Roberto Mauri

List of Publications by Year
in descending order

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103 papers	2,421 citations	159585 30 h-index	223800 46 g-index
104 all docs	104 docs citations	104 times ranked	1381 citing authors

#	Article	IF	Citations
1	Investigation on steady regimes in a X-shaped micromixer fed with water and ethanol. Chemical Engineering Science, 2022, 248, 117254.	3.8	15
2	Effects of flow unsteadiness and chemical kinetics on the reaction yield in a T-microreactor. Chemical Engineering Research and Design, 2022, 179, 1-15.	5.6	4
3	Mixing Improvement in a T-Shaped Micro-Junction through Small Rectangular Cavities. Micromachines, 2022, 13, 159.	2.9	6
4	Hydrodynamic Green functions: paradoxes in unsteady Stokes conditions and infinite propagation velocity in incompressible viscous models. Meccanica, 2022, 57, 1055-1069.	2.0	3
5	Flow regimes, mixing and reaction yield of a mixture in an X-microreactor. Chemical Engineering Journal, 2022, 437, 135113.	12.7	8
6	A Study on the Effect of Flow Unsteadiness on the Yield of a Chemical Reaction in a T Micro-Reactor. Micromachines, 2021, 12, 242.	2.9	7
7	Effect of stratification on the mixing and reaction yield in a T-shaped micro-mixer. Physical Review Fluids, 2021, 6, .	2.5	22
8	A Non-local Phase Field Model of Bohmâ€™s Quantum Potential. Foundations of Physics, 2021, 51, 1.	1.3	2
9	Non-local phase field revisited. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 063212.	2.3	5
10	Dynamics of phase separation of sheared binary mixtures after a nonisothermal quenching. Physical Review Fluids, 2021, 6, .	2.5	6
11	Constitutive Relations of Thermal and Mass Diffusion. Journal of Non-Equilibrium Thermodynamics, 2020, 45, 27-38.	4.2	5
12	The role of flow features and chemical kinetics on the reaction yield in a T-shaped micro-reactor. Chemical Engineering Journal, 2020, 396, 125223.	12.7	29
13	Dynamics of phase separation of sheared inertialess binary mixtures. Physics of Fluids, 2020, 32, .	4.0	11
14	An Overview of Flow Features and Mixing in Micro T and Arrow Mixers. Industrial & Engineering Chemistry Research, 2020, 59, 3669-3686.	3.7	46
15	Dynamic transition of dendrite orientation in the diffusive spinodal decomposition of binary mixtures under a thermal gradient. Chemical Engineering Science, 2019, 203, 450-463.	3.8	9
16	Advanced Microstructures for Electrochemical Energy Systems: A Modelling Perspective. , 2019, , .		0
17	Numerical investigation of flow regimes in Tâ€shaped micromixers: Benchmark between finite volume and spectral element methods. Canadian Journal of Chemical Engineering, 2019, 97, 528-541.	1.7	32
18	Phase segregation of metastable quenched liquid mixtures and the effect of the quenching rate. Physics and Chemistry of Liquids, 2019, 57, 251-258.	1.2	0

