Nicolas PlumerÃ©

List of Publications by Year
in descending order

72 papers	2,680 citations	172457 29 h-index	189892 50 g-index
78 all docs	78 docs citations	78 times ranked	3256 citing authors

#	Article	IF	Citations
1	A redox hydrogel protects hydrogenase from high-potential deactivation and oxygen damage. Nature Chemistry, 2014, 6, 822-827.	13.6	209
2	Enzymatic Oxygen Scavenging for Photostability without pH Drop in Single-Molecule Experiments. ACS Nano, 2012, 6, 6364-6369.	14.6	187
3	Combination of A Photosystemâ€…1â€Based Photocathode and a Photosystemâ€…2â€Based Photoanode to a Zâ€Scheme Mimic for Biophotovoltaic Applications. Angewandte Chemie - International Edition, 2013, 52, 14233-14236.	13.8	175
4	Rational wiring of photosystem II to hierarchical indium tin oxide electrodes using redox polymers. Energy and Environmental Science, 2016, 9, 3698-3709.	30.8	140
5	Engineered Electronâ€Transfer Chain in Photosystem 1 Based Photocathodes Outperforms Electronâ€Transfer Rates in Natural Photosynthesis. Chemistry - A European Journal, 2014, 20, 11029-11034.	3.3	114
6	UVâ€Triggered Polymerization, Deposition, and Patterning of Plant Phenolic Compounds. Advanced Functional Materials, 2017, 27, 1700127.	14.9	111
7	StÃ¶ber silica particles as basis for redox modifications: Particle shape, size, polydispersity, and porosity. Journal of Colloid and Interface Science, 2012, 368, 208-219.	9.4	102
8	A Redox Hydrogel Protects the O₂â€Sensitive [FeFe]â€Hydrogenase from Chlamydomonas reinhardtii from Oxidative Damage. Angewandte Chemie - International Edition, 2015, 54, 12329-12333.	13.8	87
9	Mechanism of Protection of Catalysts Supported in Redox Hydrogel Films. Journal of the American Chemical Society, 2015, 137, 5494-5505.	13.7	81
10	A gas breathing hydrogen/air biofuel cell comprising a redox polymer/hydrogenase-based bioanode. Nature Communications, 2018, 9, 4715.	12.8	71
11	Enzyme-Catalyzed O₂ Removal System for Electrochemical Analysis under Ambient Air: Application in an Amperometric Nitrate Biosensor. Analytical Chemistry, 2012, 84, 2141-2146.	6.5	70
12	Coupling of an enzymatic biofuel cell to an electrochemical cell for self-powered glucose sensing with optical readout. Bioelectrochemistry, 2015, 106, 22-27.	4.6	69
13	Photosynthesis at the forefront of a sustainable life. Frontiers in Chemistry, 2014, 2, 36.	3.6	65
14	Redox hydrogels with adjusted redox potential for improved efficiency in Z-scheme inspired biophotovoltaic cells. Physical Chemistry Chemical Physics, 2014, 16, 11936-11941.	2.8	59
15	Reversible H2 oxidation and evolution by hydrogenase embedded in a redox polymer film. Nature Catalysis, 2021, 4, 251-258.	34.4	54
16	Preventing the coffee-ring effect and aggregate sedimentation by in situ gelation of monodisperse materials. Chemical Science, 2018, 9, 7596-7605.	7.4	53
17	Surface-Attached Poly(glycidyl methacrylate) as a Versatile Platform for Creating Dual-Functional Polymer Brushes. Macromolecules, 2014, 47, 5081-5088.	4.8	52
18	Redox-Active Silica Nanoparticles. Part 1. Electrochemistry and Catalytic Activity of Spherical, Nonporous Silica Particles with Nanometric Diameters and Covalently Bound Redox-active Modifications,. Langmuir, 2006, 22, 10605-10611.	3.5	47

