NoemÃ- de-los-Santos-Ãlvarez

List of Publications by Year
in descending order

105 papers	3,495 citations	126907 33 h-index	155660 55 g-index
106 all docs	106 docs citations	106 times ranked	4639 citing authors

#	Article	IF	Citations
1	Electrochemical biosensors and nanobiosensors. Essays in Biochemistry, 2016, 60, 69-80.	4.7	265
2	Point-of-Care Diagnostics in Low Resource Settings: Present Status and Future Role of Microfluidics. Biosensors, 2015, 5, 577-601.	4.7	259
3	Carbon Nanostructure-Based Field-Effect Transistors for Label-Free Chemical/Biological Sensors. Sensors, 2010, 10, 5133-5159.	3.8	145
4	Localized Surface Plasmon Resonance as a Biosensing Platform for Developing Countries. Biosensors, 2014, 4, 172-188.	4.7	142
5	Aptamer-Based Analysis: A Promising Alternative for Food Safety Control. Sensors, 2013, 13, 16292-16311.	3.8	113
6	Modified-RNA Aptamer-Based Sensor for Competitive Impedimetric Assay of Neomycin B. Journal of the American Chemical Society, 2007, 129, 3808-3809.	13.7	106
7	Towards a reliable technology for antioxidant capacity and oxidative damage evaluation: Electrochemical (bio)sensors. Biosensors and Bioelectronics, 2011, 30, 1-12.	10.1	103
8	Helicase-dependent isothermal amplification: a novel tool in the development of molecular-based analytical systems for rapid pathogen detection. Analytical and Bioanalytical Chemistry, 2018, 410, 679-693.	3.7	96
9	Label-Free Ultrasensitive Memristive Aptasensor. Nano Letters, 2016, 16, 4472-4476.	9.1	87
10	Aptamers as recognition elements for label-free analytical devices. TrAC - Trends in Analytical Chemistry, 2008, 27, 437-446.	11.4	85
11	SPR sensing of small molecules with modified RNA aptamers: Detection of neomycin B. Biosensors and Bioelectronics, 2009, 24, 2547-2553.	10.1	70
12	A label-free DNA aptamer-based impedance biosensor for the detection of E. coli outer membrane proteins. Sensors and Actuators B: Chemical, 2013, 181, 766-772.	7.8	69
13	DNA-based biosensor for the electrocatalytic determination of antioxidant capacity in beverages. Biosensors and Bioelectronics, 2011, 26, 2396-2401.	10.1	66
14	Electrochemical aptasensors for cancer diagnosis in biological fluids â€“ A review. Analytica Chimica Acta, 2020, 1124, 1-19.	5.4	62
15	DNA aptamer-based sandwich microfluidic assays for dual quantification and multi-glycan profiling of cancer biomarkers. Biosensors and Bioelectronics, 2016, 79, 313-319.	10.1	61
16	Aptamer Binding to Celiac Disease-Triggering Hydrophobic Proteins: A Sensitive Gluten Detection Approach. Analytical Chemistry, 2014, 86, 2733-2739.	6.5	58
17	Optimisation of an electrochemical impedance spectroscopy aptasensor by exploiting quartz crystal microbalance with dissipation signals. Sensors and Actuators B: Chemical, 2015, 220, 369-375.	7.8	58
18	CO tolerance of ordered intermetallic phases. Journal of Electroanalytical Chemistry, 2009, 626, 14-22.	3.8	52

