Yonggang Yao

List of Publications by Citations

137 papers	12,731 citations	57 h-index	112 g-index
147 ext. papers	16,188 ext. citations	16.6 avg, IF	6.47 L-index

#	Paper	IF	Citations
137	Flexible, solid-state, ion-conducting membrane with 3D garnet nanofiber networks for lithium batteries. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 7094-9	11.5	593
136	Carbothermal shock synthesis of high-entropy-alloy nanoparticles. *Science*, **2018**, 359, 1489-1494	33.3	560
135	Processing bulk natural wood into a high-performance structural material. *Nature*, **2018**, 554, 224-228	50.4	558
134	Toward garnet electrolyte-based Li metal batteries: An ultrathin, highly effective, artificial solid-state electrolyte/metallic Li interface. *Science Advances*, **2017**, 3, e1601659	14.3	482
133	All-wood, low tortuosity, aqueous, biodegradable supercapacitors with ultra-high capacitance. *Energy and Environmental Science*, **2017**, 10, 538-545	35.4	451
132	Graphene Oxide-Based Electrode Inks for 3D-Printed Lithium-Ion Batteries. *Advanced Materials*, **2016**, 28, 2587-94	24	443
131	Conformal, Nanoscale ZnO Surface Modification of Garnet-Based Solid-State Electrolyte for Lithium Metal Anodes. *Nano Letters*, **2017**, 17, 565-571	11.5	416
130	Reducing Interfacial Resistance between Garnet-Structured Solid-State Electrolyte and Li-Metal Anode by a Germanium Layer. *Advanced Materials*, **2017**, 29, 1606042	24	378
129	Ultrafine Silver Nanoparticles for Seeded Lithium Deposition toward Stable Lithium Metal Anode. *Advanced Materials*, **2017**, 29, 1702714	24	374
128	Three-dimensional bilayer garnet solid electrolyte based high energy density lithium metal–sulfur batteries. *Energy and Environmental Science*, **2017**, 10, 1568-1575	35.4	368
127	Tree-Inspired Design for High-Efficiency Water Extraction. *Advanced Materials*, **2017**, 29, 1704107	24	346
126	Highly Anisotropic, Highly Transparent Wood Composites. *Advanced Materials*, **2016**, 28, 5181-7	24	342
125	Progress in 3D Printing of Carbon Materials for Energy-Related Applications. *Advanced Materials*, **2017**, 29, 1603486	24	291
124	Mesoporous, Three-Dimensional Wood Membrane Decorated with Nanoparticles for Highly Efficient Water Treatment. *ACS Nano*, **2017**, 11, 4275-4282	16.7	272
123	A Thermally Conductive Separator for Stable Li Metal Anodes. *Nano Letters*, **2015**, 15, 6149-54	11.5	262
122	Rich Mesostructures Derived from Natural Woods for Solar Steam Generation. *Joule*, **2017**, 1, 588-599	27.8	242
121	Ultra-Thick, Low-Tortuosity, and Mesoporous Wood Carbon Anode for High-Performance Sodium-Ion Batteries. *Advanced Energy Materials*, **2016**, 6, 1600377	21.8	205

120	Anisotropic, lightweight, strong, and super thermally insulating nanowood with naturally aligned nanocellulose. *Science Advances*, **2018**, 4, eaar3724	14.3	204
119	Cellulose ionic conductors with high differential thermal voltage for low-grade heat harvesting. *Nature Materials*, **2019**, 18, 608-613	27	187
118	3D-Printed All-Fiber Li-Ion Battery toward Wearable Energy Storage. *Advanced Functional Materials*, **2017**, 27, 1703140	15.6	184
117	Garnet Solid Electrolyte Protected Li-Metal Batteries. *ACS Applied Materials & Interfaces*, **2017**, 9, 18809-18815	9.5	181
