Rosalie K Hocking

List of Publications by Year
in descending order

90 papers	5,647 citations	76294 40 h-index	76872 74 g-index
93 all docs	93 docs citations	93 times ranked	7421 citing authors

#	Article	IF	Citations
1	Water-oxidation catalysis by manganese in a geochemical-like cycle. Nature Chemistry, 2011, 3, 461-466.	6.6	479
2	Overall electrochemical splitting of water at the heterogeneous interface of nickel and iron oxide. Nature Communications, 2019, 10, 5599.	5.8	475
3	Highly active nickel oxide water oxidation catalysts deposited from molecular complexes. Energy and Environmental Science, 2013, 6, 579-586.	15.6	231
4	Sorption of Arsenic(V) and Arsenic(III) to Schwertmannite. Environmental Science & Technology, 2009, 43, 9202-9207.	4.6	221
5	Fe L-Edge XAS Studies of K4[Fe(CN)6] and K3[Fe(CN)6]:Â A Direct Probe of Back-Bonding. Journal of the American Chemical Society, 2006, 128, 10442-10451.	6.6	215
6	A Surfactantâ€Free and Scalable General Strategy for Synthesizing Ultrathin Twoâ€Dimensional Metalâ€"Organic Framework Nanosheets for the Oxygen Evolution Reaction. Angewandte Chemie - International Edition, 2019, 58, 13565-13572.	7.2	205
7	Capturing the active sites of multimetallic (oxy)hydroxides for the oxygen evolution reaction. Energy and Environmental Science, 2020, 13, 4225-4237.	15.6	186
8	Defectâ€Induced Ptâ€"Coâ€"Se Coordinated Sites with Highly Asymmetrical Electronic Distribution for Boosting Oxygenâ€Involving Electrocatalysis. Advanced Materials, 2019, 31, e1805581.	11.1	168
9	Mobility of arsenic and selected metals during re-flooding of iron- and organic-rich acid-sulfate soil. Chemical Geology, 2008, 253, 64-73.	1.4	157
10	Highly active screen-printed electrocatalysts for water oxidation based on Î²-manganese oxide. Energy and Environmental Science, 2013, 6, 2222.	15.6	151
11	Fe L-Edge X-ray Absorption Spectroscopy of Low-Spin Heme Relative to Non-heme Fe Complexes:â€‰ Delocalization of Fe d-Electrons into the Porphyrin Ligand. Journal of the American Chemical Society, 2007, 129, 113-125.	6.6	137
12	In Situ Reconstruction of Vâ€Doped Ni₂P Preâ€Catalysts with Tunable Electronic Structures for Water Oxidation. Advanced Functional Materials, 2021, 31, 2100614.	7.8	129
13	Electrodeposited MnO_x Films from Ionic Liquid for Electrocatalytic Water Oxidation. Advanced Energy Materials, 2012, 2, 1013-1021.	10.2	122
14	Intrinsically stable in situ generated electrocatalyst for long-term oxidation of acidic water at up to 80â€‰Â°C. Nature Catalysis, 2019, 2, 457-465.	16.1	117
15	Implanting Ni-O-VOx sites into Cu-doped Ni for low-overpotential alkaline hydrogen evolution. Nature Communications, 2020, 11, 2720.	5.8	113
16	Iron-Monosulfide Oxidation in Natural Sediments: Resolving Microbially Mediated S Transformations Using XANES, Electron Microscopy, and Selective Extractions. Environmental Science & Technology, 2009, 43, 3128-3134.	4.6	111
17	Water Oxidation Catalysis by Nanoparticulate Manganese Oxide Thin Films: Probing the Effect of the Manganese Precursors. Chemistry of Materials, 2013, 25, 1098-1108.	3.2	110
18	Co-doped ZnO nanopowders: Location of cobalt and reduction in photocatalytic activity. Materials Chemistry and Physics, 2012, 132, 1035-1040.	2.0	105

