Peng Xiao

List of Publications by Year
in descending order

70 papers	4,313 citations	126708 33 h-index	110170 64 g-index
70 all docs	70 docs citations	70 times ranked	5202 citing authors

#	Article	IF	Citations
1	Breathable and superhydrophobic photothermic fabric enables efficient interface energy management via confined heating strategy for sustainable seawater evaporation. Chemical Engineering Journal, 2022, 428, 131142.	6.6	20
2	Constructing oxidized carbon spheres-based heterogeneous membrane with high surface energy for energy-free water purification. Chemical Engineering Journal, 2022, 431, 134132.	6.6	6
3	Bioinspired Adaptive, Elastic, and Conductive Graphene Structured Thin-Films Achieving High-Efficiency Underwater Detection and Vibration Perception. Nano-Micro Letters, 2022, 14, 62.	14.4	16
4	Bioinspired Nanostructured Superwetting Thin-Films in a Self-supported form Enabled â€œMiniature Umbrellaâ€•for Weather Monitoring and Water Rescue. Nano-Micro Letters, 2022, 14, 32.	14.4	16
5	Biomimetic Skins Enable Strainâ€Perceptionâ€Strengthening Soft Morphing. Advanced Functional Materials, 2022, 32, .	7.8	12
6	Bioinspired Interface-Guided Conformal Janus Membranes with Enhanced Adhesion for Flexible Multifunctional Electronics. Chemistry of Materials, 2022, 34, 5980-5990.	3.2	6
7	Interfacial Fabrication of CNTs/PVDF Bilayer Actuator with Fast Responses to the Light and Organic Solvent Vapor Stimuli. Macromolecular Materials and Engineering, 2021, 306, .	1.7	11
8	Biomimetic underwater self-perceptive actuating soft system based on highly compliant, morphable and conductive sandwiched thin films. Nano Energy, 2021, 81, 105617.	8.2	29
9	Mechanically robust, solar-driven, and degradable lignin-based polyurethane adsorbent for efficient crude oil spill remediation. Chemical Engineering Journal, 2021, 415, 128956.	6.6	83
10	Bionic Adaptive Thinâ€Membranes Sensory System Based on Microspring Effect for Highâ€Sensitive Airflow Perception and Noncontact Manipulation. Advanced Functional Materials, 2021, 31, 2105323.	7.8	21
11	Recent Progress in Superhydrophilic Carbon-Based Composite Membranes for Oil/Water Emulsion Separation. ACS Applied Materials & Interfaces, 2021, 13, 36679-36696.	4.0	70
12	Atmospheric Hygroscopic Ionogels with Dynamically Stable Cooling Interfaces Enable a Durable Thermoelectric Performance Enhancement. Advanced Materials, 2021, 33, e2103937.	11.1	43
13	Supramolecular fabrication of hyperbranched polyethyleneimine toward nanofiltration membrane for efficient wastewater purification. SusMat, 2021, 1, 558-568.	7.8	8
14	Collective behaviors mediated multifunctional black sand aggregate towards environmentally adaptive solar-to-thermal purified water harvesting. Nano Energy, 2020, 68, 104311.	8.2	81
15	Exploring interface confined water flow and evaporation enables solar-thermal-electro integration towards clean water and electricity harvest via asymmetric functionalization strategy. Nano Energy, 2020, 68, 104385.	8.2	113
16	Tillandsiaâ€Inspired Hygroscopic Photothermal Organogels for Efficient Atmospheric Water Harvesting. Angewandte Chemie, 2020, 132, 19399-19408.	1.6	10
17	Tillandsiaâ€Inspired Hygroscopic Photothermal Organogels for Efficient Atmospheric Water Harvesting. Angewandte Chemie - International Edition, 2020, 59, 19237-19246.	7.2	112
18	Interfacial self-assembled GR/GO ultrathin membranes on a large scale for molecular sieving. Journal of Materials Chemistry A, 2020, 8, 18735-18744.	5.2	17

