Sudipto Chakraborty

List of Publications by Year in Descending Order

90 papers	2,122 citations	27 h-index	42 g-index
92 ext. papers	2,588 ext. citations	3.8 avg, IF	5.29 L-index

#	Paper	IF	Citations
90	Investigation of regimes during partial/complete coalescence of a liquid drop on a liquid pool. *Chemical Engineering Science*, **2022**, 251, 117460	4.4	0
89	Viscous diffusion induced evolution of a vortex ring. *Physics of Fluids*, **2021**, 33, 032116	4.4	2
88	Thermo-hydrodynamic analysis of drop impact calcium alginate gelation process. *European Journal of Mechanics, B/Fluids*, **2021**, 86, 231-242	2.4	0
87	In-vitro release study through novel graphene oxide aided alginate based pH-sensitive drug carrier for gastrointestinal tract. *Materials Today Communications*, **2021**, 26, 101737	2.5	3
86	Role of anisotropic pinning and liquid properties during partial rebound of droplets on unidirectionally structured hydrophobic surfaces. *Chemical Engineering Science*, **2021**, 230, 116197	4.4	2
85	Antibacterial effect of ciprofloxacin loaded reduced graphene oxide nanosheets against Pseudomonas aeruginosa strain. *Colloids and Interface Science Communications*, **2021**, 40, 100344	5.4	3
84	Characterization of structural transformation of graphene oxide to reduced graphene oxide during thermal annealing. *Journal of Materials Research*, **2020**, 35, 1197-1204	2.5	13
83	Application of binary mixed surfactant additives in jet impingement cooling of a hot steel plate. *Heat and Mass Transfer*, **2019**, 55, 3413-3425	2.2	2
82	On the generation of vorticity and hydrodynamics of vortex ring during liquid drop impingement. *Physics of Fluids*, **2019**, 31, 082108	4.4	6
81	Investigation of chemical reaction during sodium alginate drop impact on calcium chloride film. *Physics of Fluids*, **2019**, 31, 072102	4.4	12
80	Spray cooling of hot steel plate using aqueous solution of surfactant and polymer. *Thermal Science and Engineering Progress*, **2019**, 10, 217-231	3.6	14
79	Effect of surfactant on thermo-physical properties and spray cooling heat transfer performance of Cu-Zn-Al LDH nanofluid. *Applied Clay Science*, **2019**, 168, 43-55	5.2	26
78	Bactericidal effect of graphene oxide and reduced graphene oxide: Influence of shape of bacteria. *Colloids and Interface Science Communications*, **2019**, 28, 60-68	5.4	69
77	Application of TiO2 nanofluid-based coolant for jet impingement quenching of a hot steel plate. *Experimental Heat Transfer*, **2019**, 32, 322-336	2.4	7
76	Influence of Marangoni stress on the variation in number of coalescence cascade stages. *Canadian Journal of Chemical Engineering*, **2019**, 97, 983-994	2.3	6
75	Removal of fluoride from wastewater using HCl-treated activated alumina in a ribbed hydrocyclone separator. *Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering*, **2018**, 53, 601-608	2.3	13
74	Synthesis of Cu-Al LDH nanofluid and its application in spray cooling heat transfer of a hot steel plate. *Powder Technology*, **2018**, 335, 285-300	5.2	28

