

# Manish K Tiwari

## List of Publications by Year in descending order

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Version: 2024-02-01

92  
papers

4,611  
citations

136950

32  
h-index

102487

66  
g-index

99  
all docs

99  
docs citations

99  
times ranked

4620  
citing authors

#	ARTICLE	IF	CITATIONS
1	All-organic superhydrophobic coatings with mechanochemical robustness and liquid impalement resistance. <i>Nature Materials</i> , 2018, 17, 355-360.	27.5	563
2	Mechanism of supercooled droplet freezing on surfaces. <i>Nature Communications</i> , 2012, 3, 615.	12.8	527
3	On the Nanoengineering of Superhydrophobic and Impalement Resistant Surface Textures below the Freezing Temperature. <i>Nano Letters</i> , 2014, 14, 172-182.	9.1	276
4	Rational nanostructuring of surfaces for extraordinary icephobicity. <i>Nanoscale</i> , 2014, 6, 4874-4881.	5.6	203
5	Aquasar: A hot water cooled data center with direct energy reuse. <i>Energy</i> , 2012, 43, 237-245.	8.8	172
6	Table Salt as a Template to Prepare Reusable Porous PVDF/MWCNT Foam for Separation of Immiscible Oils/Organic Solvents and Corrosive Aqueous Solutions. <i>Advanced Functional Materials</i> , 2017, 27, 1702926.	14.9	160
7	Supercooled Water Drops Impacting Superhydrophobic Textures. <i>Langmuir</i> , 2014, 30, 10855-10861.	3.5	157
8	Energy efficient hotspot-targeted embedded liquid cooling of electronics. <i>Applied Energy</i> , 2015, 138, 414-422.	10.1	157
9	Frost halos from supercooled water droplets. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 16073-16078.	7.1	143
10	Flow Condensation on Copper-Based Nanotextured Superhydrophobic Surfaces. <i>Langmuir</i> , 2013, 29, 840-848.	3.5	143
11	Multifunctional Superhydrophobic Polymer/Carbon Nanocomposites: Graphene, Carbon Nanotubes, or Carbon Black?. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 8859-8867.	8.0	116
12	Superhydrophobic and conductive carbon nanofiber/PTFE composite coatings for EMI shielding. <i>Journal of Colloid and Interface Science</i> , 2011, 353, 311-315.	9.4	115
13	A novel method of energy efficient hotspot-targeted embedded liquid cooling for electronics: An experimental study. <i>International Journal of Heat and Mass Transfer</i> , 2015, 88, 684-694.	4.8	91
14	Re-usable self-poled piezoelectric/piezocatalytic films with exceptional energy harvesting and water remediation capability. <i>Nano Energy</i> , 2020, 78, 105339.	16.0	90
15	Highly Liquid-Repellent, Large-Area, Nanostructured Poly(vinylidene fluoride)/Poly(ethyl Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 1 2010, 2, 1114-1119.	8.0	88
16	Super-durable, non-fluorinated superhydrophobic free-standing items. <i>Journal of Materials Chemistry A</i> , 2018, 6, 357-362.	10.3	75
17	Optimal thermal operation of liquid-cooled electronic chips. <i>International Journal of Heat and Mass Transfer</i> , 2012, 55, 1957-1969.	4.8	72
18	Hierarchically nanotextured surfaces maintaining superhydrophobicity under severely adverse conditions. <i>Nanoscale</i> , 2014, 6, 8710-8719.	5.6	72