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19	Asymmetric elastoplasticity of stacked graphene assembly actualizes programmable untethered soft robotics. Nature Communications, 2020, 11, 4359.	5.8	110
20	Bioinspired Selfâ€Healing Humanâ€“Machine Interactive Touch Pad with Pressureâ€Sensitive Adhesiveness on Targeted Substrates. Advanced Materials, 2020, 32, e2004290.	11.1	210
21	Converting Pomelo Peel into Eco-friendly and Low-Consumption Photothermic Biomass Sponge toward Multifunctioal Solar-to-Heat Conversion. ACS Sustainable Chemistry and Engineering, 2020, 8, 5328-5337.	3.2	79
22	A scalable, low-cost and robust photo-thermal fabric with tunable and programmable 2D/3D structures towards environmentally adaptable liquid/solid-medium water extraction. Nano Energy, 2019, 65, 104002.	8.2	115
23	Programmable Interface Asymmetric Integration of Carbon Nanotubes and Gold Nanoparticles toward Flexible, Configurable, and Surfaceâ€Enhanced Raman Scattering Active Allâ€inâ€One Solarâ€Driven Evaporators. Energy Technology, 2019, 7, 1900787.	1.8	11
24	Air/water interfacial growth of Pt nanothorns anchored in situ on macroscopic freestanding CNT thin film for efficient methanol oxidation. New Journal of Chemistry, 2019, 43, 6063-6068.	1.4	4
25	Rationally Programmable Paperâ€Based Artificial Trees Toward Multipath Solarâ€Driven Water Extraction from Liquid/Solid Substrates. Solar Rrl, 2019, 3, 1900004.	3.1	25
26	Micro-/Macroscopically Synergetic Control of Switchable 2D/3D Photothermal Water Purification Enabled by Robust, Portable, and Cost-Effective Cellulose Papers. ACS Applied Materials & Interfaces, 2019, 11, 15498-15506.	4.0	73
27	Hydrophilic/Hydrophobic Interphase-Mediated Bubble-like Stretchable Janus Ultrathin Films toward Self-Adaptive and Pneumatic Multifunctional Electronics. ACS Nano, 2019, 13, 4368-4378.	7.3	46
28	A Universal high accuracy wearable pulse monitoring system via high sensitivity and large linearity graphene pressure sensor. Nano Energy, 2019, 59, 422-433.	8.2	198
29	A self-protective, reproducible textile sensor with high performance towards humanâ€“machine interactions. Journal of Materials Chemistry A, 2019, 7, 26631-26640.	5.2	86
30	Asymmetrical Molecular Decoration of Gold Nanorods for Engineering of Shape-Controlled AuNR@Ag Coreâ€“Shell Nanostructures. Langmuir, 2019, 35, 16900-16906.	1.6	22
31	Multifunctional Cellulose Ester Containing Hindered Phenol Groups with Free-Radical-Scavenging and UV-Resistant Activities. ACS Applied Materials & Interfaces, 2019, 11, 4302-4310.	4.0	33
32	Network cracks-based wearable strain sensors for subtle and large strain detection of human motions. Journal of Materials Chemistry C, 2018, 6, 5140-5147.	2.7	164
33	Novel Thermoplastic Cellulose Esters Containing Bulky Moieties and Soft Segments. ACS Sustainable Chemistry and Engineering, 2018, 6, 4931-4939.	3.2	79
34	Biodegradable PLA Nonwoven Fabric with Controllable Wettability for Efficient Water Purification and Photocatalysis Degradation. ACS Sustainable Chemistry and Engineering, 2018, 6, 2445-2452.	3.2	87
35	Scalable fabrication of free-standing, stretchable CNT/TPE ultrathin composite films for skin adhesive epidermal electronics. Journal of Materials Chemistry C, 2018, 6, 6666-6671.	2.7	29
36	Mimosa inspired bilayer hydrogel actuator functioning in multi-environments. Journal of Materials Chemistry C, 2018, 6, 1320-1327.	2.7	201

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37	A lotus-inspired janus hybrid film enabled by interfacial self-assembly and in situ asymmetric modification. Chemical Communications, 2018, 54, 12804-12807.	2.2	23
38	Polymerization driven monomer passage through monolayer chemical vapour deposition graphene. Nature Communications, 2018, 9, 4051.	5.8	20
39	High Performance Humidity Fluctuation Sensor for Wearable Devices via a Bioinspired Atomic-Precise Tunable Graphene-Polymer Heterogeneous Sensing Junction. Chemistry of Materials, 2018, 30, 4343-4354.	3.2	120
40	Functionalization of Biodegradable PLA Nonwoven Fabric as Superoleophilic and Superhydrophobic Material for Efficient Oil Absorption and Oil/Water Separation. ACS Applied Materials & Interfaces, 2017, 9, 5968-5973.	4.0	241
41	Direct supramolecular interacted graphene oxide assembly on graphene as an active and defect-free functional platform. Chemical Communications, 2017, 53, 1949-1952.	2.2	6
42	Air/Water Interfacial Formation of â€œCleanâ€•Tiny AuNPs Anchored Densely on CNT Film for Electrocatalytic Alcohol Oxidation. Advanced Materials Interfaces, 2017, 4, 1601105.	1.9	7
43	3D Graphene Oxide Micropatterns Achieved by Rollerâ€Assisted Microcontact Printing Induced Interface Integral Peel and Transfer. Advanced Materials Interfaces, 2017, 4, 1600867.	1.9	6
44	Flexible PVDF membranes with exceptional robust superwetting surface for continuous separation of oil/water emulsions. Scientific Reports, 2017, 7, 14099.	1.6	33
45	Protonâ€Conducting Graphene Oxideâ€Coupled Neuron Transistors for Brainâ€Inspired Cognitive Systems. Advanced Materials, 2016, 28, 3557-3563.	11.1	226
46	Mechanical Robust and Selfâ€Healable Supramolecular Hydrogel. Macromolecular Rapid Communications, 2016, 37, 265-270.	2.0	58
47	Single cell migration dynamics mediated by geometric confinement. Colloids and Surfaces B: Biointerfaces, 2016, 145, 72-78.	2.5	18
48	Integration of a patterned conductive carbon nanotube thin film with an insulating hydrophobic polymer carpet into robust 2D Janus hybrid flexible electronics. Journal of Materials Chemistry C, 2016, 4, 9750-9755.	2.7	18
49	Construction of superhydrophilic and under-water superoleophobic carbon-based membranes for water purification. RSC Advances, 2016, 6, 73399-73403.	1.7	37
50	Insight into the heat resistance of fish via blood: Effects of heat stress on metabolism, oxidative stress and antioxidant response of olive flounder Paralichthys olivaceus and turbot Scophthalmus maximus. Fish and Shellfish Immunology, 2016, 58, 125-135.	1.6	59
51	Ultrafast Formation of Free-Standing 2D Carbon Nanotube Thin Films through Capillary Force Driving Compression on an Air/Water Interface. Chemistry of Materials, 2016, 28, 7125-7133.	3.2	54
52	Reaction-Driven Self-Assembled Micellar Nanoprobes for Ratiometric Fluorescence Detection of CS₂ with High Selectivity and Sensitivity. ACS Applied Materials & Interfaces, 2016, 8, 20100-20109.	4.0	13
53	A Multiresponsive Anisotropic Hydrogel with Macroscopic 3D Complex Deformations. Advanced Functional Materials, 2016, 26, 8670-8676.	7.8	209
54	Highly Efficient Actuator of Graphene/Polydopamine Uniform Composite Thin Film Driven by Moisture Gradients. Advanced Materials Interfaces, 2016, 3, 1600169.	1.9	64

