

Xinwen Peng

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112
papers

3,552
citations

33
h-index

55
g-index

122
ext. papers

4,757
ext. citations

9.7
avg, IF

5.76
L-index

#	Paper	IF	Citations
112	Hierarchically Porous Carbon Plates Derived from Wood as Bifunctional ORR/OER Electrodes. <i>Advanced Materials</i> , 2019 , 31, e1900341	24	191
111	A Supercompressible, Elastic, and Bendable Carbon Aerogel with Ultrasensitive Detection Limits for Compression Strain, Pressure, and Bending Angle. <i>Advanced Materials</i> , 2018 , 30, e1706705	24	174
110	An ultralight, elastic, cost-effective, and highly recyclable superabsorbent from microfibrillated cellulose fibers for oil spillage cleanup. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 8772-8781	13	156
109	Compressible, Elastic, and Pressure-Sensitive Carbon Aerogels Derived from 2D Titanium Carbide Nanosheets and Bacterial Cellulose for Wearable Sensors. <i>Chemistry of Materials</i> , 2019 , 31, 3301-3312	9.6	132
108	Colloidal stability of negatively charged cellulose nanocrystalline in aqueous systems. <i>Carbohydrate Polymers</i> , 2012 , 90, 644-9	10.3	116
107	Sustainable hierarchical porous carbon aerogel from cellulose for high-performance supercapacitor and CO ₂ capture. <i>Industrial Crops and Products</i> , 2016 , 87, 229-235	5.9	116
106	3D hierarchical porous N-doped carbon aerogel from renewable cellulose: an attractive carbon for high-performance supercapacitor electrodes and CO ₂ adsorption. <i>RSC Advances</i> , 2016 , 6, 15788-15795	3.7	96
105	A mechanically strong and sensitive CNT/rGO/INF carbon aerogel for piezoresistive sensors. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 23550-23559	13	93
104	An Iron-Decorated Carbon Aerogel for Rechargeable Flow and Flexible Zn-Air Batteries. <i>Advanced Materials</i> , 2020 , 32, e2002292	24	91
103	A carbon aerogel with super mechanical and sensing performances for wearable piezoresistive sensors. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 8092-8100	13	90
102	Facile and High-Yield Synthesis of Carbon Quantum Dots from Biomass-Derived Carbons at Mild Condition. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 7833-7843	8.3	81
101	Biomass-Based Porous N-Self-Doped Carbon Framework/Polyaniline Composite with Outstanding Supercapacitance. <i>ACS Sustainable Chemistry and Engineering</i> , 2017 , 5, 8663-8674	8.3	79
100	Wood-Derived Lightweight and Elastic Carbon Aerogel for Pressure Sensing and Energy Storage. <i>Advanced Functional Materials</i> , 2020 , 30, 1910292	15.6	76
99	Electrospun cellulose acetate supported Ag@AgCl composites with facet-dependent photocatalytic properties on degradation of organic dyes under visible-light irradiation. <i>Carbohydrate Polymers</i> , 2016 , 136, 322-8	10.3	76
98	Regulating Electron-Hole Separation to Promote Photocatalytic H Evolution Activity of Nanoconfined Ru/MXene/TiO ₂ Catalysts. <i>ACS Nano</i> , 2020 , 14, 14181-14189	16.7	74
97	Self-Biotemplate Preparation of Hierarchical Porous Carbon with Rational Mesopore Ratio and High Oxygen Content for an Ultrahigh Energy-Density Supercapacitor. <i>ACS Sustainable Chemistry and Engineering</i> , 2018 , 6, 7138-7150	8.3	73
96	Surface confinement assisted synthesis of nitrogen-rich hollow carbon cages with Co nanoparticles as breathable electrodes for Zn-air batteries. <i>Applied Catalysis B: Environmental</i> , 2019 , 254, 55-65	21.8	63

