Prasanta Kumar Das

List of Publications by Year
in descending order

83	1,109	471371 17	501076 28
papers	citations	h-index	g-index

90	90	90	1090
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synthesis, characterization, and thermal property measurement of nano-Al95Zn05 dispersed nanofluid prepared by a two-step process. International Journal of Heat and Mass Transfer, 2011, 54, 3783-3788.	2.5	166
2	CFD simulation of core annular flow through sudden contraction and expansion. Journal of Petroleum Science and Engineering, 2012, 86-87, 153-164.	2.1	52
3	Thermal Design of Multistream Plate Fin Heat Exchangersâ€"A State-of-the-Art Review. Heat Transfer Engineering, 2012, 33, 284-300.	1.2	43
4	Assessment of the process of boiling heat transfer during rewetting of a vertical tube bottom flooded by alumina nanofluid. International Journal of Heat and Mass Transfer, 2016, 94, 390-402.	2.5	43
5	Simulation of core annular downflow through CFDâ€"A comprehensive study. Chemical Engineering and Processing: Process Intensification, 2010, 49, 1222-1228.	1.8	39
6	Synthesis, characterization and studies on magneto-viscous properties of magnetite dispersed water based nanofluids. Journal of Magnetism and Magnetic Materials, 2016, 404, 29-39.	1.0	37
7	Simulation of Drop Movement over an Inclined Surface Using Smoothed Particle Hydrodynamics. Langmuir, 2009, 25, 11459-11466.	1.6	35
8	Visualization and flow regime identification of downward airâ€“water flow through a 12â€¯mm diameter vertical tube using image analysis. International Journal of Multiphase Flow, 2018, 100, 1-15.	1.6	25
9	Planar hydraulic jumps in thin film flow. Journal of Fluid Mechanics, 2020, 884, .	1.4	24
10	Two-Phase Natural Circulation Loops: A Review of the Recent Advances. Heat Transfer Engineering, 2012, 33, 461-482.	1.2	23
11	A Novel Technique to Identify Flow Patterns during Liquidâ^'Liquid Two-Phase Upflow through a Vertical Pipe. Industrial & Engineering Chemistry Research, 2006, 45, 2381-2393.	1.8	21
12	Motion of Taylor Bubbles and Taylor Drops in Liquidâ^'Liquid Systems. Industrial & Engineering Chemistry Research, 2008, 47, 7048-7057.	1.8	21
13	Mechanism of Bursting Taylor Bubbles at Free Surfaces. Langmuir, 2015, 31, 9870-9881.	1.6	21
14	Experiments on eccentric granular discharge from a quasi-two-dimensional silo. Powder Technology, 2016, 301, 1054-1066.	2.1	21
15	Inclusion of line tension effect in classical nucleation theory for heterogeneous nucleation: A rigorous thermodynamic formulation and some unique conclusions. Journal of Chemical Physics, 2015, 142, 104706.	1.2	20
16	Droplet oscillation and pattern formation during Leidenfrost phenomenon. Experimental Thermal and Fluid Science, 2015, 60, 346-353.	1.5	19
17	Granular drainage from a quasi-2D rectangular silo through two orifices symmetrically and asymmetrically placed at the bottom. Physics of Fluids, 2017, 29, .	1.6	18
18	Bubble evolution and necking at a submerged orifice for the complete range of orifice tilt. AICHE Journal, 2013, 59, 630-642.	1.8	17

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19	Synthesis of multistream heat exchangers by thermally linked two-stream modules. International Journal of Heat and Mass Transfer, 2010, 53, 1070-1078.	2.5	16
20	Effect of Surface Tension Variation of the Working Fluid on the Performance of a Closed Loop Pulsating Heat Pipe. Heat Transfer Engineering, 2019, 40, 509-523.	1.2	16
21	Flow field during eccentric discharge from quasiâ€twoâ€dimensional silosâ€“extension of the kinematic model with validation. AICHE Journal, 2016, 62, 1439-1453.	1.8	15
22	Control of flow and suppression of separation for Couette-Poiseuille hydrodynamics of ferrofluids using tunable magnetic fields. Physics of Fluids, 2019, 31, .	1.6	15
23	Formation, growth, and eruption cycle of vapor domes beneath a liquid puddle during Leidenfrost phenomena. Applied Physics Letters, 2013, 103, 084101.	1.5	14
24	Rewetting of Vertical Pipes by Bottom Flooding Using Nanofluid as a Coolant. Journal of Heat Transfer, 2015, 137, .	1.2	14
25	Asymmetric bursting of Taylor bubble in inclined tubes. Physics of Fluids, 2016, 28, .	1.6	14
26	Numerical Study of Air Entrainment and Liquid Film Wrapping around a Rotating Cylinder. Industrial & Engineering Chemistry Research, 2016, 55, 11950-11960.	1.8	14
27	Influence of Salinity on the Mechanism of Surface Icing: Implication to the Disappearing Freezing Singularity. Langmuir, 2018, 34, 9064-9071.	1.6	14
28	An optimized ANN for the performance prediction of an automotive air conditioning system. Science and Technology for the Built Environment, 2019, 25, 282-296.	0.8	14
29	Nanoparticle deposition from nanofluid droplets during Leidenfrost phenomenon and consequent rise in transition temperature. International Journal of Heat and Mass Transfer, 2020, 148, 119110.	2.5	14
30	Liquid holdup in concentric annuli during cocurrent gasâ€liquid upflow. Canadian Journal of Chemical Engineering, 2002, 80, 153-157.	0.9	13
31	A unique methodology of objective regime classification for two phase flow based on the intensity of digital images. Experimental Thermal and Fluid Science, 2018, 99, 537-546.	1.5	13
32	Characterisation and classification of gas-liquid two-phase flow using conductivity probe and multiple optical sensors. International Journal of Multiphase Flow, 2020, 124, 103193.	1.6	13
33	Thermokinetics of heterogeneous droplet nucleation on conically textured substrates. Journal of Chemical Physics, 2015, 143, 204703.	1.2	12
34	Model based reconstruction of an axisymmetric moving void using multiple conductivity probes. Chemical Engineering Science, 2016, 146, 64-75.	1.9	12
35	Investigation of droplet coalescence propelled by dielectrophoresis. AICHE Journal, 2019, 65, 829-839.	1.8	12
36	Numerical simulation of centrifugal and hemodynamically levitated LVAD for performance improvement. Artificial Organs, 2020, 44, E1-E19.	1.0	11

