Prashant K Sharma

List of Publications by Year
in descending order

134 papers	6,203 citations	100601 38 h-index	84171 75 g-index
140 all docs	140 docs citations	140 times ranked	7295 citing authors

#	Article	IF	Citations
1	Design of Robust Lubricant-Infused Surfaces for Anti-Corrosion. ACS Applied Materials & Interfaces, 2022, 14, 2411-2423.	4.0	23
2	Recent Progress in the Fabrication and Optical Properties of Nanoporous Anodic Alumina. Nanomaterials, 2022, 12, 444.	1.9	14
3	Hierarchically Structured, All-Aqueous-Coated Hydrophobic Surfaces with pH-Selective Droplet Transfer Capability. ACS Applied Materials & Interfaces, 2022, 14, 26225-26237.	4.0	7
4	Droplet Retention on Superhydrophobic Surfaces: A Critical Review. Advanced Materials Interfaces, 2021, 8, 2001205.	1.9	56
5	Chemical and mechanical influence of root canal irrigation on biofilm removal from lateral morphological features of simulated root canals, dentine discs and dentinal tubules. International Endodontic Journal, 2021, 54, 112-129.	2.3	29
6	Superhydrophobic Sands for the Preservation and Purification of Water. Coatings, 2021, 11, 151.	1.2	8
7	Orienting and shaping organic semiconductor single crystals through selective nanoconfinement. Soft Matter, 2021, 17, 3603-3608.	1.2	6
8	Lubricating properties of chewing stimulated whole saliva from patients suffering from xerostomia. Clinical Oral Investigations, 2021, 25, 4459-4469.	1.4	9
9	Conductive Porous MXene for Bionic, Wearable, and Precise Gesture Motion Sensors. Research, 2021, 2021, 9861467.	2.8	18
10	Nonviral Expression of LL-37 in a Human Skin Equivalent to Prevent Infection in Skin Wounds. Human Gene Therapy, 2021, 32, 1147-1157.	1.4	0
11	Tribological Properties of Micropored Poly(2-hydroxyethyl methacrylate) Hydrogels in a Biomimetic Aqueous Environment. ACS Applied Materials & Interfaces, 2021, 13, 41473-41484.	4.0	10
12	Adipose Tissue-Derived Stromal Cells Alter the Mechanical Stability and Viscoelastic Properties of Gelatine Methacryloyl Hydrogels. International Journal of Molecular Sciences, 2021, 22, 10153.	1.8	14
13	Architecture and Composition Dictate Viscoelastic Properties of Organ-Derived Extracellular Matrix Hydrogels. Polymers, 2021, 13, 3113.	2.0	23
14	Superhydrophobic drag reduction in turbulent flows: a critical review. Experiments in Fluids, 2021, 62, 1.	1.1	44
15	Lectinâ€functionalized Polyethylene Glycol for Relief of Mucosal Dryness. Advanced Healthcare Materials, 2021, , 2101719.	3.9	4
16	Fluorocarbon lubricant impregnated nanoporous oxide for omnicorrosion-resistant stainless steel. Journal of Colloid and Interface Science, 2020, 558, 301-309.	5.0	17
17	Tribological properties of microporous polydimethylsiloxane (PDMS) surfaces under physiological conditions. Journal of Colloid and Interface Science, 2020, 561, 220-230.	5.0	12
18	Photoresist Films: Freestanding Photoresist Film: A Versatile Template for Threeâ€Dimensional Microâ€• and Nanofabrication (Adv. Funct. Mater. 42/2020). Advanced Functional Materials, 2020, 30, 2070277.	7.8	1

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19	Topography-Dependent Effective Contact Line in Droplet Depinning. Physical Review Letters, 2020, 125, 184502.	2.9	27
20	Spontaneous Deicing on Cold Surfaces. Langmuir, 2020, 36, 11245-11254.	1.6	18
21	Freestanding Photoresist Film: A Versatile Template for Threeâ€Dimensional Microâ€•and Nanofabrication. Advanced Functional Materials, 2020, 30, 2004129.	7.8	2