95	The 2021 battery technology roadmap. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 183001	3	63
94	Choline chloride/urea as an effective plasticizer for production of cellulose films. <i>Carbohydrate Polymers</i> , 2015 , 117, 133-139	10.3	60
93	Comparative study of the pyrolysis of lignocellulose and its major components: characterization and overall distribution of their biochars and volatiles. <i>Bioresource Technology</i> , 2014 , 155, 21-7	11	60
92	Biomass polymer-assisted fabrication of aerogels from MXenes with ultrahigh compression elasticity and pressure sensitivity. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 10273-10281	13	58
91	"Green" films from renewable resources: properties of epoxidized soybean oil plasticized ethyl cellulose films. <i>Carbohydrate Polymers</i> , 2014 , 103, 198-206	10.3	58
90	Hydrothermal conversion of xylose, glucose, and cellulose under the catalysis of transition metal sulfates. <i>Carbohydrate Polymers</i> , 2015 , 118, 44-51	10.3	54
89	Multiresponsive hydrogels based on xylan-type hemicelluloses and photoisomerized azobenzene copolymer as drug delivery carrier. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 10000-7	5.7	51
88	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. <i>Composites Part A: Applied Science and Manufacturing</i> , 2010 , 41, 1848-1856	8.4	41
87	Advanced Compressible and Elastic 3D Monoliths beyond Hydrogels. <i>Advanced Functional Materials</i> , 2019 , 29, 1904472	15.6	40
86	Superelastic Carbon Aerogel with Ultrahigh and Wide-Range Linear Sensitivity. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 40641-40650	9.5	40
85	Facile synthesis of cellulose-based carbon with tunable N content for potential supercapacitor application. <i>Carbohydrate Polymers</i> , 2017 , 170, 107-116	10.3	38
84	Ultrahigh molecular weight, lignosulfonate-based polymers: preparation, self-assembly behaviours and dispersion property in coal/water slurry. <i>RSC Advances</i> , 2015 , 5, 21588-21595	3.7	37
83	Mesoporous Carbon-Coated Bismuth Nanorods as Anode for Potassium-Ion Batteries. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1900209	2.5	35
82	Flexible nanocomposites with ultrahigh specific areal capacitance and tunable properties based on a cellulose derived nanofiber-carbon sheet framework coated with polyaniline. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 13352-13362	13	35
81	D-Xylonic acid: a solvent and an effective biocatalyst for a three-component reaction. <i>Green Chemistry</i> , 2016 , 18, 1738-1750	10	34
80	Catalytic Conversion of Carbohydrates to Levulinate Ester over Heteropolyanion-Based Ionic Liquids. <i>ChemSusChem</i> , 2016 , 9, 3307-3316	8.3	33
79	Conversion of xylose into furfural using lignosulfonic acid as catalyst in ionic liquid. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 7430-5	5.7	30
78	Cobalt Single-Atom-Intercalated Molybdenum Disulfide for Sulfide Oxidation with Exceptional Chemoselectivity. <i>Advanced Materials</i> , 2020 , 32, e1906437	24	30

77	Using FeCl ₃ as a Solvent, Template, and Activator To Prepare B, N Co-Doping Porous Carbon with Excellent Supercapacitance. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 15983-15994	8.3	29
76	Xylan-type hemicelluloses supported terpyridine-Palladium(II) complex as an efficient and recyclable catalyst for Suzuki-Miyaura reaction. <i>Cellulose</i> , 2014 , 21, 125-137	5.5	29
75	Homogeneous synthesis of hemicellulosic succinates with high degree of substitution in ionic liquid. <i>Carbohydrate Polymers</i> , 2011 , 86, 1768-1774	10.3	29
74	N-Doped MoC Nanobelts/Graphene Nanosheets Bonded with Hydroxy Nanocellulose as Flexible and Editable Electrode for Hydrogen Evolution Reaction. <i>IScience</i> , 2019 , 19, 1090-1100	6.1	28
73	Rapid synthesis of cellulose esters by transesterification of cellulose with vinyl esters under the catalysis of NaOH or KOH in DMSO. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 2489-95	5.7	28
72	In Situ Carbonic Acid from CO ₂ : A Green Acid for Highly Effective Conversion of Cellulose in the Presence of Lewis acid. <i>ACS Sustainable Chemistry and Engineering</i> , 2016 , 4, 4146-4155	8.3	28
71	Effectively enhancing conversion of cellulose to HMF by combining in-situ carbonic acid from CO ₂ and metal oxides. <i>Industrial Crops and Products</i> , 2018 , 126, 151-157	5.9	28
70	Fabrication of a highly elastic nanocomposite hydrogel by surface modification of cellulose nanocrystals. <i>RSC Advances</i> , 2015 , 5, 13878-13885	3.7	27
69	Porous carbon coupled with an interlaced MoP/MoS ₂ heterojunction hybrid for efficient hydrogen evolution reaction. <i>Journal of Energy Chemistry</i> , 2020 , 45, 45-51	12	26
68	Polycation ionic liquid tailored PEO-based solid polymer electrolytes for high temperature lithium metal batteries. <i>Energy Storage Materials</i> , 2020 , 33, 173-180	19.4	26
67	Synthesis of water-soluble, fully biobased cellulose levulinate esters through the reaction of cellulose and alpha-angelica lactone in a DBU/CO ₂ /DMSO solvent system. <i>Green Chemistry</i> , 2020 , 22, 707-717	10	25
66	Fast Energy Storage in Two-Dimensional MoO Enabled by Uniform Oriented Tunnels. <i>ACS Nano</i> , 2019 , 13, 9091-9099	16.7	24
65	2021 Roadmap: electrocatalysts for green catalytic processes. <i>JPhys Materials</i> , 2021 , 4, 022004	4.2	24
64	Hierarchical ZnO nanorod arrays grown on copper foam as an advanced three-dimensional skeleton for dendrite-free sodium metal anodes. <i>Nano Energy</i> , 2021 , 80, 105563	17.1	24
63	Edge activation of an inert polymeric carbon nitride matrix with boosted absorption kinetics and near-infrared response for efficient photocatalytic CO ₂ reduction. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 11761-11772	13	23
62	A new strategy to tailor the structure of sustainable 3D hierarchical porous N-self-doped carbons from renewable biomass for high-performance supercapacitors and CO ₂ capture. <i>RSC Advances</i> , 2016 , 6, 34261-34270	3.7	23
61	An efficient method for the synthesis of hemicellulosic derivatives with bifunctional groups in butanol/water medium and their rheological properties. <i>Carbohydrate Polymers</i> , 2011 , 83, 1922-1928	10.3	22
60	Au@h-Al ₂ O ₃ analogic yolk-shell nanocatalyst for highly selective synthesis of biomass-derived D-xylonic acid via regulation of structure effects. <i>Green Chemistry</i> , 2018 , 20, 5188-5195	10	22

