

Robert M Buchanan

List of Publications by Year in descending order

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88
papers

4,312
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94269

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106150

65
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docs citations

91
times ranked

3030
citing authors

#	ARTICLE	IF	CITATIONS
1	Transition metal complexes of o-benzoquinone, o-semiquinone, and catecholate ligands. <i>Coordination Chemistry Reviews</i> , 1981, 38, 45-87.	9.5	712
2	Tautomeric catecholate-semiquinone interconversion via metal-ligand electron transfer. Structural, spectral, and magnetic properties of (3,5-di-tert-butylcatecholato)(3,5-di-tert-butylsemiquinone)(bipyridyl)cobalt(III), a complex containing mixed-valence organic ligands. <i>Journal of the American Chemical Society</i> , 1980, 102, 4951-4957.	6.6	413
3	Structures and Solid-State Dynamics of One-Dimensional Water Chains Stabilized by Imidazole Channels. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 5452-5455.	7.2	177
4	Biomimetic oxidation studies. 5. Mechanistic aspects of alkane functionalization with iron and iron-oxygen (Fe ₂ O and Fe ₄ O ₂) complexes in the presence of hydrogen peroxide. <i>Inorganic Chemistry</i> , 1991, 30, 3002-3006.	1.9	124
5	Structural and magnetic properties of tris(o-semiquinone) complexes of iron(III) and chromium(III). <i>Journal of the American Chemical Society</i> , 1978, 100, 7894-7900.	6.6	114
6	Metal-Assisted Ligand-Centered Electrocatalytic Hydrogen Evolution upon Reduction of a Bis(thiosemicarbazonato)Cu(II) Complex. <i>Inorganic Chemistry</i> , 2017, 56, 11254-11265.	1.9	102
7	Beyond Metal-Hydrides: Non-Transition-Metal and Metal-Free Ligand-Centered Electrocatalytic Hydrogen Evolution and Hydrogen Oxidation. <i>Journal of the American Chemical Society</i> , 2016, 138, 7844-7847.	6.6	97
8	Synthesis and characterization of dinuclear copper(II) complexes of the dinucleating ligand 2,6-bis[bis((1-methylimidazol-2-yl)methyl)amino)methyl]-4-methylphenol. <i>Inorganic Chemistry</i> , 1991, 30, 1357-1365.	1.9	91
9	Spin-state regulation of iron(III) centres by axial ligands with tetradentate bis(picolinamide) in-plane ligands. <i>Journal of the Chemical Society Dalton Transactions</i> , 1993, , 2451.	1.1	85
10	Biomimetic Oxidation Studies. 8. Structure of a New MMO Active Site Model, [Fe ₂ O(H ₂ O) ₂ (tris((1-methylimidazol-2-yl)methyl)amine) ₂] ⁴⁺ , and Role of the Aqua Ligand in Alkane Functionalization Reactions. <i>Inorganic Chemistry</i> , 1994, 33, 3208-3209.	1.9	85
11	Semiquinone radical anion coordination to divalent cobalt and nickel. Structural features of the bis(3,5-di-tert-butyl-1,2-semiquinone)cobalt(II) tetramer. <i>Inorganic Chemistry</i> , 1979, 18, 3439-3444.	1.9	83
12	Electron transfer in iron(II)iron(III) model complexes of iron-oxo proteins. <i>Journal of the American Chemical Society</i> , 1992, 114, 3815-3827.	6.6	80
13	Weak magnetic exchange interactions between paramagnetic metal ions and coordinated o-semiquinones in M(9,10-phenanthrenesemiquinone) ₂ (pyridine) ₂ [M = nickel(II) and cobalt(II)] and tetranuclear M ₄ (o-semiquinone) ₈ complexes. <i>Inorganic Chemistry</i> , 1981, 20, 1038-1046.	1.9	78
14	Mediated electrochemical reduction of oxygen to hydrogen peroxide via a surface-confined naphthoquinone reagent and the mediated electrochemical reduction of a naphthoquinone redox reagent anchored to high surface area oxides. <i>Journal of the American Chemical Society</i> , 1983, 105, 5594-5600.	6.6	78
15	Active site model of urease: synthesis, structure, and magnetic properties of a binuclear nickel(II) complex containing a polyimidazole ligand. <i>Journal of the American Chemical Society</i> , 1989, 111, 4497-4498.	6.6	77
16	New tripodal Cu(II) complexes containing imidazole ligands. <i>Inorganica Chimica Acta</i> , 1990, 173, 145-154.	1.2	74
17	Synthesis and Characterization of Copper(II) Complexes of New Tripodal Polyimidazole Ligands. <i>Inorganic Chemistry</i> , 1994, 33, 2376-2382.	1.9	74
18	Multistep redox series of the tris(o-semiquinone)chromium(III) complexes. <i>Inorganic Chemistry</i> , 1979, 18, 1736-1740.	1.9	73

