Alexander J M Miller

List of Publications by Year
in descending order

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69 papers	6,312 citations	126907 33 h-index	88630 70 g-index
72 all docs	72 docs citations	72 times ranked	7704 citing authors

#	Article	IF	Citations
1	NMR Chemical Shifts of Trace Impurities: Common Laboratory Solvents, Organics, and Gases in Deuterated Solvents Relevant to the Organometallic Chemist. Organometallics, 2010, 29, 2176-2179.	2.3	3,142
2	Thermodynamic Hydricity of Transition Metal Hydrides. Chemical Reviews, 2016, 116, 8655-8692.	47.7	365
3	Kinetic and structural studies, origins of selectivity, and interfacial charge transfer in the artificial photosynthesis of CO. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15646-15650.	7.1	181
4	Synthesis and Characterization of Three-Coordinate Ni(III)-Imide Complexes. Journal of the American Chemical Society, 2011, 133, 13055-13063.	13.7	122
5	Evaluating the Thermodynamics of Electrocatalytic N₂ Reduction in Acetonitrile. ACS Energy Letters, 2016, 1, 698-704.	17.4	115
6	Hydrogenation of Carboxylic Acids Catalyzed by Half-Sandwich Complexes of Iridium and Rhodium. Journal of the American Chemical Society, 2013, 135, 16022-16025.	13.7	111
7	Mechanism of Chemical and Electrochemical N₂ Splitting by a Rhenium Pincer Complex. Journal of the American Chemical Society, 2018, 140, 7922-7935.	13.7	110
8	Long-Lived and Efficient Emission from Mononuclear Amidophosphine Complexes of Copper. Inorganic Chemistry, 2007, 46, 7244-7246.	4.0	102
9	Using combinations of oxidants and bases as PCET reactants: thermochemical and practical considerations. Energy and Environmental Science, 2012, 5, 7771.	30.8	97
10	Catalytic Disproportionation of Formic Acid to Generate Methanol. Angewandte Chemie - International Edition, 2013, 52, 3981-3984.	13.8	95
11	Cation-Modulated Reactivity of Iridium Hydride Pincer-Crown Ether Complexes. Journal of the American Chemical Society, 2014, 136, 14519-14529.	13.7	90
12	Cation-controlled catalysis with crown ether-containing transition metal complexes. Chemical Communications, 2019, 55, 5047-5059.	4.1	78
13	Aqueous Hydricity of Late Metal Catalysts as a Continuum Tuned by Ligands and the Medium. Journal of the American Chemical Society, 2016, 138, 2252-2260.	13.7	76
14	Potential Economic Feasibility of Direct Electrochemical Nitrogen Reduction as a Route to Ammonia. ACS Sustainable Chemistry and Engineering, 2020, 8, 8938-8948.	6.7	75
15	Trialkylborane-Assisted CO₂ Reduction by Late Transition Metal Hydrides. Organometallics, 2011, 30, 4308-4314.	2.3	73
16	Photoswitchable Hydride Transfer from Iridium to 1-Methylnicotinamide Rationalized by Thermochemical Cycles. Journal of the American Chemical Society, 2014, 136, 14718-14721.	13.7	70
17	Dinitrogen Reduction to Ammonium at Rhenium Utilizing Light and Proton-Coupled Electron Transfer. Journal of the American Chemical Society, 2019, 141, 20198-20208.	13.7	62
18	An Ionâ€Responsive Pincerâ€Crown Ether Catalyst System for Rapid and Switchable Olefin Isomerization. Angewandte Chemie - International Edition, 2017, 56, 5498-5502.	13.8	60

