NetzahualcÃ³yotl Arroyo-CurrÃ¡s

List of Publications by Year
in descending order

71 papers	2,495 citations	218677 26 h-index	214800 47 g-index
75 all docs	75 docs citations	75 times ranked	2457 citing authors

#	Article	IF	Citations
1	Real-time measurement of small molecules directly in awake, ambulatory animals. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 645-650.	7.1	302
2	Electrochemical Aptamer-Based Sensors for Improved Therapeutic Drug Monitoring and High-Precision, Feedback-Controlled Drug Delivery. ACS Sensors, 2019, 4, 2832-2837.	7.8	142
3	Electrocatalytic Activity of Individual Pt Nanoparticles Studied by Nanoscale Scanning Electrochemical Microscopy. Journal of the American Chemical Society, 2016, 138, 8560-8568.	13.7	127
4	Dual-Reporter Drift Correction To Enhance the Performance of Electrochemical Aptamer-Based Sensors in Whole Blood. Journal of the American Chemical Society, 2016, 138, 15809-15812.	13.7	115
5	A Biomimetic Phosphatidylcholineâ€Terminated Monolayer Greatly Improves the In Vivo Performance of Electrochemical Aptamerâ€Based Sensors. Angewandte Chemie - International Edition, 2017, 56, 7492-7495.	13.8	112
6	Subsecond-Resolved Molecular Measurements in the Living Body Using Chronoamperometrically Interrogated Aptamer-Based Sensors. ACS Sensors, 2018, 3, 360-366.	7.8	98
7	High Surface Area Electrodes Generated via Electrochemical Roughening Improve the Signaling of Electrochemical Aptamer-Based Biosensors. Analytical Chemistry, 2017, 89, 12185-12191.	6.5	92
8	Seconds-resolved pharmacokinetic measurements of the chemotherapeutic irinotecan in situ in the living body. Chemical Science, 2019, 10, 8164-8170.	7.4	74
9	From the beaker to the body: translational challenges for electrochemical, aptamer-based sensors. Analytical Methods, 2020, 12, 1288-1310.	2.7	72
10	Biodegradable electroactive polymers for electrochemically-triggered drug delivery. Journal of Materials Chemistry B, 2014, 2, 6809-6822.	5.8	68
11	Critical Reviewâ€"Approaches for the Electrochemical Interrogation of DNA-Based Sensors: A Critical Review. Journal of the Electrochemical Society, 2020, 167, 037529.	2.9	68
12	Microneedle Aptamer-Based Sensors for Continuous, Real-Time Therapeutic Drug Monitoring. Analytical Chemistry, 2022, 94, 8335-8345.	6.5	68
13	High-Precision Control of Plasma Drug Levels Using Feedback-Controlled Dosing. ACS Pharmacology and Translational Science, 2018, 1, 110-118.	4.9	62
14	Real-Time Monitoring of a Protein Biomarker. ACS Sensors, 2020, 5, 1877-1881.	7.8	60
15	Alkanethiol Monolayer End Groups Affect the Long-Term Operational Stability and Signaling of Electrochemical, Aptamer-Based Sensors in Biological Fluids. ACS Applied Materials & Interfaces, 2020, 12, 11214-11223.	8.0	56
16	Simulation-Based Approach to Determining Electron Transfer Rates Using Square-Wave Voltammetry. Langmuir, 2017, 33, 4407-4413.	3.5	50
17	An Alkaline Flow Battery Based on the Coordination Chemistry of Iron and Cobalt. Journal of the Electrochemical Society, 2015, 162, A378-A383.	2.9	46
18	Nanometer Scale Scanning Electrochemical Microscopy Instrumentation. Analytical Chemistry, 2016, 88, 10284-10289.	6.5	45