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19	Steady and unsteady regimes in a T-shaped micro-mixer: Synergic experimental and numerical investigation. Chemical Engineering Journal, 2018, 341, 414-431.	12.7	93
20	Widom line prediction by the Soaveâ€"Redlichâ€"Kwong and Pengâ€"Robinson equations of state. Journal of Supercritical Fluids, 2018, 133, 367-371.	3.2	16
21	Dissolution or Growth of a Liquid Drop via Phase-Field Ternary Mixture Model Based on the Non-Random, Two-Liquid Equation. Entropy, 2018, 20, 125.	2.2	7
22	Triphase Separation of a Ternary Symmetric Highly Viscous Mixture. Entropy, 2018, 20, 936.	2.2	1
23	Electrochemical-thermal P2D aging model of a LiCoO2/graphite cell: Capacity fade simulations. Journal of Energy Storage, 2018, 20, 289-297.	8.1	40
24	Retardation of the phase segregation of liquid mixtures with a critical point of miscibility. AIChE Journal, 2018, 64, 4047-4052.	3.6	4
25	Unsteady mixing of binary liquid mixtures with composition-dependent viscosity. Chemical Engineering Science, 2017, 164, 333-343.	3.8	32
26	Modeling soft interface dominated systems: A comparison of phase field and Gibbs dividing surface models. Physics Reports, 2017, 675, 1-54.	25.6	39
27	Phase-field modeling of mixing/demixing of regular binary mixtures with a composition-dependent viscosity. Journal of Applied Physics, 2017, 121, .	2.5	7
28	Diffusion-Driven Dissolution or Growth of a Liquid Drop Embedded in a Continuous Phase of Another Liquid via Phase-Field Ternary Mixture Model. Langmuir, 2017, 33, 13125-13132.	3.5	5
29	Flow through porous media: a momentum tracer approach. Meccanica, 2017, 52, 2715-2734.	2.0	0
30	Critical conditions for the buoyancy-driven detachment of a wall-bound pendant drop. Physics of Fluids, 2016, 28, .	4.0	7
31	Spinodal decomposition of chemically reactive binary mixtures. Physical Review E, 2016, 94, 022605.	2.1	18
32	Phase-field modeling of interfacial dynamics in emulsion flows: Nonequilibrium surface tension. International Journal of Multiphase Flow, 2016, 85, 164-172.	3.4	12
33	The Principle of Minimal Resistance in Non-equilibrium Thermodynamics. Foundations of Physics, 2016, 46, 393-408.	1.3	1
34	Buoyancy-driven detachment of a wall-bound pendant drop: Interface shape at pinchoff and nonequilibrium surface tension. Physical Review E, 2015, 92, 032401.	2.1	8
35	Nonequilibrium surface tension. AIP Conference Proceedings, 2015, , .	0.4	0
36	Transport Phenomena in Multiphase Flows. Fluid Mechanics and Its Applications, 2015, , .	0.2	7

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37	Flow regimes in T-shaped micro-mixers. Computers and Chemical Engineering, 2015, 76, 150-159.	3.8	69
38	Mixing of binary fluids with composition-dependent viscosity in a T-shaped micro-device. Chemical Engineering Science, 2015, 123, 300-310.	3.8	29
39	Fokker-Planck Equation. Soft and Biological Matter, 2013, , 35-48.	0.3	0
40	Multiphase Flows. Soft and Biological Matter, 2013, , 107-132.	0.3	1
41	Effective Transport Properties. Soft and Biological Matter, 2013, , 133-151.	0.3	1
42	Multiple Scale Analysis. Soft and Biological Matter, 2013, , 153-179.	0.3	0
43	Waterâ€“ethanol mixing in T-shaped microdevices. Chemical Engineering Science, 2013, 95, 174-183.	3.8	84
44	Volume of mixing effect on fluid counter-diffusion. Physics of Fluids, 2013, 25, 082101.	4.0	4
45	Phase separation of viscous ternary liquid mixtures. Chemical Engineering Science, 2012, 80, 270-278.	3.8	12
46	Numerical Study of Split Tâ€Micromixers. Chemical Engineering and Technology, 2012, 35, 1291-1299.	1.5	42
47	Effect of inlet conditions on the engulfment pattern in a T-shaped micro-mixer. Chemical Engineering Journal, 2012, 185-186, 300-313.	12.7	83
48	Diffuse Interface (D.I.) Model for Multiphase Flows. , 2012, , 1-72.		0
49	Phase separation of viscous ternary liquid mixtures. , 2012, , 73-91.		0
50	Phase Field Approach to Multiphase Flow Modeling. Milan Journal of Mathematics, 2011, 79, 597-642.	1.1	65
51	Liquid mixture convection during phase separation in a temperature gradient. Physics of Fluids, 2011, 23, .	4.0	17
52	Diffuse-interface modeling of liquid-vapor phase separation in a van der Waals fluid. Physics of Fluids, 2009, 21, .	4.0	29
53	Spinodal decomposition of binary mixtures with composition-dependent heat conductivities. Chemical Engineering Science, 2008, 63, 2402-2407.	3.8	21
54	Diffuse-interface modeling of phase segregation in liquid mixtures. International Journal of Multiphase Flow, 2008, 34, 987-995.	3.4	33

