

Jiafu Shi

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

114
papers

4,229
citations

35
h-index

61
g-index

119
ext. papers

5,060
ext. citations

9.9
avg, IF

5.74
L-index

#	Paper	IF	Citations
114	Mechanochemical synthesis of enzyme@covalent organic network nanobiohybrids. <i>Applied Materials Today</i> , 2022 , 26, 101381	6.6	1
113	Pickering interfacial biocatalysis with enhanced diffusion processes for CO ₂ mineralization. <i>Chinese Journal of Catalysis</i> , 2022 , 43, 1184-1191	11.3	1
112	Interface engineering of organic-inorganic heterojunctions with enhanced charge transfer. <i>Applied Catalysis B: Environmental</i> , 2022 , 309, 121261	21.8	2
111	Enzyme-photo-coupled catalytic systems. <i>Chemical Society Reviews</i> , 2021 ,	58.5	7
110	Interactions Between Microplastics and Heavy Metals in Aquatic Environments: A Review. <i>Frontiers in Microbiology</i> , 2021 , 12, 652520	5.7	13
109	Nonconventional Cofactor Regeneration Systems 2021 , 275-296		
108	Hierarchically Porous Biocatalytic MOF Microreactor as a Versatile Platform towards Enhanced Multienzyme and Cofactor-Dependent Biocatalysis. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 5421-5428	16.4	28
107	Hierarchically Porous Biocatalytic MOF Microreactor as a Versatile Platform towards Enhanced Multienzyme and Cofactor-Dependent Biocatalysis. <i>Angewandte Chemie</i> , 2021 , 133, 5481-5488	3.6	13
106	Metal Hydride-Embedded Titania Coating to Coordinate Electron Transfer and Enzyme Protection in Photo-enzymatic Catalysis. <i>ACS Catalysis</i> , 2021 , 11, 476-483	13.1	11
105	Mussel-inspired capsules toward reaction-triggered cargo release. <i>Materials Chemistry Frontiers</i> , 2021 , 5, 792-798	7.8	4
104	Intensifying Electron Utilization by Surface-Anchored Rh Complex for Enhanced Nicotinamide Cofactor Regeneration and Photoenzymatic CO Reduction. <i>Research</i> , 2021 , 2021, 8175709	7.8	6
103	Granum-Inspired Photoenzyme-Coupled Catalytic System via Stacked Polymeric Carbon Nitride. <i>ACS Catalysis</i> , 2021 , 11, 9210-9220	13.1	0
102	Boosting Nitrogen Activation via Bimetallic Organic Frameworks for Photocatalytic Ammonia Synthesis. <i>ACS Catalysis</i> , 2021 , 11, 9986-9995	13.1	14
101	General framework for enzyme-photo-coupled catalytic system toward carbon dioxide conversion. <i>Current Opinion in Biotechnology</i> , 2021 , 73, 67-73	11.4	0
100	[email[protected]] Carbon Aerogels with a Hierarchically Structured Surface for Treating Organic Pollutants. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 17529-17536	3.9	13
99	Immobilization of carbonic anhydrase for facilitated CO ₂ capture and separation. <i>Chinese Journal of Chemical Engineering</i> , 2020 , 28, 2817-2831	3.2	10
98	TA/Fe(III) anti-chloride coating to protect concrete. <i>Journal of Cleaner Production</i> , 2020 , 259, 120922	10.3	5