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19	Hot water cooled electronics: Exergy analysis and waste heat reuse feasibility. International Journal of Heat and Mass Transfer, 2012, 55, 6391-6399.	4.8	68
20	Thermofluidics and energetics of a manifold microchannel heat sink for electronics with recovered hot water as working fluid. International Journal of Heat and Mass Transfer, 2013, 58, 135-151.	4.8	64
21	Microvortex-enhanced heat transfer in 3D-integrated liquid cooling of electronic chip stacks. International Journal of Heat and Mass Transfer, 2013, 65, 33-43.	4.8	62
22	Unraveling wetting transition through surface textures with X-rays: Liquid meniscus penetration phenomena. Scientific Reports, 2014, 4, 4055.	3.3	56
23	Elongational and shear rheology of carbon nanotube suspensions. Rheologica Acta, 2009, 48, 597-609.	2.4	54
24	3D Integrated Water Cooling of a Composite Multilayer Stack of Chips. Journal of Heat Transfer, 2010, 132, .	2.1	54
25	Experimental investigation into vortex structure and pressure drop across microcavities in 3D integrated electronics. Experiments in Fluids, 2011, 51, 731-741.	2.4	51
26	Novel Fluoropolymer Blends for the Fabrication of Sprayable Multifunctional Superhydrophobic Nanostructured Composites. Industrial & Engineering Chemistry Research, 2011, 50, 11117-11123.	3.7	49
27	Biocompatible poly(vinylidene fluoride)/cyanoacrylate composite coatings with tunable hydrophobicity and bonding strength. Applied Physics Letters, 2008, 93, 173902.	3.3	48
28	A high-efficiency hybrid high-concentration photovoltaic system. International Journal of Heat and Mass Transfer, 2015, 89, 514-521.	4.8	48
29	Electrospun fibrous nanocomposites as permeable, flexible strain sensors. Journal of Applied Physics, 2008, 103, .	2.5	45
30	Surface tension confined (STC) tracks for capillary-driven transport of low surface tension liquids. Lab on A Chip, 2012, 12, 5237.	6.0	44
31	Significant thermal conductivity reduction of silicon nanowire forests through discrete surface doping of germanium. Applied Physics Letters, 2015, 106, .	3.3	34
32	High strain sustaining, nitrile rubber based, large-area, superhydrophobic, nanostructured composite coatings. Composites Part A: Applied Science and Manufacturing, 2011, 42, 979-985.	7.6	33
33	Analysis of failure mechanism of bitumen films. Fuel, 2013, 106, 437-447.	6.4	32
34	Fluorine-Free Transparent Superhydrophobic Nanocomposite Coatings from Mesoporous Silica. Langmuir, 2020, 36, 13426-13438.	3.5	31
35	Delayed Lubricant Depletion of Slippery Liquid Infused Porous Surfaces Using Precision Nanostructures. Langmuir, 2021, 37, 10071-10078.	3.5	31
36	On the Principles of Printing Sub-micrometer 3D Structures from Dielectric-Liquid-Based Colloids. Advanced Functional Materials, 2011, 21, 388-395.	14.9	30

