Guoliang Liu

List of Publications by Year
in descending order

104 papers	8,767 citations	57631 44 h-index	42291 92 g-index
108 all docs	108 docs citations	108 times ranked	11803 citing authors

#	Article	IF	Citations
1	Polyaniline and Polypyrrole Pseudocapacitor Electrodes with Excellent Cycling Stability. Nano Letters, 2014, 14, 2522-2527.	4.5	688
2	Supercapacitors Based on Three-Dimensional Hierarchical Graphene Aerogels with Periodic Macropores. Nano Letters, 2016, 16, 3448-3456.	4.5	608
3	Revitalizing carbon supercapacitor electrodes with hierarchical porous structures. Journal of Materials Chemistry A, 2017, 5, 17705-17733.	5.2	464
4	Progress in Developing Metal Oxide Nanomaterials for Photoelectrochemical Water Splitting. Advanced Energy Materials, 2017, 7, 1700555.	10.2	455
5	Directed Self-Assembly of Block Copolymers for Nanolithography: Fabrication of Isolated Features and Essential Integrated Circuit Geometries. ACS Nano, 2007, 1, 168-175.	7.3	424
6	Pore and Heteroatom Engineered Carbon Foams for Supercapacitors. Advanced Energy Materials, 2019, 9, 1803665.	10.2	321
7	A New Benchmark Capacitance for Supercapacitor Anodes by Mixedâ€Valence Sulfurâ€Doped V₆O_{13âˆ’<i>x</i>}. Advanced Materials, 2014, 26, 5869-5875.	11.1	305
8	3D printed functional nanomaterials for electrochemical energy storage. Nano Today, 2017, 15, 107-120.	6.2	302
9	A general approach to DNA-programmable atom equivalents. Nature Materials, 2013, 12, 741-746.	13.3	279
10	Multiscale Pore Network Boosts Capacitance of Carbon Electrodes for Ultrafast Charging. Nano Letters, 2017, 17, 3097-3104.	4.5	251
11	Improving the Cycling Stability of Metalâ€“Nitride Supercapacitor Electrodes with a Thin Carbon Shell. Advanced Energy Materials, 2014, 4, 1300994.	10.2	217
12	Block copolymer derived uniform mesopores enable ultrafast electron and ion transport at high mass loadings. Nature Communications, 2019, 10, 675.	5.8	213
13	Morphology and Doping Engineering of Sn-Doped Hematite Nanowire Photoanodes. Nano Letters, 2017, 17, 2490-2495.	4.5	204
14	Block copolymerâ€“based porous carbon fibers. Science Advances, 2019, 5, eaau6852.	4.7	201
15	Selective isolation of gold facilitated by second-sphere coordination with Î±-cyclodextrin. Nature Communications, 2013, 4, 1855.	5.8	156
16	Ostwald Ripening Improves Rate Capability of High Mass Loading Manganese Oxide for Supercapacitors. ACS Energy Letters, 2017, 2, 1752-1759.	8.8	146
17	A Review on Nano-/Microstructured Materials Constructed by Electrochemical Technologies for Supercapacitors. Nano-Micro Letters, 2020, 12, 118.	14.4	146
18	Tip-Directed Synthesis of Multimetallic Nanoparticles. Journal of the American Chemical Society, 2015, 137, 9167-9173.	6.6	136

