Xi Yao

List of Publications by Year
in descending order

93 papers	11,066 citations	47006 47 h-index	40979 93 g-index
97 all docs	97 docs citations	97 times ranked	10903 citing authors

#	Article	IF	Citations
1	Bioinspired Surfaces with Superwettability: New Insight on Theory, Design, and Applications. Chemical Reviews, 2015, 115, 8230-8293.	47.7	1,292
2	Applications of Bioâ€Inspired Special Wettable Surfaces. Advanced Materials, 2011, 23, 719-734.	21.0	961
3	Recent developments in bio-inspired special wettability. Chemical Society Reviews, 2010, 39, 3240.	38.1	922
4	The Dryâ€Style Antifogging Properties of Mosquito Compound Eyes and Artificial Analogues Prepared by Soft Lithography. Advanced Materials, 2007, 19, 2213-2217.	21.0	884
5	Adaptive fluid-infused porous films with tunable transparency and wettability. Nature Materials, 2013, 12, 529-534.	27.5	481
6	Bioinspired Conical Copper Wire with Gradient Wettability for Continuous and Efficient Fog Collection. Advanced Materials, 2013, 25, 5937-5942.	21.0	289
7	Curvatureâ€Driven Reversible In Situ Switching Between Pinned and Rollâ€Down Superhydrophobic States for Water Droplet Transportation. Advanced Materials, 2011, 23, 545-549.	21.0	268
8	Stretchable materials of high toughness and low hysteresis. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5967-5972.	7.1	253
9	Three-dimensional capillary ratchet-induced liquid directional steering. Science, 2021, 373, 1344-1348.	12.6	223
10	Janus effect of antifreeze proteins on ice nucleation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14739-14744.	7.1	205
11	Self-removal of condensed water on the legs of water striders. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9247-9252.	7.1	194
12	Underwater Oil Capture by a Threeâ€Dimensional Network Architectured Organosilane Surface. Advanced Materials, 2011, 23, 2861-2864.	21.0	192
13	Bioinspired Ribbed Nanoneedles with Robust Superhydrophobicity. Advanced Functional Materials, 2010, 20, 656-662.	14.9	182
14	A Mechanically Robust Conducting Polymer Network Electrode for Efficient Flexible Perovskite Solar Cells. Joule, 2019, 3, 2205-2218.	24.0	175
15	Fabrication of Transparent Multilayer Circuits by Inkjet Printing. Advanced Materials, 2016, 28, 1420-1426.	21.0	172
16	Superoleophobic Surfaces with Controllable Oil Adhesion and Their Application in Oil Transportation. Advanced Functional Materials, 2011, 21, 4270-4276.	14.9	171
17	Temperatureâ€Driven Switching of Water Adhesion on Organogel Surface. Advanced Materials, 2014, 26, 1895-1900.	21.0	165
18	Vertically aligned reduced graphene oxide/Ti3C2Tx MXene hybrid hydrogel for highly efficient solar steam generation. Nano Research, 2020, 13, 3048-3056.	10.4	163

