

Charles Machan

List of Publications by Year in descending order

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58
papers

2,630
citations

172457

29
h-index

189892

50
g-index

83
all docs

83
docs citations

83
times ranked

2956
citing authors

#	ARTICLE	IF	CITATIONS
1	A coordination chemistry dichotomy for icosahedral carborane-based ligands. <i>Nature Chemistry</i> , 2011, 3, 590-596.	13.6	294
2	Developing a Mechanistic Understanding of Molecular Electrocatalysts for CO ₂ Reduction using Infrared Spectroelectrochemistry. <i>Organometallics</i> , 2014, 33, 4550-4559.	2.3	186
3	A Molecular Ruthenium Electrocatalyst for the Reduction of Carbon Dioxide to CO and Formate. <i>Journal of the American Chemical Society</i> , 2015, 137, 8564-8571.	13.7	129
4	Supramolecular Assembly Promotes the Electrocatalytic Reduction of Carbon Dioxide by Re(I) Bipyridine Catalysts at a Lower Overpotential. <i>Journal of the American Chemical Society</i> , 2014, 136, 14598-14607.	13.7	128
5	Electronic Tuning of Nickel-Based Bis(dicarbollide) Redox Shuttles in Dye-Sensitized Solar Cells. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 5339-5343.	13.8	121
6	Secondary-Sphere Effects in Molecular Electrocatalytic CO ₂ Reduction. <i>Frontiers in Chemistry</i> , 2019, 7, 397.	3.6	114
7	Photocatalytic Reduction of Carbon Dioxide to CO and HCO ₂ H Using <i>fac</i> -Mn(CN)(bpy)(CO) ₃ . <i>Inorganic Chemistry</i> , 2016, 55, 3192-3198.	4.0	100
8	Electrocatalytic Reduction of CO ₂ to Formate by an Iron Schiff Base Complex. <i>Inorganic Chemistry</i> , 2018, 57, 2111-2121.	4.0	97
9	Concerted One-Electron Two-Proton Transfer Processes in Models Inspired by the Tyr-His Couple of Photosystem II. <i>ACS Central Science</i> , 2017, 3, 372-380.	11.3	80
10	Re(I) NHC Complexes for Electrocatalytic Conversion of CO ₂ . <i>Inorganic Chemistry</i> , 2016, 55, 3136-3144.	4.0	77
11	Advances in the Molecular Catalysis of Dioxygen Reduction. <i>ACS Catalysis</i> , 2020, 10, 2640-2655.	11.2	76
12	Electrocatalytic Reduction of Carbon Dioxide by Mn(CN)(2,2'-bipyridine)(CO) ₃ : CN Coordination Alters Mechanism. <i>Inorganic Chemistry</i> , 2015, 54, 8849-8856.	4.0	72
13	Synthesis, Spectroscopy, and Electrochemistry of (Î±-Diimine)M(CO) ₃ Br, M = Mn, Re, Complexes: Ligands Isolelectronic to Bipyridyl Show Differences in CO ₂ Reduction. <i>Organometallics</i> , 2015, 34, 3-12.	2.3	72
14	Improving the Efficiency and Activity of Electrocatalysts for the Reduction of CO ₂ through Supramolecular Assembly with Amino Acid-Modified Ligands. <i>Journal of the American Chemical Society</i> , 2016, 138, 8184-8193.	13.7	59
15	A look at periodic trends in d-block molecular electrocatalysts for CO ₂ reduction. <i>Dalton Transactions</i> , 2019, 48, 9454-9468.	3.3	58
16	Electrocatalytic Reduction of Dioxygen to Hydrogen Peroxide by a Molecular Manganese Complex with a Bipyridine-Containing Schiff Base Ligand. <i>Journal of the American Chemical Society</i> , 2018, 140, 3232-3241.	13.7	56
17	Dioxygen Reduction to Hydrogen Peroxide by a Molecular Mn Complex: Mechanistic Divergence between Homogeneous and Heterogeneous Reductants. <i>Journal of the American Chemical Society</i> , 2019, 141, 4379-4387.	13.7	51
18	Highly Efficient Electrocatalytic Reduction of CO ₂ to CO by a Molecular Chromium Complex. <i>ACS Catalysis</i> , 2020, 10, 1146-1151.	11.2	48