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19	Recent advances in chemical methods for activating carbon and metal oxide based electrodes for supercapacitors. Journal of Materials Chemistry A, 2017, 5, 17151-17173.	5.2	135
20	Addressing the Achilles' heel of pseudocapacitive materials: Longâ€term stability. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 807-842.	8.5	135
21	Interpolation in the Directed Assembly of Block Copolymers on Nanopatterned Substrates: Simulation and Experiments. Macromolecules, 2010, 43, 3446-3454.	2.2	131
22	Hierarchically porous carbon foams for electric double layer capacitors. Nano Research, 2016, 9, 2875-2888.	5.8	120
23	An Electrochemical Capacitor with Applicable Energy Density of 7.4 Wh/kg at Average Power Density of 3000 W/kg. Nano Letters, 2015, 15, 3189-3194.	4.5	118
24	Hollow Spherical Nucleic Acids for Intracellular Gene Regulation Based upon Biocompatible Silica Shells. Nano Letters, 2012, 12, 3867-3871.	4.5	111
25	Exceptional capacitive deionization rate and capacity by block copolymerâ€“based porous carbon fibers. Science Advances, 2020, 6, eaaz0906.	4.7	108
26	Integration of Density Multiplication in the Formation of Deviceâ€Oriented Structures by Directed Assembly of Block Copolymerâ€“Homopolymer Blends. Advanced Functional Materials, 2010, 20, 1251-1257.	7.8	99
27	Engineering of Mesoscale Pores in Balancing Mass Loading and Rate Capability of Hematite Films for Electrochemical Capacitors. Advanced Energy Materials, 2018, 8, 1801784.	10.2	97
28	Desktop nanofabrication with massively multiplexed beam pen lithography. Nature Communications, 2013, 4, 2103.	5.8	86
29	Zipping Up NiFe(OH)_{<i>x</i>}-Encapsulated Hematite To Achieve an Ultralow Turn-On Potential for Water Oxidation. ACS Energy Letters, 2019, 4, 1983-1990.	8.8	82
30	Assembly of Supramolecular Nanotubes from Molecular Triangles and 1,2-Dihalohydrocarbons. Journal of the American Chemical Society, 2014, 136, 16651-16660.	6.6	81
31	Delineating the pathways for the site-directed synthesis of individual nanoparticles on surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 887-891.	3.3	78
32	Direct ink writing of organic and carbon aerogels. Materials Horizons, 2018, 5, 1166-1175.	6.4	78
33	Preparation of Neutral Wetting Brushes for Block Copolymer Films from Homopolymer Blends. Advanced Materials, 2008, 20, 3054-3060.	11.1	74
34	Block copolymer-based porous carbons for supercapacitors. Journal of Materials Chemistry A, 2019, 7, 23476-23488.	5.2	74
35	Molecular Transfer Printing Using Block Copolymers. ACS Nano, 2010, 4, 599-609.	7.3	69
36	A three-dimensional nitrogen-doped graphene aerogel-activated carbon composite catalyst that enables low-cost microfluidic microbial fuel cells with superior performance. Journal of Materials Chemistry A, 2016, 4, 15913-15919.	5.2	68

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37	Phase Behavior and Dimensional Scaling of Symmetric Block Copolymerâ˘'Homopolymer Ternary Blends in Thin Films. Macromolecules, 2009, 42, 3063-3072.	2.2	63
38	Photohole Induced Corrosion of Titanium Dioxide: Mechanism and Solutions. Nano Letters, 2015, 15, 7051-7057.	4.5	57
39	Key Parameter Controlling the Sensitivity of Plasmonic Metal Nanoparticles: Aspect Ratio. Journal of Physical Chemistry C, 2016, 120, 19353-19364.	1.5	56
40	Stereoselective photoredox ring-opening polymerization of O-carboxyanhydrides. Nature Communications, 2018, 9, 1559.	5.8	51
41	Directed Assembly of Non-equilibrium ABA Triblock Copolymer Morphologies on Nanopatterned Substrates. ACS Nano, 2012, 6, 5440-5448.	7.3	50
42	Dimensional Scaling of Cylinders in Thin Films of Block Copolymerâ˘'Homopolymer Ternary Blends. Macromolecules, 2009, 42, 5139-5145.	2.2	49
43	Drug-Loaded Polymeric Spherical Nucleic Acids: Enhancing Colloidal Stability and Cellular Uptake of Polymeric Nanoparticles through DNA Surface-Functionalization. Biomacromolecules, 2017, 18, 483-489.	2.6	47
44	The potassium hydroxide-urea synergy in improving the capacitive energy-storage performance of agar-derived carbon aerogels. Carbon, 2019, 147, 451-459.	5.4	46
45	Low-Molecular-Weight, High-Mechanical-Strength, and Solution-Processable Telechelic Poly(ether) Tj ETQq1 1 0.784314 rgBT /Overlock	2.2	45
46	Anisotropic Nanoparticles as Shape-Directing Catalysts for the Chemical Etching of Silicon. Journal of the American Chemical Society, 2013, 135, 12196-12199.	6.6	44
47	The role of viscosity on polymer ink transport in dip-pen nanolithography. Chemical Science, 2013, 4, 2093.	3.7	44
48	Controlling the Pore Size of Mesoporous Carbon Thin Films through Thermal and Solvent Annealing. Small, 2017, 13, 1603107.	5.2	43
49	Recent development of polyimides: Synthesis, processing, and application in gas separation. Journal of Polymer Science, 2021, 59, 943-962.	2.0	43
50	Nonbulk Complex Structures in Thin Films of Symmetric Block Copolymers on Chemically Nanopatterned Surfaces. Macromolecules, 2012, 45, 3986-3992.	2.2	40
51	Porous organic materials offer vast future opportunities. Nature Communications, 2020, 11, 4984.	5.8	39
52	3D Printed Functionally Graded Plasmonic Constructs. Advanced Optical Materials, 2017, 5, 1700367.	3.6	37
53	Plasmonic solar desalination. Nature Photonics, 2016, 10, 361-362.	15.6	35
54	Morphology of Lamellae-Forming Block Copolymer Films between Two Orthogonal Chemically Nanopatterned Striped Surfaces. Physical Review Letters, 2012, 108, 065502.	2.9	34

