Xinwen Peng

List of Publications by Year
in descending order

116 papers	6,160 citations	57631 44 h-index	76769 74 g-index
122 all docs	122 docs citations	122 times ranked	7237 citing authors

#	Article	IF	Citations
1	Hierarchically Porous Carbon Plates Derived from Wood as Bifunctional ORR/OER Electrodes. Advanced Materials, 2019, 31, e1900341.	11.1	320
2	A Supercompressible, Elastic, and Bendable Carbon Aerogel with Ultrasensitive Detection Limits for Compression Strain, Pressure, and Bending Angle. Advanced Materials, 2018, 30, e1706705.	11.1	255
3	Compressible, Elastic, and Pressure-Sensitive Carbon Aerogels Derived from 2D Titanium Carbide Nanosheets and Bacterial Cellulose for Wearable Sensors. Chemistry of Materials, 2019, 31, 3301-3312.	3.2	220
4	An Ironâ€Đecorated Carbon Aerogel for Rechargeable Flow and Flexible Znâ€“Air Batteries. Advanced Materials, 2020, 32, e2002292.	11.1	213
5	An ultralight, elastic, cost-effective, and highly recyclable superabsorbent from microfibrillated cellulose fibers for oil spillage cleanup. Journal of Materials Chemistry A, 2015, 3, 8772-8781.	5.2	186
6	Woodâ€Đerived Lightweight and Elastic Carbon Aerogel for Pressure Sensing and Energy Storage. Advanced Functional Materials, 2020, 30, 1910292.	7.8	186
7	Regulating Electronâ€“Hole Separation to Promote Photocatalytic H₂ Evolution Activity of Nanoconfined Ru/MXene/TiO₂ Catalysts. ACS Nano, 2020, 14, 14181-14189.	7.3	160
8	The 2021 battery technology roadmap. Journal Physics D: Applied Physics, 2021, 54, 183001.	1.3	158
9	Sustainable hierarchical porous carbon aerogel from cellulose for high-performance supercapacitor and CO2 capture. Industrial Crops and Products, 2016, 87, 229-235.	2.5	156
10	Colloidal stability of negatively charged cellulose nanocrystalline in aqueous systems. Carbohydrate Polymers, 2012, 90, 644-649.	5.1	152
11	Facile and High-Yield Synthesis of Carbon Quantum Dots from Biomass-Derived Carbons at Mild Condition. ACS Sustainable Chemistry and Engineering, 2019, 7, 7833-7843.	3.2	149
12	A carbon aerogel with super mechanical and sensing performances for wearable piezoresistive sensors. Journal of Materials Chemistry A, 2019, 7, 8092-8100.	5.2	146
13	A mechanically strong and sensitive CNT/rGOâ€“CNF carbon aerogel for piezoresistive sensors. Journal of Materials Chemistry A, 2018, 6, 23550-23559.	5.2	133
14	3D hierarchical porous N-doped carbon aerogel from renewable cellulose: an attractive carbon for high-performance supercapacitor electrodes and CO₂ adsorption. RSC Advances, 2016, 6, 15788-15795.	1.7	127
15	Activating Lattice Oxygen in Layered Lithium Oxides through Cation Vacancies for Enhanced Urea Electrolysis. Angewandte Chemie - International Edition, 2022, 61, .	7.2	116
16	Wood Carbon Based Single-Atom Catalyst for Rechargeable Znâ€“Air Batteries. ACS Energy Letters, 2021, 6, 3624-3633.	8.8	103
17	Biomass-Based Porous N-Self-Doped Carbon Framework/Polyaniline Composite with Outstanding Supercapacitance. ACS Sustainable Chemistry and Engineering, 2017, 5, 8663-8674.	3.2	102
18	Biomass polymer-assisted fabrication of aerogels from MXenes with ultrahigh compression elasticity and pressure sensitivity. Journal of Materials Chemistry A, 2019, 7, 10273-10281.	5.2	100