22	Enhancement in Xerostomia Patient Salivary Lubrication Using a Mucoadhesive. Journal of Dental Research, 2020, 99, 914-921.	2.5	13
23	Next Generation Salivary Lubrication Enhancer Derived from Recombinant Supercharged Polypeptides for Xerostomia. ACS Applied Materials & Interfaces, 2020, 12, 34524-34535.	4.0	13
24	Graphoepitaxy-Directed Assembly of Organic Semiconductor Single Crystals into Trellis Structures. , 2020, 2, 721-726.		5
25	Superwicking on Nanoporous Micropillared Surfaces. ACS Applied Materials & Interfaces, 2020, 12, 30925-30931.	4.0	15
26	The influence of time and irrigant refreshment on biofilm removal from lateral morphological features of simulated root canals. International Endodontic Journal, 2020, 53, 1705-1714.	2.3	10
27	Contact Line and Adhesion Force of Droplets on Concentric Ring-Textured Hydrophobic Surfaces. Langmuir, 2020, 36, 2622-2628.	1.6	25
28	Phase-Change Slippery Liquid-Infused Porous Surfaces with Thermo-Responsive Wetting and Shedding States. ACS Applied Materials & Interfaces, 2020, 12, 34306-34316.	4.0	42
29	A bioinspired mucoadhesive restores lubrication of degraded cartilage through reestablishment of lamina splendens. Colloids and Surfaces B: Biointerfaces, 2020, 193, 110977.	2.5	13
30	Nanostructured Coating for Biomaterial Lubrication through Biomacromolecular Recruitment. ACS Applied Materials & Interfaces, 2020, 12, 23726-23736.	4.0	15
31	Nanoconfinement and Salt Synergistically Suppress Crystallization in Polyethylene Oxide. Macromolecules, 2020, 53, 1494-1501.	2.2	8
32	Facile fabrication of sponge-like porous micropillar arrays via an electrochemical process. Nanoscale, 2020, 12, 10565-10572.	2.8	1
33	Effects of Pore Shape and Oil Viscosity on the Corrosion Resistance of Oil-Impregnated Nanoporous Anodic Oxide Coating. ECS Meeting Abstracts, 2020, MA2020-02, 1205-1205.	0.0	0
34	Study of the Coarsening of Nanoporous Gold Nanowires by In Situ Scanning Transmission Electron Microscopy During Annealing. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900376.	1.2	6
35	Durable omniphobicity of oil-impregnated anodic aluminum oxide nanostructured surfaces. Journal of Colloid and Interface Science, 2019, 553, 734-745.	5.0	32
36	Penetration and Accumulation of Dendrons with Different Peripheral Composition in Pseudomonas aeruginosa Biofilms. Nano Letters, 2019, 19, 4327-4333.	4.5	15

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37	Generalized models for advancing and receding contact angles of fakir droplets on pillared and pored surfaces. Journal of Colloid and Interface Science, 2019, 552, 359-371.	5.0	49
38	Role of Viscoelasticity in Bacterial Killing by Antimicrobials in Differently Grown Pseudomonas aeruginosa Biofilms. Antimicrobial Agents and Chemotherapy, 2019, 63, .	1.4	20
39	Depinning force of a receding droplet on pillared superhydrophobic surfaces: Analytical models. Journal of Colloid and Interface Science, 2019, 543, 122-129.	5.0	25
40	Nanoscale viscosity of confined polyethylene oxide. Physical Review E, 2019, 100, 062503.	0.8	3
41	Double amplified colorimetric detection of DNA using gold nanoparticles, enzymes and a catalytic hairpin assembly. Mikrochimica Acta, 2019, 186, 34.	2.5	27
42	Antimicrobial synergy of monolaurin lipid nanocapsules with adsorbed antimicrobial peptides against Staphylococcus aureus biofilms in vitro is absent in vivo. Journal of Controlled Release, 2019, 293, 73-83.	4.8	33
