Gaigai Duan

List of Publications by Year
in descending order

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88 papers	13,119 citations	46918 47 h-index	49773 87 g-index
88 all docs	88 docs citations	88 times ranked	12268 citing authors

#	Article	IF	Citations
1	Electrospinning: A Fascinating Method for the Preparation of Ultrathin Fibers. Angewandte Chemie - International Edition, 2007, 46, 5670-5703.	7.2	3,704
2	Use of electrospinning technique for biomedical applications. Polymer, 2008, 49, 5603-5621.	1.8	1,552
3	Functional materials by electrospinning of polymers. Progress in Polymer Science, 2013, 38, 963-991.	11.8	784
4	Recent progress in carbon-based materials for supercapacitor electrodes: a review. Journal of Materials Science, 2021, 56, 173-200.	1.7	474
5	Progress in the Field of Electrospinning for Tissue Engineering Applications. Advanced Materials, 2009, 21, 3343-3351.	11.1	454
6	Electrospun nanofiber reinforced composites: a review. Polymer Chemistry, 2018, 9, 2685-2720.	1.9	431
7	Recent Progress on Nanocellulose Aerogels: Preparation, Modification, Composite Fabrication, Applications. Advanced Materials, 2021, 33, e2005569.	11.1	311
8	Ultralight, Thermally Insulating, Compressible Polyimide Fiber Assembled Sponges. ACS Applied Materials & Interfaces, 2017, 9, 32308-32315.	4.0	184
9	Electrospun Functional Materials toward Food Packaging Applications: A Review. Nanomaterials, 2020, 10, 150.	1.9	174
10	A Mussel-Inspired Polydopamine-Filled Cellulose Aerogel for Solar-Enabled Water Remediation. ACS Applied Materials & Interfaces, 2021, 13, 7617-7624.	4.0	172
11	LowâEĐensity Open Cellular Sponges as Functional Materials. Angewandte Chemie - International Edition, 2017, 56, 15520-15538.	7.2	168
12	Ultralight, Soft Polymer Sponges by SelfâEAssembly of Short Electrospun Fibers in Colloidal Dispersions. Advanced Functional Materials, 2015, 25, 2850-2856.	7.8	164
13	High strength in combination with high toughness in robust and sustainable polymeric materials. Science, 2019, 366, 1376-1379.	6.0	162
14	Design and fabrication of conductive polymer hydrogels and their applications in flexible supercapacitors. Journal of Materials Chemistry A, 2020, 8, 23059-23095.	5.2	151
15	Wood-Inspired Anisotropic Cellulose Nanofibril Composite Sponges for Multifunctional Applications. ACS Applied Materials & Interfaces, 2020, 12, 35513-35522.	4.0	148
16	Porous aerogel and sponge composites: Assisted by novel nanomaterials for electromagnetic interference shielding. Nano Today, 2021, 38, 101204.	6.2	142
17	Microstructures and mechanical properties of aligned electrospun carbon nanofibers from binary composites of polyacrylonitrile and polyamic acid. Journal of Materials Science, 2018, 53, 15096-15106.	1.7	138
18	Boosting solar steam generation by photothermal enhanced polydopamine/wood composites. Polymer, 2021, 217, 123464.	1.8	132