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19	Considering Electrocatalytic Ammonia Synthesis via Bimetallic Dinitrogen Cleavage. ACS Catalysis, 2020, 10, 10826-10846.	11.2	60
20	Molecular Photoelectrocatalysts for Visible Light-Driven Hydrogen Evolution from Neutral Water. ACS Catalysis, 2014, 4, 2727-2733.	11.2	56
21	Controlling ligand binding for tunable and switchable catalysis: cation-modulated hemilability in pincer-crown ether ligands. Dalton Transactions, 2017, 46, 11987-12000.	3.3	52
22	Thermodynamic and kinetic hydricity of transition metal hydrides. Chemical Society Reviews, 2020, 49, 7929-7948.	38.1	52
23	The Trans Effect in Electrocatalytic CO₂ Reduction: Mechanistic Studies of Asymmetric Ruthenium Pyridyl-Carbene Catalysts. Journal of the American Chemical Society, 2019, 141, 6658-6671.	13.7	51
24	Photochemical Formic Acid Dehydrogenation by Iridium Complexes: Understanding Mechanism and Overcoming Deactivation. ACS Catalysis, 2015, 5, 6320-6327.	11.2	48
25	Rapid water oxidation electrocatalysis by a ruthenium complex of the tripodal ligand tris(2-pyridyl)phosphine oxide. Chemical Science, 2015, 6, 2405-2410.	7.4	43
26	Bathochromic Shifts in Rhenium Carbonyl Dyes Induced through Destabilization of Occupied Orbitals. Inorganic Chemistry, 2018, 57, 5389-5399.	4.0	42
27	Simultaneous Electrosynthesis of Syngas and an Aldehyde from CO₂ and an Alcohol by Molecular Electrocatalysis. ACS Applied Energy Materials, 2019, 2, 97-101.	5.1	41
28	Efficient Photochemical Dihydrogen Generation Initiated by a Bimetallic Self-Quenching Mechanism. Journal of the American Chemical Society, 2016, 138, 13509-13512.	13.7	40
29	Ammonia Synthesis from a Pincer Ruthenium Nitride via Metalâ€“Ligand Cooperative Proton-Coupled Electron Transfer. Journal of the American Chemical Society, 2017, 139, 5305-5308.	13.7	40
30	Kinetics of the Trans Effect in Ruthenium Complexes Provide Insight into the Factors That Control Activity and Stability in CO₂ Electroreduction. Journal of the American Chemical Society, 2020, 142, 8980-8999.	13.7	40
31	An Iron Pyridyl-Carbene Electrocatalyst for Low Overpotential CO₂Reduction to CO. ACS Catalysis, 2021, 11, 615-626.	11.2	38
32	(Electroâ€)chemical Splitting of Dinitrogen with a Rhenium Pincer Complex. European Journal of Inorganic Chemistry, 2020, 2020, 1402-1410.	2.0	37
33	Modulating the Elementary Steps of Methanol Carbonylation by Bridging the Primary and Secondary Coordination Spheres. Organometallics, 2016, 35, 3074-3086.	2.3	36
34	Connecting Neutral and Cationic Pathways in Nickel-Catalyzed Insertion of Benzaldehyde into a Câ€“H Bond of Acetonitrile. Organometallics, 2015, 34, 4669-4677.	2.3	34
35	Molecular Photoelectrocatalysts for Light-Driven Hydrogen Production. ACS Energy Letters, 2018, 3, 1128-1136.	17.4	34
36	Selecting Double Bond Positions with a Single Cation-Responsive Iridium Olefin Isomerization Catalyst. Journal of the American Chemical Society, 2021, 143, 2792-2800.	13.7	34

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37	Diverse Cation-Promoted Reactivity of Iridium Carbonyl Pincer-Crown Ether Complexes. Organometallics, 2016, 35, 306-316.	2.3	33
38	Determining the Overpotential of Electrochemical Fuel Synthesis Mediated by Molecular Catalysts: Recommended Practices, Standard Reduction Potentials, and Challenges. ChemElectroChem, 2021, 8, 4161-4180.	3.4	31
39	Thermodynamic Studies of Cationâ€“Macrocycle Interactions in Nickel Pincerâ€“Crown Ether Complexes Enable Switchable Ligation. Organometallics, 2017, 36, 3094-3103.	2.3	29
40	Mapping the Binding Modes of Hemilabile Pincerâ€“Crown Ether Ligands in Solution Using Diamagnetic Anisotropic Effects on NMR Chemical Shift. Inorganic Chemistry, 2017, 56, 11141-11150.	4.0	28
41	Thermodynamic Hydricity across Solvents: Subtle Electronic Effects and Striking Ligation Effects in Iridium Hydrides. Organometallics, 2019, 38, 3104-3110.	2.3	25
42	Understanding Terminal versus Bridging End-on N₂ Coordination in Transition Metal Complexes. Journal of the American Chemical Society, 2021, 143, 9744-9757.	13.7	24
43	Salt-promoted catalytic methanol carbonylation using iridium pincer-crown ether complexes. Catalysis Science and Technology, 2018, 8, 3133-3143.	4.1	23
44	Arene Activation at Iridium Facilitates Câ€“O Bond Cleavage of Aryl Ethers. Organometallics, 2014, 33, 1245-1252.	2.3	19
45	Solvent-Dependent Thermochemistry of an Iridium/Ruthenium H₂ Evolution Catalyst. Inorganic Chemistry, 2016, 55, 12042-12051.	4.0	18
46	Stable Molecular Surface Modification of Nanostructured, Mesoporous Metal Oxide Photoanodes by Silane and Click Chemistry. ACS Applied Materials & Interfaces, 2019, 11, 4560-4567.	8.0	18
47	Oligomerization and polymerization of 5-ethylidene-2-norbornene by cationic palladium and nickel catalysts. Polymer Chemistry, 2020, 11, 2576-2584.	3.9	18
48	Letâ€™s Talk About Safety: Open Communication for Safer Laboratories. Organometallics, 2018, 37, 3225-3227.	2.3	17
49	Aqueous Hydricity from Calculations of Reduction Potential and Acidity in Water. Journal of Physical Chemistry B, 2016, 120, 12911-12919.	2.6	16
50	A Ruthenium Hydrido Dinitrogen Core Conserved across Multielectron/Multiproton Changes to the Pincer Ligand Backbone. Inorganic Chemistry, 2018, 57, 1964-1975.	4.0	15
51	Stabilization of Ruthenium(II) Polypyridyl Chromophores on Mesoporous TiO₂ Electrodes: Surface Reductive Electropolymerization and Silane Chemistry. ACS Central Science, 2019, 5, 506-514.	11.3	15
52	Mechanistic basis for tuning iridium hydride photochemistry from H2 evolution to hydride transfer hydrodechlorination. Chemical Science, 2020, 11, 6442-6449.	7.4	14
53	Temperature and Solvent Effects on H₂ Splitting and Hydricity: Ramifications on CO₂ Hydrogenation by a Rhenium Pincer Catalyst. Journal of the American Chemical Society, 2021, 143, 945-954.	13.7	13
54	Photochemical Production of Ethane from an Iridium Methyl Complex. Organometallics, 2017, 36, 1906-1914.	2.3	12

