Xiaolei Zuo

List of Publications by Year in descending order

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135 papers	10,545 citations	31976 53 h-index	33894 99 g-index
141 all docs	141 docs citations	141 times ranked	9438 citing authors

#	Article	IF	Citations
1	A Target-Responsive Electrochemical Aptamer Switch (TREAS) for Reagentless Detection of Nanomolar ATP. Journal of the American Chemical Society, 2007, 129, 1042-1043.	13.7	570
2	Sensitive and Selective Amplified Fluorescence DNA Detection Based on Exonuclease III-Aided Target Recycling. Journal of the American Chemical Society, 2010, 132, 1816-1818.	13.7	477
3	Hybridization Chain Reaction Amplification of MicroRNA Detection with a Tetrahedral DNA Nanostructure-Based Electrochemical Biosensor. Analytical Chemistry, 2014, 86, 2124-2130.	6.5	460
4	High Specificity, Electrochemical Sandwich Assays Based on Single Aptamer Sequences and Suitable for the Direct Detection of Small-Molecule Targets in Blood and Other Complex Matrices. Journal of the American Chemical Society, 2009, 131, 6944-6945.	13.7	391
5	Functional DNA Nanostructures for Theranostic Applications. Accounts of Chemical Research, 2014, 47, 550-559.	15.6	364
6	Programmable Engineering of a Biosensing Interface with Tetrahedral DNA Nanostructures for Ultrasensitive DNA Detection. Angewandte Chemie - International Edition, 2015, 54, 2151-2155.	13.8	350
7	An Exonuclease IIIâ€Powered, Onâ€Particle Stochastic DNA Walker. Angewandte Chemie - International Edition, 2017, 56, 1855-1858.	13.8	325
8	Electrochemical detection of nucleic acids, proteins, small molecules and cells using a DNA-nanostructure-based universal biosensing platform. Nature Protocols, 2016, 11, 1244-1263.	12.0	320
9	An Exonuclease IIIâ€Powered, Onâ€Particle Stochastic DNA Walker. Angewandte Chemie, 2017, 129, 1881-1884.	2.0	252
10	Graphene Oxide-Facilitated Electron Transfer of Metalloproteins at Electrode Surfaces. Langmuir, 2010, 26, 1936-1939.	3.5	215
11	Fluorescent biosensors enabled by graphene and graphene oxide. Biosensors and Bioelectronics, 2017, 89, 96-106.	10.1	215
12	An Electrochemical Supersandwich Assay for Sensitive and Selective DNA Detection in Complex Matrices. Journal of the American Chemical Society, 2010, 132, 14346-14348.	13.7	214
13	Gold nanoparticle-decorated MoS2 nanosheets for simultaneous detection of ascorbic acid, dopamine and uric acid. RSC Advances, 2014, 4, 27625.	3.6	206
14	DNA Hydrogel with Aptamer-Toehold-Based Recognition, Cloaking, and Decloaking of Circulating Tumor Cells for Live Cell Analysis. Nano Letters, 2017, 17, 5193-5198.	9.1	204
15	COVID-19: A Call for Physical Scientists and Engineers. ACS Nano, 2020, 14, 3747-3754.	14.6	177
16	Yolkâ€“shell nanostructured Fe₃O₄@C magnetic nanoparticles with enhanced peroxidase-like activity for label-free colorimetric detection of H₂O₂and glucose. Nanoscale, 2017, 9, 4508-4515.	5.6	175
17	Programming nanoparticle valence bonds with single-stranded DNA encoders. Nature Materials, 2020, 19, 781-788.	27.5	166
18	DNA Nanostructure-Programmed Like-Charge Attraction at the Cell-Membrane Interface. ACS Central Science, 2018, 4, 1344-1351.	11.3	163

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19	Dual-Target Electrochemical Biosensing Based on DNA Structural Switching on Gold Nanoparticle-Decorated MoS₂ Nanosheets. ACS Applied Materials & Interfaces, 2016, 8, 6826-6833.	8.0	155