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19	Stabilization of amorphous paracetamol based systems using traditional and novel strategies. International Journal of Pharmaceutics, 2014, 477, 294-305.	5.2	42
20	Iridium Oxidation as Observed by Surface Interrogation Scanning Electrochemical Microscopy. Journal of Physical Chemistry C, 2015, 119, 8147-8154.	3.1	42
21	High-Precision Electrochemical Measurements of the Guanine-, Mismatch-, and Length-Dependence of Electron Transfer from Electrode-Bound DNA Are Consistent with a Contact-Mediated Mechanism. Journal of the American Chemical Society, 2019, 141, 1304-1311.	13.7	42
22	Detection of the SARS-CoV-2 spike protein in saliva with Shrinky-DinkÂ© electrodes. Analytical Methods, 2021, 13, 874-883.	2.7	36
23	Interrogation of Electrochemical Aptamer-Based Sensors via Peak-to-Peak Separation in Cyclic Voltammetry Improves the Temporal Stability and Batch-to-Batch Variability in Biological Fluids. ACS Sensors, 2021, 6, 1199-1207.	7.8	35
24	Open Source Software for the Real-Time Control, Processing, and Visualization of High-Volume Electrochemical Data. Analytical Chemistry, 2019, 91, 12321-12328.	6.5	33
25	Co-Amorphous Simvastatin-Nifedipine with Enhanced Solubility for Possible Use in Combination Therapy of Hypertension and Hypercholesterolemia. Molecules, 2018, 23, 2161.	3.8	32
26	Ultra-High-Precision, in-vivo Pharmacokinetic Measurements Highlight the Need for and a Route Toward More Highly Personalized Medicine. Frontiers in Molecular Biosciences, 2019, 6, 69.	3.5	28
27	The challenge of long-term stability for nucleic acid-based electrochemical sensors. Current Opinion in Electrochemistry, 2022, 32, 100902.	4.8	28
28	E-DNA scaffold sensors and the reagentless, single-step, measurement of HIV-diagnostic antibodies in human serum. Microsystems and Nanoengineering, 2020, 6, 13.	7.0	27
29	Long-Term Stability of New Co-Amorphous Drug Binary Systems: Study of Glass Transitions as a Function of Composition and Shelf Time. Molecules, 2016, 21, 1712.	3.8	26
30	Chain Dynamics Limit Electron Transfer from Electrode-Bound, Single-Stranded Oligonucleotides. Journal of Physical Chemistry C, 2018, 122, 21441-21448.	3.1	25
31	Nuclease Hydrolysis Does Not Drive the Rapid Signaling Decay of DNA Aptamer-Based Electrochemical Sensors in Biological Fluids. Langmuir, 2021, 37, 5213-5221.	3.5	25
32	Electrochemical Monitoring of TiO₂ Atomic Layer Deposition by Chronoamperometry and Scanning Electrochemical Microscopy. Chemistry of Materials, 2013, 25, 4165-4172.	6.7	24
33	Two-phase amorphous-amorphous solid drug dispersion with enhanced stability, solubility and bioavailability resulting from ultrasonic dispersion of an immiscible system. European Journal of Pharmaceutics and Biopharmaceutics, 2017, 119, 243-252.	4.3	24
34	Highly Soluble Glimepiride and Irbesartan Co-amorphous Formulation with Potential Application in Combination Therapy. AAPS PharmSciTech, 2019, 20, 144.	3.3	23
35	Achieving Nanometer Scale Tip-to-Substrate Gaps with Micrometer-Size Ultramicroelectrodes in Scanning Electrochemical Microscopy. Analytical Chemistry, 2011, 83, 9082-9085.	6.5	22
36	Nickel-Based Electrocatalysts for Water Electrolysis. Energies, 2022, 15, 1609.	3.1	21

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37	Substituent Inductive Effects on the Electrochemical Oxidation of Flavonoids Studied by Square Wave Voltammetry and Ab Initio Calculations. Molecules, 2016, 21, 1422.	3.8	20
38	Black bean extract ameliorates liver fibrosis in rats with CCl4-induced injury. Annals of Hepatology, 2008, 7, 130-135.	1.5	19
39	Application of ATRâ€FTIR spectroscopy to the study of thermally induced changes in secondary structure of protein molecules in solid state. Biopolymers, 2015, 103, 574-584.	2.4	18
40	Modeling Faradaic Reactions and Electrokinetic Phenomena at a Nanochannel-Confined Bipolar Electrode. Journal of Physical Chemistry C, 2019, 123, 5353-5364.	3.1	18
41	A Biomimetic Phosphatidylcholineâ€Terminated Monolayer Greatly Improves the In Vivo Performance of Electrochemical Aptamerâ€Based Sensors. Angewandte Chemie, 2017, 129, 7600-7603.	2.0	17
42	Fluorescence-Based Observation of Transient Electrochemical and Electrokinetic Effects at Nanoconfined Bipolar Electrodes. ACS Applied Materials & Interfaces, 2019, 11, 13777-13786.	8.0	17
43	An electrochemical biosensor exploiting binding-induced changes in electron transfer of electrode-attached DNA origami to detect hundred nanometer-scale targets. Nanoscale, 2020, 12, 13907-13911.	5.6	16
44	Advances in nucleic acid architectures for electrochemical sensing. Current Opinion in Electrochemistry, 2021, 27, 100695.	4.8	15
45	Pt-Co3O4 Superstructures by One-Pot Reduction/Precipitation in Bicontinuous Microemulsion for Electrocatalytic Oxygen Evolution Reaction. Catalysts, 2020, 10, 1311.	3.5	14
46	Chemical Equilibrium-Based Mechanism for the Electrochemical Reduction of DNA-Bound Methylene Blue Explains Double Redox Waves in Voltammetry. Journal of Physical Chemistry C, 2021, 125, 9038-9049.	3.1	14
47	Electrochemical Aptamer-Based Sensors: A Platform Approach to High-Frequency Molecular Monitoring In Situ in the Living Body. Methods in Molecular Biology, 2022, 2393, 479-492.	0.9	13
48	Antibodyâ€"Invertase Fusion Protein Enables Quantitative Detection of SARS-CoV-2 Antibodies Using Widely Available Glucometers. Journal of the American Chemical Society, 2022, 144, 11226-11237.	13.7	13
49	Hot-SWV: Square Wave Voltammetry with Hot Microelectrodes. Analytical Chemistry, 2020, 92, 8852-8858.	6.5	12
50	Study of surface modification strategies to create glassy carbon-supported, aptamer-based sensors for continuous molecular monitoring. Analytical and Bioanalytical Chemistry, 2022, 414, 5627-5641.	3.7	11
51	Green synthesis of starch-capped Cu‹sub›2‹/sub›O nanocubes and their application in the direct electrochemical detection of glucose. RSC Advances, 2021, 11, 13711-13721.	3.6	10
52	Surface Attachment Enhances the Thermodynamic Stability of Proteinâ€…L. Angewandte Chemie - International Edition, 2019, 58, 1714-1718.	13.8	8
53	Understanding Disorder in 2D Materials: The Case of Carbon Doping of Silicene. Nano Letters, 2020, 20, 6336-6343.	9.1	8
54	Nanoscale Bioreceptor Layers Comprising Carboxylated Polythiophene for Organic Electrochemical Transistor-Based Biosensors. ACS Applied Nano Materials, 2021, 4, 13459-13468.	5.0	8

