Frederic Gloaguen

List of Publications by Citations

84 papers	6,019 citations	43 h-index	77 g-index
89 ext. papers	6,330 ext. citations	6.6 avg, IF	5.67 L-index

#	Paper	IF	Citations
84	Small molecule mimics of hydrogenases: hydrides and redox. *Chemical Society Reviews*, **2009**, 38, 100-8	58.5	582
83	Biomimetic hydrogen evolution catalyzed by an iron carbonyl thiolate. *Journal of the American Chemical Society*, **2001**, 123, 9476-7	16.4	399
82	Electron and proton transfers at diiron dithiolate sites relevant to the catalysis of proton reduction by the [FeFe]-hydrogenases. *Coordination Chemistry Reviews*, **2009**, 253, 1476-1494	23.2	279
81	Synthetic and structural studies on [Fe2(SR)2(CN)x(CO)6-x](x-) as active site models for Fe-only hydrogenases. *Journal of the American Chemical Society*, **2001**, 123, 12518-27	16.4	261
80	Catalysis of the electrochemical H2 evolution by di-iron sub-site models. *Coordination Chemistry Reviews*, **2005**, 249, 1664-1676	23.2	231
79	Bimetallic carbonyl thiolates as functional models for Fe-only hydrogenases. *Inorganic Chemistry*, **2002**, 41, 6573-82	5.1	209
78	Evidence for the formation of terminal hydrides by protonation of an asymmetric iron hydrogenase active site mimic. *Inorganic Chemistry*, **2007**, 46, 3426-8	5.1	196
77	Oxygen electroreduction on carbon-supported platinum catalysts. Particle-size effect on the tolerance to methanol competition. *Electrochimica Acta*, **2002**, 47, 3431-3440	6.7	180
76	Kinetic study of electrochemical reactions at catalyst-recast ionomer interfaces from thin active layer modelling. *Journal of Applied Electrochemistry*, **1994**, 24, 863-869	2.6	177
75	Electrocatalytic oxidation of methanol on platinum nanoparticles electrodeposited onto porous carbon substrates. *Journal of Applied Electrochemistry*, **1997**, 27, 1052-1060	2.6	169
74	N-Heterocyclic Carbene Ligands as Cyanide Mimics in Diiron Models of the All-Iron Hydrogenase Active Site. *Organometallics*, **2005**, 24, 2020-2022	3.8	146
73	N-Heterocyclic Carbene Ligands in Nonsymmetric Diiron Models of Hydrogenase Active Sites. *Organometallics*, **2007**, 26, 2042-2052	3.8	136
72	Platinum electrodeposition on graphite: electrochemical study and STM imaging. *Electrochimica Acta*, **1999**, 44, 1805-1816	6.7	136
71	Influence of a pendant amine in the second coordination sphere on proton transfer at a dissymmetrically disubstituted diiron system related to the [2Fe]H subsite of [FeFe]H2ase. *Inorganic Chemistry*, **2009**, 48, 2-4	5.1	133
70	Oxygen reduction on well-defined platinum nanoparticles inside recast ionomer. *Electrochimica Acta*, **1996**, 41, 307-314	6.7	128
69	Particle size effect for oxygen reduction and methanol oxidation on Pt/C inside a proton exchange membrane. *Journal of Electroanalytical Chemistry*, **1994**, 373, 251-254	4.1	124
68	Electrochemical proton reduction by thiolate-bridged hexacarbonyldiiron clusters. *Journal of Electroanalytical Chemistry*, **2004**, 566, 241-247	4.1	123

