Pradip Dutta

List of Publications by Year in descending order

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60 papers	1,252 citations	394421 19 h-index	395702 33 g-index
60 all docs	60 docs citations	60 times ranked	824 citing authors

#	Article	IF	Citations
1	A generalized formulation for evaluation of latent heat functions in enthalpy-based macroscopic models for convection-diffusion phase change processes. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2001, 32, 562-564.	2.1	98
2	Ultrahigh-Energy-Density Sorption Thermal Battery Enabled by Graphene Aerogel-Based Composite Sorbents for Thermal Energy Harvesting from Air. ACS Energy Letters, 2021, 6, 1795-1802.	17.4	82
3	Performance evaluation of a two-stage silicaÂgelÂ+Âwater adsorption based cooling-cum-desalination system. International Journal of Refrigeration, 2015, 58, 186-198.	3.4	69
4	Adsorption of 1,1,1,2-Tetrafluoroethane on Activated Charcoal. Journal of Chemical & Engineering Data, 2001, 46, 417-422.	1.9	62
5	Evaluation of Adsorption Parameters and Heats of Adsorption through Desorption Measurements. Journal of Chemical & Engineering Data, 2007, 52, 2419-2424.	1.9	62
6	Coupled modeling of a directly heated tubular solar receiver for supercritical carbon dioxide Brayton cycle: Structural and creep-fatigue evaluation. Applied Thermal Engineering, 2016, 109, 979-987.	6.0	54
7	Thermodynamic formalism of minimum heat source temperature for driving advanced adsorption cooling device. Applied Physics Letters, 2007, 91, 111902.	3.3	50
8	Thermal Management of Electronics Using PCM-Based Heat Sink Subjected to Cyclic Heat Load. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 464-473.	2.5	50
9	Optimization of degree of sphericity of primary phase during cooling slope casting of A356 Al alloy: Taguchi method and regression analysis. Measurement: Journal of the International Measurement Confederation, 2014, 55, 605-615.	5.0	46
10	Microstructural Evolution of A356 Al Alloy During Flow Along a Cooling Slope. Transactions of the Indian Institute of Metals, 2012, 65, 669-672.	1.5	40
11	Studies on die filling of A356 Al alloy and development of a steering knuckle component using rheo pressure die casting system. Journal of Materials Processing Technology, 2019, 271, 293-311.	6.3	35
12	Coupled modeling of a directly heated tubular solar receiver for supercritical carbon dioxide Brayton cycle: Optical and thermal-fluid evaluation. Applied Thermal Engineering, 2016, 109, 970-978.	6.0	32
13	Microstructure Evolution and Rheological Behavior of Cooling Slope Processed Al-Si-Cu-Fe Alloy Slurry. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 2243-2256.	2.2	30
14	Rheological Behavior of Al-7Si-0.3Mg Alloy at Mushy State. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 1302-1313.	2.1	28
15	The effect of solutal undercooling on double-diffusive convection and macrosegregation during binary alloy solidification: a numerical investigation. International Journal for Numerical Methods in Fluids, 2002, 38, 895-917.	1.6	24
16	Semisolid Processing of A380 Al Alloy Using Cooling Slope. Materials and Manufacturing Processes, 2014, 29, 422-428.	4.7	23
17	Studies on dynamics of two-stage air cooled water/silica gel adsorption system. Applied Thermal Engineering, 2020, 178, 115552.	6.0	23
18	Phase field modelling of microstructure evolution and ripening driven grain growth during cooling slope processing of A356 Al alloy. Computational Materials Science, 2016, 125, 8-19.	3.0	22

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19	Solar driven carbon dioxide Brayton cycle power generation with thermal compression. Applied Thermal Engineering, 2016, 109, 854-860.	6.0	22
20	Remelting of Solid and its Effect on Macrosegregation During Solidification. Numerical Heat Transfer; Part A: Applications, 2007, 51, 59-83.	2.1	21
21	Performance Analysis of Heat Sinks With Phase-Change Materials Subjected to Transient and Cyclic Heating. Heat Transfer Engineering, 2015, 36, 1349-1359.	1.9	21
22	Analytical Solutions for Heat Transfer During Cyclic Melting and Freezing of a Phase Change Material Used in Electronic or Electrical Packaging. Journal of Electronic Packaging, Transactions of the ASME, 2003, 125, 126-133.	1.8	20
23	Theoretical and Experimental Studies on an Ammonia-Based Loop Heat Pipe With a Flat Evaporator. IEEE Transactions on Components and Packaging Technologies, 2010, 33, 478-487.	1.3	19
24	Calculation of Heat of Adsorption of Gases and Refrigerants on Activated Carbons from Direct Measurements Fitted to the Dubininâ€“Astakhov Equation. Adsorption Science and Technology, 2012, 30, 549-565.	3.2	19
25	Numerical studies on columnar-to-equiaxed transition in directional solidification of binary alloys. Journal of Materials Science, 2009, 44, 3952-3961.	3.7	16
26	Phase Field Simulation of Equiaxed Microstructure Formation during Semi-solid Processing of A380 Al Alloy. ISIJ International, 2014, 54, 1601-1610.	1.4	16
27	Multiphase Model of Semisolid Slurry Generation and Isothermal Holding During Cooling Slope Rheoprocessing of A356 Al Alloy. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 1925-1944.	2.1	16
28	Computational Modeling of GMAW Process for Joining Dissimilar Aluminum Alloys. Numerical Heat Transfer; Part A: Applications, 2008, 53, 432-455.	2.1	15
29	Grain Floatation During Equiaxed Solidification of an Al-Cu Alloy in a Side-Cooled Cavity: Part Iâ€”Numerical Studies. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2011, 42, 783-799.	2.1	15
30	Evaporation Heat Transfer Coefficient in a Capillary Pumped Loop and Loop Heat Pipe for Different Working Fluids. Heat Transfer Engineering, 2012, 33, 765-774.	1.9	15
31	Numerical Studies on Channel Formation and Growth During Solidification: Effect of Process Parameters. Journal of Heat Transfer, 2007, 129, 548-558.	2.1	14
32	Grain Floatation During Equiaxed Solidification of an Al-Cu Alloy in a Side-Cooled Cavity: Part Iâ€”Experimental Studies. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2011, 42, 825-836.	2.1	14
33	Numerical Study of Heat Transfer From Pin-Fin Heat Sink Using Steady and Pulsated Impinging Jets. IEEE Transactions on Components and Packaging Technologies, 2009, 32, 859-867.	1.3	13
34	NUMERICAL MODELING OF HEAT AND MASS TRANSFER IN LASER SURFACE ALLOYING: NON-EQUILIBRIUM SOLIDIFICATION EFFECTS. Materials and Manufacturing Processes, 2002, 17, 455-468.	4.7	11
35	Die Filling Behaviour of Semi Solid A356 Al Alloy Slurry During Rheo Pressure Die Casting. Transactions of the Indian Institute of Metals, 2015, 68, 1215-1220.	1.5	11
36	Radiative heating of supercritical carbon dioxide flowing through tubes. Applied Thermal Engineering, 2016, 109, 871-877.	6.0	11

