

Sudipto Chakraborty

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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	Application of response surface methodology (RSM) for optimization of leaching parameters for ash reduction from low-grade coal. <i>International Journal of Mining Science and Technology</i> , 2018 , 28, 621-629	7.1	173
89	Adsorption study for the removal of a basic dye: experimental and modeling. <i>Chemosphere</i> , 2005 , 58, 1079-86	8.4	127
88	Spray evaporative cooling to achieve ultra fast cooling in runout table. <i>International Journal of Thermal Sciences</i> , 2009 , 48, 1741-1747	4.1	84
87	Thermal reduction of graphene oxide: How temperature influences purity. <i>Journal of Materials Research</i> , 2018 , 33, 4113-4122	2.5	84
86	Bactericidal effect of graphene oxide and reduced graphene oxide: Influence of shape of bacteria. <i>Colloids and Interface Science Communications</i> , 2019 , 28, 60-68	5.4	69
85	Numerical study of conjugate heat transfer in rectangular microchannel heat sink with Al ₂ O ₃ /H ₂ O nanofluid. <i>Heat and Mass Transfer</i> , 2009 , 45, 1323-1333	2.2	64
84	Achievement of ultrafast cooling rate in a hot steel plate by air-atomized spray with different surfactant additives. <i>Experimental Thermal and Fluid Science</i> , 2013 , 50, 79-89	3	63
83	Air Dense Medium Fluidized Bed for Dry Beneficiation of Coal: Technological Challenges for Future. <i>Particulate Science and Technology</i> , 2013 , 31, 16-27	2	62
82	Iron ore grindability improvement by microwave pre-treatment. <i>Journal of Industrial and Engineering Chemistry</i> , 2010 , 16, 805-812	6.3	58
81	Studies on the performance of a hydrocyclone and modeling for flow characterization in presence and absence of air core. <i>Chemical Engineering Science</i> , 2007 , 62, 6391-6402	4.4	54
80	Studies on the understanding mechanism of air core and vortex formation in a hydrocyclone. <i>Chemical Engineering Journal</i> , 2008 , 144, 153-166	14.7	49
79	Synthesis of CuAl layered double hydroxide nanofluid and characterization of its thermal properties. <i>Applied Clay Science</i> , 2015 , 107, 98-108	5.2	47
78	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. <i>Applied Thermal Engineering</i> , 2014 , 64, 64-75	5.8	46
77	Experimental investigation on the effect of dispersant addition on thermal and rheological characteristics of TiO ₂ nanofluid. <i>Powder Technology</i> , 2017 , 307, 10-24	5.2	46
76	Influence of Ultrafast Cooling on Microstructure and Mechanical Properties of Steel. <i>Steel Research International</i> , 2013 , 84, 1157-1170	1.6	40
75	Heat transfer enhancement using air-atomized spray cooling with water-Al ₂ O ₃ nanofluid. <i>International Journal of Thermal Sciences</i> , 2015 , 96, 85-93	4.1	39
74	Experimental investigation of air-atomized spray with aqueous polymer additive for high heat flux applications. <i>International Journal of Heat and Mass Transfer</i> , 2014 , 72, 362-377	4.9	38