67	Activation of proton by the two-electron reduction of a di-iron organometallic complex. *Journal of Electroanalytical Chemistry*, **2006**, 595, 47-52	4.1	106
66	A super-efficient cobalt catalyst for electrochemical hydrogen production from neutral water with 80 mV overpotential. *Energy and Environmental Science*, **2014**, 7, 329-334	35.4	104
65	Electrochemical hydrogen production in aqueous micellar solution by a diiron benzenedithiolate complex relevant to [FeFe] hydrogenases. *Energy and Environmental Science*, **2012**, 5, 7757	35.4	98
64	Electrochemical insights into the mechanisms of proton reduction by [Fe2(CO)6{micro-SCH2N(R)CH2S}] complexes related to the [2Fe](H) subsite of [FeFe]hydrogenase. *Chemistry - A European Journal*, **2008**, 14, 1954-64	4.8	92
63	Electrochemical and theoretical investigations of the reduction of [Fe2(CO)5L{□SCH2XCH2S}] complexes related to [FeFe] hydrogenase. *New Journal of Chemistry*, **2007**, 31, 2052	3.6	89
62	Electron-transfer-catalyzed rearrangement of unsymmetrically substituted diiron dithiolate complexes related to the active site of the [FeFe]-hydrogenases. *Inorganic Chemistry*, **2007**, 46, 9863-72	5.1	88
61	Electrocatalytic hydrogen evolution from neutral water by molecular cobalt tripyridine-diamine complexes. *Chemical Communications*, **2013**, 49, 9455-7	5.8	80
60	An evaluation of the macro-homogeneous and agglomerate model for oxygen reduction in PEMFCs. *Electrochimica Acta*, **1998**, 43, 3767-3772	6.7	80
59	Electrodes modified by electrodeposition of CoTAA complexes as selective oxygen cathodes in a direct methanol fuel cell. *Journal of Applied Electrochemistry*, **2001**, 31, 945-952	2.6	73
58	Concerted proton-coupled electron transfer from a metal-hydride complex. *Nature Chemistry*, **2014**, 7, 140-5	17.6	72
57	Comprehensive review and future perspectives on the photocatalytic hydrogen production. *Journal of Chemical Technology and Biotechnology*, **2019**, 94, 3049-3063	3.5	67
56	Organometallic Diiron Complex Chemistry Related to the [2Fe]H Subsite of [FeFe]H2ase. *European Journal of Inorganic Chemistry*, **2008**, 2008, 4671-4681	2.3	67
55	In Situ Infrared Study of Carbon Monoxide Adsorbed onto Commercial Fuel-Cell-Grade Carbon-Supported Platinum Nanoparticles:□Correlation with13C NMR Results. *Journal of Physical Chemistry B*, **2000**, 104, 5803-5807	3.4	67
54	Di-iron aza diphosphido complexes: mimics for the active site of Fe-only hydrogenase, and effects of changing the coordinating atoms of the bridging ligand in [Fe2[mu-(ECH2)2NR](CO)6]. *Inorganic Chemistry*, **2004**, 43, 8203-5	5.1	65
53	Use of 1,10-phenanthroline in diiron dithiolate derivatives related to the [Fe-Fe] hydrogenase active site. *Dalton Transactions*, **2007**, 3754-6	4.3	61
52	Electrochemical proton reduction at mild potentials by monosubstituted diiron organometallic complexes bearing a benzenedithiolate bridge. *Journal of Electroanalytical Chemistry*, **2007**, 603, 15-20	4.1	61
51	Photocatalytic hydrogen production using models of the iron-iron hydrogenase active site dispersed in micellar solution. *ChemSusChem*, **2014**, 7, 638-43	8.3	55
50	Electrochemical and spontaneous deposition of ruthenium at platinum electrodes for methanol oxidation: an electrochemical quartz crystal microbalance study. *Electrochimica Acta*, **2001**, 46, 4331-4337	6.7	55

