Zhen Xu

List of Publications by Year
in descending order

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112 papers	14,857 citations	31902 53 h-index	27345 106 g-index
115 all docs	115 docs citations	115 times ranked	15664 citing authors

#	Article	IF	Citations
1	Multifunctional, Ultraâ€Flyweight, Synergistically Assembled Carbon Aerogels. Advanced Materials, 2013, 25, 2554-2560.	11.1	1,701
2	Ultrathin Graphene Nanofiltration Membrane for Water Purification. Advanced Functional Materials, 2013, 23, 3693-3700.	7.8	1,361
3	Graphene chiral liquid crystals and macroscopic assembled fibres. Nature Communications, 2011, 2, 571.	5.8	936
4	In situ Polymerization Approach to Graphene-Reinforced Nylon-6 Composites. Macromolecules, 2010, 43, 6716-6723.	2.2	629
5	Ultrastrong Fibers Assembled from Giant Graphene Oxide Sheets. Advanced Materials, 2013, 25, 188-193.	11.1	613
6	Strong, Conductive, Lightweight, Neat Graphene Aerogel Fibers with Aligned Pores. ACS Nano, 2012, 6, 7103-7113.	7.3	599
7	Aqueous Liquid Crystals of Graphene Oxide. ACS Nano, 2011, 5, 2908-2915.	7.3	567
8	Ultrahigh Thermal Conductive yet Superflexible Graphene Films. Advanced Materials, 2017, 29, 1700589.	11.1	416
9	An iron-based green approach to 1-h production of single-layer graphene oxide. Nature Communications, 2015, 6, 5716.	5.8	377
10	MXene/graphene hybrid fibers for high performance flexible supercapacitors. Journal of Materials Chemistry A, 2017, 5, 22113-22119.	5.2	347
11	Ultrafast all-climate aluminum-graphene battery with quarter-million cycle life. Science Advances, 2017, 3, eaao7233.	4.7	316
12	Graphene fiber: a new trend in carbon fibers. Materials Today, 2015, 18, 480-492.	8.3	307
13	Graphene in Macroscopic Order: Liquid Crystals and Wet-Spun Fibers. Accounts of Chemical Research, 2014, 47, 1267-1276.	7.6	295
14	Direct 3D Printing of Ultralight Graphene Oxide Aerogel Microlattices. Advanced Functional Materials, 2018, 28, 1707024.	7.8	284
15	A Defectâ€Free Principle for Advanced Graphene Cathode of Aluminumâ€Ion Battery. Advanced Materials, 2017, 29, 1605958.	11.1	280
16	Ultrastiff and Strong Graphene Fibers via Fullâ€Scale Synergetic Defect Engineering. Advanced Materials, 2016, 28, 6449-6456.	11.1	279
17	Highly Electrically Conductive Agâ€Doped Graphene Fibers as Stretchable Conductors. Advanced Materials, 2013, 25, 3249-3253.	11.1	257
18	A Review on Graphene Fibers: Expectations, Advances, and Prospects. Advanced Materials, 2020, 32, e1902664.	11.1	206