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19	Polyimide Nanofibers by â€œGreenâ€•Electrospinning via Aqueous Solution for Filtration Applications. ACS Sustainable Chemistry and Engineering, 2016, 4, 4797-4804.	3.2	126
20	Anisotropic nanocellulose aerogels with ordered structures fabricated by directional freeze-drying for fast liquid transport. Cellulose, 2019, 26, 6653-6667.	2.4	123
21	Emergence of melanin-inspired supercapacitors. Nano Today, 2021, 37, 101075.	6.2	121
22	A review of smart electrospun fibers toward textiles. Composites Communications, 2020, 22, 100506.	3.3	119
23	Nanofibers with diameter below one nanometer from electrospinning. RSC Advances, 2018, 8, 4794-4802.	1.7	117
24	Pyrolysis of Enzymolysisâ€Treated Wood: Hierarchically Assembled Porous Carbon Electrode for Advanced Energy Storage Devices. Advanced Functional Materials, 2021, 31, 2101077.	7.8	109
25	Structural design toward functional materials by electrospinning: A review. E-Polymers, 2020, 20, 682-712.	1.3	103
26	Flexible Polydopamine Bioelectronics. Advanced Functional Materials, 2021, 31, 2103391.	7.8	102
27	One-step fabrication of eco-friendly superhydrophobic fabrics for high-efficiency oil/water separation and oil spill cleanup. Nanoscale, 2022, 14, 1296-1309.	2.8	101
28	Molecular engineering of carbonyl organic electrodes for rechargeable metal-ion batteries: fundamentals, recent advances, and challenges. Energy and Environmental Science, 2021, 14, 4228-4267.	15.6	100
29	Highly Flexible and Tough Concentric Triaxial Polystyrene Fibers. ACS Applied Materials & Interfaces, 2014, 6, 5918-5923.	4.0	95
30	High-density Fibrous Polyimide Sponges with Superior Mechanical and Thermal Properties. ACS Applied Materials & Interfaces, 2020, 12, 19006-19014.	4.0	92
31	Tough and Transparent Nylon-6 Electrospun Nanofiber Reinforced Melamineâ€“Formaldehyde Composites. ACS Applied Materials & Interfaces, 2012, 4, 2597-2603.	4.0	90
32	Airâ€Blowingâ€Assisted Coaxial Electrospinning toward High Productivity of Core/Sheath and Hollow Fibers. Macromolecular Materials and Engineering, 2019, 304, 1800669.	1.7	86
33	High-performance polyamide-imide films and electrospun aligned nanofibers from an amide-containing diamine. Journal of Materials Science, 2019, 54, 6719-6727.	1.7	81
34	Temperature-induced molecular orientation and mechanical properties of single electrospun polyimide nanofiber. Materials Letters, 2018, 216, 81-83.	1.3	79
35	Short electrospun polymeric nanofibers reinforced polyimide nanocomposites. Composites Science and Technology, 2013, 88, 57-61.	3.8	77
36	Liquid Transport and Real-Time Dye Purification via Lotus Petiole-Inspired Long-Range-Ordered Anisotropic Cellulose Nanofibril Aerogels. ACS Nano, 2021, 15, 20666-20677.	7.3	75