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37	Proposal of hemodynamically improved design of an axial flow blood pump for LVAD. Medical and Biological Engineering and Computing, 2020, 58, 401-418.	1.6	11
38	Analytical techniques for analysis of fully developed laminar flow through rectangular channels. Heat and Mass Transfer, 2011, 47, 1289-1299.	1.2	10
39	Numerical Study of Dynamics of Bubbles Using Lattice Boltzmann Method. Industrial & Engineering Chemistry Research, 2012, 51, 6364-6376.	1.8	10
40	Effect of electrostatic incitation on the wetting mode of a nano-drop over a pillar-arrayed surface. RSC Advances, 2016, 6, 110127-110133.	1.7	10
41	Levitation of non-magnetizable dropletÂinside ferrofluid. Journal of Fluid Mechanics, 2018, 857, 398-448.	1.4	10
42	Thermo-capillarity in microfluidic binary systems via phase modulated sinusoidal thermal stimuli. Physics of Fluids, 2022, 34, .	1.6	10
43	Flow restrictive and shear reducing effect of magnetization relaxation in ferrofluid cavity flow. Physics of Fluids, 2016, 28, .	1.6	9
44	Bubble Evolution through a Submerged Orifice Using Smoothed Particle Hydrodynamics: Effect of Different Thermophysical Properties. Industrial & Engineering Chemistry Research, 2009, 48, 8726-8735.	1.8	8
45	Maneuvering the chain agglomerates of colloidal superparamagnetic nanoparticles by tunable magnetic fields. Applied Physics Letters, 2014, 105, .	1.5	8
46	Motion, deformation and pearling of ferrofluid droplets due to a tunable moving magnetic field. Soft Matter, 2020, 16, 1642-1652.	1.2	8
47	Experimental analysis of flashing front propagation in superheated waterâ€"Effects of degree of superheat, tube inclination, and secondary nucleation. Physics of Fluids, 2020, 32, .	1.6	8
48	Comparative assessment of different versions of axial and centrifugal LVADs: A review. Artificial Organs, 2021, 45, 665-681.	1.0	8
49	The hydrodynamics of liquidâ€"liquid upflow through a venturimeter. International Journal of Multiphase Flow, 2008, 34, 1119-1129.	1.6	7
50	PERFORMANCE OF AN OFF-BOARD TEST RIG FOR AN AUTOMOTIVE AIR CONDITIONING SYSTEM. International Journal of Air-Conditioning and Refrigeration, 2013, 21, 1350020.	0.8	7
51	Three-dimensional printing of diamagnetic microparticles in paramagnetic and diamagnetic media. Physics of Fluids, 2020, 32, .	1.6	6
52	Internal hydraulic jump in plane Poiseuille two-layer flow: theoretical, numerical and experimental study. Journal of Fluid Mechanics, 2021, 912, .	1.4	6
53	Inception and termination of the coreâ€annular flow pattern for oilâ€water downflow through a vertical pipe. AICHE Journal, 2012, 58, 2020-2029.	1.8	5
54	Assessing the effect of flashing on steady state behavior and Ledinegg instability of a two phase rectangular natural circulation loop. International Journal of Heat and Mass Transfer, 2018, 116, 218-230.	2.5	5

