Yi Xiao

List of Publications by Year in descending order

94 papers	13,263 citations	31976 53 h-index	34986 98 g-index
100 all docs	100 docs citations	100 times ranked	10043 citing authors

#	Article	IF	Citations
1	DNA Aptamerâ€“Cyanine Complexes as Generic Colorimetric Smallâ€Molecule Sensors. Angewandte Chemie - International Edition, 2022, 61, .	13.8	19
2	Revealing the catalytic kinetics and dynamics of individual Pt atoms at the single-molecule level. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2114639119.	7.1	11
3	Near-Infrared Dye-Aptamer Assay for Small Molecule Detection in Complex Specimens. Analytical Chemistry, 2022, 94, 10082-10090.	6.5	2
4	Fabrication of Aptamerâ€Modified Paper Electrochemical Devices for Onâ€Site Biosensing. Angewandte Chemie - International Edition, 2021, 60, 2993-3000.	13.8	40
5	Fabrication of Aptamerâ€Modified Paper Electrochemical Devices for Onâ€Site Biosensing. Angewandte Chemie, 2021, 133, 3030-3037.	2.0	8
6	Isolation of Natural DNA Aptamers for Challenging Small-Molecule Targets, Cannabinoids. Analytical Chemistry, 2021, 93, 3172-3180.	6.5	44
7	Advances and Challenges in Smallâ€Molecule DNA Aptamer Isolation, Characterization, and Sensor Development. Angewandte Chemie - International Edition, 2021, 60, 16800-16823.	13.8	198
8	Advances and Challenges in Smallâ€Molecule DNA Aptamer Isolation, Characterization, and Sensor Development. Angewandte Chemie, 2021, 133, 16938-16961.	2.0	8
9	Aptamer-Integrated Multianalyte-Detecting Paper Electrochemical Device. ACS Applied Materials & Interfaces, 2021, 13, 17330-17339.	8.0	15
10	<scp>Singleâ€Molecule</scp> Fluorescence Imaging of Nanocatalysis. Chinese Journal of Chemistry, 2021, 39, 1459-1470.	4.9	14
11	Immobilization Strategies for Enhancing Sensitivity of Electrochemical Aptamer-Based Sensors. ACS Applied Materials & Interfaces, 2021, 13, 9491-9499.	8.0	57
12	Accelerating Post-SELEX Aptamer Engineering Using Exonuclease Digestion. Journal of the American Chemical Society, 2021, 143, 805-816.	13.7	56
13	Platinum-Nanoparticle-Modified Single-Walled Carbon Nanotube-Laden Paper Electrodes for Electrocatalytic Oxidation of Methanol. ACS Applied Nano Materials, 2021, 4, 13798-13806.	5.0	6
14	Label-free profiling of DNA aptamer-small molecule binding using T5 exonuclease. Nucleic Acids Research, 2020, 48, e120-e120.	14.5	25
15	Tuning Biosensor Cross-Reactivity Using Aptamer Mixtures. Analytical Chemistry, 2020, 92, 5041-5047.	6.5	22
16	Revealing Kinetics of Two-Electron Oxygen Reduction Reaction at Single-Molecule Level. Journal of the American Chemical Society, 2020, 142, 13201-13209.	13.7	39
17	Nicotinamide mononucleotide adenylyltransferase uses its NAD+ substrate-binding site to chaperone phosphorylated Tau. ELife, 2020, 9, .	6.0	18
18	Universal Design of Structure-Switching Aptamers with Signal Reporting Functionality. Analytical Chemistry, 2019, 91, 14514-14521.	6.5	25