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55	Controlling the physical and electrochemical properties of block copolymer-based porous carbon fibers by pyrolysis temperature. Molecular Systems Design and Engineering, 2020, 5, 153-165.	1.7	34
56	A cantilever-free approach to dot-matrix nanoprinting. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12921-12924.	3.3	33
57	A silver wire aerogel promotes hydrogen peroxide reduction for fuel cells and electrochemical sensors. Journal of Materials Chemistry A, 2019, 7, 11497-11505.	5.2	32
58	Composition Design of Block Copolymers for Porous Carbon Fibers. Chemistry of Materials, 2019, 31, 8898-8907.	3.2	31
59	Block copolymers for supercapacitors, dielectric capacitors and batteries. Journal of Physics Condensed Matter, 2019, 31, 233001.	0.7	27
60	Molecular-Level Control over Plasmonic Properties in Silver Nanoparticle/Self-Assembling Peptide Hybrids. Journal of the American Chemical Society, 2020, 142, 9158-9162.	6.6	26
61	Symmetric Diblock Copolymers Confined by Two Nanopatterned Surfaces. Macromolecules, 2012, 45, 2588-2596.	2.2	25
62	Poly(vinylpyrrolidone)â€Free Multistep Synthesis of Silver Nanoplates with Plasmon Resonance in the Near Infrared Range. Small, 2017, 13, 1701715.	5.2	23
63	Generating Electricity on Chips: Microfluidic Biofuel Cells in Perspective. Industrial & Engineering Chemistry Research, 2018, 57, 2746-2758.	1.8	22
64	Layer-by-Layer Assembly of a Metallomesogen by Dip-Pen Nanolithography. ACS Nano, 2013, 7, 2602-2609.	7.3	21
65	Using Scanning-Probe Block Copolymer Lithography and Electron Microscopy To Track Shape Evolution in Multimetallic Nanoclusters. ACS Nano, 2015, 9, 12137-12145.	7.3	21
66	Tuning the Electrochemical Properties of Nitrogen-Doped Carbon Aerogels in a Blend of Ammonia and Nitrogen Gases. ACS Applied Energy Materials, 2018, 1, 5043-5053.	2.5	21
67	Cobalt-Containing Nanoporous Nitrogen-Doped Carbon Nanocuboids from Zeolite Imidazole Frameworks for Supercapacitors. Nanomaterials, 2019, 9, 1110.	1.9	21
68	Modification of a polystyrene brush layer by insertion of poly(methyl methacrylate) molecules. Journal of Vacuum Science & Technology B, 2009, 27, 3038-3042.	1.3	18
69	Nitrogen-doped carbon â€œspider websâ€• derived from pyrolysis of polyaniline nanofibers in ammonia for capacitive energy storage. Journal of Materials Research, 2018, 33, 1109-1119.	1.2	16
70	Solvent-Resistant Self-Crosslinked Poly(ether imide). Macromolecules, 2021, 54, 3405-3412.	2.2	16
71	Porous Carbon Nanofiber-Modified Carbon Fiber Microelectrodes for Dopamine Detection. ACS Applied Nano Materials, 2022, 5, 2241-2249.	2.4	16
72	Sub-10 nm domains in high-performance polyetherimides. Polymer Chemistry, 2019, 10, 379-385.	1.9	15