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19	Self-Biotemplate Preparation of Hierarchical Porous Carbon with Rational Mesopore Ratio and High Oxygen Content for an Ultrahigh Energy-Density Supercapacitor. ACS Sustainable Chemistry and Engineering, 2018, 6, 7138-7150.	3.2	95
20	Surface confinement assisted synthesis of nitrogen-rich hollow carbon cages with Co nanoparticles as breathable electrodes for Zn-air batteries. Applied Catalysis B: Environmental, 2019, 254, 55-65.	10.8	92
21	Electrospun cellulose acetate supported Ag@AgCl composites with facet-dependent photocatalytic properties on degradation of organic dyes under visible-light irradiation. Carbohydrate Polymers, 2016, 136, 322-328.	5.1	88
22	â€œGreenâ€•films from renewable resources: Properties of epoxidized soybean oil plasticized ethyl cellulose films. Carbohydrate Polymers, 2014, 103, 198-206.	5.1	87
23	Hierarchical ZnO nanorod arrays grown on copper foam as an advanced three-dimensional skeleton for dendrite-free sodium metal anodes. Nano Energy, 2021, 80, 105563.	8.2	87
24	Comparative study of the pyrolysis of lignocellulose and its major components: Characterization and overall distribution of their biochars and volatiles. Bioresource Technology, 2014, 155, 21-27.	4.8	85
25	Choline chloride/urea as an effective plasticizer for production of cellulose films. Carbohydrate Polymers, 2015, 117, 133-139.	5.1	84
26	Polycation ionic liquid tailored PEO-based solid polymer electrolytes for high temperature lithium metal batteries. Energy Storage Materials, 2020, 33, 173-180.	9.5	78
27	Coupling overall water splitting and biomass oxidation via Fe-doped Ni2P@C nanosheets at large current density. Applied Catalysis B: Environmental, 2022, 307, 121170.	10.8	75
28	Graphene Oxide Encapsulating Liquid Metal to Toughen Hydrogel. Advanced Functional Materials, 2021, 31, 2106761.	7.8	72
29	Hydrothermal conversion of xylose, glucose, and cellulose under the catalysis of transition metal sulfates. Carbohydrate Polymers, 2015, 118, 44-51.	5.1	69
30	Advanced Compressible and Elastic 3D Monoliths beyond Hydrogels. Advanced Functional Materials, 2019, 29, 1904472.	7.8	69
31	Superelastic Carbon Aerogel with Ultrahigh and Wide-Range Linear Sensitivity. ACS Applied Materials & Interfaces, 2018, 10, 40641-40650.	4.0	64
32	Cobalt Singleâ€Atomâ€Intercalated Molybdenum Disulfide for Sulfide Oxidation with Exceptional Chemoselectivity. Advanced Materials, 2020, 32, e1906437.	11.1	62
33	Multiresponsive Hydrogels Based on Xylan-Type Hemicelluloses and Photoisomerized Azobenzene Copolymer as Drug Delivery Carrier. Journal of Agricultural and Food Chemistry, 2014, 62, 10000-10007.	2.4	59
34	Fast Energy Storage in Two-Dimensional MoO₂ Enabled by Uniform Oriented Tunnels. ACS Nano, 2019, 13, 9091-9099.	7.3	59
35	2021 Roadmap: electrocatalysts for green catalytic processes. JPhys Materials, 2021, 4, 022004.	1.8	57
36	Facile synthesis of cellulose-based carbon with tunable N content for potential supercapacitor application. Carbohydrate Polymers, 2017, 170, 107-116.	5.1	52

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37	Laccase and alkali treatments of cellulose fibre: Surface lignin and its influences on fibre surface properties and interfacial behaviour of sisal fibre/phenolic resin composites. Composites Part A: Applied Science and Manufacturing, 2010, 41, 1848-1856.	3.8	51
38	Ultrahigh molecular weight, lignosulfonate-based polymers: preparation, self-assembly behaviours and dispersion property in coalâ€“water slurry. RSC Advances, 2015, 5, 21588-21595.	1.7	50