73	Experimental Studies on Different Cooling Processes to Achieve Ultra-Fast Cooling Rate for Hot Steel Plate. <i>Experimental Heat Transfer</i> , 2012 , 25, 111-126	2.4	38
72	Experimental Investigation of Effect of a Surfactant to Increase Cooling of Hot Steel Plates by a Water Jet. <i>Journal of Heat Transfer</i> , 2013 , 135,	1.8	38
71	Mixed-surfactant additives for enhancement of air-atomized spray cooling of a hot steel plate. <i>Experimental Thermal and Fluid Science</i> , 2014 , 55, 210-220	3	32
70	Ultra Fast Cooling of a Hot Steel Plate by Using High Mass Flux Air Atomized Spray. <i>Steel Research International</i> , 2013 , 84, 229-236	1.6	31
69	Thermo-physical properties of Cu-Zn-Al LDH nanofluid and its application in spray cooling. <i>Applied Thermal Engineering</i> , 2018 , 141, 339-351	5.8	30
68	Experimental study of the effect of spray inclination on ultrafast cooling of a hot steel plate. <i>Heat and Mass Transfer</i> , 2013 , 49, 1509-1522	2.2	30
67	An experimental and theoretical analysis of turbulence promoter assisted ultrafiltration of synthetic fruit juice. <i>Separation and Purification Technology</i> , 2008 , 62, 659-667	8.3	29
66	Chemical demineralization of high ash Indian coal by using alkali and acid solutions. <i>Fuel</i> , 2017 , 196, 102-109	1.09	28
65	Ultrafast cooling of a hot moving steel plate by using alumina nanofluid based air atomized spray impingement. <i>Applied Thermal Engineering</i> , 2015 , 75, 738-747	5.8	28
64	Synthesis of Cu-Al LDH nanofluid and its application in spray cooling heat transfer of a hot steel plate. <i>Powder Technology</i> , 2018 , 335, 285-300	5.2	28
63	Heat transfer enhancement using surfactant based alumina nanofluid jet from a hot steel plate. <i>Experimental Thermal and Fluid Science</i> , 2017 , 89, 295-303	3	27
62	Optimization Process of an Air Dense Medium Fluidized Bed Separator for Treating High-Ash Non-coking Indian Coal. <i>Mineral Processing and Extractive Metallurgy Review</i> , 2013 , 34, 240-248	3.1	27
61	Effect of surfactant on thermo-physical properties and spray cooling heat transfer performance of Cu-Zn-Al LDH nanofluid. <i>Applied Clay Science</i> , 2019 , 168, 43-55	5.2	26
60	Experimental Investigation of Effect of Different Types of Surfactants and Jet Height on Cooling of a Hot Steel Plate. <i>Journal of Heat Transfer</i> , 2014 , 136,	1.8	25
59	EXPERIMENTAL STUDY AND OPTIMIZATION OF AIR ATOMIZED SPRAY WITH SURFACTANT ADDED WATER TO PRODUCE HIGH COOLING RATE. <i>Journal of Enhanced Heat Transfer</i> , 2012 , 19, 397-408	1.7	25
58	Prediction of permeate flux and permeate concentration in nanofiltration of dye solution. <i>Separation and Purification Technology</i> , 2004 , 35, 141-152	8.3	25
57	Ultra fast cooling of hot steel plate by air atomized spray with salt solution. <i>Heat and Mass Transfer</i> , 2014 , 50, 587-601	2.2	24
56	Influence of Coal Feed Size on the Performance of Air Dense Medium Fluidized Bed Separator Used for Coal Beneficiation. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 10865-10871	3.9	24