59	A novel transesterification system to rapidly synthesize cellulose aliphatic esters. <i>Cellulose</i> , 2014 , 21, 581-594	5.5	21
58	Impact of regeneration process on the crystalline structure and enzymatic hydrolysis of cellulose obtained from ionic liquid. <i>Carbohydrate Polymers</i> , 2014 , 111, 400-3	10.3	21
57	Glycidyl methacrylate derivatized xylan-rich hemicelluloses: synthesis and characterizations. <i>Cellulose</i> , 2012 , 19, 1361-1372	5.5	21
56	Carbon Nanotube/Chitosan-Based Elastic Carbon Aerogel for Pressure Sensing. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 17768-17775	3.9	20
55	Fluorescent pH-Sensing Probe Based on Biorefinery Wood Lignosulfonate and Its Application in Human Cancer Cell Bioimaging. <i>Journal of Agricultural and Food Chemistry</i> , 2016 , 64, 9592-9600	5.7	20
54	Solvothermally Controlled Synthesis of Organic-Inorganic Hybrid Nanosheets as Efficient pH-Universal Hydrogen-Evolution Electrocatalysts. <i>ChemSusChem</i> , 2018 , 11, 2828-2836	8.3	20
53	A foldable composite electrode with excellent electrochemical performance using microfibrillated cellulose fibers as a framework. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 20338-20346	13	19
52	Efficient photoreforming of lignocellulose into H ₂ and photocatalytic CO ₂ reduction via in-plane surface dyadic heterostructure of porous polymeric carbon nitride. <i>Carbon</i> , 2020 , 170, 199-212	10.4	18
51	Fabricating 3D hierarchical porous TiO ₂ and SiO ₂ with high specific surface area by using nanofibril-interconnected cellulose aerogel as a new biotemplate. <i>Industrial Crops and Products</i> , 2017 , 109, 790-802	5.9	17
50	Synthesis and characterization of cyanoethyl hemicelluloses and their hydrated products. <i>Cellulose</i> , 2013 , 20, 291-301	5.5	17
49	Synthesizing green carbon dots with exceptionally high yield from biomass hydrothermal carbon. <i>Cellulose</i> , 2020 , 27, 415-428	5.5	17
48	Hydrothermal conversion of bamboo: identification and distribution of the components in solid residue, water-soluble and acetone-soluble fractions. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 12360-5	5.7	16
47	Adsorption of Cu ²⁺ and Ni ²⁺ from Aqueous Solution by Arabinoxylan Hydrogel: Equilibrium, Kinetic, Competitive Adsorption. <i>Separation Science and Technology</i> , 2013 , 48, 2659-2669	2.5	16
46	Green synthesis of palladium nanoparticles via branched polymers: a bio-based nanocomposite for C-C coupling reactions. <i>RSC Advances</i> , 2016 , 6, 32202-32211	3.7	15
45	Linking Renewable Cellulose Nanocrystal into Lightweight and Highly Elastic Carbon Aerogel. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 11921-11929	8.3	15
44	Efficient base-free oxidation of monosaccharide into sugar acid under mild conditions using hierarchical porous carbon supported gold catalysts. <i>Green Chemistry</i> , 2020 , 22, 2588-2597	10	14
43	A new strategy for acid anhydrides-modified xylans in ionic liquids. <i>Fibers and Polymers</i> , 2013 , 14, 16-21	2	13
42	Functional Chitosan-based Materials for Biological Applications. <i>Current Medicinal Chemistry</i> , 2020 , 27, 4660-4672	4.3	12