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19	Fluorogel Elastomers with Tunable Transparency, Elasticity, Shapeâ€Memory, and Antifouling Properties. Angewandte Chemie - International Edition, 2014, 53, 4418-4422.	13.8	161
20	Hydrogel Paint. Advanced Materials, 2019, 31, e1903062.	21.0	146
21	Cactus Stem Inspired Coneâ€Arrayed Surfaces for Efficient Fog Collection. Advanced Functional Materials, 2014, 24, 6933-6938.	14.9	142
22	Highly Brilliant Noniridescent Structural Colors Enabled by Graphene Nanosheets Containing Graphene Quantum Dots. Advanced Functional Materials, 2018, 28, 1802585.	14.9	137
23	Supramolecular silicone coating capable of strong substrate bonding, readily damage healing, and easy oil sliding. Science Advances, 2019, 5, eaaw5643.	10.3	132
24	Selfâ€Healable Organogel Nanocomposite with Angleâ€Independent Structural Colors. Angewandte Chemie - International Edition, 2017, 56, 10462-10466.	13.8	131
25	Development of â€œLiquid-likeâ€•Copolymer Nanocoatings for Reactive Oil-Repellent Surface. ACS Nano, 2017, 11, 2248-2256.	14.6	130
26	Multiphaseâ€Assembly of Siloxane Oligomers with Improved Mechanical Strength and Waterâ€Enhanced Healing. Angewandte Chemie - International Edition, 2018, 57, 11242-11246.	13.8	129
27	Largeâ€Scale Fabrication of Bioinspired Fibers for Directional Water Collection. Small, 2011, 7, 3429-3433.	10.0	119
28	Directional pumping of water and oil microdroplets on slippery surface. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2482-2487.	7.1	119
29	Wearable and Washable Conductors for Active Textiles. ACS Applied Materials & Interfaces, 2017, 9, 25542-25552.	8.0	118
30	Organogel as durable anti-icing coatings. Science China Materials, 2015, 58, 559-565.	6.3	116
31	Effects of Rugged Nanoprotrusions on the Surface Hydrophobicity and Water Adhesion of Anisotropic Micropatterns. Langmuir, 2007, 23, 4886-4891.	3.5	113
32	Bioinspired Solid Organogel Materials with a Regenerable Sacrificial Alkane Surface Layer. Advanced Materials, 2017, 29, 1700865.	21.0	109
33	Peptide-Decorated Gold Nanoparticles as Functional Nano-Capping Agent of Mesoporous Silica Container for Targeting Drug Delivery. ACS Applied Materials & Interfaces, 2016, 8, 11204-11209.	8.0	91
34	A highly stretchable and robust non-fluorinated superhydrophobic surface. Journal of Materials Chemistry A, 2017, 5, 16273-16280.	10.3	89
35	Sprayable superhydrophobic coating with high processibility and rapid damage-healing nature. Chemical Engineering Journal, 2020, 392, 124834.	12.7	89
36	Interfacial Engineering of Bimetallic Ag/Pt Nanoparticles on Reduced Graphene Oxide Matrix for Enhanced Antimicrobial Activity. ACS Applied Materials & Interfaces, 2016, 8, 8834-8840.	8.0	81

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37	Selfâ€Replenishable Antiâ€Waxing Organogel Materials. Angewandte Chemie - International Edition, 2015, 54, 8975-8979.	13.8	71
38	Antiadhesion Organogel Materials: From Liquid to Solid. Advanced Materials, 2017, 29, 1703032.	21.0	70
39	Bioinspired Quasiâ€3D Multiplexed Antiâ€Counterfeit Imaging via Selfâ€Assembled and Nanoimprinted Photonic Architectures. Advanced Materials, 2022, 34, e2107243.	21.0	70
40	Dynamic siloxane materials: From molecular engineering to emerging applications. Chemical Engineering Journal, 2021, 405, 127023.	12.7	69
41	Fabrication and Characterization of Superhydrophobic Surfaces with Dynamic Stability. Advanced Functional Materials, 2010, 20, 3343-3349.	14.9	68
42	â€œWater Striderâ€•Legs with a Selfâ€Assembled Coating of Singleâ€Crystalline Nanowires of an Organic Semiconductor. Advanced Materials, 2010, 22, 376-379.	21.0	65
43	Emerging Applications of Bioinspired Slippery Surfaces in Biomedical Fields. Chemistry - A European Journal, 2018, 24, 14864-14877.	3.3	63
44	Ionotronic Luminescent Fibers, Fabrics, and Other Configurations. Advanced Materials, 2020, 32, e2005545.	21.0	63
45	Instant, Tough, Noncovalent Adhesion. ACS Applied Materials & Interfaces, 2019, 11, 40749-40757.	8.0	60
46	Role of Redox Reaction and Electrostatics in Transition-Metal Impurity-Promoted Photoluminescence Evolution of Water-Soluble ZnSe Nanocrystals. Journal of Physical Chemistry C, 2009, 113, 7503-7510.	3.1	56
47	Wetting ridge assisted programmed magnetic actuation of droplets on ferrofluid-infused surface. Nature Communications, 2021, 12, 7136.	12.8	51
48	Improved air stability of perovskite hybrid solar cells via blending poly(dimethylsiloxane)â€“urea copolymers. Journal of Materials Chemistry A, 2017, 5, 5486-5494.	10.3	49
49	Development of multifunctional liquid-infused materials by printing assisted functionalization on porous nanocomposites. Journal of Materials Chemistry A, 2018, 6, 4199-4208.	10.3	47
50	Transparent and Gasâ€Permeable Liquid Marbles for Culturing and Drug Sensitivity Test of Tumor Spheroids. Advanced Healthcare Materials, 2017, 6, 1700185.	7.6	46
51	Adhesion of Microdroplets on Water-Repellent Surfaces toward the Prevention of Surface Fouling and Pathogen Spreading by Respiratory Droplets. ACS Applied Materials & Interfaces, 2017, 9, 6599-6608.	8.0	45
52	Dual-Cross-Linked Supramolecular Polysiloxanes for Mechanically Tunable, Damage-Healable and Oil-Repellent Polymeric Coatings. ACS Applied Materials & Interfaces, 2019, 11, 47382-47389.	8.0	44
53	Bio-Inspired Elastic Liquid-Infused Material for On-Demand Underwater Manipulation of Air Bubbles. ACS Nano, 2019, 13, 10596-10602.	14.6	37
54	Controllable Fabrication of Noniridescent Microshaped Photonic Crystal Assemblies by Dynamic Three-Phase Contact Line Behaviors on Superhydrophobic Substrates. ACS Applied Materials & Interfaces, 2015, 7, 22644-22651.	8.0	35