#	Article	IF	Citations
19	Perspective on the Future Role of Aptamers in Analytical Chemistry. Analytical Chemistry, 2019, 91, 15335-15344.	6.5	89
20	Innovative engineering and sensing strategies for aptamer-based small-molecule detection. TrAC - Trends in Analytical Chemistry, 2019, 121, 115699.	11.4	102
21	Defect-Driven Heterogeneous Electron Transfer between an Individual Graphene Sheet and Electrode. Journal of Physical Chemistry Letters, 2019, 10, 5402-5407.	4.6	6
22	Label-Free, Visual Detection of Small Molecules Using Highly Target-Responsive Multimodule Split Aptamer Constructs. Analytical Chemistry, 2019, 91, 7199-7207.	6.5	53
23	In vitro isolation of class-specific oligonucleotide-based small-molecule receptors. Nucleic Acids Research, 2019, 47, e71-e71.	14.5	50
24	In vitro isolation of small-molecule-binding aptamers with intrinsic dye-displacement functionality. Nucleic Acids Research, 2018, 46, e43-e43.	14.5	39
25	Dithiothreitol-Regulated Coverage of Oligonucleotide-Modified Gold Nanoparticles To Achieve Optimized Biosensor Performance. ACS Applied Materials & Interfaces, 2018, 10, 4233-4242.	8.0	25
26	Sensitive Detection of Small-Molecule Targets Using Cooperative Binding Split Aptamers and Enzyme-Assisted Target Recycling. Analytical Chemistry, 2018, 90, 1748-1758.	6.5	31
27	Introducing structure-switching functionality into small-molecule-binding aptamers via nuclease-directed truncation. Nucleic Acids Research, 2018, 46, e81-e81.	14.5	51
28	Enhancement of PCR Sensitivity and Yield Using Thiol-modified Primers. Scientific Reports, 2018, 8, 14858.	3.3	5
29	No Structure-Switching Required: A Generalizable Exonuclease-Mediated Aptamer-Based Assay for Small-Molecule Detection. Journal of the American Chemical Society, 2018, 140, 9961-9971.	13.7	62
30	A Broadly Applicable Assay for Rapidly and Accurately Quantifying DNA Surface Coverage on Diverse Particles. Bioconjugate Chemistry, 2017, 28, 933-943.	3.6	6
31	A cooperative-binding split aptamer assay for rapid, specific and ultra-sensitive fluorescence detection of cocaine in saliva. Chemical Science, 2017, 8, 131-141.	7.4	89
32	Rapid, Surfactant-Free, and Quantitative Functionalization of Gold Nanoparticles with Thiolated DNA under Physiological pH and Its Application in Molecular Beacon-Based Biosensor. ACS Applied Materials & Interfaces, 2016, 8, 27298-27304.	8.0	32
33	Antagonistic roles between Nibbler and Hen1 modulate piRNA 3' ends in Drosophila. Development (Cambridge), 2015, 143, 530-9.	2.5	53
34	Paper-Based Device for Rapid Visualization of NADH Based on Dissolution of Gold Nanoparticles. ACS Applied Materials & Interfaces, 2015, 7, 15023-15030.	8.0	43
35	Nanoprobe-Enhanced, Split Aptamer-Based Electrochemical Sandwich Assay for Ultrasensitive Detection of Small Molecules. Analytical Chemistry, 2015, 87, 7712-7719.	6.5	50
36	Ambient Filtration Method To Rapidly Prepare Highly Conductive, Paper-Based Porous Gold Films for Electrochemical Biosensing. ACS Applied Materials & Interfaces, 2015, 7, 27049-27058.	8.0	29

#	Article	IF	Citations
37	A Label-Free Aptamer-Fluorophore Assembly for Rapid and Specific Detection of Cocaine in Biofluids. Analytical Chemistry, 2014, 86, 11100-11106.	6.5	95
38	Amplified Single Base-Pair Mismatch Detection via Aggregation of Exonuclease-Sheared Gold Nanoparticles. Analytical Chemistry, 2014, 86, 3461-3467.	6.5	38
39	Self-Assembled DNA Monolayer Buffered Dynamic Ranges of Mercuric Electrochemical Sensor. Analytical Chemistry, 2013, 85, 7574-7580.	6.5	53
40	Controlling the function of DNA nanostructures with specific trigger sequences. Chemical Communications, 2013, 49, 397-399.	4.1	6
41	In Vitro Selection of Shape-Changing DNA Nanostructures Capable of Binding-Induced Cargo Release. ACS Nano, 2013, 7, 9675-9683.	14.6	26
42	Selection is more intelligent than design: improving the affinity of a bivalent ligand through directed evolution. Nucleic Acids Research, 2012, 40, 11777-11783.	14.5	70
43	Electrochemical DNA three-way junction based sensor for distinguishing chiral metallo-supramolecular complexes. Chemical Communications, 2012, 48, 6900.	4.1	26
44	Improving Aptamer Selection Efficiency through Volume Dilution, Magnetic Concentration, and Continuous Washing in Microfluidic Channels. Analytical Chemistry, 2011, 83, 6883-6889.	6.5	60
45	Measurement of Aptamerâ€“Protein Interactions with Back-Scattering Interferometry. Analytical Chemistry, 2011, 83, 8867-8870.	6.5	37
46	Genetic Analysis of H1N1 Influenza Virus from Throat Swab Samples in a Microfluidic System for Point-of-Care Diagnostics. Journal of the American Chemical Society, 2011, 133, 9129-9135.	13.7	178
47	Polarityâ€Switching Electrochemical Sensor for Specific Detection of Singleâ€Nucleotide Mismatches. Angewandte Chemie - International Edition, 2011, 50, 11176-11180.	13.8	51
48	Twoâ€Step, PCRâ€Free Telomerase Detection by Using Exonuclease IIIâ€Aided Target Recycling. ChemBioChem, 2011, 12, 2745-2747.	2.6	48
49	Selection of phage-displayed peptides on live adherent cells in microfluidic channels. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6909-6914.	7.1	57
50	Probing the Limits of Aptamer Affinity with a Microfluidic SELEX Platform. PLoS ONE, 2011, 6, e27051.	2.5	90
51	Detection of Proteins in Serum by Micromagnetic Aptamer PCR (MAP) Technology. Angewandte Chemie - International Edition, 2010, 49, 355-358.	13.8	96
52	In vitro selection of structure-switching, self-reporting aptamers. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14053-14058.	7.1	113
53	Detection of Telomerase Activity in High Concentration of Cell Lysates Using Primer-Modified Gold Nanoparticles. Journal of the American Chemical Society, 2010, 132, 15299-15307.	13.7	105
54	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