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19	Orientation of Cyano-Substituted Bipyridine Re(I) <i>fac</i> -Tricarbonyl Electrocatalysts Bound to Conducting Au Surfaces. <i>Journal of Physical Chemistry C</i> , 2016, 120, 1657-1665.	3.1	46
20	Rapid synthesis of redox-active dodecaborane B ₁₂ (OR) ₁₂ clusters under ambient conditions. <i>Inorganic Chemistry Frontiers</i> , 2016, 3, 711-717.	6.0	44
21	Bio-inspired CO ₂ reduction by a rhenium tricarbonyl bipyridine-based catalyst appended to amino acids and peptidic platforms: incorporating proton relays and hydrogen-bonding functional groups. <i>Faraday Discussions</i> , 2017, 198, 279-300.	3.2	42
22	Electrocatalytic reduction of carbon dioxide with Mn(terpyridine) carbonyl complexes. <i>Dalton Transactions</i> , 2016, 45, 17179-17186.	3.3	40
23	One-Pot Synthesis of an Fe(II) Bis-Terpyridine Complex with Allosterically Regulated Electronic Properties. <i>Journal of the American Chemical Society</i> , 2012, 134, 16921-16924.	13.7	39
24	Reductive Disproportionation of Carbon Dioxide by an Alkyl-Functionalized Pyridine Monoimine Re(I) <i>fac</i> -Tricarbonyl Electrocatalyst. <i>Organometallics</i> , 2015, 34, 4678-4683.	2.3	37
25	Electrocatalytic CO ₂ Reduction to Formate with Molecular Fe(III) Complexes Containing Pendent Proton Relays. <i>Inorganic Chemistry</i> , 2020, 59, 5854-5864.	4.0	37
26	Electrocatalytic Water Oxidation by a Trinuclear Copper(II) Complex. <i>ACS Catalysis</i> , 2021, 11, 7223-7240.	11.2	35
27	Chelating Effect as a Driving Force for the Selective Formation of Heteroligated Pt(II) Complexes with Bidentate Phosphino-Chalcoether Ligands. <i>Inorganic Chemistry</i> , 2011, 50, 1411-1419.	4.0	32
28	General Strategy for the Synthesis of Rigid Weak-Link Approach Platinum(II) Complexes: Tweezers, Triple-Layer Complexes, and Macrocycles. <i>Inorganic Chemistry</i> , 2013, 52, 5876-5888.	4.0	30
29	Combined steric and electronic effects of positional substitution on dimethyl-bipyridine rhenium(I)tricarbonyl electrocatalysts for the reduction of CO ₂ . <i>Inorganica Chimica Acta</i> , 2014, 422, 109-113.	2.4	30
30	Charged Macromolecular Rhenium Bipyridine Catalysts with Tunable CO ₂ Reduction Potentials. <i>Chemistry - A European Journal</i> , 2017, 23, 8619-8622.	3.3	30
31	Recent advances in spectroelectrochemistry related to molecular catalytic processes. <i>Current Opinion in Electrochemistry</i> , 2019, 15, 42-49.	4.8	26
32	Electrochemical CO ₂ Reduction in a Continuous Non-Aqueous Flow Cell with [Ni(cyclam)] ²⁺ . <i>Inorganic Chemistry</i> , 2020, 59, 1883-1892.	4.0	26
33	Pendent Relay Enhances H ₂ O ₂ Selectivity during Dioxygen Reduction Mediated by Bipyridine-Based Co ^{II} -N ₂ O ₂ Complexes. <i>Journal of the American Chemical Society</i> , 2021, 143, 13065-13073.	13.7	25
34	Controlling Polymorphism and Orientation of NU-901/NU-1000 Metal-Organic Framework Thin Films. <i>Chemistry of Materials</i> , 2020, 32, 10556-10565.	6.7	23
35	Nitric oxide activation facilitated by cooperative multimetallic electron transfer within an iron-functionalized polyoxovanadate ³⁻ alkoxide cluster. <i>Chemical Science</i> , 2018, 9, 6379-6389.	7.4	20
36	Electrochemical reduction of carbon dioxide with a molecular polypyridyl nickel complex. <i>Sustainable Energy and Fuels</i> , 2018, 2, 1269-1277.	4.9	19

