Rebecca Lai

List of Publications by Year
in descending order

60 papers	4,027 citations	147566 31 h-index	128067 60 g-index
60 all docs	60 docs citations	60 times ranked	3864 citing authors

#	Article	IF	Citations
1	An Electronic, Aptamer-Based Small-Molecule Sensor for the Rapid, Label-Free Detection of Cocaine in Adulterated Samples and Biological Fluids. Journal of the American Chemical Society, 2006, 128, 3138-3139.	6.6	759
2	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.	6.6	333
3	Aptamer-Based Electrochemical Detection of Picomolar Platelet-Derived Growth Factor Directly in Blood Serum. Analytical Chemistry, 2007, 79, 229-233.	3.2	329
4	Effect of Molecular Crowding on the Response of an Electrochemical DNA Sensor. Langmuir, 2007, 23, 6827-6834.	1.6	293
5	Electrochemical aptamer-based sensors for food and water analysis: AÂreview. Analytica Chimica Acta, 2019, 1051, 1-23.	2.6	188
6	Rapid, sequence-specific detection of unpurified PCR amplicons via a reusable, electrochemical sensor. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 4017-4021.	3.3	174
7	A folding-based electrochemical aptasensor for detection of vascular endothelial growth factor in human whole blood. Biosensors and Bioelectronics, 2011, 26, 2442-2447.	5.3	145
8	Linear, redox modified DNA probes as electrochemical DNA sensors. Chemical Communications, 2007, , 3768.	2.2	108
9	Comparison of the Signaling and Stability of Electrochemical DNA Sensors Fabricated from 6- or 11-Carbon Self-Assembled Monolayers. Langmuir, 2006, 22, 10796-10800.	1.6	103
10	A reagentless and reusable electrochemical aptamer-based sensor for rapid detection of ampicillin in complex samples. Talanta, 2018, 176, 619-624.	2.9	85
11	Methylene Blue-Mediated Electrocatalytic Detection of Hexavalent Chromium. Analytical Chemistry, 2015, 87, 2560-2564.	3.2	81
12	Microfluidic Device Architecture for Electrochemical Patterning and Detection of Multiple DNA Sequences. Langmuir, 2008, 24, 1102-1107.	1.6	77
13	An electrochemical peptide-based biosensing platform for HIV detection. Chemical Communications, 2010, 46, 395-397.	2.2	74
14	Comparison of the Stem-Loop and Linear Probe-Based Electrochemical DNA Sensors by Alternating Current Voltammetry and Cyclic Voltammetry. Langmuir, 2011, 27, 14669-14677.	1.6	66
15	Characterization of an electrochemical mercury sensor using alternating current, cyclic, square wave and differential pulse voltammetry. Analytica Chimica Acta, 2014, 810, 79-85.	2.6	66
16	A reagentless and reusable electrochemical aptamer-based sensor for rapid detection of Cd(II). Journal of Electroanalytical Chemistry, 2017, 803, 89-94.	1.9	65
17	Development of an electrochemical insulin sensor based on the insulin-linked polymorphicregion. Biosensors and Bioelectronics, 2013, 42, 62-68.	5.3	62
18	A reagentless and reusable electrochemical DNA sensor based on target hybridization-induced stem-loop probe formation. Chemical Communications, 2012, 48, 10523.	2.2	53

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19	Towards the development of a sensitive and selective electrochemical aptamer-based ampicillin sensor. Sensors and Actuators B: Chemical, 2018, 258, 722-729.	4.0	52
20	Electrochemical techniques for characterization of stem-loop probe and linear probe-based DNA sensors. Methods, 2013, 64, 267-275.	1.9	49
21	Development of a â€œsignal-onâ€•electrochemical DNA sensor with an oligo-thymine spacer for point mutation detection. Chemical Communications, 2013, 49, 3422.	2.2	49
22	Fabrication of Electrochemical DNA Sensors on Gold-Modified Recessed Platinum Nanoelectrodes. Analytical Chemistry, 2014, 86, 2849-2852.	3.2	48
23	Progress in the materials for optical detection of arsenic in water. TrAC - Trends in Analytical Chemistry, 2019, 110, 97-115.	5.8	47
24	Folding-based electrochemical DNA sensor fabricated on a gold-plated screen-printed carbon electrode. Chemical Communications, 2009, , 2902.	2.2	43
25	Use of thiolated oligonucleotides as anti-fouling diluents in electrochemical peptide-based sensors. Chemical Communications, 2014, 50, 4690.	2.2	43
26	Fabrication of an electrochemical DNA sensor array via potential-assisted â€œclickâ€•chemistry. Chemical Communications, 2010, 46, 3941.	2.2	39
27	Design and characterization of an electrochemical peptide-based sensor fabricated viaâ€œclickâ€• chemistry. Chemical Communications, 2011, 47, 8688.	2.2	38
28	Effects of DNA Probe and Target Flexibility on the Performance of a â€œSignal-onâ€•Electrochemical DNA Sensor. Analytical Chemistry, 2014, 86, 8888-8895.	3.2	35
29	Comparison of nanostructured silver-modified silver and carbon ultramicroelectrodes for electrochemical detection of nitrate. Analytica Chimica Acta, 2015, 892, 153-159.	2.6	35
30	Electrochemiluminescence Detection in Paperâ€Based and Other Inexpensive Microfluidic Devices. ChemElectroChem, 2017, 4, 1594-1603.	1.7	32
31	Folding-based electrochemical DNA sensor fabricated by â€œclickâ€•chemistry. Chemical Communications, 2009, , 4835.	2.2	31
32	Electrochemical Gold(III) Sensor with High Sensitivity and Tunable Dynamic Range. Analytical Chemistry, 2016, 88, 2227-2233.	3.2	31
33	Differential Labeling of Closely Spaced Biosensor Electrodes via Electrochemical Lithography. Langmuir, 2006, 22, 1932-1936.	1.6	29
34	A Hg(ii)-mediated â€œsignal-onâ€•electrochemical glutathione sensor. Chemical Communications, 2014, 50, 8385.	2.2	26
35	A reagentless DNAâ€based electrochemical silver(I) sensor for real time detection of Ag(I) â€“ the effect of probe sequence and orientation on sensor response. Biotechnology Journal, 2016, 11, 788-796.	1.8	26
36	Tunable Signal-Off and Signal-On Electrochemical Cisplatin Sensor. Analytical Chemistry, 2017, 89, 9984-9989.	3.2	24

