Suman Chakraborty

List of Publications by Year
in descending order

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386	10,116	36271	82499
papers	citations	51 h-index	72 g-index

394	394	394	5333
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Analytical solutions for velocity, temperature and concentration distribution in electroosmotic microchannel flows of a non-Newtonian bio-fluid. Analytica Chimica Acta, 2006, 559, 15-24.	2.6	306
2	PDMS microfluidics: A mini review. Journal of Applied Polymer Science, 2020, 137, 48958.	1.3	239
3	Electroosmotically driven capillary transport of typical non-Newtonian biofluids in rectangular microchannels. Analytica Chimica Acta, 2007, 605, 175-184.	2.6	212
4	Electroosmosis-modulated peristaltic transport in microfluidic channels. Physics of Fluids, 2016, 28, .	1.6	125
5	Dynamics of capillary flow of blood into a microfluidic channel. Lab on A Chip, 2005, 5, 421.	3.1	115
6	Thermal characteristics of electromagnetohydrodynamic flows in narrow channels with viscous dissipation and Joule heating under constant wall heat flux. International Journal of Heat and Mass Transfer, 2013, 67, 1151-1162.	2.5	113
7	An enthalpy-based hybrid lattice-Boltzmann method for modelling solidâ€“liquid phase transition in the presence of convective transport. Journal of Fluid Mechanics, 2007, 592, 155-175.	1.4	112
8	Microchannel flow control through a combined electromagnetohydrodynamic transport. Journal Physics D: Applied Physics, 2006, 39, 5364-5371.	1.3	111
9	Augmentation of peristaltic microflows through electro-osmotic mechanisms. Journal Physics D: Applied Physics, 2006, 39, 5356-5363.	1.3	110
10	A paper based self-pumping and self-breathing fuel cell using pencil stroked graphite electrodes. Lab on A Chip, 2014, 14, 1661-1664.	3.1	109
11	A hybrid lattice Boltzmann model for solidâ€“liquid phase transition in presence of fluid flow. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 351, 359-367.	0.9	104
12	Streaming-field-induced convective transport and its influence on the electroviscous effects in narrow fluidic confinement beyond the Debye-HÃ¼ckel limit. Physical Review E, 2008, 77, 037303.	0.8	82
13	Hydraulic jumps due to oblique impingement of circular liquid jets on a flat horizontal surface. Journal of Fluid Mechanics, 2007, 573, 247-263.	1.4	81
14	Energy Transfer through Streaming Effects in Time-Periodic Pressure-Driven Nanochannel Flows with Interfacial Slip. Langmuir, 2010, 26, 581-590.	1.6	80
15	Capillarity-driven blood plasma separation on paper-based devices. Analyst, The, 2015, 140, 6473-6476.	1.7	80
16	Electrokinetics in polyelectrolyte grafted nanofluidic channels modulated by the ion partitioning effect. Soft Matter, 2016, 12, 5968-5978.	1.2	80
17	Electrokinetically modulated peristaltic transport of power-law fluids. Microvascular Research, 2016, 103, 41-54.	1.1	80
18	Analytical solutions of Nusselt number for thermally fully developed flow in microtubes under a combined action of electroosmotic forces and imposed pressure gradients. International Journal of Heat and Mass Transfer, 2006, 49, 810-813.	2.5	78

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19	Numerical study of conjugate heat transfer in rectangular microchannel heat sink with Al2O3/H2O nanofluid. Heat and Mass Transfer, 2009, 45, 1323-1333.	1.2	78
20	Steric-Effect Induced Alterations in Streaming Potential and Energy Transfer Efficiency of Non-Newtonian Fluids in Narrow Confinements. Langmuir, 2011, 27, 12243-12252.	1.6	75
21	Giant augmentations in electro-hydro-dynamic energy conversion efficiencies of nanofluidic devices using viscoelastic fluids. Applied Physics Letters, 2012, 101, 043905.	1.5	72
22	Mass flow-rate control through time periodic electro-osmotic flows in circular microchannels. Physics of Fluids, 2008, 20, .	1.6	71
23	Numerical modeling of surface reaction kinetics in electrokinetically actuated microfluidic devices. Analytica Chimica Acta, 2014, 838, 64-75.	2.6	70