41	Iron Single Atom Catalyzed Quinoline Synthesis. <i>Advanced Materials</i> , 2021 , 33, e2101382	24	11
40	Wood Carbon Based Single-Atom Catalyst for Rechargeable Zn/Air Batteries. <i>ACS Energy Letters</i> , 2021 , 6, 3624-3633	3.1	11
39	Hemicelluloses supported palladium/xylan nanocomposites containing N and O ligands: Highly-performance heterogeneous catalysts for Suzuki reaction. <i>Carbohydrate Polymers</i> , 2019 , 217, 224-231	10.3	9
38	Regulating the electron-hole separation to promote selective oxidation of biomass using ZnS@Bi ₂ S ₃ nanosheet catalyst. <i>Applied Catalysis B: Environmental</i> , 2021 , 292, 120180	21.8	9
37	Amphiphilic xylan-hydroxy acid conjugates: synthesis and self-assembly behaviors in aqueous solution. <i>Cellulose</i> , 2018 , 25, 245-257	5.5	8
36	Lignin Nanosphere-Supported Cuprous Oxide as an Efficient Catalyst for Huisgen [3+2] Cycloadditions under Relatively Mild Conditions. <i>Polymers</i> , 2018 , 10,	4.5	8
35	Lignocellulosic Biomass Derived Functional Materials: Synthesis and Applications in Biomedical Engineering. <i>Current Medicinal Chemistry</i> , 2019 , 26, 2456-2474	4.3	8
34	Mesoporous, nitrogen-doped, graphitized carbon nanosheets embedded with cobalt nanoparticles for efficient oxygen electroreduction. <i>Journal of Materials Science</i> , 2019 , 54, 4168-4179	4.3	8
33	Regulating TiO ₂ /MXenes catalysts to promote photocatalytic performance of highly selective oxidation of D-xylose. <i>Green Chemistry</i> , 2021 , 23, 1382-1388	10	8
32	Synthesis and characterization of biofunctional quaternized xylan-Fe ₂ O ₃ core/shell nanocomposites and modification with polylysine and folic acid. <i>Carbohydrate Polymers</i> , 2018 , 199, 382-389	10.3	8
31	Graphene Oxide Encapsulating Liquid Metal to Toughen Hydrogel. <i>Advanced Functional Materials</i> , 2018 , 28, 2106761	1.6	8
30	Preparing phenolic resins using pulping spent liquor. <i>International Journal of Adhesion and Adhesives</i> , 2017 , 77, 72-77	3.4	7
29	Synthesis of Biocompatible Cholesteryl-Carboxymethyl Xylan Micelles for Tumor-Targeting Intracellular DOX Delivery. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 1582-1589	5.5	7
28	Sulfonation of carbonized xylan-type hemicellulose: a renewable and effective biomass-based biocatalyst for the synthesis of O- and N-heterocycles. <i>New Journal of Chemistry</i> , 2018 , 42, 9140-9150	3.6	7
27	Coupling overall water splitting and biomass oxidation via Fe-doped Ni ₂ P@C nanosheets at large current density. <i>Applied Catalysis B: Environmental</i> , 2022 , 307, 121170	21.8	6
26	2020 Roadmap on Zinc Metal Batteries. <i>Chemistry - an Asian Journal</i> , 2020 , 15, 3696-3708	4.5	6
25	Palladium Nanoparticles Anchored on Thiol Functionalized Xylose Hydrochar Microspheres: An Efficient Heterogeneous Catalyst for Suzuki Cross-Coupling Reactions. <i>Catalysis Letters</i> , 2020 , 150, 1011-1019	2.8	5
24	Biomass-based N doped carbon as metal-free catalyst for selective oxidation of d-xylose into d-xyloonic acid. <i>Green Energy and Environment</i> , 2021 ,	5.7	5