116	Highly efficient decomposition of ammonia using high-entropy alloy catalysts. *Nature Communications*, **2019**, 10, 4011	17.4	168
115	Extrusion-Based 3D Printing of Hierarchically Porous Advanced Battery Electrodes. *Advanced Materials*, **2018**, 30, e1705651	24	164
114	Large piezoelectricity and dielectric permittivity in BaTiO 3 -xBaSnO 3 system: The role of phase coexisting. *Europhysics Letters*, **2012**, 98, 27008	1.6	162
113	Transient Behavior of the Metal Interface in Lithium Metal-Garnet Batteries. *Angewandte Chemie - International Edition*, **2017**, 56, 14942-14947	16.4	160
112	High temperature shockwave stabilized single atoms. *Nature Nanotechnology*, **2019**, 14, 851-857	28.7	159
111	Highly Conductive, Lightweight, Low-Tortuosity Carbon Frameworks as Ultrathick 3D Current Collectors. *Advanced Energy Materials*, **2017**, 7, 1700595	21.8	156
110	Wood Composite as an Energy Efficient Building Material: Guided Sunlight Transmittance and Effective Thermal Insulation. *Advanced Energy Materials*, **2016**, 6, 1601122	21.8	154
109	Transparent and haze wood composites for highly efficient broadband light management in solar cells. *Nano Energy*, **2016**, 26, 332-339	17.1	149
108	Reduced Graphene Oxide Films with Ultrahigh Conductivity as Li-Ion Battery Current Collectors. *Nano Letters*, **2016**, 16, 3616-23	11.5	146
107	A carbon-based 3D current collector with surface protection for Li metal anode. *Nano Research*, **2017**, 10, 1356-1365	10	139
106	Anisotropic, Transparent Films with Aligned Cellulose Nanofibers. *Advanced Materials*, **2017**, 29, 1606284	24	137
105	Three-Dimensional Printable High-Temperature and High-Rate Heaters. *ACS Nano*, **2016**, 10, 5272-9	16.7	137
104	Enhanced electrocaloric effect in lead-free BaTi1−xSnxO3 ceramics near room temperature. *Applied Physics Letters*, **2014**, 105, 102904	3.4	136
103	Extreme Light Management in Mesoporous Wood Cellulose Paper for Optoelectronics. *ACS Nano*, **2016**, 10, 1369-77	16.7	133

102	Carbonized-leaf Membrane with Anisotropic Surfaces for Sodium-ion Battery. *ACS Applied Materials & Interfaces*, **2016**, 8, 2204-10	9.5	124
101	Flexible, Scalable, and Highly Conductive Garnet-Polymer Solid Electrolyte Templated by Bacterial Cellulose. *Advanced Energy Materials*, **2018**, 8, 1703474	21.8	117
100	Hierarchically Porous, Ultrathick, Breathable Wood-Derived Cathode for Lithium-Oxygen Batteries. *Advanced Energy Materials*, **2018**, 8, 1701203	21.8	109
99	Phase transitions and the piezoelectricity around morphotropic phase boundary in Ba(Zr0.2Ti0.8)O3-x(Ba0.7Ca0.3)TiO3 lead-free solid solution. *Applied Physics Letters*, **2014**, 105, 162908	3.4	108
98	3D-Printed Graphene Oxide Framework with Thermal Shock Synthesized Nanoparticles for Li-CO2 Batteries. *Advanced Functional Materials*, **2018**, 28, 1805899	15.6	95
97	High Temperature Carbonized Grass as a High Performance Sodium Ion Battery Anode. *ACS Applied Materials & Interfaces*, **2017**, 9, 391-397	9.5	94
96	Self-Powered Human-Interactive Transparent Nanopaper Systems. *ACS Nano*, **2015**, 9, 7399-406	16.7	85
95	Light management in plastic paper hybrid substrate towards high-performance optoelectronics. *Energy and Environmental Science*, **2016**, 9, 2278-2285	35.4	85
94	Transient, in situ synthesis of ultrafine ruthenium nanoparticles for a high-rate Li CO2 battery. *Energy and Environmental Science*, **2019**, 12, 1100-1107	35.4	77