97	Superhydrophobic Metal-Organic Framework Nanocoating Induced by Metal-Phenolic Networks for Oily Water Treatment. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 1831-1839	8.3	17
96	Synergy of Electron Transfer and Electron Utilization via Metal-Organic Frameworks as an Electron Buffer Tank for Nicotinamide Regeneration. <i>ACS Catalysis</i> , 2020 , 10, 2894-2905	13.1	24
95	Unraveling and Manipulating of NADH Oxidation by Photogenerated Holes. <i>ACS Catalysis</i> , 2020 , 10, 4967-4972	13.1	17
94	Improving Photocatalytic Energy Conversion via NAD(P)H. <i>Joule</i> , 2020 , 4, 2055-2059	27.8	4
93	Design and Construction of Enzyme-Nanozyme Integrated Catalyst as a Multifunctional Detection Platform. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 20646-20655	3.9	4
92	Concerted Chemoenzymatic Synthesis of β -Keto Acid through Compartmentalizing and Channeling of Metal-Organic Frameworks. <i>ACS Catalysis</i> , 2020 , 10, 9664-9673	13.1	15
91	Nanoporous Phyllosilicate Assemblies for Enzyme Immobilization.. <i>ACS Applied Bio Materials</i> , 2019 , 2, 777-786	4.1	13
90	Hierarchically Porous and Water-Tolerant Metal-Organic Frameworks for Enzyme Encapsulation. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 12835-12844	3.9	19
89	Crackled nanocapsules: the "imperfect" structure for enzyme immobilization. <i>Chemical Communications</i> , 2019 , 55, 7155-7158	5.8	10
88	Artificial Thylakoid for the Coordinated Photoenzymatic Reduction of Carbon Dioxide. <i>ACS Catalysis</i> , 2019 , 9, 3913-3925	13.1	45
87	Mussel-Inspired pH-Switched Assembly of Capsules with an Ultrathin and Robust Nanoshell. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 28228-28235	9.5	11
86	Coordination between Electron Transfer and Molecule Diffusion through a Bioinspired Amorphous Titania Nanoshell for Photocatalytic Nicotinamide Cofactor Regeneration. <i>ACS Catalysis</i> , 2019 , 9, 11492-11501	13.1	19
85	Bioinspired synthesis of nanofibers on monolithic scaffolds for enzyme immobilization with enhanced loading capacity and activity recovery. <i>Journal of Chemical Technology and Biotechnology</i> , 2019 , 94, 3763-3771	3.5	2
84	Plant polyphenol-inspired nano-engineering topological and chemical structures of commercial sponge surface for oils/organic solvents clean-up and recovery. <i>Chemosphere</i> , 2019 , 218, 559-568	8.4	16
83	Phosphorus Quantum Dots-Facilitated Enrichment of Electrons on g-C ₃ N ₄ Hollow Tubes for Visible-Light-Driven Nicotinamide Adenine Dinucleotide Regeneration. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 285-295	8.3	28
82	One-pot fabrication of chitin-shellac composite microspheres for efficient enzyme immobilization. <i>Journal of Biotechnology</i> , 2018 , 266, 1-8	3.7	21
81	Nickle-cobalt composite catalyst-modified activated carbon anode for direct glucose alkaline fuel cell. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 1805-1815	6.7	47
80	Shielding of Enzymes on the Surface of Graphene-Based Composite Cellular Foams Through Bioinspired Mineralization. <i>Methods in Enzymology</i> , 2018 , 609, 355-370	1.7	1

79	Bioinspired construction of multi-enzyme catalytic systems. <i>Chemical Society Reviews</i> , 2018 , 47, 4295-4318	38.5	90
78	Robust and Recyclable Two-Dimensional Nanobiocatalysts for Biphasic Reactions in Pickering Emulsions. <i>Industrial & Engineering Chemistry Research</i> , 2018 , 57, 8708-8717	3.9	11
77	Bio-inspired synthesis of three-dimensional porous g-C ₃ N ₄ @carbon microflowers with enhanced oxygen evolution reactivity. <i>Chemical Engineering Journal</i> , 2018 , 337, 312-321	14.7	35
76	Polymer@MOFs capsules prepared through controlled interfacial mineralization for switching on/off enzymatic reactions. <i>Applied Materials Today</i> , 2018 , 13, 320-328	6.6	11
75	Chloroplast-Inspired Artificial Photosynthetic Capsules for Efficient and Sustainable Enzymatic Hydrogenation. <i>ACS Sustainable Chemistry and Engineering</i> , 2018 , 6, 17114-17123	8.3	11
74	Catalysts from renewable resources for biodiesel production. <i>Energy Conversion and Management</i> , 2018 , 178, 277-289	10.6	101
73	g-C ₃ N ₄ @Fe ₂ O ₃ /C Photocatalysts: Synergistically Intensified Charge Generation and Charge Transfer for NADH Regeneration. <i>ACS Catalysis</i> , 2018 , 8, 5664-5674	13.1	99
72	Cofactor NAD(P)H Regeneration Inspired by Heterogeneous Pathways. <i>CheM</i> , 2017 , 2, 621-654	16.2	171
71	In situ biosynthesis of ultrafine metal nanoparticles within a metal-organic framework for efficient heterogeneous catalysis. <i>Nanotechnology</i> , 2017 , 28, 365604	3.4	11
70	Constructing Quantum Graphitic Carbon Nitride Isotype Heterojunctions for Enhanced Visible-Light-Driven NADH Regeneration and Enzymatic Hydrogenation. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 6247-6255	3.9	28
69	Coordination polymer nanocapsules prepared using metal-organic framework templates for pH-responsive drug delivery. <i>Nanotechnology</i> , 2017 , 28, 275601	3.4	33
68	Preparation of Ultrathin, Robust Nanohybrid Capsules through a "Beyond Biomineralization" Method. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 12841-12850	9.5	6
67	Shielding of Enzyme by a Stable and Protective Organosilica Layer on Monolithic Scaffolds for Continuous Bioconversion. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 10615-10622	3.9	12
66	Peony petal-like 3D graphene-nickel oxide nanocomposite decorated nickel foam as high-performance electrocatalyst for direct glucose alkaline fuel cell. <i>International Journal of Hydrogen Energy</i> , 2017 , 42, 29863-29873	6.7	24
65	Monolithic biocatalytic systems with enhanced stabilities constructed through biomimetic silicification-induced enzyme immobilization on rGO/FeOOH hydrogel. <i>Biochemical Engineering Journal</i> , 2017 , 117, 52-61	4.2	15
64	Combination of Redox Assembly and Biomimetic Mineralization To Prepare Graphene-Based Composite Cellular Foams for Versatile Catalysis. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 43950-43958	9.5	6
63	In situ synthesized rGO@Fe ₃ O ₄ nanocomposites as enzyme immobilization support for achieving high activity recovery and easy recycling. <i>Biochemical Engineering Journal</i> , 2016 , 105, 273-280	4.2	50
62	Enhancing 6-APA Productivity and Operational Stability of Penicillin G Acylase via Rapid Surface Capping on Commercial Resins. <i>Industrial & Engineering Chemistry Research</i> , 2016 , 55, 10263-10270	3.9	8

