

Lizeng Gao

List of Publications by Year in descending order

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92
papers

13,214
citations

76326

40
h-index

42399

92
g-index

93
all docs

93
docs citations

93
times ranked

10244
citing authors

#	ARTICLE	IF	CITATIONS
1	Intrinsic peroxidase-like activity of ferromagnetic nanoparticles. <i>Nature Nanotechnology</i> , 2007, 2, 577-583.	31.5	5,080
2	In vivo guiding nitrogen-doped carbon nanozyme for tumor catalytic therapy. <i>Nature Communications</i> , 2018, 9, 1440.	12.8	759
3	Standardized assays for determining the catalytic activity and kinetics of peroxidase-like nanozymes. <i>Nature Protocols</i> , 2018, 13, 1506-1520.	12.0	654
4	A Single-Atom Nanozyme for Wound Disinfection Applications. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 4911-4916.	13.8	607
5	Iron Oxide Nanozyme: A Multifunctional Enzyme Mimetic for Biomedical Applications. <i>Theranostics</i> , 2017, 7, 3207-3227.	10.0	421
6	Optimization of Fe ₃ O ₄ nanozyme activity via single amino acid modification mimicking an enzyme active site. <i>Chemical Communications</i> , 2017, 53, 424-427.	4.1	334
7	Nanozymes: A clear definition with fuzzy edges. <i>Nano Today</i> , 2021, 40, 101269.	11.9	332
8	High-Performance Self-Cascade Pyrite Nanozymes for Apoptosis-Ferroptosis Synergistic Tumor Therapy. <i>ACS Nano</i> , 2021, 15, 5735-5751.	14.6	266
9	Copper/Carbon Hybrid Nanozyme: Tuning Catalytic Activity by the Copper State for Antibacterial Therapy. <i>Nano Letters</i> , 2019, 19, 7645-7654.	9.1	257
10	Dextran-Coated Iron Oxide Nanoparticles as Biomimetic Catalysts for Localized and pH-Activated Biofilm Disruption. <i>ACS Nano</i> , 2019, 13, 4960-4971.	14.6	243
11	Nanocatalysts promote <i>Streptococcus mutans</i> biofilm matrix degradation and enhance bacterial killing to suppress dental caries in vivo. <i>Biomaterials</i> , 2016, 101, 272-284.	11.4	236
12	Nanozymes: an emerging field bridging nanotechnology and biology. <i>Science China Life Sciences</i> , 2016, 59, 400-402.	4.9	214
13	Ferromagnetic nanoparticles with peroxidase-like activity enhance the cleavage of biological macromolecules for biofilm elimination. <i>Nanoscale</i> , 2014, 6, 2588-2593.	5.6	213
14	Carbon Nanotube Delivery of the GFP Gene into Mammalian Cells. <i>ChemBioChem</i> , 2006, 7, 239-242.	2.6	156
15	Emerging Biomedical Applications of Enzyme-Like Catalytic Nanomaterials. <i>Trends in Biotechnology</i> , 2018, 36, 15-29.	9.3	154
16	Exosome-like Nanozyme Vesicles for H ₂ O ₂ -Responsive Catalytic Photoacoustic Imaging of Xenograft Nasopharyngeal Carcinoma. <i>Nano Letters</i> , 2019, 19, 203-209.	9.1	150
17	Magnetite Nanoparticle-Linked Immunosorbent Assay. <i>Journal of Physical Chemistry C</i> , 2008, 112, 17357-17361.	3.1	146
18	Converting organosulfur compounds to inorganic polysulfides against resistant bacterial infections. <i>Nature Communications</i> , 2018, 9, 3713.	12.8	141