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55	Chemical characteristics of the products of the complexation reaction between copper(II) and a tetra-aza macrocycle in the presence of chloride ions. Journal of Coordination Chemistry, 2015, 68, 2810-2826.	2.2	7
56	Electrochemical Study of Flavonoids in Acetonitrile: Structure-Activity Relationships. ECS Transactions, 2010, 29, 349-359.	0.5	5
57	Time and cost efficient biodegradation of diesel in a continuousâ€upflow packed bed biofilm reactor and effect of surfactant GAELE. Journal of Chemical Technology and Biotechnology, 2012, 87, 1131-1140.	3.2	5
58	Black bean extract ameliorates liver fibrosis in rats with CCl4-induced injury. Annals of Hepatology, 2008, 7, 130-5.	1.5	5
59	Effects of bone marrow cell transplant on thyroid function in an I131-induced low T4 and elevated TSH rat model. Journal of Negative Results in BioMedicine, 2007, 6, 1.	1.4	4
60	Nano and micro dispersions of two-phase amorphous-amorphous drug formulations as strategy to enhance solubility of pharmaceuticals. Materials Today: Proceedings, 2019, 13, 390-396.	1.8	3
61	Electropolishing and anodization of titanium in water/ethylene glycol baths for the production of TiO2 nanotubes. Journal of Nanoparticle Research, 2020, 22, 1.	1.9	3
62	Improvement on cell cyclability of leadâ€"acid batteries through high-energy ball milling and addition of multi-walled carbon nanotubes in the formulation of leady oxides. Journal of Applied Electrochemistry, 2021, 51, 387-397.	2.9	3
63	Comparative Evaluation of a Modified Acetic Method for Extraction of Antioxidant Compounds from Black Beans (<i>Phaseolus vulgaris</i>). Food and Nutrition Sciences (Print), 2012, 03, 348-353.	0.4	2
64	Surface Attachment Enhances the Thermodynamic Stability of Proteinâ€…L. Angewandte Chemie, 2019, 131, 1728-1732.	2.0	1
65	Different approaches to teach thermal analysis; roles of undergraduate students: trainee, tutor and designer. International Journal on Interactive Design and Manufacturing, 2019, 13, 1457-1467.	2.2	1
66	Development and Validation of a Rapid Analytical Method for the Simultaneous Quantification of Metabolic Syndrome Drugs by HPLC-DAD Chromatography. Scientia Pharmaceutica, 2021, 89, 8.	2.0	1
67	Galvanostatically Deposited PtNi Thinâ€Films as Electrocatalysts for the Hydrogen Evolution Reaction. ChemistryOpen, 2022, 11, e202100241.	1.9	1
68	Understanding the Biophysics of Protein-Surface Interactions. Biophysical Journal, 2019, 116, 464a.	0.5	0
69	Electrochemical and Chemical Synthesis of Platinum Hierarchical Nanostructures Using Bicontinuous Microemulsions. ECS Meeting Abstracts, 2018, , .	0.0	0
70	Silver Electrodeposition on Nanocrystalline Graphite: Galvanostatic Control As a Tool in the Study Electrodes with High Resistance. ECS Meeting Abstracts, 2018, , .	0.0	0
71	Improving Monolayer Chemistries to Achieve Multiday Aptamer-Based Sensing. ECS Meeting Abstracts, 2020, MA2020-01, 2468-2468.	0.0	0