BenoÃ®t Limoges

List of Publications by Year
in descending order

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101 papers	3,822 citations	109137 35 h-index	138251 58 g-index
117 all docs	117 docs citations	117 times ranked	3514 citing authors

#	Article	IF	Citations
1	An Electrochemical Metalloimmunoassay Based on a Colloidal Gold Label. Analytical Chemistry, 2000, 72, 5521-5528.	3.2	366
2	Gold Nanoparticle-Based Quantitative Electrochemical Detection of Amplified Human Cytomegalovirus DNA Using Disposable Microband Electrodes. Analytical Chemistry, 2001, 73, 4450-4456.	3.2	328
3	Hybridization Assay at a Disposable Electrochemical Biosensor for the Attomole Detection of Amplified Human Cytomegalovirus DNA. Analytical Biochemistry, 2000, 284, 107-113.	1.1	156
4	Electrochemical Functionalization of Carbon Surfaces by Aromatic Azide or Alkyne Molecules: A Versatile Platform for Click Chemistry. Chemistry - A European Journal, 2008, 14, 9286-9291.	1.7	136
5	Mediated Electrochemistry of Horseradish Peroxidase. Catalysis and Inhibition. Journal of the American Chemical Society, 2002, 124, 240-253.	6.6	107
6	Dense Monolayers of Metal-Chelating Ligands Covalently Attached to Carbon Electrodes Electrochemically and Their Useful Application in Affinity Binding of Histidine-Tagged Proteins. Langmuir, 2005, 21, 3362-3375.	1.6	101
7	Real-Time Electrochemical PCR with a DNA Intercalating Redox Probe. Analytical Chemistry, 2011, 83, 1815-1821.	3.2	97
8	Quantitative Analysis of Catalysis and Inhibition at Horseradish Peroxidase Monolayers Immobilized on an Electrode Surface. Journal of the American Chemical Society, 2003, 125, 9192-9203.	6.6	84
9	An Immunomagnetic Electrochemical Sensor Based on a Perfluorosulfonate-Coated Screen-Printed Electrode for the Determination of 2,4-Dichlorophenoxyacetic Acid. Analytical Chemistry, 1999, 71, 2571-2577.	3.2	81
10	Accessing the Twoâ€Electron Charge Storage Capacity of MnO₂ in Mild Aqueous Electrolytes. Advanced Energy Materials, 2020, 10, 2000332.	10.2	69
11	Biotinylation of Screen-Printed Carbon Electrodes through the Electrochemical Reduction of the Diazonium Salt of p-Aminobenzoyl Biocytin. Journal of the American Chemical Society, 1999, 121, 6946-6947.	6.6	67
12	Subfemtomolar Determination of Alkaline Phosphatase at a Disposable Screen-Printed Electrode Modified with a Perfluorosulfonated Ionomer Film. Analytical Chemistry, 1997, 69, 4688-4694.	3.2	66
13	Real-time electrochemical monitoring of isothermal helicase-dependent amplification of nucleic acids. Analyst, The, 2011, 136, 3635.	1.7	66
14	A disposable Protein A-based immunosensor for flow-injection assay with electrochemical detection. Analytica Chimica Acta, 2000, 404, 187-194.	2.6	62
15	Real-Time Electrochemical Monitoring of the Polymerase Chain Reaction by Mediated Redox Catalysis. Journal of the American Chemical Society, 2009, 131, 11433-11441.	6.6	62
16	Electrochemistry of Immobilized Redox Enzymes:Â Kinetic Characteristics of NADH Oxidation Catalysis at Diaphorase Monolayers Affinity Immobilized on Electrodes.. Journal of the American Chemical Society, 2006, 128, 2084-2092.	6.6	60
17	Unraveling the Mechanism of Catalytic Reduction of O₂ by Microperoxidase-11 Adsorbed within a Transparent 3D-Nanoporous ITO Film. Journal of the American Chemical Society, 2012, 134, 6834-6845.	6.6	58
18	Homogeneous electrochemical immunoassay using a perfluorosulfonated ionomer-modified electrode as detector for a cationic-labeled hapten. Analytical Chemistry, 1993, 65, 1054-1060.	3.2	57

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19	Oriented Immobilization of a Fully Active Monolayer of Histidineâ€Tagged Recombinant Laccase on Modified Gold Electrodes. Chemistry - A European Journal, 2008, 14, 7186-7192.	1.7	54