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19	Highly stretchable carbon aerogels. Nature Communications, 2018, 9, 881.	5.8	202
20	General Avenue to Individually Dispersed Graphene Oxide-Based Two-Dimensional Molecular Brushes by Free Radical Polymerization. Macromolecules, 2011, 44, 444-452.	2.2	195
21	Multifunctional non-woven fabrics of interfused graphene fibres. Nature Communications, 2016, 7, 13684.	5.8	193
22	Wet-Spun Continuous Graphene Films. Chemistry of Materials, 2014, 26, 6786-6795.	3.2	186
23	Synergistic effect of graphene and carbon nanotube for high-performance electromagnetic interference shielding films. Carbon, 2018, 133, 316-322.	5.4	167
24	Flexible high performance wet-spun graphene fiber supercapacitors. RSC Advances, 2013, 3, 23957.	1.7	152
25	Fast Response and High Sensitivity ZnO/glass Surface Acoustic Wave Humidity Sensors Using Graphene Oxide Sensing Layer. Scientific Reports, 2014, 4, 7206.	1.6	149
26	Superb Electrically Conductive Graphene Fibers via Doping Strategy. Advanced Materials, 2016, 28, 7941-7947.	11.1	140
27	Hydroplastic foaming of graphene aerogels and artificially intelligent tactile sensors. Science Advances, 2020, 6, .	4.7	129
28	Highly Stretchable Graphene Fibers with Ultrafast Electrothermal Response for Lowâ€Voltage Wearable Heaters. Advanced Electronic Materials, 2017, 3, 1600425.	2.6	128
29	Low-cost AlCl3/Et3NHCl electrolyte for high-performance aluminum-ion battery. Energy Storage Materials, 2019, 17, 38-45.	9.5	124
30	Bismuth oxide nanotubesâ€“graphene fiber-based flexible supercapacitors. Nanoscale, 2014, 6, 8595.	2.8	121
31	Graphene and Other 2D Colloids: Liquid Crystals and Macroscopic Fibers. Advanced Materials, 2017, 29, 1606794.	11.1	121
32	Lyotropic Liquid Crystal of Polyacrylonitrile-Grafted Graphene Oxide and Its Assembled Continuous Strong Nacre-Mimetic Fibers. Macromolecules, 2013, 46, 6931-6941.	2.2	119
33	Wet-Spinning of Continuous Montmorillonite-Graphene Fibers for Fire-Resistant Lightweight Conductors. ACS Nano, 2015, 9, 5214-5222.	7.3	115
34	A Broadband Fluorographene Photodetector. Advanced Materials, 2017, 29, 1700463.	11.1	110
35	Hydrothermally Activated Graphene Fiber Fabrics for Textile Electrodes of Supercapacitors. ACS Nano, 2017, 11, 11056-11065.	7.3	110
36	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.	4.0	110

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37	Highly Efficient Synthesis of Neat Graphene Nanoscrolls from Graphene Oxide by Well-Controlled Lyophilization. Chemistry of Materials, 2014, 26, 6811-6818.	3.2	100
38	Multifunctional, supramolecular, continuous artificial nacre fibres. Scientific Reports, 2012, 2, 767.	1.6	98
39	High sensitivity flexible Lamb-wave humidity sensors with a graphene oxide sensing layer. Nanoscale, 2015, 7, 7430-7436.	2.8	95
40	Liquid crystal self-templating approach to ultrastrong and tough biomimic composites. Scientific Reports, 2013, 3, 2374.	1.6	91
41	Hierarchical Porous SWCNT Stringed Carbon Polyhedrons and PSS Threaded MOF Bilayer Membrane for Efficient Solar Vapor Generation. Small, 2019, 15, e1900354.	5.2	89
42	Continuous crystalline graphene papers with gigapascal strength by intercalation modulated plasticization. Nature Communications, 2020, 11, 2645.	5.8	87
43	Macroscopic assembled, ultrastrong and H2SO4-resistant fibres of polymer-grafted graphene oxide. Scientific Reports, 2013, 3, 3164.	1.6	80
44	Millisecond Response of Shape Memory Polymer Nanocomposite Aerogel Powered by Stretchable Graphene Framework. ACS Nano, 2019, 13, 5549-5558.	7.3	77
45	Commercial expanded graphite as high-performance cathode for low-cost aluminum-ion battery. Carbon, 2019, 148, 134-140.	5.4	74
46	Rapid roll-to-roll production of graphene films using intensive Joule heating. Carbon, 2019, 155, 462-468.	5.4	73
47	Chemically doped macroscopic graphene fibers with significantly enhanced thermoelectric properties. Nano Research, 2018, 11, 741-750.	5.8	70
48	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.	3.4	68
49	Dry spinning approach to continuous graphene fibers with high toughness. Nanoscale, 2017, 9, 12335-12342.	2.8	66
50	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, 11280-11283.	6.6	58
51	Tri-high designed graphene electrodes for long cycle-life supercapacitors with high mass loading. Energy Storage Materials, 2019, 17, 349-357.	9.5	58
52	Mass production of graphene nanoscrolls and their application in high rate performance supercapacitors. Nanoscale, 2016, 8, 1413-1420.	2.8	57
53	Large-area potassium-doped highly conductive graphene films for electromagnetic interference shielding. Nanoscale, 2017, 9, 18613-18618.	2.8	57
54	Reversible fusion and fission of graphene oxideâ€“based fibers. Science, 2021, 372, 614-617.	6.0	56