24	Effect of Conductivity Variations within the Electric Double Layer on the Streaming Potential Estimation in Narrow Fluidic Confinements. Langmuir, 2010, 26, 11589-11596.	1.6	69
25	Semi-analytical solutions for electroosmotic flows with interfacial slip in microchannels of complex cross-sectional shapes. Microfluidics and Nanofluidics, 2011, 11, 255-267.	1.0	68
26	Electrokinetics with â€œpaper-and-pencilâ€•devices. Lab on A Chip, 2012, 12, 4026.	3.1	66
27	Uniform electric-field-induced lateral migration of a sedimenting drop. Journal of Fluid Mechanics, 2016, 792, 553-589.	1.4	66
28	Rapid mixing with highâ€throughput in a semiâ€active semiâ€passive micromixer. Electrophoresis, 2017, 38, 1310-1317.	1.3	66
29	Electrical Power Generation from Wet Textile Mediated by Spontaneous Nanoscale Evaporation. Nano Letters, 2019, 19, 7191-7200.	4.5	66
30	Analytical Solution for Thermally Fully Developed Combined Electroosmotic and Pressure-Driven Flows in Narrow Confinements With Thick Electrical Double Layers. Journal of Heat Transfer, 2011, 133, .	1.2	65
31	Studies on Thermal Stratification Phenomenon in LH2Storage Vessel. Heat Transfer Engineering, 2004, 25, 54-66.	1.2	64
32	Semi-analytical solution of the extended Graetz problem for combined electroosmotically and pressure-driven microchannel flows with step-change in wall temperature. International Journal of Heat and Mass Transfer, 2008, 51, 4875-4885.	2.5	63
33	Generalized Model for Time Periodic Electroosmotic Flows with Overlapping Electrical Double Layers. Langmuir, 2007, 23, 12421-12428.	1.6	62
34	An enthalpy-source based lattice Boltzmann model for conduction dominated phase change of pure substances. International Journal of Thermal Sciences, 2008, 47, 552-559.	2.6	62
35	Generalization of Interfacial Electrohydrodynamics in the Presence of Hydrophobic Interactions in Narrow Fluidic Confinements. Physical Review Letters, 2008, 100, 097801.	2.9	62
36	Thermodynamics of premixed combustion in a heat recirculating micro combustor. Energy, 2014, 68, 510-518.	4.5	62

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37	Modeling of coupled momentum, heat and solute transport during DNA hybridization in a microchannel in the presence of electro-osmotic effects and axial pressure gradients. Microfluidics and Nanofluidics, 2006, 2, 37-49.	1.0	61
38	Steric effect and slipâ€modulated energy transfer in narrow fluidic channels with finite aspect ratios. Electrophoresis, 2010, 31, 843-849.	1.3	61
39	THREE-DIMENSIONAL COMPUTATIONAL MODELING OF MOMENTUM, HEAT, AND MASS TRANSFER IN A LASER SURFACE ALLOYING PROCESS. Numerical Heat Transfer; Part A: Applications, 2002, 42, 307-326.	1.2	60
40	Double layer overlap in ac electroosmosis. European Journal of Mechanics, B/Fluids, 2008, 27, 297-308.	1.2	60
41	Steric-effect-induced enhancement of electrical-double-layer overlapping phenomena. Physical Review E, 2011, 84, 012501.	0.8	60
42	Electro-osmosis of superimposed fluids in the presence of modulated charged surfaces in narrow confinements. Journal of Fluid Mechanics, 2015, 776, 390-429.	1.4	60
43	Modelling of transport phenomena in laser surface alloying with distributed species mass source. International Journal of Heat and Fluid Flow, 2002, 23, 298-307.	1.1	59
44	Electric-field-driven contact-line dynamics of two immiscible fluids over chemically patterned surfaces in narrow confinements. Physical Review E, 2013, 88, 023022.	0.8	59
45	Towards a generalized representation of surface effects on pressure-driven liquid flow in microchannels. Applied Physics Letters, 2007, 90, 034108.	1.5	56
46	Order Parameter Modeling of Fluid Dynamics in Narrow Confinements Subjected to Hydrophobic Interactions. Physical Review Letters, 2007, 99, 094504.	2.9	56
47	Anomalous Electrical Conductivity of Nanoscale Colloidal Suspensions. ACS Nano, 2008, 2, 2029-2036.	7.3	56
48	Analysis of micromixing of non-Newtonian fluids driven by alternating current electrothermal flow. Journal of Non-Newtonian Fluid Mechanics, 2017, 247, 123-131.	1.0	56