49	Simulations of PEFC cathodes: an effectiveness factor approach. *Journal of Applied Electrochemistry* , **1997**, 27, 1029-1035	2.6	52
48	Chemically modified electrode based on an organometallic model of the [FeFe] hydrogenase active center. *Electrochemistry Communications*, **2005**, 7, 427-430	5.1	52
47	Selective Earth-Abundant System for CO2 Reduction: Comparing Photo- and Electrocatalytic Processes. *ACS Catalysis*, **2019**, 9, 2091-2100	13.1	50
46	Effect of electron-withdrawing dithiolate bridge on the electron-transfer steps in diiron molecules related to [2Fe](H) subsite of the [FeFe]-hydrogenases. *Inorganic Chemistry*, **2010**, 49, 2496-501	5.1	47
45	Preparation of methanol oxidation electrocatalysts: ruthenium deposition on carbon-supported platinum nanoparticles. *Journal of Applied Electrochemistry*, **2003**, 33, 1-8	2.6	47
44	Modeling [FeFe] hydrogenase: Synthesis and protonation of a diiron dithiolate complex containing a phosphine-N-heterocyclic-carbene ligand. *Journal of Organometallic Chemistry*, **2009**, 694, 2801-2807	2.3	46
43	On the electrochemistry of diiron dithiolate complexes related to the active site of the [FeFe]H2ase. *Comptes Rendus Chimie*, **2008**, 11, 842-851	2.7	46
42	First insights into the protonation of dissymetrically disubstituted di-iron azadithiolate models of the [FeFe]H2ases active site. *Chemical Communications*, **2008**, 2547-9	5.8	46
41	Electrochemical study of the role of a H-bridged, unsymmetrically disubstituted diiron complex in proton reduction catalysis. *Journal of Electroanalytical Chemistry*, **2009**, 626, 161-170	4.1	42
40	Diiron chelate complexes relevant to the active site of the iron-only hydrogenase. *Comptes Rendus Chimie*, **2008**, 11, 906-914	2.7	42
39	Electrochemistry of Simple Organometallic Models of Iron-Iron Hydrogenases in Organic Solvent and Water. *Inorganic Chemistry*, **2016**, 55, 390-8	5.1	41
38	Mechanistic insights into the catalysis of electrochemical proton reduction by a diiron azadithiolate complex. *Inorganic Chemistry*, **2014**, 53, 10667-73	5.1	37
37	A binuclear iron-thiolate catalyst for electrochemical hydrogen production in aqueous micellar solution. *Chemistry - A European Journal*, **2012**, 18, 13473-9	4.8	36
36	An electrochemical quartz crystal microbalance study of the hydrogen underpotential deposition at a Pt electrode. *Journal of Electroanalytical Chemistry*, **1999**, 467, 186-192	4.1	35
35	Non-innocent bma ligand in a dissymetrically disubstituted diiron dithiolate related to the active site of the [FeFe] hydrogenases. *Journal of Inorganic Biochemistry*, **2010**, 104, 1038-42	4.2	32
34	Electrochemical Synthesis of Mono- and Disubstituted Diiron Dithiolate Complexes as Models for the Active Site of Iron-Only Hydrogenases. *European Journal of Inorganic Chemistry*, **2007**, 2007, 5062-5068	2.3	29
33	Diiron species containing a cyclic P(Ph)2N(Ph)2 diphosphine related to the [FeFe]H2ases active site. *Chemical Communications*, **2011**, 47, 878-80	5.8	28
32	Tetranuclear iron complexes bearing benzenetetrathiolate bridges as four-electron transformation templates and their electrocatalytic properties for proton reduction. *Inorganic Chemistry*, **2013**, 52, 1798-806	5.1	26

31	Multielectron-transfer templates via consecutive two-electron transformations: iron-sulfur complexes relevant to biological enzymes. *Chemistry - A European Journal*, **2012**, 18, 13968-73	4.8	26
30	Oxidatively induced reactivity of [Fe2(CO)4(□-dppe)(□pdt)]: an electrochemical and theoretical study of the structure change and ligand binding processes. *Inorganic Chemistry*, **2011**, 50, 12575-85	5.1	26
29	Investigation on the protonation of a trisubstituted [Fe(2)(CO)(3)(PPh(3))(kappa(2)-phen)(mu-pdt)] complex: rotated versus unrotated intermediate pathways. *Inorganic Chemistry*, **2010**, 49, 5003-8	5.1	25
28	New nitrosyl derivatives of diiron dithiolates related to the active site of the [FeFe]-hydrogenases. *Inorganic Chemistry*, **2008**, 47, 11816-24	5.1	24
27	Tuning of electron transfer in diiron azo-bridged complexes relevant to hydrogenases. *International Journal of Hydrogen Energy*, **2010**, 35, 10797-10802	6.7	21
26	Magnetic crossover effect in Nickel nanowire arrays. *Physica B: Condensed Matter*, **2011**, 406, 2046-2053	2.8	20
25	Kinetic and thermodynamic aspects of the electrocatalysis of acid reduction in organic solvent using molecular diiron-dithiolate compounds. *Electrochimica Acta*, **2013**, 110, 641-645	6.7	19
24	Carboxy-functionalized dithiolate di-iron complexes related to the active site of Fe-only hydrogenase. *Journal of Organometallic Chemistry*, **2007**, 692, 4177-4181	2.3	16
23	Reactivity of [Fe2(CO)6(□S2)] toward a Base-Containing Diphosphine (Ph2PCH2)2NCH3: Formation of Diiron Carbonyl Compounds Having Polydentate Heterofunctionalized Phosphine (PNS = Ph2PCH2N(CH3)CH2S) and Bidentate Thiophosphinito (Ph2PS = PS) Bridges. *Organometallics*, **2010**, 29, 1296-1301	3.8	11
22	Reversible Redox Switching of Chromophoric Phenylmethylenepyrans by Carbon-Carbon Bond Making/Breaking. *Journal of Organic Chemistry*, **2017**, 82, 12395-12405	4.2	10
21	Electrochemistry of cytochrome c immobilized on cardiolipin-modified electrodes: a probe for protein-lipid interactions. *Biochimica Et Biophysica Acta - General Subjects*, **2013**, 1830, 2798-803	4	10
20	Diiron Complexes with a [2Fe3S] Core Related to the Active Site of [FeFe]H2ases. *European Journal of Inorganic Chemistry*, **2011**, 2011, 1038-1042	2.3	9
19	Electrochemistry of dinuclear, thiolate-bridged transition-metal compounds. 7. Electrochemical generation of isomers of [Mo2Cp2(CO)2(.mu.-SMe)2] and their reactivity toward isocyanide ligands. *Organometallics*, **1991**, 10, 2004-2011	3.8	9
18	Effects of anodization and electrodeposition conditions on the growth of copper and cobalt nanostructures in aluminum oxide films. *Journal of Applied Electrochemistry*, **2009**, 39, 719-725	2.6	8
17	Thermal Evolution of Magnetic Interactions in Ni Nanowires Embedded in Polycarbonate Membranes by Ferromagnetic Resonance. *Acta Physica Polonica A*, **2009**, 116, 1039-1043	0.6	8
16	Study of the magnetization behavior of ferromagnetic nanowire array: Existence of growth defects revealed by micromagnetic simulations. *Journal of Magnetism and Magnetic Materials*, **2016**, 401, 378-385	2.8	7
15	A molecular material based on electropolymerized cobalt macrocycles for electrocatalytic hydrogen evolution. *Physical Chemistry Chemical Physics*, **2015**, 17, 13374-9	3.6	6
14	Spectral radiative analysis of bio-inspired H2 production in a benchmark photoreactor: A first investigation using spatial photonic balance. *International Journal of Hydrogen Energy*, **2018**, 43, 8221-8231	6.7	6