20	Multivalent Capture and Detection of Cancer Cells with DNA Nanostructured Biosensors and Multibranched Hybridization Chain Reaction Amplification. Analytical Chemistry, 2014, 86, 7843-7848.	6.5	154
21	Ultrasensitive Electrochemical Detection of Prostate-Specific Antigen by Using Antibodies Anchored on a DNA Nanostructural Scaffold. Analytical Chemistry, 2014, 86, 7337-7342.	6.5	153
22	DNA biomolecular-electronic encoder and decoder devices constructed by multiplex biosensors. NPG Asia Materials, 2012, 4, e1-e1.	7.9	138
23	Target-Responsive, DNA Nanostructure-Based E-DNA Sensor for microRNA Analysis. Analytical Chemistry, 2014, 86, 2285-2288.	6.5	134
24	Design of a carbon nanotube/magnetic nanoparticle-based peroxidase-like nanocomplex and its application for highly efficient catalytic oxidation of phenols. Nano Research, 2009, 2, 617-623.	10.4	133
25	Universal Fluorescence Biosensor Platform Based on Graphene Quantum Dots and Pyrene-Functionalized Molecular Beacons for Detection of MicroRNAs. ACS Applied Materials & Interfaces, 2015, 7, 16152-16156.	8.0	126
26	DNA Framework-Programmed Cell Capture via Topology-Engineered Receptorâ€“Ligand Interactions. Journal of the American Chemical Society, 2019, 141, 18910-18915.	13.7	122
27	Real-Time, Quantitative Lighting-up Detection of Telomerase in Urines of Bladder Cancer Patients by AIEgens. Analytical Chemistry, 2015, 87, 6822-6827.	6.5	119
28	Quantizing single-molecule surface-enhanced Raman scattering with DNA origami metamolecules. Science Advances, 2019, 5, eaau4506.	10.3	118
29	Scaffolded biosensors with designed DNA nanostructures. NPG Asia Materials, 2013, 5, e51-e51.	7.9	111
30	On-Electrode Synthesis of Shape-Controlled Hierarchical Flower-Like Gold Nanostructures for Efficient Interfacial DNA Assembly and Sensitive Electrochemical Sensing of MicroRNA. Small, 2016, 12, 3794-3801.	10.0	110
31	Nucleic Acid Tests for Clinical Translation. Chemical Reviews, 2021, 121, 10469-10558.	47.7	109
32	PolyA-Mediated DNA Assembly on Gold Nanoparticles for Thermodynamically Favorable and Rapid Hybridization Analysis. Analytical Chemistry, 2016, 88, 4949-4954.	6.5	107
33	Programming Cell Adhesion for On-Chip Sequential Boolean Logic Functions. Journal of the American Chemical Society, 2017, 139, 10176-10179.	13.7	103
34	A Bubbleâ€Mediated Intelligent Microscale Electrochemical Device for Singleâ€Step Quantitative Bioassays. Advanced Materials, 2014, 26, 4671-4676.	21.0	99
35	DNA Nanotechnology-Enabled Interfacial Engineering for Biosensor Development. Annual Review of Analytical Chemistry, 2018, 11, 171-195.	5.4	93
36	Nucleic Acids Analysis. Science China Chemistry, 2021, 64, 171-203.	8.2	88

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37	Valencyâ€Controlled Framework Nucleic Acid Signal Amplifiers. Angewandte Chemie - International Edition, 2018, 57, 7131-7135.	13.8	85
38	Programming bulk enzyme heterojunctions for biosensor development with tetrahedral DNA framework. Nature Communications, 2020, 11, 838.	12.8	84
39	Development of mercury (II) ion biosensors based on mercury-specific oligonucleotide probes. Biosensors and Bioelectronics, 2016, 75, 433-445.	10.1	83
40	Nucleic acid-based electrochemical nanobiosensors. Biosensors and Bioelectronics, 2018, 102, 479-489.	10.1	80
41	A Surfaceâ€Confined Protonâ€Driven DNA Pump Using a Dynamic 3D DNA Scaffold. Advanced Materials, 2016, 28, 6860-6865.	21.0	79