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19	Light Induced H₂ Evolution from a Biophotocathode Based on Photosystem 1 â€“ Pt Nanoparticles Complexes Integrated in Solvated Redox Polymers Films. Journal of Physical Chemistry B, 2015, 119, 13726-13731.	2.6	47
20	Protection and Reactivation of the [NiFeSe] Hydrogenase from Desulfovibrio vulgaris Hildenborough under Oxidative Conditions. ACS Energy Letters, 2017, 2, 964-968.	17.4	45
21	Complete Protection of O₂-Sensitive Catalysts in Thin Films. Journal of the American Chemical Society, 2019, 141, 16734-16742.	13.7	45
22	Bio-inspired strategy for controlled dopamine polymerization in basic solutions. Polymer Chemistry, 2017, 8, 2145-2151.	3.9	44
23	High-Density Droplet Microarray of Individually Addressable Electrochemical Cells. Analytical Chemistry, 2017, 89, 5832-5839.	6.5	44
24	The Role of Hydrophobicity of Os-Complex-Modified Polymers for Photosystem 1 Based Photocathodes. Journal of the Electrochemical Society, 2014, 161, H3035-H3041.	2.9	39
25	Reversible catalysis. Nature Reviews Chemistry, 2021, 5, 348-360.	30.2	38
26	Dual properties of a hydrogen oxidation Ni-catalyst entrapped within a polymer promote self-defense against oxygen. Nature Communications, 2018, 9, 864.	12.8	35
27	Interferences from oxygen reduction reactions in bioelectroanalytical measurements: the case study of nitrate and nitrite biosensors. Analytical and Bioanalytical Chemistry, 2013, 405, 3731-3738.	3.7	34
28	Bioelectrocatalytic Cofactor Regeneration Coupled to CO₂ Fixation in a Redoxâ€Active Hydrogel for Stereoselective Câ”C Bond Formation. Angewandte Chemie - International Edition, 2021, 60, 21056-21061.	13.8	32
29	Bioinspired Strategy for Controlled Polymerization and Photopatterning of Plant Polyphenols. Chemistry of Materials, 2018, 30, 1937-1946.	6.7	30
30	Light-induced formation of partially reduced oxygen species limits the lifetime of photosystem 1-based biocathodes. Nature Communications, 2018, 9, 1973.	12.8	30
31	Suppressing hydrogen peroxide generation to achieve oxygen-insensitivity of a [NiFe] hydrogenase in redox active films. Nature Communications, 2020, 11, 920.	12.8	28
32	Electrodeposition of Catechol on Glassy Carbon Electrode and Its Electrocatalytic Activity Toward NADH Oxidation. Electroanalysis, 2012, 24, 1932-1936.	2.9	27
33	Redox-active silica nanoparticles. Electrochimica Acta, 2007, 53, 1244-1251.	5.2	26
34	Interrogation of a PS1â€Based Photocathode by Means of Scanning Photoelectrochemical Microscopy. Small, 2017, 13, 1604093.	10.0	26
35	A novel versatile microbiosensor for local hydrogen detection by means of scanning photoelectrochemical microscopy. Biosensors and Bioelectronics, 2017, 94, 433-437.	10.1	26
36	Electrochemical patterning as a tool for fabricating biomolecule microarrays. TrAC - Trends in Analytical Chemistry, 2014, 58, 23-30.	11.4	19

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37	Biophotoelectrochemistry of Photosynthetic Proteins. Advances in Biochemical Engineering/Biotechnology, 2016, 158, 111-136.	1.1	19
38	Short circuit at the chlorophyll. Nature Chemical Biology, 2016, 12, 990-991.	8.0	19
39	A kinetic model for redox-active film based biophotoelectrodes. Faraday Discussions, 2019, 215, 39-53.	3.2	19
40	Highâ€Temperature Chlorinationâ€Reduction Sequence for the Preparation of Silicon Hydride Modified Silica Surfaces. Chemistry - A European Journal, 2009, 15, 936-946.	3.3	18
41	In depth analysis of complex interfacial processes: in situ electrochemical characterization of deposition of atomic layers of Cu, Pb and Te on Pd electrodes. RSC Advances, 2012, 2, 10994.	3.6	17
42	Scanning Droplet Cell for Chemoselective Patterning through Local Electroactivation of Protected Quinone Monolayers. ChemPhysChem, 2014, 15, 151-156.	2.1	17
43	Ein Redoxhydrogel schÃ¼tzt die O₂â€empfindliche [FeFe]â€Hydrogenase aus Chlamydomonas reinhardtii vor oxidativer ZerstÃ¶rung. Angewandte Chemie, 2015, 127, 12506-12510.	2.0	17
44	A protein in the spotlight. Nature Nanotechnology, 2012, 7, 616-617.	31.5	16
45	Affinity binding via Zinc(II) for controlled orientation and electrochemistry of Histidine-tagged nitrate reductase in self-assembled monolayers. Bioelectrochemistry, 2013, 93, 46-50.	4.6	15
46	A pH Responsive Redox Hydrogel for Electrochemical Detection of Redox Silent Biocatalytic Processes. Control of Hydrogel Solvation. Electroanalysis, 2015, 27, 938-944.	2.9	15
47	Bioelectrocatalytic and electrochemical cascade for phosphate sensing with up to 6 electrons per analyte molecule. Biosensors and Bioelectronics, 2018, 117, 501-507.	10.1	13
48	Spectroscopic Evidence for a Covalent Sigma Auâ€“C Bond on Au Surfaces Using ¹³C Isotope Labeling. Jacs Au, 2021, 1, 362-368.	7.9	13
49	Thermoresponsive amperometric glucose biosensor. Biointerphases, 2016, 11, 011001.	1.6	12
50	Reactivation of sulfide-protected [FeFe] hydrogenase in a redox-active hydrogel. Chemical Communications, 2020, 56, 9958-9961.	4.1	12
51	Determination of Temperature Gradients with Micrometric Resolution by Local Open Circuit Potential Measurements at a Scanning Microelectrode. Electroanalysis, 2013, 25, 2084-2091.	2.9	11
52	Controlling the charge of pH-responsive redox hydrogels by means of redox-silent biocatalytic processes. A biocatalytic off/on switch. Electrochemistry Communications, 2015, 51, 50-53.	4.7	11
53	Redox-active silica nanoparticles. Part 4. Synthesis, size distribution, and electrochemical adsorption behavior of ferrocene- and (diamine)(diphosphine)-ruthenium(II)-modified StÃ¶ber silica colloidal particles. Journal of Solid State Electrochemistry, 2010, 14, 289-303.	2.5	10
54	Thermally Induced Radical Hydrosilylation for Synthesis of C18 HPLC phases from Highly Condensed SiH Terminated Silica Surfaces. Langmuir, 2009, 25, 13481-13487.	3.5	9