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55	Covalent tethering of photo-responsive superficial layers on hydrogel surfaces for photo-controlled release. Chemical Science, 2017, 8, 2010-2016.	7.4	35
56	Condensation frosting and passive anti-frosting. Cell Reports Physical Science, 2021, 2, 100474.	5.6	35
57	Mucus-Inspired Supramolecular Adhesives with Oil-Regulated Molecular Configurations and Long-Lasting Antibacterial Properties. ACS Applied Materials & Interfaces, 2020, 12, 16877-16886.	8.0	34
58	Multiphaseâ€Assembly of Siloxane Oligomers with Improved Mechanical Strength and Waterâ€Enhanced Healing. Angewandte Chemie, 2018, 130, 11412-11416.	2.0	33
59	Stretchable Electrets: Nanoparticleâ€“Elastomer Composites. Nano Letters, 2020, 20, 4580-4587.	9.1	31
60	Running droplet of interfacial chemical reaction flow. Soft Matter, 2012, 8, 5988.	2.7	29
61	Cascadeâ€Microphaseâ€Separationâ€Induced Hierarchical Photonic Structures in Supramolecular Organogel for Deformationâ€Insensitive Structural Colors. Advanced Optical Materials, 2019, 7, 1801749.	7.3	27
62	Inkjet Printed Physicallyâ€Unclonable Structuralâ€Color Anticounterfeiting Labels with Convenient Artificial Intelligence Authentication. Advanced Materials Interfaces, 2021, 8, 2101281.	3.7	27
63	Continuous Energy Harvesting from Ubiquitous Humidity Gradients using Liquidâ€Infused Nanofluidics. Advanced Materials, 2022, 34, e2106410.	21.0	27
64	Lyophilic Nonwettable Surface Based on an Oil/Water/Air/Solid Fourâ€Phase System. Small, 2013, 9, 2515-2519.	10.0	26
65	Selfâ€Healable Organogel Nanocomposite with Angleâ€Independent Structural Colors. Angewandte Chemie, 2017, 129, 10598-10602.	2.0	26
66	Direct Insight into the Threeâ€Dimensional Internal Morphology of Solidâ€“Liquidâ€“Vapor Interfaces at Microscale. Angewandte Chemie - International Edition, 2015, 54, 4792-4795.	13.8	25
67	A fluorescent molecular rotor probe for tracking plasma membranes and exosomes in living cells. Chemical Communications, 2020, 56, 8480-8483.	4.1	25
68	Condensation-assisted micro-patterning of low-surface-tension liquids on reactive oil-repellent surfaces. Journal of Materials Chemistry A, 2017, 5, 16344-16351.	10.3	22
69	Up-to-date vaccine delivery systems: robust immunity elicited by multifarious nanomaterials upon administration through diverse routes. Biomaterials Science, 2019, 7, 822-835.	5.4	22
70	Defect-enhanced selective ion transport in an ionic nanocomposite for efficient energy harvesting from moisture. Energy and Environmental Science, 2022, 15, 2601-2609.	30.8	22
71	Coordinationâ€Driven Assembly of Metalâ€“Organic Framework Coating for Catalytically Active Superhydrophobic Surface. Advanced Materials Interfaces, 2021, 8, 2001202.	3.7	21
72	Cationic Ligand Protection: A Novel Strategy for One-Pot Preparation of Narrow-Dispersed Aqueous CdS Spheres. Langmuir, 2009, 25, 10237-10242.	3.5	19