55	Performance evaluation of a hydrocyclone with a spiral rib for separation of particles. <i>Advanced Powder Technology</i> , 2017 , 28, 3222-3232	4.6	22
54	Ultra Fast Cooling and Its Effect on the Mechanical Properties of Steel. <i>Journal of Heat Transfer</i> , 2014 , 136,	1.8	22
53	Adsorption of Reactive Dyes from a Textile Effluent Using Sawdust as the Adsorbent. <i>Industrial & Engineering Chemistry Research</i> , 2006 , 45, 4732-4741	3.9	20
52	Effect of polymer additive on the cooling rate of a hot steel plate by using water jet. <i>Experimental Thermal and Fluid Science</i> , 2016 , 70, 105-114	3	18
51	Surfactant-Based Cu-Water Nanofluid Spray for Heat Transfer Enhancement of High Temperature Steel Surface. <i>Journal of Heat Transfer</i> , 2015 , 137,	1.8	18
50	Enhancement of Cooling Rate for a Hot Steel Plate using Air-Atomized Spray with Surfactant-Added Water. <i>Experimental Heat Transfer</i> , 2014 , 27, 72-90	2.4	17
49	Performance characteristics of pilot plant dense media hydrocyclone for beneficiation of coal and 3-D CFD simulation. <i>Chemical Engineering Science</i> , 2010 , 65, 4661-4671	4.4	17
48	Curing kinetics of medium reactive unsaturated polyester resin used for liquid composite molding process. <i>Journal of Applied Polymer Science</i> , 2009 , 114, 2415-2420	2.9	16
47	Separation and Fractionation of Dye Solution by Nanofiltration. <i>Separation Science and Technology</i> , 2003 , 38, 219-235	2.5	15
46	Spray cooling of hot steel plate using aqueous solution of surfactant and polymer. <i>Thermal Science and Engineering Progress</i> , 2019 , 10, 217-231	3.6	14
45	Ultrafast cooling of a hot steel plate using Cu-Al layered double hydroxide nanofluid jet. <i>International Journal of Thermal Sciences</i> , 2017 , 116, 52-62	4.1	13
44	Characterization of structural transformation of graphene oxide to reduced graphene oxide during thermal annealing. <i>Journal of Materials Research</i> , 2020 , 35, 1197-1204	2.5	13
43	Removal of fluoride from wastewater using HCl-treated activated alumina in a ribbed hydrocyclone separator. <i>Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering</i> , 2018 , 53, 601-608	2.3	13
42	Characteristics of Minimum Fluidization Velocity for Magnetite Powder used in an Air Dense Medium Fluidized Bed for Coal Beneficiation. <i>Particle and Particle Systems Characterization</i> , 2012 , 29, 228-237	3.1	13
41	Ultrafast cooling processes with surfactant additive for hot moving steel plate. <i>Experimental Thermal and Fluid Science</i> , 2015 , 68, 135-144	3	12
40	Investigation of chemical reaction during sodium alginate drop impact on calcium chloride film. <i>Physics of Fluids</i> , 2019 , 31, 072102	4.4	12
39	Hydrodynamic Characteristics of a Sparged Gas-Liquid Contactor for Fine Bubble Generation. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 11225-11229	3.9	12
38	Heat transfer in jet impingement on a hot steel surface using surfactant based Cu-Al layered double hydroxide nanofluid. <i>International Journal of Heat and Mass Transfer</i> , 2016 , 101, 825-833	4.9	11

37	Identification and prediction of air core diameter in a hydrocyclone by a novel online sensor based on digital signal processing technique. <i>Chemical Engineering and Processing: Process Intensification</i> , 2010 , 49, 165-176	3.7	11
36	Removal of ash from low grade Indian coal by chemical leaching technique. <i>Mineral Processing and Extractive Metallurgy Review</i> , 2018 , 39, 59-67	3.1	11
35	Role of chemical reaction and drag force during drop impact gelation process. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2018 , 559, 401-409	5.1	10
34	Effect of liquid pool concentration on chemically reactive drop impact gelation process. <i>Journal of Colloid and Interface Science</i> , 2018 , 528, 156-165	9.3	10
33	Effect of alumina nanofluid jet on the enhancement of heat transfer from a steel plate. <i>Heat and Mass Transfer</i> , 2017 , 53, 2187-2197	2.2	9
32	Studies on gas holdup in a bubble column using porous spargers with additives. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2008 , 3, 417-424	1.3	9
31	Synthesis and characterization of Zn-Al layered double hydroxide nanofluid and its application as a coolant in metal quenching. <i>Applied Clay Science</i> , 2017 , 143, 241-249	5.2	8
30	Effect of Oxide Layer in the Ultra Fast Cooling of a Steel Plate. <i>Experimental Heat Transfer</i> , 2015 , 28, 156-173	2.4	8
29	Heat Transfer from a Hot Moving Steel Plate by Air-Atomized Spray Impingement. <i>Experimental Heat Transfer</i> , 2016 , 29, 78-96	2.4	8
28	Improvement of performance efficiency of a hydrocyclone with design modification by suppressing air core. <i>Korean Journal of Chemical Engineering</i> , 2011 , 28, 225-231	2.8	8
27	Heat transfer from a hot moving steel plate by using Cu-Al layered double hydroxide nanofluid based air atomized spray. <i>Experimental Heat Transfer</i> , 2017 , 30, 500-516	2.4	7
26	Jet Impingement Cooling of a Hot Moving Steel Plate: An Experimental Study. <i>Experimental Heat Transfer</i> , 2016 , 29, 615-631	2.4	7
25	Demineralization mechanism and influence of parameters on high ash Indian coal by chemical leaching of acid and alkali solution. <i>International Journal of Coal Science and Technology</i> , 2018 , 5, 142-155	4.5	7
24	Prediction of economic operating conditions for Indian coal preparation plants. <i>Fuel Processing Technology</i> , 2011 , 92, 1696-1700	7.2	7
23	Application of TiO ₂ nanofluid-based coolant for jet impingement quenching of a hot steel plate. <i>Experimental Heat Transfer</i> , 2019 , 32, 322-336	2.4	7
22	Role of vortex finder depth on pressure drop and performance efficiency in a ribbed hydrocyclone. <i>South African Journal of Chemical Engineering</i> , 2018 , 25, 103-109	3.2	7
21	On the generation of vorticity and hydrodynamics of vortex ring during liquid drop impingement. <i>Physics of Fluids</i> , 2019 , 31, 082108	4.4	6
20	Role of air core in particle separation in cyclones. <i>Institutions of Mining and Metallurgy Transactions Section C: Mineral Processing and Extractive Metallurgy</i> , 2013 , 122, 25-35		6