#	Article	IF	Citations
19	Redox Activity and Two-Step Valence Tautomerism in a Family of Dinuclear Cobalt Complexes with a Spiroconjugated Bis(dioxolene) Ligand. Journal of the American Chemical Society, 2013, 135, 8304-8323.	6.6	102
20	Tuning the Coordination Structure of Cuï£¿Nï£¿C Single Atom Catalysts for Simultaneous Electrochemical Reduction of CO₂ and NO₃^{â€“} to Urea. Advanced Energy Materials, 2022, 12, .	10.2	98
21	NiFeCr Hydroxide Holey Nanosheet as Advanced Electrocatalyst for Water Oxidation. ACS Applied Materials & Interfaces, 2017, 9, 41239-41245.	4.0	96
22	Nitrogen Vacancy Induced Coordinative Reconstruction of Singleâ€Atom Ni Catalyst for Efficient Electrochemical CO₂ Reduction. Advanced Functional Materials, 2021, 31, 2107072.	7.8	89
23	Iron L-Edge X-ray Absorption Spectroscopy of Oxy-Picket Fence Porphyrin: Experimental Insight into Feâ€“O₂ Bonding. Journal of the American Chemical Society, 2013, 135, 1124-1136.	6.6	81
24	Highly efficient rutile TiO₂ photocatalysts with single Cu(<scp>ii</scp>) and Fe(<scp>iii</scp>) surface catalytic sites. Journal of Materials Chemistry A, 2016, 4, 3127-3138.	5.2	73
25	Arsenic Mobilization in a Seawater Inundated Acid Sulfate Soil. Environmental Science & Technology, 2010, 44, 1968-1973.	4.6	72
26	Improvement of Catalytic Water Oxidation on MnO_{<i>x</i>} Films by Heat Treatment. ChemSusChem, 2013, 6, 643-651.	3.6	71
27	Fe L-Edge X-ray Absorption Spectroscopy Determination of Differential Orbital Covalency of Siderophore Model Compounds: Electronic Structure Contributions to High Stability Constants. Journal of the American Chemical Society, 2010, 132, 4006-4015.	6.6	68
28	DFT Study of the Systematic Variations in Metalâˆ'Ligand Bond Lengths of Coordination Complexes:Â the Crucial Role of the Condensed Phase. Inorganic Chemistry, 2007, 46, 8238-8244.	1.9	65
29	A Surfactantâ€Free and Scalable General Strategy for Synthesizing Ultrathin Twoâ€Dimensional Metalâ€“Organic Framework Nanosheets for the Oxygen Evolution Reaction. Angewandte Chemie, 2019, 131, 13699-13706.	1.6	64
30	Fe L- and K-edge XAS of Low-Spin Ferric Corrole: Bonding and Reactivity Relative to Low-Spin Ferric Porphyrin. Inorganic Chemistry, 2009, 48, 1678-1688.	1.9	63
31	Database Analysis of Transition Metal Carbonyl Bond Lengths:Â Insight into the Periodicity of Ï€ Back-Bonding, Ïƒ Donation, and the Factors Affecting the Electronic Structure of the TMâˆ'Câ‹®O Moiety. Organometallics, 2007, 26, 2815-2823.	1.1	56
32	Anodic deposition of NiOx water oxidation catalysts from macrocyclic nickel(ii) complexes. Catalysis Science and Technology, 2013, 3, 1725.	2.1	56
33	A Two-Step Valence Tautomeric Transition in a Dinuclear Cobalt Complex. Inorganic Chemistry, 2012, 51, 3944-3946.	1.9	53
34	Rates of Water Exchange for Two Cobalt(II) Heteropolyoxotungstate Compounds in Aqueous Solution. Chemistry - A European Journal, 2011, 17, 4408-4417.	1.7	52
35	Evolution of Oxygenâ€“Metal Electron Transfer and Metal Electronic States During Manganese Oxide Catalyzed Water Oxidation Revealed with Inâ€…Situ Soft Xâ€Ray Spectroscopy. Angewandte Chemie - International Edition, 2019, 58, 3426-3432.	7.2	52