42	Nanodiamond autophagy inhibitor allosterically improves the arsenical-based therapy of solid tumors. Nature Communications, 2018, 9, 4347.	12.8	77
43	Highly narrow nanogap-containing Au@Au coreâ€“shell SERS nanoparticles: size-dependent Raman enhancement and applications in cancer cell imaging. Nanoscale, 2016, 8, 2090-2096.	5.6	76
44	Biomacromolecular nanostructures-based interfacial engineering: from precise assembly to precision biosensing. National Science Review, 2018, 5, 740-755.	9.5	73
45	DNA nanotechnology-empowered nanoscopic imaging of biomolecules. Chemical Society Reviews, 2021, 50, 5650-5667.	38.1	73
46	Electrochemical Interrogation of Interactions between Surface-Confined DNA and Methylene Blue. Sensors, 2007, 7, 2671-2680.	3.8	71
47	DNA Walkers for Biosensing Development. Advanced Science, 2022, 9, e2200327.	11.2	68
48	Ultrasensitive Detection of Dual Cancer Biomarkers with Integrated CMOS-Compatible Nanowire Arrays. Analytical Chemistry, 2015, 87, 11203-11208.	6.5	64
49	Encoding DNA Frameworks for Amplified Multiplexed Imaging of Intracellular microRNAs. Analytical Chemistry, 2021, 93, 2226-2234.	6.5	64
50	A novel ultrasensitive electrochemical DNA sensor based on double tetrahedral nanostructures. Biosensors and Bioelectronics, 2015, 71, 434-438.	10.1	61
51	Naked-eye point-of-care testing platform based on a pH-responsive superwetting surface: toward the non-invasive detection of glucose. NPG Asia Materials, 2018, 10, 177-189.	7.9	57
52	Quadratic isothermal amplification for the detection of microRNA. Nature Protocols, 2014, 9, 597-607.	12.0	56
53	Valenceâ€Engineering of Quantum Dots Using Programmable DNA Scaffolds. Angewandte Chemie - International Edition, 2017, 56, 16077-16081.	13.8	56
54	Sequential Therapy of Acute Kidney Injury with a DNA Nanodevice. Nano Letters, 2021, 21, 4394-4402.	9.1	56

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55	Dynamic Modulation of DNA Hybridization Using Allosteric DNA Tetrahedral Nanostructures. Analytical Chemistry, 2016, 88, 8043-8049.	6.5	54
56	Ultrafast DNA Sensors with DNA Framework-Bridged Hybridization Reactions. Journal of the American Chemical Society, 2020, 142, 9975-9981.	13.7	54
57	Encapsulation and release of living tumor cells using hydrogels with the hybridization chain reaction. Nature Protocols, 2020, 15, 2163-2185.	12.0	54
58	Biosensing: CRISPR-powered diagnostics. Nature Biomedical Engineering, 2017, 1, .	22.5	52
59	An ultrasensitive electrochemical biosensor for the detection of mecA gene in methicillin-resistant Staphylococcus aureus. Biosensors and Bioelectronics, 2018, 99, 424-430.	10.1	51
60	Twoâ€Step, PCRâ€Free Telomerase Detection by Using Exonuclease IIIâ€Aided Target Recycling. ChemBioChem, 2011, 12, 2745-2747.	2.6	48
61	Graphene Oxide-Assisted Nucleic Acids Assays Using Conjugated Polyelectrolytes-Based Fluorescent Signal Transduction. Analytical Chemistry, 2015, 87, 3877-3883.	6.5	48
62	Analysis of telomerase activity based on a spired DNA tetrahedron TS primer. Biosensors and Bioelectronics, 2015, 67, 364-369.	10.1	47
63	Rational Designed Bipolar, Conjugated Polymer-DNA Composite Beacon for the Sensitive Detection of Proteins and Ions. Analytical Chemistry, 2015, 87, 3890-3894.	6.5	44
64	Aptamer-initiated on-particle template-independent enzymatic polymerization (aptamer-OTEP) for electrochemical analysis of tumor biomarkers. Biosensors and Bioelectronics, 2016, 86, 536-541.	10.1	41
