

# Pallab Sinha Mahapatra

## List of Publications by Year in descending order

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Version: 2024-02-01

61  
papers

1,224  
citations

361045

20  
h-index

414034

32  
g-index

63  
all docs

63  
docs citations

63  
times ranked

813  
citing authors

#	ARTICLE	IF	CITATIONS
1	Key design and operating parameters for enhancing dropwise condensation through wettability patterning. <i>International Journal of Heat and Mass Transfer</i> , 2016, 92, 877-883.	2.5	126
2	Analysis of heat transfer and pumping power for bottom-heated porous cavity saturated with Cu-water nanofluid. <i>Powder Technology</i> , 2018, 326, 356-369.	2.1	90
3	A comparative study of flow regimes and thermal performance between flat plate pulsating heat pipe and capillary tube pulsating heat pipe. <i>Applied Thermal Engineering</i> , 2019, 149, 613-624.	3.0	68
4	Self-driven droplet transport: Effect of wettability gradient and confinement. <i>Physics of Fluids</i> , 2019, 31, .	1.6	63
5	Enhanced thermal energy transport using adiabatic block inside lid-driven cavity. <i>International Journal of Heat and Mass Transfer</i> , 2016, 100, 407-427.	2.5	55
6	Rapid, Self-driven Liquid Mixing on Open-Surface Microfluidic Platforms. <i>Scientific Reports</i> , 2017, 7, 1800.	1.6	53
7	Heat Transfer and Entropy Generation in a Porous Square Enclosure in Presence of an Adiabatic Block. <i>Transport in Porous Media</i> , 2016, 111, 305-329.	1.2	42
8	Evaporation kinetics of pure water drops: Thermal patterns, Marangoni flow, and interfacial temperature difference. <i>Physical Review E</i> , 2018, 98, .	0.8	40
9	Merit of non-uniform over uniform heating in a porous cavity. <i>International Communications in Heat and Mass Transfer</i> , 2016, 78, 135-144.	2.9	37
10	Buoyancy-driven fluid and energy flow in protruded heater enclosure. <i>Meccanica</i> , 2016, 51, 2159-2184.	1.2	36
11	Spatially-selective cooling by liquid jet impinging orthogonally on a wettability-patterned surface. <i>International Journal of Heat and Mass Transfer</i> , 2016, 95, 142-152.	2.5	36
12	Mixed Convection Heat Transfer in a Grooved Channel with Injection. <i>Numerical Heat Transfer; Part A: Applications</i> , 2015, 68, 663-685.	1.2	33
13	Thermal management of heating element in a ventilated enclosure. <i>International Communications in Heat and Mass Transfer</i> , 2015, 66, 84-92.	2.9	31
14	Convective heat transfer enhancement: effect of multi-frequency heating. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2019, 29, 3822-3856.	1.6	31
15	Liquid Wicking in a Paper Strip: An Experimental and Numerical Study. <i>ACS Omega</i> , 2020, 5, 22931-22939.	1.6	27
16	Surface-Wettability Patterning for Distributing High-Momentum Water Jets on Porous Polymeric Substrates. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 5038-5049.	4.0	25
17	Heatlines and other visualization techniques for confined heat transfer systems. <i>International Journal of Heat and Mass Transfer</i> , 2018, 118, 1069-1079.	2.5	24
18	Precise Liquid Transport on and through Thin Porous Materials. <i>Langmuir</i> , 2018, 34, 2865-2875.	1.6	23

#	ARTICLE	IF	CITATIONS
19	Condensation of Humid Air on Superhydrophobic Surfaces: Effect of Nanocoatings on a Hierarchical Interface. Langmuir, 2021, 37, 12767-12780.	1.6	23
20	Pulsed laser assisted high-throughput intracellular delivery in hanging drop based three dimensional cancer spheroids. Analyst, The, 2021, 146, 4756-4766.	1.7	22
21	Modeling of steam-water direct contact condensation using volume of fluid approach. Numerical Heat Transfer; Part A: Applications, 2018, 73, 17-33.	1.2	21
22	Modeling and analysis of condensation induced water hammer. Numerical Heat Transfer; Part A: Applications, 2018, 74, 975-1000.	1.2	21
23	Effect of active wall location in a partially heated enclosure. International Communications in Heat and Mass Transfer, 2015, 61, 69-77.	2.9	20
24	Modeling aspects of vapor bubble condensation in subcooled liquid using the VOF approach. Numerical Heat Transfer; Part A: Applications, 2017, 72, 236-254.	1.2	19
25	Fabrication of TiO <sub>2</sub> microspikes for highly efficient intracellular delivery by pulse laser-assisted photoporation. RSC Advances, 2021, 11, 9336-9348.	1.7	18
26	Thermal Non-equilibrium Heat Transfer and Entropy Generation due to Natural Convection in a Cylindrical Enclosure with a Truncated Conical, Heat-Generating Porous Bed. Transport in Porous Media, 2017, 116, 353-377.	1.2	17
27	Shape evolution of drops on surfaces of different wettability gradients. Chemical Engineering Science, 2021, 229, 116136.	1.9	16
28	Proper orthogonal decomposition of thermally-induced flow structure in an enclosure with alternately active localized heat sources. International Journal of Heat and Mass Transfer, 2016, 94, 373-379.	2.5	15
29	Autonomous transport and splitting of a droplet on an open surface. Physical Review Fluids, 2021, 6, .	1.0	13
30	Thermal performance of a two-phase flat thermosyphon with surface wettability modifications. Applied Thermal Engineering, 2022, 204, 117862.	3.0	13
31	Effect of particle shape and slip mechanism on buoyancy induced convective heat transport with nanofluids. Physics of Fluids, 2017, 29, .	1.6	12
32	Effect of size distribution on mixing of a polydisperse wet granular material in a belt-driven enclosure. Granular Matter, 2016, 18, 1.	1.1	11
33	Transitions between multiple dynamical states in a confined dense active-particle system. Physical Review E, 2017, 95, 062610.	0.8	11
34	Surface Treatments to Enhance the Functionality of PPEs. , 2020, 5, 333-336.		11
35	Confined System Analysis of a Predator-Prey Minimalistic Model. Scientific Reports, 2019, 9, 11258.	1.6	10
36	Imbibition of Liquids through a Paper Substrate in a Controlled Environment. Langmuir, 2022, 38, 4736-4746.	1.6	10

