

# Moyuan Cao

## List of Publications by Year in descending order

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63  
papers

4,766  
citations

117625

34  
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114465

63  
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65  
all docs

65  
docs citations

65  
times ranked

4600  
citing authors

#	ARTICLE	IF	CITATIONS
1	Bio-Inspired Titanium Dioxide Materials with Special Wettability and Their Applications. <i>Chemical Reviews</i> , 2014, 114, 10044-10094.	47.7	489
2	Floatable, Self-Cleaning, and Carbon-Black-Based Superhydrophobic Gauze for the Solar Evaporation Enhancement at the Air-Water Interface. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 13645-13652.	8.0	316
3	One-step transformation of highly hydrophobic membranes into superhydrophilic and underwater superoleophobic ones for high-efficiency separation of oil-in-water emulsions. <i>Journal of Materials Chemistry A</i> , 2018, 6, 3391-3396.	10.3	257
4	Facile and Large-Scale Fabrication of a Cactus-Inspired Continuous Fog Collector. <i>Advanced Functional Materials</i> , 2014, 24, 3235-3240.	14.9	233
5	Hydrophobic/Hydrophilic Cooperative Janus System for Enhancement of Fog Collection. <i>Small</i> , 2015, 11, 4379-4384.	10.0	232
6	Water-Repellent Properties of Superhydrophobic and Lubricant-Infused "Slippery" Surfaces: A Brief Study on the Functions and Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 3615-3623.	8.0	212
7	Unidirectional Wetting Properties on Multi-Bioinspired Magnetocontrollable Slippery Microcilia. <i>Advanced Materials</i> , 2017, 29, 1606869.	21.0	183
8	Improved Interfacial Floatability of Superhydrophobic/Superhydrophilic Janus Sheet Inspired by Lotus Leaf. <i>Advanced Functional Materials</i> , 2017, 27, 1701466.	14.9	165
9	Spontaneous and Directional Transportation of Gas Bubbles on Superhydrophobic Cones. <i>Advanced Functional Materials</i> , 2016, 26, 3236-3243.	14.9	157
10	Bioinspired Pressure-Tolerant Asymmetric Slippery Surface for Continuous Self-Transport of Gas Bubbles in Aqueous Environment. <i>ACS Nano</i> , 2018, 12, 2048-2055.	14.6	155
11	Magnetically Induced Fog Harvesting via Flexible Conical Arrays. <i>Advanced Functional Materials</i> , 2015, 25, 5967-5971.	14.9	142
12	Surface-Embedding of Functional Micro-/Nanoparticles for Achieving Versatile Superhydrophobic Interfaces. <i>Matter</i> , 2019, 1, 661-673.	10.0	119
13	Manipulating Bubbles in Aqueous Environment via a Lubricant-Infused Slippery Surface. <i>Advanced Functional Materials</i> , 2017, 27, 1701605.	14.9	114
14	Superhydrophobic "Pump" Continuous and Spontaneous Antigravity Water Delivery. <i>Advanced Functional Materials</i> , 2015, 25, 4114-4119.	14.9	111
15	Cactus kirigami for efficient fog harvesting: simplifying a 3D cactus into 2D paper art. <i>Journal of Materials Chemistry A</i> , 2020, 8, 13452-13458.	10.3	104
16	A hierarchical hydrophilic/hydrophobic cooperative fog collector possessing self-pumped droplet delivering ability. <i>Journal of Materials Chemistry A</i> , 2018, 6, 20966-20972.	10.3	91
17	Under-water unidirectional air penetration via a Janus mesh. <i>Chemical Communications</i> , 2015, 51, 11872-11875.	4.1	88
18	Unidirectional water delivery on a superhydrophilic surface with two-dimensional asymmetrical wettability barriers. <i>Materials Horizons</i> , 2018, 5, 303-308.	12.2	84