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55	Enhanced heat transport during phase separation of liquid binary mixtures. Physics of Fluids, 2007, 19, .	4.0	39
56	Fluctuations of non-conservative systems. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P03002-P03002.	2.3	1
57	Experimental Evidence of the Motion of a Single Out-of-Equilibrium Drop. Langmuir, 2007, 23, 7459-7461.	3.5	23
58	Cellular Automata Model of Phase Transition in Binary Mixturesâ€. Industrial & Engineering Chemistry Research, 2006, 45, 2892-2896.	3.7	8
59	Violation of the fluctuation-dissipation theorem in confined driven colloids. Europhysics Letters, 2006, 76, 1022-1028.	2.0	23
60	Mixing of macroscopically quiescent liquid mixtures. Physics of Fluids, 2006, 18, 044107.	4.0	31
61	Effects of quenching rate and viscosity on spinodal decomposition. Physical Review E, 2006, 74, 011507.	2.1	29
62	Nucleation and spinodal decomposition of liquid mixtures. Physics of Fluids, 2005, 17, 034107.	4.0	35
63	Large-scale, unidirectional convection during phase separation of a density-matched liquid mixture. Physics of Fluids, 2005, 17, 094109.	4.0	16
64	Transport Properties of EVAl-Starch-Î± Amylase Membranes. Biomacromolecules, 2005, 6, 1389-1396.	5.4	3
65	Mixing of viscous liquid mixtures. Chemical Engineering Science, 2004, 59, 2065-2069.	3.8	12
66	Drop Size Evolution during the Phase Separation of Liquid Mixturesâ€. Industrial & Engineering Chemistry Research, 2004, 43, 349-353.	3.7	23
67	Convection-driven phase segregation of deeply quenched liquid mixtures. Journal of Chemical Physics, 2003, 118, 8841-8846.	3.0	23
68	Heat and mass transport in nonhomogeneous random velocity fields. Physical Review E, 2003, 68, 066306.	2.1	8
69	The constitutive relation of suspensions of noncolloidal particles in viscous fluids. Physics of Fluids, 2003, 15, 1888-1896.	4.0	7
70	The onset of particle segregation in plane Couette flows of concentrated suspensions. International Journal of Multiphase Flow, 2002, 28, 127-136.	3.4	5
71	Phase Separation of Liquid Mixtures. , 2002, , 139-152.		9
72	Phase Separation of Initially Inhomogeneous Liquid Mixtures. Industrial & Engineering Chemistry Research, 2001, 40, 2004-2010.	3.7	37

