiphase Flow, 2017, 90, 1-12.	1.6	15
77	Hydrodynamics and mass transfer in segmented flow small channel contactors for uranium extraction. Chemical Engineering and Processing: Process Intensification, 2020, 153, 107921.	1.8	14
78	Intensified liquid-liquid extraction of biomolecules using ionic liquids in small channels. Separation and Purification Technology, 2022, 282, 120063.	3.9	14
79	A continuous process concept for homogeneous catalysis in fluorous biphasic systems. Chemical Engineering Science, 2004, 59, 4983-4989.	1.9	13
80	Droplet size and velocity in dual continuous horizontal oilâ€“water flows. Chemical Engineering Research and Design, 2008, 86, 83-93.	2.7	13
81	Predictive model of the entrained fraction in horizontal oilâ€“water flows. Chemical Engineering Science, 2009, 64, 2817-2825.	1.9	13
82	Transition from stratified to non-stratified oilâ€“water flows using a bluff body. Experimental Thermal and Fluid Science, 2016, 76, 175-184.	1.5	13
83	Application of acoustic techniques to fluid-particle systems â€“ A review. Chemical Engineering Research and Design, 2021, 176, 180-193.	2.7	13
84	Effect of glycerol addition on phase inversion in horizontal dispersed oilâ€“water pipe flows. Experimental Thermal and Fluid Science, 2011, 35, 628-635.	1.5	12
85	Experimental and numerical studies on the flow characteristics and separation properties of dispersed liquid-liquid flows. Physics of Fluids, 2019, 31, .	1.6	12
86	On the closure problem of the effective stress in the Eulerian-Eulerian and mixture modeling approaches for the simulation of liquid-particle suspensions. Physics of Fluids, 2019, 31, .	1.6	11
87	Investigation of the swollen state of Carbopol molecules in non-aqueous solvents through rheological characterization. Soft Matter, 2020, 16, 9799-9815.	1.2	11
88	Spectral density analysis of the interface in stratified oilâ€“water flows. International Journal of Multiphase Flow, 2014, 65, 117-126.	1.6	10
89	A modelling approach for the comparison between intensified extraction in small channels and conventional solvent extraction technologies. Chemical Engineering Science, 2019, 203, 201-211.	1.9	10
90	Viscoelastic flow instabilities in static mixers: Onset and effect on the mixing efficiency. Physics of Fluids, 2021, 33, .	1.6	9

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91	Mathematical modelling of intensified extraction for spent nuclear fuel reprocessing. Nuclear Engineering and Design, 2018, 332, 162-172.	0.8	8
92	Gelation kinetics of non-aqueous Carbopol dispersions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 577, 84-95.	2.3	8
93	Effect of surfactants on drop formation flow patterns in a flow-focusing microchannel. Chemical Engineering Science, 2022, 253, 117517.	1.9	8
94	Droplet Size in Two-Phase Liquid Dispersed Pipeline Flows. Chemical Engineering and Technology, 2001, 24, 431-434.	0.9	7
95	Surfing of drops on moving liquidâ€"liquid interfaces. Journal of Fluid Mechanics, 2020, 892, .	1.4	7
96	Luminescent ruthenium(II) tris-bipyridyl complex caged in nanoscale silica for particle velocimetry studies in microchannels. Measurement Science and Technology, 2012, 23, 084004.	1.4	6
97	Separation studies in a continuous flow fluorous biphasic system. Journal of Molecular Catalysis A, 2004, 221, 19-27.	4.8	5
98	Onset of entrainment and degree of dispersion in dual continuous horizontal oilâ€"water flows. Experimental Thermal and Fluid Science, 2009, 33, 774-781.	1.5	5
99	Investigations of interfacial waves at the inlet section in stratified oilâ€"water flows. Experimental Thermal and Fluid Science, 2015, 60, 115-122.	1.5	5