61	Enzyme-conjugated ZIF-8 particles as efficient and stable Pickering interfacial biocatalysts for biphasic biocatalysis. <i>Journal of Materials Chemistry B</i> , 2016 , 4, 2654-2661	7.3	76
60	Superhydrophobic Particles Derived from Nature-Inspired Polyphenol Chemistry for Liquid Marble Formation and Oil Spills Treatment. <i>ACS Sustainable Chemistry and Engineering</i> , 2016 , 4, 676-681	8.3	54
59	Transesterification of palm oil to fatty acids methyl ester using K ₂ CO ₃ /palygorskite catalyst. <i>Energy Conversion and Management</i> , 2016 , 116, 142-149	10.6	36
58	Conferring Natural-Derived Porous Microspheres with Surface Multifunctionality through Facile Coordination-Enabled Self-Assembly Process. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 8076-85	9.5	21
57	Remarkably enhancing the biodiesel yield from palm oil upon abalone shell-derived CaO catalysts treated by ethanol. <i>Fuel Processing Technology</i> , 2016 , 143, 110-117	7.2	49
56	Biomimetic/Bioinspired Design of Enzyme@capsule Nano/Microsystems. <i>Methods in Enzymology</i> , 2016 , 571, 87-112	1.7	2
55	An Efficient, Recyclable, and Stable Immobilized Biocatalyst Based on Bioinspired Microcapsules-in-Hydrogel Scaffolds. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 25152-61	9.5	13
54	A biomimetic silicification approach to synthesize CaO@SiO ₂ catalyst for the transesterification of palm oil into biodiesel. <i>Fuel</i> , 2015 , 153, 48-55	7.1	77
53	Facile preparation of porous magnetic polydopamine microspheres through an inverse replication strategy for efficient enzyme immobilization. <i>Journal of Materials Chemistry B</i> , 2015 , 3, 7194-7202	7.3	29
52	MOF-templated rough, ultrathin inorganic microcapsules for enzyme immobilization. <i>Journal of Materials Chemistry B</i> , 2015 , 3, 6587-6598	7.3	18
51	Coordination-Enabled One-Step Assembly of Ultrathin, Hybrid Microcapsules with Weak pH-Response. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 9178-84	9.5	37
50	Biodiesel production from palm oil using active and stable K doped hydroxyapatite catalysts. <i>Energy Conversion and Management</i> , 2015 , 98, 463-469	10.6	99
49	Porous CaO-based catalyst derived from PSS-induced mineralization for biodiesel production enhancement. <i>Energy Conversion and Management</i> , 2015 , 106, 405-413	10.6	24
48	Facile Method To Prepare Microcapsules Inspired by Polyphenol Chemistry for Efficient Enzyme Immobilization. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 19570-8	9.5	47
47	Polymer/inorganic microcapsules fabricated by combining biomimetic adhesion and bioinspired mineralization and their use for catalase immobilization. <i>Biochemical Engineering Journal</i> , 2015 , 93, 281-288	4.3	20
46	Mask-Like Symmetrical Microclusters through a Diffusion-Limited Assembly Approach. <i>Chemistry - A European Journal</i> , 2015 , 21, 10185-90	4.8	4
45	Performance comparison of immobilized enzyme on the titanate nanotube surfaces modified by poly(dopamine) and poly(norepinephrine). <i>RSC Advances</i> , 2015 , 5, 42461-42467	3.7	19
44	Enzymatic conversion of carbon dioxide. <i>Chemical Society Reviews</i> , 2015 , 44, 5981-6000	58.5	218

