

# Biwu Liu

## List of Publications by Year in descending order

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82  
papers

6,899  
citations

61984

43  
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58581

82  
g-index

83  
all docs

83  
docs citations

83  
times ranked

6040  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Nanozymatic Solution to Acute Lung Injury. ACS Central Science, 2022, 8, 7-9.	11.3	3
2	DNA Triplex and Quadruplex Assembled Nanosensors for Correlating K <sup>+</sup> and pH in Lysosomes. Angewandte Chemie, 2021, 133, 5513-5518.	2.0	43
3	DNA Triplex and Quadruplex Assembled Nanosensors for Correlating K <sup>+</sup> and pH in Lysosomes. Angewandte Chemie - International Edition, 2021, 60, 5453-5458.	13.8	61
4	Hg(II) Adsorption on Gold Nanoparticles Dominates DNA-Based Label-Free Colorimetric Sensing. ACS Applied Nano Materials, 2021, 4, 1377-1384.	5.0	25
5	Understanding Carbon Nanotube-Based Ionic Diodes: Design and Mechanism. Small, 2021, 17, e2100383.	10.0	15
6	Construction of a Mesoporous Ceria Hollow Sphere/Enzyme Nanoreactor for Enhanced Cascade Catalytic Antibacterial Therapy. ACS Applied Materials & Interfaces, 2021, 13, 40302-40314.	8.0	39
7	Promotion and inhibition of oxidase-like nanoceria and peroxidase-like iron oxide by arsenate and arsenite. Inorganic Chemistry Communication, 2021, 134, 108979.	3.9	5
8	Nucleoside-based fluorescent carbon dots for discrimination of metal ions. Journal of Materials Chemistry B, 2020, 8, 3640-3646.	5.8	18
9	Incorporation of Boronic Acid into Aptamer-Based Molecularly Imprinted Hydrogels for Highly Specific Recognition of Adenosine. ACS Applied Bio Materials, 2020, 3, 2568-2576.	4.6	20
10	Conjugation of antibodies and aptamers on nanozymes for developing biosensors. Biosensors and Bioelectronics, 2020, 168, 112537.	10.1	113
11	Heating Drives DNA to Hydrophobic Regions While Freezing Drives DNA to Hydrophilic Regions of Graphene Oxide for Highly Robust Biosensors. Journal of the American Chemical Society, 2020, 142, 14702-14709.	13.7	34
12	Enhancing the peroxidase-like activity and stability of gold nanoparticles by coating a partial iron phosphate shell. Nanoscale, 2020, 12, 22467-22472.	5.6	22
13	Promoting DNA Adsorption by Acids and Polyvalent Cations: Beyond Charge Screening. Langmuir, 2020, 36, 11183-11195.	3.5	35
14	Stronger Adsorption of Phosphorothioate DNA Oligonucleotides on Graphene Oxide by van der Waals Forces. Langmuir, 2020, 36, 13708-13715.	3.5	10
15	A high local DNA concentration for nucleating a DNA/Fe coordination shell on gold nanoparticles. Chemical Communications, 2020, 56, 4208-4211.	4.1	5
16	Interactions between gold, thiol and As( <sup>III</sup> ) for colorimetric sensing. Analyst, The, 2020, 145, 5166-5173.	3.5	11
17	Engineering base-excised aptamers for highly specific recognition of adenosine. Chemical Science, 2020, 11, 2735-2743.	7.4	27
18	Yttrium Oxide as a Strongly Adsorbing but Nonquenching Surface for DNA Oligonucleotides. Langmuir, 2020, 36, 1034-1042.	3.5	7