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37	Anisotropic cellulose nanofibril composite sponges for electromagnetic interference shielding with low reflection loss. Carbohydrate Polymers, 2022, 276, 118799.	5.1	68
38	Exploration of Macroporous Polymeric Sponges As Drug Carriers. Biomacromolecules, 2017, 18, 3215-3221.	2.6	62
39	Short nylon-6 nanofiber reinforced transparent and high modulus thermoplastic polymeric composites. Composites Science and Technology, 2013, 87, 164-169.	3.8	60
40	Lowâ€Density Selfâ€Assembled Poly(Nâ€Isopropyl Acrylamide) Sponges with Ultrahigh and Extremely Fast Water Uptake and Release. Macromolecular Rapid Communications, 2018, 39, e1700838.	2.0	57
41	Robust strong electrospun polyimide composite nanofibers from a ternary polyamic acid blend. Composites Communications, 2019, 15, 92-95.	3.3	57
42	Mechanical and thermal properties of electrospun polyimide/rGO composite nanofibers via in-situ polymerization and in-situ thermal conversion. European Polymer Journal, 2020, 141, 110083.	2.6	56
43	Synthesis of polyacrylonitrile and mechanical properties of its electrospun nanofibers. E-Polymers, 2018, 18, 569-573.	1.3	54
44	Electrospun polyimide nonwovens with enhanced mechanical and thermal properties by addition of trace plasticizer. Journal of Materials Science, 2020, 55, 5667-5679.	1.7	53
45	Molecular orientation in aligned electrospun polyimide nanofibers by polarized FT-IR spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 200, 339-344.	2.0	52
46	Woodâ€Derived Highâ€Massâ€Loading MnO₂ Composite Carbon Electrode Enabling High Energy Density and Highâ€Rate Supercapacitor. Small, 2022, 18, e2201307.	5.2	52
47	Electrospun nanofiber belts made from high performance copolyimide. Nanotechnology, 2008, 19, 015604.	1.3	50
48	Dense and thin coating of gel polymer electrolyte on sulfur cathode toward high performance Li-sulfur battery. Composites Communications, 2020, 19, 239-245.	3.3	50
49	Woodâ€Derived, Conductivity and Hierarchical Pore Integrated Thick Electrode Enabling High Areal/Volumetric Energy Density for Hybrid Capacitors. Small, 2021, 17, e2102532.	5.2	49
50	Fluorescent and Colorimetric Sensors Based on the Oxidation of o-Phenylenediamine. ACS Omega, 2020, 5, 20698-20706.	1.6	48
51	Antibiofouling Ultrathin Poly(amidoxime) Membrane for Enhanced U(VI) Recovery from Wastewater and Seawater. ACS Applied Materials & Interfaces, 2021, 13, 21272-21285.	4.0	47
52	Facile preparation of CNTs microspheres as improved carbon absorbers for high-efficiency electromagnetic wave absorption. Ceramics International, 2021, 47, 10013-10018.	2.3	46
53	Magnetically separable and recyclable Fe3O4@PDA covalent grafted by l-cysteine core-shell nanoparticles toward efficient removal of Pb2+. Vacuum, 2021, 189, 110229.	1.6	45
54	Ultralight open cell polymer sponges with advanced properties by PPX CVD coating. Polymer Chemistry, 2016, 7, 2759-2764.	1.9	43

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55	Synthetic melanin facilitates MnO supercapacitors with high specific capacitance and wide operation potential window. Polymer, 2021, 235, 124276.	1.8	43
56	Low Density, Thermally Stable, and Intrinsic Flame Retardant Poly(bis(benzimidazo)Benzophenanthrolineâ€dione) Sponge. Macromolecular Materials and Engineering, 2018, 303, 1700615.	1.7	41
57	Electrospinning of ABS nanofibers and their high filtration performance. Advanced Fiber Materials, 2020, 2, 34-43.	7.9	41
58	Lightweight and anisotropic cellulose nanofibril/rectorite composite sponges for efficient dye adsorption and selective separation. International Journal of Biological Macromolecules, 2022, 207, 130-139.	3.6	41
59	Metal-phenolic network green flame retardants. Polymer, 2021, 221, 123627.	1.8	40
60	Excellent fluoride removal performance by electrospun Laâ€“Mn bimetal oxide nanofibers. New Journal of Chemistry, 2022, 46, 490-497.	1.4	40
61	An Electrospinning Anisotropic Hydrogel with Remotely-Controlled Photo-Responsive Deformation and Long-Range Navigation for Synergist Actuation. Chemical Engineering Journal, 2022, 433, 134258.	6.6	40
62	Size Regulation of Polydopamine Nanoparticles by Boronic Acid and Lewis Base. Macromolecular Rapid Communications, 2023, 44, e2100916.	2.0	39
63	Mechanical performance of aligned electrospun polyimide nanofiber belt at high temperature. Materials Letters, 2015, 140, 12-15.	1.3	36
64	Modification of precursor polymer using co-polymerization: A good way to high performance electrospun carbon nanofiber bundles. Materials Letters, 2014, 122, 178-181.	1.3	35
65	Highly Efficient Reusable Sponge-Type Catalyst Carriers Based on Short Electrospun Fibers. Macromolecular Rapid Communications, 2017, 38, 1600511.	2.0	35
66	A poly(amidoxime)-modified MOF macroporous membrane for high-efficient uranium extraction from seawater. E-Polymers, 2022, 22, 399-410.	1.3	35
67	Fabrication of Functional Polycatechol Nanoparticles. ACS Macro Letters, 2022, 11, 251-256.	2.3	31
68	Hydrothermal Synthesis of Ce-doped ZnO Heterojunction Supported on Carbon Nanofibers with High Visible Light Photocatalytic Activity. Chemical Research in Chinese Universities, 2021, 37, 565-570.	1.3	30
69	Green Nanoparticle Scavengers against Oxidative Stress. ACS Applied Materials & Interfaces, 2021, 13, 39126-39134.	4.0	30
70	Polymer nanofibre composite nonwovens with metal-like electrical conductivity. Npj Flexible Electronics, 2018, 2, .	5.1	29
71	Heat-resistant polybenzoxazole nanofibers made by electrospinning. European Polymer Journal, 2014, 50, 61-68.	2.6	28
72	Thermal, mechanical and thermomechanical properties of tough electrospun poly(imide-co-benzoxazole) nanofiber belts. New Journal of Chemistry, 2015, 39, 7797-7804.	1.4	28