20	Ferrocenylethyl Phosphate:Â An Improved Substrate for the Detection of Alkaline Phosphatase by Cathodic Stripping Ion-Exchange Voltammetry. Application to the Electrochemical Enzyme Affinity Assay of Avidin. Analytical Chemistry, 1996, 68, 4141-4148.	3.2	49
21	Subfemtomolar electrochemical detection of target DNA by catalytic enlargement of the hybridized gold nanoparticle labels. Analyst, The, 2006, 131, 923.	1.7	49
22	Evidencing Fast, Massive, and Reversible H⁺ Insertion in Nanostructured TiO₂ Electrodes at Neutral pH. Where Do Protons Come From?. Journal of Physical Chemistry C, 2017, 121, 10325-10335.	1.5	48
23	Simple and Highly Enantioselective Electrochemical Aptamer-Based Binding Assay for Trace Detection of Chiral Compounds. Analytical Chemistry, 2012, 84, 5415-5420.	3.2	46
24	Homogeneous electrochemical monitoring of exonuclease III activity and its application to nucleic acid testing by target recycling. Chemical Communications, 2012, 48, 8772.	2.2	44
25	Ultimate Single-Copy DNA Detection Using Real-Time Electrochemical LAMP. ACS Sensors, 2016, 1, 904-912.	4.0	44
26	Enzyme Immunoassays with an Electrochemical Detection Method Using Alkaline Phosphatase and a Perfluorosulfonated Ionomer-Modified Electrode. Application to Phenytoin Assays. Analytical Chemistry, 1995, 67, 1245-1253.	3.2	42
27	Kinetic control by the substrate and the cosubstrate in electrochemically monitored redox enzymatic immobilized systems. Catalytic responses in cyclic voltammetry and steady state techniques. Journal of Electroanalytical Chemistry, 2002, 521, 8-15.	1.9	42
28	Catalysis by immobilized redox enzymes. Diagnosis of inactivation and reactivation effects through odd cyclic voltammetric responses. Journal of Electroanalytical Chemistry, 2004, 562, 43-52.	1.9	42
29	On the unsuspected role of multivalent metal ions on the charge storage of a metal oxide electrode in mild aqueous electrolytes. Chemical Science, 2019, 10, 8752-8763.	3.7	42
30	Switching On/Off the Chemisorption of Thioctic-Based Self-Assembled Monolayers on Gold by Applying a Moderate Cathodic/Anodic Potential. Langmuir, 2013, 29, 5360-5368.	1.6	41
31	Simultaneous homogeneous immunoassay of phenytoin and phenobarbital using a Nafion-loaded carbon paste electrode and two redox cationic labels. Analytica Chimica Acta, 1997, 356, 195-203.	2.6	40
32	Characterization of the Electron Transfer of a Ferrocene Redox Probe and a Histidine-Tagged Hemoprotein Specifically Bound to a Nitrilotriacetic-Terminated Self-Assembled Monolayer. Langmuir, 2009, 25, 6532-6542.	1.6	39
33	Spectroelectrochemical Characterization of Small Hemoproteins Adsorbed within Nanostructured Mesoporous ITO Electrodes. Langmuir, 2012, 28, 14065-14072.	1.6	39
34	Enzyme Affinity Assays Involving a Single-Use Electrochemical Sensor. Applications to the Enzyme Immunoassay of Human Chorionic Gonadotropin Hormone and Nucleic Acid Hybridization of Human Cytomegalovirus DNA. Electroanalysis, 2000, 12, 1447-1452.	1.5	38
35	Theory and Practice of Enzyme Bioaffinity Electrodes. Direct Electrochemical Product Detection. Journal of the American Chemical Society, 2008, 130, 7259-7275.	6.6	38
36	Evidence of Bulk Proton Insertion in Nanostructured Anatase and Amorphous TiO₂ Electrodes. Chemistry of Materials, 2021, 33, 3436-3448.	3.2	37

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37	Kinetic control by the substrate and/or the cosubstrate in electrochemically monitored redox enzymatic homogeneous systems. Catalytic responses in cyclic voltammetry. Journal of Electroanalytical Chemistry, 2002, 521, 1-7.	1.9	36
38	High Amplification Rates from the Association of Two Enzymes Confined within a Nanometric Layer Immobilized on an Electrode:Â Modeling and Illustrating Example. Journal of the American Chemical Society, 2006, 128, 6014-6015.	6.6	36
