Zhen Xu

List of Publications by Citations

110 papers	11,804 citations	45 h-index	108 g-index
115 ext. papers	13,359 ext. citations	11.3 avg, IF	7 L-index

#	Paper	IF	Citations
110	Multifunctional, ultra-flyweight, synergistically assembled carbon aerogels. *Advanced Materials*, **2013**, 25, 2554-60	24	1494
109	Ultrathin Graphene Nanofiltration Membrane for Water Purification. *Advanced Functional Materials*, **2013**, 23, 3693-3700	15.6	1120
108	Graphene chiral liquid crystals and macroscopic assembled fibres. *Nature Communications*, **2011**, 2, 571	17.4	833
107	In situ Polymerization Approach to Graphene-Reinforced Nylon-6 Composites. *Macromolecules*, **2010**, 43, 6716-6723	5.5	569
106	Ultrastrong fibers assembled from giant graphene oxide sheets. *Advanced Materials*, **2013**, 25, 188-93	24	542
105	Strong, conductive, lightweight, neat graphene aerogel fibers with aligned pores. *ACS Nano*, **2012**, 6, 7103-13	16.7	520
104	Aqueous liquid crystals of graphene oxide. *ACS Nano*, **2011**, 5, 2908-15	16.7	482
103	An iron-based green approach to 1-h production of single-layer graphene oxide. *Nature Communications*, **2015**, 6, 5716	17.4	302
102	Ultrahigh Thermal Conductive yet Superflexible Graphene Films. *Advanced Materials*, **2017**, 29, 1700589	24	289
101	Graphene in macroscopic order: liquid crystals and wet-spun fibers. *Accounts of Chemical Research*, **2014**, 47, 1267-76	24.3	264
100	Graphene fiber: a new trend in carbon fibers. *Materials Today*, **2015**, 18, 480-492	21.8	257
99	Highly electrically conductive Ag-doped graphene fibers as stretchable conductors. *Advanced Materials*, **2013**, 25, 3249-53	24	235
98	Ultrafast all-climate aluminum-graphene battery with quarter-million cycle life. *Science Advances*, **2017**, 3, eaao7233	14.3	230
97	A Defect-Free Principle for Advanced Graphene Cathode of Aluminum-Ion Battery. *Advanced Materials*, **2017**, 29, 1605958	24	228
96	Ultrastiff and Strong Graphene Fibers via Full-Scale Synergetic Defect Engineering. *Advanced Materials*, **2016**, 28, 6449-56	24	217
95	MXene/graphene hybrid fibers for high performance flexible supercapacitors. *Journal of Materials Chemistry A*, **2017**, 5, 22113-22119	13	212
94	Direct 3D Printing of Ultralight Graphene Oxide Aerogel Microlattices. *Advanced Functional Materials*, **2018**, 28, 1707024	15.6	198

93	General Avenue to Individually Dispersed Graphene Oxide-Based Two-Dimensional Molecular Brushes by Free Radical Polymerization. *Macromolecules*, **2011**, 44, 444-452	5.5	180
92	Multifunctional non-woven fabrics of interfused graphene fibres. *Nature Communications*, **2016**, 7, 13684	17.4	156
91	Wet-Spun Continuous Graphene Films. *Chemistry of Materials*, **2014**, 26, 6786-6795	9.6	149
90	Flexible high performance wet-spun graphene fiber supercapacitors. *RSC Advances*, **2013**, 3, 23957	3.7	137
89	Highly stretchable carbon aerogels. *Nature Communications*, **2018**, 9, 881	17.4	136
88	A Review on Graphene Fibers: Expectations, Advances, and Prospects. *Advanced Materials*, **2020**, 32, e1902664	24	126
87	Synergistic effect of graphene and carbon nanotube for high-performance electromagnetic interference shielding films. *Carbon*, **2018**, 133, 316-322	10.4	120
86	Superb Electrically Conductive Graphene Fibers via Doping Strategy. *Advanced Materials*, **2016**, 28, 7941-7947	24	116
85	Fast response and high sensitivity ZnO/glass surface acoustic wave humidity sensors using graphene oxide sensing layer. *Scientific Reports*, **2014**, 4, 7206	4.9	115
84	Bismuth oxide nanotubes-graphene fiber-based flexible supercapacitors. *Nanoscale*, **2014**, 6, 8595-600	7.7	105
83	Graphene and Other 2D Colloids: Liquid Crystals and Macroscopic Fibers. *Advanced Materials*, **2017**, 29, 1606794	24	101
82	Lyotropic Liquid Crystal of Polyacrylonitrile-Grafted Graphene Oxide and Its Assembled Continuous Strong Nacre-Mimetic Fibers. *Macromolecules*, **2013**, 46, 6931-6941	5.5	101
81	Wet-spinning of continuous montmorillonite-graphene fibers for fire-resistant lightweight conductors. *ACS Nano*, **2015**, 9, 5214-22	16.7	100
80	Multifunctional, supramolecular, continuous artificial nacre fibres. *Scientific Reports*, **2012**, 2, 767	4.9	96
79	Highly Stretchable Graphene Fibers with Ultrafast Electrothermal Response for Low-Voltage Wearable Heaters. *Advanced Electronic Materials*, **2017**, 3, 1600425	6.4	94
78	Hydrothermally Activated Graphene Fiber Fabrics for Textile Electrodes of Supercapacitors. *ACS Nano*, **2017**, 11, 11056-11065	16.7	87
77	Highly Efficient Synthesis of Neat Graphene Nanoscrolls from Graphene Oxide by Well-Controlled Lyophilization. *Chemistry of Materials*, **2014**, 26, 6811-6818	9.6	86
76	Low-cost AlCl3/Et3NHCl electrolyte for high-performance aluminum-ion battery. *Energy Storage Materials*, **2019**, 17, 38-45	19.4	84