19	Influence of Marangoni stress on the variation in number of coalescence cascade stages. <i>Canadian Journal of Chemical Engineering</i> , 2019 , 97, 983-994	2.3	6
18	Comparative study on different additives with a jet array on cooling of a hot steel surface. <i>Applied Thermal Engineering</i> , 2018 , 137, 154-163	5.8	3
17	Cost and Quality Optimization: A Win-Win Scenario for Coal Washery and Thermal Power Plant. <i>Mineral Processing and Extractive Metallurgy Review</i> , 2012 , 33, 280-291	3.1	3
16	Reliability of a Generalized Distribution Model for Coal Cleaning. <i>International Journal of Coal Preparation and Utilization</i> , 2011 , 31, 289-298	1.2	3
15	In-vitro release study through novel graphene oxide aided alginate based pH-sensitive drug carrier for gastrointestinal tract. <i>Materials Today Communications</i> , 2021 , 26, 101737	2.5	3
14	Antibacterial effect of ciprofloxacin loaded reduced graphene oxide nanosheets against <i>Pseudomonas aeruginosa</i> strain. <i>Colloids and Interface Science Communications</i> , 2021 , 40, 100344	5.4	3
13	Application of binary mixed surfactant additives in jet impingement cooling of a hot steel plate. <i>Heat and Mass Transfer</i> , 2019 , 55, 3413-3425	2.2	2
12	Ultrafast cooling of medium carbon steel strip by air atomised water sprays with dissolved additives. <i>Ironmaking and Steelmaking</i> , 2014 , 41, 529-538	1.3	2
11	Development of Soft Sensor to Identify Flow Regimes in Horizontal Pipe Using Digital Signal Processing Technique. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 3001-3010	3.9	2
10	Economic Challenges in High-Ash Indian Coal Preparation. <i>International Journal of Coal Preparation and Utilization</i> , 2010 , 30, 295-309	1.2	2
9	Response to Comment on 'Adsorption of Reactive Dyes from a Textile Effluent Using Sawdust as the Adsorbent' <i>Industrial & Engineering Chemistry Research</i> , 2006 , 45, 7363-7363	3.9	2
8	Fluid flow and heat transfer in a laminar radial impinging jet. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 1994 , 4, 173-185	4.5	2
7	Viscous diffusion induced evolution of a vortex ring. <i>Physics of Fluids</i> , 2021 , 33, 032116	4.4	2
6	Role of anisotropic pinning and liquid properties during partial rebound of droplets on unidirectionally structured hydrophobic surfaces. <i>Chemical Engineering Science</i> , 2021 , 230, 116197	4.4	2
5	Upgradation of Low Grade Coal to High Quality Coal by Chemical Beneficiation Technique 2017 ,		1
4	Generation of uniform small bubbles and hydrodynamic characterization of a bubble column with high pressure jet sparger. <i>Korean Journal of Chemical Engineering</i> , 2012 , 29, 724-730	2.8	1
3	Investigating the effect of graphite pretreatment and contribution of the oxidizer in the synthesis of graphite oxide by hummers approach. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 1-12	1.8	1
2	Investigation of regimes during partial/complete coalescence of a liquid drop on a liquid pool. <i>Chemical Engineering Science</i> , 2022 , 251, 117460	4.4	0

- 1 Thermo-hydrodynamic analysis of drop impact calcium alginate gelation process. *European Journal of Mechanics, B/Fluids*, **2021**, 86, 231-242 2.4 ○