#	Article	IF	Citations
55	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
56	Colorimetric detection of DNA, small molecules, proteins, and ions using unmodified gold nanoparticles and conjugated polyelectrolytes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 10837-10841.	7.1	505
57	Electrochemical DNA Detection via Exonuclease and Target-Catalyzed Transformation of Surface-Bound Probes. Langmuir, 2010, 26, 10392-10396.	3.5	72
58	Label-Free, Dual-Analyte Electrochemical Biosensors: A New Class of Molecular-Electronic Logic Gates. Journal of the American Chemical Society, 2010, 132, 8557-8559.	13.7	117
59	On the Binding of Cationic, Water-Soluble Conjugated Polymers to DNA: Electrostatic and Hydrophobic Interactions. Journal of the American Chemical Society, 2010, 132, 1252-1254.	13.7	82
60	Quantitative selection of DNA aptamers through microfluidic selection and high-throughput sequencing. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15373-15378.	7.1	226
61	Labelâ€Free Colorimetric Screening of Nuclease Activity and Substrates by Using Unmodified Gold Nanoparticles. ChemBioChem, 2009, 10, 1973-1977.	2.6	26
62	On the Signaling of Electrochemical Aptamerâ€Based Sensors: Collisionâ€and Foldingâ€Based Mechanisms. Electroanalysis, 2009, 21, 1267-1271.	2.9	71
63	Fluorescence Detection of Singleâ€Nucleotide Polymorphisms with a Single, Selfâ€Complementary, Tripleâ€Stem DNA Probe. Angewandte Chemie - International Edition, 2009, 48, 4354-4358.	13.8	118
64	Optimization of a Reusable, DNA Pseudoknot-Based Electrochemical Sensor for Sequence-Specific DNA Detection in Blood Serum. Analytical Chemistry, 2009, 81, 656-661.	6.5	94
65	An Electrochemical Sensor for Single Nucleotide Polymorphism Detection in Serum Based on a Triple-Stem DNA Probe. Journal of the American Chemical Society, 2009, 131, 15311-15316.	13.7	171
66	Generation of Highly Specific Aptamers via Micromagnetic Selection. Analytical Chemistry, 2009, 81, 5490-5495.	6.5	125
67	Continuous, Real-Time Monitoring of Cocaine in Undiluted Blood Serum via a Microfluidic, Electrochemical Aptamer-Based Sensor. Journal of the American Chemical Society, 2009, 131, 4262-4266.	13.7	333
68	i-Motif Quadruplex DNA-Based Biosensor for Distinguishing Single- and Multiwalled Carbon Nanotubes. Journal of the American Chemical Society, 2009, 131, 13813-13818.	13.7	117
69	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
70	Micromagnetic selection of aptamers in microfluidic channels. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 2989-2994.	7.1	310
71	Electrochemical Approaches to Aptamer-Based Sensing. , 2009, , 179-197.		4
72	Optimization of Electrochemical Aptamer-Based Sensors via Optimization of Probe Packing Density and Surface Chemistry. Langmuir, 2008, 24, 10513-10518.	3.5	278

