

Sudipto Chakraborty

List of Publications by Year in descending order

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92
papers

3,021
citations

147566
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182168
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docs citations

92
times ranked

2391
citing authors

#	ARTICLE	IF	CITATIONS
1	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.	4.6	309
2	Thermal reduction of graphene oxide: How temperature influences purity. <i>Journal of Materials Research</i> , 2018, 33, 4113-4122.	1.2	185
3	Adsorption study for the removal of a basic dye: experimental and modeling. <i>Chemosphere</i> , 2005, 58, 1079-1086.	4.2	156
4	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.	2.0	131
5	Spray evaporative cooling to achieve ultra fast cooling in runout table. <i>International Journal of Thermal Sciences</i> , 2009, 48, 1741-1747.	2.6	100
6	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.	1.2	78
7	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.	1.5	78
8	Air Dense Medium Fluidized Bed for Dry Beneficiation of Coal: Technological Challenges for Future. <i>Particulate Science and Technology</i> , 2013, 31, 16-27.	1.1	70
9	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.	1.9	67
10	Iron ore grindability improvement by microwave pre-treatment. <i>Journal of Industrial and Engineering Chemistry</i> , 2010, 16, 805-812.	2.9	67
11	Studies on the understanding mechanism of air core and vortex formation in a hydrocyclone. <i>Chemical Engineering Journal</i> , 2008, 144, 153-166.	6.6	65
12	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.	2.1	64
13	Synthesis of Cu-Al layered double hydroxide nanofluid and characterization of its thermal properties. <i>Applied Clay Science</i> , 2015, 107, 98-108.	2.6	63
14	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.	3.0	58
15	Thermo-physical properties of Cu-Zn-Al LDH nanofluid and its application in spray cooling. <i>Applied Thermal Engineering</i> , 2018, 141, 339-351.	3.0	54
16	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.	2.6	53
17	Influence of Ultrafast Cooling on Microstructure and Mechanical Properties of Steel. <i>Steel Research International</i> , 2013, 84, 1157-1170.	1.0	49
18	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.	2.5	47

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19	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.	1.5	47
20	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.	2.6	46
21	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.	2.3	45
22	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.	2.1	42
23	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, .	1.2	41
24	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.	1.2	37
25	Chemical demineralization of high ash Indian coal by using alkali and acid solutions. <i>Fuel</i> , 2017, 196, 102-109.	3.4	37
26	An experimental and theoretical analysis of turbulence promoter assisted ultrafiltration of synthetic fruit juice. <i>Separation and Purification Technology</i> , 2008, 62, 659-667.	3.9	36
27	Performance evaluation of a hydrocyclone with a spiral rib for separation of particles. <i>Advanced Powder Technology</i> , 2017, 28, 3222-3232.	2.0	36
28	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.	1.0	33
29	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.	3.0	33
30	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.	1.5	33
31	Characterization of structural transformation of graphene oxide to reduced graphene oxide during thermal annealing. <i>Journal of Materials Research</i> , 2020, 35, 1197-1204.	1.2	32
32	Prediction of permeate flux and permeate concentration in nanofiltration of dye solution. <i>Separation and Purification Technology</i> , 2004, 35, 141-152.	3.9	30
33	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.	0.5	30
34	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.	2.6	30
35	Ultra fast cooling of hot steel plate by air atomized spray with salt solution. <i>Heat and Mass Transfer</i> , 2014, 50, 587-601.	1.2	30
36	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.	1.8	29