39	Time-resolved UV-visible spectroelectrochemistry using transparent 3D-mesoporous nanocrystalline ITO electrodes. Chemical Communications, 2011, 47, 1863-1865.	2.2	32
40	Evaluation of the analytical performances of avidin-modified carbon sensors based on a mediated horseradish peroxidase enzyme label and their application to the amperometric detection of nucleic acids. Biosensors and Bioelectronics, 2007, 22, 2906-2913.	5.3	31
41	Multianalytical Study of the Binding between a Small Chiral Molecule and a DNA Aptamer: Evidence for Asymmetric Steric Effect upon 3â€²- versus 5â€²-End Sequence Modification. Analytical Chemistry, 2016, 88, 11963-11971.	3.2	31
42	Effect of Substrate Inhibition and Cooperativity on the Electrochemical Responses of Glucose Dehydrogenase. Kinetic Characterization of Wild and Mutant Types. Journal of the American Chemical Society, 2011, 133, 12801-12809.	6.6	29
43	Theory and Practice of Enzyme Bioaffinity Electrodes. Chemical, Enzymatic, and Electrochemical Amplification of in Situ Product Detection. Journal of the American Chemical Society, 2008, 130, 7276-7285.	6.6	27
44	Synthesis of nitroxides for use as procationic labels and their incorporation into nafion films. Journal of Organic Chemistry, 1993, 58, 2573-2577.	1.7	26
45	Renewable Perfluorosulfonated Ionomer Carbon Paste Electrode for Competitive Homogeneous Electrochemical Immunoassays Using a Redox Cationic Labeled Hapten. Analytical Chemistry, 1996, 68, 930-935.	3.2	26
46	Real-time electrochemical LAMP: a rational comparative study of different DNA intercalating and non-intercalating redox probes. Analyst, The, 2016, 141, 4196-4203.	1.7	26
47	Kinetic Rotating Droplet Electrochemistry: A Simple and Versatile Method for Reaction Progress Kinetic Analysis in Microliter Volumes. Journal of the American Chemical Society, 2013, 135, 14215-14228.	6.6	25
48	Utilization of a NafionÂ® -modified electrode in a competitive homogeneous electrochemical immunoassay involving a redox cationic labelled haptenâ€"phenytoin. Journal of Electroanalytical Chemistry, 1993, 350, 329-335.	1.9	24
49	Redox cationic or procationic labeled drugs detected at a perfluorosulfonated ionomer film-coated electrode. Journal of Electroanalytical Chemistry, 1996, 402, 175-187.	1.9	24
50	Description of Ferrocenylalkylthiol SAMs on Gold by Molecular Dynamics Simulations. Langmuir, 2009, 25, 9164-9172.	1.6	24
51	Determination of alkaline phosphatase using a NafionÂ®-modified electrode. Journal of Electroanalytical Chemistry, 1994, 379, 281-291.	1.9	23
52	Electroenzymatic Reactions. Investigation of a Reductive Dehalogenase by Means of Electrogenerated Redox Cosubstrates. Journal of the American Chemical Society, 2005, 127, 13583-13588.	6.6	23
53	Bienzymatic-based electrochemical DNA biosensors: a way to lower the detection limit of hybridization assays. Analyst, The, 2009, 134, 349-353.	1.7	23
54	Nanostructured Electrode Enabling Fast and Fully Reversible MnO₂-to-Mn²⁺ Conversion in Mild Buffered Aqueous Electrolytes. ACS Applied Energy Materials, 2020, 3, 7610-7618.	2.5	23

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55	Electrode Surface Confinement of Self-Assembled Enzyme Aggregates Using Magnetic Nanoparticles and Its Application in Bioelectrocatalysis. Analytical Chemistry, 2007, 79, 187-194.	3.2	22
56	Molecular Dynamics Simulations of Ferrocene-Terminated Self-Assembled Monolayers. Journal of Physical Chemistry B, 2010, 114, 6447-6454.	1.2	22
57	Highly ordered transparent mesoporous TiO2 thin films: an attractive matrix for efficient immobilization and spectroelectrochemical characterization of cytochrome c. Chemical Communications, 2009, , 7494.	2.2	21
58	Heterogeneous Reconstitution of the PQQ-Dependent Glucose Dehydrogenase Immobilized on an Electrode: A Sensitive Strategy for PQQ Detection Down to Picomolar Levels. Analytical Chemistry, 2014, 86, 2257-2267.	3.2	21