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55	Designing an Efficient Multimode Environmental Sensor Based on Grapheneâ€“Silicon Heterojunction. Advanced Materials Technologies, 2017, 2, 1600262.	3.0	55
56	Effect of flake size on the mechanical properties of graphene aerogels prepared by freeze casting. RSC Advances, 2017, 7, 33600-33605.	1.7	53
57	Solution processible hyperbranched inverse-vulcanized polymers as new cathode materials in Liâ€“S batteries. Polymer Chemistry, 2015, 6, 973-982.	1.9	52
58	Sheet Collapsing Approach for Rubber-like Graphene Papers. ACS Nano, 2017, 11, 8092-8102.	7.3	50
59	Superconducting Continuous Graphene Fibers via Calcium Intercalation. ACS Nano, 2017, 11, 4301-4306.	7.3	47
60	Piezoresistive effect of superelastic graphene aerogel spheres. Carbon, 2020, 158, 418-425.	5.4	47
61	Experimental Guidance to Graphene Macroscopic Wet-Spun Fibers, Continuous Papers, and Ultralightweight Aerogels. Chemistry of Materials, 2017, 29, 319-330.	3.2	43
62	Recent development of polyimides: Synthesis, processing, and application in gas separation. Journal of Polymer Science, 2021, 59, 943-962.	2.0	43
63	Handedness-controlled and solvent-driven actuators with twisted fibers. Materials Horizons, 2019, 6, 1207-1214.	6.4	40
64	Ion Diffusion-Directed Assembly Approach to Ultrafast Coating of Graphene Oxide Thick Multilayers. ACS Nano, 2017, 11, 9663-9670.	7.3	38
65	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.	4.0	38
66	Graphene fiber based supercapacitors: Strategies and perspective toward high performances. Journal of Energy Chemistry, 2018, 27, 6-11.	7.1	34
67	Environmentally stable macroscopic graphene films with specific electrical conductivity exceeding metals. Carbon, 2020, 156, 205-211.	5.4	33
68	Polyelectrolyte-Stabilized Graphene Oxide Liquid Crystals against Salt, pH, and Serum. Langmuir, 2014, 30, 3715-3722.	1.6	31
69	Artificial Bicontinuous Laminate Synergistically Reinforces and Toughens Dilute Graphene Composites. ACS Nano, 2018, 12, 11236-11243.	7.3	31
70	Composition Design of Block Copolymers for Porous Carbon Fibers. Chemistry of Materials, 2019, 31, 8898-8907.	3.2	31
71	Redissolution of Flower-Shaped Graphene Oxide Powder with High Density. ACS Applied Materials & Interfaces, 2016, 8, 8000-8007.	4.0	29
72	Artificial colloidal liquid metacrystals by shearing microlithography. Nature Communications, 2019, 10, 4111.	5.8	29

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73	Conformational Phase Map of Two-Dimensional Macromolecular Graphene Oxide in Solution. Matter, 2020, 3, 230-245.	5.0	29
74	Interlayer crosslinking to conquer the stress relaxation of graphene laminated materials. Materials Horizons, 2018, 5, 1112-1119.	6.4	28
75	Highly Efficient Cellular Acoustic Absorber of Graphene Ultrathin Drums. Advanced Materials, 2022, 34, e2103740.	11.1	25
76	Ultralight graphene micro-popcorns for multifunctional composite applications. Carbon, 2018, 139, 545-555.	5.4	24
77	Liquid crystalline 3D printing for superstrong graphene microlattices with high density. Carbon, 2020, 159, 166-174.	5.4	21
78	Digital Programming Graphene Oxide Liquid Crystalline Hybrid Hydrogel by Shearing Microlithography. ACS Nano, 2020, 14, 2336-2344.	7.3	19
79	Biomedical segmented polyurethanes based on polyethylene glycol, poly(Îµ-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.	1.8	17
80	Wrinkle-stabilized metal-graphene hybrid fibers with zero temperature coefficient of resistance. Nanoscale, 2017, 9, 12178-12188.	2.8	17
81	Nonsphere Drop Impact Assembly of Graphene Oxide Liquid Crystals. ACS Nano, 2019, 13, 8382-8391.	7.3	17
82	Solvent-Resistant Self-Crosslinked Poly(ether imide). Macromolecules, 2021, 54, 3405-3412.	2.2	16
83	Anisotropic Thermal Transport in Spray-Coated Single-Phase Two-Dimensional Materials: Synthetic Clay Versus Graphene Oxide. ACS Applied Materials & Interfaces, 2020, 12, 18785-18791.	4.0	15
84	Perspective: Graphene aerogel goes to superelasticity and ultraflyweight. APL Materials, 2013, 1, .	2.2	14
85	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.	1.5	14
86	Heavy Water Enables High-Voltage Aqueous Electrochemistry via the Deuterium Isotope Effect. Journal of Physical Chemistry Letters, 2020, 11, 303-310.	2.1	14
87	Twist-spinning assembly of robust ultralight graphene fibers with hierarchical structure and multi-functions. Carbon, 2020, 158, 157-162.	5.4	13
88	Dynamic dispersion stability of graphene oxide with metal ions. Chinese Chemical Letters, 2020, 31, 1625-1629.	4.8	12
89	A humidity sensor based on AlN Lamb wave resonator coated with graphene oxide of different concentrations. Journal of Micromechanics and Microengineering, 2018, 28, 105016.	1.5	11
90	Capacitive Organic Dye Removal by Block Copolymer Based Porous Carbon Fibers. Advanced Materials Interfaces, 2020, 7, 2000507.	1.9	11