65	Programmable DNA Hydrogels as Artificial Extracellular Matrix. Small, 2022, 18, e2107640.	10.0	41
66	Photoactivated Nanoflares for mRNA Detection in Single Living Cells. Analytical Chemistry, 2019, 91, 2021-2027.	6.5	39
67	Poly-adenine-based programmable engineering of gold nanoparticles for highly regulated spherical DNAzymes. Nanoscale, 2015, 7, 18671-18676.	5.6	38
68	DNA Frameworkâ€Based Topological Cell Sorters. Angewandte Chemie - International Edition, 2020, 59, 10406-10410.	13.8	38
69	Molecular Threading-Dependent Mass Transport in Paper Origami for Single-Step Electrochemical DNA Sensors. Nano Letters, 2019, 19, 369-374.	9.1	37
70	Polymerase/nicking enzyme synergetic isothermal quadratic DNA machine and its application for one-step amplified biosensing of lead (II) ions at femtomole level and DNA methyltransferase. NPG Asia Materials, 2014, 6, e131-e131.	7.9	36
71	Encoding Carbon Nanotubes with Tubular Nucleic Acids for Information Storage. Journal of the American Chemical Society, 2019, 141, 17861-17866.	13.7	36
72	Encoding quantized fluorescence states with fractal DNA frameworks. Nature Communications, 2020, 11, 2185.	12.8	36

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73	Quantitative investigation of the poly-adenine DNA dissociation from the surface of gold nanoparticles. Scientific Reports, 2015, 5, 10158.	3.3	34
74	Novel Rolling Circle Amplification and DNA Origami-Based DNA Belt-Involved Signal Amplification Assay for Highly Sensitive Detection of Prostate-Specific Antigen (PSA). ACS Applied Materials & Interfaces, 2014, 6, 20372-20377.	8.0	33
75	Metal Ion-Mediated Assembly of DNA Nanostructures for Cascade Fluorescence Resonance Energy Transfer-Based Fingerprint Analysis. Analytical Chemistry, 2014, 86, 7084-7087.	6.5	33
76	Poly-adenine-mediated spherical nucleic acids for strand displacement-based DNA/RNA detection. Biosensors and Bioelectronics, 2019, 127, 85-91.	10.1	33
77	Nanoparticleâ€Assisted Alignment of Carbon Nanotubes on DNA Origami. Angewandte Chemie - International Edition, 2020, 59, 4892-4896.	13.8	33
78	Prescribing Silver Chirality with DNA Origami. Journal of the American Chemical Society, 2021, 143, 8639-8646.	13.7	33
79	Bacterial Extracellular Electron Transfer Occurs in Mammalian Gut. Analytical Chemistry, 2019, 91, 12138-12141.	6.5	32
80	DNA orientation-specific adhesion and patterning of living mammalian cells on self-assembled DNA monolayers. Chemical Science, 2016, 7, 2722-2727.	7.4	31
81	DNA Framework-Supported Electrochemical Analysis of DNA Methylation for Prostate Cancers. Nano Letters, 2020, 20, 7028-7035.	9.1	31
82	Encoding Fluorescence Anisotropic Barcodes with DNA Frameworks. Journal of the American Chemical Society, 2021, 143, 10735-10742.	13.7	31
83	Nanoprobe-Initiated Enzymatic Polymerization for Highly Sensitive Electrochemical DNA Detection. ACS Applied Materials & Interfaces, 2015, 7, 25618-25623.	8.0	30
84	DNA Framework-Mediated Electrochemical Biosensing Platform for Amplification-Free MicroRNA Analysis. Analytical Chemistry, 2020, 92, 4498-4503.	6.5	30
85	Hybridization chain reaction amplification for highly sensitive fluorescence detection of DNA with dextran coated microarrays. Biosensors and Bioelectronics, 2016, 81, 92-96.	10.1	29
86	Binding-induced collapse of DNA nano-assembly for naked-eye detection of ATP with plasmonic gold nanoparticles. Biosensors and Bioelectronics, 2015, 65, 171-175.	10.1	28