49	Modelling of turbulent molten pool convection in laser welding of a copperâ€“nickel dissimilar couple. International Journal of Heat and Mass Transfer, 2007, 50, 1805-1822.	2.5	54
50	Design and Optimization of Single-Phase Liquid Cooled Microchannel Heat Sink. IEEE Transactions on Components and Packaging Technologies, 2009, 32, 876-886.	1.4	54
51	Fabricating Paper Based Devices Using Correction Pens. Scientific Reports, 2019, 9, 1752.	1.6	54
52	Coalescence dynamics of unequal sized drops. Physics of Fluids, 2019, 31, 012105.	1.6	54
53	Transverse electrodes for improved DNA hybridization in microchannels. AICHE Journal, 2007, 53, 1086-1099.	1.8	53
54	Traction force microscopy on-chip: shear deformation of fibroblast cells. Lab on A Chip, 2008, 8, 1308.	3.1	53

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55	Effects of entrance region transport processes on free convection slip flow in vertical microchannels with isothermally heated walls. International Journal of Heat and Mass Transfer, 2007, 50, 1248-1254.	2.5	52
56	Ultra-low-cost â€˜paper-and-pencilâ€™ device for electrically controlled micromixing of analytes. Microfluidics and Nanofluidics, 2015, 19, 375-383.	1.0	52
57	Electroosmosis of viscoelastic fluids over charge modulated surfaces in narrow confinements. Physics of Fluids, 2015, 27, .	1.6	52
58	Numerical Investigation on Role of Bottom Gas Stirring in Controlling Thermal Stratification in Steel Ladles. ISIJ International, 2004, 44, 537-546.	0.6	51
59	A novel modeling and simulation technique of photoâ€“thermal interactions between lasers and living biological tissues undergoing multiple changes in phase. Computers in Biology and Medicine, 2005, 35, 447-462.	3.9	51
60	Redefining electrical double layer thickness in narrow confinements: Effect of solvent polarization. Physical Review E, 2012, 85, 051508.	0.8	51
61	Analytical solutions for the rate of DNA hybridization in a microchannel in the presence of pressure-driven and electroosmotic flows. Sensors and Actuators B: Chemical, 2006, 114, 957-963.	4.0	50
62	An Enthalpy Model for Simulation of Dendritic Growth. Numerical Heat Transfer, Part B: Fundamentals, 2006, 50, 59-78.	0.6	48
63	Predicting microscale gas flows and rarefaction effects through extended Navierâ€“Stokesâ€“Fourier equations from phoretic transport considerations. Microfluidics and Nanofluidics, 2010, 9, 831-846.	1.0	48
64	Electrokinetically induced alterations in dynamic response of viscoelastic fluids in narrow confinements. Physical Review E, 2012, 85, 056302.	0.8	48
65	Derivations of extended Navier-Stokes equations from upscaled molecular transport considerations for compressible ideal gas flows: Towards extended constitutive forms. Physics of Fluids, 2007, 19, .	1.6	46
66	Transiences in rotational electro-hydrodynamics microflows of a viscoelastic fluid under electrical double layer phenomena. Journal of Non-Newtonian Fluid Mechanics, 2016, 231, 56-67.	1.0	46
67	Smartphone-Enabled Paper-Based Hemoglobin Sensor for Extreme Point-of-Care Diagnostics. ACS Sensors, 2021, 6, 1077-1085.	4.0	46
68	Anomalous mixing behaviour in rotationally actuated microfluidic devices. Lab on A Chip, 2011, 11, 2823.	3.1	44
69	Magnetohydrodynamics in narrow fluidic channels in presence of spatially non-uniform magnetic fields: framework for combined magnetohydrodynamic and magnetophoretic particle transport. Microfluidics and Nanofluidics, 2012, 13, 799-807.	1.0	43
70	Combined Effects of Interfacial Permittivity Variations and Finite Ionic Sizes on Streaming Potentials in Nanochannels. Langmuir, 2012, 28, 17552-17563.	1.6	43
71	Capillary filling dynamics of water in nanopores. Applied Physics Letters, 2012, 101, .	1.5	42
72	Role of streaming potential on pulsating mass flow rate control in combined electroosmotic and pressureâ€driven microfluidic devices. Electrophoresis, 2012, 33, 419-425.	1.3	42

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73	Electrohydrodynamics of confined two-dimensional liquid droplets in uniform electric field. Physics of Fluids, 2018, 30, .	1.6	42
