

# Zhichao Lou

## List of Publications by Year in descending order

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73  
papers

2,882  
citations

201674

27  
h-index

175258

52  
g-index

74  
all docs

74  
docs citations

74  
times ranked

2704  
citing authors

#	ARTICLE	IF	CITATIONS
1	A flexible electromagnetic wave-electricity harvester. <i>Nature Communications</i> , 2021, 12, 834.	12.8	269
2	Biomass-Derived Carbon Heterostructures Enable Environmentally Adaptive Wideband Electromagnetic Wave Absorbers. <i>Nano-Micro Letters</i> , 2022, 14, 11.	27.0	169
3	Effect of pyrolysis temperature on the chemical oxidation stability of bamboo biochar. <i>Bioresource Technology</i> , 2016, 218, 1303-1306.	9.6	156
4	Pyrolysis polygeneration of poplar wood: Effect of heating rate and pyrolysis temperature. <i>Bioresource Technology</i> , 2016, 218, 780-788.	9.6	151
5	Effect of alkali treatment on microstructure and mechanical properties of individual bamboo fibers. <i>Cellulose</i> , 2017, 24, 333-347.	4.9	132
6	Synthesis of porous carbon matrix with inlaid Fe <sub>3</sub> C/Fe <sub>3</sub> O <sub>4</sub> micro-particles as an effective electromagnetic wave absorber from natural wood shavings. <i>Journal of Alloys and Compounds</i> , 2019, 775, 800-809.	5.5	118
7	Phenolic foam-derived magnetic carbon foams (MCFs) with tunable electromagnetic wave absorption behavior. <i>Chemical Engineering Journal</i> , 2020, 391, 123571.	12.7	108
8	Synthesis of Magnetic Wood with Excellent and Tunable Electromagnetic Wave-Absorbing Properties by a Facile Vacuum/Pressure Impregnation Method. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 1000-1008.	6.7	98
9	Nano-Fe <sub>3</sub> O <sub>4</sub> /bamboo bundles/phenolic resin oriented recombination ternary composite with enhanced multiple functions. <i>Composites Part B: Engineering</i> , 2021, 226, 109335.	12.0	96
10	Effect of torrefaction pretreatment and catalytic pyrolysis on the pyrolysis poly-generation of pine wood. <i>Bioresource Technology</i> , 2016, 214, 615-622.	9.6	92
11	Synthesis of Porous 3D Fe/C Composites from Waste Wood with Tunable and Excellent Electromagnetic Wave Absorption Performance. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 15598-15607.	6.7	90
12	Regulating lignin content to obtain excellent bamboo-derived electromagnetic wave absorber with thermal stability. <i>Chemical Engineering Journal</i> , 2022, 430, 133178.	12.7	73
13	Bamboo flattening technique: a literature and patent review. <i>European Journal of Wood and Wood Products</i> , 2021, 79, 1035-1048.	2.9	72
14	Magnetic Cellâ€“Scaffold Interface Constructed by Superparamagnetic IONP Enhanced Osteogenesis of Adipose-Derived Stem Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 44279-44289.	8.0	67
15	Assemblyâ€“Induced Thermogenesis of Gold Nanoparticles in the Presence of Alternating Magnetic Field for Controllable Drug Release of Hydrogel. <i>Advanced Materials</i> , 2016, 28, 10801-10808.	21.0	62
16	Effects of thermal modification on the physical, chemical and micromechanical properties of Masson pine wood ( <i>Pinus massoniana</i> Lamb.). <i>Holzforschung</i> , 2018, 72, 1063-1070.	1.9	61
17	In-situ formation of low-dimensional, magnetic core-shell nanocrystal for electromagnetic dissipation. <i>Composites Part B: Engineering</i> , 2021, 214, 108744.	12.0	57
18	Effect of Saturated Steam Heat Treatment on Physical and Chemical Properties of Bamboo. <i>Molecules</i> , 2020, 25, 1999.	3.8	53