87	DNA Origami Radiometers for Measuring Ultraviolet Exposure. Journal of the American Chemical Society, 2020, 142, 8782-8789.	13.7	28
88	Engineering electrochemical interface for biomolecular sensing. Current Opinion in Electrochemistry, 2019, 14, 71-80.	4.8	27
89	Programming chain-growth copolymerization of DNA hairpin tiles for in-vitro hierarchical supramolecular organization. Nature Communications, 2019, 10, 1006.	12.8	26
90	Programming Biomimetically Confined Aptamers with DNA Frameworks. ACS Nano, 2020, 14, 8776-8783.	14.6	26

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91	Humidityâ€Responsive Singleâ€Nanoparticleâ€Layer Plasmonic Films. Advanced Materials, 2017, 29, 1606796.	21.0	25
92	Constructing Submonolayer DNA Origami Scaffold on Gold Electrode for Wiring of Redox Enzymatic Cascade Pathways. ACS Applied Materials & Interfaces, 2019, 11, 13881-13887.	8.0	25
93	Driving DNA Origami Assembly with a Terahertz Wave. Nano Letters, 2022, 22, 468-475.	9.1	23
94	Programming Accessibility of DNA Monolayers for Degradation-Free Whole-Blood Biosensors. , 2019, 1, 671-676.		21
95	Biosensors based on DNA logic gates. View, 2021, 2, 20200038.	5.3	20
96	DNA framework-engineered electrochemical biosensors. Science China Life Sciences, 2020, 63, 1130-1141.	4.9	19
97	Dynamic regulation of DNA nanostructures by noncanonical nucleic acids. NPG Asia Materials, 2021, 13, .	7.9	19
98	Poly-adenine-mediated fluorescent spherical nucleic acid probes for live-cell imaging of endogenous tumor-related mRNA. Nanomedicine: Nanotechnology, Biology, and Medicine, 2018, 14, 1797-1807.	3.3	18
99	Remote Photothermal Control of DNA Origami Assembly in Cellular Environments. Nano Letters, 2021, 21, 5834-5841.	9.1	18
100	A study of pH-dependence of shrink and stretch of tetrahedral DNA nanostructures. Nanoscale, 2015, 7, 6467-6470.	5.6	17
101	Recognizing single phospholipid vesicle collisions on carbon fiber nanoelectrode. Science China Chemistry, 2017, 60, 1474-1480.	8.2	17
102	Epitope Binning Assay Using an Electron Transfer-Modulated Aptamer Sensor. ACS Applied Materials & Interfaces, 2018, 10, 341-349.	8.0	17
103	Catalytic Nucleic Acids for Bioanalysis. ACS Applied Bio Materials, 2020, 3, 2674-2685.	4.6	15
104	Zeroâ€Background Helicaseâ€Dependent Amplification and Its Application to Reliable Assay of Telomerase Activity in Cancer Cell by Eliminating Primerâ€“Dimer Artifacts. ChemBioChem, 2016, 17, 1171-1176.	2.6	14
105	Stimuli-Responsive DNA-Switchable Biointerfaces. Langmuir, 2018, 34, 15055-15068.	3.5	14
106	Reconstructing Somaâ€“Soma Synapse-like Vesicular Exocytosis with DNA Origami. ACS Central Science, 2021, 7, 1400-1407.	11.3	14
107	Gold nanoflowerâ€based surfaceâ€enhanced Raman probes for pH mapping of tumor cell microenviroment. Cell Proliferation, 2019, 52, e12618.	5.3	13
108	Probing Transient DNA Conformation Changes with an Intercalative Fluorescent Excimer. Angewandte Chemie - International Edition, 2021, 60, 6624-6630.	13.8	13

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109	Directing Multivalent Aptamerâ€Receptor Binding on the Cell Surface with Programmable Atomâ€Like Nanoparticles. Angewandte Chemie - International Edition, 2022, 61, .	13.8	13
110	Molecular Visualization of Earlyâ€Stage Acute Kidney Injury with a DNA Framework Nanodevice. Advanced Science, 2022, 9, e2105947.	11.2	12
111	Imaging the in vivo growth patterns of bacteria in human gut Microbiota. Gut Microbes, 2021, 13, 1960134.	9.8	11