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37	Wettability-confined liquid-film convective cooling: Parameter study. International Journal of Heat and Mass Transfer, 2018, 126, 667-676.	2.5	9
38	Effect of microchannel on combined impingement and film cooling of a concave surface. International Communications in Heat and Mass Transfer, 2021, 126, 105441.	2.9	9
39	Activity-induced mixing and phase transitions of self-propelled swimmers. Physical Review E, 2019, 99, 012609.	0.8	8
40	Insights into the evolution of the thermal field in evaporating sessile pure water drops. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 611, 125855.	2.3	8
41	Internal flow in evaporating water drops: dominance of Marangoni flow. Experiments in Fluids, 2022, 63, 1.	1.1	8
42	Thermal instability-driven multiple solutions in a grooved channel. Numerical Heat Transfer; Part A: Applications, 2016, 70, 776-790.	1.2	7
43	Droplet Dynamics on a Wettability Patterned Surface during Spray Impact. Processes, 2021, 9, 555.	1.3	7
44	Effect of particle fraction on phase transitions in an active-passive particles system. Physical Review E, 2020, 101, 042607.	0.8	6
45	A point of care sensor for milk adulteration detection. , 2021, , .		6
46	Thermal and flow characteristics in a flat plate pulsating heat pipe with ethanol-water mixtures: From slug-plug to droplet oscillations. International Journal of Heat and Mass Transfer, 2022, 194, 123066.	2.5	6
47	On the brachistochrone of a fluid-filled cylinder. Journal of Fluid Mechanics, 2019, 865, 775-789.	1.4	5
48	Dispersion of Polydisperse Droplets in a Pulsating Flow Field. Procedia IUTAM, 2015, 15, 242-248.	1.2	4
49	Effect of liquid-air interface on particle cloud dynamics in viscous liquids. Physics of Fluids, 2021, 33, .	1.6	4
50	Alignment-mediated segregation in an active-passive mixture. Physical Review E, 2021, 104, 044610.	0.8	4
51	Mixed Convection in a Ventilated Enclosure with Different Heater Position. Lecture Notes in Mechanical Engineering, 2017, , 363-374.	0.3	2
52	Thermal Patterns and Internal Flow Mechanisms in Evaporating Inverted Sessile Drops of Pure Water. , 2019, , .		2
53	A wettability pattern-mediated trapped bubble removal from a horizontal liquid-liquid interface. Physics of Fluids, 2022, 34, .	1.6	2
54	Spatiotemporal dynamics of a self-propelled system with opposing alignment and repulsive forces. Physical Review E, 2020, 102, 042613.	0.8	1

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55	Pressure dependence of dryout in a heat-generating porous debris bed. <i>Sadhana - Academy Proceedings in Engineering Sciences</i> , 2020, 45, 1.	0.8	1
56	NUMERICAL STUDY OF DROPLET IMPACT ON WETTABILITY PATTERNED SURFACE. , 2019, , .		1
57	Fabrication of hierarchically textured aluminum-based superhydrophobic surfaces for anti-frosting application. <i>Materials Today: Proceedings</i> , 2022, 56, 1267-1273.	0.9	1
58	Effect of Flow Pulsations in Premixed, Swirl Stabilized Combustor. , 2014, , .		0
59	Multiphase Flow its Application in Water Management and Harvesting in Fuel Cells. <i>Energy, Environment, and Sustainability</i> , 2019, , 249-285.	0.6	0
60	Nonaxisymmetry and flow transition in evaporating water drops. <i>Applied Physics Letters</i> , 2022, 120, 011602.	1.5	0
61	Condensing droplets on the soft surfaces with varying shear modulus. <i>Chemical Engineering Science</i> , 2022, 259, 117797.	1.9	0