Uttam Manna

List of Publications by Year
in descending order

89 papers	2,532 citations	201674 27 h-index	223800 46 g-index
92 all docs	92 docs citations	92 times ranked	2574 citing authors

#	Article	IF	Citations
1	Fabrication of Liquidâ€Infused Surfaces Using Reactive Polymer Multilayers: Principles for Manipulating the Behaviors and Mobilities of Aqueous Fluids on Slippery Liquid Interfaces. Advanced Materials, 2015, 27, 3007-3012.	21.0	143
2	Slippery Liquidâ€Infused Porous Surfaces that Prevent Microbial Surface Fouling and Kill Nonâ€Adherent Pathogens in Surrounding Media: A Controlled Release Approach. Advanced Functional Materials, 2016, 26, 3599-3611.	14.9	132
3	Restoration of Superhydrophobicity in Crushed Polymer Films by Treatment with Water: Selfâ€Healing and Recovery of Damaged Topographic Features Aided by an Unlikely Source. Advanced Materials, 2013, 25, 5104-5108.	21.0	125
4	Superabsorbent hydrogel (SAH) as a soil amendment for drought management: A review. Soil and Tillage Research, 2020, 204, 104736.	5.6	109
5	Synthetic Surfaces with Robust and Tunable Underwater Superoleophobicity. Advanced Functional Materials, 2015, 25, 1672-1681.	14.9	104
6	Slippery Liquid-Infused Porous Surfaces that Prevent Bacterial Surface Fouling and Inhibit Virulence Phenotypes in Surrounding Planktonic Cells. ACS Infectious Diseases, 2016, 2, 509-517.	3.8	83
7	Borax Mediated Layer-by-Layer Self-Assembly of Neutral Poly(vinyl alcohol) and Chitosan. Journal of Physical Chemistry B, 2009, 113, 9137-9142.	2.6	82
8	Liquid Crystal Chemical Sensors That Cells Can Wear. Angewandte Chemie - International Edition, 2013, 52, 14011-14015.	13.8	75
9	Glucose-Triggered Drug Delivery from Borate Mediated Layer-by-Layer Self-Assembly. ACS Applied Materials & Interfaces, 2010, 2, 1521-1527.	8.0	73
10	Chemical Patterning and Physical Refinement of Reactive Superhydrophobic Surfaces. Advanced Materials, 2012, 24, 4291-4295.	21.0	73
11	Layer-by-Layer Self-Assembly of Modified Hyaluronic Acid/Chitosan Based on Hydrogen Bonding. Biomacromolecules, 2009, 10, 2632-2639.	5.4	70
12	Robust and Self-Healable Bulk-Superhydrophobic Polymeric Coating. Chemistry of Materials, 2017, 29, 8720-8728.	6.7	65
13	Dual Drug Delivery Microcapsules via Layer-by-Layer Self-Assembly. Langmuir, 2009, 25, 10515-10522.	3.5	61
14	Stretchable and durable superhydrophobicity that acts both in air and under oil. Journal of Materials Chemistry A, 2017, 5, 15208-15216.	10.3	56
15	Role of chemistry in bio-inspired liquid wettability. Chemical Society Reviews, 2022, 51, 5452-5497.	38.1	53
16	Facile Synthesis of Tunable and Durable Bulk Superhydrophobic Material from Amine â€œReactiveâ€• Polymeric Gel. Chemistry of Materials, 2016, 28, 8689-8699.	6.7	50
17	Synthesis of â€˜reactiveâ€™ and covalent polymeric multilayer coatings with durable superoleophobic and superoleophilic properties under water. Chemical Science, 2017, 8, 6092-6102.	7.4	48
18	A general and facile chemical avenue for the controlled and extreme regulation of water wettability in air and oil wettability under water. Chemical Science, 2017, 8, 6542-6554.	7.4	47