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37	Effects of redox label location on the performance of an electrochemical aptamer-based tumor necrosis factor-alpha sensor. Talanta, 2018, 189, 585-591.	2.9	23
38	Effect of diluent chain length on the performance of the electrochemical DNA sensor at elevated temperature. Analyst, The, 2011, 136, 134-139.	1.7	22
39	Application of Calcium-Binding Motif of E-Cadherin for Electrochemical Detection of Pb(II). Analytical Chemistry, 2018, 90, 6519-6525.	3.2	21
40	Multiplexed Monitoring of Neurochemicals via Electrografting-Enabled Site-Selective Functionalization of Aptamers on Field-Effect Transistors. Analytical Chemistry, 2022, 94, 8605-8617.	3.2	21
41	An electrochemical peptide-based Ara h 2 antibody sensor fabricated on a nickel(II)-nitriloacetic acid self-assembled monolayer using a His-tagged peptide. Analytica Chimica Acta, 2014, 828, 85-91.	2.6	20
42	Application of electrochemical surface plasmon resonance spectroscopy for characterization of electrochemical DNA sensors. Colloids and Surfaces B: Biointerfaces, 2014, 122, 835-839.	2.5	19
43	Incorporation of extra amino acids in peptide recognition probe to improve specificity and selectivity of an electrochemical peptide-based sensor. Analytica Chimica Acta, 2015, 886, 157-164.	2.6	19
44	Electrochemical hydrogen peroxide sensors fabricated using cytochrome c immobilized on macroelectrodes and ultramicroelectrodes. Colloids and Surfaces B: Biointerfaces, 2014, 123, 866-869.	2.5	15
45	Electrochemical Detection of Platinum(IV) Prodrug Satraplatin in Serum. Analytical Chemistry, 2015, 87, 11092-11097.	3.2	15
46	Comparison of Mannose, Ethylene Glycol, and Methoxy-Terminated Diluents on Specificity and Selectivity of Electrochemical Peptide-Based Sensors. Analytical Chemistry, 2015, 87, 6966-6973.	3.2	14
47	Effect of redox label tether length and flexibility on sensor performance of displacement-based electrochemical DNA sensors. Analytica Chimica Acta, 2014, 812, 176-183.	2.6	13
48	Waste to wealth translation of e-waste to plasmonic nanostructures for surface-enhanced Raman scattering. Applied Nanoscience (Switzerland), 2020, 10, 1615-1623.	1.6	11
49	Evidence for surface effects on the intermolecular interactions in Fe(<scp>ii</scp>) spin crossover coordination polymers. Physical Chemistry Chemical Physics, 2022, 24, 883-894.	1.3	11
50	Design and characterization of a metal ionâ€“imidazole self-assembled monolayer for reversible immobilization of histidine-tagged peptides. Chemical Communications, 2011, 47, 12391.	2.2	9
51	Iron(III)â€mediated Electrochemical Detection of Levofloxacin in Complex Biological Samples. Electroanalysis, 2017, 29, 2672-2677.	1.5	9
52	Hexavalent Chromium as an Electrocatalyst in DNA Sensing. Analytical Chemistry, 2017, 89, 13342-13348.	3.2	7
53	Folding- and Dynamics-Based Electrochemical DNA Sensors. Methods in Enzymology, 2017, 589, 221-252.	0.4	7
54	Effects of DNA Probe Length on the Performance of a Dynamicsâ€based Electrochemical Hg(II) Sensor. Electroanalysis, 2017, 29, 2239-2245.	1.5	6

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55	Engineering uranyl-chelating peptides from NikR for electrochemical peptide-based sensing applications. Journal of Electroanalytical Chemistry, 2020, 858, 113698.	1.9	6
56	Laser vibrational excitation of radicals to prevent crystallinity degradation caused by boron doping in diamond. Science Advances, 2021, 7, .	4.7	6
57	Evidence for long drift carrier lifetimes in [Fe(Htrz)2(trz)](BF4) plus polyaniline composites. Organic Electronics, 2022, 105, 106516.	1.4	6
58	Design and Synthesis of a Class of Twinâ€Chain Amphiphiles for Selfâ€Assembled Monolayerâ€Based Electrochemical Biosensor Applications. European Journal of Organic Chemistry, 2013, 2013, 3263-3270.	1.2	3
59	Scanning Electrochemical and Fluorescence Microscopy for Detection of Reactive Oxygen Species in Living Cells. ACS Symposium Series, 2015, , 415-430.	0.5	3
60	Solution-stable anisotropic carbon nanotube/graphene hybrids based on slanted columnar thin films for chemical sensing. RSC Advances, 2016, 6, 63235-63240.	1.7	3