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19	Bioinspired Ultrastrong Solid Electrolytes with Fast Proton Conduction along 2D Channels. <i>Advanced Materials</i> , 2017, 29, 1605898.	21.0	81
20	Directional and Continuous Transport of Gas Bubbles on Superaerophilic Geometry-Gradient Surfaces in Aqueous Environments. <i>Advanced Functional Materials</i> , 2018, 28, 1705091.	14.9	78
21	Aerophilic Electrode with Cone Shape for Continuous Generation and Efficient Collection of $H_2$ Bubbles. <i>Advanced Functional Materials</i> , 2016, 26, 6830-6835.	14.9	72
22	Random Organic Nanolaser Arrays for Cryptographic Primitives. <i>Advanced Materials</i> , 2019, 31, e1807880.	21.0	72
23	Beetle-Inspired Hierarchical Antibacterial Interface for Reliable Fog Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 34330-34337.	8.0	70
24	A Multi-Bioinspired Dual-Gradient Electrode for Microbubble Manipulation toward Controllable Water Splitting. <i>Advanced Materials</i> , 2020, 32, e1908099.	21.0	69
25	Bioinspired Slippery Cone for Controllable Manipulation of Gas Bubbles in Low-Surface-Tension Environment. <i>ACS Nano</i> , 2019, 13, 4083-4090.	14.6	68
26	Morphology-Control Strategy of the Superhydrophobic Poly(Methyl Methacrylate) Surface for Efficient Bubble Adhesion and Wastewater Remediation. <i>Advanced Functional Materials</i> , 2017, 27, 1702020.	14.9	64
27	Robust bio-inspired superhydrophilic and underwater superoleophobic membranes for simultaneously fast water and oil recovery. <i>Journal of Membrane Science</i> , 2021, 623, 119041.	8.2	62
28	Superhydrophobic helix: controllable and directional bubble transport in an aqueous environment. <i>Journal of Materials Chemistry A</i> , 2016, 4, 16865-16870.	10.3	54
29	Superwettability integration: concepts, design and applications. <i>Surface Innovations</i> , 2016, 4, 180-194.	2.3	50
30	Zwitterionic hydrogel coated superhydrophilic hierarchical antifouling floater enables unimpeded interfacial steam generation and multi-contamination resistance in complex conditions. <i>Chemical Engineering Journal</i> , 2021, 421, 130344.	12.7	48
31	Bio-inspired humidity responsive switch for directional water droplet delivery. <i>Journal of Materials Chemistry A</i> , 2015, 3, 15540-15545.	10.3	42
32	Ordered porous structure hybrid films generated by breath figures for directional water penetration. <i>RSC Advances</i> , 2015, 5, 88471-88476.	3.6	41
33	Unidirectional Liquid Manipulation Via an Integrated Mesh with Orthogonal Anisotropic Slippery Tracks. <i>Advanced Functional Materials</i> , 2019, 29, 1904446.	14.9	39
34	Is Superhydrophobicity Equal to Underwater Superaerophilicity: Regulating the Gas Behavior on Superaerophilic Surface via Hydrophilic Defects. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 20995-21000.	8.0	35
35	Interfacial solar evaporation for water production: from structure design to reliable performance. <i>Molecular Systems Design and Engineering</i> , 2020, 5, 419-432.	3.4	35
36	Designing Flexible but Tough Slippery Track for Underwater Gas Manipulation. <i>Small</i> , 2021, 17, e2007803.	10.0	35