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19	Self-assembled gold nanoparticles for impedimetric and amperometric detection of a prostate cancer biomarker. Sensors and Actuators B: Chemical, 2017, 251, 637-643.	7.8	52
20	Impedimetric aptasensor for tobramycin detection in human serum. Biosensors and Bioelectronics, 2011, 26, 2354-2360.	10.1	51
21	Attomolar quantitation of Mycobacterium tuberculosis by asymmetric helicase-dependent isothermal DNA-amplification and electrochemical detection. Biosensors and Bioelectronics, 2015, 68, 122-128.	10.1	51
22	Optimisation and Characterisation of Anti-Fouling Ternary SAM Layers for Impedance-Based Aptasensors. Sensors, 2015, 15, 25015-25032.	3.8	50
23	Highly Monodisperse Fe₃O₄@Au Superparamagnetic Nanoparticles as Reproducible Platform for Genosensing Genetically Modified Organisms. ACS Sensors, 2016, 1, 1044-1053.	7.8	49
24	Focusing aptamer selection on the glycan structure of prostate-specific antigen: Toward more specific detection of prostate cancer. Biosensors and Bioelectronics, 2019, 128, 83-90.	10.1	46
25	A comparative study of different adenine derivatives for the electrocatalytic oxidation of Î²-nicotinamide adenine dinucleotide. Journal of Electroanalytical Chemistry, 2001, 502, 109-117.	3.8	45
26	Sensitive gluten determination in gluten-free foods by an electrochemical aptamer-based assay. Analytical and Bioanalytical Chemistry, 2015, 407, 6021-6029.	3.7	42
27	Targeting Helicase-Dependent Amplification Products with an Electrochemical Genosensor for Reliable and Sensitive Screening of Genetically Modified Organisms. Analytical Chemistry, 2015, 87, 8547-8554.	6.5	41
28	DNA aptamer-based detection of prostate cancer. Chemical Papers, 2015, 69, .	2.2	41
29	PCR-coupled electrochemical sensing of Legionella pneumophila. Biosensors and Bioelectronics, 2009, 24, 2390-2396.	10.1	40
30	Structured Nucleic Acid Probes for Electrochemical Devices. Electroanalysis, 2009, 21, 2077-2090.	2.9	39
31	Electrocatalytic evaluation of DNA damage by superoxide radical for antioxidant capacity assessment. Journal of Electroanalytical Chemistry, 2011, 659, 43-49.	3.8	39
32	Impedimetric aptamer-based glycan PSA score for discrimination of prostate cancer from other prostate diseases. Biosensors and Bioelectronics, 2021, 175, 112872.	10.1	38
33	Hybrid Synthetic Receptors on MOSFET Devices for Detection of Prostate Specific Antigen in Human Plasma. Analytical Chemistry, 2016, 88, 11486-11490.	6.5	35
34	SPR evaluation of binding kinetics and affinity study of modified RNA aptamers towards small molecules. Talanta, 2012, 99, 767-773.	5.5	32
35	Multiplex electrochemical DNA platform for femtomolar-level quantification of genetically modified soybean. Biosensors and Bioelectronics, 2015, 68, 259-265.	10.1	32
36	Thioaromatic DNA monolayers for target-amplification-free electrochemical sensing of environmental pathogenic bacteria. Biosensors and Bioelectronics, 2017, 92, 162-170.	10.1	32

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37	Long noncoding RNAs: from genomic junk to rising stars in the early detection of cancer. Analytical and Bioanalytical Chemistry, 2019, 411, 4265-4275.	3.7	32
38	Affinity of aptamers binding 33-mer gliadin peptide and gluten proteins: Influence of immobilization and labeling tags. Analytica Chimica Acta, 2015, 873, 63-70.	5.4	31
39	Strongly structured DNA sequences as targets for genosensing: Sensing phase design and coupling to PCR amplification for a highly specific 33-mer gliadin DNA fragment. Biosensors and Bioelectronics, 2014, 60, 244-251.	10.1	30
40	Disposable electrochemical aptasensor for gluten determination in food. Sensors and Actuators B: Chemical, 2017, 241, 522-527.	7.8	29
41	Understanding the Factors Affecting the Analytical Performance of Sandwichâ€hybridization Genosensors on Gold Electrodes. Electroanalysis, 2018, 30, 1229-1240.	2.9	27
42	Electrochemical genoassays on gold-coated magnetic nanoparticles to quantify genetically modified organisms (GMOs) in food and feed as GMO percentage. Biosensors and Bioelectronics, 2018, 110, 147-154.	10.1	26
43	Dual electrochemical genosensor for early diagnosis of prostate cancer through lncRNAs detection. Biosensors and Bioelectronics, 2021, 192, 113520.	10.1	26
44	Solid-phase helicase dependent amplification and electrochemical detection of Salmonella on highly stable oligonucleotide-modified ITO electrodes. Chemical Communications, 2017, 53, 9721-9724.	4.1	26
45	Comparison of isothermal helicase-dependent amplification and PCR for the detection of Mycobacterium tuberculosis by an electrochemical genomagnetic assay. Analytical and Bioanalytical Chemistry, 2016, 408, 8603-8610.	3.7	25
46	Electrochemical genosensors in food safety assessment. Critical Reviews in Food Science and Nutrition, 2017, 57, 2758-2774.	10.3	25
47	Post-translational modifications in tumor biomarkers: the next challenge for aptamers?. Analytical and Bioanalytical Chemistry, 2018, 410, 2059-2065.	3.7	23
48	Electrochemical oxidation of guanosine and adenosine: Two convergent pathways. Electrochemistry Communications, 2007, 9, 1862-1866.	4.7	22
49	Aptamerâ€Based Inhibition Assay for the Electrochemical Detection of Tobramycin Using Magnetic Microparticles. Electroanalysis, 2011, 23, 43-49.	2.9	22
50	Aptamers targeting protein-specific glycosylation in tumor biomarkers: general selection, characterization and structural modeling. Chemical Science, 2020, 11, 9402-9413.	7.4	22
51	The Translational Potential of Electrochemical DNA-Based Liquid Biopsy. Frontiers in Chemistry, 2020, 8, 143.	3.6	21
52	Effect of Tags and Labels on the Performance of Enzymeâ€Amplified Electrochemical Genomagnetic Assays. Electroanalysis, 2013, 25, 147-153.	2.9	20
53	Harnessing Aptamers to Overcome Challenges in Gluten Detection. Biosensors, 2016, 6, 16.	4.7	20
54	Electrochemical aptamer-based assays coupled to isothermal nucleic acid amplification techniques: New tools for cancer diagnosis. Current Opinion in Electrochemistry, 2019, 14, 32-43.	4.8	20