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19	Opposite salt-dependent stability of i-motif and duplex reflected in a single DNA hairpin nanomachine. <i>Nanotechnology</i> , 2020, 31, 195503.	2.6	8
20	Molecular Detection Using Nanozymes. <i>Nanostructure Science and Technology</i> , 2020, , 395-424.	0.1	2
21	From general base to general acid catalysis in a sodium-specific DNAzyme by a guanine-to-adenine mutation. <i>Nucleic Acids Research</i> , 2019, 47, 8154-8162.	14.5	25
22	Mn <sup>2+</sup> -Assisted DNA Oligonucleotide Adsorption on Ti <sub>2</sub> C MXene Nanosheets. <i>Langmuir</i> , 2019, 35, 9858-9866.	3.5	31
23	Sensors and biosensors based on metal oxide nanomaterials. <i>TrAC - Trends in Analytical Chemistry</i> , 2019, 121, 115690.	11.4	78
24	Fluorescein-Stabilized i-Motif DNA and Its Unfolding Leading to a Stronger Adsorption Affinity. <i>Langmuir</i> , 2019, 35, 11932-11939.	3.5	11
25	Interface-Driven Hybrid Materials Based on DNA-Functionalized Gold Nanoparticles. <i>Matter</i> , 2019, 1, 825-847.	10.0	147
26	Adsorption of DNA Oligonucleotides by Boronic Acid-Functionalized Hydrogel Nanoparticles. <i>Langmuir</i> , 2019, 35, 13727-13734.	3.5	14
27	Etching silver nanoparticles using DNA. <i>Materials Horizons</i> , 2019, 6, 155-159.	12.2	35
28	Fluorescent detection of fluoride by CeO <sub>2</sub> nanozyme oxidation of Amplex red. <i>Inorganic Chemistry Communication</i> , 2019, 106, 38-42.	3.9	26
29	Adsorption of Arsenite on Gold Nanoparticles Studied with DNA Oligonucleotide Probes. <i>Langmuir</i> , 2019, 35, 7304-7311.	3.5	49
30	Freezing-Driven DNA Adsorption on Gold Nanoparticles: Tolerating Extremely Low Salt Concentration but Requiring High DNA Concentration. <i>Langmuir</i> , 2019, 35, 6476-6482.	3.5	59
31	Freezing-directed Stretching and Alignment of DNA Oligonucleotides. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 2109-2113.	13.8	42
32	Freezing-directed Stretching and Alignment of DNA Oligonucleotides. <i>Angewandte Chemie</i> , 2019, 131, 2131-2135.	2.0	16
33	Robust Hydrogels from Lanthanide Nucleotide Coordination with Evolving Nanostructures for a Highly Stable Protein Encapsulation. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 14321-14330.	8.0	40
34	Bromide as a Robust Backfiller on Gold for Precise Control of DNA Conformation and High Stability of Spherical Nucleic Acids. <i>Journal of the American Chemical Society</i> , 2018, 140, 4499-4502.	13.7	91
35	Janus DNA orthogonal adsorption of graphene oxide and metal oxide nanoparticles enabling stable sensing in serum. <i>Materials Horizons</i> , 2018, 5, 65-69.	12.2	88
36	Interfacing DNA Oligonucleotides with Calcium Phosphate and Other Metal Phosphates. <i>Langmuir</i> , 2018, 34, 14975-14982.	3.5	19