39	Effectively enhancing conversion of cellulose to HMF by combining in-situ carbonic acid from CO2 and metal oxides. Industrial Crops and Products, 2018, 126, 151-157.	2.5	49
40	Using FeCl₃ as a Solvent, Template, and Activator To Prepare B, N Co-Doping Porous Carbon with Excellent Supercapacitance. ACS Sustainable Chemistry and Engineering, 2019, 7, 15983-15994.	3.2	48
41	Mesoporous Carbonâ€Coated Bismuth Nanorods as Anode for Potassiumâ€Ion Batteries. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900209.	1.2	47
42	Synthesis of water-soluble, fully biobased cellulose levulinate esters through the reaction of cellulose and alpha-angelica lactone in a DBU/CO₂/DMSO solvent system. Green Chemistry, 2020, 22, 707-717.	4.6	47
43	Flexible nanocomposites with ultrahigh specific areal capacitance and tunable properties based on a cellulose derived nanofiber-carbon sheet framework coated with polyaniline. Journal of Materials Chemistry A, 2016, 4, 13352-13362.	5.2	46
44	Catalytic Conversion of Carbohydrates to Levulinate Ester over Heteropolyanionâ€Based Ionic Liquids. ChemSusChem, 2016, 9, 3307-3316.	3.6	46
45	<scp>d</scp>-Xylonic acid: a solvent and an effective biocatalyst for a three-component reaction. Green Chemistry, 2016, 18, 1738-1750.	4.6	46
46	Synthesizing green carbon dots with exceptionally high yield from biomass hydrothermal carbon. Cellulose, 2020, 27, 415-428.	2.4	46
47	Carbon Nanotube/Chitosan-Based Elastic Carbon Aerogel for Pressure Sensing. Industrial & Engineering Chemistry Research, 2019, 58, 17768-17775.	1.8	43
48	Porous carbon coupled with an interlaced MoPâ€“MoS2 heterojunction hybrid for efficient hydrogen evolution reaction. Journal of Energy Chemistry, 2020, 45, 45-51.	7.1	43
49	Recent progress and future perspectives of flexible metalâ€air batteries. SmartMat, 2021, 2, 519-553.	6.4	43
50	Edge activation of an inert polymeric carbon nitride matrix with boosted absorption kinetics and near-infrared response for efficient photocatalytic CO₂ reduction. Journal of Materials Chemistry A, 2020, 8, 11761-11772.	5.2	42
51	Conversion of Xylose into Furfural Using Lignosulfonic Acid as Catalyst in Ionic Liquid. Journal of Agricultural and Food Chemistry, 2014, 62, 7430-7435.	2.4	39
52	Flexible metalâ€“air batteries: An overview. SmartMat, 2021, 2, 123-126.	6.4	39
53	Iron Single Atom Catalyzed Quinoline Synthesis. Advanced Materials, 2021, 33, e2101382.	11.1	39
54	Rapid Synthesis of Cellulose Esters by Transesterification of Cellulose with Vinyl Esters under the Catalysis of NaOH or KOH in DMSO. Journal of Agricultural and Food Chemistry, 2013, 61, 2489-2495.	2.4	38

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55	N-Doped Mo2C Nanobelts/Graphene Nanosheets Bonded with Hydroxy Nanocellulose as Flexible and Editable Electrode for Hydrogen Evolution Reaction. IScience, 2019, 19, 1090-1100.	1.9	37
56	Fluorescent pH-Sensing Probe Based on Biorefinery Wood Lignosulfonate and Its Application in Human Cancer Cell Bioimaging. Journal of Agricultural and Food Chemistry, 2016, 64, 9592-9600.	2.4	36
57	Efficient photoreforming of lignocellulose into H2 and photocatalytic CO2 reduction via in-plane surface dyadic heterostructure of porous polymeric carbon nitride. Carbon, 2020, 170, 199-212.	5.4	36