75	A high performance humidity sensor based on surface acoustic wave and graphene oxide on AlN/Si layered structure. *Sensors and Actuators B: Chemical*, **2018**, 255, 2454-2461	8.5	83
74	High sensitivity flexible Lamb-wave humidity sensors with a graphene oxide sensing layer. *Nanoscale*, **2015**, 7, 7430-6	7.7	80
73	Liquid crystal self-templating approach to ultrastrong and tough biomimic composites. *Scientific Reports*, **2013**, 3, 2374	4.9	80
72	A Broadband Fluorographene Photodetector. *Advanced Materials*, **2017**, 29, 1700463	24	72
71	Macroscopic assembled, ultrastrong and H(2)SO(4)-resistant fibres of polymer-grafted graphene oxide. *Scientific Reports*, **2013**, 3, 3164	4.9	72
70	Chemically doped macroscopic graphene fibers with significantly enhanced thermoelectric properties. *Nano Research*, **2018**, 11, 741-750	10	59
69	Hierarchical Porous SWCNT Stringed Carbon Polyhedrons and PSS Threaded MOF Bilayer Membrane for Efficient Solar Vapor Generation. *Small*, **2019**, 15, e1900354	11	53
68	Mass production of graphene nanoscrolls and their application in high rate performance supercapacitors. *Nanoscale*, **2016**, 8, 1413-20	7.7	47
67	Dry spinning approach to continuous graphene fibers with high toughness. *Nanoscale*, **2017**, 9, 12335-12342	7.7	47
66	Hydroplastic foaming of graphene aerogels and artificially intelligent tactile sensors. *Science Advances*, **2020**, 6,	14.3	46
65	Solution processible hyperbranched inverse-vulcanized polymers as new cathode materials in Li–S batteries. *Polymer Chemistry*, **2015**, 6, 973-982	4.9	45
64	Graphene oxide liquid crystals as a versatile and tunable alignment medium for the measurement of residual dipolar couplings in organic solvents. *Journal of the American Chemical Society*, **2014**, 136, 11280-3	16.4	45
63	Rapid roll-to-roll production of graphene films using intensive Joule heating. *Carbon*, **2019**, 155, 462-468	10.4	44
62	Commercial expanded graphite as high-performance cathode for low-cost aluminum-ion battery. *Carbon*, **2019**, 148, 134-140	10.4	43
61	Tri-high designed graphene electrodes for long cycle-life supercapacitors with high mass loading. *Energy Storage Materials*, **2019**, 17, 349-357	19.4	42
60	Large-area potassium-doped highly conductive graphene films for electromagnetic interference shielding. *Nanoscale*, **2017**, 9, 18613-18618	7.7	41
59	Millisecond Response of Shape Memory Polymer Nanocomposite Aerogel Powered by Stretchable Graphene Framework. *ACS Nano*, **2019**, 13, 5549-5558	16.7	39
58	Continuous crystalline graphene papers with gigapascal strength by intercalation modulated plasticization. *Nature Communications*, **2020**, 11, 2645	17.4	39