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37	Highly active fluorogenic oxidase-mimicking NiO nanozymes. <i>Chemical Communications</i> , 2018, 54, 12519-12522.	4.1	80
38	DNA-Functionalized Nanoceria for Probing Oxidation of Phosphorus Compounds. <i>Langmuir</i> , 2018, 34, 15871-15877.	3.5	23
39	NiO Nanoparticles for Exceptionally Stable DNA Adsorption and Its Extraction from Biological Fluids. <i>Langmuir</i> , 2018, 34, 9314-9321.	3.5	20
40	Polyvalent Spherical Nucleic Acids for Universal Display of Functional DNA with Ultrahigh Stability. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 9439-9442.	13.8	53
41	Polyvalent Spherical Nucleic Acids for Universal Display of Functional DNA with Ultrahigh Stability. <i>Angewandte Chemie</i> , 2018, 130, 9583-9586.	2.0	16
42	Surface modification of nanozymes. <i>Nano Research</i> , 2017, 10, 1125-1148.	10.4	406
43	Methods for preparing DNA-functionalized gold nanoparticles, a key reagent of bioanalytical chemistry. <i>Analytical Methods</i> , 2017, 9, 2633-2643.	2.7	173
44	Polythymine DNA as a High-Affinity Ligand for Inorganic Nanomaterials. <i>Angewandte Chemie</i> , 2017, 129, 6304-6308.	2.0	21
45	Polythymine DNA as a High-Affinity Ligand for Inorganic Nanomaterials. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 6208-6212.	13.8	132
46	Reversible gating of ion transport through DNA-functionalized carbon nanotube membranes. <i>RSC Advances</i> , 2017, 7, 611-616.	3.6	9
47	Adsorption of Selenite and Selenate by Metal Oxides Studied with Fluorescent DNA Probes for Analytical Application. <i>Journal of Analysis and Testing</i> , 2017, 1, 1.	5.1	22
48	Molecular Imprinting on Inorganic Nanozymes for Hundred-fold Enzyme Specificity. <i>Journal of the American Chemical Society</i> , 2017, 139, 5412-5419.	13.7	522
49	Molecular Imprinting for Substrate Selectivity and Enhanced Activity of Enzyme Mimics. <i>Small</i> , 2017, 13, 1602730.	10.0	59
50	Multicopper Laccase Mimicking Nanozymes with Nucleotides as Ligands. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 1352-1360.	8.0	319
51	Freezing Directed Construction of Bio/Nano Interfaces: Reagentless Conjugation, Denser Spherical Nucleic Acids, and Better Nanoflakes. <i>Journal of the American Chemical Society</i> , 2017, 139, 9471-9474.	13.7	303
52	Filling in the Gaps between Nanozymes and Enzymes: Challenges and Opportunities. <i>Bioconjugate Chemistry</i> , 2017, 28, 2903-2909.	3.6	290
53	Graphene oxide surface blocking agents can increase the DNA biosensor sensitivity. <i>Biotechnology Journal</i> , 2016, 11, 780-787.	3.5	43
54	DNA Adsorption by ZnO Nanoparticles near Its Solubility Limit: Implications for DNA Fluorescence Quenching and DNAzyme Activity Assays. <i>Langmuir</i> , 2016, 32, 5672-5680.	3.5	63

