Suman Chakraborty

List of Publications by Citations

372 papers	7,792 citations	47 h-index	62 g-index
394 ext. papers	9,019 ext. citations	3.9 avg, IF	6.92 L-index

#	Paper	IF	Citations
372	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	6.6	262
371	Electroosmotically driven capillary transport of typical non-Newtonian biofluids in rectangular microchannels. *Analytica Chimica Acta*, **2007**, 605, 175-84	6.6	179
370	A paper based self-pumping and self-breathing fuel cell using pencil stroked graphite electrodes. *Lab on A Chip*, **2014**, 14, 1661-4	7.2	91
369	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	4.9	89
368	PDMS microfluidics: A mini review. *Journal of Applied Polymer Science*, **2020**, 137, 48958	2.9	88
367	An enthalpy-based hybrid lattice-Boltzmann method for modelling solid–liquid phase transition in the presence of convective transport. *Journal of Fluid Mechanics*, **2007**, 592, 155-175	3.7	88
366	A hybrid lattice Boltzmann model for solid–liquid phase transition in presence of fluid flow. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2006**, 351, 359-367	2.3	88
365	Electroosmosis-modulated peristaltic transport in microfluidic channels. *Physics of Fluids*, **2016**, 28, 052002	4.4	88
364	Dynamics of capillary flow of blood into a microfluidic channel. *Lab on A Chip*, **2005**, 5, 421-30	7.2	86
363	Augmentation of peristaltic microflows through electro-osmotic mechanisms. *Journal Physics D: Applied Physics*, **2006**, 39, 5356-5363	3	84
362	Microchannel flow control through a combined electromagnetohydrodynamic transport. *Journal Physics D: Applied Physics*, **2006**, 39, 5364-5371	3	79
361	Streaming-field-induced convective transport and its influence on the electroviscous effects in narrow fluidic confinement beyond the Debye-Hückel limit. *Physical Review E*, **2008**, 77, 037303	2.4	78
360	Energy transfer through streaming effects in time-periodic pressure-driven nanochannel flows with interfacial slip. *Langmuir*, **2010**, 26, 581-90	4	71
359	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	4.9	71
358	Giant augmentations in electro-hydro-dynamic energy conversion efficiencies of nanofluidic devices using viscoelastic fluids. *Applied Physics Letters*, **2012**, 101, 043905	3.4	70
357	Steric-effect induced alterations in streaming potential and energy transfer efficiency of non-newtonian fluids in narrow confinements. *Langmuir*, **2011**, 27, 12243-52	4	69
356	Numerical study of conjugate heat transfer in rectangular microchannel heat sink with Al2O3/H2O nanofluid. *Heat and Mass Transfer*, **2009**, 45, 1323-1333	2.2	64

355	Electrokinetically modulated peristaltic transport of power-law fluids. *Microvascular Research*, **2016**, 103, 41-54	3.7	63
354	Effect of conductivity variations within the electric double layer on the streaming potential estimation in narrow fluidic confinements. *Langmuir*, **2010**, 26, 11589-96	4	62
353	Capillarity-driven blood plasma separation on paper-based devices. *Analyst, The*, **2015**, 140, 6473-6	5	61
352	Electrokinetics in polyelectrolyte grafted nanofluidic channels modulated by the ion partitioning effect. *Soft Matter*, **2016**, 12, 5968-78	3.6	61
351	Electrokinetics with "paper-and-pencil" devices. *Lab on A Chip*, **2012**, 12, 4026-8	7.2	61
350	Mass flow-rate control through time periodic electro-osmotic flows in circular microchannels. *Physics of Fluids*, **2008**, 20, 083602	4.4	58
349	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	4.9	58
348	Semi-analytical solutions for electroosmotic flows with interfacial slip in microchannels of complex cross-sectional shapes. *Microfluidics and Nanofluidics*, **2011**, 11, 255-267	2.8	57
347	Generalization of interfacial electrohydrodynamics in the presence of hydrophobic interactions in narrow fluidic confinements. *Physical Review Letters*, **2008**, 100, 097801	7.4	57
346	Hydraulic jumps due to oblique impingement of circular liquid jets on a flat horizontal surface. *Journal of Fluid Mechanics*, **2007**, 573, 247-263	3.7	57
345	Steric effect and slip-modulated energy transfer in narrow fluidic channels with finite aspect ratios. *Electrophoresis*, **2010**, 31, 843-9	3.6	55
344	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	2.3	55
343	Uniform electric-field-induced lateral migration of a sedimenting drop. *Journal of Fluid Mechanics*, **2016**, 792, 553-589	3.7	54
342	Thermodynamics of premixed combustion in a heat recirculating micro combustor. *Energy*, **2014**, 68, 510-518	7.9	53
341	Towards a generalized representation of surface effects on pressure-driven liquid flow in microchannels. *Applied Physics Letters*, **2007**, 90, 034108	3.4	53
340	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	2.8	53
339	Rapid mixing with high-throughput in a semi-active semi-passive micromixer. *Electrophoresis*, **2017**, 38, 1310-1317	3.6	52
338	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,	1.8	52