#	Article	IF	Citations
73	Label-Free Electrochemical Detection of DNA in Blood Serum via Target-Induced Resolution of an Electrode-Bound DNA Pseudoknot. Journal of the American Chemical Society, 2007, 129, 11896-11897.	13.7	240
74	Electrochemical Detection of Parts-Per-Billion Lead via an Electrode-Bound DNAzyme Assembly. Journal of the American Chemical Society, 2007, 129, 262-263.	13.7	456
75	Preparation of electrode-immobilized, redox-modified oligonucleotides for electrochemical DNA and aptamer-based sensing. Nature Protocols, 2007, 2, 2875-2880.	12.0	350
76	Single-step electronic detection of femtomolar DNA by target-induced strand displacement in an electrode-bound duplex. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 16677-16680.	7.1	220
77	Label-Free Electronic Detection of Thrombin in Blood Serum by Using an Aptamer-Based Sensor. Angewandte Chemie - International Edition, 2005, 44, 5456-5459.	13.8	683
78	An OsII-Bisbipyridine-4-Picolinic Acid Complex Mediates the Biocatalytic Growth of Au Nanoparticles: Optical Detection of Glucose and Acetylcholine Esterase Inhibition. Chemistry - A European Journal, 2005, 11, 2698-2704.	3.3	50
79	Optical and Electrochemical Detection of NADH and of NAD+-Dependent Biocatalyzed Processes by the Catalytic Deposition of Copper on Gold Nanoparticles. Small, 2005, 1, 213-216.	10.0	75
80	A Reagentless Signal-On Architecture for Electronic, Aptamer-Based Sensors via Target-Induced Strand Displacement. Journal of the American Chemical Society, 2005, 127, 17990-17991.	13.7	500
81	Inhibition of the Acetycholine Esterase-Stimulated Growth of Au Nanoparticles:â€‰ Nanotechnology-Based Sensing of Nerve Gases. Nano Letters, 2005, 5, 649-653.	9.1	225
82	Shape and Color of Au Nanoparticles Follow Biocatalytic Processes. Langmuir, 2005, 21, 5659-5662.	3.5	67
83	Catalytic Growth of Au Nanoparticles by NAD(P)H Cofactors: Optical Sensors for NAD(P)+-Dependent Biocatalyzed Transformations. Angewandte Chemie - International Edition, 2004, 43, 4519-4522.	13.8	158
84	Lighting Up Biochemiluminescence by the Surface Self-Assembly of DNA-Hemin Complexes. ChemBioChem, 2004, 5, 374-379.	2.6	167
85	Electrical contacting of glucose oxidase by DNA-templated polyaniline wires on surfaces. Electrochemistry Communications, 2004, 6, 1057-1060.	4.7	63
86	Amplified Chemiluminescence Surface Detection of DNA and Telomerase Activity Using Catalytic Nucleic Acid Labels. Analytical Chemistry, 2004, 76, 2152-2156.	6.5	342
87	Aptamer-Functionalized Au Nanoparticles for the Amplified Optical Detection of Thrombin. Journal of the American Chemical Society, 2004, 126, 11768-11769.	13.7	669
88	Catalytic Beacons for the Detection of DNA and Telomerase Activity. Journal of the American Chemical Society, 2004, 126, 7430-7431.	13.7	411
89	DNAzyme-Functionalized Au Nanoparticles for the Amplified Detection of DNA or Telomerase Activity. Nano Letters, 2004, 4, 1683-1687.	9.1	289
90	"Plugging into Enzymes": Nanowiring of Redox Enzymes by a Gold Nanoparticle. Science, 2003, 299, 1877-1881.	12.6	1,248

#	Article	IF	Citations
91	Electrocatalytic intercalator-induced winding of double-stranded DNA with polyaniline. Chemical Communications, 2003, , 1540.	4.1	29
92	Hydrogen peroxide sensor based on horseradish peroxidase-labeled Au colloids immobilized on gold electrode surface by cysteamine monolayer. Analytica Chimica Acta, 1999, 391, 73-82.	5.4	380
93	Amperometric Biosensor for Glucose Based on a Nanometer-Sized Microband Gold Electrode Coimmobilized with Glucose Oxidase and Poly(o-phenylenediamide). Electroanalysis, 1998, 10, 541-545.	2.9	70
94	DNA Aptamerâ€Cyanine Complexes as Generic Colorimetric Smallâ€Molecule Sensors. Angewandte Chemie, 0, , .	2.0	4