

# James K Mccusker

## List of Publications by Year in descending order

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53  
papers

7,215  
citations

94269

37  
h-index

174990

52  
g-index

57  
all docs

57  
docs citations

57  
times ranked

6572  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ion-pair reorganization regulates reactivity in photoredox catalysts. <i>Nature Chemistry</i> , 2022, 14, 746-753.	6.6	28
2	Ligand-Field Spectroscopy of Co(III) Complexes and the Development of a Spectrochemical Series for Low-Spin $d^6$ Charge-Transfer Chromophores. <i>Journal of the American Chemical Society</i> , 2022, 144, 12488-12500.	6.6	22
3	Optical and Infrared Spectroelectrochemical Studies of CN-Substituted Bipyridyl Complexes of Ruthenium(II). <i>Inorganic Chemistry</i> , 2021, 60, 3514-3523.	1.9	4
4	A Modular Approach to Light Capture and Synthetic Tuning of the Excited-State Properties of Fe(II)-Based Chromophores. <i>Journal of the American Chemical Society</i> , 2021, 143, 8086-8098.	6.6	25
5	Influence of Electrolyte Composition on Ultrafast Interfacial Electron Transfer in Fe-Sensitized $TiO_2$ -Based Solar Cells. <i>Journal of Physical Chemistry C</i> , 2020, 124, 1794-1811.	1.5	19
6	Mechanistic Origin of Photoredox Catalysis Involving Iron(II) Polypyridyl Chromophores. <i>Journal of the American Chemical Society</i> , 2020, 142, 16229-16233.	6.6	52
7	Outer-sphere effects on ligand-field excited-state dynamics: solvent dependence of high-spin to low-spin conversion in $[Fe(bpy)_3]^{2+}$ . <i>Chemical Science</i> , 2020, 11, 5191-5204.	3.7	11
8	Leveraging excited-state coherence for synthetic control of ultrafast dynamics. <i>Nature</i> , 2020, 582, 214-218.	13.7	76
9	Exploiting chemistry and molecular systems for quantum information science. <i>Nature Reviews Chemistry</i> , 2020, 4, 490-504.	13.8	247
10	Using Ultrafast X-ray Spectroscopy To Address Questions in Ligand-Field Theory: The Excited State Spin and Structure of $[Fe(dcpp)_2]^{2+}$ . <i>Inorganic Chemistry</i> , 2019, 58, 9341-9350.	1.9	29
11	Insights into the excited state dynamics of Fe(II) polypyridyl complexes from variable-temperature ultrafast spectroscopy. <i>Chemical Science</i> , 2019, 10, 134-144.	3.7	53
12	Electronic structure in the transition metal block and its implications for light harvesting. <i>Science</i> , 2019, 363, 484-488.	6.0	204
13	Vibrational Relaxation and Redistribution Dynamics in Ruthenium(II) Polypyridyl-Based Charge-Transfer Excited States: A Combined Ultrafast Electronic and Infrared Absorption Study. <i>Journal of Physical Chemistry A</i> , 2018, 122, 7941-7953.	1.1	20
14	Photosensitized, energy transfer-mediated organometallic catalysis through electronically excited nickel(II). <i>Science</i> , 2017, 355, 380-385.	6.0	398
15	Using coherence to enhance function in chemical and biophysical systems. <i>Nature</i> , 2017, 543, 647-656.	13.7	477
16	The photophysics of photoredox catalysis: a roadmap for catalyst design. <i>Chemical Society Reviews</i> , 2016, 45, 5803-5820.	18.7	636
17	Spectroelectrochemical identification of charge-transfer excited states in transition metal-based polypyridyl complexes. <i>Dalton Transactions</i> , 2014, 43, 17635-17646.	1.6	75
18	Synthesis and Characterization of a High-Symmetry Ferrous Polypyridyl Complex: Approaching the $T_2 \times T_3 \times T_1$ Crossing Point for Fe(II). <i>Inorganic Chemistry</i> , 2014, 53, 15-17.	1.9	105