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19	Intramolecular antiferromagnetic exchange in tris(o-semiquinone) complexes of vanadium(III), chromium(III), and iron(III). <i>Journal of the American Chemical Society</i> , 1978, 100, 4318-4320.	6.6	65
20	Orthoquinone complexes of vanadium and their reactions with molecular oxygen. <i>Journal of the American Chemical Society</i> , 1983, 105, 2680-2686.	6.6	65
21	Counter ligand dependence of charge distribution in copper-quinone complexes. Structural and magnetic properties of (3,5-di-tert-butylcatecholato)(bipyridine)copper(II). <i>Inorganic Chemistry</i> , 1986, 25, 3070-3076.	1.9	64
22	Synthesis, crystal structure and magnetic properties of a pyrazolate-bridged binuclear copper(II) complex. <i>Inorganic Chemistry</i> , 1990, 29, 1058-1062.	1.9	62
23	Ligand-Assisted Metal-Centered Electrocatalytic Hydrogen Evolution upon Reduction of a Bis(thiosemicarbazonato)Ni(II) Complex. <i>Inorganic Chemistry</i> , 2018, 57, 13486-13493.	1.9	58
24	Synthesis and characterization of a mixed-valence binuclear manganese(II,III) complex of a septadentate polyimidazole ligand. <i>Inorganic Chemistry</i> , 1988, 27, 971-973.	1.9	54
25	Dinuclear Copper(II) Complexes Incorporating a New Septadentate Polyimidazole Ligand. <i>Inorganic Chemistry</i> , 1996, 35, 3325-3334.	1.9	52
26	Distorted trigonal prismatic coordination in tris(9,10-phenanthrenequinone)molybdenum. <i>Journal of the American Chemical Society</i> , 1975, 97, 4912-4917.	6.6	50
27	Radical-anion coordination of 9,10-phenanthrenequinone in (penta-oxo)bis(9,10-phenanthrenequinone)dimolybdenum. <i>Journal of the American Chemical Society</i> , 1975, 97, 6450-6455.	6.6	48
28	Antifungal activity of thiosemicarbazones, bis(thiosemicarbazones), and their metal complexes. <i>Journal of Inorganic Biochemistry</i> , 2021, 225, 111620.	1.5	48
29	Electrochemical behavior of a surface-confined naphthoquinone derivative. Electrochemical and photoelectrochemical reduction of oxygen to hydrogen peroxide at derivatized electrodes. <i>Journal of the American Chemical Society</i> , 1982, 104, 5786-5788.	6.6	47
30	Structural and Spectroscopic Characterization of Copper(II) Complexes of a New Bisamide Functionalized Imidazole Tripod and Evidence for the Formation of a Mononuclear End-On Cu ^{II} -OOH Species. <i>Inorganic Chemistry</i> , 2006, 45, 3191-3202.	1.9	47
31	Studies on complexes containing mixed-valence semiquinone-catecholate ligands. Synthesis and characterization of bis(o-quinone)(bipyridine)chromium(III) complexes. <i>Inorganic Chemistry</i> , 1983, 22, 2552-2556.	1.9	46
32	Synthesis, structure and properties of a N ₃ tridentate bis-imidazolyl ligand with copper(II). <i>Polyhedron</i> , 1989, 8, 659-668.	1.0	41
33	Synthesis, Crystal Structure, and Properties of a Polyimidazole Diiron(III) Complex. A New Model of the Active Site of Purple Acid Phosphatase. <i>Inorganic Chemistry</i> , 1995, 34, 2382-2388.	1.9	41
34	Synthesis and properties of a binuclear (1/4-oxo) diiron(III) complex containing a tripodal polybenzimidazole ligand. <i>Inorganica Chimica Acta</i> , 1993, 214, 33-40.	1.2	40
35	Biomimetic Oxidation Studies. 9. Mechanistic Aspects of the Oxidation of Alcohols with Functional, Active Site Methane Monooxygenase Enzyme Models in Aqueous Solution. <i>Journal of the American Chemical Society</i> , 1995, 117, 12356-12357.	6.6	40
36	Synthesis, Characterization, and Biological Activity of Hybrid Thiosemicarbazone-alkylthiocarbamate Metal Complexes. <i>Inorganic Chemistry</i> , 2020, 59, 4924-4935.	1.9	40