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19	A Bioinspired Five-Coordinate Single-Atom Iron Nanozyme for Tumor Catalytic Therapy. <i>Advanced Materials</i> , 2022, 34, e2107088.	21.0	133
20	Tumor Catalytic-Photothermal Therapy with Yolk-Shell Gold@Carbon Nanozymes. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 4502-4511.	8.0	130
21	A metal-free nanozyme-activated prodrug strategy for targeted tumor catalytic therapy. <i>Nano Today</i> , 2020, 35, 100935.	11.9	126
22	Three-Dimensional Functionalized Tetrapod-like ZnO Nanostructures for Plasmid DNA Delivery. <i>Small</i> , 2006, 2, 621-625.	10.0	124
23	A Nanozyme-Based Artificial Peroxisome Ameliorates Hyperuricemia and Ischemic Stroke. <i>Advanced Functional Materials</i> , 2021, 31, 2007130.	14.9	116
24	Unveiling the active sites on ferrihydrite with apparent catalase-like activity for potentiating radiotherapy. <i>Nano Today</i> , 2021, 41, 101317.	11.9	102
25	Chiral Carbon Dots Mimicking Topoisomerase...I To Mediate the Topological Rearrangement of Supercoiled DNA Enantioselectively. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 11087-11092.	13.8	100
26	<scp>l</scp> -Arginine Modifies the Exopolysaccharide Matrix and Thwarts <i>Streptococcus mutans</i> Outgrowth within Mixed-Species Oral Biofilms. <i>Journal of Bacteriology</i> , 2016, 198, 2651-2661.	2.2	99
27	A Single-Atom Nanozyme for Wound Disinfection Applications. <i>Angewandte Chemie</i> , 2019, 131, 4965-4970.	2.0	94
28	Iron oxide nanozyme suppresses intracellular <i>Salmonella</i> Enteritidis growth and alleviates infection <i>in vivo</i> . <i>Theranostics</i> , 2018, 8, 6149-6162.	10.0	91
29	Catalytic inactivation of influenza virus by iron oxide nanozyme. <i>Theranostics</i> , 2019, 9, 6920-6935.	10.0	90
30	Mn ²⁺ -coordinated PDA@DOX/PLGA nanoparticles as a smart theranostic agent for synergistic chemo-photothermal tumor therapy. <i>International Journal of Nanomedicine</i> , 2017, Volume 12, 3331-3345.	6.7	78
31	Light-enhanced sponge-like carbon nanozyme used for synergetic antibacterial therapy. <i>Biomaterials Science</i> , 2019, 7, 4131-4141.	5.4	74
32	Nano-decocted ferrous polysulfide coordinates ferroptosis-like death in bacteria for anti-infection therapy. <i>Nano Today</i> , 2020, 35, 100981.	11.9	71
33	Human ferritin for tumor detection and therapy. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2013, 5, 287-298.	6.1	66
34	Label-Free Colorimetric Detection of Gelatinases on Nanoporous Silicon Photonic Films. <i>Analytical Chemistry</i> , 2008, 80, 1468-1473.	6.5	58
35	Anti-CD146 monoclonal antibody AA98 inhibits angiogenesis via suppression of nuclear factor- κ B activation. <i>Molecular Cancer Therapeutics</i> , 2006, 5, 2872-2878.	4.1	54
36	Enzyme-Controlled Self-Assembly and Transformation of Nanostructures in a Tetramethylbenzidine/Horseradish Peroxidase/H ₂ O ₂ System. <i>ACS Nano</i> , 2011, 5, 6736-6742.	14.6	53

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37	Ex Vivo Detection of Iron Oxide Magnetic Nanoparticles in Mice Using Their Intrinsic Peroxidase-Mimicking Activity. <i>Molecular Pharmaceutics</i> , 2012, 9, 1983-1989.	4.6	51
38	Mechanistic Insight into the Light-Irradiated Carbon Capsules as an Antibacterial Agent. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 25026-25036.	8.0	51
39	The age of bioinspired molybdenum-involved nanozymes: Synthesis, catalytic mechanisms, and biomedical applications. <i>View</i> , 2021, 2, 20200188.	5.3	49
40	Aloe-Emodin/Carbon Nanoparticle Hybrid Gels with Light-Induced and Long-Term Antibacterial Activity. <i>ACS Biomaterials Science and Engineering</i> , 2018, 4, 4391-4400.	5.2	44
41	Ultrasmall FeS ₂ Nanoparticles Decorated Carbon Spheres with Laser-Mediated Ferrous Ion Release for Antibacterial Therapy. <i>Small</i> , 2021, 17, e2005473.	10.0	43
42	Mucosal Vaccination for Influenza Protection Enhanced by Catalytic Immune Adjuvant. <i>Advanced Science</i> , 2020, 7, 2000771.	11.2	42
43	Nanozyme-based medicine for enzymatic therapy: progress and challenges. <i>Biomedical Materials (Bristol)</i> , 2021, 16, 042002.	3.3	40
44	Ferroptotic stress promotes macrophages against intracellular bacteria. <i>Theranostics</i> , 2022, 12, 2266-2289.	10.0	39
45	Oral biofilm elimination by combining iron-based nanozymes and hydrogen peroxide-producing bacteria. <i>Biomaterials Science</i> , 2020, 8, 2447-2458.	5.4	38
46	A novel application of iron oxide nanoparticles for detection of hydrogen peroxide in acid rain. <i>Materials Letters</i> , 2008, 62, 3972-3974.	2.6	36
47	Biomimicry Promotes the Efficiency of a 10-Step Sequential Enzymatic Reaction on Nanoparticles, Converting Glucose to Lactate. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 235-238.	13.8	35
48	Bimetallic CuCo ₂ S ₄ Nanozymes with Enhanced Peroxidase Activity at Neutral pH for Combating Burn Infections. <i>ChemBioChem</i> , 2020, 21, 2620-2627.	2.6	35
49	Au-PLGA Hybrid Nanoparticles with Catalase-Mimicking and near-Infrared Photothermal Activities for Photoacoustic Imaging-Guided Cancer Therapy. <i>ACS Biomaterials Science and Engineering</i> , 2018, 4, 1083-1091.	5.2	33
50	Self-Assembled Multiple-Enzyme Composites for Enhanced Synergistic Cancer Starving Catalytic Therapy. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 20191-20201.	8.0	33
51	Silica coating magnetic nanoparticle-based silver enhancement immunoassay for rapid electrical detection of ricin toxin. <i>Toxicon</i> , 2010, 55, 145-152.	1.6	32
52	Local delivery of insulin/IGF-1 for bone regeneration: carriers, strategies, and effects. <i>Nanotheranostics</i> , 2020, 4, 242-255.	5.2	31
53	Synthesis of magnetite hybrid nanocomplexes to eliminate bacteria and enhance biofilm disruption. <i>Biomaterials Science</i> , 2019, 7, 2833-2840.	5.4	30
54	Dietary Fe ₃ O ₄ Nanozymes Prevent the Injury of Neurons and Blood-Brain Barrier Integrity from Cerebral Ischemic Stroke. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 299-310.	5.2	30