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37	On the shear thinning of non-Brownian suspensions: Friction or adhesion?. Journal of Non-Newtonian Fluid Mechanics, 2020, 281, 104298.	2.4	28
38	Computational modeling of vortex shedding in water cooling of 3D integrated electronics. International Journal of Heat and Fluid Flow, 2013, 44, 745-755.	2.4	27
39	A Novel 3D Integrated Platform for the High-Resolution Study of Cell Migration Plasticity. Macromolecular Bioscience, 2013, 13, 973-983.	4.1	25
40	Dynamics of magnetic modulation of ferrofluid droplets for digital microfluidic applications. Journal of Magnetism and Magnetic Materials, 2017, 421, 165-176.	2.3	21
41	Site-specific deposition of single gold nanoparticles by individual growth in electrohydrodynamically-printed attoliter droplet reactors. Nanoscale, 2015, 7, 9510-9519.	5.6	20
42	A simplified approach to hotspot alleviation in microprocessors. Applied Thermal Engineering, 2016, 93, 1314-1323.	6.0	20
43	Transparent and Robust Amphiphobic Surfaces Exploiting Nanohierarchical Surface-grown Metal-Organic Frameworks. Nano Letters, 2021, 21, 3480-3486.	9.1	20
44	HOT WATER COOLED HEAT SINKS FOR EFFICIENT DATA CENTER COOLING: TOWARDS ELECTRONIC COOLING WITH HIGH EXERGETIC UTILITY. Frontiers in Heat and Mass Transfer, 2010, 1, .	0.2	20
45	Vortex shedding from confined micropin arrays. Microfluidics and Nanofluidics, 2013, 15, 231-242.	2.2	19
46	Dropwise condensation on superhydrophobic nanostructured surfaces: literature review and experimental analysis. Journal of Physics: Conference Series, 2014, 501, 012028.	0.4	19
47	High-resolution 3D printing for healthcare underpinned by small-scale fluidics. , 2017, , 167-206.		18
48	Process modeling for control of a batch heat treatment furnace with low NOx radiant tube burner. Energy Conversion and Management, 2005, 46, 2093-2113.	9.2	17
49	Waste heat recovery in supercomputers and 3D integrated liquid cooled electronics. , 2012, , .		17
50	On the significance of developing boundary layers in integrated water cooled 3D chip stacks. International Journal of Heat and Mass Transfer, 2012, 55, 5222-5232.	4.8	17
51	Analysis of conjugated heat transfer in micro-heat exchangers via integral transforms and non-intrusive optical techniques. International Journal of Numerical Methods for Heat and Fluid Flow, 2015, 25, 1444-1462.	2.8	16
52	Innovative Metallic Microfluidic Device for Intensified Biodiesel Production. Industrial & Engineering Chemistry Research, 2020, 59, 389-398.	3.7	14
53	Mixing in flows past confined microfluidic cylinders: Effects of pin and fluid interface offsetting. Chemical Engineering Journal, 2020, 397, 125358.	12.7	13
54	Compression molding processed superhydrophobic CB/CeO2/PVDF/CF nanocomposites with highly robustness, reusability and multifunction. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 590, 124533.	4.7	13

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55	Autonomous transport and splitting of a droplet on an open surface. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	13
56	Bioinspired Multifunctional Glass Surfaces through Regenerative Secondary Mask Lithography. <i>Advanced Materials</i> , 2021, 33, e2102175.	21.0	13
57	Computational Modeling of Hot-Spot Identification and Control in 3-D Stacked Chips with Integrated Cooling. <i>Numerical Heat Transfer; Part A: Applications</i> , 2014, 65, 201-215.	2.1	12
58	Poly(vinylidene fluoride) and Poly(ethyl 2â€cyanoacrylate) Blends through Controlled Polymerization of Ethyl 2â€cyanoacrylates. <i>Macromolecular Materials and Engineering</i> , 2009, 294, 775-780.	3.6	11
59	Copper nanowire embedded hypromellose: An antibacterial nanocomposite film. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 30-39.	9.4	11
60	Nanotextured Aluminum-Based Surfaces with Icephobic Properties. <i>Heat Transfer Engineering</i> , 2020, 41, 1663-1672.	1.9	10
61	Effect of Particle Specific Surface Area on the Rheology of Non-Brownian Silica Suspensions. <i>Materials</i> , 2020, 13, 4628.	2.9	10
62	Spacer-Defined Intrinsic Multiple Patterning. <i>ACS Nano</i> , 2020, 14, 12091-12100.	14.6	10
63	Probing vortex-shedding at high frequencies in flows past confined microfluidic cylinders using high-speed microscale particle image velocimetry. <i>Physics of Fluids</i> , 2019, 31, .	4.0	9
64	NUMERICAL SIMULATION OF OPTIMAL MULTIPLE-INPUT, MULTIPLE-OUTPUT CONTROL OF JET IMPINGEMENT COOLING OF A GLASS PLATE. <i>Numerical Heat Transfer; Part A: Applications</i> , 2004, 46, 401-424.	2.1	8
65	Pre-impact dynamics of a droplet impinging on a deformable surface. <i>Physics of Fluids</i> , 2021, 33, .	4.0	8
66	Fabricating devices with dielectrophoretically assembled, suspended single walled carbon nanotubes for improved nanoelectronic device characterization. <i>Microelectronic Engineering</i> , 2011, 88, 2740-2743.	2.4	7
67	Droplet Dynamics on a Wettability Patterned Surface during Spray Impact. <i>Processes</i> , 2021, 9, 555.	2.8	7
68	Micron resolution, high-fidelity three-dimensional vascular optical imaging phantoms. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	7
69	A route to engineered high aspect-ratio silicon nanostructures through regenerative secondary mask lithography. <i>Nanoscale</i> , 2022, 14, 1847-1854.	5.6	7
70	Millimeter-wave on-chip solenoid inductor by on-demand three-dimensional printing of colloidal nanoparticles. <i>Applied Physics Letters</i> , 2010, 97, 243109.	3.3	6
71	Parameter optimization through performance analysis of model based control of a batch heat treatment furnace with low NOx radiant tube burner. <i>Energy Conversion and Management</i> , 2005, 46, 2114-2133.	9.2	5
72	Advanced liquid cooling in HCPVT systems to achieve higher energy efficiencies. , 2013, , .		5