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55	Interdiffusion across Electrode-Electrolyte Interface in Solid Oxide Fuel Cell Incorporating the Finite Size Effect of the Ions. Journal of the Electrochemical Society, 2018, 165, F1184-F1191.	1.3	5
56	Modulation of viscous planar jump by an obstacle in the flow pathâ€"Interrogation through shallow water equations and numerical analysis. Physics of Fluids, 2021, 33, .	1.6	5
57	Heat transfer from a ferrofluid during generalized Couette flow through parallel plates in the presence of an orthogonal magnetic field. International Journal of Thermal Sciences, 2021, 164, 106895.	2.6	5
58	Performance of symmetric polygonal fins with and without tip loss â€" A comparison of different methods of prediction. Canadian Journal of Chemical Engineering, 2000, 78, 395-401.	0.9	4
59	Unravelling Electrostatic Actuation on Inclined and Humped Surfaces: Effect of Substrate Contact Angle. Industrial & Engineering Chemistry Research, 2016, 55, 3949-3959.	1.8	4
60	Effect of a triple contact line on the thermokinetics of dropwise condensation on an immiscible liquid surface. RSC Advances, 2016, 6, 41506-41515.	1.7	4
61	Thermostability analysis of line-tension-associated nucleation at a gas-liquid interface. Physical Review E, 2017, 95, 012802.	0.8	4
62	Estimations of leakages through gaps at â€˜transitionâ€™ contacts using computational fluid dynamics and photoimaging of core-flow cavitation features in Gerotor pumps. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2021, 235, 1748-1770.	1.4	4
63	Planar hydraulic jump and associated hysteresis in near horizontal confined flow. Physical Review Fluids, 2021, 6, .	1.0	4
64	LIQUID-LIQUID TWO-PHASE FLOW THROUGH AN ORIFICE. Chemical Engineering Communications, 2009, 196, 1117-1129.	1.5	3
65	Application of Bayesian Inference Technique for the reconstruction of an isothermal hot spot inside a circular disc from peripheral temperature measurement â€“ A critical assessment. International Journal of Heat and Mass Transfer, 2015, 88, 456-469.	2.5	3
66	Thermodynamic formulation of the barrier for heterogeneous pinned nucleation: Implication to the crossover scenarios associated with barrierless and homogeneous nucleation. Journal of Chemical Physics, 2017, 146, 234702.	1.2	3
67	Mechanics and FEM estimation of gaps generated in star-ring active contacts of ORBIT motor during operation. International Journal of Mechanics and Materials in Design, 2020, 16, 69-89.	1.7	3
68	Effect of Oxygen Diffusion Constraints on the Performance of Planar Solid Oxide Fuel Cells for Variable Oxygen Concentration. Industrial & Engineering Chemistry Research, 2020, 59, 18844-18856.	1.8	3
69	Simulations for the flow of viscoplastic fluids in a cavity driven by the movement of walls by Lattice Boltzmann Method. Korea Australia Rheology Journal, 2020, 32, 213-231.	0.7	3
70	Leidenfrost Phenomenon and Rewetting of Hot Vertical Tubes by Bottom Flooding Using Nanofluids. Heat Transfer Engineering, 2021, 42, 1332-1347.	1.2	3
71	Single-mode instability of a ferrofluid-mercury interface under a nonuniform magnetic field. Physical Review E, 2016, 94, 012803.	0.8	2
72	A fully analytical solution of convection in ferrofluids during Couette-Poiseuille flow subjected to an orthogonal magnetic field. International Communications in Heat and Mass Transfer, 2022, 130, 105793.	2.9	2

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73	Unique shapes of liquid bells as a function of flow parameters: A brief overview and some new results. European Journal of Mechanics, B/Fluids, 2015, 50, 98-109.	1.2	1
74	Reconstruction of elongated bubbles fusing the information from multiple optical probes through a Bayesian inference technique. Review of Scientific Instruments, 2016, 87, 075109.	0.6	1
75	Steady-State Performance of a Rectangular Natural Circulation Loop With Differentially Heated Parallel Channels. Journal of Thermal Science and Engineering Applications, 2016, 8, .	0.8	1
76	Characterization of bubbly flow through the fusion of multiple features extracted from high speed images. , 2016, , .		1
77	Numerical simulation of flash evaporation in the presence of secondary nucleation. International Journal of Multiphase Flow, 2021, 142, 103703.	1.6	1
78	Thermal Conductivity and Rheological Behaviour of Al-alloy Dispersed Ethylene Glycol Based Nanofluids. Journal of ASTM International, 2012, 9, 1-13.	0.2	1
79	Effect of left ventricular assist device on the hemodynamics of a patient-specific left heart. Medical and Biological Engineering and Computing, 2022, 60, 1705-1721.	1.6	1
80	Chrono-photographic visualization and characterization of the flow regimes in rewetting by bottom flooding. Experimental Thermal and Fluid Science, 2022, 139, 110727.	1.5	1
81	Influence of an orifice on liquid-liquid two phase flow. Canadian Journal of Chemical Engineering, 2009, 87, 685-694.	0.9	0
82	Thermal Conductivity and Rheological Behaviour of Al-alloy Dispersed Ethylene Glycol Based Nanofluids. , 2012, , 104-121.		0
83	Water footprint comparison of a naphtha-fired combined cycle power plant and a coal-fired steam power plant. Environmental Monitoring and Assessment, 2022, 194, 404.	1.3	0