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55	Viologen-modified electrodes for protection of hydrogenases from high potential inactivation while performing H₂oxidation at low overpotential. Dalton Transactions, 2018, 47, 10685-10691.	3.3	9
56	The electron as a probe to measure the thickness distributions of electroactive films. Chemical Science, 2020, 11, 937-946.	7.4	7
57	Bioelektrokatalytische Cofaktorâ€Regeneration und CO₂â€Fixierung in einem redoxaktiven Hydrogel durch stereoselektive Câ€Câ€BindungsknÃ¼pfung. Angewandte Chemie, 2021, 133, 21224-21230.	2.0	7
58	Simultaneous measurements of photocurrents and H2O2 evolution from solvent exposed photosystem 2 complexes. Biointerphases, 2016, 11, 019001.	1.6	6
59	Amperometric sensing â€" Bioelectroanalysis. Analytical and Bioanalytical Chemistry, 2013, 405, 3423-3426.	3.7	2
60	Artificial maturation of [FeFe] hydrogenase in a redox polymer film. Chemical Communications, 2021, 57, 1750-1753.	4.1	2
61	9 Semi-artificial photosynthetic Z-scheme for hydrogen production from water. , 2015, , 189-210.		1
62	Photostability without pH Drop - An Alternative Oxygen Scavenging System for Sinlge-Molecule FRET Experiments. Biophysical Journal, 2012, 102, 179a.	0.5	0
63	Anodic Desorption Monitored by Voltammetric and Gravimetric Measurements for Fast Estimation of Surface Coverage of Complex Organic Molecules on Au Electrodes. Electroanalysis, 2016, 28, 2382-2388.	2.9	0
64	Beyond artificial photosynthesis: general discussion. Faraday Discussions, 2019, 215, 422-438.	3.2	0
65	Biological approaches to artificial photosynthesis: general discussion. Faraday Discussions, 2019, 215, 66-83.	3.2	0
66	Making electrocatalytic materials from molecular catalysts. CheM, 2021, 7, 549-552.	11.7	0
67	Titelbild: Bioelektrokatalytische Cofaktorâ€Regeneration und CO₂â€Fixierung in einem redoxaktiven Hydrogel durch stereoselektive Câ€Câ€BindungsknÃ¼pfung (Angew. Chem. 38/2021). Angewandte Chemie, 2021, 133, 20733-20733.	2.0	0
68	Bioelectrode Engineering - Control of Catalytic Film Thickness for Enzymatic Fuel Cells. ECS Meeting Abstracts, 2018, , .	0.0	0
69	(Keynote) Synthetic Protection Matrices for Integration of Redox Proteins in Fuel Cells and Photovoltaic Cells. ECS Meeting Abstracts, 2018, , .	0.0	0
70	(Keynote) Revisiting Protection Matrices for Bioelectrochemical Systems. ECS Meeting Abstracts, 2019, , .	0.0	0
71	(Invited) Redox Polymer-Based Gas Breathing H2-Oxidation Anodes Equipped with Highly Active [Nife] and [Nifese] Hydrogenases for Biofuel Cell Applications. ECS Meeting Abstracts, 2019, , .	0.0	0
72	(Invited) Tuning Matrix Solvation for Adjusting the Formal Potential of Redox-Active Centers. ECS Meeting Abstracts, 2019, , .	0.0	0