36	Cobalt complexes with tripodal ligands: implications for the design of drug chaperones. Dalton Transactions, 2012, 41, 11293.	1.6	50

#	Article	IF	Citations
37	Ultrasmall CoO(OH)_{<i>x</i>} Nanoparticles As a Highly Efficient â€œTrueâ€•Cocatalyst in Porous Photoanodes for Water Splitting. ACS Catalysis, 2017, 7, 4759-4767.	5.5	50
38	Impurity Tolerance of Unsaturated Ni-N-C Active Sites for Practical Electrochemical CO₂ Reduction. ACS Energy Letters, 2022, 7, 920-928.	8.8	47
39	Synchrotron-Based XANES Speciation of Chromium in the Oxy-Fuel Fly Ash Collected from Lab-Scale Drop-Tube Furnace. Environmental Science & Technology, 2011, 45, 6640-6646.	4.6	43
40	X-ray Absorption Spectroscopy and Density Functional Theory Studies of [(H3buea)FeIII-X]n-(X = S2-, O2-,) Tj ETQq0 0 0 rgBT /Overlock American Chemical Society, 2006, 128, 9825-9833.	6.6	42
41	Structural Measure of Metalâˆ'Ligand Covalency from the Bonding in Carboxylate Ligands. Inorganic Chemistry, 2003, 42, 2833-2835.	1.9	40
42	Reduction of the photocatalytic activity of ZnO nanoparticles for UV protection applications. International Journal of Nanotechnology, 2012, 9, 1017.	0.1	37
43	Counting vacancies and nitrogen-vacancy centers in detonation nanodiamond. Nanoscale, 2016, 8, 10548-10552.	2.8	33
44	Cobalt Electrochemical Recovery from Lithium Cobalt Oxides in Deep Eutectic Choline Chloride+Urea Solvents. ChemSusChem, 2021, 14, 2972-2983.	3.6	33
45	Local structure and photocatalytic property of solâ€"gel synthesized ZnO doped with transition metal oxides. Journal of Materials Science, 2012, 47, 3150-3158.	1.7	31
46	Aggregation induced emission transformation of liquid and solid-state N-doped graphene quantum dots. Carbon, 2021, 175, 576-584.	5.4	30
47	Formation of a Nanoparticulate Birnessiteâ€Like Phase in Purported Molecular Water Oxidation Catalyst Systems. ChemCatChem, 2014, 6, 2028-2038.	1.8	29
48	Highly dispersed and disordered nickelâ€"iron layered hydroxides and sulphides: robust and high-activity water oxidation catalysts. Sustainable Energy and Fuels, 2018, 2, 1561-1573.	2.5	29
49	Evolution of Oxygenâ€"Metal Electron Transfer and Metal Electronic States During Manganese Oxide Catalyzed Water Oxidation Revealed with Inâ€…Situ Soft Xâ€Ray Spectroscopy. Angewandte Chemie, 2019, 131, 3464-3470.	1.6	28
50	Nanoscale structural disorder in manganese oxide particles embedded in Nafion. Journal of Materials Chemistry A, 2014, 2, 3730-3733.	5.2	24
51	Photon-Induced, Timescale, and Electrode Effects Critical for the in Situ X-ray Spectroscopic Analysis of Electrocatalysts: The Water Oxidation Case. Journal of Physical Chemistry C, 2019, 123, 28533-28549.	1.5	24
52	Engineering Disorder into Heterogeniteâ€Like Cobalt Oxides by Phosphate Doping: Implications for the Design of Waterâ€Oxidation Catalysts. ChemCatChem, 2017, 9, 511-521.	1.8	23
53	Ligand Field and Molecular Orbital Theories of Transition Metal X-ray Absorption Edge Transitions. Structure and Bonding, 2011, , 155-184.	1.0	22
54	Towards Hydrogen Energy: Progress on Catalysts for Water Splitting. Australian Journal of Chemistry, 2012, 65, 577.	0.5	22

