Elisabeth Lojou

List of Publications by Year
in descending order

77 papers	3,244 citations	117625 34 h-index	161849 54 g-index
80 all docs	80 docs citations	80 times ranked	2597 citing authors

#	Article	IF	Citations
1	Tackling the Challenges of Enzymatic (Bio)Fuel Cells. Chemical Reviews, 2019, 119, 9509-9558.	47.7	321
2	Membrane-Bound Hydrogenase I from the Hyperthermophilic Bacterium <i>Aquifex aeolicus</i>: Enzyme Activation, Redox Intermediates and Oxygen Tolerance. Journal of the American Chemical Society, 2010, 132, 6991-7004.	13.7	145
3	New trends in enzyme immobilization at nanostructured interfaces for efficient electrocatalysis in biofuel cells. Electrochimica Acta, 2014, 126, 104-114.	5.2	118
4	Hydrogenases as catalysts for fuel cells: Strategies for efficient immobilization at electrode interfaces. Electrochimica Acta, 2011, 56, 10385-10397.	5.2	95
5	Impact of substrate diffusion and enzyme distribution in 3D-porous electrodes: a combined electrochemical and modelling study of a thermostable H₂/O₂enzymatic fuel cell. Energy and Environmental Science, 2017, 10, 1966-1982.	30.8	93
6	Recent developments in high surface area bioelectrodes for enzymatic fuel cells. Current Opinion in Electrochemistry, 2017, 5, 74-84.	4.8	92
7	How the Intricate Interactions between Carbon Nanotubes and Two Bilirubin Oxidases Control Direct and Mediated O₂ Reduction. ACS Applied Materials & Interfaces, 2016, 8, 23074-23085.	8.0	91
8	Effects of Deletion of Genes Encoding Fe-Only Hydrogenase of Desulfovibrio vulgaris Hildenborough on Hydrogen and Lactate Metabolism. Journal of Bacteriology, 2002, 184, 679-686.	2.2	81
9	Electrochemistry, AFM, and PMâ€IRRA Spectroscopy of Immobilized Hydrogenase: Role of a Hydrophobic Helix in Enzyme Orientation for Efficient H₂ Oxidation. Angewandte Chemie - International Edition, 2012, 51, 953-956.	13.8	79
10	Controlling Redox Enzyme Orientation at Planar Electrodes. Catalysts, 2018, 8, 192.	3.5	78
11	A membraneless air-breathing hydrogen biofuel cell based on direct wiring of thermostable enzymes on carbon nanotube electrodes. Chemical Communications, 2015, 51, 7447-7450.	4.1	77
12	Biocatalysts for fuel cells: efficient hydrogenase orientation for H2 oxidation at electrodes modified with carbon nanotubes. Journal of Biological Inorganic Chemistry, 2008, 13, 1157-1167.	2.6	76
13	Immobilization of the hyperthermophilic hydrogenase from Aquifex aeolicus bacterium onto gold and carbon nanotube electrodes for efficient H2 oxidation. Journal of Biological Inorganic Chemistry, 2009, 14, 1275-1288.	2.6	75
14	Design of a H2/O2 biofuel cell based on thermostable enzymes. Electrochemistry Communications, 2014, 42, 72-74.	4.7	74
15	Buildup of Polyelectrolyteâˆ'Protein Multilayer Assemblies on Gold Electrodes. Role of the Hydrophobic Effect. Langmuir, 2004, 20, 748-755.	3.5	72
16	An innovative powerful and mediatorless H2/O2 biofuel cell based on an outstanding bioanode. Electrochemistry Communications, 2012, 23, 25-28.	4.7	71
17	H₂/O₂enzymatic fuel cells: from proof-of-concept to powerful devices. Sustainable Energy and Fuels, 2017, 1, 1475-1501.	4.9	69
18	Hydrogenase Activity Control at Desulfovibrio vulgaris Cell-Coated Carbon Electrodes: Biochemical and Chemical Factors Influencing the Mediated Bioelectrocatalysis. Electroanalysis, 2002, 14, 913.	2.9	67