93	From Wood to Textiles: Top-Down Assembly of Aligned Cellulose Nanofibers. *Advanced Materials*, **2018**, 30, e1801347	24	75
92	Ultra-fast self-assembly and stabilization of reactive nanoparticles in reduced graphene oxide films. *Nature Communications*, **2016**, 7, 12332	17.4	74
91	A strong, biodegradable and recyclable lignocellulosic bioplastic. *Nature Sustainability*, **2021**, 4, 627-635	22.1	74
90	Rapid Thermal Annealing of Cathode-Garnet Interface toward High-Temperature Solid State Batteries. *Nano Letters*, **2017**, 17, 4917-4923	11.5	72
89	A Strong, Tough, and Scalable Structural Material from Fast-Growing Bamboo. *Advanced Materials*, **2020**, 32, e1906308	24	69
88	Thermoelectric properties and performance of flexible reduced graphene oxide films up to 3,000 K. *Nature Energy*, **2018**, 3, 148-156	62.3	69
87	Stabilizing the Garnet Solid-Electrolyte/Polysulfide Interface in Li S Batteries. *Chemistry of Materials*, **2017**, 29, 8037-8041	9.6	67
86	Carbon Welding by Ultrafast Joule Heating. *Nano Letters*, **2016**, 16, 7282-7289	11.5	65
85	Textile Inspired Lithium-Oxygen Battery Cathode with Decoupled Oxygen and Electrolyte Pathways. *Advanced Materials*, **2018**, 30, 1704907	24	63

84	Transient Rechargeable Batteries Triggered by Cascade Reactions. *Nano Letters*, **2015**, 15, 4664-71	11.5	60
83	Computationally aided, entropy-driven synthesis of highly efficient and durable multi-elemental alloy catalysts. *Science Advances*, **2020**, 6, eaaz0510	14.3	60
82	Millisecond synthesis of CoS nanoparticles for highly efficient overall water splitting. *Nano Research*, **2019**, 12, 2259-2267	10	57
81	Determining the three-dimensional atomic structure of an amorphous solid. *Nature*, **2021**, 592, 60-64	50.4	57
80	Rapid, in Situ Synthesis of High Capacity Battery Anodes through High Temperature Radiation-Based Thermal Shock. *Nano Letters*, **2016**, 16, 5553-8	11.5	52
79	High-throughput, combinatorial synthesis of multimetallic nanoclusters. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 6316-6322	11.5	50
78	General, Vertical, Three-Dimensional Printing of Two-Dimensional Materials with Multiscale Alignment. *ACS Nano*, **2019**, 13, 12653-12661	16.7	49
77	Isotropic Paper Directly from Anisotropic Wood: Top-Down Green Transparent Substrate Toward Biodegradable Electronics. *ACS Applied Materials & Interfaces*, **2018**, 10, 28566-28571	9.5	49
76	Flexible, High Temperature, Planar Lighting with Large Scale Printable Nanocarbon Paper. *Advanced Materials*, **2016**, 28, 4684-91	24	47
75	Denary oxide nanoparticles as highly stable catalysts for methane combustion. *Nature Catalysis*, **2021**, 4, 62-70	36.5	45
74	In Situ Chainmail Catalyst Assembly in Low-Tortuosity, Hierarchical Carbon Frameworks for Efficient and Stable Hydrogen Generation. *Advanced Energy Materials*, **2018**, 8, 1801289	21.8	44
73	Overcoming immiscibility toward bimetallic catalyst library. *Science Advances*, **2020**, 6, eaaz6844	14.3	42
72	A Solution-Processed High-Temperature, Flexible, Thin-Film Actuator. *Advanced Materials*, **2016**, 28, 8618-8624	24	42
71	Thermally Stable Cellulose Nanocrystals toward High-Performance 2D and 3D Nanostructures. *ACS Applied Materials & Interfaces*, **2017**, 9, 28922-28929	9.5	39