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37	Synthesis, structure, and properties of the oxygen-deficient bis(3,5-di-tert-butylcatecholato)oxomolybdenum(VI) dimer, [MoO(O ₂ C ₆ H ₂ (t-Bu) ₂) ₂] ₂ . <i>Inorganic Chemistry</i> , 1979, 18, 1616-1620.	1.9	39
38	Synthesis and Sulfur Oxygenation of a (N ₃)Ni Complex Related to Nickel-Containing Superoxide Dismutase. <i>Inorganic Chemistry</i> , 2009, 48, 9974-9976.	1.9	39
39	New piano-stool ruthenium(II) complexes of benzene and bidentate/tridentate nitrogen-donor ligands: synthesis and characterization. <i>Journal of the Chemical Society Dalton Transactions</i> , 1994, , 465.	1.1	37
40	Biomimetic oxidation studies. 10. Cyclohexane oxidation reactions with active site methane monooxygenase enzyme models and t-butyl hydroperoxide in aqueous micelles: Mechanistic insights and the role of t-butoxy radicals in the C-H functionalization reaction. <i>Journal of Molecular Catalysis A</i> , 1997, 116, 43-47.	4.8	37
41	Synthesis and characterization of a (μ-oxo)(μ-carboxylato)dimanganese(III) polyimidazole complex. <i>Inorganic Chemistry</i> , 1993, 32, 4561-4565.	1.9	35
42	Valence detrapping in iron(II)-iron(III) models of iron-oxo proteins. <i>Journal of the American Chemical Society</i> , 1989, 111, 2745-2746.	6.6	33
43	Molecular structure of 2,2'-bipyridyldibenzylideneacetonepalladium(0). <i>Journal of Organometallic Chemistry</i> , 1977, 124, 103-112.	0.8	32
44	Control of the stereochemistry of four-coordinate copper(II) complexes by pyridinecarboxamide ligands: crystal structure, spectral and redox properties. <i>Journal of the Chemical Society Dalton Transactions</i> , 1994, , 965.	1.1	32
45	Biomimetic Oxidation Studies. 11. Alkane Functionalization in Aqueous Solution Utilizing in Situ Formed [Fe ₂ O(μ-1-H ₂ O)(μ-1-OAc)(TPA) ₂] ³⁺ , as an MMO Model Precatalyst, Embedded in Surface-Derivatized Silica and Contained in Micelles. <i>Inorganic Chemistry</i> , 1999, 38, 3575-3580.	1.9	28
46	A supramolecular assembly of side-by-side polyimidazole tripod coils stabilized by π-π stacking and unique boric acid templated hydrogen bonding interactions. <i>Chemical Communications</i> , 2005, , 2223.	2.2	27
47	Magnetic exchange interactions propagated by saturated bridges in binuclear dicyclopentadienyltitanium(III) complexes. <i>Inorganic Chemistry</i> , 1983, 22, 628-636.	1.9	23
48	Biomimetic oxidation studies. 7. Alkane functionalization with a MMO structural model, [Fe ₂ O(OAc)(tris((1-methylimidazol-2-yl) methyl) amine) ₂] ³⁺ , in the presence of t-butyl hydroperoxide and oxygen gas. <i>Catalysis Letters</i> , 1993, 18, 357-365.	1.4	23
49	Attenuation of antiferromagnetic exchange interactions via water hydrogen bonding to oxo-bridged diiron(III) complexes. <i>Inorganic Chemistry</i> , 1992, 31, 1123-1125.	1.9	22
50	Syntheses, Crystal Structures, and Properties of Unsymmetrical (μ ₄ -Oxo)diiron(III) Complexes Containing Polyimidazole Ligands. <i>Inorganic Chemistry</i> , 1996, 35, 6642-6643.	1.9	22
51	Synthesis, X-ray structure and properties of a new nitrite-bound copper(II) complex with 2-(3,5- <i>Tj</i> ETQq1 1 0.784314 rgBT / Qyerlock 10	1.0	21
52	Chemical derivatization of electrode surfaces with derivatives of N,N,N',N'-tetraalkyl-1,4-benzenediamine. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1983, 153, 129-156.	0.3	20
53	Synthesis, crystal structure and properties of (1,3-bis(N-methylimidazolimine)-propan-2-ol)Cu(II)·perchlorate. <i>Inorganica Chimica Acta</i> , 1989, 159, 219-224.	1.2	20
54	Molybdenum complexes containing catecholate ligands. Structural studies on complexes of the pentaoxobis(quinone)dimolybdenate(n-) (n = 0, 1, 2) redox series. <i>Inorganic Chemistry</i> , 1982, 21, 652-657.	1.9	19