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19	Magnetized bentonite by Fe <sub>3</sub> O <sub>4</sub> nanoparticles treated as adsorbent for methylene blue removal from aqueous solution: Synthesis, characterization, mechanism, kinetics and regeneration. Journal of the Taiwan Institute of Chemical Engineers, 2015, 49, 199-205.	5.3	52
20	In situ identification of the molecular-scale interactions of phenol-formaldehyde resin and wood cell walls using infrared nanospectroscopy. RSC Advances, 2016, 6, 76318-76324.	3.6	52
21	Synthesis of Magnetic Wood Fiber Board and Corresponding Multi-Layer Magnetic Composite Board, with Electromagnetic Wave Absorbing Properties. Nanomaterials, 2018, 8, 441.	4.1	41
22	Moderate cooling coprecipitation for extremely small iron oxide as a pH dependent MRI contrast agent. Nanoscale, 2020, 12, 5521-5532.	5.6	35
23	Fabrication of Magnetic Conjugation Clusters via Intermolecular Assembling for Ultrasensitive Surface Plasmon Resonance (SPR) Detection in a Wide Range of Concentrations. Analytical Chemistry, 2017, 89, 13472-13479.	6.5	33
24	Multi-Scale Evaluation of the Effect of Phenol Formaldehyde Resin Impregnation on the Dimensional Stability and Mechanical Properties of Pinus Massoniana Lamb.. Forests, 2019, 10, 646.	2.1	31
25	Effect of Phenol Formaldehyde Resin Penetration on the Quasi-Static and Dynamic Mechanics of Wood Cell Walls Using Nanoindentation. Nanomaterials, 2019, 9, 1409.	4.1	30
26	Synthesis of Ultralight and Porous Magnetic g-C <sub>3</sub> N <sub>4</sub> /g-Carbon Foams with Excellent Electromagnetic Wave (EMW) Absorption Performance and Their Application as a Reinforcing Agent for 3D Printing EMW Absorbers. Industrial & Engineering Chemistry Research, 2020, 59, 7633-7645.	3.7	28
27	Effect of the penetration of isocyanates (pMDI) on the nanomechanics of wood cell wall evaluated by AFM-IR and nanoindentation (NI). Holzforschung, 2018, 72, 301-309.	1.9	27
28	The properties of Moso bamboo heat-treated with silicon oil. European Journal of Wood and Wood Products, 2018, 76, 1273-1278.	2.9	27
29	Fabrication of Fe/C Composites as Effective Electromagnetic Wave Absorber by Carbonization of Pre-magnetized Natural Wood Fibers. Journal of Bioresources and Bioproducts, 2019, 4, 43-50.	20.5	27
30	A new approach for fabricating crack-free, flattened bamboo board and the study of its macro-/micro-properties. European Journal of Wood and Wood Products, 2021, 79, 1531-1540.	2.9	26
31	Radiosensitivity enhancement of Fe <sub>3</sub> O <sub>4</sub> @Ag nanoparticles on human glioblastoma cells. Artificial Cells, Nanomedicine and Biotechnology, 2018, 46, 975-984.	2.8	25
32	Synthesis of Fe <sub>3</sub> C@C from Pyrolysis of Fe <sub>3</sub> O <sub>4</sub> -Lignin Clusters and Its Application for Quick and Sensitive Detection of PrP <sup>Sc</sup> through a Sandwich SPR Detection Assay. International Journal of Molecular Sciences, 2019, 20, 741.	4.1	25
33	Molecular-level insights of early-stage prion protein aggregation on mica and gold surface determined by AFM imaging and molecular simulation. Colloids and Surfaces B: Biointerfaces, 2015, 135, 371-378.	5.0	24
34	Characteristics and properties of wood/polyaniline electromagnetic shielding composites synthesized via in situ polymerization. Polymer Composites, 2018, 39, 537-543.	4.6	24
35	Fabrication of a novel magnetic reconstituted bamboo with mildew resistance properties. Materials Today Communications, 2020, 23, 101086.	1.9	24
36	Recent Advancements in MOF/Biomass and Bio-MOF Multifunctional Materials: A Review. Sustainability, 2022, 14, 5768.	3.2	23