73	Demineralization mechanism and influence of parameters on high ash Indian coal by chemical leaching of acid and alkali solution. *International Journal of Coal Science and Technology*, **2018**, 5, 142-155	4.5	7
72	Comparative study on different additives with a jet array on cooling of a hot steel surface. *Applied Thermal Engineering*, **2018**, 137, 154-163	5.8	3
71	Thermo-physical properties of Cu-Zn-Al LDH nanofluid and its application in spray cooling. *Applied Thermal Engineering*, **2018**, 141, 339-351	5.8	30
70	Application of response surface methodology (RSM) for optimization of leaching parameters for ash reduction from low-grade coal. *International Journal of Mining Science and Technology*, **2018**, 28, 621-629	7.1	173
69	Removal of ash from low grade Indian coal by chemical leaching technique. *Mineral Processing and Extractive Metallurgy Review*, **2018**, 39, 59-67	3.1	11
68	Thermal reduction of graphene oxide: How temperature influences purity. *Journal of Materials Research*, **2018**, 33, 4113-4122	2.5	84
67	Role of chemical reaction and drag force during drop impact gelation process. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2018**, 559, 401-409	5.1	10
66	Role of vortex finder depth on pressure drop and performance efficiency in a ribbed hydrocyclone. *South African Journal of Chemical Engineering*, **2018**, 25, 103-109	3.2	7
65	Effect of liquid pool concentration on chemically reactive drop impact gelation process. *Journal of Colloid and Interface Science*, **2018**, 528, 156-165	9.3	10
64	Chemical demineralization of high ash Indian coal by using alkali and acid solutions. *Fuel*, **2017**, 196, 102-109	7.1	28
63	Ultrafast cooling of a hot steel plate using Cu-Al layered double hydroxide nanofluid jet. *International Journal of Thermal Sciences*, **2017**, 116, 52-62	4.1	13
62	Heat transfer from a hot moving steel plate by using Cu-Al layered double hydroxide nanofluid based air atomized spray. *Experimental Heat Transfer*, **2017**, 30, 500-516	2.4	7
61	Synthesis and characterization of Zn-Al layered double hydroxide nanofluid and its application as a coolant in metal quenching. *Applied Clay Science*, **2017**, 143, 241-249	5.2	8
60	Performance evaluation of a hydrocyclone with a spiral rib for separation of particles. *Advanced Powder Technology*, **2017**, 28, 3222-3232	4.6	22
59	Upgradation of Low Grade Coal to High Quality Coal by Chemical Beneficiation Technique **2017**,		1
58	Heat transfer enhancement using surfactant based alumina nanofluid jet from a hot steel plate. *Experimental Thermal and Fluid Science*, **2017**, 89, 295-303	3	27
57	Effect of alumina nanofluid jet on the enhancement of heat transfer from a steel plate. *Heat and Mass Transfer*, **2017**, 53, 2187-2197	2.2	9
56	Experimental investigation on the effect of dispersant addition on thermal and rheological characteristics of TiO2 nanofluid. *Powder Technology*, **2017**, 307, 10-24	5.2	46

55	Effect of polymer additive on the cooling rate of a hot steel plate by using water jet. *Experimental Thermal and Fluid Science*, **2016**, 70, 105-114	3	18
54	Heat transfer in jet impingement on a hot steel surface using surfactant based CuAl layered double hydroxide nanofluid. *International Journal of Heat and Mass Transfer*, **2016**, 101, 825-833	4.9	11
53	Jet Impingement Cooling of a Hot Moving Steel Plate: An Experimental Study. *Experimental Heat Transfer*, **2016**, 29, 615-631	2.4	7
52	Heat Transfer from a Hot Moving Steel Plate by Air-Atomized Spray Impingement. *Experimental Heat Transfer*, **2016**, 29, 78-96	2.4	8
51	Synthesis of CuAl layered double hydroxide nanofluid and characterization of its thermal properties. *Applied Clay Science*, **2015**, 107, 98-108	5.2	47
50	Ultrafast cooling processes with surfactant additive for hot moving steel plate. *Experimental Thermal and Fluid Science*, **2015**, 68, 135-144	3	12
49	Ultrafast cooling of a hot moving steel plate by using alumina nanofluid based air atomized spray impingement. *Applied Thermal Engineering*, **2015**, 75, 738-747	5.8	28
48	Effect of Oxide Layer in the Ultra Fast Cooling of a Steel Plate. *Experimental Heat Transfer*, **2015**, 28, 156-173	2.4	8
47	Heat transfer enhancement using air-atomized spray cooling with waterAl2O3 nanofluid. *International Journal of Thermal Sciences*, **2015**, 96, 85-93	4.1	39
46	Surfactant-Based CuWater Nanofluid Spray for Heat Transfer Enhancement of High Temperature Steel Surface. *Journal of Heat Transfer*, **2015**, 137,	1.8	18
45	Enhancement of heat transfer rate in air-atomized spray cooling of a hot steel plate by using an aqueous solution of non-ionic surfactant and ethanol. *Applied Thermal Engineering*, **2014**, 64, 64-75	5.8	46
44	Ultra Fast Cooling and Its Effect on the Mechanical Properties of Steel. *Journal of Heat Transfer*, **2014**, 136,	1.8	22
43	Experimental Investigation of Effect of Different Types of Surfactants and Jet Height on Cooling of a Hot Steel Plate. *Journal of Heat Transfer*, **2014**, 136,	1.8	25
42	Ultrafast cooling of medium carbon steel strip by air atomised water sprays with dissolved additives. *Ironmaking and Steelmaking*, **2014**, 41, 529-538	1.3	2
41	Enhancement of Cooling Rate for a Hot Steel Plate using Air-Atomized Spray with Surfactant-Added Water. *Experimental Heat Transfer*, **2014**, 27, 72-90	2.4	17
40	Experimental investigation of air-atomized spray with aqueous polymer additive for high heat flux applications. *International Journal of Heat and Mass Transfer*, **2014**, 72, 362-377	4.9	38
39	Mixed-surfactant additives for enhancement of air-atomized spray cooling of a hot steel plate. *Experimental Thermal and Fluid Science*, **2014**, 55, 210-220	3	32
38	Ultra fast cooling of hot steel plate by air atomized spray with salt solution. *Heat and Mass Transfer*, **2014**, 50, 587-601	2.2	24