43	Three-Dimensional Porous Aerogel Constructed by g-C ₃ N ₄ and Graphene Oxide Nanosheets with Excellent Visible-Light Photocatalytic Performance. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 25693-701	9.5	305
42	Fabrication of a Superhydrophobic, Fire-Resistant, and Mechanical Robust Sponge upon Polyphenol Chemistry for Efficiently Absorbing Oils/Organic Solvents. <i>Industrial & Engineering Chemistry Research</i> , 2015 , 54, 1842-1848	3.9	47
41	Enhancing Catalytic Activity and Stability of Yeast Alcohol Dehydrogenase by Encapsulation in Chitosan-Calcium Phosphate Hybrid Beads. <i>Industrial & Engineering Chemistry Research</i> , 2015 , 54, 597-604	3.9	8
40	Transesterification of palm oil to biodiesel using rice husk ash-based catalysts. <i>Fuel Processing Technology</i> , 2015 , 133, 8-13	7.2	108
39	Synthesis of organic-inorganic hybrid microcapsules through in situ generation of an inorganic layer on an adhesive layer with mineralization-inducing capability. <i>Journal of Materials Chemistry B</i> , 2015 , 3, 465-474	7.3	22
38	Facile fabrication of organic/inorganic composite beads by gelatin induced biomimetic mineralization for yeast alcohol dehydrogenase encapsulation. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2014 , 100, 49-58		9
37	Open-mouthed hybrid microcapsules with elevated enzyme loading and enhanced catalytic activity. <i>Chemical Communications</i> , 2014 , 50, 12500-3	5.8	16
36	Preparation and enzymatic application of flower-like hybrid microcapsules through a biomimetic mineralization approach. <i>Journal of Materials Chemistry B</i> , 2014 , 2, 4289-4296	7.3	32
35	Merging of covalent cross-linking and biomimetic mineralization into an LBL self-assembly process for the construction of robust organic-inorganic hybrid microcapsules. <i>Journal of Materials Chemistry B</i> , 2014 , 2, 4346-4355	7.3	17
34	Conferring an adhesion layer with mineralization-inducing capabilities for preparing organic-inorganic hybrid microcapsules. <i>Journal of Materials Chemistry B</i> , 2014 , 2, 1371-1378	7.3	18
33	An efficient and recyclable enzyme catalytic system constructed through the synergy between biomimetic mineralization and polyamine-salt aggregate assembly. <i>Journal of Materials Chemistry B</i> , 2014 , 2, 4435-4441	7.3	11
32	Ultrasonic-assisted production of biodiesel from transesterification of palm oil over ostrich eggshell-derived CaO catalysts. <i>Bioresource Technology</i> , 2014 , 171, 428-32	11	128
31	Monolithic Macroporous Carbon Materials as High-Performance and Ultralow-Cost Sorbents for Efficiently Solving Organic Pollution. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 4888-4893	3.9	37
30	Preparation of Dopamine/Titania Hybrid Nanoparticles through Biomimetic Mineralization and Titanium(IV)catecholate Coordination for Enzyme Immobilization. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 12665-12672	3.9	19
29	Biomimetic and bioinspired membranes: Preparation and application. <i>Progress in Polymer Science</i> , 2014 , 39, 1668-1720	29.6	155
28	Biomimetic and bioinspired synthesis of titania and titania-based materials. <i>RSC Advances</i> , 2014 , 4, 12388-7	3.7	33
27	Bioinspired Approach to Multienzyme Cascade System Construction for Efficient Carbon Dioxide Reduction. <i>ACS Catalysis</i> , 2014 , 4, 962-972	13.1	96
26	Facile one-pot preparation of chitosan/calcium pyrophosphate hybrid microflowers. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 14522-32	9.5	100