70	Fire-Resistant Structural Material Enabled by an Anisotropic Thermally Conductive Hexagonal Boron Nitride Coating. *Advanced Functional Materials*, **2020**, 30, 1909196	15.6	37
69	All-Component Transient Lithium-Ion Batteries. *Advanced Energy Materials*, **2016**, 6, 1502496	21.8	37
68	Epitaxial Welding of Carbon Nanotube Networks for Aqueous Battery Current Collectors. *ACS Nano* , **2018**, 12, 5266-5273	16.7	36
67	Thermally Conductive Reduced Graphene Oxide Thin Films for Extreme Temperature Sensors. *Advanced Functional Materials*, **2019**, 29, 1901388	15.6	35

66	High temperature thermal management with boron nitride nanosheets. *Nanoscale*, **2017**, 10, 167-173	7.7	35
65	Flexible Solid-State Electrolyte with Aligned Nanostructures Derived from Wood **2019**, 1, 354-361		34
64	Anisotropic, Mesoporous Microfluidic Frameworks with Scalable, Aligned Cellulose Nanofibers. *ACS Applied Materials & Interfaces*, **2018**, 10, 7362-7370	9.5	33
63	Inverse effect of morphotropic phase boundary on the magnetostriction of ferromagnetic Tb1−xGdxCo2. *Physical Review B*, **2014**, 89,	3.3	30
62	Extreme mixing in nanoscale transition metal alloys. *Matter*, **2021**, 4, 2340-2353	12.7	30
61	A general, highly efficient, high temperature thermal pulse toward high performance solid state electrolyte. *Energy Storage Materials*, **2019**, 17, 234-241	19.4	30
60	High-Performance, Scalable Wood-Based Filtration Device with a Reversed-Tree Design. *Chemistry of Materials*, **2020**, 32, 1887-1895	9.6	29
59	Ultrahigh-temperature conversion of biomass to highly conductive graphitic carbon. *Carbon*, **2019**, 144, 241-248	10.4	28
58	Holey three-dimensional wood-based electrode for vanadium flow batteries. *Energy Storage Materials*, **2020**, 27, 327-332	19.4	27
57	In Situ Lignin Modification toward Photonic Wood. *Advanced Materials*, **2021**, 33, e2001588	24	27
56	High Temperature Synthesis of Single-Component Metallic Nanoparticles. *ACS Central Science*, **2017**, 3, 294-301	16.8	26
55	Isothermal phase transition and the transition temperature limitation in the lead-free (1-x)Bi0.5Na0.5TiO3-xBaTiO3 system. *Acta Materialia*, **2016**, 103, 746-753	8.4	26
54	Highly Efficient Water Treatment via a Wood-Based and Reusable Filter **2020**, 2, 430-437		24
53	Dramatic Enhancement of CO2 Photoreduction by Biodegradable Light-Management Paper. *Advanced Energy Materials*, **2018**, 8, 1703136	21.8	24
52	High-Temperature Atomic Mixing toward Well-Dispersed Bimetallic Electrocatalysts. *Advanced Energy Materials*, **2018**, 8, 1800466	21.8	24
51	Universal, In Situ Transformation of Bulky Compounds into Nanoscale Catalysts by High-Temperature Pulse. *Nano Letters*, **2017**, 17, 5817-5822	11.5	23
50	Solvo-thermal microwave-powered two-dimensional material exfoliation. *Chemical Communications* , **2016**, 52, 5757-60	5.8	23
49	Carbon-Supported High-Entropy Oxide Nanoparticles as Stable Electrocatalysts for Oxygen Reduction Reactions. *Advanced Functional Materials*, **2021**, 31, 2010561	15.6	21

48	Direct observation of the formation and stabilization of metallic nanoparticles on carbon supports. *Nature Communications*, **2020**, 11, 6373	17.4	20
47	Lignin-Based Direct Ink Printed Structural Scaffolds. *Small*, **2020**, 16, e1907212	11	20