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55	Truncated aptamers as selective receptors in a gluten sensor supporting direct measurement in a deep eutectic solvent. Biosensors and Bioelectronics, 2020, 165, 112339.	10.1	20
56	Flavin Adenine Dinucleotide As Precursor for NADH Electrocatalyst. Analytical Chemistry, 2005, 77, 4286-4289.	6.5	18
57	5-Hydroxytryptophan as a Precursor of a Catalyst for the Oxidation of NADH. Analytical Chemistry, 2005, 77, 2624-2631.	6.5	18
58	3D-nanostructured Au electrodes for the event-specific detection of MON810 transgenic maize. Talanta, 2015, 134, 158-164.	5.5	18
59	Challenging genosensors in food samples: The case of gluten determination in highly processed samples. Talanta, 2016, 146, 490-495.	5.5	18
60	Hairpin-based DNA electrochemical sensor for selective detection of a repetitive and structured target codifying a gliadin fragment. Analytical and Bioanalytical Chemistry, 2015, 407, 3481-3488.	3.7	17
61	Electrochemical magnetoassay coupled to PCR as a quantitative approach to detect the soybean transgenic event GTS40-3-2 in foods. Sensors and Actuators B: Chemical, 2016, 222, 1050-1057.	7.8	17
62	Selection of Antiâ€gluten DNA Aptamers in a Deep Eutectic Solvent. Angewandte Chemie - International Edition, 2018, 57, 12850-12854.	13.8	17
63	Monovalent labeling system improves the sensitivity of aptamer-based inhibition assays for small molecule detection. Sensors and Actuators B: Chemical, 2013, 182, 668-674.	7.8	16
64	Sequence-specific electrochemical detection of enzymatic amplification products of Salmonella genome on ITO electrodes improves pathogen detection to the single copy level. Sensors and Actuators B: Chemical, 2018, 268, 438-445.	7.8	16
65	Amperometric Quantification of Gluten in Food Samples Using an ELISA Competitive Assay and Flow Injection Analysis. Electroanalysis, 2011, 23, 108-114.	2.9	15
66	High resolution melting analysis as a new approach to discriminate gluten-containing cereals. Food Chemistry, 2016, 211, 383-391.	8.2	14
67	Onâ€Gold Recombinase Polymerase Primer Elongation for Electrochemical Detection of Bacterial Genome: Mechanism Insights and Influencing Factors. ChemElectroChem, 2019, 6, 793-800.	3.4	13
68	Catalytic Voltammetric Determination of Cladribine in Biological Samples. Electroanalysis, 2003, 15, 441-446.	2.9	12
69	Selection of Antiâ€gluten DNA Aptamers in a Deep Eutectic Solvent. Angewandte Chemie, 2018, 130, 13032-13036.	2.0	12
70	Unravelling the lipocalin 2 interaction with aptamers: May rolling circle amplification improve their functional affinity?. Talanta, 2019, 197, 406-412.	5.5	12
71	Fe3O4@Au nanoparticles-based magnetoplatform for the HMGA maize endogenous gene electrochemical genosensing. Talanta, 2020, 206, 120220.	5.5	12
72	Multiplexed Prostate Cancer Companion Diagnostic Devices. Sensors, 2021, 21, 5023.	3.8	12