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336	Modelling of transport phenomena in laser surface alloying with distributed species mass source. *International Journal of Heat and Fluid Flow*, **2002**, 23, 298-307	2.4	52
335	Electro-osmosis of superimposed fluids in the presence of modulated charged surfaces in narrow confinements. *Journal of Fluid Mechanics*, **2015**, 776, 390-429	3.7	51
334	Steric-effect-induced enhancement of electrical-double-layer overlapping phenomena. *Physical Review E*, **2011**, 84, 012501	2.4	51
333	Generalized model for time periodic electroosmotic flows with overlapping electrical double layers. *Langmuir*, **2007**, 23, 12421-8	4	51
332	Modelling of turbulent molten pool convection in laser welding of a copper–nickel dissimilar couple. *International Journal of Heat and Mass Transfer*, **2007**, 50, 1805-1822	4.9	50
331	Order parameter modeling of fluid dynamics in narrow confinements subjected to hydrophobic interactions. *Physical Review Letters*, **2007**, 99, 094504	7.4	49
330	Studies on Thermal Stratification Phenomenon in LH2 Storage Vessel. *Heat Transfer Engineering*, **2004**, 25, 54-66	1.7	49
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328	Traction force microscopy on-chip: shear deformation of fibroblast cells. *Lab on A Chip*, **2008**, 8, 1308-18	7.2	48
327	An enthalpy-source based lattice Boltzmann model for conduction dominated phase change of pure substances. *International Journal of Thermal Sciences*, **2008**, 47, 552-559	4.1	47
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324	Redefining electrical double layer thickness in narrow confinements: effect of solvent polarization. *Physical Review E*, **2012**, 85, 051508	2.4	46
323	Anomalous electrical conductivity of nanoscale colloidal suspensions. *ACS Nano*, **2008**, 2, 2029-36	16.7	46
322	Electrokinetically induced alterations in dynamic response of viscoelastic fluids in narrow confinements. *Physical Review E*, **2012**, 85, 056302	2.4	45
321	Electric-field-driven contact-line dynamics of two immiscible fluids over chemically patterned surfaces in narrow confinements. *Physical Review E*, **2013**, 88, 023022	2.4	44
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319	Predicting microscale gas flows and rarefaction effects through extended Navier–Stokes–Fourier equations from phoretic transport considerations. *Microfluidics and Nanofluidics*, **2010**, 9, 831-846	2.8	43
318	Numerical modeling of surface reaction kinetics in electrokinetically actuated microfluidic devices. *Analytica Chimica Acta*, **2014**, 838, 64-75	6.6	40
317	Design and Optimization of Single-Phase Liquid Cooled Microchannel Heat Sink. *IEEE Transactions on Components and Packaging Technologies*, **2009**, 32, 876-886		40
316	An Enthalpy Model for Simulation of Dendritic Growth. *Numerical Heat Transfer, Part B: Fundamentals*, **2006**, 50, 59-78	1.3	40
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281	Electrothermally modulated contact line dynamics of a binary fluid in a patterned fluidic environment. *Physics of Fluids*, **2018**, 30, 092005	4.4	27
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