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19	Biohydrogen for a New Generation of H₂/O₂ Biofuel Cells: A Sustainable Energy Perspective. ChemElectroChem, 2014, 1, 1724-1750.	3.4	61
20	Recent advances in surface chemistry of electrodes to promote direct enzymatic bioelectrocatalysis. Current Opinion in Electrochemistry, 2020, 19, 113-121.	4.8	61
21	Controllable Display of Sequential Enzymes on Yeast Surface with Enhanced Biocatalytic Activity toward Efficient Enzymatic Biofuel Cells. Journal of the American Chemical Society, 2020, 142, 3222-3230.	13.7	58
22	Efficiency of Enzymatic O₂ Reduction by <i>Myrothecium verrucaria</i> Bilirubin Oxidase Probed by Surface Plasmon Resonance, PMIRRAS, and Electrochemistry. ACS Catalysis, 2016, 6, 5482-5492.	11.2	44
23	Mechanism of Chloride Inhibition of Bilirubin Oxidases and Its Dependence on Potential and pH. ACS Catalysis, 2017, 7, 3916-3923.	11.2	44
24	Interplay between Orientation at Electrodes and Copper Activation of <i>Thermus thermophilus</i> Laccase for O₂ Reduction. Journal of the American Chemical Society, 2020, 142, 1394-1405.	13.7	44
25	Kinetic studies on the electron transfer between various c-type cytochromes and iron (III) using a voltammetric approach. Electrochimica Acta, 1998, 43, 2005-2013.	5.2	42
26	Carbon nanofiber mesoporous films: efficient platforms for bio-hydrogen oxidation in biofuel cells. Physical Chemistry Chemical Physics, 2014, 16, 1366-1378.	2.8	42
27	Electrostatic-Driven Activity, Loading, Dynamics, and Stability of a Redox Enzyme on Functionalized-Gold Electrodes for Bioelectrocatalysis. ACS Catalysis, 2018, 8, 12004-12014.	11.2	42
28	Membrane electrodes can modulate the electrochemical response of redox proteinsâ€"direct electrochemistry of cytochrome c. Journal of Electroanalytical Chemistry, 2000, 485, 71-80.	3.8	41
29	Electrochemical studies on small electron transfer proteins using membrane electrodes. Journal of Electroanalytical Chemistry, 2003, 541, 153-162.	3.8	40
30	The Type I / Type II Cytochrome c3 Complex: an Electron Transfer Link in the Hydrogen-Sulfate Reduction Pathway. Journal of Molecular Biology, 2005, 354, 73-90.	4.2	38
31	Membrane Electrodes for Protein and Enzyme Electrochemistry. Electroanalysis, 2004, 16, 1113-1121.	2.9	37
32	Direct electrochemistry and enzymatic activity of bacterial polyhemic cytochrome c3 incorporated in clay films. Journal of Electroanalytical Chemistry, 2005, 579, 199-213.	3.8	37
33	Hydrogen bioelectrooxidation on gold nanoparticle-based electrodes modified by Aquifex aeolicus hydrogenase: Application to hydrogen/oxygen enzymatic biofuel cells. Bioelectrochemistry, 2015, 106, 47-55.	4.6	37
34	A H 2 /O 2 enzymatic fuel cell as a sustainable power for a wireless device. Electrochemistry Communications, 2015, 60, 216-220.	4.7	36
35	Aquifex aeolicus membrane hydrogenase for hydrogen biooxidation: Role of lipids and physiological partners in enzyme stability and activity. International Journal of Hydrogen Energy, 2010, 35, 10778-10789.	7.1	35
36	The Hyperthermophilic Bacterium Aquifex aeolicus. Advances in Microbial Physiology, 2012, 61, 125-194.	2.4	35