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19	Sustainable polymeric material for the facile and repetitive removal of oil-spills through the complementary use of both selective-absorption and active-filtration processes. Journal of Materials Chemistry A, 2017, 5, 23339-23348.	10.3	47
20	Encapsulation of Uncharged Water-Insoluble Organic Substance in Polymeric Membrane Capsules via Layer-by-Layer Approach. Journal of Physical Chemistry B, 2008, 112, 13258-13262.	2.6	43
21	Superhydrophobic Polymer Multilayers that Promote the Extended, Longâ€Term Release of Embedded Waterâ€Soluble Agents. Advanced Materials, 2013, 25, 6405-6409.	21.0	38
22	Multilayer single-component thin films and microcapsules via covalent bonded layer-by-layer self-assembly. Chemical Communications, 2010, 46, 2250.	4.1	37
23	â€œShrinkâ€toâ€Fitâ€•Superhydrophobicity: Thermallyâ€Induced Microscale Wrinkling of Thin Hydrophobic Multilayers Fabricated on Flexible Shrinkâ€Wrap Substrates. Advanced Materials, 2013, 25, 3085-3089.	21.0	37
24	Synthesis of fish scale and lotus leaf mimicking, stretchable and durable multilayers. Journal of Materials Chemistry A, 2018, 6, 15993-16002.	10.3	37
25	Quantifying the interactive effect of water absorbing polymer (WAP)-soil texture on plant available water content and irrigation frequency. Geoderma, 2020, 368, 114310.	5.1	35
26	Patterning and Impregnation of Superhydrophobic Surfaces Using Aqueous Solutions. ACS Applied Materials & Interfaces, 2013, 5, 7731-7736.	8.0	33
27	A biodegradable polymer-based common chemical avenue for optimizing switchable, chemically reactive and tunable adhesive superhydrophobicity. Journal of Materials Chemistry A, 2019, 7, 9120-9129.	10.3	31
28	Synergistic chemical patterns on a hydrophilic slippery liquid infused porous surface (SLIPS) for water harvesting applications. Journal of Materials Chemistry A, 2020, 8, 25040-25046.	10.3	30
29	â€˜Reactiveâ€™ nano-complex coated medical cotton: a facile avenue for tailored release of small molecules. Nanoscale, 2017, 9, 16154-16165.	5.6	29
30	Hierarchically featured and substrate independent bulk-deposition of â€˜reactiveâ€™ polymeric nanocomplexes for controlled and strategic manipulation of durable biomimicking wettability. Journal of Materials Chemistry A, 2018, 6, 6642-6653.	10.3	29
31	Strategic Formulation of Graphene Oxide Sheets for Flexible Monoliths and Robust Polymeric Coatings Embedded with Durable Bioinspired Wettability. ACS Applied Materials & Interfaces, 2017, 9, 42354-42365.	8.0	26
32	Porous and reactive polymeric interfaces: an emerging avenue for achieving durable and functional bio-inspired wettability. Journal of Materials Chemistry A, 2021, 9, 824-856.	10.3	24
33	Stimuliâ€Responsive Liquidâ€Crystalâ€Infused Porous Surfaces for Manipulation of Underwater Gas Bubble Transport and Adhesion. Advanced Materials, 2022, 34, e2110085.	21.0	21
34	Hydrophobicity or superhydrophobicityâ€”which is the right choice for stabilizing underwater superoleophilicity?. Journal of Materials Chemistry A, 2020, 8, 97-106.	10.3	20
35	â€˜Fish-scaleâ€™-mimicked stretchable and robust oil-wettability that performs in various practically relevant physically/chemically severe scenarios. Journal of Materials Chemistry A, 2018, 6, 22027-22036.	10.3	19
36	Synthesis of Dual-Functional and Robust Underwater Superoleophobic Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 28571-28581.	8.0	19