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55	Exploiting Metal-Ligand Cooperativity to Sequester, Activate, and Reduce Atmospheric Carbon Dioxide with a Neutral Zinc Complex. <i>Inorganic Chemistry</i> , 2020, 59, 4835-4841.	1.9	19
56	Synthesis, structure, and properties of a novel heterobimetallic iron(III)manganese(II) complex containing a septadentate polyimidazole ligand. <i>Inorganic Chemistry</i> , 1990, 29, 1299-1301.	1.9	18
57	Electrochemically Induced Metalation of Polymeric Phthalocyanines. <i>Journal of the American Chemical Society</i> , 1998, 120, 4887-4888.	6.6	17
58	Electrocatalytic Hydrogen Evolution and Hydrogen Oxidation with a Ni(PS) ₂ Complex. <i>European Journal of Inorganic Chemistry</i> , 2017, 2017, 3714-3719.	1.0	17
59	Translation of Ligand-Centered Hydrogen Evolution Reaction Activity and Mechanism of a Rhenium-Thiolate from Solution to Modified Electrodes: A Combined Experimental and Density Functional Theory Study. <i>Inorganic Chemistry</i> , 2017, 56, 2177-2187.	1.9	16
60	Utilizing Charge Effects and Minimizing Intramolecular Proton Rearrangement to Improve the Overpotential of a Thiosemicarbazonato Zinc HER Catalyst. <i>Inorganic Chemistry</i> , 2019, 58, 12986-12997.	1.9	14
61	Structure and properties of an Fe(III) complex containing a novel amide functionalized polyimidazole ligand. Electronic supplementary information (ESI) available: ¹ H, ¹³ C NMR, UV-vis and FTIR spectra, ESI-mass spectra and cyclic voltammetry. See http://www.rsc.org/suppdata/cc/b2/b204799c/ . <i>Chemical Communications</i> , 2002, 2166-2167.	2.2	13
62	Copper catalysed aerobic oxidation of benzylic alcohols in an imidazole containing N ₄ ligand framework. <i>Dalton Transactions</i> , 2016, 45, 18356-18364.	1.6	12
63	Photocatalytic hydrogen evolution on Si photocathodes modified with bis(thiosemicarbazonato)nickel(II)/Nafion. <i>Chemical Communications</i> , 2019, 55, 9440-9443.	2.2	12
64	Structural features of chloro(dimethylphenylphosphonium) 1979, 18, 3608-3610.	1.9	11
65	Reversible methanol addition to copper Schiff base complexes: a kinetic, structural and spectroscopic study of reactions at azomethine C=N bonds. <i>Dalton Transactions</i> , 2016, 45, 15791-15799.	1.6	11
66	Spectroscopic characterization of a Ni-organic radical intermediate in the aerobic oxidation of methanol catalyzed by a Ni(II)(polyoximate) complex. <i>Inorganica Chimica Acta</i> , 2008, 361, 947-955.	1.2	10
67	Ligand-Centered Hydrogen Evolution with Ni(II) and Pd(II)DMTH. <i>Inorganic Chemistry</i> , 2022, 61, 9792-9800.	1.9	10
68	Synthesis, Characterization, and HER Activity of Pendant Diamine Derivatives of NiATSM. <i>European Journal of Inorganic Chemistry</i> , 2019, 2019, 3782-3790.	1.0	9
69	Copper bis(thiosemicarbazone) Complexes with Pendant Polyamines: Effects of Proton Relays and Charged Moieties on Electrocatalytic HER. <i>European Journal of Inorganic Chemistry</i> , 2021, 2021, 267-275.	1.0	9
70	Synthesis and characterization of a new binucleating schiff base macrocycle and its nickel(II) and copper(II) complexes. <i>Inorganica Chimica Acta</i> , 1988, 145, 21-28.	1.2	8
71	Binuclear schiff base complexes. <i>Inorganica Chimica Acta</i> , 1989, 158, 227-237.	1.2	7
72	Effect of Stacking Interactions on the Translation of Structurally Related Bis(thiosemicarbazonato)nickel(II) HER Catalysts to Modified Electrode Surfaces. <i>Inorganic Chemistry</i> , 2019, 58, 12025-12039.	1.9	6