23	Recent progress and future perspectives of flexible metal-air batteries. <i>SmartMat</i> , 2021 , 2, 519-553	22.8	5
22	Deep eutectic solvents derived carbon-based efficient electrocatalyst for boosting H ₂ production coupled with glucose oxidation. <i>Chemical Engineering Journal</i> , 2022 , 430, 132783	14.7	4
21	Xylan-Derived Light Conversion Nanocomposite Film. <i>Polymers</i> , 2020 , 12,	4.5	4
20	Cryogenic engineering of solid polymer electrolytes for room temperature and 4V-class all-solid-state lithium batteries. <i>Chemical Engineering Journal</i> , 2021 , 420, 127623	14.7	4
19	Vacancy engineered polymeric carbon nitride nanosheets for enhanced photoredox catalytic efficiency. <i>Cell Reports Physical Science</i> , 2021 , 100491	6.1	4
18	Synthesis, Characterization, and Applications of Hemicelluloses Based Eco-friendly Polymer Composites 2019 , 1267-1322		2
17	Strengthening effects of carboxymethylated hemicellulosic fractions on paper strength. <i>Industrial Crops and Products</i> , 2018 , 125, 360-369	5.9	2
16	Preparation and Characterization of PVC Matrix Composites with Biochemical Sludge. <i>Journal of Polymers and the Environment</i> , 2018 , 26, 3197-3201	4.5	1
15	Recycled fiber derived carbon dispersed Ag nanoparticles as high-performance catalyst for 4-nitrophenol reduction and substrate for surface-enhanced Raman scattering. <i>Cellulose</i> , 2020 , 27, 1649-1659	5.5	1
14	Microwave-assisted Extraction of Polysaccharides from Bamboo (<i>Phyllostachys acuta</i>) Leaves and their Antioxidant Activity. <i>BioResources</i> , 2016 , 11,	1.3	1
13	Metal coordination assists fabrication of multifunctional aerogel. <i>Journal of Materials Science and Technology</i> , 2021 , 71, 67-74	9.1	1
12	One-step construction of Co ₂ P nanoparticles encapsulated in N, P co-doped biomass-based porous carbon as bifunctional efficient electrocatalysts for overall water splitting. <i>Sustainable Energy and Fuels</i> , 2021 , 5, 2477-2485	5.8	1
11	Visible-light-promoted thiocyanation of sp ² C≡N bonds over heterogeneous graphitic carbon nitrides. <i>New Journal of Chemistry</i> , 2021 , 45, 14058-14062	3.6	1
10	Biomass-based protic ionic liquid derived N, P, co-doped porous carbon-coated CoP nanocrystals for efficient hydrogen evolution reaction. <i>Journal of Materials Science</i> , 2021 , 56, 18188-18199	4.3	1
9	Energy-efficient monosaccharides electrooxidation coupled with green hydrogen production by bifunctional Co ₉ S ₈ /Ni ₃ S ₂ electrode. <i>Chemical Engineering Journal</i> , 2022 , 136950	14.7	1
8	Oxygen Reduction Reaction Electrocatalysts 2022 , 1-34		0
7	Highly selective oxidation of monosaccharides to sugar acids at room temperature over palladium supported on surface functionalized carbon nanotubes. <i>Green Chemistry</i> , 2021 , 23, 7084-7092	10	0
6	Highly selective oxidation of monosaccharides to sugar acids by nickel-embedded carbon nanotubes under mild conditions. <i>Renewable Energy</i> , 2021 , 175, 650-659	8.1	0

- 5 Emulsion templated advanced functional materials from emerging nano building blocks. *Journal of Materials Chemistry A*, 13 0
- 4 Direct growth of a porous substrate on high-quality graphene via in situ phase inversion of a polymeric solution. *Nanoscale*, **2020**, 12, 4953-4958 7-7
- 3 Biorenewable Nanofiber and Nanocrystal: Renewable Nanomaterials for Constructing Novel Nanocomposites **2017**, 155-226
- 2 Enhanced Tunneling Magnetoresistance Effect via Ferroelectric Control of Interface Electronic/Magnetic Reconstructions. *ACS Applied Materials & Interfaces*, **2021**, 13, 56638-56644 9-5
- 1 Zinc-Air Batteries: An Iron-Decorated Carbon Aerogel for Rechargeable Flow and Flexible Zn/Air Batteries (Adv. Mater. 32/2020). *Advanced Materials*, **2020**, 32, 2070241 24