37	Experimental study of the effect of spray inclination on ultrafast cooling of a hot steel plate. *Heat and Mass Transfer*, **2013**, 49, 1509-1522	2.2	30
36	Achievement of ultrafast cooling rate in a hot steel plate by air-atomized spray with different surfactant additives. *Experimental Thermal and Fluid Science*, **2013**, 50, 79-89	3	63
35	Ultra Fast Cooling of a Hot Steel Plate by Using High Mass Flux Air Atomized Spray. *Steel Research International*, **2013**, 84, 229-236	1.6	31
34	Influence of Ultrafast Cooling on Microstructure and Mechanical Properties of Steel. *Steel Research International*, **2013**, 84, 1157-1170	1.6	40
33	Role of air core in particle separation in cyclones. *Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy*, **2013**, 122, 25-35		6
32	Experimental Investigation of Effect of a Surfactant to Increase Cooling of Hot Steel Plates by a Water Jet. *Journal of Heat Transfer*, **2013**, 135,	1.8	38
31	Air Dense Medium Fluidized Bed for Dry Beneficiation of Coal: Technological Challenges for Future. *Particulate Science and Technology*, **2013**, 31, 16-27	2	62
30	Optimization Process of an Air Dense Medium Fluidized Bed Separator for Treating High-Ash Non-coking Indian Coal. *Mineral Processing and Extractive Metallurgy Review*, **2013**, 34, 240-248	3.1	27
29	Characteristics of Minimum Fluidization Velocity for Magnetite Powder used in an Air Dense Medium Fluidized Bed for Coal Beneficiation. *Particle and Particle Systems Characterization*, **2012**, 29, 228-237	3.1	13
28	Cost and Quality Optimization: A Win-Win Scenario for Coal Washery and Thermal Power Plant. *Mineral Processing and Extractive Metallurgy Review*, **2012**, 33, 280-291	3.1	3
27	Experimental Studies on Different Cooling Processes to Achieve Ultra-Fast Cooling Rate for Hot Steel Plate. *Experimental Heat Transfer*, **2012**, 25, 111-126	2.4	38
26	EXPERIMENTAL STUDY AND OPTIMIZATION OF AIR ATOMIZED SPRAY WITH SURFACTANT ADDED WATER TO PRODUCE HIGH COOLING RATE. *Journal of Enhanced Heat Transfer*, **2012**, 19, 397-408	1.7	25
25	Generation of uniform small bubbles and hydrodynamic characterization of a bubble column with high pressure jet sparger. *Korean Journal of Chemical Engineering*, **2012**, 29, 724-730	2.8	1
24	Influence of Coal Feed Size on the Performance of Air Dense Medium Fluidized Bed Separator Used for Coal Beneficiation. *Industrial & Engineering Chemistry Research*, **2011**, 50, 10865-10871	3.9	24
23	Improvement of performance efficiency of a hydrocyclone with design modification by suppressing air core. *Korean Journal of Chemical Engineering*, **2011**, 28, 225-231	2.8	8
22	Prediction of economic operating conditions for Indian coal preparation plants. *Fuel Processing Technology*, **2011**, 92, 1696-1700	7.2	7
21	Reliability of a Generalized Distribution Model for Coal Cleaning. *International Journal of Coal Preparation and Utilization*, **2011**, 31, 289-298	1.2	3
20	Development of Soft Sensor to Identify Flow Regimes in Horizontal Pipe Using Digital Signal Processing Technique. *Industrial & Engineering Chemistry Research*, **2010**, 49, 3001-3010	3.9	2