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37	Programmable droplet transport on multi-bioinspired slippery surface with tridirectionally anisotropic wettability. <i>Chemical Engineering Journal</i> , 2022, 449, 137831.	12.7	35
38	Superhydrophobic "Aspirator": Toward Dispersion and Manipulation of Micro/Nanoliter Droplets. <i>Small</i> , 2015, 11, 4491-4496.	10.0	34
39	Directional and Adaptive Oil Self-Transport on a Multi-Bioinspired Grooved Conical Spine. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	34
40	"Plug-and-Coat" Type Liquid Diode: Integrated Mesh with Janus Superwetting Properties. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600276.	3.7	32
41	Foolproof Method for Fast and Reversible Switching of Water-Droplet Adhesion by Magnetic Gradients. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 23238-23245.	8.0	32
42	A fishbone-inspired liquid splitter enables directional droplet transportation and spontaneous separation. <i>Journal of Materials Chemistry A</i> , 2021, 9, 9719-9728.	10.3	31
43	A convenient scheme for synthesizing reduction-sensitive chitosan-based amphiphilic copolymers for drug delivery. <i>Journal of Applied Polymer Science</i> , 2012, 123, 3137-3144.	2.6	30
44	Bioinspired Continuous and Spontaneous Antigravity Oil Collection and Transportation. <i>Advanced Functional Materials</i> , 2018, 28, 1704220.	14.9	30
45	A hierarchical origami moisture collector with laser-textured microchannel array for a plug-and-play irrigation system. <i>Journal of Materials Chemistry A</i> , 2021, 9, 5630-5638.	10.3	29
46	Direct Insight into the Three-Dimensional Internal Morphology of Solid-Liquid Vapor Interfaces at Microscale. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 4792-4795.	13.8	25
47	Preparation of a novel organo-soluble chitosan grafted polycaprolactone copolymer for drug delivery. <i>International Journal of Biological Macromolecules</i> , 2014, 65, 21-27.	7.5	22
48	Multifunctional Engineering Aluminum Surfaces for Self-Propelled Anti-Condensation. <i>Advanced Engineering Materials</i> , 2015, 17, 961-968.	3.5	21
49	Bioinspired Anisotropic Slippery Cilia for Stiffness-Controllable Bubble Transport. <i>ACS Nano</i> , 2022, 16, 9348-9358.	14.6	19
50	Spear and Shield: Survival War between Mantis Shrimps and Abalones. <i>Advanced Materials Interfaces</i> , 2015, 2, 1500250.	3.7	17
51	Self-Propelled and Electrobraking Synergetic Liquid Manipulator toward Microsampling and Bioanalysis. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 14741-14751.	8.0	17
52	An interfacial floating tumbler with a penetrable structure and Janus wettability inspired by <i>Pistia stratiotes</i> . <i>Materials Horizons</i> , 2022, 9, 1888-1895.	12.2	16
53	Smart Manipulation of Gas Bubbles in Harsh Environments Via a Fluorinert-Infused Shape-Gradient Slippery Surface. <i>Transactions of Tianjin University</i> , 2020, 26, 441-449.	6.4	12
54	Zwitterionic functionalized catalytic evaporator enables simultaneous solar distillation and organic pollutant degradation. <i>Applied Energy</i> , 2022, 321, 119372.	10.1	11

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55	Fully Superhydrophilic, Self-Floatable, and Multi-Contamination-Resistant Solar Steam Generator Inspired by Seaweed. <i>Engineering</i> , 2023, 20, 153-161.	6.7	10
56	Soft-binding ligand-capped fluorescent CdSe/ZnS quantum dots for the facile labeling of polysaccharide-based self-assemblies. <i>Colloids and Surfaces B: Biointerfaces</i> , 2013, 109, 154-160.	5.0	9
57	Directional Transport: Bioinspired Continuous and Spontaneous Antigravity Oil Collection and Transportation ( <i>Adv. Funct. Mater.</i> 5/2018). <i>Advanced Functional Materials</i> , 2018, 28, 1870032.	14.9	8
58	Synthesis of well-defined chitosan-based tricomponent copolymers for constructing multifunctional delivery systems. <i>Journal of Polymer Science Part A</i> , 2012, 50, 4936-4946.	2.3	6
59	Ultrahigh concentration, single-layer of graphene paste as conductive additive for lithium-ion battery. <i>Carbon Trends</i> , 2021, 5, 100104.	3.0	6
60	Fog Collection: Facile and Large-Scale Fabrication of a Cactus-Inspired Continuous Fog Collector ( <i>Adv. Funct. Mater.</i> 2021, 31, 2100000). <i>Advanced Functional Materials</i> , 2021, 31, 2100000.	14.9	5
61	STUDIES ON ONE-STEP ELECTROSPINNING FOR PREPARING CROSSLINKED GELATIN FIBERS. <i>Acta Polymerica Sinica</i> , 2009, 009, 1157-1161.	0.0	4
62	Editorial: Superwetting Interfaces for Oil/Water Separation. <i>Frontiers in Chemistry</i> , 2021, 9, 667106.	3.6	2
63	Underwater Gas Manipulation: Designing Flexible but Tough Slippery Track for Underwater Gas Manipulation ( <i>Small</i> 8/2021). <i>Small</i> , 2021, 17, 2170035.	10.0	0