

# Pallab Sinha Mahapatra

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

57  
papers

681  
citations

15  
h-index

24  
g-index

63  
ext. papers

948  
ext. citations

3.8  
avg, IF

4.78  
L-index

#	Paper	IF	Citations
57	Nonaxisymmetry and flow transition in evaporating water drops. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 011602	5.8	1
56	Thermal performance of a two-phase flat thermosyphon with surface wettability modifications. <i>Applied Thermal Engineering</i> , <b>2022</b> , 204, 117862	2.5	1
55	Internal flow in evaporating water drops: dominance of Marangoni flow. <i>Experiments in Fluids</i> , <b>2022</b> , 63, 1	4.4	0
54	Imbibition of Liquids through a Paper Substrate in a Controlled Environment.. <i>Langmuir</i> , <b>2022</b> , 38, 4736-4746	4.9	1
53	A wettability pattern-mediated trapped bubble removal from a horizontal liquid-liquid interface. <i>Physics of Fluids</i> , <b>2022</b> , 34, 042109		1
52	Thermal and flow characteristics in a flat plate pulsating heat pipe with ethanol-water mixtures: From slug-plug to droplet oscillations. <i>International Journal of Heat and Mass Transfer</i> , <b>2022</b> , 194, 123066		0
51	A point of care sensor for milk adulteration detection <b>2021</b> ,		0
50	Alignment-mediated segregation in an active-passive mixture. <i>Physical Review E</i> , <b>2021</b> , 104, 044610	2.4	4
49	Condensation of Humid Air on Superhydrophobic Surfaces: Effect of Nanocoatings on a Hierarchical Interface. <i>Langmuir</i> , <b>2021</b> , 37, 12767-12780	2.9	3
48	Droplet Dynamics on a Wettability Patterned Surface during Spray Impact. <i>Processes</i> , <b>2021</b> , 9, 555	4.4	6
47	Effect of liquid-air interface on particle cloud dynamics in viscous liquids. <i>Physics of Fluids</i> , <b>2021</b> , 33, 063306	5.1	4
46	Shape evolution of drops on surfaces of different wettability gradients. <i>Chemical Engineering Science</i> , <b>2021</b> , 229, 116136	3.7	9
45	Insights into the evolution of the thermal field in evaporating sessile pure water drops. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2021</b> , 611, 125855	5	4
44	Fabrication of TiO microspikes for highly efficient intracellular delivery by pulse laser-assisted photoporation. <i>RSC Advances</i> , <b>2021</b> , 11, 9336-9348	5.8	3
43	Pulsed laser assisted high-throughput intracellular delivery in hanging drop based three dimensional cancer spheroids. <i>Analyst, The</i> , <b>2021</b> , 146, 4756-4766	2.8	1
42	Effect of microchannel on combined impingement and film cooling of a concave surface. <i>International Communications in Heat and Mass Transfer</i> , <b>2021</b> , 126, 105441		
41	Autonomous transport and splitting of a droplet on an open surface. <i>Physical Review Fluids</i> , <b>2021</b> , 6,		

40	Surface Treatments to Enhance the Functionality of PPEs <b>2020</b> , 5, 333-336		5
39	Effect of particle fraction on phase transitions in an active-passive particles system. <i>Physical Review E</i> , <b>2020</b> , 101, 042607	2.4	3
38	Spatiotemporal dynamics of a self-propelled system with opposing alignment and repulsive forces. <i>Physical Review E</i> , <b>2020</b> , 102, 042613	2.4	0
37	Pressure dependence of dryout in a heat-generating porous debris bed. <i>Sadhana - Academy Proceedings in Engineering Sciences</i> , <b>2020</b> , 45, 1	1	1
36	Liquid Wicking in a Paper Strip: An Experimental and Numerical Study. <i>ACS Omega</i> , <b>2020</b> , 5, 22931-22939	3.9	6
35	Self-driven droplet transport: Effect of wettability gradient and confinement. <i>Physics of Fluids</i> , <b>2019</b> , 31, 042111	4.4	37
34	On the brachistochrone of a fluid-filled cylinder. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 865, 775-789	3.7	1
33	Confined System Analysis of a Predator-Prey Minimalistic Model. <i>Scientific Reports</i> , <b>2019</b> , 9, 11258	4.9	4
32	Convective heat transfer enhancement: effect of multi-frequency heating. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , <b>2019</b> , 29, 3822-3856	4.5	11
31	Thermal Patterns and Internal Flow Mechanisms in Evaporating Inverted Sessile Drops of Pure Water <b>2019</b> ,		2
30	Multiphase Flow its Application in Water Management and Harvesting in Fuel Cells. <i>Energy, Environment, and Sustainability</i> , <b>2019</b> , 249-285	0.8	
29	Activity-induced mixing and phase transitions of self-propelled swimmers. <i>Physical Review E</i> , <b>2019</b> , 99, 012609	2.4	5
28	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> , <b>2019</b> , 149, 613-624	5.8	32
27	Precise Liquid Transport on and through Thin Porous Materials. <i>Langmuir</i> , <b>2018</b> , 34, 2865-2875	4	19
26	Surface-Wettability Patterning for Distributing High-Momentum Water Jets on Porous Polymeric Substrates. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 5038-5049	9.5	20
25	Modeling of steam-water direct contact condensation using volume of fluid approach. <i>Numerical Heat Transfer; Part A: Applications</i> , <b>2018</b> , 73, 17-33	2.3	12
24	Heatlines and other visualization techniques for confined heat transfer systems. <i>International Journal of Heat and Mass Transfer</i> , <b>2018</b> , 118, 1069-1079	4.9	14
23	Analysis of heat transfer and pumping power for bottom-heated porous cavity saturated with Cu-water nanofluid. <i>Powder Technology</i> , <b>2018</b> , 326, 356-369	5.2	55