74	Oscillatory shear stress induced calcium flickers in osteoblast cells. Integrative Biology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 70	0.6	41
75	Wettability-mediated dynamics of two-phase flow in microfluidic T-junction. Physics of Fluids, 2018, 30, 122106.	1.6	41
76	Patterned-wettability-induced alteration of electro-osmosis over charge-modulated surfaces in narrow confinements. Physical Review E, 2012, 85, 046304.	0.8	40
77	Combined influences of viscous dissipation, non-uniform Joule heating and variable thermophysical properties on convective heat transfer in microtubes. International Journal of Heat and Mass Transfer, 2012, 55, 762-772.	2.5	39
78	Tunable hydrodynamic characteristics in microchannels with biomimetic superhydrophobic (lotus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.2	39
79	Slippery to Sticky Transition of Hydrophobic Nanochannels. Nano Letters, 2015, 15, 7497-7502.	4.5	38
80	Effect of surfactant on motion and deformation of compound droplets in arbitrary unbounded Stokes flows. Journal of Fluid Mechanics, 2016, 803, 200-249.	1.4	38
81	The effect of uniform electric field on the cross-stream migration of a drop in plane Poiseuille flow. Journal of Fluid Mechanics, 2016, 809, 726-774.	1.4	38
82	Hydrodynamics in deformable microchannels. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	38
83	Time periodic electroosmosis of linear viscoelastic liquids over patterned charged surfaces in microfluidic channels. Journal of Non-Newtonian Fluid Mechanics, 2013, 202, 1-11.	1.0	37
84	Ionic size dependent electroosmosis in ionâ€selective microchannels and nanochannels. Electrophoresis, 2013, 34, 2193-2198.	1.3	36
85	Energy generation from water flow over a reduced graphene oxide surface in a paperâ€“pencil device. Lab on A Chip, 2016, 16, 3589-3596.	3.1	36
86	Electrothermally modulated contact line dynamics of a binary fluid in a patterned fluidic environment. Physics of Fluids, 2018, 30, .	1.6	36
87	Instant power generation from an air-breathing paper and pencil based bacterial bio-fuel cell. Lab on A Chip, 2015, 15, 2580-2583.	3.1	35
88	Electroosmosis of Viscoelastic Fluids: Role of Wall Depletion Layer. Langmuir, 2017, 33, 12046-12055.	1.6	35
89	Rotational electrohydrodynamics of a non-Newtonian fluid under electrical double-layer phenomenon: the role of lateral confinement. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	35
90	Influence of combined electromagnetohydrodynamics on microchannel flow with electrokinetic effect and interfacial slip. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	34

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91	Mixed Electroosmotically and Pressure-Driven Flow with Temperature-Dependent Properties. Journal of Thermophysics and Heat Transfer, 2011, 25, 432-442.	0.9	33
92	Thermocapillary-actuated contact-line motion of immiscible binary fluids over substrates with patterned wettability in narrow confinement. Physical Review E, 2014, 90, 023011.	0.8	33
93	Effect of interfacial slip on the cross-stream migration of a drop in an unbounded Poiseuille flow. Physical Review E, 2015, 92, 023002.	0.8	33
94	Heat transfer in an evaporating thin liquid film moving slowly along the walls of an inclined microchannel. International Journal of Heat and Mass Transfer, 2005, 48, 2801-2805.	2.5	32
95	Rheology-modulated contact line dynamics of an immiscible binary system under electrical double layer phenomena. Soft Matter, 2015, 11, 6692-6702.	1.2	32
96	Universal evaporation dynamics of ordered arrays of sessile droplets. Journal of Fluid Mechanics, 2019, 866, 61-81.	1.4	32
97	Dispersion characteristics of blood during nanoparticle assisted drug delivery process through a permeable microvessel. Microvascular Research, 2014, 92, 25-33.	1.1	31
98	Contact line dynamics of electroosmotic flows of incompressible binary fluid system with density and viscosity contrasts. Physics of Fluids, 2015, 27, 032109.	1.6	31