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37	Stabilization Role of a Phenothiazine Derivative on the Electrocatalytic Oxidation of Hydrogen via <i>Aquifex aeolicus</i> Hydrogenase at Graphite Membrane Electrodes. Langmuir, 2010, 26, 18534-18541.	3.5	34
38	Insight into Molecular Stability and Physiological Properties of the Diheme Cytochrome CYC41from the Acidophilic BacteriumAcidithiobacillus ferrooxidans. Biochemistry, 2005, 44, 6471-6481.	2.5	33
39	Mineral respiration under extreme acidic conditions: from a supramolecular organization to a molecular adaptation in <i>Acidithiobacillus ferrooxidans</i>. Biochemical Society Transactions, 2012, 40, 1324-1329.	3.4	31
40	The weak, fluctuating, dipole moment of membrane-bound hydrogenase from Aquifex aeolicus accounts for its adaptability to charged electrodes. Physical Chemistry Chemical Physics, 2014, 16, 11318-11322.	2.8	31
41	Enzymatic fuel cells in a microfluidic environment: Status and opportunities. A mini review. Electrochemistry Communications, 2019, 107, 106533.	4.7	30
42	Electrochemical study of the intermolecular electron transfer to Pseudomonas aeruginosa cytochrome cd1 nitrite reductase. Electrochimica Acta, 2003, 48, 1055-1064.	5.2	28
43	Spectroscopic Characterization of a Green Copper Site in a Single-Domain Cupredoxin. PLoS ONE, 2014, 9, e98941.	2.5	28
44	Pore size effect of MgO-templated carbon on enzymatic H2 oxidation by the hyperthermophilic hydrogenase from Aquifex aeolicus. Journal of Electroanalytical Chemistry, 2018, 812, 221-226.	3.8	27
45	Multiscale Simulations Give Insight into the Hydrogen In and Out Pathways of [NiFe]-Hydrogenases from <i>Aquifex aeolicus</i> and <i>Desulfovibrio fructosovorans</i>. Journal of Physical Chemistry B, 2014, 118, 13800-13811.	2.6	26
46	From Enzyme Stability to Enzymatic Bioelectrode Stabilization Processes. Catalysts, 2021, 11, 497.	3.5	25
47	Impact of Carbon Nanotube Surface Chemistry on Hydrogen Oxidation by Membraneâ€Bound Oxygenâ€Tolerant Hydrogenases. ChemElectroChem, 2016, 3, 2179-2188.	3.4	23
48	Electrocatalytic Reactions at Hydrogenase-Modified Electrodes and Their Applications to Biosensors: From the Isolated Enzymes to the Whole Cells. Electroanalysis, 2004, 16, 1093-1100.	2.9	22
49	Exploring Properties of a Hyperthermophilic Membraneâ€Bound Hydrogenase at Carbon Nanotube Modified Electrodes for a Powerful H₂/O₂ Biofuel Cell. Electroanalysis, 2013, 25, 685-695.	2.9	22
50	Poly(esterâ€“sulfonic acid): modified carbon electrodes for the electrochemical study of c-type cytochromes. Electrochimica Acta, 1999, 44, 3341-3352.	5.2	21
51	Bacterial Respiratory Chain Diversity Reveals a Cytochrome <i>c</i> Oxidase Reducing O₂ at Low Overpotentials. Journal of the American Chemical Society, 2019, 141, 11093-11102.	13.7	19
52	Hydrogen bioelectrooxidation in ionic liquids: From cytochrome c3 redox behavior to hydrogenase activity. Electrochimica Acta, 2011, 56, 3359-3368.	5.2	18
53	Reconstitution of supramolecular organization involved in energy metabolism at electrochemical interfaces for biosensing and bioenergy production. Analytical and Bioanalytical Chemistry, 2014, 406, 1011-1027.	3.7	18
54	Quartz crystal microbalance and voltammetry monitoring for layer-by-layer assembly of cytochrome c3 and poly(ester sulfonic acid) films on gold and silver electrodes. Journal of Electroanalytical Chemistry, 2003, 557, 37-47.	3.8	17