43	The most stable state of a droplet on anisotropic patterns: support for a missing link. Surface Innovations, 2018, 6, 133-140.	1.4	31
44	Spontaneous Spreading of a Droplet: The Role of Solid Continuity and Advancing Contact Angle. Langmuir, 2018, 34, 4945-4951.	1.6	39
45	Target switching catalytic hairpin assembly and gold nanoparticle colorimetric for EGFR mutant detection. Sensors and Actuators B: Chemical, 2018, 261, 497-504.	4.0	30
46	Superhydrophobic waveguide: Liquid-core air-cladding waveguide platform for optofluidics. Applied Physics Letters, 2018, 113, .	1.5	13
47	Anti-Icing or Deicing: Icephobicities of Superhydrophobic Surfaces with Hierarchical Structures. Langmuir, 2018, 34, 13821-13827.	1.6	65
48	Transmission of Monospecies and Dual-Species Biofilms from Smooth to Nanopillared Surfaces. Applied and Environmental Microbiology, 2018, 84, .	1.4	5
49	An ex vivo salivary lubrication system to mimic xerostomic conditions and to predict the lubricating properties of xerostomia relieving agents. Scientific Reports, 2018, 8, 9087.	1.6	21
50	Anti- and De-Icing Behaviors of Superhydrophobic Fabrics. Coatings, 2018, 8, 198.	1.2	17
51	Hot Embossing for Whole Teflon Superhydrophobic Surfaces. Coatings, 2018, 8, 227.	1.2	14
52	Manipulation of the Superhydrophobicity of Plasma-Etched Polymer Nanostructures. Micromachines, 2018, 9, 304.	1.4	19
53	Combining High-Speed Video Imaging and Cryo-SEM to Study Droplet Impact Freezing on an Extremely Cold Surface. Microscopy and Microanalysis, 2018, 24, 402-403.	0.2	0
54	Notochordal cell matrix as a bioactive lubricant for the osteoarthritic joint. Scientific Reports, 2018, 8, 8875.	1.6	11

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55	Effect of a surface tension gradient on the slip flow along a superhydrophobic air-water interface. Physical Review Fluids, 2018, 3, .	1.0	39
56	Effects of Oil Viscosity on the Anti-Corrosion and Self-Healing Properties of Oil-Impregnated Nanoporous Anodic Aluminum Oxide. ECS Meeting Abstracts, 2018, , .	0.0	0
57	Nanoporous anodic alumina oxide layer and its sealing for the enhancement of radiative heat dissipation of aluminum alloy. Nano Energy, 2017, 31, 504-513.	8.2	40
58	Oilâ€Impregnated Nanoporous Oxide Layer for Corrosion Protection with Selfâ€Healing. Advanced Functional Materials, 2017, 27, 1606040.	7.8	100
59	Nanotexturing of Conjugated Polymers via One-Step Maskless Oxygen Plasma Etching for Enhanced Tunable Wettability. Langmuir, 2017, 33, 6885-6894.	1.6	26
60	On-Demand Capture and Release of Organic Droplets Using Surfactant-Doped Polypyrrole Surfaces. ACS Applied Materials & Interfaces, 2017, 9, 23119-23127.	4.0	18
61	Nano-patterned aluminum surface with oil-impregnation for improved antibacterial performance. LWT - Food Science and Technology, 2017, 84, 359-363.	2.5	19
62	Nanoengineered Superhydrophobic Surfaces of Aluminum with Extremely Low Bacterial Adhesivity. ACS Applied Materials & Interfaces, 2017, 9, 12118-12129.	4.0	182
63	Bubble Movement on Inclined Hydrophobic Surfaces. Langmuir, 2017, 33, 12016-12027.	1.6	22
64	Elastic and viscous bond components in the adhesion of colloidal particles and fibrillated streptococci to QCM-D crystal surfaces with different hydrophobicities using Kelvinâ€“Voigt and Maxwell models. Physical Chemistry Chemical Physics, 2017, 19, 25391-25400.	1.3	11
65	Selective hierarchical patterning of silicon nanostructures via soft nanostencil lithography. Nanotechnology, 2017, 28, 465303.	1.3	9