112	Valencyâ€Controlled Framework Nucleic Acid Signal Amplifiers. Angewandte Chemie, 2018, 130, 7249-7253.	2.0	9
113	Programming folding cooperativity of the dimeric i-motif with DNA frameworks for sensing small pH variations. Chemical Communications, 2021, 57, 3247-3250.	4.1	9
114	Electrochemical Analysis for Multiscale Single Entities on the Confined Interface^{â€}. Chinese Journal of Chemistry, 2021, 39, 1745-1752.	4.9	9
115	Modular DNA Circuits for Point-of-Care Colorimetric Assay of Infectious Pathogens. Analytical Chemistry, 2021, 93, 13861-13869.	6.5	9
116	Stepping gating of ion channels on nanoelectrode via DNA hybridization for label-free DNA detection. Biosensors and Bioelectronics, 2019, 133, 141-146.	10.1	8
117	Immunostimulatory AIE Dots for Live-Cell Imaging and Drug Delivery. ACS Applied Materials & Interfaces, 2021, 13, 19660-19667.	8.0	8
118	Nanoparticleâ€Assisted Alignment of Carbon Nanotubes on DNA Origami. Angewandte Chemie, 2020, 132, 4922-4926.	2.0	7
119	Valenceâ€Engineering of Quantum Dots Using Programmable DNA Scaffolds. Angewandte Chemie, 2017, 129, 16293-16297.	2.0	6
120	Inâ€Situ Configuration Studies on Segmented DNA Origami Nanotubes. ChemBioChem, 2019, 20, 1508-1513.	2.6	4
121	Programming biosensing sensitivity by controlling the dimension of nanostructured electrode. Analytical and Bioanalytical Chemistry, 2019, 411, 4085-4092.	3.7	4
122	DNA Framework-based Topological Aptamer for Differentiating Subtypes of Hepatocellular Carcinoma Cells. Chemical Research in Chinese Universities, 2021, 37, 919-924.	2.6	4
123	Rapid Transmembrane Transport of DNA Nanostructures by Chemically Anchoring Artificial Receptors on Cell Membranes. ChemPlusChem, 2019, 84, 323-327.	2.8	3
124	DNA Framework-Programmed Micronano Hierarchy Sensor Interface for Metabolite Analysis in Whole Blood. ACS Applied Bio Materials, 2020, 3, 53-58.	4.6	3
125	Nucleic Acid Nanoprobes for Biosensor Development in Complex Matrices. Chemical Research in Chinese Universities, 2020, 36, 185-193.	2.6	3
126	DNA Frameworkâ€Based Topological Cell Sorters. Angewandte Chemie, 2020, 132, 10492-10496.	2.0	3

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127	Programming cell entry of molecules via reversible synthetic DNA circuits on cell membrane. Fundamental Research, 2021, 1, 747-751.	3.3	3
128	DNA origami nanocalipers for pH sensing at the nanoscale. Chemical Communications, 2022, 58, 3673-3676.	4.1	3
129	Directing Multivalent Aptamerâ€Receptor Binding on the Cell Surface with Programmable Atomâ€Like Nanoparticles. Angewandte Chemie, 0, , .	2.0	2
130	Engineering nucleic acid functional probes in neuroimaging. TrAC - Trends in Analytical Chemistry, 2022, 154, 116651.	11.4	2
131	Deformation-Resistant, Double-Layer DNA Self-Assembled Nanoraft with High Positioning Precision. ACS Applied Bio Materials, 2020, 3, 2610-2616.	4.6	1
132	DNA Frameworkâ€Mediated Geometric Renormalization of Gold Nanoparticles on a Twoâ€Dimensional Fluidic Membrane Interface. ChemPlusChem, 2021, 86, 1472-1475.	2.8	1
133	Innentitelbild: Valencyâ€Controlled Framework Nucleic Acid Signal Amplifiers (Angew. Chem. 24/2018). Angewandte Chemie, 2018, 130, 7066-7066.	2.0	0
134	Probing Transient DNA Conformation Changes with an Intercalative Fluorescent Excimer. Angewandte Chemie, 2021, 133, 6698-6704.	2.0	0
135	CRISPR/Cas system-guided plasmid mutagenesis without sequence restriction. Fundamental Research, 2022, , .	3.3	0