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55	Profiling Metal Oxides with Lipids: Magnetic Liposomal Nanoparticles Displaying DNA and Proteins. <i>Angewandte Chemie</i> , 2016, 128, 12242-12246.	2.0	3
56	Comparison of Graphene Oxide and Reduced Graphene Oxide for DNA Adsorption and Sensing. <i>Langmuir</i> , 2016, 32, 10776-10783.	3.5	123
57	DNA adsorbed on graphene and graphene oxide: Fundamental interactions, desorption and applications. <i>Current Opinion in Colloid and Interface Science</i> , 2016, 26, 41-49.	7.4	224
58	Profiling Metal Oxides with Lipids: Magnetic Liposomal Nanoparticles Displaying DNA and Proteins. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 12063-12067.	13.8	47
59	Parallel Polyadenine Duplex Formation at Low pH Facilitates DNA Conjugation onto Gold Nanoparticles. <i>Langmuir</i> , 2016, 32, 11986-11992.	3.5	63
60	Iron oxide nanozyme catalyzed synthesis of fluorescent polydopamine for light-up Zn <sup>2+</sup> detection. <i>Nanoscale</i> , 2016, 8, 13620-13626.	5.6	103
61	Boosting the oxidase mimicking activity of nanoceria by fluoride capping: rivaling protein enzymes and ultrasensitive F <sup>-</sup> detection. <i>Nanoscale</i> , 2016, 8, 13562-13567.	5.6	209
62	Magnetic Iron Oxide Nanoparticle Seeded Growth of Nucleotide Coordinated Polymers. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 15615-15622.	8.0	57
63	Hydrogen Peroxide Displacing DNA from Nanoceria: Mechanism and Detection of Glucose in Serum. <i>Journal of the American Chemical Society</i> , 2015, 137, 1290-1295.	13.7	370
64	Accelerating peroxidase mimicking nanozymes using DNA. <i>Nanoscale</i> , 2015, 7, 13831-13835.	5.6	186
65	Comprehensive Screen of Metal Oxide Nanoparticles for DNA Adsorption, Fluorescence Quenching, and Anion Discrimination. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 24833-24838.	8.0	116
66	DNA Adsorption by Indium Tin Oxide Nanoparticles. <i>Langmuir</i> , 2015, 31, 371-377.	3.5	45
67	Characterization of glucose oxidation by gold nanoparticles using nanoceria. <i>Journal of Colloid and Interface Science</i> , 2014, 428, 78-83.	9.4	84
68	Intracellular Detection of ATP Using an Aptamer Beacon Covalently Linked to Graphene Oxide Resisting Nonspecific Probe Displacement. <i>Analytical Chemistry</i> , 2014, 86, 12229-12235.	6.5	160
69	Cation-Size-Dependent DNA Adsorption Kinetics and Packing Density on Gold Nanoparticles: An Opposite Trend. <i>Langmuir</i> , 2014, 30, 13228-13234.	3.5	28
70	Fluorescent sensors using DNA-functionalized graphene oxide. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 6885-6902.	3.7	119
71	DNA adsorption by magnetic iron oxide nanoparticles and its application for arsenate detection. <i>Chemical Communications</i> , 2014, 50, 8568.	4.1	132
72	Adsorption of DNA Oligonucleotides by Titanium Dioxide Nanoparticles. <i>Langmuir</i> , 2014, 30, 839-845.	3.5	94

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73	Attaching DNA to Nanoceria: Regulating Oxidase Activity and Fluorescence Quenching. ACS Applied Materials & Interfaces, 2013, 5, 6820-6825.	8.0	183
74	Mechanisms of DNA Sensing on Graphene Oxide. Analytical Chemistry, 2013, 85, 7987-7993.	6.5	201
75	Correlation of photobleaching, oxidation and metal induced fluorescence quenching of DNA-templated silver nanoclusters. Nanoscale, 2013, 5, 2840.	5.6	65
76	Dissecting Colloidal Stabilization Factors in Crowded Polymer Solutions by Forming Self-Assembled Monolayers on Gold Nanoparticles. Langmuir, 2013, 29, 6018-6024.	3.5	29
77	Oxidation Level-Dependent Zwitterionic Liposome Adsorption and Rupture by Graphene-Based Materials and Light-Induced Content Release. Small, 2013, 9, 1030-1035.	10.0	44
78	Polarity Control for Nonthiolated DNA Adsorption onto Gold Nanoparticles. Langmuir, 2013, 29, 6091-6098.	3.5	77
79	Orthogonal Adsorption Onto Nano-Graphene Oxide Using Different Intermolecular Forces for Multiplexed Delivery. Advanced Materials, 2013, 25, 4087-4092.	21.0	43
80	Parts-per-Million of Polyethylene Glycol as a Non-Interfering Blocking Agent for Homogeneous Biosensor Development. Analytical Chemistry, 2013, 85, 10045-10050.	6.5	42
81	Rationally Designed Nucleobase and Nucleotide Coordinated Nanoparticles for Selective DNA Adsorption and Detection. Analytical Chemistry, 2013, 85, 12144-12151.	6.5	67
82	Instantaneous Attachment of an Ultrahigh Density of Nonthiolated DNA to Gold Nanoparticles and Its Applications. Langmuir, 2012, 28, 17053-17060.	3.5	157