100	Experimental and CFD scale-up studies for intensified actinide/lanthanide separations. Chemical Engineering and Processing: Process Intensification, 2021, 164, 108355.	1.8	5
101	Application of ultrasound techniques in Solid-Liquid fluidized bed. Measurement: Journal of the International Measurement Confederation, 2022, 194, 111017.	2.5	5
102	Hydrodynamics studies of the behaviour of traditional and two-phase ionic liquid solvent systems in countercurrent chromatography (CCC). Chemical Engineering Science, 2018, 192, 551-564.	1.9	4
103	Experimental investigation of the solid-liquid separation in a stirred tank owing to viscoelasticity. Physical Review Fluids, 2020, 5, .	1.0	4
104	Viscoelastic effects of immiscible liquidâ€"liquid displacement in microchannels with bends. Physics of Fluids, 2022, 34, .	1.6	4
105	Probability Density Functions for Droplet Sizing in Aerosol Transport Modelling. Computer Aided Chemical Engineering, 2017, , 2245-2250.	0.3	3
106	Modelling under Uncertainty for Process Design and Scale-up of an Industrial AACVD. Computer Aided Chemical Engineering, 2018, , 253-258.	0.3	3
107	Process intensification applied to spent nuclear fuel reprocessing: An alternative flowsheet using small channels. Chemical Engineering and Processing: Process Intensification, 2019, 143, 107618.	1.8	3
108	A mechanistic model for the prediction of flow pattern transitions during separation of liquid-liquid pipe flows. International Journal of Multiphase Flow, 2022, 155, 104172.	1.6	3

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109	{UO2}2+ Extraction Using Ionic Liquids in Intensified Extractors. , 2014, , .		2
110	A Semi-Empirical Model for Predicting the Onset of Drop Formation in Stratified Horizontal Oil-Water Flow. Chemical Engineering Communications, 2015, 202, 415-419.	1.5	2
111	Vortex-induced interfacial waves in liquidâ€“liquid flows across cylindrical bluff bodies of various sizes. European Journal of Mechanics, B/Fluids, 2019, 76, 340-351.	1.2	2
112	Design optimization of microfluidic-based solvent extraction systems for radionuclides detection. Nuclear Engineering and Design, 2021, 383, 111432.	0.8	2
113	Modelling of Microfluidic Devices for Analysis of Radionuclides. Computer Aided Chemical Engineering, 2019, 46, 1807-1812.	0.3	2
114	Mathematical Modelling of Intensified Extraction for Spent Nuclear Fuel Reprocessing. Computer Aided Chemical Engineering, 2017, , 355-360.	0.3	1
115	Optimal design of a COEX process for spent nuclear fuel reprocessing using small channels. Computer Aided Chemical Engineering, 2018, 44, 2365-2370.	0.3	1
116	Scale-Up Studies for Co/Ni Separations in Intensified Reactors. Micromachines, 2020, 11, 1106.	1.4	1
117	Effect of D-Mannitol on the Microstructure and Rheology of Non-Aqueous Carbopol Microgels. Materials, 2021, 14, 1782.	1.3	1
118	Bubble Formation on Top of Submerged Needle and Substrate Plates. , 2010, , .		0
119	Extraction of {UO2}2+ in Intensified Separators of Different Sizes Using Ionic Liquids. , 2016, , .		0
120	In memory of Professor Barry Azzopardi. International Journal of Multiphase Flow, 2017, 97, A1-A2.	1.6	0
121	Multiphase Flow and Transfer Phenomenon. International Journal of Chemical Engineering, 2017, 2017, 1-2.	1.4	0
122	Roles of solid effective stress and fluid-particle interaction force in modeling shear-induced particle migration in non-Brownian suspensions. Physical Review Fluids, 2021, 6, .	1.0	0
123	å^†æ•£ä½“ç³»ä¸æ¶²æ»´é—´åŠ›å¦è¡Œä¸º. Chinese Science Bulletin, 2015, 60, 2272-2281.	0.4	0
124	Intensified solvent extraction of L-tryptophan in small channels using D2EHPA. Chemical Engineering and Processing: Process Intensification, 2022, 172, 108802.	1.8	0