57	Designing an Efficient Multimode Environmental Sensor Based on Graphene–Silicon Heterojunction. *Advanced Materials Technologies*, **2017**, 2, 1600262	6.8	38
56	Surface acoustic wave humidity sensors based on uniform and thickness controllable graphene oxide thin films formed by surface tension. *Microsystems and Nanoengineering*, **2019**, 5, 36	7.7	37
55	Effect of flake size on the mechanical properties of graphene aerogels prepared by freeze casting. *RSC Advances*, **2017**, 7, 33600-33605	3.7	36
54	Sheet Collapsing Approach for Rubber-like Graphene Papers. *ACS Nano*, **2017**, 11, 8092-8102	16.7	36
53	Experimental Guidance to Graphene Macroscopic Wet-Spun Fibers, Continuous Papers, and Ultralightweight Aerogels. *Chemistry of Materials*, **2017**, 29, 319-330	9.6	36
52	Superconducting Continuous Graphene Fibers via Calcium Intercalation. *ACS Nano*, **2017**, 11, 4301-4306	16.7	35
51	Polyelectrolyte-stabilized graphene oxide liquid crystals against salt, pH, and serum. *Langmuir*, **2014**, 30, 3715-22	4	30
50	Graphene fiber based supercapacitors: Strategies and perspective toward high performances. *Journal of Energy Chemistry*, **2018**, 27, 6-11	12	28
49	Redissolution of Flower-Shaped Graphene Oxide Powder with High Density. *ACS Applied Materials & Interfaces*, **2016**, 8, 8000-7	9.5	26
48	Piezoresistive effect of superelastic graphene aerogel spheres. *Carbon*, **2020**, 158, 418-425	10.4	25
47	Handedness-controlled and solvent-driven actuators with twisted fibers. *Materials Horizons*, **2019**, 6, 1207-1214	14.4	24
46	Ion Diffusion-Directed Assembly Approach to Ultrafast Coating of Graphene Oxide Thick Multilayers. *ACS Nano*, **2017**, 11, 9663-9670	16.7	23
45	Humidity sensors based on AlN microcantilevers excited at high-order resonant modes and sensing layers of uniform graphene oxide. *Sensors and Actuators B: Chemical*, **2019**, 283, 198-206	8.5	23
44	Environmentally stable macroscopic graphene films with specific electrical conductivity exceeding metals. *Carbon*, **2020**, 156, 205-211	10.4	21
43	Ultralight graphene micro-popcorns for multifunctional composite applications. *Carbon*, **2018**, 139, 545-555	10.4	20
42	Composition Design of Block Copolymers for Porous Carbon Fibers. *Chemistry of Materials*, **2019**, 31, 8898-8907	9.6	19
41	Artificial Bicontinuous Laminate Synergistically Reinforces and Toughens Dilute Graphene Composites. *ACS Nano*, **2018**, 12, 11236-11243	16.7	19
40	Artificial colloidal liquid metacrystals by shearing microlithography. *Nature Communications*, **2019**, 10, 4111	17.4	17

39	Interlayer crosslinking to conquer the stress relaxation of graphene laminated materials. *Materials Horizons*, **2018**, 5, 1112-1119	14.4	17
38	Reversible fusion and fission of graphene oxide-based fibers. *Science*, **2021**, 372, 614-617	33.3	17
37	Conformational Phase Map of Two-Dimensional Macromolecular Graphene Oxide in Solution. *Matter*, **2020**, 3, 230-245	12.7	16
36	Biomedical segmented polyurethanes based on polyethylene glycol, poly(□caprolactone-co-D,L-lactide), and diurethane diisocyanates with uniform hard segment: Synthesis and properties. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2016**, 65, 947-956	3	14
35	Liquid crystalline 3D printing for superstrong graphene microlattices with high density. *Carbon*, **2020**, 159, 166-174	10.4	14
34	Wrinkle-stabilized metal-graphene hybrid fibers with zero temperature coefficient of resistance. *Nanoscale*, **2017**, 9, 12178-12188	7.7	13
33	Perspective: Graphene aerogel goes to superelasticity and ultraflyweight. *APL Materials*, **2013**, 1, 030901	5.7	13
32	Anisotropic Thermal Transport in Spray-Coated Single-Phase Two-Dimensional Materials: Synthetic Clay Versus Graphene Oxide. *ACS Applied Materials & Interfaces*, **2020**, 12, 18785-18791	9.5	10
31	Thermally Stable and Mechanically Strong Mesoporous Films of Poly(ether imide)-Based Triblock Copolymers. *ACS Applied Polymer Materials*, **2020**, 2, 1398-1405	4.3	10
30	Nonsphere Drop Impact Assembly of Graphene Oxide Liquid Crystals. *ACS Nano*, **2019**, 13, 8382-8391	16.7	10
29	Heavy Water Enables High-Voltage Aqueous Electrochemistry via the Deuterium Isotope Effect. *Journal of Physical Chemistry Letters*, **2020**, 11, 303-310	6.4	9
28	A SAW hydrogen sensor based on decoration of graphene oxide by palladium nanoparticles on AlN/Si layered structure. *Journal of Micromechanics and Microengineering*, **2019**, 29, 045007	2	8
27	Impact of metal cations on the thermal, mechanical, and rheological properties of telechelic sulfonated polyetherimides. *Polymer Chemistry*, **2020**, 11, 393-400	4.9	8
26	Specific Sensing Mechanism Investigation of Surface Acoustic Wave Humidity Sensors Coated With Uniform Graphene Oxide Membrane. *Journal of Microelectromechanical Systems*, **2020**, 29, 348-356	2.5	7
25	Digital Programming Graphene Oxide Liquid Crystalline Hybrid Hydrogel by Shearing Microlithography. *ACS Nano*, **2020**, 14, 2336-2344	16.7	7
24	Shape-controlled of ten-nanometer-thick graphite and worm-like graphite by lithographic exfoliation. *Carbon*, **2018**, 135, 248-252	10.4	7
23	Highly oxidized graphene with enhanced fluorescence and its direct fluorescence visualization. *Science China Chemistry*, **2014**, 57, 605-614	7.9	7
22	Twist-spinning assembly of robust ultralight graphene fibers with hierarchical structure and multi-functions. *Carbon*, **2020**, 158, 157-162	10.4	7