99	Flow dynamics of a viscoelastic fluid squeezed and extruded between two parallel plates. Journal of Non-Newtonian Fluid Mechanics, 2016, 227, 56-64.	1.0	31
100	Confinement effects on the rotational microflows of a viscoelastic fluid under electrical double layer phenomenon. Journal of Non-Newtonian Fluid Mechanics, 2017, 244, 123-137.	1.0	31
101	Effect of uniform electric field on the drop deformation in simple shear flow and emulsion shear rheology. Physics of Fluids, 2017, 29, .	1.6	31
102	Hydroelectric power plant on a paper strip. Lab on A Chip, 2018, 18, 1560-1568.	3.1	31
103	Electrohydrodynamic interaction between droplet pairs in a confined shear flow. Physics of Fluids, 2019, 31, .	1.6	31
104	Implications of hydrophobic interactions and consequent apparent slip phenomenon on the entrance region transport of liquids through microchannels. Physics of Fluids, 2008, 20, .	1.6	30
105	Effective viscosity of nanoscale colloidal suspensions. Journal of Applied Physics, 2009, 106, .	1.1	30
106	Combined influence of streaming potential and substrate compliance on load capacity of a planar slider bearing. Physics of Fluids, 2011, 23, .	1.6	30
107	Electrokinetic energy conversion in nanofluidic channels: Addressing the loose ends in nanodevice efficiency. Electrophoresis, 2015, 36, 675-681.	1.3	30
108	Thermally enhanced self-propelled droplet motion on gradient surfaces. RSC Advances, 2015, 5, 45266-45275.	1.7	30

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109	Electric field-induced pinch-off of a compound droplet in Poiseuille flow. Physics of Fluids, 2019, 31, .	1.6	30
110	Universality in coalescence of polymeric fluids. Soft Matter, 2020, 16, 10921-10927.	1.2	30
111	Analyzing the Fluid Flow in Continuous Casting through Evolutionary Neural Nets and Multiâ€Objective Genetic Algorithms. Steel Research International, 2010, 81, 197-203.	1.0	29
112	Capillary filling dynamics of viscoelastic fluids. Physical Review E, 2014, 89, 053024.	0.8	29
113	Drop deformation and emulsion rheology under the combined influence of uniform electric field and linear flow. Journal of Fluid Mechanics, 2018, 841, 408-433.	1.4	29
114	Thermally developing electroosmotic transport of nanofluids in microchannels. Microfluidics and Nanofluidics, 2008, 4, 501-511.	1.0	28
115	Controlled microbubble generation on a compact disk. Applied Physics Letters, 2010, 97, 234103.	1.5	28
116	Migration of a surfactant-laden droplet in non-isothermal Poiseuille flow. Physics of Fluids, 2017, 29, .	1.6	28
117	Hemodynamic shear stress induces protective autophagy in HeLa cells through lipid raft-mediated mechanotransduction. Clinical and Experimental Metastasis, 2018, 35, 135-148.	1.7	28
118	Flow-induced deformation in a microchannel with a non-Newtonian fluid. Biomicrofluidics, 2018, 12, 034116.	1.2	28
119	Development and fluidic simulation of microneedles for painless pathological interfacing with living systems. Journal of Applied Physics, 2008, 103, 114701.	1.1	27
120	Micro-scale thermo-fluidic transport in two immiscible liquid layers subject to combined electroosmotic and pressure-driven transport. International Journal of Heat and Mass Transfer, 2009, 52, 2660-2666.	2.5	27
121	Effects of solvent-mediated nonelectrostatic ion-ion interactions on a streaming potential in microchannels and nanochannels. Physical Review E, 2013, 88, 033014.	0.8	27
122	On-chip lectin microarray for glycoprofiling of different gastritis types and gastric cancer. Biomicrofluidics, 2014, 8, 034107.	1.2	27
123	Studies on transport phenomena during directional solidification of a noneutectic binary solution cooled from the top. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2003, 34, 899-909.	1.0	26
124	Probing nanoantenna-directed photothermal destruction of tumors using noninvasive laser irradiation. Applied Physics Letters, 2009, 95, 233701.	1.5	26
125	Effect of submicron particles on electrowetting on dielectrics (EWOD) of sessile droplets. Journal of Colloid and Interface Science, 2011, 363, 640-645.	5.0	26