22	Evaporation kinetics of pure water drops: Thermal patterns, Marangoni flow, and interfacial temperature difference. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	21
21	Modeling and analysis of condensation induced water hammer. <i>Numerical Heat Transfer; Part A: Applications</i> , <b>2018</b> , 74, 975-1000	2.3	9
20	Wettability-confined liquid-film convective cooling: Parameter study. <i>International Journal of Heat and Mass Transfer</i> , <b>2018</b> , 126, 667-676	4.9	6
19	Rapid, Self-driven Liquid Mixing on Open-Surface Microfluidic Platforms. <i>Scientific Reports</i> , <b>2017</b> , 7, 18004.9	4.9	44
18	Modeling aspects of vapor bubble condensation in subcooled liquid using the VOF approach. <i>Numerical Heat Transfer; Part A: Applications</i> , <b>2017</b> , 72, 236-254	2.3	10
17	Transitions between multiple dynamical states in a confined dense active-particle system. <i>Physical Review E</i> , <b>2017</b> , 95, 062610	2.4	10
16	Mixed Convection in a Ventilated Enclosure with Different Heater Position. <i>Lecture Notes in Mechanical Engineering</i> , <b>2017</b> , 363-374	0.4	2
15	Thermal Non-equilibrium Heat Transfer and Entropy Generation due to Natural Convection in a Cylindrical Enclosure with a Truncated Conical, Heat-Generating Porous Bed. <i>Transport in Porous Media</i> , <b>2017</b> , 116, 353-377	3.1	15
14	Effect of particle shape and slip mechanism on buoyancy induced convective heat transport with nanofluids. <i>Physics of Fluids</i> , <b>2017</b> , 29, 122001	4.4	8
13	Merit of non-uniform over uniform heating in a porous cavity. <i>International Communications in Heat and Mass Transfer</i> , <b>2016</b> , 78, 135-144	5.8	18
12	Buoyancy-driven fluid and energy flow in protruded heater enclosure. <i>Meccanica</i> , <b>2016</b> , 51, 2159-2184	2.1	14
11	Heat Transfer and Entropy Generation in a Porous Square Enclosure in Presence of an Adiabatic Block. <i>Transport in Porous Media</i> , <b>2016</b> , 111, 305-329	3.1	35
10	Spatially-selective cooling by liquid jet impinging orthogonally on a wettability-patterned surface. <i>International Journal of Heat and Mass Transfer</i> , <b>2016</b> , 95, 142-152	4.9	26
9	Key design and operating parameters for enhancing dropwise condensation through wettability patterning. <i>International Journal of Heat and Mass Transfer</i> , <b>2016</b> , 92, 877-883	4.9	84
8	Proper orthogonal decomposition of thermally-induced flow structure in an enclosure with alternately active localized heat sources. <i>International Journal of Heat and Mass Transfer</i> , <b>2016</b> , 94, 373-379	4.9	13
7	Enhanced thermal energy transport using adiabatic block inside lid-driven cavity. <i>International Journal of Heat and Mass Transfer</i> , <b>2016</b> , 100, 407-427	4.9	33
6	Effect of size distribution on mixing of a polydisperse wet granular material in a belt-driven enclosure. <i>Granular Matter</i> , <b>2016</b> , 18, 1	2.6	10
5	Thermal instability-driven multiple solutions in a grooved channel. <i>Numerical Heat Transfer; Part A: Applications</i> , <b>2016</b> , 70, 776-790	2.3	5

4	Mixed Convection Heat Transfer in a Grooved Channel with Injection. <i>Numerical Heat Transfer; Part A: Applications</i> , <b>2015</b> , 68, 663-685	2.3	16
3	Dispersion of Polydisperse Droplets in a Pulsating Flow Field. <i>Procedia IUTAM</i> , <b>2015</b> , 15, 242-248		4
2	Thermal management of heating element in a ventilated enclosure. <i>International Communications in Heat and Mass Transfer</i> , <b>2015</b> , 66, 84-92	5.8	18
1	Effect of active wall location in a partially heated enclosure. <i>International Communications in Heat and Mass Transfer</i> , <b>2015</b> , 61, 69-77	5.8	13