25	Design and synthesis of organic-inorganic hybrid capsules for biotechnological applications. <i>Chemical Society Reviews</i> , 2014 , 43, 5192-210	58.5	124
24	Highly efficient covalent immobilization of catalase on titanate nanotubes. <i>Biochemical Engineering Journal</i> , 2014 , 83, 8-15	4.2	32
23	Enhanced stability of catalase covalently immobilized on functionalized titania submicrospheres. <i>Materials Science and Engineering C</i> , 2013 , 33, 1438-45	8.3	28
22	Preparation of ultrathin, robust protein microcapsules through template-mediated interfacial reaction between amine and catechol groups. <i>Biomacromolecules</i> , 2013 , 14, 3861-9	6.9	15
21	Polydopamine microcapsules with different wall structures prepared by a template-mediated method for enzyme immobilization. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 9991-7	9.5	79
20	Catechol modification and covalent immobilization of catalase on titania submicrospheres. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013 , 92, 44-50		26
19	Composite polyelectrolyte multilayer membranes for oligosaccharides nanofiltration separation. <i>Carbohydrate Polymers</i> , 2013 , 94, 106-13	10.3	18
18	Synergy of Pickering Emulsion and Sol-Gel Process for the Construction of an Efficient, Recyclable Enzyme Cascade System. <i>Advanced Functional Materials</i> , 2013 , 23, 1450-1458	15.6	45
17	Exploring the segregating and mineralization-inducing capacities of cationic hydrophilic polymers for preparation of robust, multifunctional mesoporous hybrid microcapsules. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 5174-85	9.5	14
16	Dopamine-Modified Alginate Beads Reinforced by Cross-Linking via Titanium Coordination or Self-Polymerization and Its Application in Enzyme Immobilization. <i>Industrial & Engineering Chemistry Research</i> , 2013 , 52, 14828-14836	3.9	37
15	Incorporating mobile nanospheres in the lumen of hybrid microcapsules for enhanced enzymatic activity. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 10433-6	9.5	15
14	Mussel-inspired surface capping and pore filling to confer mesoporous silica with high loading and enhanced stability of enzyme. <i>Microporous and Mesoporous Materials</i> , 2012 , 152, 122-127	5.3	25
13	Metal-organic coordination-enabled layer-by-layer self-assembly to prepare hybrid microcapsules for efficient enzyme immobilization. <i>ACS Applied Materials & Interfaces</i> , 2012 , 4, 3476-83	9.5	72
12	Fabrication of antimicrobial bacterial cellulose/Ag/AgCl nanocomposite using bacteria as versatile biofactory. <i>Journal of Nanoparticle Research</i> , 2012 , 14, 1	2.3	52
11	Simultaneous size control and surface functionalization of titania nanoparticles through bioadhesion-assisted bio-inspired mineralization. <i>Journal of Nanoparticle Research</i> , 2012 , 14, 1	2.3	11
10	Constructing spatially separated multienzyme system through bioadhesion-assisted bio-inspired mineralization for efficient carbon dioxide conversion. <i>Bioresource Technology</i> , 2012 , 118, 359-66	11	50
9	Sol-Gel Derived Boehmite as an Efficient and Robust Carrier for Enzyme Encapsulation. <i>Industrial & Engineering Chemistry Research</i> , 2012 , 51, 255-261	3.9	18
8	Facile construction of multicompartiment multienzyme system through layer-by-layer self-assembly and biomimetic mineralization. <i>ACS Applied Materials & Interfaces</i> , 2011 , 3, 881-9	9.5	90

7	Facile preparation of robust microcapsules by manipulating metal-coordination interaction between biomineral layer and bioadhesive layer. <i>ACS Applied Materials & Interfaces</i> , 2011 , 3, 597-608	9.5	63
6	Bioinspired preparation of polydopamine microcapsule for multienzyme system construction. <i>Green Chemistry</i> , 2011 , 13, 300-306	10	153
5	Sandwich-structured enzyme membrane reactor for efficient conversion of maltose into isomaltooligosaccharides. <i>Bioresource Technology</i> , 2010 , 101, 9144-9	11	31
4	Immobilized transglucosidase in biomimetic polymer/inorganic hybrid capsules for efficient conversion of maltose to isomaltooligosaccharides. <i>Biochemical Engineering Journal</i> , 2009 , 46, 186-192	4.2	31
3	Biomimetic fabrication of hydroxyapatite-polysaccharide-formate dehydrogenase composite capsules for efficient CO ₂ conversion. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2009 , 20, 1661-1745	7.5	9
2	Biomimetic polymer-inorganic hybrid microcapsules for yeast alcohol dehydrogenase encapsulation. <i>Reactive and Functional Polymers</i> , 2008 , 68, 1507-1515	4.6	24
1	General model for artificial photosynthesis with capsule-immobilized enzyme. <i>AIChE Journal</i> , e17409	3.6	