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37	Highly transparent and self-healing films based on the dynamic Schiff base linkage. RSC Advances, 2016, 6, 115247-115251.	3.6	22
38	Temperature-dependent mechanical properties of wood-adhesive bondline evaluated by nanoindentation. Journal of Adhesion, 2017, 93, 640-656.	3.0	22
39	Effects of One-Step Hot Oil Treatment on the Physical, Mechanical, and Surface Properties of Bamboo Scrimber. Molecules, 2020, 25, 4488.	3.8	21
40	Multi-scale evaluation of the effect of saturated steam on the micromechanical properties of Moso bamboo. Holzforschung, 2021, 75, 1052-1060.	1.9	21
41	Qualitative and Quantitative Detection of PrPSc Based on the Controlled Release Property of Magnetic Microspheres Using Surface Plasmon Resonance (SPR). Nanomaterials, 2018, 8, 107.	4.1	20
42	Transition characteristics of a carbonized wood cell wall investigated by scanning thermal microscopy (SThM). Wood Science and Technology, 2017, 51, 831-843.	3.2	19
43	Growth enhancing effect of LBL-assembled magnetic nanoparticles on primary bone marrow cells. Science China Materials, 2016, 59, 901-910.	6.3	18
44	Following the aggregation of human prion protein on Au(111) surface in real-time. Chemical Communications, 2015, 51, 2088-2090.	4.1	17
45	Quick and sensitive SPR detection of prion disease-associated isoform (PrPSc) based on its self-assembling behavior on bare gold film and specific interactions with aptamer-graphene oxide (AGO). Colloids and Surfaces B: Biointerfaces, 2017, 157, 31-39.	5.0	17
46	In vitro cytotoxicity evaluation of graphene oxide from the peroxidase-like activity perspective. Colloids and Surfaces B: Biointerfaces, 2017, 151, 215-223.	5.0	16
47	Fe <sub>3</sub> O <sub>4</sub> /Fe decorated porous carbon-based composites with adjustable electromagnetic wave absorption: Impedance matching and loading rate. Journal of Alloys and Compounds, 2021, 858, 157706.	5.5	16
48	Facile Synthesis of Ultralight and Porous Melamine-Formaldehyde (MF) Resin-Derived Magnetic Graphite-Like C <sub>3</sub> N <sub>4</sub> /Carbon Foam with Electromagnetic Wave Absorption Behavior. Crystals, 2020, 10, 656.	2.2	15
49	Effect of High-Temperature Hydrothermal Treatment on Chemical, Mechanical, Physical, and Surface Properties of Moso Bamboo. Forests, 2022, 13, 712.	2.1	15
50	Magnetic Nanobubble Mechanical Stress Induces the Piezo <sup>2+</sup> â€”BMP2/Smad Pathway to Modulate Neural Stem Cell Fate and MRI/Ultrasound Dual Imaging Surveillance for Ischemic Stroke. Small, 2022, 18, e2201123.	10.0	14
51	Effects of accelerated aging treatment on the microstructure and mechanics of wood-resin interphase. Holzforschung, 2018, 72, 235-241.	1.9	13
52	Roles of PIP <sub>2</sub> in the membrane binding of MIM <sup>+</sup> â€”BAR: insights from molecular dynamics simulations. FEBS Letters, 2018, 592, 2533-2542.	2.8	13
53	3D magnetic nanocomposite scaffolds enhanced the osteogenic capacities of rat bone mesenchymal stem cells in vitro and in a rat calvarial bone defect model by promoting cell adhesion. Journal of Biomedical Materials Research - Part A, 2021, 109, 1670-1680.	4.0	12
54	Gold Nanoparticle Probe-Assisted Antigen-Counting Chip Using SEM. ACS Applied Materials & Interfaces, 2019, 11, 6769-6776.	8.0	11