46	Super-Clear Nanopaper from Agro-Industrial Waste for Green Electronics. *Advanced Electronic Materials*, **2017**, 3, 1600539	6.4	19
45	High-entropy nanoparticles: Synthesis-structure-property relationships and data-driven discovery.. *Science*, **2022**, 376, eabn3103	33.3	19
44	Design of High Capacity Dissoluble Electrodes for All Transient Batteries. *Advanced Functional Materials*, **2017**, 27, 1605724	15.6	18
43	Evolution of the tetragonal to rhombohedral transition in (1 -)(BiNa)TiO - BaTiO (7%). *Science and Technology of Advanced Materials*, **2013**, 14, 035008	7.1	18
42	Lightweight, strong, moldable wood via cell wall engineering as a sustainable structural material. *Science*, **2021**, 374, 465-471	33.3	18
41	Continuous 2000 K droplet-to-particle synthesis. *Materials Today*, **2020**, 35, 106-114	21.8	18
40	Inverted battery design as ion generator for interfacing with biosystems. *Nature Communications*, **2017**, 8, 15609	17.4	17
39	Stamping Flexible Li Alloy Anodes. *Advanced Materials*, **2021**, 33, e2005305	24	16
38	Tailoring the Local Environment of Platinum in Single-Atom Pt /CeO Catalysts for Robust Low-Temperature CO Oxidation. *Angewandte Chemie - International Edition*, **2021**, 60, 26054-26062	16.4	15
37	Evolution from successive phase transitions to morphotropic phase boundary in BaTiO3-based ferroelectrics. *Applied Physics Letters*, **2018**, 112, 182903	3.4	14
36	Ultrafast, Controllable Synthesis of Sub-Nano Metallic Clusters through Defect Engineering. *ACS Applied Materials & Interfaces*, **2019**, 11, 29773-29779	9.5	14
35	Ferroelastic and strain glass transition in (1-x)(Bi 0.5 Na 0.5)TiO 3 -xBaTiO 3 solid solution. *Europhysics Letters*, **2012**, 100, 17004	1.6	14
34	Fly-through synthesis of nanoparticles on textile and paper substrates. *Nanoscale*, **2019**, 11, 6174-6181	7.7	11
33	Necklace-Like Silicon Carbide and Carbon Nanocomposites Formed by Steady Joule Heating. *Small Methods*, **2018**, 2, 1700371	12.8	11
32	Anisotropic Evaporator with a T-Shape Design for High-Performance Solar-Driven Zero-Liquid Discharge. *Small*, **2021**, 17, e2100969	11	11
31	Transient Behavior of the Metal Interface in Lithium Metal garnet Batteries. *Angewandte Chemie*, **2017**, 129, 15138-15143	3.6	10

30	Anatomy of vertical heteroepitaxial interfaces reveals the memristive mechanism in Nb□□NaNbO□ thin films. *Scientific Reports*, **2015**, 5, 9229	4.9	10
29	Cut-and-stack nanofiber paper toward fast transient energy storage. *Inorganic Chemistry Frontiers*, **2016**, 3, 681-688	6.8	10
28	Thermal Shock Synthesis of Nanocatalyst by 3D-Printed Miniaturized Reactors. *Small*, **2020**, 16, e2000509	11	9
27	Strong and Superhydrophobic Wood with Aligned Cellulose Nanofibers as a Waterproof Structural Material□*Chinese Journal of Chemistry*, **2020**, 38, 823-829	4.9	9
26	A General Method for Regenerating Catalytic Electrodes. *Joule*, **2020**, 4, 2374-2386	27.8	9
25	Strong, robust cellulose composite film for efficient light management in energy efficient building. *Chemical Engineering Journal*, **2021**, 425, 131469	14.7	9
24	3D Printed Graphene-Based 3000 K Probe. *Advanced Functional Materials*, **2021**, 31, 2102994	15.6	8
23	High-entropy alloy stabilized and activated Pt clusters for highly efficient electrocatalysis. *SusMat*,		7