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55	Excited-State Switching between Ligand-Centered and Charge Transfer Modulated by Metalâ€“Carbon Bonds in Cyclopentadienyl Iridium Complexes. Inorganic Chemistry, 2018, 57, 15445-15461.	4.0	12
56	Mechanisms of Electrochemical N₂ Splitting by a Molybdenum Pincer Complex. Inorganic Chemistry, 2022, 61, 2307-2318.	4.0	11
57	H₂ Evolution at an Electrochemical â€œUnderpotentialâ€•with an Iridium-Based Molecular Photoelectrocatalyst. ACS Catalysis, 2020, 10, 9006-9018.	11.2	10
58	Photochemical H₂ Evolution from Bis(diphosphine)nickel Hydrides Enables Low-Overpotential Electrocatalysis. Journal of the American Chemical Society, 2021, 143, 21388-21401.	13.7	10
59	An Ionâ€Responsive Pincerâ€Crown Ether Catalyst System for Rapid and Switchable Olefin Isomerization. Angewandte Chemie, 2017, 129, 5590-5594.	2.0	9
60	An Iron Bis(carbene) Catalyst for Low Overpotential CO₂ Electroreduction to CO: Mechanistic Insights from Kinetic Zone Diagrams, Spectroscopy, and Theory. ACS Catalysis, 2021, 11, 15212-15222.	11.2	9
61	Identifying and Evading Olefin Isomerization Catalyst Deactivation Pathways Resulting from Ion-Tunable Hemilability. ACS Catalysis, 2020, 10, 13019-13030.	11.2	8
62	Decarbonylative ether dissection by iridium pincer complexes. Chemical Science, 2020, 11, 12130-12138.	7.4	8
63	Catalytic Dehydrogenation of Alkanes by PCPâ€“Pincer Iridium Complexes Using Proton and Electron Acceptors. ACS Catalysis, 2021, 11, 3009-3016.	11.2	8
64	Synthesis and Characterization of Stable Gold(III) PNP Pincer Complexes. European Journal of Inorganic Chemistry, 2018, 2018, 3113-3117.	2.0	7
65	Organometallic Elaboration as a Strategy for Tuning the Supramolecular Characteristics of Aza-Crown Ethers. Organometallics, 2019, 38, 4392-4398.	2.3	6
66	Photocatalytic Transfer Hydrogenation in Water: Insight into Mechanism and Catalyst Speciation. Organometallics, 2021, 40, 1482-1491.	2.3	6
67	Electrochemical Câ€“H bond activation via cationic iridium hydride pincer complexes. Chemical Science, 2019, 10, 9326-9330.	7.4	4
68	Stepwise Iodide-Free Methanol Carbonylation via Methyl Acetate Activation by Pincer Iridium Complexes. Journal of the American Chemical Society, 2021, 143, 12633-12643.	13.7	4
69	Mechanistic comparisons on Ru and Fe carbene-supported complexes for electrocatalytic CO2 reduction. , 0, , .		0