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73	Structural features of Ir(NO)(PPh ₃)(O ₂ C ₆ Br ₄), a complex molecule containing both quinone and nitrosyl ligands. <i>Inorganic Chemistry</i> , 1980, 19, 1803-1805.	1.9	5
74	Syntheses, structures, and electrochemical studies of N,N'-bis(alkylthiocarbamate)butane-2,3-diimine Cu(II) complexes as pendent alkoxy derivatives of Cu(ATSM). <i>Inorganica Chimica Acta</i> , 2017, 461, 45-51.	1.2	5
75	Streams, cascades, and pools: various water cluster motifs in structurally similar Ni(<i>scp</i>) complexes. <i>CrystEngComm</i> , 2018, 20, 7071-7081.	1.3	5
76	Tris[(1-methylimidazol-2-yl)methyl]amine·boric acid (1/1). <i>Acta Crystallographica Section C: Crystal Structure Communications</i> , 2002, 58, o629-o631.	0.4	3
77	Synthesis, Structure, and Solution Properties of [(mim-TASN)FeCl ₂] ⁺ and Its 1/4-Oxo Derivative. <i>Inorganic Chemistry</i> , 2010, 49, 10427-10435.	1.9	3
78	N-(2-formyl-1-methylimidazol-4-yl)-2,2-dimethylpropanamide: a versatile reagent for preparing imidazole-amine ligands with variable second-coordination spheres. <i>Tetrahedron Letters</i> , 2011, 52, 4771-4774.	0.7	3
79	Synthesis, characterization and crystal structures of Nickel(II) complexes containing sterically hindering Benzimidazole ligands. <i>Journal of Coordination Chemistry</i> , 2004, 57, 361-372.	0.8	2
80	5,10-dihydroxy-5H,10H-diimidazo[1,2-a:1',2'-d]pyrazine. <i>Acta Crystallographica Section C: Crystal Structure Communications</i> , 2005, 61, o361-o362.	0.4	2
81	Supramolecular assembly of a dinuclear Ag(I) complex with discreet Ag ₂ S ₂ centers. <i>Inorganic Chemistry Communication</i> , 2009, 12, 1091-1093.	1.8	2
82	Water wire clusters in isostructural Cu(II) and Ni(II) complexes: Synthesis, characterization, and thermal analyses. <i>Inorganica Chimica Acta</i> , 2019, 492, 268-274.	1.2	2
83	Investigations of Bis(alkylthiocarbamato)copper Linkage Isomers. <i>Inorganic Chemistry</i> , 2022, 61, 7715-7719.	1.9	2
84	Ethyl 1-methylimidazole-2-carboxylate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2006, 62, o1548-o1549.	0.2	1
85	Small molecule crystals with 1D water wires modulate electronic properties of surface water networks. <i>Applied Materials Today</i> , 2021, 22, 100895.	2.3	1
86	Additions and Corrections - Orthoquinone Complexes of Vanadium and Their Reactions with Molecular Oxygen. <i>Journal of the American Chemical Society</i> , 1984, 106, 2483-2483.	6.6	0
87	Racemic (1,4-dioxan-2-yl)diphenylmethanol. <i>Acta Crystallographica Section C: Crystal Structure Communications</i> , 2011, 67, o129-o130.	0.4	0
88	Tetra-1/4-acetato-1/8O:O'-bis{[2,2-dimethyl-N-(pyridin-2-yl)propanamide-1-N1]copper(II)}(Cu ²⁺ Cu). <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2011, 67, m1892-m1893.	0.2	0