59	Unraveling the charge transfer/electron transport in mesoporous semiconductive TiO₂ films by voltabsorptometry. Physical Chemistry Chemical Physics, 2015, 17, 10592-10607.	1.3	21
60	Efficient Chemisorption of Organophosphorous Redox Probes on Indium Tin Oxide Surfaces under Mild Conditions. Langmuir, 2015, 31, 1931-1940.	1.6	19
61	Competitive assay of 2,4-dichlorophenoxyacetic acid using a polymer imprinted with an electrochemically active tracer closely related to the analyte. Analyst, The, 2000, 125, 665-667.	1.7	18
62	Spectroelectrochemistry of Fe^{III}- and Co^{III}-mimochrome VI artificial enzymes immobilized on mesoporous ITO electrodes. Chemical Communications, 2014, 50, 1894-1896.	2.2	18
63	Cyclic voltammetry modeling of proton transport effects on redox charge storage in conductive materials: application to a TiO₂ mesoporous film. Physical Chemistry Chemical Physics, 2017, 19, 17944-17951.	1.3	18
64	The Role of Al³⁺â€Based Aqueous Electrolytes in the Charge Storage Mechanism of MnO_x Cathodes. Small, 2021, 17, e2101515.	5.2	18
65	Electrocatalytic oxidation of hydrogen peroxide by nitroxyl radicals. Journal of Electroanalytical Chemistry, 1997, 422, 7-12.	1.9	17
66	Detection of Cationic Phenolic Derivatives at a Surfactant-Doped Screen-Printed Electrode for the Sensitive Indirect Determination of Alkaline Phosphatase. Electroanalysis, 1998, 10, 1255-1259.	1.5	17
67	Simultaneous detection of three drugs labeled by cationic metal complexes at a nafion-loaded carbon paste electrode. Talanta, 1999, 48, 201-208.	2.9	17
68	Cyclic voltammetry of immobilized redox enzymes. Interference of steady-state and non-steady-state Michaelisâ€“Menten kinetics of the enzymeâ€“redox cosubstrate system. Journal of Electroanalytical Chemistry, 2003, 549, 61-70.	1.9	17
69	Introducing Molecular Functionalities within High Surface Area Nanostructured ITO Electrodes through Diazonium Electrografting. ChemElectroChem, 2018, 5, 1625-1630.	1.7	15
70	Cyclic Voltammetric Responses of Horseradish Peroxidase Multilayers on Electrodes. Langmuir, 2006, 22, 10807-10815.	1.6	14
71	Free Energy Calculations in Electroactive Self-Assembled Monolayers (SAMs): Impact of the Chain Length on the Redox Reaction. Journal of Physical Chemistry B, 2011, 115, 11678-11687.	1.2	14
72	New immunoassay techniques using Nafion-modified electrodes and cationic redox labels or enzyme labels. Analytica Chimica Acta, 1995, 311, 301-308.	2.6	13

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73	Redox Enzymes Immobilized on Electrodes with Solution Cosubstrates. General Procedure for Simulation of Time-Resolved Catalytic Responses. Analytical Chemistry, 2006, 78, 3138-3143.	3.2	13
74	On the decisive role of the sulfur-based anchoring group in the electro-assisted formation of self-assembled monolayers on gold. Electrochimica Acta, 2017, 257, 165-171.	2.6	13
75	Determination of horseradish peroxidase and a peroxidase-like iron porphyrin at a Nafion-modified electrode. Analyst, The, 2001, 126, 887-891.	1.7	12
76	Towards a high MnO₂ loading and gravimetric capacity from proton-coupled Mn⁴⁺/Mn²⁺ reactions using a 3D free-standing conducting scaffold. Journal of Materials Chemistry A, 2021, 9, 1500-1506.	5.2	12
77	Molecular simulations of grafted metal-chelating monolayers: methodology, structure and energy. Molecular Physics, 2008, 106, 1397-1411.	0.8	11
78	Detection of a few DNA copies by real-time electrochemical polymerase chain reaction. Analyst, The, 2017, 142, 3432-3440.	1.7	11
79	Exponential Molecular Amplification by H₂O₂â€Mediated Autocatalytic Deprotection of Boronic Ester Probes to Redox Cyclers. Chemistry - A European Journal, 2019, 25, 7534-7546.	1.7	11
80	Redox labeling of two antiepileptic drugs with metallocenes and their simultaneous detection by a Nafion-modified electrode. Applied Organometallic Chemistry, 1998, 12, 59-65.	1.7	10