58	Fabrication of a highly elastic nanocomposite hydrogel by surface modification of cellulose nanocrystals. RSC Advances, 2015, 5, 13878-13885.	1.7	35
59	In Situ Carbonic Acid from CO₂: A Green Acid for Highly Effective Conversion of Cellulose in the Presence of Lewis acid. ACS Sustainable Chemistry and Engineering, 2016, 4, 4146-4155.	3.2	35
60	Homogeneous synthesis of hemicellulosic succinates with high degree of substitution in ionic liquid. Carbohydrate Polymers, 2011, 86, 1768-1774.	5.1	34
61	Linking Renewable Cellulose Nanocrystal into Lightweight and Highly Elastic Carbon Aerogel. ACS Sustainable Chemistry and Engineering, 2020, 8, 11921-11929.	3.2	33
62	Au@h-Al₂O₃analogic yolkâ€“shell nanocatalyst for highly selective synthesis of biomass-derived<scp>d</scp>-xylonic acidviaregulation of structure effects. Green Chemistry, 2018, 20, 5188-5195.	4.6	31
63	A foldable composite electrode with excellent electrochemical performance using microfibrillated cellulose fibers as a framework. Journal of Materials Chemistry A, 2018, 6, 20338-20346.	5.2	31
64	Regulating the electronâ€“hole separation to promote selective oxidation of biomass using ZnS@Bi2S3 nanosheet catalyst. Applied Catalysis B: Environmental, 2021, 292, 120180.	10.8	31
65	Xylan-type hemicelluloses supported terpyridineâ€“palladium(II) complex as an efficient and recyclable catalyst for Suzukiâ€“Miyaura reaction. Cellulose, 2014, 21, 125-137.	2.4	30
66	A new strategy to tailor the structure of sustainable 3D hierarchical porous N-self-doped carbons from renewable biomass for high-performance supercapacitors and CO₂ capture. RSC Advances, 2016, 6, 34261-34270.	1.7	29
67	Solvothermally Controlled Synthesis of Organicâ€“Inorganic Hybrid Nanosheets as Efficient pHâ€Universal Hydrogenâ€Evolution Electrocatalysts. ChemSusChem, 2018, 11, 2828-2836.	3.6	29
68	Glycidyl methacrylate derivatized xylan-rich hemicelluloses: synthesis and characterizations. Cellulose, 2012, 19, 1361-1372.	2.4	26
69	A novel transesterification system to rapidly synthesize cellulose aliphatic esters. Cellulose, 2014, 21, 581-594.	2.4	26
70	2020 Roadmap on Zinc Metal Batteries. Chemistry - an Asian Journal, 2020, 15, 3696-3708.	1.7	26
71	An efficient method for the synthesis of hemicellulosic derivatives with bifunctional groups in butanol/water medium and their rheological properties. Carbohydrate Polymers, 2011, 83, 1922-1928.	5.1	25
72	Fabricating 3D hierarchical porous TiO2 and SiO2 with high specific surface area by using nanofibril-interconnected cellulose aerogel as a new biotemplate. Industrial Crops and Products, 2017, 109, 790-802.	2.5	25

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73	Synthesis and characterization of cyanoethyl hemicelluloses and their hydrated products. Cellulose, 2013, 20, 291-301.	2.4	24
74	Efficient base-free oxidation of monosaccharide into sugar acid under mild conditions using hierarchical porous carbon supported gold catalysts. Green Chemistry, 2020, 22, 2588-2597.	4.6	23
75	Impact of regeneration process on the crystalline structure and enzymatic hydrolysis of cellulose obtained from ionic liquid. Carbohydrate Polymers, 2014, 111, 400-403.	5.1	22
76	Deep eutectic solvents derived carbon-based efficient electrocatalyst for boosting H2 production coupled with glucose oxidation. Chemical Engineering Journal, 2022, 430, 132783.	6.6	22