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19	Enlightened state. <i>Nature Physics</i> , 2014, 10, 476-477.	6.5	10
20	Ligand-field symmetry effects in Fe(II) polypyridyl compounds probed by transient X-ray absorption spectroscopy. <i>Faraday Discussions</i> , 2012, 157, 463.	1.6	49
21	Synthesis and Spectroscopic Characterization of CN-Substituted Bipyridyl Complexes of Ru(II). <i>Inorganic Chemistry</i> , 2011, 50, 1656-1669.	1.9	49
22	Femtosecond Soft X-ray Spectroscopy of Solvated Transition-Metal Complexes: Deciphering the Interplay of Electronic and Structural Dynamics. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 880-884.	2.1	169
23	Angular Momentum Conservation in Dipolar Energy Transfer. <i>Science</i> , 2011, 334, 1684-1687.	6.0	38
24	Photo-Induced Spin-State Conversion in Solvated Transition Metal Complexes Probed via Time-Resolved Soft X-ray Spectroscopy. <i>Journal of the American Chemical Society</i> , 2010, 132, 6809-6816.	6.6	135
25	Vibrational coherence in the excited state dynamics of Cr(acac) <sub>3</sub> : probing the reaction coordinate for ultrafast intersystem crossing. <i>Chemical Science</i> , 2010, 1, 405.	3.7	90
26	Electronic structure of [Ga <sub>2</sub> (tren) <sub>2</sub> (CAsq,cat)](BPh <sub>4</sub> ) <sub>2</sub> (BF <sub>4</sub> ): An EPR, ENDOR, and density functional study. <i>Inorganica Chimica Acta</i> , 2008, 361, 3539-3547.	1.2	6
27	Energy Transfer Dynamics in Re <sup>I</sup> -Based Polynuclear Assemblies: A Quantitative Application of Förster Theory. <i>Inorganic Chemistry</i> , 2008, 47, 7249-7261.	1.9	18
28	Femtosecond Time-Resolved Optical and Raman Spectroscopy of Photoinduced Spin Crossover: Temporal Resolution of Low-to-High Spin Optical Switching. <i>Journal of the American Chemical Society</i> , 2008, 130, 14105-14107.	6.6	149
29	Spin Exchange Effects on the Physicochemical Properties of Tetraoxolene-Bridged Bimetallic Complexes. <i>Inorganic Chemistry</i> , 2007, 46, 3257-3274.	1.9	60
30	Picosecond X-ray Absorption Spectroscopy of a Photoinduced Iron(II) Spin Crossover Reaction in Solution. <i>Journal of Physical Chemistry A</i> , 2006, 110, 38-44.	1.1	171
31	Ultrafast dynamics of ligand-field excited states. <i>Coordination Chemistry Reviews</i> , 2006, 250, 1783-1791.	9.5	184
32	Ultrafast Dynamics of 2E State Formation in Cr(acac) <sub>3</sub> . <i>Journal of the American Chemical Society</i> , 2005, 127, 6857-6865.	6.6	111
33	Femtosecond Absorption Spectroscopy of Transition Metal Charge-Transfer Complexes. <i>Accounts of Chemical Research</i> , 2003, 36, 876-887.	7.6	386
34	Density functional theory of spin-coupled models for diiron-oxo proteins: Effects of oxo and hydroxo bridging on geometry, electronic structure, and magnetism. <i>Journal of Chemical Physics</i> , 2002, 116, 6253-6270.	1.2	56
35	Ground- and Excited-State Electronic Structures of the Solar Cell Sensitizer Bis(4,4'-dicarboxylato-2,2'-bipyridine)bis(isothiocyanato)ruthenium(II). <i>Journal of Physical Chemistry A</i> , 2002, 106, 7399-7406.	1.1	207
36	Transient Absorption Spectroscopy of Ruthenium and Osmium Polypyridyl Complexes Adsorbed onto Nanocrystalline TiO <sub>2</sub> Photoelectrodes. <i>Journal of Physical Chemistry B</i> , 2002, 106, 9347-9358.	1.2	191

