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	Janus Polymer/Carbon Nanotube Hybrid Membranes for Oil/Water Separation. ACS Applied Materials & Interfaces, 2014, 6, 16204-16209.	4.0	283
2	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
3	Protonâ€Conducting Graphene Oxideâ€Coupled Neuron Transistors for Brainâ€Inspired Cognitive Systems. Advanced Materials, 2016, 28, 3557-3563.	11.1	226
4	Bioinspired Selfâ€Healing Humanâ€“Machine Interactive Touch Pad with Pressureâ€Sensitive Adhesiveness on Targeted Substrates. Advanced Materials, 2020, 32, e2004290.	11.1	210
5	A Multiresponsive Anisotropic Hydrogel with Macroscopic 3D Complex Deformations. Advanced Functional Materials, 2016, 26, 8670-8676.	7.8	209
6	Mimosa inspired bilayer hydrogel actuator functioning in multi-environments. Journal of Materials Chemistry C, 2018, 6, 1320-1327.	2.7	201
7	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
8	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
9	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
10	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
11	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
12	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
13	Tillandsiaâ€Inspired Hygroscopic Photothermal Organogels for Efficient Atmospheric Water Harvesting. Angewandte Chemie - International Edition, 2020, 59, 19237-19246.	7.2	112
14	Asymmetric elastoplasticity of stacked graphene assembly actualizes programmable untethered soft robotics. Nature Communications, 2020, 11, 4359.	5.8	110
15	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
16	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
17	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
18	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

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19	Collective behaviors mediated multifunctional black sand aggregate towards environmentally adaptive solar-to-thermal purified water harvesting. Nano Energy, 2020, 68, 104311.	8.2	81
20	Novel Thermoplastic Cellulose Esters Containing Bulky Moieties and Soft Segments. ACS Sustainable Chemistry and Engineering, 2018, 6, 4931-4939.	3.2	79
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	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
23	Recent Progress in Superhydrophilic Carbon-Based Composite Membranes for Oil/Water Emulsion Separation. ACS Applied Materials & Interfaces, 2021, 13, 36679-36696.	4.0	70
24	Highly Efficient Actuator of Graphene/Polydopamine Uniform Composite Thin Film Driven by Moisture Gradients. Advanced Materials Interfaces, 2016, 3, 1600169.	1.9	64
25	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
26	Mechanical Robust and Selfâ€Healable Supramolecular Hydrogel. Macromolecular Rapid Communications, 2016, 37, 265-270.	2.0	58
27	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
28	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
29	Atmospheric Hygroscopic Ionogels with Dynamically Stable Cooling Interfaces Enable a Durable Thermoelectric Performance Enhancement. Advanced Materials, 2021, 33, e2103937.	11.1	43
30	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
31	A microcontact printing induced supramolecular self-assembled photoactive surface for patterning polymer brushes. Chemical Communications, 2013, 49, 11167.	2.2	38
32	Construction of superhydrophilic and under-water superoleophobic carbon-based membranes for water purification. RSC Advances, 2016, 6, 73399-73403.	1.7	37
33	Micro-contact printing of graphene oxide nanosheets for fabricating patterned polymer brushes. Chemical Communications, 2014, 50, 7103.	2.2	34
34	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
35	Polymer brush functionalized Janus graphene oxide/chitosan hybrid membranes. RSC Advances, 2014, 4, 22759.	1.7	34
36	Flexible PVDF membranes with exceptional robust superwetting surface for continuous separation of oil/water emulsions. Scientific Reports, 2017, 7, 14099.	1.6	33

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37	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
38	Au nanoparticle-loaded PDMAEMA brush grafted graphene oxide hybrid systems for thermally smart catalysis. RSC Advances, 2014, 4, 44480-44485.	1.7	30
39	Exploring the potential of exfoliated ternary ultrathin Ti₄AlN₃ nanosheets for fabricating hybrid patterned polymer brushes. RSC Advances, 2015, 5, 70339-70344.	1.7	30
40	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
41	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
42	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
43	Rationally Programmable Paperâ€Based Artificial Trees Toward Multipath Solarâ€Driven Water Extraction from Liquid/Solid Substrates. Solar Rrl, 2019, 3, 1900004.	3.1	25
44	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
45	Asymmetrical Molecular Decoration of Gold Nanorods for Engineering of Shape-Controlled AuNR@Ag Coreâ€“Shell Nanostructures. Langmuir, 2019, 35, 16900-16906.	1.6	22
46	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
47	Polymerization driven monomer passage through monolayer chemical vapour deposition graphene. Nature Communications, 2018, 9, 4051.	5.8	20
48	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
49	Single cell migration dynamics mediated by geometric confinement. Colloids and Surfaces B: Biointerfaces, 2016, 145, 72-78.	2.5	18
50	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
51	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
52	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
53	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
54	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

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55	Biomimetic Skins Enable Strainâ€Perceptionâ€Strengthening Soft Morphing. Advanced Functional Materials, 2022, 32, .	7.8	12
56	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
57	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
58	Controlled evaporative self-assembly of Fe₃O₄ nanoparticles assisted by an external magnetic field. RSC Advances, 2015, 5, 31519-31524.	1.7	10
59	Tillandsiaâ€Inspired Hygroscopic Photothermal Organogels for Efficient Atmospheric Water Harvesting. Angewandte Chemie, 2020, 132, 19399-19408.	1.6	10
60	Fabricating a morphology tunable patterned bio-inspired polydopamine film directly via microcontact printing. RSC Advances, 2015, 5, 60990-60992.	1.7	8
61	Supramolecular fabrication of hyperbranched polyethyleneimine toward nanofiltration membrane for efficient wastewater purification. SusMat, 2021, 1, 558-568.	7.8	8
62	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
63	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
64	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
65	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
66	Bioinspired Interface-Guided Conformal Janus Membranes with Enhanced Adhesion for Flexible Multifunctional Electronics. Chemistry of Materials, 2022, 34, 5980-5990.	3.2	6
67	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
68	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
69	Experimental demonstration of acoustic aberration detection with a vertical hydrophone array. , 2014, , .		0
70	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