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37	Sustainable Biomimicked Oil/Water Wettability That Performs Under Severe Challenges. ACS Sustainable Chemistry and Engineering, 2019, 7, 11350-11359.	6.7	18
38	Designing a single superabsorbent for separating oil from both layered as well as micron/submicron size emulsified oil/water mixtures by gamma radiation assisted grafting. RSC Advances, 2016, 6, 26086-26095.	3.6	17
39	Exceptional control on physical properties of a polymeric material through alcoholic solvent-mediated environment-friendly Michael addition reaction. Green Chemistry, 2017, 19, 4527-4532.	9.0	17
40	Rational Use of Dual Chemical Reactivity in a Single Interface for Optimizing Both Superhydrophobicity and Underwater Superoleophobicity. Chemistry of Materials, 2019, 31, 1479-1484.	6.7	17
41	Surfactant-Induced Ordering and Wetting Transitions of Droplets of Thermotropic Liquid Crystals â€œCagedâ€•Inside Partially Filled Polymeric Capsules. Langmuir, 2014, 30, 14944-14953.	3.5	16
42	Chemically reactive protein nanoparticles for synthesis of a durable and deformable superhydrophobic material. Nanoscale Advances, 2019, 1, 1746-1753.	4.6	16
43	How Does Chemistry Influence Liquid Wettability on Liquid-Infused Porous Surface?. ACS Applied Materials & Interfaces, 2020, 12, 14531-14541.	8.0	16
44	Facile optimization of hierarchical topography and chemistry on magnetically active graphene oxide nanosheets. Chemical Science, 2020, 11, 6556-6566.	7.4	16
45	Evaluation of Capacitance Sensor for Suction Measurement in Silty Clay Loam. Geotechnical and Geological Engineering, 2020, 38, 4319-4331.	1.7	16
46	Covalent Immobilization of Caged Liquid Crystal Microdroplets on Surfaces. ACS Applied Materials & Interfaces, 2015, 7, 26892-26903.	8.0	15
47	Design of â€˜tolerant and hardâ€™ superhydrophobic coatings to freeze physical deformation. Materials Horizons, 2021, 8, 2717-2725.	12.2	15
48	Aloe vera mucilage derived highly tolerant underwater superoleophobic coatings. Journal of Materials Chemistry A, 2018, 6, 22465-22471.	10.3	14
49	Alkali metal-ion assisted Michael addition reaction in controlled tailoring of topography in a superhydrophobic polymeric monolith. Journal of Materials Chemistry A, 2018, 6, 17019-17031.	10.3	14
50	Unconventional and Facile Fabrication of Chemically Reactive Silk Fibroin Sponges for Environmental Remediation. ACS Applied Materials & Interfaces, 2021, 13, 24258-24271.	8.0	14
51	Rapid recognition of fatal cyanide in water in a wide pH range by a trifluoroacetamido based metalâ€“organic framework. New Journal of Chemistry, 2021, 45, 20193-20200.	2.8	14
52	Michael Addition Reaction Assisted Derivation of Functional and Durable Superhydrophobic Interfaces. Chemistry of Materials, 2021, 33, 8941-8959.	6.7	14
53	Dually reactive multilayer coatings enable orthogonal manipulation of underwater superoleophobicity and oil adhesion <i>via</i> post-functionalization. Materials Horizons, 2022, 9, 991-1001.	12.2	14
54	A self-cleaning hydrophobic MOF-based composite for highly efficient and recyclable separation of oil from water and emulsions. Materials Chemistry Frontiers, 2022, 6, 2051-2060.	5.9	14

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55	Reduction of imine-based cross-linkages to achieve sustainable underwater superoleophobicity that performs under challenging conditions. Journal of Materials Chemistry A, 2020, 8, 15148-15156.	10.3	13
56	Catalyst-Free and Rapid Chemical Approach for in Situ Growth of â€œChemically Reactiveâ€•and Porous Polymeric Coating. ACS Applied Materials & Interfaces, 2019, 11, 34316-34329.	8.0	12
57	Customizing oil-wettability in airâ€”without affecting extreme water repellency. Nanoscale, 2020, 12, 24349-24356.	5.6	12
58	Transformation of non-water sorbing fly ash to a water sorbing material for drought management. Scientific Reports, 2020, 10, 18664.	3.3	12
59	The synthesis of a chemically reactive and polymeric luminescent gel. Chemical Science, 2021, 12, 2097-2107.	7.4	12
60	Structured Liquid Droplets as Chemical Sensors that Function Inside Living Cells. ACS Applied Materials & Interfaces, 2021, 13, 42502-42512.	8.0	11
61	Rapid and Scalable Synthesis of a Vanillin-Based Organogelator and Its Durable Composite for a Comprehensive Remediation of Crude-Oil Spillages. ACS Applied Materials & Interfaces, 2021, 13, 46803-46812.	8.0	11
62	Superhydrophobic polymer multilayers for the filtrationâ€•and absorptionâ€based separation of oil/water mixtures. Journal of Polymer Science Part A, 2017, 55, 3127-3136.	2.3	10
63	Covalently Modulated and Transiently Visible Writing: Rational Association of Two Extremes of Water Wettabilities. ACS Applied Materials & Interfaces, 2020, 12, 2935-2943.	8.0	10
64	Green and Rapid Synthesis of Durable and Super-Oil (under Water) and Water (in Air) Repellent Interfaces. ACS Applied Materials & Interfaces, 2018, 10, 23451-23457.	8.0	9
65	Rational Chemical Engineering in Natural Protein Derived Functional Interface. ACS Sustainable Chemistry and Engineering, 2019, 7, 7502-7509.	6.7	9
66	Simultaneous and controlled release of two different bioactive small molecules from nature inspired single material. Journal of Materials Chemistry B, 2018, 6, 7692-7702.	5.8	8
67	A Scalable Chemical Approach for the Synthesis of a Highly Tolerant and Efficient Oil Absorbent. Chemistry - an Asian Journal, 2019, 14, 4732-4740.	3.3	8
68	Impact of chemistry on the preparation and post-modification of multilayered hollow microcapsules. Chemical Communications, 2021, 57, 2110-2123.	4.1	8
69	Small molecules derived Tailored-Superhydrophobicity on fibrous and porous Substratesâ€”with superior tolerance. Chemical Engineering Journal, 2022, 430, 132597.	12.7	8
70	Effect of Water Absorbing Polymer Amendment on Water Retention Properties of Cohesionless Soil. Lecture Notes in Civil Engineering, 2020, , 185-195.	0.4	8
71	Designing a Network of Crystalline Polymers for a Scalable, Nonfluorinated, Healable and Amphiphobic Solid Slippery Interface. Angewandte Chemie - International Edition, 2022, 61, .	13.8	8
72	Reactive Multilayer Coating As Versatile Nanoarchitectonics for Customizing Various Bioinspired Liquid Wettabilities. ACS Applied Materials & Interfaces, 2023, 15, 25232-25247.	8.0	8