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55	Synthesis and enzymatic photo-activity of an O2 tolerant hydrogenaseâ€“CdSe@CdS quantum rod bioconjugate. Chemical Communications, 2014, 50, 4989-4992.	4.1	17
56	Electron transfer in an acidophilic bacterium: interaction between a diheme cytochrome and a cupredoxin. Chemical Science, 2018, 9, 4879-4891.	7.4	17
57	Light-induced reactivation of O2-tolerant membrane-bound [Niâ€“Fe] hydrogenase from the hyperthermophilic bacterium Aquifex aeolicus under turnover conditions. Physical Chemistry Chemical Physics, 2013, 15, 16463.	2.8	16
58	Interprotein Electron Transfer between FeSâ€Protein Nanowires and Oxygenâ€Tolerant NiFe Hydrogenase. Angewandte Chemie - International Edition, 2017, 56, 7774-7778.	13.8	16
59	A friendly detergent for H2 oxidation by Aquifex aeolicus membrane-bound hydrogenase immobilized on graphite and Self-Assembled-Monolayer-modified gold electrodes. Electrochimica Acta, 2012, 82, 115-125.	5.2	15
60	Microâ€•and Nanoscopic Imaging of Enzymatic Electrodes: A Review. ChemElectroChem, 2019, 6, 5524-5546.	3.4	15
61	Hydrogenases from the hyperthermophilic bacterium Aquifex aeolicus: electrocatalysis of the hydrogen production/consumption reactions at carbon electrodes. Journal of Electroanalytical Chemistry, 2005, 577, 79-86.	3.8	14
62	In Situ Fluorescence Tomography Enables a 3D Mapping of Enzymatic O₂ Reduction at the Electrochemical Interface. Analytical Chemistry, 2020, 92, 7249-7256.	6.5	14
63	Direct electron transfer of bilirubin oxidase at a carbon flow-through electrode. Electrochimica Acta, 2018, 283, 88-96.	5.2	13
64	Impact of copper ligand mutations on a cupredoxin with a green copper center. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 351-359.	1.0	12
65	Carbon nanoparticulate films as effective scaffolds for mediatorless bioelectrocatalytic hydrogen oxidation. Electrochimica Acta, 2013, 111, 434-440.	5.2	11
66	Nanosecond Laserâ€“Fabricated Monolayer of Gold Nanoparticles on ITO for Bioelectrocatalysis. Frontiers in Chemistry, 2020, 8, 431.	3.6	11
67	From the proteinâ€“polypeptide model system to the interaction between physiological partners using electrochemistry. Journal of Electroanalytical Chemistry, 2002, 523, 150-159.	3.8	10
68	The pHâ€Induced Selectivity Between Cysteine or Histidine Coordinated Heme in an Artificial Î±â€Helical Metalloprotein. Angewandte Chemie - International Edition, 2021, 60, 3974-3978.	13.8	10
69	Implicit Modeling of the Impact of Adsorption on Solid Surfaces for Protein Mechanics and Activity with a Coarse-Grained Representation. Journal of Physical Chemistry B, 2020, 124, 8516-8523.	2.6	8
70	Mutations in the coordination spheres of T1 Cu affect Cu2+-activation of the laccase from Thermus thermophilus. Biochimie, 2021, 182, 228-237.	2.6	8
71	Dihemic c4-type cytochrome acting as a surrogate electron conduit: Artificially interconnecting a photosystem I supercomplex with electrodes. Electrochemistry Communications, 2018, 91, 49-53.	4.7	6
72	Adsorption of acid proteins onto auto-assembled polyelectrolyte or basic protein films â€" application to electrocatalytic reactions controlled by hydrogenase. Journal of Electroanalytical Chemistry, 2004, 573, 159-167.	3.8	5

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73	Enzymatic Bioelectrocatalysis. Catalysts, 2021, 11, 1373.	3.5	4
74	Interprotein Electron Transfer between FeSâ€Protein Nanowires and Oxygenâ€Tolerant NiFe Hydrogenase. Angewandte Chemie, 2017, 129, 7882-7886.	2.0	2
75	The pHâ€Induced Selectivity Between Cysteine or Histidine Coordinated Heme in an Artificial Î±â€Helical Metalloprotein. Angewandte Chemie, 2021, 133, 4020-4024.	2.0	2
76	Electrochemistry of copper efflux oxidase-like multicopper oxidases involved in copper homeostasis. Current Opinion in Electrochemistry, 2022, 32, 100919.	4.8	2
77	Effects of interactions between SPEEK or Nafion ionomers and bilirubin oxidase on O2 enzymatic reduction. Electrochimica Acta, 2022, 426, 140787.	5.2	0