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37	Silica Gelâ€‰+â€‰Water Adsorber Chiller and Desalination System: A Transient Heat Transfer Study. Journal of Thermal Science and Engineering Applications, 2016, 8, .	1.5	11
38	Effects of Solutal Undercooling on Three-Dimensional Double-Diffusive Convection and Macrosegregation during Solidification of a Binary Alloy. Numerical Heat Transfer; Part A: Applications, 2005, 48, 261-281.	2.1	10
39	Realistic minimum desorption temperatures and compressor sizing for activated carbonÂ+ÂHFC 134a adsorption coolers. Applied Thermal Engineering, 2013, 51, 551-559.	6.0	10
40	Globularization of Primary Phase of Alâ€“7Siâ€“0.3Mg Alloy During Cooling Slope Processing and Isothermal Holding. Transactions of the Indian Institute of Metals, 2021, 74, 1241-1251.	1.5	10
41	Numerical and Experimental Evaluation of Ceramic Honeycombs for Thermal Energy Storage. Transactions of the Indian Ceramic Society, 2017, 76, 102-107.	1.0	9
42	A Generalized Enthalpy Update Scheme for Solidification of a Binary Alloy with Solid Phase Movement. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2011, 42, 1075-1079.	2.1	8
43	Waring and Riedel Functions for the Liquidâ€“Vapor Coexistence Curve. Industrial & Engineering Chemistry Research, 2012, 51, 3197-3202.	3.7	8
44	Study of Freckles Formation During Directional Solidification Under the Influence of Single-Phase and Multiphase Convection. Journal of Thermal Science and Engineering Applications, 2013, 5, .	1.5	8
45	Role of Melt Convection on Optimization of PCM-Based Heat Sink Under Cyclic Heat Load. Heat Transfer Engineering, 2013, 34, 950-958.	1.9	8
46	Effect of Rub-Grooves on Leakage and Windage Heating in Straight-Through Labyrinth Seals. Journal of Tribology, 2016, 138, .	1.9	8
47	Optical characterization of a fixed focus Scheffler reflector for pressurized solar receiver testing. Solar Energy, 2021, 227, 89-100.	6.1	8
48	High-Temperature Workability of Thixocast A356ÂAluminum Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3248-3259.	2.2	7
49	Numerical Investigations for Leakage and Windage Heating in Straight-Through Labyrinth Seals. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	1.1	7
50	Three-dimensional phase field simulation of spheroidal grain formation during semi solid processing of Al-7Si-0.3ÂMg alloy. Computational Materials Science, 2020, 184, 109856.	3.0	6
51	Numerical and experimental studies on a pressurized hybrid tubular and cavity solar air receiver using a Scheffler reflector. Applied Thermal Engineering, 2022, 214, 118898.	6.0	3
52	Effect of semi-solid heat treatment on elevated temperature plasticity of 304L stainless steel. Journal of Materials Science, 2016, 51, 4306-4319.	3.7	2
53	Activated carbonâ€“carbon dioxide based two stage adsorption compression Brayton cycle power generation. Adsorption, 2019, 25, 1663-1672.	3.0	2
54	Measurement of radiation heat transfer in supercritical carbon dioxide medium. Measurement: Journal of the International Measurement Confederation, 2019, 139, 40-48.	5.0	2

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55	Development of a Canister Module for PCM Coupled Heat Pipe in Spacecraft Thermal Management. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 1804-1815.	2.5	2
56	Effect of constitutional supercooling on the numerical solution of species concentration distribution in laser surface alloying. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2001, 32, 969-972.	2.1	1
57	Thermodynamic Property Slopes from Primary Measurements. International Journal of Mechanical Engineering Education, 2012, 40, 79-91.	1.0	1
58	Determination of Optimum Process Parameters and Residual Stress in Friction Welding of Thixocast A356 Aluminum Alloy. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 3079-3088.	2.1	1
59	A Generalized Enthalpy Update Scheme for Solidification of a Binary Alloy with Solid Phase Movement. , 2011, 42, 1075.		1
60	Modeling of growth and motion of equiaxed dendrites in a convecting melt. , 2010, , .		0