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91	Specific Sensing Mechanism Investigation of Surface Acoustic Wave Humidity Sensors Coated With Uniform Graphene Oxide Membrane. Journal of Microelectromechanical Systems, 2020, 29, 348-356.	1.7	11
92	Thermally Stable and Mechanically Strong Mesoporous Films of Poly(ether imide)-Based Triblock Copolymers. ACS Applied Polymer Materials, 2020, 2, 1398-1405.	2.0	11
93	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.	1.3	10
94	Impact of metal cations on the thermal, mechanical, and rheological properties of telechelic sulfonated polyetherimides. Polymer Chemistry, 2020, 11, 393-400.	1.9	10
95	Shape-controlled of ten-nanometer-thick graphite and worm-like graphite by lithographic exfoliation. Carbon, 2018, 135, 248-252.	5.4	9
96	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.	3.5	9
97	Highly oxidized graphene with enhanced fluorescence and its direct fluorescence visualization. Science China Chemistry, 2014, 57, 605-614.	4.2	7
98	Enhanced Mechanical Properties of Natural Rubber by Block Copolymer-Based Porous Carbon Fibers. ACS Applied Polymer Materials, 0, , .	2.0	6
99	Physics and chemistry-based constitutive modeling of photo-oxidative aging in semi-crystalline polymers. International Journal of Solids and Structures, 2022, 239-240, 111427.	1.3	6
100	Humidity-Controlled Preparation of Flexible Porous Carbon Fibers from Block Copolymers. ACS Applied Polymer Materials, 2022, 4, 4980-4992.	2.0	6
101	Polysiloxanes with Quaternary Ammonium and Polyether Groups for Silylâ€Terminated Polypropylene Oxide Waterborne Emulsions. Journal of Surfactants and Detergents, 2016, 19, 739-745.	1.0	5
102	An improved sensitivity AlN microcantilever humidity sensor using interdigital transducers actuated very high resonant mode and graphene oxide sensing layer. , 2018, , .		5
103	Utilization of Block Copolymers to Understand Water Vaporization Enthalpy Reduction in Uniform Pores. Macromolecules, 2022, 55, 4803-4811.	2.2	5
104	Graphene and graphene oxide-reinforced 3D and 4D printable composites. , 2020, , 259-296.		4
105	Facile Preparation of Halogen-Free Poly(ether imide) Containing Phosphonium and Sulfonate Groups. ACS Applied Polymer Materials, 2020, 2, 66-73.	2.0	4
106	Highly Sensitive AlN Surface Acoustic Wave Humidity Sensor Based on Uniform Graphene Oxide Thin Film Formed by Surface Tension. , 2018, , .		3
107	Tailorable graphene-based superconducting films via self-assembly and in-situ doping. Carbon, 2019, 152, 527-531.	5.4	2
108	Poly(ether imide)s with tailored end groups. Journal of Polymer Science, 2021, 59, 2365.	2.0	2

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109	Mesoporous polyetherimide thin films via hydrolysis of polylactide-b-polyetherimide-b-polylactide. Polymer Chemistry, 2021, 12, 3939-3946.	1.9	2
110	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.	2.0	2
111	Broadband and Fast Response Thermophone Using Graphene Nanofilm. , 2019, , .		1
112	Robust and Sensitive Sensing of Unsteady Flows Using a Hair-Like Macroscopic Graphene Fiber. , 2020, , .		0