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37	Attenuated Total Reflection Design for in Situ FT-IR Spectroelectrochemical Studies. <i>Analytical Chemistry</i> , 2001, 73, 4374-4378.	3.2	14
38	PHOTOCATALYSIS: Enhanced: Fuel from Photons. <i>Science</i> , 2001, 293, 1599-1601.	6.0	19
39	Bimolecular Electron and Energy Transfer Reactivity of Exchange-Coupled Dinuclear Iron(III) Complexes. <i>Inorganic Chemistry</i> , 2001, 40, 6802-6812.	1.9	27
40	Femtosecond Excited-State Dynamics of an Iron(II) Polypyridyl Solar Cell Sensitizer Model. <i>Journal of the American Chemical Society</i> , 2000, 122, 4092-4097.	6.6	281
41	Ultrafast Electron Localization Dynamics Following Photo-Induced Charge Transfer. <i>Science</i> , 2000, 289, 935-938.	6.0	365
42	Blue-Fluorescent Antibodies. <i>Science</i> , 2000, 290, 307-313.	6.0	110
43	Static and Time-Resolved Spectroscopic Studies of Low-Symmetry Ru(II) Polypyridyl Complexes. <i>Journal of Physical Chemistry A</i> , 1999, 103, 7032-7041.	1.1	55
44	Ultrafast Dynamics in the Metal-to-Ligand Charge Transfer Excited-State Evolution of [Ru(4,4'-diphenyl-2,2'-bipyridine) <sub>3</sub> ] <sup>2+</sup> . <i>Journal of Physical Chemistry A</i> , 1999, 103, 8440-8446.	1.1	212
45	Variable-Temperature Emission Studies of Solvation Dynamics: Evidence for Coupling of Solvation to Chromophore Structural Dynamics in the Evolution of Charge-Transfer Excited States. <i>Inorganic Chemistry</i> , 1999, 38, 4268-4277.	1.9	36
46	Density Functional Theory Analysis of Electronic Structure Variations across the Orthoquinone/Semiquinone/Catechol Redox Series. <i>Journal of Physical Chemistry A</i> , 1999, 103, 4101-4112.	1.1	54
47	Theoretical Studies of Steric Effects on Intraligand Electron Delocalization: Implications for the Temporal Evolution of MLCT Excited States. <i>Journal of Physical Chemistry A</i> , 1998, 102, 3382-3397.	1.1	86
48	Effects of Intraligand Electron Delocalization, Steric Tuning, and Excited-State Vibronic Coupling on the Photophysics of Aryl-Substituted Bipyridyl Complexes of Ru(II). <i>Journal of the American Chemical Society</i> , 1997, 119, 8253-8268.	6.6	271
49	Femtosecond Dynamics of Excited-State Evolution in [Ru(bpy) <sub>3</sub> ] <sup>2+</sup> . <i>Science</i> , 1997, 275, 54-57.	6.0	673
50	Variable-Temperature Studies of Laser-Initiated 5T <sub>2</sub> Intersystem Crossing in Spin-Crossover Complexes: Empirical Correlations between Activation Parameters and Ligand Structure in a Series of Polypyridyl Ferrous Complexes. <i>Inorganic Chemistry</i> , 1996, 35, 2100-2112.	1.9	205
51	Subpicosecond 1MLCT → 5T <sub>2</sub> intersystem crossing of low-spin polypyridyl ferrous complexes. <i>Journal of the American Chemical Society</i> , 1993, 115, 298-307.	6.6	165
52	Sub-picosecond 5T <sub>2</sub> = 2 intersystem crossing in low-spin ferrous complexes. <i>Journal of the American Chemical Society</i> , 1992, 114, 6919-6920.	6.6	72
53	On the use of vibronic coherence to identify reaction coordinates for ultrafast excited-state dynamics of transition metal-based chromophores. <i>Faraday Discussions</i> , 0, 237, 274-299.	1.6	5