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73	3D Integrated Water Cooling of a Composite Multilayer Stack of Chips. , 2010, , .		4
74	Hybrid porous media and fluid domain modeling strategy to optimize a novel staggered fin heat sink design. , 2013, , .		4
75	An improved lumped model for freezing of a freely suspended supercooled water droplet in air stream. Journal of Engineering Mathematics, 2021, 130, 1.	1.2	4
76	Suspension rheology of adhesive particles at high shear-rates. Physical Review Fluids, 2020, 5, .	2.5	4
77	3D direct-write printing of water soluble micromoulds for high-resolution rapid prototyping. Additive Manufacturing, 2022, 58, 103019.	3.0	4
78	Drops, Jets and High-Resolution 3D Printing: Fundamentals and Applications. Energy, Environment, and Sustainability, 2018, , 123-162.	1.0	3
79	On the Thermal Performance of a Microparallel Channels Heat Exchanger. Journal of Thermal Science and Engineering Applications, 2019, 11, .	1.5	3
80	Hybrid integral transform analysis of supercooled droplets solidification. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, 20200874.	2.1	3
81	Electrospun Nanocomposites as Flexible Sensors. , 2008, , .		2
82	Thermal Transport in Micro- and Nanoscale Systems. , 2018, , 277-327.		2
83	Bio-compatible Piezoresistive Pressure Sensing Skin Sleeve for Millimetre-Scale Flexible Robots: Design, Manufacturing and Pitfalls. , 2019, 2019, 1657-1661.		2
84	Single Sensor Interventional All-Optical Ultrasound Imaging: Beam Characteristics and Bandwidth Performance. , 2021, , .		2
85	Evaluation and Testing of Organometallic Precursor for Copper Direct-Write. Materials Research Society Symposia Proceedings, 2007, 1002, 1.	0.1	1
86	Thermal Transport in Micro- and Nanoscale Systems. , 2017, , 1-51.		1
87	Hot Water Cooled Electronics for High Exergetic Utility. , 2012, , .		0
88	Metal Line Interconnects Produced by Means of Printable Copper Precursor Solutions. , 2006, , .		0
89	NANOTEXTURED SURFACES FOR ANTI-ICING. , 2018, , .		0
90	VORTEX INDUCED TRANSPORT PHENOMENA IN FLOWS PAST MICROPINS. , 2018, , .		0

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91	Design, Static and Performance Analysis of a Parallel Robot for Head Stabilisation in Vitreoretinal Surgery. Mechanisms and Machine Science, 2021, , 169-179.	0.5	0
92	3D Printed Flexible Photoplethysmography Sensor Array for Tissue Oximetry. , 2022, , .		0