77	Hydrothermal Conversion of Bamboo: Identification and Distribution of the Components in Solid Residue, Water-Soluble and Acetone-Soluble Fractions. Journal of Agricultural and Food Chemistry, 2014, 62, 12360-12365.	2.4	21
78	Regulating TiO₂/MXenes catalysts to promote photocatalytic performance of highly selective oxidation of <scp>d</scp>-xylose. Green Chemistry, 2021, 23, 1382-1388.	4.6	21
79	Adsorption of Cu²⁺ and Ni²⁺ from Aqueous Solution by Arabinoxylan Hydrogel: Equilibrium, Kinetic, Competitive Adsorption. Separation Science and Technology, 2013, 48, 2659-2669.	1.3	19
80	Biomass-based N doped carbon as metal-free catalyst for selective oxidation of d-xylose into d-xylonic acid. Green Energy and Environment, 2022, 7, 1310-1317.	4.7	19
81	Green synthesis of palladium nanoparticles via branched polymers: a bio-based nanocomposite for Câ€“C coupling reactions. RSC Advances, 2016, 6, 32202-32211.	1.7	18
82	Lignocellulosic Biomass Derived Functional Materials: Synthesis and Applications in Biomedical Engineering. Current Medicinal Chemistry, 2019, 26, 2456-2474.	1.2	18
83	Functional Chitosan-based Materials for Biological Applications. Current Medicinal Chemistry, 2020, 27, 4660-4672.	1.2	18
84	Vacancy engineered polymeric carbon nitride nanosheets for enhanced photoredox catalytic efficiency. Cell Reports Physical Science, 2021, 2, 100491.	2.8	17
85	A new strategy for acid anhydrides-modified xylans in ionic liquids. Fibers and Polymers, 2013, 14, 16-21.	1.1	15
86	Cellulose nanofiberâ€derived carbon aerogel for advanced roomâ€temperature sodiumâ€“sulfur batteries. , 2023, 5, .		15
87	Synthesis and characterization of biofunctional quaternized xylan-Fe2O3 core/shell nanocomposites and modification with polylysine and folic acid. Carbohydrate Polymers, 2018, 199, 382-389.	5.1	14
88	Lignin Nanosphere-Supported Cuprous Oxide as an Efficient Catalyst for Huisgen [3+2] Cycloadditions under Relatively Mild Conditions. Polymers, 2018, 10, 724.	2.0	14
89	Cryogenic engineering of solid polymer electrolytes for room temperature and 4ÂV-class all-solid-state lithium batteries. Chemical Engineering Journal, 2021, 420, 127623.	6.6	13
90	Hemicelluloses supported palladium/xylan nanocomposites containing N and O ligands: Highly-performance heterogeneous catalysts for Suzuki reaction. Carbohydrate Polymers, 2019, 217, 224-231.	5.1	12

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91	Mesoporous, nitrogen-doped, graphitized carbon nanosheets embedded with cobalt nanoparticles for efficient oxygen electroreduction. Journal of Materials Science, 2019, 54, 4168-4179.	1.7	12
92	Synthesis of Biocompatible Cholesterylâ€“Carboxymethyl Xylan Micelles for Tumor-Targeting Intracellular DOX Delivery. ACS Biomaterials Science and Engineering, 2020, 6, 1582-1589.	2.6	12
93	One-step construction of Co₂P nanoparticles encapsulated in N, P co-doped biomass-based porous carbon as bifunctional efficient electrocatalysts for overall water splitting. Sustainable Energy and Fuels, 2021, 5, 2477-2485.	2.5	12
94	Amphiphilic xylanâ€“cholic acid conjugates: synthesis and self-assembly behaviors in aqueous solution. Cellulose, 2018, 25, 245-257.	2.4	11
95	Strengthening effects of carboxymethylated hemicellulosic fractions on paper strength. Industrial Crops and Products, 2018, 125, 360-369.	2.5	11
96	Preparing phenolic resins using pulping spent liquor. International Journal of Adhesion and Adhesives, 2017, 77, 72-77.	1.4	10