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55	Vitamin B2 functionalized iron oxide nanozymes for mouth ulcer healing. <i>Science China Life Sciences</i> , 2020, 63, 68-79.	4.9	29
56	Iron Oxide Nanozyme: A Multifunctional Enzyme Mimetics for Biomedical Application. <i>Nanostructure Science and Technology</i> , 2020, , 105-140.	0.1	28
57	Metal ions/nucleotide coordinated nanoparticles comprehensively suppress tumor by synergizing ferroptosis with energy metabolism interference. <i>Journal of Nanobiotechnology</i> , 2022, 20, 199.	9.1	26
58	Nano-Sized Iron Sulfide: Structure, Synthesis, Properties, and Biomedical Applications. <i>Frontiers in Chemistry</i> , 2020, 8, 818.	3.6	25
59	Chiral Carbon Dots Mimicking Topoisomeraseâ€¦I To Mediate the Topological Rearrangement of Supercoiled DNA Enantioselectively. <i>Angewandte Chemie</i> , 2020, 132, 11180-11185.	2.0	25
60	Effects of Nanoparticle Size on Multilayer Formation and Kinetics of Tethered Enzymes. <i>Bioconjugate Chemistry</i> , 2015, 26, 1931-1938.	3.6	24
61	Nanozybiotics: Nanozyme-Based Antibacterials against Bacterial Resistance. <i>Antibiotics</i> , 2022, 11, 390.	3.7	23
62	Catalytic antimicrobial therapy using nanozymes. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2022, 14, e1769.	6.1	23
63	Metastable Iron Sulfides Gramâ€œDependently Counteract Resistant <i>Gardnerella Vaginalis</i> for Bacterial Vaginosis Treatment. <i>Advanced Science</i> , 2022, 9, e2104341.	11.2	21
64	Fe ₃ O ₄ Nanoparticles Attenuated Salmonella Infection in Chicken Liver Through Reactive Oxygen and Autophagy via PI3K/Akt/mTOR Signaling. <i>Frontiers in Physiology</i> , 2019, 10, 1580.	2.8	20
65	Nanozymes go oral: nanocatalytic medicine facilitates dental health. <i>Journal of Materials Chemistry B</i> , 2021, 9, 1491-1502.	5.8	19
66	Tumor Microenvironment-Modulated Nanozymes for NIR-II-Triggered Hyperthermia-Enhanced Photo-Nanocatalytic Therapy via Disrupting ROS Homeostasis. <i>International Journal of Nanomedicine</i> , 2021, Volume 16, 4559-4577.	6.7	18
67	Separation of long DNA molecules through cleavage of hydrogen bonds under a stretching force. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	17
68	Do catalytic nanoparticles offer an improved therapeutic strategy to combat dental biofilms?. <i>Nanomedicine</i> , 2017, 12, 275-279.	3.3	15
69	Mutation Screening Based on the Mechanical Properties of DNA Molecules Tethered to a Solid Surface. <i>Journal of Physical Chemistry B</i> , 2010, 114, 1064-1068.	2.6	13
70	Reverse intratumor bacteria-induced gemcitabine resistance with carbon nanozymes for enhanced tumor catalytic-chemo therapy. <i>Nano Today</i> , 2022, 43, 101395.	11.9	13
71	Cytotoxicity studies of Fe ₃ O ₄ nanoparticles in chicken macrophage cells. <i>Royal Society Open Science</i> , 2020, 7, 191561.	2.4	12
72	Kinetics and Mechanisms for Nanozymes. <i>Nanostructure Science and Technology</i> , 2020, , 17-39.	0.1	12