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73	Selective Cooperation with Liquids for Environmentally Friendly and Comprehensive Oilâ€“Water Separation. ChemSusChem, 2017, 10, 4839-4844.	6.8	7
74	Self-Assembly of Biopolymers on Colloidal Particles via Hydrogen Bonding. Journal of Physical Chemistry Letters, 2010, 1, 907-911.	4.6	6
75	Evaluating the Impact of Tailored Water Wettability on Performance of CO₂ Capture. ACS Applied Energy Materials, 2020, 3, 10541-10549.	5.1	6
76	Abrasion tolerant, non-stretchable and super-water-repellent conductive & ultrasensitive pattern for identifying slow, fast, weak and strong human motions under diverse conditions. Materials Horizons, 2021, 8, 2851-2858.	12.2	6
77	Bioâ€inspired Underwater Superâ€Oilâ€Wettability for Controlling Platelet Adhesion. Chemistry - an Asian Journal, 2021, 16, 1081-1085.	3.3	6
78	Quantifying the combined effect of pH and salinity on the performance of water absorbing polymers used for drought management. Journal of Polymer Research, 2021, 28, 1.	2.4	6
79	Liquid Crystal-Infused Porous Polymer Surfaces: A â€œSlipperyâ€• Soft Material Platform for the Naked-Eye Detection and Discrimination of Amphiphilic Species. ACS Applied Materials & Interfaces, 2021, 13, 33652-33663.	8.0	5
80	Hollow hemisphere and microcapsules of nonionic copolymer. Journal of Materials Chemistry, 2011, 21, 263-268.	6.7	4
81	Synthesis of orthogonally reactive multilayered microcapsules. Chemical Communications, 2020, 56, 7853-7856.	4.1	4
82	Performance of an Electromagnetic Sensor for Field Monitoring of Volumetric Water Content in Water-Absorbing Polymer Amended Soil. Lecture Notes in Civil Engineering, 2021, , 15-24.	0.4	4
83	Hysteresis Model for Water Retention Characteristics of Water-Absorbing Polymer-Amended Soils. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2022, 148, .	3.0	4
84	Designing a Network of Crystalline Polymers for a Scalable, Nonfluorinated, Healable and Amphiphobic Solid Slippery Interface. Angewandte Chemie, 2022, 134, .	2.0	3
85	Design of a Waste Paperâ€Derived Chemically â€˜Reactiveâ€™ and Durable Functional Material with Tailorable Mechanical Property Following an Ambient and Sustainable Chemical Approach. Chemistry - an Asian Journal, 2021, 16, 1988-2001.	3.3	2
86	Polymer Coatings Comprised Entirely of Soft and Semipermeable Microcapsules. ACS Applied Polymer Materials, 2021, 3, 4044-4054.	4.4	2
87	Superhydrophobic Interfaces for High-Performance/Advanced Application. Materials Horizons, 2019, , 411-457.	0.6	1
88	Multiplexed Covalent Patterns on Doubleâ€Reactive Porous Coating. Chemistry - an Asian Journal, 2022, , .	3.3	1
89	Design of a Super-Liquid Crystal-Phobic Coating for Immobilizing Liquid Crystal Î¼-Dropletsâ”€Without Affecting Their Sensitivity. Langmuir, 0, , .	3.5	0