97	Sulfonation of carbonized xylan-type hemicellulose: a renewable and effective biomass-based biocatalyst for the synthesis of O- and N-heterocycles. New Journal of Chemistry, 2018, 42, 9140-9150.	1.4	10
98	Biomass-based protic ionic liquid derived N, P, co-doped porous carbon-coated CoP nanocrystals for efficient hydrogen evolution reaction. Journal of Materials Science, 2021, 56, 18188-18199.	1.7	10
99	Activating Lattice Oxygen in Layered Lithium Oxides through Cation Vacancies for Enhanced Urea Electrolysis. Angewandte Chemie, 2022, 134, .	1.6	10
100	Palladium Nanoparticles Anchored on Thiol Functionalized Xylose Hydrochar Microspheres: An Efficient Heterogeneous Catalyst for Suzuki Cross-Coupling Reactions. Catalysis Letters, 2020, 150, 1011-1019.	1.4	9
101	Xylan-Derived Light Conversion Nanocomposite Film. Polymers, 2020, 12, 1779.	2.0	8
102	Visible-light-promoted thiocyanation of sp² Câ€“H bonds over heterogeneous graphitic carbon nitrides. New Journal of Chemistry, 2021, 45, 14058-14062.	1.4	8
103	Highly selective oxidation of monosaccharides to sugar acids by nickel-embedded carbon nanotubes under mild conditions. Renewable Energy, 2021, 175, 650-659.	4.3	6
104	Energy-efficient monosaccharides electrooxidation coupled with green hydrogen production by bifunctional Co9S8/Ni3S2 electrode. Chemical Engineering Journal, 2022, 446, 136950.	6.6	5
105	Recycled fiber derived carbon dispersed Ag nanoparticles as high-performance catalyst for 4-nitrophenol reduction and substrate for surface-enhanced Raman scattering. Cellulose, 2020, 27, 1649-1659.	2.4	4
106	Metal coordination assists fabrication of multifunctional aerogel. Journal of Materials Science and Technology, 2021, 71, 67-74.	5.6	4
107	Highly selective oxidation of monosaccharides to sugar acids at room temperature over palladium supported on surface functionalized carbon nanotubes. Green Chemistry, 2021, 23, 7084-7092.	4.6	4
108	Emulsion templated advanced functional materials from emerging nano building blocks. Journal of Materials Chemistry A, 2021, 9, 25827-25851.	5.2	4

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109	Synthesis, Characterization, and Applications of Hemicelluloses Based Eco-friendly Polymer Composites. , 2019, , 1267-1322.		3
110	Microwave-assisted Extraction of Polysaccharides from Bamboo (Phyllostachys acuta) Leaves and their Antioxidant Activity. BioResources, 2016, 11, .	0.5	2
111	Preparation and Characterization of PVC Matrix Composites with Biochemical Sludge. Journal of Polymers and the Environment, 2018, 26, 3197-3201.	2.4	2
112	Zincâ€Air Batteries: An Ironâ€Decorated Carbon Aerogel for Rechargeable Flow and Flexible Znâ€“Air Batteries (Adv. Mater. 32/2020). Advanced Materials, 2020, 32, 2070241.	11.1	1
113	Direct growth of a porous substrate on high-quality graphene via in situ phase inversion of a polymeric solution. Nanoscale, 2020, 12, 4953-4958.	2.8	1
114	Enhanced Tunneling Magnetoresistance Effect via Ferroelectric Control of Interface Electronic/Magnetic Reconstructions. ACS Applied Materials & Interfaces, 2021, 13, 56638-56644.	4.0	1
115	Effect of Cationic Hemicellulosic Fractions from Corncob Obtained by Graded Ethanol Precipitation on Recycled Paper Strength. BioResources, 2018, 13, .	0.5	0
116	Outside Back Cover: Volume 2 Issue 4. SmartMat, 2021, 2, .	6.4	0