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73	Photolysis of methicillin-resistant <i>Staphylococcus aureus</i> using Cu-doped carbon spheres. <i>Biomaterials Science</i> , 2020, 8, 6225-6234.	5.4	11
74	Artesunate-loaded poly (lactic-co-glycolic acid)/polydopamine-manganese oxides nanoparticles as an oxidase mimic for tumor chemo-catalytic therapy. <i>International Journal of Biological Macromolecules</i> , 2021, 181, 72-81.	7.5	11
75	Nanozymology: An Overview. <i>Nanostructure Science and Technology</i> , 2020, , 3-16.	0.1	11
76	Ferritin-Nanocaged ATP Traverses the Blood-Testis Barrier and Enhances Sperm Motility in an Asthenozoospermia Model. <i>ACS Nano</i> , 2022, 16, 4175-4185.	14.6	11
77	Oral Administration of Nanoiron Sulfide Supernatant for the Treatment of Gallbladder Stones with Chronic Cholecystitis. <i>ACS Applied Bio Materials</i> , 2021, 4, 3773-3785.	4.6	10
78	Biomimicry Enhances Sequential Reactions of Tethered Glycolytic Enzymes, TPI and GAPDHS. <i>PLoS ONE</i> , 2013, 8, e61434.	2.5	10
79	Separation of single-stranded DNA fragments at a 10-nucleotide resolution by stretching in microfluidic channels. <i>Lab on A Chip</i> , 2011, 11, 4036.	6.0	8
80	Multistage Magnetic Separation of Microspheres Enabled by Temperature-Responsive Polymers. <i>ACS Applied Materials & Interfaces</i> , 2012, 4, 3041-3046.	8.0	8
81	Nanozymes: Biomedical Applications of Enzymatic Fe ₃ O ₄ Nanoparticles from In Vitro to In Vivo. <i>Advances in Experimental Medicine and Biology</i> , 2019, 1174, 291-312.	1.6	8
82	Sorting Short Fragments of Single-Stranded DNA with an Evolving Electric Double Layer. <i>Journal of Physical Chemistry B</i> , 2013, 117, 2267-2272.	2.6	7
83	Current developments and trends in nanobiocatalysis. <i>Scientia Sinica Vitae</i> , 2020, 50, 682-697.	0.3	7
84	Ferrihydrite nanoparticles as the photosensitizer augment microbial infected wound healing with blue light. <i>Nanoscale</i> , 2021, 13, 19123-19132.	5.6	7
85	Fabrication of PAN/FeNPs electrospun nanofibers: Nanozyme and an efficient antimicrobial agent. <i>Materials Today Communications</i> , 2021, 26, 102168.	1.9	5
86	Catalytic defense against fungal pathogens using nanozymes. <i>Nanotechnology Reviews</i> , 2021, 10, 1277-1292.	5.8	4
87	Nanozymes for Antimicrobes: Precision Biocide. <i>Nanostructure Science and Technology</i> , 2020, , 489-526.	0.1	4
88	Nanozyme-Based Tumor Theranostics. <i>Nanostructure Science and Technology</i> , 2020, , 425-457.	0.1	3
89	Antibacterial effects of nano-decoction iron polysulfide in epididymitis and the systematic evaluation of its toxicity on the reproductive health of male mice. <i>Ecotoxicology and Environmental Safety</i> , 2022, 231, 113184.	6.0	3
90	Fe ₃ O ₄ Nanozymes Improve Neuroblast Differentiation and Blood-Brain Barrier Integrity of the Hippocampal Dentate Gyrus in D-Galactose-Induced Aged Mice. <i>International Journal of Molecular Sciences</i> , 2022, 23, 6463.	4.1	3

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91	Enzyme-Like Property (Nanozyme) of Iron Oxide Nanoparticles. , 0, , .		3
92	Biomimicry Promotes the Efficiency of a 10-Step Sequential Enzymatic Reaction on Nanoparticles, Converting Glucose to Lactate. <i>Angewandte Chemie</i> , 2017, 129, 241-244.	2.0	2