Nilanjan Mondal

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/9591211/publications.pdf

Version: 2024-02-01

32 papers	1,642 citations	236925 25 h-index	414414 32 g-index
32 all docs	32 docs citations	32 times ranked	1189 citing authors

#	Article	IF	Citations
1	PDMS microfluidics: A mini review. Journal of Applied Polymer Science, 2020, 137, 48958.	2.6	239
2	Capillarity-driven blood plasma separation on paper-based devices. Analyst, The, 2015, 140, 6473-6476.	3.5	80
3	Mass flow-rate control through time periodic electro-osmotic flows in circular microchannels. Physics of Fluids, 2008, 20, .	4.0	71
4	Semi-analytical solutions for electroosmotic flows with interfacial slip in microchannels of complex cross-sectional shapes. Microfluidics and Nanofluidics, 2011, 11, 255-267.	2.2	68
5	Uniform electric-field-induced lateral migration of a sedimenting drop. Journal of Fluid Mechanics, 2016, 792, 553-589.	3.4	66
6	Rapid mixing with highâ€throughput in a semiâ€active semiâ€passive micromixer. Electrophoresis, 2017, 38, 1310-1317.	2.4	66
7	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, .	2.1	65
8	Generalized Model for Time Periodic Electroosmotic Flows with Overlapping Electrical Double Layers. Langmuir, 2007, 23, 12421-12428.	3.5	62
9	An enthalpy-source based lattice Boltzmann model for conduction dominated phase change of pure substances. International Journal of Thermal Sciences, 2008, 47, 552-559.	4.9	62
10	Thermodynamics of premixed combustion in a heat recirculating micro combustor. Energy, 2014, 68, 510-518.	8.8	62
11	Steric effect and slipâ€modulated energy transfer in narrow fluidic channels with finite aspect ratios. Electrophoresis, 2010, 31, 843-849.	2.4	61
12	Double layer overlap in ac electroosmosis. European Journal of Mechanics, B/Fluids, 2008, 27, 297-308.	2.5	60
13	Steric-effect-induced enhancement of electrical-double-layer overlapping phenomena. Physical Review E, 2011, 84, 012501.	2.1	60
14	Order Parameter Modeling of Fluid Dynamics in Narrow Confinements Subjected to Hydrophobic Interactions. Physical Review Letters, 2007, 99, 094504.	7.8	56
15	Anomalous Electrical Conductivity of Nanoscale Colloidal Suspensions. ACS Nano, 2008, 2, 2029-2036.	14.6	56
16	Transverse electrodes for improved DNA hybridization in microchannels. AICHE Journal, 2007, 53, 1086-1099.	3.6	53
17	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.	4.8	52
18	Numerical Investigation on Role of Bottom Gas Stirring in Controlling Thermal Stratification in Steel Ladles. ISIJ International, 2004, 44, 537-546.	1.4	51

#	Article	IF	Citations
19	Redefining electrical double layer thickness in narrow confinements: Effect of solvent polarization. Physical Review E, 2012, 85, 051508.	2.1	51
20	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.	7.8	50
21	Predicting microscale gas flows and rarefaction effects through extended Navierâ€“Stokesâ€“Fourier equations from phoretic transport considerations. Microfluidics and Nanofluidics, 2010, 9, 831-846.	2.2	48
22	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, .	4.0	46
23	Slippery to Sticky Transition of Hydrophobic Nanochannels. Nano Letters, 2015, 15, 7497-7502.	9.1	38
24	Electric field-induced pinch-off of a compound droplet in Poiseuille flow. Physics of Fluids, 2019, 31, .	4.0	30
25	Anomalous interplay of slip, shear and wettability in nanoconfined water. Nanoscale, 2019, 11, 11254-11261.	5.6	26
26	Rapid capillary filling via ionâ€“water interactions over the nanoscale. Nanoscale, 2016, 8, 6535-6541.	5.6	15
27	Electric field modulated deformation dynamics of a compound drop in the presence of confined shear flow. Physics of Fluids, 2020, 32, .	4.0	13
28	Interfacial viscosity-dictated morpho-dynamics of a compound drop in linear flows. Physics of Fluids, 2020, 32, 062006.	4.0	10
29	Upstream events dictate interfacial slip in geometrically converging nanopores. Journal of Chemical Physics, 2021, 154, 164709.	3.0	9
30	Morpho-dynamic evolution due to inertia-mediated impact of a compound drop on a deep liquid pool. Physics of Fluids, 2022, 34, .	4.0	7
31	Topology and transport in generalized helical flows. Physics of Fluids, 2021, 33, 117106.	4.0	6
32	Mechanistic basis of transport in unconfined swirling flows. Physics of Fluids, 2021, 33, 053109.	4.0	3