21	The Effect of CNTs on Performance Improvement of rGO Supported Fe-Nx/C Electrocatalysts for the Oxygen Reduction Reaction. *Journal of the Electrochemical Society*, **2018**, 165, F401-F407	3.9	6
20	A humidity sensor based on AlN Lamb wave resonator coated with graphene oxide of different concentrations. *Journal of Micromechanics and Microengineering*, **2018**, 28, 105016	2	6
19	Polysiloxanes with Quaternary Ammonium and Polyether Groups for Silyl-Terminated Polypropylene Oxide Waterborne Emulsions. *Journal of Surfactants and Detergents*, **2016**, 19, 739-745	1.9	5
18	Solvent-Resistant Self-Crosslinked Poly(ether imide). *Macromolecules*, **2021**, 54, 3405-3412	5.5	5
17	Recent development of polyimides: Synthesis, processing, and application in gas separation. *Journal of Polymer Science*, **2021**, 59, 943-962	2.4	5
16	Capacitive Organic Dye Removal by Block Copolymer Based Porous Carbon Fibers. *Advanced Materials Interfaces*, **2020**, 7, 2000507	4.6	4
15	An improved sensitivity AlN microcantilever humidity sensor using interdigital transducers actuated very high resonant mode and graphene oxide sensing layer **2018**,		4
14	Facile Preparation of Halogen-Free Poly(ether imide) Containing Phosphonium and Sulfonate Groups. *ACS Applied Polymer Materials*, **2020**, 2, 66-73	4.3	4
13	Wet-spinning assembly of nitrogen-doped graphene film for stable graphene-polyaniline supercapacitor electrodes with high mass loading. *Science China Materials*, **2020**, 63, 1889-1897	7.1	4
12	Dynamic dispersion stability of graphene oxide with metal ions. *Chinese Chemical Letters*, **2020**, 31, 1625-1629	4	4
11	Highly Efficient Cellular Acoustic Absorber of Graphene Ultrathin Drums.. *Advanced Materials*, **2022**, e2103740	24	3
10	Highly Sensitive AIN Surface Acoustic Wave Humidity Sensor Based on Uniform Graphene Oxide Thin Film Formed by Surface Tension **2018**,		3
9	Tailorable graphene-based superconducting films via self-assembly and in-situ doping. *Carbon*, **2019**, 152, 527-531	10.4	2
8	Graphene and graphene oxide-reinforced 3D and 4D printable composites **2020**, 259-296		2
7	Enhanced Mechanical Properties of Natural Rubber by Block Copolymer-Based Porous Carbon Fibers. *ACS Applied Polymer Materials*,	4.3	1
6	The Functionalization of Carbon Nanotubes and Nano-Onions1-18		1
5	Physics and chemistry-based constitutive modeling of photo-oxidative aging in semi-crystalline polymers. *International Journal of Solids and Structures*, **2022**, 239-240, 111427	3.1	0
4	Poly(ether imide)s with tailored end groups. *Journal of Polymer Science*, **2021**, 59, 2365	2.4	0

3	Can the Voigt Model be Directly Used for Determining the Modulus of Graphene in Laminate Thin Films?. *ACS Applied Polymer Materials*, **2022**, 4, 394-402	4.3	0
2	The Functionalization of Graphene and Its Assembled Macrostructures19-44		
1	Mesoporous polyetherimide thin films via hydrolysis of polylactide-b-polyetherimide-b-polylactide. *Polymer Chemistry*, **2021**, 12, 3939-3946	4.9	