#	Article	IF	Citations
55	Electrosynthesis of Highly Transparent Cobalt Oxide Water Oxidation Catalyst Films from Cobalt Aminopolycarboxylate Complexes. ChemSusChem, 2015, 8, 1394-1403.	3.6	21
56	Electron shuttle-induced oxidative transformation of arsenite on the surface of goethite and underlying mechanisms. Journal of Hazardous Materials, 2022, 425, 127780.	6.5	21
57	Catalytic Activity and Impedance Behavior of Screenâ€Printed Nickel Oxide as Efficient Water Oxidation Catalysts. ChemSusChem, 2015, 8, 4266-4274.	3.6	20
58	Oxidant or Catalyst for Oxidation? A Study of How Structure and Disorder Change the Selectivity for Direct versus Catalytic Oxidation Mediated by Manganese(III,IV) Oxides. Chemistry of Materials, 2018, 30, 8244-8256.	3.2	19
59	Mixed metalâ€“antimony oxide nanocomposites: low pH water oxidation electrocatalysts with outstanding durability at ambient and elevated temperatures. Journal of Materials Chemistry A, 2021, 9, 27468-27484.	5.2	19
60	Characterization of Energy Materials with X-ray Absorption Spectroscopyâ”€Advantages, Challenges, and Opportunities. Energy & Fuels, 2022, 36, 2369-2389.	2.5	19
61	Effect of manganese oxide minerals and complexes on gold mobilization and speciation. Chemical Geology, 2015, 407-408, 10-20.	1.4	18
62	Phase transformation of nanosized zero-valent iron modulated by As(III) determines heavy metal passivation. Water Research, 2022, 221, 118804.	5.3	18
63	Phosphorylated manganese oxide electrodeposited from ionic liquid as a stable, high efficiency water oxidation catalyst. Catalysis Today, 2013, 200, 36-40.	2.2	17
64	Exploration of TiO2 as substrates for single metal catalysts: A DFT study. Applied Surface Science, 2020, 533, 147362.	3.1	17
65	Forward and Reverse (Retro) Iron(III) or Gallium(III) Desferrioxamine E and Ring-Expanded Analogues Prepared Using Metal-Templated Synthesis from <i>endo</i>-Hydroxamic Acid Monomers. Inorganic Chemistry, 2015, 54, 3573-3583.	1.9	15
66	Engineering Disorder at a Nanoscale: A Combined TEM and XAS Investigation of Amorphous versus Nanocrystalline Sodium Birnessite. Australian Journal of Chemistry, 2015, 68, 1715.	0.5	13
67	Preparation and Characterization of Catalysts for Clean Energy: A Challenge for X-rays and Electrons. Australian Journal of Chemistry, 2012, 65, 608.	0.5	12
68	Photoactive semiconducting metal oxides: Hydrogen gas sensing mechanisms. International Journal of Hydrogen Energy, 2022, 47, 18208-18227.	3.8	12
69	Structural measures of elementâ€“oxygen bond covalency from the changes to the delocalisation of the carboxylate ligand. Dalton Transactions, 2005, , 969-978.	1.6	11
70	Extraction of metals from mildly acidic tropical soils: Interactions between chelating ligand, pH and soil type. Chemosphere, 2020, 248, 126060.	4.2	11
71	Direct Formation of 2D-MnO_{<i>x</i>} under Conditions of Water Oxidation Catalysis. ACS Applied Nano Materials, 2018, 1, 1603-1611.	2.4	9
72	Durable Electrooxidation of Acidic Water Catalysed by a Cobaltâ€Bismuthâ€based Oxide Composite: An Unexpected Role of the Fâ€doped SnO₂ Substrate. ChemCatChem, 2022, 14, .	1.8	9

#	Article	IF	Citations
73	Tunable Biogenic Manganese Oxides. Chemistry - A European Journal, 2017, 23, 13482-13492.	1.7	8