22	Catalyst-Free Carbon Nanotube Growth in Confined Space High Temperature Gradient. *Research*, **2018**, 2018, 1793784	7.8	6
21	Rapid Laser Pulse Synthesis of Supported Metal Nanoclusters with Kinetically Tunable Size and Surface Density for Electrocatalytic Hydrogen Evolution. *ACS Applied Nano Materials*, **2020**, 3, 2959-2968	5.6	5
20	Tuning the High-Temperature Wetting Behavior of Metals toward Ultrafine Nanoparticles. *Angewandte Chemie - International Edition*, **2018**, 57, 2625-2629	16.4	5
19	Multi-principal elemental intermetallic nanoparticles synthesized via a disorder-to-order transition.. *Science Advances*, **2022**, 8, eabm4322	14.3	5
18	Solar-driven on-site H2O2 generation and tandem photo-Fenton reaction on a triphase interface for rapid organic pollutant degradation. *Chemical Engineering Journal*, **2021**, 133168	14.7	5
17	High-temperature-pulse synthesis of ultrathin-graphene-coated metal nanoparticles. *Nano Energy*, **2021**, 80, 105536	17.1	5
16	Bamboo-inspired, simulation-guided design and 3D printing of light-weight and high-strength mechanical metamaterials. *Applied Materials Today*, **2021**, 26, 101268	6.6	4
15	Interface Engineering Between multi-elemental alloy Nanoparticles and Carbon Support Toward Stable Catalysts. *Advanced Materials*, **2021**, e2106436	24	4
14	Overcoming Immiscibility via a Milliseconds-Long Shock Synthesis toward Alloyed Nanoparticles. *Matter*, **2019**, 1, 1451-1453	12.7	4
13	Rapid Synthesis of High-Entropy Oxide Microparticles.. *Small*, **2022**, e2104761	11	3

12	Nanocarbon Paper: Flexible, High Temperature, Planar Lighting with Large Scale Printable Nanocarbon Paper (Adv. Mater. 23/2016). *Advanced Materials*, **2016**, 28, 4566	24	3
11	Highly efficient, field-assisted water splitting enabled by a bifunctional Ni3Fe magnetized wood carbon. *Chemical Engineering Journal*, **2022**, 439, 135722	14.7	3
10	Programmable heating and quenching for efficient thermochemical synthesis.. *Nature*, **2022**, 605, 470-476	50.4	3
9	Enthalpy induced phase partition toward hierarchical, nanostructured high-entropy alloys. *Nano Research*,1	10	2
8	Continuous Fly-Through High-Temperature Synthesis of Nanocatalysts. *Nano Letters*, **2021**, 21, 4517-4523	11.5	2
7	Surface-Decorated High-Entropy Alloy Catalysts with Significantly Boosted Activity and Stability. *Advanced Functional Materials*,2204643	15.6	2
6	Sustainable, superfast deconstruction of natural cellulosic aggregates toward intrinsically green, multifunctional gel. *Chemical Engineering Journal*, **2022**, 435, 134856	14.7	1
5	Composition-dependent structure and properties of 5- and 15-element high-entropy alloy nanoparticles. *Cell Reports Physical Science*, **2021**, 2, 100641	6.1	1
4	Tailoring the Local Environment of Platinum in Single-Atom Pt1/CeO2 Catalysts for Robust Low-Temperature CO Oxidation. *Angewandte Chemie*,	3.6	1
3	A general strategy for overcoming the trade-off between ultrasmall size and high loading of MOF-derived metal nanoparticles by millisecond pyrolysis. *Nano Energy*, **2022**, 97, 107125	17.1	1
2	Tuning the High-Temperature Wetting Behavior of Metals toward Ultrafine Nanoparticles. *Angewandte Chemie*, **2018**, 130, 2655-2659	3.6	0
1	In situ TEM Observation of Nanoparticles Formation during Carbothermal Shock. *Microscopy and Microanalysis*, **2019**, 25, 1534-1535	0.5	