81	Ion-exchange voltammetry at a surfactant-doped electrode: model of mass transfer kinetics to an anionic surface-charged electrode and its application for the sensitive determination of alkaline phosphatase. Journal of Electroanalytical Chemistry, 2000, 488, 48-58.	1.9	10
82	Ion-Exchange Voltammetry as a Solid-Phase Microextraction Analytical Method:Â Factors Influencing the Mass Transfer to Perfluorosulfonated Ionomer Film-Coated Electrodes and Some of Their Consequences on the Current Responses. Analytical Chemistry, 1999, 71, 3192-3199.	3.2	9
83	Molecular Dynamics Description of Grafted Monolayers: Effect of the Surface Coverage. Journal of Physical Chemistry B, 2008, 112, 14221-14229.	1.2	9
84	Rational Design of a Redoxâ€Labeled Chiral Target for an Enantioselective Aptamerâ€Based Electrochemical Binding Assay. Chemistry - A European Journal, 2014, 20, 2953-2959.	1.7	9
85	Electroâ€assisted Deposition of Binary Selfâ€Assembled 1,2â€Dithiolane Monolayers on Gold with Predictable Composition. ChemElectroChem, 2016, 3, 1422-1428.	1.7	9
86	Alkaline phosphatase assay using a redox procationic labeled substrate and a renewable Nafion-loaded carbon paste electrode. Electroanalysis, 1996, 8, 880-884.	1.5	8
87	An optical H2S biosensor based on the chemoselective Hb-I protein tethered to a transparent, high surface area nanocolumnar electrode. Sensors and Actuators B: Chemical, 2019, 290, 326-335.	4.0	8
88	Tuning the reactivity of nanostructured indium tin oxide electrodes toward chemisorption. Chemical Communications, 2015, 51, 6944-6947.	2.2	7
89	A Pioneering Career in Electrochemistry: Jean-Michel SavÃ©ant. ACS Catalysis, 2021, 11, 3224-3238.	5.5	7
90	Avidinâ€“Biotin Assembling of Horseradish Peroxidase Multi-Monomolecular Layers on Electrodes. Australian Journal of Chemistry, 2006, 59, 257.	0.5	7

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91	Fast magnetically driven electrodeposition of amorphous metal oxide water oxidation catalysts from carbon-coated metallic nanoparticles. Journal of Materials Chemistry A, 2015, 3, 16190-16197.	5.2	6
92	Enzyme immunoassay technique using alkaline phosphatase enzyme labels and a Nafion electrode as sensor. Journal of Pharmaceutical and Biomedical Analysis, 1996, 14, 1343-1349.	1.4	5
93	Chronoabsorptometry To Investigate Conduction-Band-Mediated Electron Transfer in Mesoporous TiO₂ Thin Films. Journal of Physical Chemistry C, 2015, 119, 14929-14937.	1.5	5
94	An autocatalytic organic reaction network based on cross-catalysis. Chemical Communications, 2021, 57, 11374-11377.	2.2	5
95	Synthesis of cobaltocenium salts for use as redox labels and their incorporation into Nafion films. Applied Organometallic Chemistry, 1993, 7, 233-241.	1.7	4
96	Use of a redox probe for an electrochemical RNAâ€“ligand binding assay in microliter droplets. Chemical Communications, 2017, 53, 1140-1143.	2.2	4
97	Mechanism of Reconstitution/Activation of the Soluble PQQ-Dependent Glucose Dehydrogenase from Acinetobacter calcoaceticus: A Comprehensive Study. ACS Omega, 2020, 5, 2015-2026.	1.6	3
98	Specific Versus Nonâ€specific Response in Exponential Molecular Amplification from Crossâ€Catalysis: Modeling the Influence of Background Amplifications on the Analytical Performances. ChemPhysChem, 2021, 22, 1611-1621.	1.0	2
99	Investigating Charge Transfer in Functionalized Mesoporous EISAâ€“SnO₂ Films. Journal of Physical Chemistry C, 2017, 121, 23207-23217.	1.5	1
100	Interplay Between Charge Accumulation and Oxygen Reduction Catalysis in Nanostructured TiO 2 Electrodes Functionalized with a Molecular Catalyst. ChemElectroChem, 2021, 8, 2640-2648.	1.7	1
101	Exponential amplification by redox cross-catalysis and unmasking of doubly protected molecular probes. Chemical Science, 2022, 13, 2764-2777.	3.7	1