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73	LncRNA CRNDE regulates the proliferation and migration of vascular smooth muscle cells. Journal of Cellular Physiology, 2019, 234, 16205-16214.	4.1	19
74	Bioinspired Supramolecular Slippery Organogels for Controlling Pathogen Spread by Respiratory Droplets. Advanced Functional Materials, 2021, 31, 2102888.	14.9	19
75	Ultrastretchable conductive liquid metal composites enabled by adaptive interfacial polarization. Materials Horizons, 2021, 8, 3399-3408.	12.2	17
76	Particulate-Aggregated Adhesives with Exudate-Sensitive Properties and Sustained Bacteria Disinfection to Facilitate Wound Healing. ACS Applied Materials & Interfaces, 2020, 12, 31090-31098.	8.0	16
77	Liquid Metal Nanoparticles as a Highly Efficient Photoinitiator to Develop Multifunctional Hydrogel Composites. ACS Applied Materials & Interfaces, 2022, 14, 29315-29323.	8.0	16
78	Bioinspired Robust Allâ€Aqueous Droplet via Diffusionâ€Controlled Interfacial Coacervation. Advanced Functional Materials, 2020, 30, 2004166.	14.9	15
79	Direction-dependent adhesion of water strider's legs for water-walking. Solid State Sciences, 2012, 14, 1146-1151.	3.2	14
80	Manipulation of semiconductor nanocrystal growth in polymer soft solids. Soft Matter, 2009, 5, 4113.	2.7	13
81	Attenuating innate immunity and facilitating Î²-coronavirus infection by NSP1 of SARS-CoV-2 through specific redistributing hnRNP A2/B1 cellular localization. Signal Transduction and Targeted Therapy, 2021, 6, 371.	17.1	13
82	Aggregate Engineering in Supramolecular Polymers via Extensive Non-covalent Networks. Chinese Journal of Polymer Science (English Edition), 2021, 39, 1310-1318.	3.8	12
83	Capillary force restoration of droplet on superhydrophobic ribbed nano-needles arrays. Soft Matter, 2010, 6, 2470.	2.7	9
84	Topological prime. Science China Technological Sciences, 2020, 63, 1314-1322.	4.0	9
85	Mechano-Induced Assembly of a Nanocomposite for â€œPress-N-Goâ€•Coatings with Highly Efficient Surface Disinfection. ACS Applied Materials & Interfaces, 2021, 13, 19332-19341.	8.0	6
86	Hydrogels: Hydrogel Paint (Adv. Mater. 39/2019). Advanced Materials, 2019, 31, 1970276.	21.0	4
87	Stable Liquid Jets Bouncing off Soft Gels. Physical Review Letters, 2018, 120, 028006.	7.8	3
88	Magnetothermal Miniature Reactors Based on Fe₃O₄ Nanocubeâ€Coated Liquid Marbles. Advanced Healthcare Materials, 2021, 10, e2001658.	7.6	3
89	Bioinspired Fibers: Large-Scale Fabrication of Bioinspired Fibers for Directional Water Collection (Small 24/2011). Small, 2011, 7, 3428-3428.	10.0	2
90	A combined strategy of room-temperature plasma activation and chemical treatment to toughen the interfacial adhesion of fluoropolymers. Chemical Engineering Journal, 2022, 435, 135006.	12.7	2

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91	Organogels: Temperature-Driven Switching of Water Adhesion on Organogel Surface (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overlock	21.0	0
92	Liquid Marbles: Transparent and Gasâ€Permeable Liquid Marbles for Culturing and Drug Sensitivity Test of Tumor Spheroids (Adv. Healthcare Mater. 13/2017). Advanced Healthcare Materials, 2017, 6, .	7.6	0
93	Frontispiece: Emerging Applications of Bioinspired Slippery Surfaces in Biomedical Fields. Chemistry - A European Journal, 2018, 24, .	3.3	0