19	Economic Challenges in High-Ash Indian Coal Preparation. *International Journal of Coal Preparation and Utilization*, **2010**, 30, 295-309	1.2	2
18	Performance characteristics of pilot plant dense media hydrocyclone for beneficiation of coal and 3-D CFD simulation. *Chemical Engineering Science*, **2010**, 65, 4661-4671	4.4	17
17	Iron ore grindability improvement by microwave pre-treatment. *Journal of Industrial and Engineering Chemistry*, **2010**, 16, 805-812	6.3	58
16	Identification and prediction of air core diameter in a hydrocyclone by a novel online sensor based on digital signal processing technique. *Chemical Engineering and Processing: Process Intensification*, **2010**, 49, 165-176	3.7	11
15	Curing kinetics of medium reactive unsaturated polyester resin used for liquid composite molding process. *Journal of Applied Polymer Science*, **2009**, 114, 2415-2420	2.9	16
14	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
13	Spray evaporative cooling to achieve ultra fast cooling in runout table. *International Journal of Thermal Sciences*, **2009**, 48, 1741-1747	4.1	84
12	Hydrodynamic Characteristics of a Sparged Gas□liquid Contactor for Fine Bubble Generation. *Industrial & Engineering Chemistry Research*, **2009**, 48, 11225-11229	3.9	12
11	An experimental and theoretical analysis of turbulence promoter assisted ultrafiltration of synthetic fruit juice. *Separation and Purification Technology*, **2008**, 62, 659-667	8.3	29
10	Studies on gas holdup in a bubble column using porous spargers with additives. *Asia-Pacific Journal of Chemical Engineering*, **2008**, 3, 417-424	1.3	9
9	Studies on the understanding mechanism of air core and vortex formation in a hydrocyclone. *Chemical Engineering Journal*, **2008**, 144, 153-166	14.7	49
8	Studies on the performance of a hydrocyclone and modeling for flow characterization in presence and absence of air core. *Chemical Engineering Science*, **2007**, 62, 6391-6402	4.4	54
7	Adsorption of Reactive Dyes from a Textile Effluent Using Sawdust as the Adsorbent. *Industrial & Engineering Chemistry Research*, **2006**, 45, 4732-4741	3.9	20
6	Response to □Comment on □Adsorption of Reactive Dyes from a Textile Effluent Using Sawdust as the Adsorbent'□ *Industrial & Engineering Chemistry Research*, **2006**, 45, 7363-7363	3.9	2
5	Adsorption study for the removal of a basic dye: experimental and modeling. *Chemosphere*, **2005**, 58, 1079-86	8.4	127
4	Prediction of permeate flux and permeate concentration in nanofiltration of dye solution. *Separation and Purification Technology*, **2004**, 35, 141-152	8.3	25
3	Separation and Fractionation of Dye Solution by Nanofiltration. *Separation Science and Technology*, **2003**, 38, 219-235	2.5	15
2	Fluid flow and heat transfer in a laminar radial impinging jet. *International Journal of Numerical Methods for Heat and Fluid Flow*, **1994**, 4, 173-185	4.5	2

1	Investigating the effect of graphite pretreatment and contribution of the oxidizer in the synthesis of graphite oxide by hummers approach. *Fullerenes Nanotubes and Carbon Nanostructures*,1-12	1.8	1