74	Statistical and Molecular Mechanics Analysis of the Effects of Changing Donor Type on Bond Length in the Two Series [CoIIINnO6-n] and [NiIINnO6-n] (n= 0âˆ'6):Â A New Route to Bond-Stretch Parameters. Inorganic Chemistry, 2002, 41, 2660-2666.	1.9	7
75	Geometric Structure Determination of N694C Lipoxygenase: A Comparative Near-Edge X-Ray Absorption Spectroscopy and Extended X-Ray Absorption Fine Structure Study. Inorganic Chemistry, 2008, 47, 11543-11550.	1.9	7
76	Transformation of chlorine in NaCl-loaded Victorian brown coal during the gasification in steam. Journal of Fuel Chemistry and Technology, 2012, 40, 1409-1414.	0.9	7
77	Comment on â€œDirect Observation of Tetrahedrally Coordinated Fe(III) in Ferrihydriteâ€• Environmental Science & Technology, 2012, 46, 11471-11472.	4.6	7
78	Fe and S K-edge XAS determination of iron-sulfur species present in a range of acid sulfate soils: Effects of particle size and concentration on quantitative XANES determinations. Journal of Physics: Conference Series, 2009, 190, 012144.	0.3	6
79	Intrinsic Catalytic Activity for the Alkaline Hydrogen Evolution of Layer-Expanded MoS₂ Functionalized with Nanoscale Ni and Co Sulfides. ACS Sustainable Chemistry and Engineering, 2022, 10, 7117-7133.	3.2	6
80	Insights into the van der Waals Radius of Low-Spin Ni(ii) fromMolecular Mechanics Studies and the Crystal Structures of [Ni(cis-cyclohexane-1,3-diamine)2]Cl2, [Ni{(R)-5,5,7-trimethyl-1,4-diazacycloheptane}2]Cl2Â·H2O and [Ni(5,7-dimethyl-1,4-diazacycloheptane)2](ClO4)2. Synthesis of 5,7-Dimethyl-1,4-diazacycloheptane and an Improved Synthesis of cis-Cyclohexane-1,3-diamine. Australian Journal of Chemistry, 2002, 55, 523.	0.5	5
81	Structural insights into transition-metal carbonyl bonding. Chemical Communications, 2003, , 1516-1517.	2.2	5
82	Insight into pHâ€Dependent Formation of Manganese Oxide Phases in Electrodeposited Catalytic Films Probed by Soft Xâ€Ray Absorption Spectroscopy. ChemPlusChem, 2018, 83, 721-727.	1.3	5
83	Redox Properties of Iron Sulfides: Direct <i>versus</i> Catalytic Reduction and Implications for Catalyst Design. ChemCatChem, 2022, 14, .	1.8	5
84	Probing the Fate of Mn Complexes in Nafion: A Combined Multifrequency EPR and XAS Study. Journal of Physical Chemistry C, 2016, 120, 853-861.	1.5	4
85	The Oxidation of Peroxide by Disordered Metal Oxides: A Measurement of Thermodynamic Stability â€œBy Proxyâ€• ChemPlusChem, 2018, 83, 620-629.	1.3	4
86	Theoretical study of K3Sb/graphene heterostructure for electrochemical nitrogen reduction reaction. Frontiers of Physics, 2022, 17, 1.	2.4	4
87	Role of Advanced Analytical Techniques in the Design and Characterization of Improved Catalysts for Water Oxidation. , 2013, , 305-339.		3
88	Applying databases of small molecule crystal structures to understanding the interactions about biologically relevent metal centres. Journal of Inorganic Biochemistry, 2003, 96, 147.	1.5	1
89	The search for intermediates formed during water-oxidation catalysis. Chem Catalysis, 2021, 1, 248-250.	2.9	1
90	Cover Feature: Redox Properties of Iron Sulfides: Direct <i>versus</i> Catalytic Reduction and Implications for Catalyst Design (ChemCatChem 12/2022). ChemCatChem, 2022, 14, .	1.8	0