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55	Multistage Extraction of Star Anise and Black Pepper Derivatives for Antibacterial, Antioxidant, and Anticancer Activity. <i>Frontiers in Chemistry</i> , 2021, 9, 660138.	3.6	11
56	Determination of the Effects of Superheated Steam on Microstructure and Micromechanical Properties of Bamboo Cell Walls Using Quasi-Static Nanoindentation. <i>Forests</i> , 2021, 12, 1742.	2.1	9
57	Multi-scale characterization of the effect of saturated steam on the macroscale properties and surface changes of moso bamboo. <i>Materials Express</i> , 2021, 11, 740-748.	0.5	8
58	Change in Micro-Morphology and Micro-Mechanical Properties of Thermally Modified Moso Bamboo. <i>Polymers</i> , 2022, 14, 646.	4.5	8
59	Study on Bamboo Longitudinal Flattening Technology. <i>Polymers</i> , 2022, 14, 816.	4.5	8
60	Thermal phase transition controlling electromagnetic wave absorption behavior of PAN fiber derived porous magnetic absorber. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 26007-26020.	2.2	7
61	&lt;math>\gamma</math>-Radiation Synthesis of Nano/Micrometer-Scale Single-Crystalline Large Gold Plates. <i>Journal of Nanoscience and Nanotechnology</i> , 2012, 12, 3142-3149.	0.9	6
62	Effect of the electrostatic surface potential on the oligomerization of full-length human recombinant prion protein at single-molecule level. <i>Journal of Chemical Physics</i> , 2016, 144, 114701.	3.0	6
63	Synthesis of Porous Fe/C Bio-Char Adsorbent for Rhodamine B from Waste Wood: Characterization, Kinetics and Thermodynamics. <i>Processes</i> , 2019, 7, 150.	2.8	6
64	Effect of torrefaction on the pyrolysis behavior, kinetics, and phenolic products of lignin. <i>Biomass Conversion and Biorefinery</i> , 2020, , 1.	4.6	6
65	Multi-Scale Analysis of Changes in Crack-Free Flattened Moso Bamboo After Saturated Steam Treatment and Flattening Process. <i>Science of Advanced Materials</i> , 2021, 13, 1259-1267.	0.7	5
66	Artificial intelligence-assisted enumeration of ultra-small viruses with dual dark-field plasmon resonance probes. <i>Biosensors and Bioelectronics</i> , 2022, 199, 113893.	10.1	5
67	A simple strategy to fabricate poly (acrylamide-co-alginate)/gold nanocomposites for inactivation of bacteria. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 117, 2009-2018.	2.3	3
68	Quantitative Evaluation of the Influence of Densification Process on Bamboo Cell Walls. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2021, 16, 1296-1302.	0.5	3
69	Characterization of the Influence of Heat Compression on Bamboo Cell Walls by Nanoindentation. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2021, 16, 1436-1443.	0.5	3
70	Detection of Wild-Type Hypoxanthine Guanine Phosphoribosyl Transferase of Lymphocytes in Gamma-Irradiated Mice with Surface Plasmon Resonance. <i>Analytical Letters</i> , 2012, 45, 850-861.	1.8	2
71	High-Density Polyethylene and Heat-Treated Bamboo Fiber Composites: Nonisothermal Crystallization Properties. <i>International Journal of Polymer Science</i> , 2015, 2015, 1-7.	2.7	2
72	Facile synthesis and antibacterial evaluation of poly(acrylamide- $\beta$ -cyclodextrin)/silver nanocomposite. <i>Polymer Composites</i> , 2016, 37, 1480-1487.	4.6	2

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73	Optimizing purification process of MIM-I-BAR domain by introducing atomic force microscope and dynamics simulations. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017, 157, 391-397.	5.0	1