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73	Solvent extraction of chromium and cadmium from contaminated soils. AICHE Journal, 2001, 47, 509-512.	3.6	30
74	THERMOCAPILLARY MIGRATION IN DILUTE POLYDISPERSE SUSPENSIONS OF BUBBLES. Chemical Engineering Communications, 2001, 185, 17-21.	2.6	0
75	Two-dimensional model of phase segregation in liquid binary mixtures with an initial concentration gradient. Chemical Engineering Science, 2000, 55, 6109-6118.	3.8	38
76	Diffusiophoresis of two-dimensional liquid droplets in a phase-separating system. Physical Review E, 1999, 60, 2037-2044.	2.1	56
77	The longitudinal drift velocity of a sheared dilute suspension of spheres. International Journal of Multiphase Flow, 1999, 25, 875-885.	3.4	5
78	Two-dimensional model of phase segregation in liquid binary mixtures. Physical Review E, 1999, 60, 6968-6977.	2.1	73
79	Phase Separation of Liquid Mixtures in the Presence of Surfactants. Industrial & Engineering Chemistry Research, 1999, 38, 2418-2424.	3.7	46
80	A new application of the reciprocity relations to the study of fluid flows through fixed beds. Journal of Engineering Mathematics, 1998, 33, 103-112.	1.2	8
81	Diffusion-driven phase separation of deeply quenched mixtures. Physical Review E, 1998, 58, 7691-7699.	2.1	57
82	Transverse shear-induced gradient diffusion in a dilute suspension of spheres. Journal of Fluid Mechanics, 1998, 357, 279-287.	3.4	37
83	Onset of instability in sheared gas fluidized beds. AICHE Journal, 1997, 43, 1362-1365.	3.6	10
84	The transverse shear-induced liquid and particle tracer diffusivities of a dilute suspension of spheres undergoing a simple shear flow. Journal of Fluid Mechanics, 1996, 327, 255-272.	3.4	61
85	Liquidâ˘Liquid Extraction Using the Composition-Induced Phase Separation Process. Industrial & Engineering Chemistry Research, 1996, 35, 2360-2368.	3.7	46
86	Spinodal decomposition in binary mixtures. Physical Review E, 1996, 53, 2613-2623.	2.1	64
87	BROWNIAN MOTION OF CONTINUOUS DEFORMABLE BODIES. Chemical Engineering Communications, 1996, 148-150, 73-84.	2.6	0
88	ON THE PROPAGATOR OF THE STOKES EQUATION AND A DYNAMICAL DEFINITION OF VISCOSITY. Chemical Engineering Communications, 1996, 148-150, 385-390.	2.6	5
89	Lagrangian self-diffusion of Brownian particles in periodic flow fields. International Journal of Multiphase Flow, 1996, 22, 139.	3.4	0
90	Heat and mass transport in random velocity fields with application to dispersion in porous media. Journal of Engineering Mathematics, 1995, 29, 77-89.	1.2	10

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91	Lagrangian selfâ€diffusion of Brownian particles in periodic flow fields. Physics of Fluids, 1995, 7, 275-284.	4.0	14
92	Shear-Induced Particle Diffusion in Dilute Suspensions: Some Recent Theoretical Results. , 1995, , 69-72.		0
93	On the measurement of the relative viscosity of suspensions. Journal of Rheology, 1994, 38, 1285-1296.	2.6	38
94	Thermocapillary migration of a bidisperse suspension of bubbles. Journal of Fluid Mechanics, 1994, 261, 47-64.	3.4	24
95	Shear-induced resuspension in a couette device. International Journal of Multiphase Flow, 1993, 19, 797-802.	3.4	86
96	Longitudinal shear-induced diffusion of spheres in a dilute suspension. Journal of Fluid Mechanics, 1992, 240, 651.	3.4	68
97	Time-Dependent Dispersion of Small Particles in Rectangular Conduits. SIAM Journal on Applied Mathematics, 1991, 51, 1538-1555.	1.8	12
98	Dispersion, convection, and reaction in porous media. Physics of Fluids A, Fluid Dynamics, 1991, 3, 743-756.	1.6	102
99	Lagrangian approach to time-dependent laminar dispersion in rectangular conduits. Part 1. Two-dimensional flows. Journal of Fluid Mechanics, 1988, 190, 201-215.	3.4	25
100	Applications of Wienerâ€™s Path Integral for the Diffusion of Brownian Particles in Shear Flows. SIAM Journal on Applied Mathematics, 1986, 46, 49-55.	1.8	18
101	Dispersion and Convection in Periodic Porous Media. SIAM Journal on Applied Mathematics, 1986, 46, 1018-1023.	1.8	76
102	Boundary conditions for darcy's flow through porous media. International Journal of Multiphase Flow, 1983, 9, 561-574.	3.4	57
103	The detachment of a wall-bound pendant drop suspended in a sheared fluid and subjected to an external force field. Physics of Fluids, 0, , .	4.0	1