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73	Cross-sectional Imaging of Block Copolymer Thin Films on Chemically Patterned Surfaces. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2010, 23, 149-154.	0.1	14
74	Fabrication of chevron patterns for patterned media with block copolymer directed assembly. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 06F204.	0.6	14
75	Mechanically Strong, Thermally Stable, and Flame Retardant Poly(ether imide) Terminated with Phosphonium Bromide. Macromolecules, 2019, 52, 7361-7368.	2.2	14
76	Two-Dimensional Plasmonic Nanoparticle as a Nanoscale Sensor to Probe Polymer Brush Formation. Analytical Chemistry, 2017, 89, 7541-7548.	3.2	13
77	Nanostructure stability and swelling of ternary block copolymer/homopolymer blends: A direct comparison between dissipative particle dynamics and experiment. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 794-803.	2.4	12
78	Spectral-Selective Plasmonic Polymer Nanocomposites Across the Visible and Near-Infrared. ACS Nano, 2019, 13, 4255-4266.	7.3	12
79	The Effect of End Group and Molecular Weight on the Yellowness of Polyetherimide. Macromolecular Rapid Communications, 2018, 39, e1800045.	2.0	11
80	Capacitive Organic Dye Removal by Block Copolymer Based Porous Carbon Fibers. Advanced Materials Interfaces, 2020, 7, 2000507.	1.9	11
81	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
82	Mechanism and dynamics of block copolymer directed assembly with density multiplication on chemically patterned surfaces. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C6B13-C6B19.	0.6	10
83	Impact of metal cations on the thermal, mechanical, and rheological properties of telechelic sulfonated polyetherimides. Polymer Chemistry, 2020, 11, 393-400.	1.9	10
84	Covalent and Noncovalent Loading of Doxorubicin by Folic Acid-Carbon Dot Nanoparticles for Cancer Theranostics. ACS Omega, 2022, 7, 23322-23331.	1.6	10
85	Janus Plasmonic Silver Nanoplatelets for Interface Stabilization. ACS Applied Nano Materials, 2018, 1, 5377-5381.	2.4	9
86	Aligned continuous cylindrical pores derived from electrospun polymer fibers in titanium diboride. International Journal of Applied Ceramic Technology, 2019, 16, 802-813.	1.1	9
87	Mutually Reinforced Polymerâ€“Graphene Bilayer Membranes for Energyâ€Efficient Acoustic Transduction. Advanced Materials, 2021, 33, e2004053.	11.1	9
88	Block Copolymerâ€Derived Porous Carbon Fibers Enable High MnO₂ Loading and Fast Charging in Aqueous Zincâ€Ion Battery. Batteries and Supercaps, 2022, 5, .	2.4	9
89	Preferred domain orientation in block copolymer fibers after solvent annealing. Molecular Systems Design and Engineering, 2018, 3, 357-363.	1.7	8
90	Reduced graphene oxide modified activated carbon for improving power generation of air-cathode microbial fuel cells. Journal of Materials Research, 2018, 33, 1279-1287.	1.2	8

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91	Melt-processable telechelic poly(ether imide)s end-capped with zinc sulfonate salts. Polymer Chemistry, 2018, 9, 5660-5670.	1.9	8
92	In situ characterization of block copolymer ordering on chemically nanopatterned surfaces by time-resolved small angle x-ray scattering. Journal of Vacuum Science & Technology B, 2008, 26, 2504-2508.	1.3	7
93	Boosting the Power-Generation Performance of Micro-Sized Al-H2O2 Fuel Cells by Using Silver Nanowires as the Cathode. Energies, 2018, 11, 2316.	1.6	6
94	Enhanced Mechanical Properties of Natural Rubber by Block Copolymer-Based Porous Carbon Fibers. ACS Applied Polymer Materials, 0, , .	2.0	6
95	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
96	Humidity-Controlled Preparation of Flexible Porous Carbon Fibers from Block Copolymers. ACS Applied Polymer Materials, 2022, 4, 4980-4992.	2.0	6
97	Improved block copolymer domain dispersity on chemical patterns via homopolymer-blending and molecular transfer printing. Polymer, 2017, 116, 99-104.	1.8	5
98	Utilization of Block Copolymers to Understand Water Vaporization Enthalpy Reduction in Uniform Pores. Macromolecules, 2022, 55, 4803-4811.	2.2	5
99	Critical Role of Polystyrene Layer on Plasmonic Silver Nanoplates in Organic Photovoltaics. ACS Applied Energy Materials, 2019, 2, 2475-2485.	2.5	4
100	Facile Preparation of Halogen-Free Poly(ether imide) Containing Phosphonium and Sulfonate Groups. ACS Applied Polymer Materials, 2020, 2, 66-73.	2.0	4
101	Overlooking Issues and Prospective Resolutions Behind the Prosperity of Three-Dimensional Porous Carbon Supercapacitor Electrodes. Frontiers in Energy Research, 2020, 8, .	1.2	3
102	Poly(ether imide)s with tailored end groups. Journal of Polymer Science, 2021, 59, 2365.	2.0	2
103	Mesoporous polyetherimide thin films <i>via</i> hydrolysis of polylactide-<i>b</i>-polyetherimide-<i>b</i>-polylactide. Polymer Chemistry, 2021, 12, 3939-3946.	1.9	2
104	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