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55	Macroscopic Ultrathin Film as Bioâ€Inspired Interfacial Reactor for Fabricating 2D Freestanding Janus CNTs/AuNPs Hybrid Nanosheets with Enhanced Electrical Performance. Advanced Materials Interfaces, 2016, 3, 1600170.	1.9	30
56	Thin Films: 2D Janus Hybrid Materials of Polymerâ€Grafted Carbon Nanotube/Graphene Oxide Thin Film as Flexible, Miniature Electric Carpet (Adv. Funct. Mater. 16/2015). Advanced Functional Materials, 2015, 25, 2479-2479.	7.8	0
57	Controlled functionalization of carbon nanotubes as superhydrophobic material for adjustable oil/water separation. Journal of Materials Chemistry A, 2015, 3, 4124-4128.	5.2	88
58	2D Janus Hybrid Materials of Polymerâ€Grafted Carbon Nanotube/Graphene Oxide Thin Film as Flexible, Miniature Electric Carpet. Advanced Functional Materials, 2015, 25, 2428-2435.	7.8	41
59	Controlled evaporative self-assembly of Fe₃O₄ nanoparticles assisted by an external magnetic field. RSC Advances, 2015, 5, 31519-31524.	1.7	10
60	A direct microcontact printing induced supramolecular interaction for creating shape-tunable patterned polymeric surfaces. Journal of Materials Chemistry C, 2015, 3, 8659-8664.	2.7	1
61	Exploring the potential of exfoliated ternary ultrathin Ti₄AlN₃ nanosheets for fabricating hybrid patterned polymer brushes. RSC Advances, 2015, 5, 70339-70344.	1.7	30
62	Fabricating a morphology tunable patterned bio-inspired polydopamine film directly via microcontact printing. RSC Advances, 2015, 5, 60990-60992.	1.7	8
63	Experimental demonstration of acoustic aberration detection with a vertical hydrophone array. , 2014, , .		0
64	Micro-contact printing of graphene oxide nanosheets for fabricating patterned polymer brushes. Chemical Communications, 2014, 50, 7103.	2.2	34
65	Janus Polymer/Carbon Nanotube Hybrid Membranes for Oil/Water Separation. ACS Applied Materials & Interfaces, 2014, 6, 16204-16209.	4.0	283
66	Au nanoparticle-loaded PDMAEMA brush grafted graphene oxide hybrid systems for thermally smart catalysis. RSC Advances, 2014, 4, 44480-44485.	1.7	30
67	Robust preparation of superhydrophobic polymer/carbon nanotube hybrid membranes for highly effective removal of oils and separation of water-in-oil emulsions. Journal of Materials Chemistry A, 2014, 2, 15268.	5.2	194
68	Synthesis, characterization and properties of novel cellulose derivatives containing phosphorus: cellulose diphenyl phosphate and its mixed esters. Cellulose, 2014, 21, 2369-2378.	2.4	34
69	Polymer brush functionalized Janus graphene oxide/chitosan hybrid membranes. RSC Advances, 2014, 4, 22759.	1.7	34
70	A microcontact printing induced supramolecular self-assembled photoactive surface for patterning polymer brushes. Chemical Communications, 2013, 49, 11167.	2.2	38