126	Extended Graetz problem for combined electroosmotic and pressure-driven flows in narrow confinements with thick electric double layers. International Journal of Heat and Mass Transfer, 2012, 55, 4724-4733.	2.5	26

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127	Electrohydrodynamics within the electrical double layer in the presence of finite temperature gradients. Physical Review E, 2013, 88, 053020.	0.8	26
128	Filling of charged cylindrical capillaries. Physical Review E, 2014, 90, 043011.	0.8	26
129	Anomalous interplay of slip, shear and wettability in nanoconfined water. Nanoscale, 2019, 11, 11254-11261.	2.8	26
130	Electroâ€kinetically driven route for highly sensitive blood pathology on a paperâ€based device. Electrophoresis, 2020, 41, 615-620.	1.3	26
131	PSA detection using label free graphene FET with coplanar electrodes based microfluidic point of care diagnostic device. Talanta, 2021, 222, 121581.	2.9	26
132	Order Parameter Description of Electrochemical-Hydrodynamic Interactions in Nanochannels. Physical Review Letters, 2008, 101, 184501.	2.9	25
133	Effect of presence of salt on the dynamics of water in uncharged nanochannels. Journal of Chemical Physics, 2013, 138, 054504.	1.2	25
134	Alterations in streaming potential in presence of time periodic pressureâ€driven flow of a power law fluid in narrow confinements with nonelectrostatic ionâ€“ion interactions. Electrophoresis, 2014, 35, 662-669.	1.3	25
135	Pulsating electric field modulated contact line dynamics of immiscible binary systems in narrow confinements under an electrical double layer phenomenon. Soft Matter, 2014, 10, 8512-8523.	1.2	25
136	Effect of Surface Wettability on Crack Dynamics and Morphology of Colloidal Films. Langmuir, 2015, 31, 6001-6010.	1.6	25
137	Heat Transfer and Entropy Generation Characteristics of a Non-Newtonian Fluid Squeezed and Extruded Between Two Parallel Plates. Journal of Heat Transfer, 2017, 139, .	1.2	25
138	Ion-size dependent electroosmosis of viscoelastic fluids in microfluidic channels with interfacial slip. Physics of Fluids, 2017, 29, 072002.	1.6	25
139	Capillary filling in centrifugally actuated microfluidic devices with dynamically evolving contact line motion. Journal of Applied Physics, 2009, 105, .	1.1	24
140	Wenzel and Cassie-Baxter states of an electrolytic drop on charged surfaces. Physical Review E, 2012, 86, 011603.	0.8	24
141	Confinement-induced alterations in the evaporation dynamics of sessile droplets. Soft Matter, 2017, 13, 969-977.	1.2	24
142	Universal evaporation dynamics of a confined sessile droplet. Applied Physics Letters, 2017, 111, .	1.5	24
143	Mimicking wettability alterations using temperature gradients for water nanodroplets. Nanoscale, 2017, 9, 12509-12515.	2.8	24
144	Sedimentation of a surfactant-laden drop under the influence of an electric field. Journal of Fluid Mechanics, 2018, 849, 277-311.	1.4	24

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145	Rayleigh-benard convection during solidification of an eutectic solution cooled from the top. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2002, 33, 605-612.	1.0	23
146	Gas Injection in Steelmaking Vessels: Coupling a Fluid Dynamic Analysis with a Genetic Algorithms-Based Pareto-Optimality. Materials and Manufacturing Processes, 2005, 20, 363-379.	2.7	23
147	A generalized model for probing frictional characteristics of pressure-driven liquid microflows. Journal of Applied Physics, 2007, 102, 104907.	1.1	23
148	Effect of fluidic transport on the reaction kinetics in lectin microarrays. Analytica Chimica Acta, 2011, 701, 6-14.	2.6	23
149	Effect of surface charge convection and shape deformation on the dielectrophoretic motion of a liquid drop. Physical Review E, 2016, 93, 043127.	0.8	23
150	Streaming potential-modulated capillary filling dynamics of immiscible fluids. Soft Matter, 2016, 12, 2056-2065.	1.2	23