13	Magnetic properties of ferromagnetic nanowire arrays: Theory and experiment. *Journal of Physics: Conference Series*, **2010**, 200, 072032	0.3	6
12	Application of the energetic span model to the electrochemical catalysis of proton reduction by a diiron azadithiolate complex. *New Journal of Chemistry*, **2015**, 39, 8073-8079	3.6	5
11	Electronic and molecular structure relations in diiron compounds mimicking the [FeFe]-hydrogenase active site studied by X-ray spectroscopy and quantum chemistry. *Dalton Transactions*, **2017**, 46, 12544-12557	4.3	5
10	Insights into the radical-radical and radical-substrate dimerization processes for substituted phenylmethylenepyrans. *Electrochimica Acta*, **2019**, 305, 304-311	6.7	4
9	Electrocatalytic Proton Reduction by a Cobalt Complex Containing a Proton-Responsive Bis(alkylimdazole)methane Ligand: Involvement of a C-H Bond in H Formation. *Chemistry - A European Journal*, **2020**, 26, 12560-12569	4.8	3
8	Electrochemical and Computational Study of the Reactivity of a Diiron Azadithiolate Complex towards Protons in the Presence of Coordinating Anions. *European Journal of Inorganic Chemistry*, **2015**, 2015, 4986-4990	2.3	3
7	Oxo-functionalised mesoionic NHC nickel complexes for selective electrocatalytic reduction of CO to formate. *Green Chemistry*, **2021**, 23, 3365-3373	10	3
6	Electrochemical hydrogen production in aqueous micellar solution by a diiron benzenedithiolate complex relevant to [FeFe] hydrogenases. *Physical Chemistry Chemical Physics*, **2012**,	3.6	2
5	Influence of QD photosensitizers in the photocatalytic production of hydrogen with biomimetic [FeFe]-hydrogenase. Comparative performance of CdSe and CdTe. *Chemosphere*, **2021**, 278, 130485	8.4	2
4	Why Cobalt macrocyclic complexes are not efficient catalysts for the oxygen reduction reaction, under acidic conditions. *Electrochimica Acta*, **2020**, 358, 136854	6.7	0
3	Electrochemically Driven Reduction of Carbon Dioxide Mediated by Mono-Reduced Mo-Diimine Tetracarbonyl Complexes: Electrochemical, Spectroelectrochemical and Theoretical Studies. *ChemElectroChem*, **2021**, 8, 1899-1910	4.3	0
2	Rhodium-based cathodes with ultra-low metal loading to increase the sustainability in the hydrogen evolution reaction. *Journal of Environmental Chemical Engineering*, **2022**, 107682	6.8	0
1	Phosphorus Functionalized Carbenes: Synthesis and Coordination Properties. *Phosphorus, Sulfur and Silicon and the Related Elements*, **2008**, 183, 669-670	1	