66	Salvinia-Effect-Inspired â€œStickyâ€•Superhydrophobic Surfaces by Meniscus-Confined Electrodeposition. Langmuir, 2017, 33, 13640-13648.	1.6	30
67	Stencil Lithography for Scalable Micro- and Nanomanufacturing. Micromachines, 2017, 8, 131.	1.4	43
68	The Rise of Scalable Micro/Nanopatterning. Micromachines, 2017, 8, 275.	1.4	4
69	Large-Scale Fabrication of Porous Gold Nanowires via Laser Interference Lithography and Dealloying of Goldâ€“Silver Nano-Alloys. Micromachines, 2017, 8, 168.	1.4	18
70	Dealloying of goldâ€“copper alloy nanowires: From hillocks to ring-shaped nanopores. Beilstein Journal of Nanotechnology, 2016, 7, 1361-1367.	1.5	7
71	Controlling the Formation of Nanocavities in Kirkendall Nanoobjects through Sequential Thermal Ex Situ Oxidation and In Situ Reduction Reactions. Small, 2016, 12, 2885-2892.	5.2	12
72	Superhydrophobic drag reduction in laminar flows: a critical review. Experiments in Fluids, 2016, 57, 1.	1.1	229

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73	Quantification of the viscoelasticity of the bond of biotic and abiotic particles adhering to solid-liquid interfaces using a window-equipped quartz crystal microbalance with dissipation. Colloids and Surfaces B: Biointerfaces, 2016, 148, 255-262.	2.5	6
74	Galvanic Replacement Reaction: A Route to Highly Ordered Bimetallic Nanotubes. Journal of Physical Chemistry C, 2016, 120, 17652-17659.	1.5	52
75	Ultra-sensitive detection of zinc oxide nanowires using a quartz crystal microbalance and phosphoric acid DNA. Nanotechnology, 2016, 27, 365501.	1.3	5
76	Lateral actuation of an organic droplet on conjugated polymer electrodes via imbalanced interfacial tensions. Soft Matter, 2016, 12, 6902-6909.	1.2	31
77	Staphylococcal Adhesion, Detachment and Transmission on Nanopillared Si Surfaces. ACS Applied Materials & Interfaces, 2016, 8, 30430-30439.	4.0	57
78	Highly sensitive, direct and real-time detection of silver nanowires by using a quartz crystal microbalance. Nanotechnology, 2016, 27, 475506.	1.3	2
79	Planar Arrays of Nanoporous Gold Nanowires: When Electrochemical Dealloying Meets Nanopatterning. ACS Applied Materials & Interfaces, 2016, 8, 6611-6620.	4.0	49
80	Effects of Particulates on Contact Angles and Adhesion of a Droplet: A Critical Review. Reviews of Adhesion and Adhesives, 2016, 4, 192-222.	3.3	5
81	In Situ Control of Underwater-Pinning of Organic Droplets on a Surfactant-Doped Conjugated Polymer Surface. ACS Applied Materials & Interfaces, 2015, 7, 25608-25617.	4.0	16
82	Label-free detection of zinc oxide nanowire using a graphene wrapping method. Biosensors and Bioelectronics, 2015, 68, 481-486.	5.3	6
83	Ultra-sensitive in situ detection of silver ions using a quartz crystal microbalance. New Journal of Chemistry, 2015, 39, 8028-8034.	1.4	12
84	Air-Impregnated Nanoporous Anodic Aluminum Oxide Layers for Enhancing the Corrosion Resistance of Aluminum. Langmuir, 2015, 31, 11040-11050.	1.6	68
85	The Kirkendall Effect in Binary Alloys: Trapping Gold in Copper Oxide Nanoshells. Chemistry of Materials, 2015, 27, 6374-6384.	3.2	21
86	Impact of 3D Hierarchical Nanostructures on the Antibacterial Efficacy of a Bacteria-Triggered Self-Defensive Antibiotic Coating. ACS Applied Materials & Interfaces, 2015, 7, 20304-20313.	4.0	125
87	Enhancement of heat dissipation of LED module with cupric-oxide composite coating on aluminum-alloy heat sink. Energy Conversion and Management, 2015, 106, 958-963.	4.4	49
88	Nano-engineered alumina surfaces for prevention of bacteria adhesions. , 2014, , .		1