151	The effect of surface charge convection and shape deformation on the settling velocity of drops in nonuniform electric field. Physics of Fluids, 2017, 29, .	1.6	23
152	Microfluidics on Porous Substrates Mediated by Capillarity-Driven Transport. Industrial & Engineering Chemistry Research, 2020, 59, 3644-3654.	1.8	23
153	Regimes of streaming potential in cylindrical nano-pores in presence of finite sized ions and charge induced thickening: An analytical approach. Journal of Chemical Physics, 2013, 139, 224503.	1.2	22
154	Effect of hematocrit on blood dynamics on a compact disc platform. Analyst, The, 2015, 140, 1432-1437.	1.7	22
155	Dielectrophoresis of a surfactant-laden viscous drop. Physics of Fluids, 2016, 28, .	1.6	22
156	Transient electroosmosis of a Maxwell fluid in a rotating microchannel. Electrophoresis, 2017, 38, 2741-2748.	1.3	22
157	Influence of complex interfacial rheology on the thermocapillary migration of a surfactant-laden droplet in Poiseuille flow. Physics of Fluids, 2018, 30, 022103.	1.6	22
158	Electrothermally actuated moving contact line dynamics over chemically patterned surfaces with resistive heaters. Physics of Fluids, 2018, 30, .	1.6	22
159	Electrokinetics with blood. Electrophoresis, 2019, 40, 180-189.	1.3	22
160	Phase-field modeling of multicomponent and multiphase flows in microfluidic systems: a review. International Journal of Numerical Methods for Heat and Fluid Flow, 2021, 31, 3089-3131.	1.6	22
161	Electrically modulated dynamic spreading of drops on soft surfaces. Applied Physics Letters, 2015, 107, 034101.	1.5	21
162	Effect of temperature gradient on the cross-stream migration of a surfactant-laden droplet in Poiseuille flow. Journal of Fluid Mechanics, 2018, 835, 170-216.	1.4	21

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163	Effect of Marangoni stress on the bulk rheology of a dilute emulsion of surfactant-laden deformable droplets in linear flows. Physical Review Fluids, 2017, 2, .	1.0	21
164	Analytical Solutions for Heat Transfer During Cyclic Melting and Freezing of a Phase Change Material Used in Electronic or Electrical Packaging. Journal of Electronic Packaging, Transactions of the ASME, 2003, 125, 126-133.	1.2	20
165	Droplet dynamics in a microchannel subjected to electrocapillary actuation. Journal of Applied Physics, 2007, 101, 104901.	1.1	20
166	Influence of streaming potential on the elastic response of a compliant microfluidic substrate subjected to dynamic loading. Physics of Fluids, 2010, 22, 122002.	1.6	20
167	Augmented stress-responsive characteristics of cell lines in narrow confinements. Integrative Biology (United Kingdom), 2011, 3, 684.	0.6	20
168	Thin film evaporation in microchannels with interfacial slip. Microfluidics and Nanofluidics, 2011, 10, 155-163.	1.0	20
169	Graetz Problem Extended to Mixed Electroosmotically and Pressure Driven Flow. Journal of Thermophysics and Heat Transfer, 2012, 26, 123-133.	0.9	20
170	Variational formulation on Joule heating in combined electroosmotic and pressure driven microflows. International Journal of Heat and Mass Transfer, 2013, 61, 254-265.	2.5	20
171	Small-Scale Flow with Deformable Boundaries. Journal of the Indian Institute of Science, 2018, 98, 159-183.	0.9	20
172	Confinement effect on electrically induced dynamics of a droplet in shear flow. Physical Review E, 2019, 100, 033101.	0.8	20
173	Electrically modulated dynamics of a compound droplet in a confined microfluidic environment. Journal of Fluid Mechanics, 2020, 882, .	1.4	20
174	A portable spinning disc for complete blood count (CBC). Biosensors and Bioelectronics, 2020, 150, 111935.	5.3	20
175	Biomicrofluidics: Recent trends and future challenges. Sadhana - Academy Proceedings in Engineering Sciences, 2009, 34, 573-590.	0.8	19
176	Frictional and Heat Transfer Characteristics of Single-Phase Microchannel Liquid Flows. Heat Transfer Engineering, 2012, 33, 425-446.	1.2	19
177	Transient dynamics of confined liquid drops in a uniform electric field. Physical Review E, 2014, 89, 053020.	0.8	19
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