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73	Electrochemical and Catalytic Properties of the Adenine Coenzymes FAD and Coenzyme A on Pyrolytic Graphite Electrodes. Electroanalysis, 2005, 17, 445-451.	2.9	10
74	A Quantitative PCR-Electrochemical Genosensor Test for the Screening of Biotech Crops. Sensors, 2017, 17, 881.	3.8	9
75	Electrocatalytic adsorptive voltammetry for fludarabine determination in urine. Analytica Chimica Acta, 2004, 504, 271-277.	5.4	8
76	Fabrication of a Horizontal and a Vertical Large Surface Area Nanogap Electrochemical Sensor. Sensors, 2016, 16, 2128.	3.8	8
77	Electrochemical Oxidation of Guanosine and Xanthosine at Physiological pH: Further Evidences of a Convergent Mechanism for the Oxidation of Purine Nucleosides. Electroanalysis, 2008, 20, 833-839.	2.9	7
78	New Uses for the Personal Glucose Meter: Detection of Nucleic Acid Biomarkers for Prostate Cancer Screening. Sensors, 2020, 20, 5514.	3.8	7
79	On the Electrochemical Detection of Alpha-Fetoprotein Using Aptamers: DNA Isothermal Amplification Strategies to Improve the Performance of Weak Aptamers. Biosensors, 2020, 10, 46.	4.7	7
80	A convenient renewable surface plasmon resonance chip for relative quantification of genetically modified soybean in food and feed. PLoS ONE, 2020, 15, e0229659.	2.5	7
81	Amperometric determination of serum lactate dehydrogenase activity using an ADP-modified graphite electrode. Analytica Chimica Acta, 2002, 457, 275-284.	5.4	6
82	Electrocatalytic Oxidation of NADH by Oxidized s-Adenosyl-L-Methionine (SAMe): Application to NADH and SAMe Determinations. Electroanalysis, 2004, 16, 881-887.	2.9	6
83	Amplified label-free electrocatalytic detection of DNA in the presence of calcium ions. Biosensors and Bioelectronics, 2006, 21, 1507-1512.	10.1	6
84	Ferroceneâ€Decorated Phenol Derivatives by Trapping orthoâ€Quinone Methide Intermediates with Ferrocene. European Journal of Organic Chemistry, 2018, 2018, 2858-2862.	2.4	6
85	Electrocatalytic activity of oxidation products of guanine and 5â€²-GMP towards the oxidation of NADH. Electrochimica Acta, 2007, 53, 829-836.	5.2	5
86	Aptamers targeting a tumor-associated extracellular matrix component: The human mature collagen XÎ±1. Analytica Chimica Acta, 2022, 1189, 339206.	5.4	5
87	Aptamers as Synthetic Receptors for Food Quality andÂSafety Control. Comprehensive Analytical Chemistry, 2016, , 155-191.	1.3	4
88	Trapping para-Quinone Methide Intermediates with Ferrocene: Synthesis and Preliminary Biological Evaluation of New Phenol-Ferrocene Conjugates. Molecules, 2018, 23, 1335.	3.8	4
89	Bioanalytical methods for circulating extracellular matrix-related proteins: new opportunities in cancer diagnosis. Analytical and Bioanalytical Chemistry, 2022, 414, 147-165.	3.7	4
90	Chronoamperometric magnetogenosensing for simultaneous detection of two Roundup Readyâ„¢ soybean lines: GTS 40-3-2 and MON89788. Sensors and Actuators B: Chemical, 2019, 283, 262-268.	7.8	3

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91	A competitive assay for the detection of a 16-mer peptide from Î±1 chain of human collagen XI. Talanta, 2022, 240, 123196.	5.5	2
92	Determination of ascorbic acid in dietary supplements by cyclic voltammetry. , 2020, , 13-23.		1
93	Catching the Sugars: Electrochemical Aptasensors for the Detection of Cancer-Related Glycosylation Changes in Prostate-Specific Antigen. , 0, , .		1
94	Editorial: Electrochemical aptasensors are gaining momentum. Electrochimica Acta, 2022, 401, 139520.	5.2	1
95	Electrochemical and SERS Based Biosensors for Cancer Biomarkers Detection. Proceedings (mdpi), 2017, 1, .	0.2	0
96	Effect of Graphene Oxide Modification on a DNA Biosensor Developed for the Detection of Methylated DNA Associated with Cancer. Proceedings (mdpi), 2019, 15, .	0.2	0
97	Amperometric detection of NADH using carbon-based electrodes. , 2020, , 67-74.		0
98	Impedimetric aptasensor for determination of the antibiotic neomycin B. , 2020, , 109-118.		0
99	Engaging in analytical chemistry in review classes: contests based on TV shows as fun evaluable checkpoints. Analytical and Bioanalytical Chemistry, 2020, 412, 5891-5896.	3.7	0
100	NEW MOLECULAR RECEPTORS FOR DIAGNOSIS AND THERAPY OF PANCREATIC DUCTAL ADENOCARCINOMA. British Journal of Surgery, 2021, 108, .	0.3	0
101	Electrochemical Detection of Salmonella via On-surface Isothermal Amplification of its Genetic Material onto Highly Stable and Reproducible Indium Tin Oxide Platforms. , 0, , .		0
102	Improving the analytical performance of weak aptamers: DNA isothermal amplification approaches. , 2020, 60, .		0
103	Electrochemical platforms for solid-phase isothermal 2amplification and detection of bacterial genome. , 2020, 60, .		0
104	APTAMER SELECTION THROUGH MAGNETIC BEADS-BASED SELEX TECHNOLOGY FOR GLYCOPEPTIDE ANTIBIOTIC. , 0, , .		0
105	Giving New Uses to Glucose Meters: Detection of Prostate Cancer. , 2020, 60, .		0