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37	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, .	1.2	29
38	Spray cooling of hot steel plate using aqueous solution of surfactant and polymer. <i>Thermal Science and Engineering Progress</i> , 2019, 10, 217-231.	1.3	29
39	Surfactant-Based Cu-Al Water Nanofluid Spray for Heat Transfer Enhancement of High Temperature Steel Surface. <i>Journal of Heat Transfer</i> , 2015, 137, .	1.2	25
40	Adsorption of Reactive Dyes from a Textile Effluent Using Sawdust as the Adsorbent. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 4732-4741.	1.8	24
41	Ultra Fast Cooling and Its Effect on the Mechanical Properties of Steel. <i>Journal of Heat Transfer</i> , 2014, 136, .	1.2	24
42	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.	1.9	23
43	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.	2.3	23
44	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.	1.3	21
45	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.	1.5	21
46	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.	0.9	20
47	Investigation of chemical reaction during sodium alginate drop impact on calcium chloride film. <i>Physics of Fluids</i> , 2019, 31, .	1.6	20
48	Jet Impingement Cooling of a Hot Moving Steel Plate: An Experimental Study. <i>Experimental Heat Transfer</i> , 2016, 29, 615-631.	2.3	19
49	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.	1.2	18
50	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.	2.5	18
51	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.	2.6	18
52	Removal of ash from low grade Indian coal by chemical leaching technique. <i>Mineral Processing and Extractive Metallurgy Review</i> , 2018, 39, 59-67.	2.6	18
53	Separation and Fractionation of Dye Solution by Nanofiltration. <i>Separation Science and Technology</i> , 2003, 38, 219-235.	1.3	17
54	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.	1.2	17

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55	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.	2.3	17
56	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.	1.8	16
57	Effect of liquid pool concentration on chemically reactive drop impact gelation process. <i>Journal of Colloid and Interface Science</i> , 2018, 528, 156-165.	5.0	16
58	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.	1.2	14
59	Ultrafast cooling processes with surfactant additive for hot moving steel plate. <i>Experimental Thermal and Fluid Science</i> , 2015, 68, 135-144.	1.5	14
60	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.	2.3	14
61	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.	0.8	13
62	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.	0.9	13
63	Hydrodynamic Characteristics of a Sparged Gas-Liquid Contactor for Fine Bubble Generation. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 11225-11229.	1.8	12
64	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.	2.6	12
65	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.	2.7	12
66	Effect of Oxide Layer in the Ultra Fast Cooling of a Steel Plate. <i>Experimental Heat Transfer</i> , 2015, 28, 156-173.	2.3	11
67	Heat Transfer from a Hot Moving Steel Plate by Air-Atomized Spray Impingement. <i>Experimental Heat Transfer</i> , 2016, 29, 78-96.	2.3	10
68	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.	2.3	10
69	Influence of Marangoni stress on the variation in number of coalescence cascade stages. <i>Canadian Journal of Chemical Engineering</i> , 2019, 97, 983-994.	0.9	10
70	Prediction of economic operating conditions for Indian coal preparation plants. <i>Fuel Processing Technology</i> , 2011, 92, 1696-1700.	3.7	9
71	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.	3.0	9
72	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.	1.2	8

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73	On the generation of vorticity and hydrodynamics of vortex ring during liquid drop impingement. <i>Physics of Fluids</i> , 2019, 31, 082108.	1.6	8
74	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.	1.9	8
75	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.	2.0	8
76	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.	0.6	6
77	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.	1.2	5
78	Ultrafast cooling of medium carbon steel strip by air atomised water sprays with dissolved additives. <i>Ironmaking and Steelmaking</i> , 2014, 41, 529-538.	1.1	4
79	Experimental investigation of hot AISI 304 steel plate with very high mass flux varying water temperature spray. <i>Heat Transfer</i> , 2022, 51, 1110-1137.	1.7	4
80	Investigation of regimes during partial/complete coalescence of a liquid drop on a liquid pool. <i>Chemical Engineering Science</i> , 2022, 251, 117460.	1.9	4
81	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.	1.8	3
82	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
83	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.	2.6	3
84	Viscous diffusion induced evolution of a vortex ring. <i>Physics of Fluids</i> , 2021, 33, 032116.	1.6	3
85	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> , 2022, 30, 626-637.	1.0	3
86	Investigation of spray cooling in an inclined nozzle-plate configuration with varying coolant temperature. <i>Experimental Heat Transfer</i> , 0, , 1-18.	2.3	3
87	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.	1.6	2
88	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.	1.8	2
89	Economic Challenges in High-Ash Indian Coal Preparation. <i>International Journal of Coal Preparation and Utilization</i> , 2010, 30, 295-309.	1.2	2
90	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.	1.2	2

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91	Thermo-hydrodynamic analysis of drop impact calcium alginate gelation process. European Journal of Mechanics, B/Fluids, 2021, 86, 231-242.	1.2	2
92	Upgradation of Low Grade Coal to High Quality Coal by Chemical Beneficiation Technique. , 2017, , .		1