89	Transfer patterning of large-area graphene nanomesh via holographic lithography and plasma etching. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	28
90	Hollow Nanostructures: Highly Ordered Hollow Oxide Nanostructures: The Kirkendall Effect at the Nanoscale (Small 17/2013). Small, 2013, 9, 2837-2837.	5.2	1

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91	Cooling performance enhancement of LED (light emitting diode) packages with carbon nanogrease. Energy, 2013, 60, 195-203.	4.5	23
92	Fabrication of highly ordered hollow oxide nanostructures based on nanoscale Kirkendall effect and ostwald ripening. , 2013, , .		0
93	Highly Ordered Hollow Oxide Nanostructures: The Kirkendall Effect at the Nanoscale. Small, 2013, 9, 2838-2843.	5.2	66
94	Effects of contact angle hysteresis on ice adhesion and growth on superhydrophobic surfaces under dynamic flow conditions. Colloid and Polymer Science, 2013, 291, 427-435.	1.0	107
95	Condensation-induced wetting state and contact angle hysteresis on superhydrophobic lotus leaves. Colloid and Polymer Science, 2013, 291, 437-445.	1.0	46
96	Low-voltage manipulation of an aqueous droplet in a microchannel via tunable wetting on PPy(DBS). Lab on A Chip, 2013, 13, 302-309.	3.1	9
97	Evaporation Kinetics of Sessile Water Droplets on Micropillared Superhydrophobic Surfaces. Langmuir, 2013, 29, 6032-6041.	1.6	127
98	Large-Amplitude, Reversible, pH-Triggered Wetting Transitions Enabled by Layer-by-Layer Films. ACS Applied Materials & Interfaces, 2013, 5, 12617-12623.	4.0	29
99	Experimental study of skin friction drag reduction on superhydrophobic flat plates in high Reynolds number boundary layer flow. Physics of Fluids, 2013, 25, .	1.6	176
100	Response to â€œComment on â€˜Experimental study of skin friction drag reduction on superhydrophobic flat plates in high Reynolds number boundary layer flowâ€™â€•[Phys. Fluid 25, 079101 (2013)]. Physics of Fluids, 2013, 25, .	1.6	4
101	Simple Holographic Patterning for Highâ€Aspectâ€Ratio Threeâ€Dimensional Nanostructures with Large Coverage Area. Advanced Functional Materials, 2013, 23, 608-618.	7.8	55
102	Fabrication of hierarchical nanostructures using free-standing trilayer membrane. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06FF04.	0.6	11
103	Recombinant Supercharged Polypeptides Restore and Improve Biolubrication. Advanced Materials, 2013, 25, 3426-3431.	11.1	28
104	Dual applications of free-standing holographic nanopatterns for lift-off and stencil lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	0.6	18
105	3-D nanofabrication using nanostructured photoresist film as free-standing appliqué. , 2012, , .		4
106	From nanocone to nanodisc: Structural transformation of gold nanoarrays via simple mechanical stresses. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 06FF10.	0.6	9
107	Effects of Surface Topography and Colloid Particles on the Evaporation Kinetics of Sessile Droplets on Superhydrophobic Surfaces. Journal of Heat Transfer, 2012, 134, .	1.2	16
108	Cotton Fabrics with Single-Faced Superhydrophobicity. Langmuir, 2012, 28, 17426-17434.	1.6	143

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109	From Sticky to Slippery Droplets: Dynamics of Contact Line Depinning on Superhydrophobic Surfaces. Physical Review Letters, 2012, 109, 024504.	2.9	156
110	Boundary lubrication by brushed salivary conditioning films and their degree of glycosylation. Clinical Oral Investigations, 2012, 16, 1499-1506.	1.4	19