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73	Rambutan-like Nb2O5@SHCs microspheres for improved microwave absorption performance. Composites Communications, 2021, 24, 100643.	3.3	27
74	Design of wood-derived anisotropic structural carbon electrode for high-performance supercapacitor. Wood Science and Technology, 2022, 56, 1191-1203.	1.4	27
75	Mesostructured Nonwovens with Penguin Downy Featherâ€Like Morphologyâ€”Topâ€Down Combined with Bottomâ€Up. Advanced Functional Materials, 2019, 29, 1903166.	7.8	24
76	Investigating the draw ratio and velocity of an electrically charged liquid jet during electrospinning. RSC Advances, 2019, 9, 13608-13613.	1.7	24
77	A wood-mimetic porous MXene/gelatin hydrogel for electric field/sunlight bi-enhanced uranium adsorption. E-Polymers, 2022, 22, 468-477.	1.3	24
78	Fatsia Japonica-Derived Hierarchical Porous Carbon for Supercapacitors With High Energy Density and Long Cycle Life. Frontiers in Chemistry, 2020, 8, 89.	1.8	22
79	Core effect on mechanical properties of one dimensional electrospun core-sheath composite fibers. Composites Communications, 2021, 25, 100773.	3.3	22
80	Recent advances in dynamic covalent bond-based shape memory polymers. E-Polymers, 2022, 22, 285-300.	1.3	22
81	Heat and Solvent Resistant Electrospun Polybenzoxazole Nanofibers from Methoxy-Containing Polyaramide. Journal of Nanomaterials, 2010, 2010, 1-5.	1.5	17
82	Spongy Gels by a Topâ€Down Approach from Polymer Fibrous Sponges. Angewandte Chemie, 2017, 129, 3333-3336.	1.6	17
83	Self-Assembly of Poly(Janus particle)s into Unimolecular and Oligomeric Spherical Micelles. ACS Macro Letters, 2021, 10, 1563-1569.	2.3	17
84	Electrospun magnetic La2O3â€“CeO2â€“Fe3O4 composite nanofibers for removal of fluoride from aqueous solution. Composites Communications, 2022, 33, 101194.	3.3	15
85	Î²-Cyclodextrin toughened polyimide composites toward all-organic dielectric materials. Journal of Materials Science: Materials in Electronics, 2018, 29, 1182-1188.	1.1	12
86	Adsorption of volatile benzene series compounds by surface-modified glass fibers: kinetics, thermodynamic adsorption efficiencies, and mechanisms. Environmental Science and Pollution Research, 2021, 28, 30898-30907.	2.7	11
87	Giving Penetrable Remote-Control Ability to Thermoresponsive Fibrous Composite Actuator with Fast Response Induced by Alternative Magnetic Field. Nanomaterials, 2022, 12, 53.	1.9	6
88	Berichtigung: Spongy Gels by a Topâ€Down Approach from Polymer Fibrous Sponges. Angewandte Chemie, 2017, 129, 5744-5744.	1.6	0