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37	Interrogating heterobimetallic co-catalytic responses for the electrocatalytic reduction of CO ₂ using supramolecular assembly. Dalton Transactions, 2016, 45, 15942-15950.	3.3	18
38	DFT Study on the Electrocatalytic Reduction of CO ₂ to CO by a Molecular Chromium Complex. Inorganic Chemistry, 2021, 60, 3635-3650.	4.0	18
39	Non-covalent assembly of proton donors and <i>p</i> -benzoquinone anions for co-electrocatalytic reduction of dioxygen. Chemical Science, 2021, 12, 9733-9741.	7.4	17
40	Metal-Free Electrochemical Reduction of Carbon Dioxide Mediated by Cyclic(Alkyl)(Amino) Carbenes. Chemistry - A European Journal, 2019, 25, 6098-6101.	3.3	16
41	Reduction of dioxygen to water by a Co(N ₂ O ₂) complex with a 2,2'-bipyridine backbone. Chemical Communications, 2021, 57, 516-519.	4.1	16
42	Mediated Inner-Sphere Electron Transfer Induces Homogeneous Reduction of CO ₂ via Through-Space Electronic Conjugation. Angewandte Chemie - International Edition, 2021, , .	13.8	16
43	Catalytic Reduction of Dioxygen to Water by a Bioinspired Non-Heme Iron Complex via a 2+2 Mechanism. Journal of the American Chemical Society, 2021, 143, 16411-16418.	13.7	15
44	Plasticity of the Nickel(II) Coordination Environment in Complexes with Hemilabile Phosphino Thioether Ligands. Journal of the American Chemical Society, 2011, 133, 3023-3033.	13.7	14
45	Soluble, crystalline, and thermally stable alkali CO ₂ ²⁻ and carbonate (CO ₂ ²⁻) clusters supported by cyclic(alkyl)(amino) carbenes. Chemical Science, 2021, 12, 3544-3550.	7.4	12
46	Crystallographic Snapshots of the Bond-Breaking Isomerization Reactions Involving Nickel(II) Complexes with Hemilabile Ligands. Angewandte Chemie - International Edition, 2012, 51, 1469-1472.	13.8	10
47	Reversible modulation of the redox characteristics of acid-sensitive molybdenum and tungsten scorpionate complexes. Dalton Transactions, 2018, 47, 6323-6332.	3.3	10
48	Electrocatalytic reduction of dioxygen by Mn(III) meso-tetra(N-methylpyridinium-4-yl)porphyrin in universal buffer. Dalton Transactions, 2019, 48, 8633-8641.	3.3	10
49	Editorial: Molecular Catalysts for CO ₂ Fixation/Reduction. Frontiers in Chemistry, 2020, 8, 59.	3.6	8
50	Metal-Organic Frameworks as Porous Templates for Enhanced Cobalt Oxide Electrocatalyst Performance. ACS Applied Energy Materials, 2019, 2, 3306-3313.	5.1	7
51	Mechanistic insight into initiation and regioselectivity in the copolymerization of epoxides and anhydrides by Al complexes. Chemical Communications, 2020, 56, 14027-14030.	4.1	7
52	Molecular catalysts for artificial photosynthesis: general discussion. Faraday Discussions, 2017, 198, 353-395.	3.2	6
53	Bioinspired mononuclear Mn complexes for O ₂ activation and biologically relevant reactions. Dalton Transactions, 2021, 50, 16871-16886.	3.3	6
54	Homogeneous Catalytic Reduction of O ₂ to H ₂ O by a Terpyridine-Based FeN ₃ O Complex. Inorganic Chemistry, 2022, 61, 8387-8392.	4.0	6

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55	Mediated Inner-Sphere Electron Transfer Induces Homogeneous Reduction of CO ₂ via Through-Space Electronic Conjugation**. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	4
56	Catalytic Reduction of O ₂ to H ₂ O ₂ via a Mn Complex. <i>Trends in Chemistry</i> , 2019, 1, 794-795.	8.5	1
57	Introduction to the Organometallic Chemistry of Carbon Dioxide. , 2021, , .		0
58	Berichtigung: Mediated Inner-Sphere Electron Transfer Induces Homogeneous Reduction of CO ₂ via Through-Space Electronic Conjugation. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	0