111	Single-Step Direct Fabrication of Pillar-on-Pore Hybrid Nanostructures in Anodizing Aluminum for Superior Superhydrophobic Efficiency. ACS Applied Materials & Interfaces, 2012, 4, 842-848.	4.0	116
112	Wafer-Scale Pattern Transfer of Metal Nanostructures on Polydimethylsiloxane (PDMS) Substrates via Holographic Nanopatterns. ACS Applied Materials & Interfaces, 2012, 4, 5505-5514.	4.0	35
113	Highly ordered ultralong magnetic nanowires wrapped in stacked graphene layers. Beilstein Journal of Nanotechnology, 2012, 3, 846-851.	1.5	8
114	Experimental Studies on Evaporation Kinetics and Wetting Dynamics of Nanofluid Droplets on Superhydrophobic Surfaces of Micro-post Patterns. Journal of Adhesion Science and Technology, 2011, 25, 1305-1321.	1.4	14
115	Tunable Wetting Mechanism of Polypyrrole Surfaces and Low-Voltage Droplet Manipulation via Redox. Langmuir, 2011, 27, 4249-4256.	1.6	42
116	Tunable two-mirror laser interference lithography system for large-area nano-patterning. , 2011, , .		1
117	Large-area pattern transfer of metallic nanostructures on glass substrates via interference lithography. Nanotechnology, 2011, 22, 285306.	1.3	43
118	Direct Synthesis of ZnO Nanowires on Nanopatterned Surface by Magnetron Sputtering. Chemical Vapor Deposition, 2011, 17, 337-341.	1.4	4
119	Evaporative self-assembly of nanowires on superhydrophobic surfaces of nanotip latching structures. Applied Physics Letters, 2011, 98, .	1.5	42
120	Self-Assembly of Nanowires at Three-Phase Contact Lines on Superhydrophobic Surfaces. Nanoscience and Nanotechnology Letters, 2010, 2, 150-156.	0.4	14
121	Cell growth as a sheet on threeâ€dimensional sharpâ€tip nanostructures. Journal of Biomedical Materials Research - Part A, 2009, 89A, 804-817.	2.1	31
122	The use of three-dimensional nanostructures to instruct cells to produce extracellular matrix for regenerative medicine strategies. Biomaterials, 2009, 30, 4665-4675.	5.7	62
123	Droplet Evaporation of Pure Water and Protein Solution on Nanostructured Superhydrophobic Surfaces of Varying Heights. Langmuir, 2009, 25, 7561-7567.	1.6	92
124	Structured Surfaces for a Giant Liquid Slip. Physical Review Letters, 2008, 101, 064501.	2.9	366
125	Influence of Systematically Varied Nano-Scale Topography on Cell Morphology and Adhesion. Cell Communication and Adhesion, 2007, 14, 181-194.	1.0	44
126	Cell interaction with three-dimensional sharp-tip nanotopography. Biomaterials, 2007, 28, 1672-1679.	5.7	251

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127	Effective slip and friction reduction in nanograted superhydrophobic microchannels. Physics of Fluids, 2006, 18, 087105.	1.6	387
128	Fabrication of a dense array of tall nanostructures over a large sample area with sidewall profile and tip sharpness control. Nanotechnology, 2006, 17, 5326-5333.	1.3	138
129	Large Slip of Aqueous Liquid Flow over a Nanoengineered Superhydrophobic Surface. Physical Review Letters, 2006, 96, 066001.	2.9	634
130	Choi and Kim Reply:. Physical Review Letters, 2006, 97, .	2.9	15
131	Apparent slip flows in hydrophilic and hydrophobic microchannels. Physics of Fluids, 2003, 15, 2897.	1.6	430
132	To Slip or Not to Slip: Water Flows in Hydrophilic and Hydrophobic Microchannels. , 2002, , 557.		36
133	Cell Adhesions on Nanoturf Surfaces. , 0, , .		0
134	Direct Measurements of Adhesion Forces for Water Droplets in Contact with Smooth and Patterned Polymers. Surface Innovations, 0, , 1-52.	1.4	18