Matthew D Krzyaniak

List of Publications by Year
in descending order

71 papers	2,487 citations	172457 29 h-index	223800 46 g-index
72 all docs	72 docs citations	72 times ranked	3075 citing authors

#	Article	IF	Citations
1	Unified model for singlet fission within a non-conjugated covalent pentacene dimer. Nature Communications, 2017, 8, 15171.	12.8	176
2	Long Coherence Times in Nuclear Spin-Free Vanadyl Qubits. Journal of the American Chemical Society, 2016, 138, 14678-14685.	13.7	118
3	Vanadium Catalyst on Isostructural Transition Metal, Lanthanide, and Actinide Based Metalâ€“Organic Frameworks for Alcohol Oxidation. Journal of the American Chemical Society, 2019, 141, 8306-8314.	13.7	112
4	Evidence for Charge-Transfer Mediation in the Primary Events of Singlet Fission in a Weakly Coupled Pentacene Dimer. CheM, 2018, 4, 1092-1111.	11.7	105
5	Discrete Dimers of Redox-Active and Fluorescent Perylene Diimide-Based Rigid Isosceles Triangles in the Solid State. Journal of the American Chemical Society, 2019, 141, 1290-1303.	13.7	87
6	Photodriven quantum teleportation of an electron spin state in a covalent donorâ€“acceptorâ€“radical system. Nature Chemistry, 2019, 11, 981-986.	13.6	83
7	Quintet-triplet mixing determines the fate of the multiexciton state produced by singlet fission in a terrylenediimide dimer at room temperature. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 8178-8183.	7.1	73
8	Insights into the Enhanced Catalytic Activity of Cytochrome c When Encapsulated in a Metalâ€“Organic Framework. Journal of the American Chemical Society, 2020, 142, 18576-18582.	13.7	73
9	Synthetic Approach To Determine the Effect of Nuclear Spin Distance on Electronic Spin Decoherence. Journal of the American Chemical Society, 2017, 139, 3196-3201.	13.7	72
10	Varying the Interpentacene Electronic Coupling to Tune Singlet Fission. Journal of the American Chemical Society, 2019, 141, 6191-6203.	13.7	66
11	Energy and Electron Transfer Dynamics within a Series of Perylene Diimide/Cyclophane Systems. Journal of the American Chemical Society, 2015, 137, 15299-15307.	13.7	64
12	Chiral Redox-Active Isosceles Triangles. Journal of the American Chemical Society, 2016, 138, 5968-5977.	13.7	62
13	Spin Frustration in the Triradical Trianion of a Naphthalenediimide Molecular Triangle. Journal of the American Chemical Society, 2017, 139, 2948-2951.	13.7	60
14	A concentrated array of copper porphyrin candidate qubits. Chemical Science, 2019, 10, 1702-1708.	7.4	58
15	Electron Hopping and Charge Separation within a Naphthalene-1,4:5,8-bis(dicarboximide) Chiral Covalent Organic Cage. Journal of the American Chemical Society, 2017, 139, 3348-3351.	13.7	53
16	Effect of Redox â€œNon-Innocentâ€•Linker on the Catalytic Activity of Copper-Catecholate-Decorated Metalâ€“Organic Frameworks. ACS Applied Materials & Interfaces, 2018, 10, 635-641.	8.0	52
17	Supramolecular Tessellations by a Rigid Naphthalene Diimide Triangle. Journal of the American Chemical Society, 2019, 141, 17783-17795.	13.7	52
18	Metalâ€“ligand covalency enables room temperature molecular qubit candidates. Chemical Science, 2019, 10, 6707-6714.	7.4	50

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19	Photogenerated Quartet State Formation in a Compact Ring-Fused Perylene-Nitroxide. Journal of Physical Chemistry B, 2015, 119, 13560-13569.	2.6	48
20	CNOT gate operation on a photogenerated molecular electron spin-qubit pair. Journal of Chemical Physics, 2020, 152, 014503.	3.0	45
21	Ultrafast Two-Electron Transfer in a CdS Quantum Dotâ€“Extended-Viologen Cyclophane Complex. Journal of the American Chemical Society, 2016, 138, 6163-6170.	13.7	42
22	Spectral Addressability in a Modular Two Qubit System. Journal of the American Chemical Society, 2021, 143, 8069-8077.	13.7	39
23	Probing Nuclear Spin Effects on Electronic Spin Coherence via EPR Measurements of Vanadium(IV) Complexes. Inorganic Chemistry, 2017, 56, 8106-8113.	4.0	37
24	Spin and Phonon Design in Modular Arrays of Molecular Qubits. Chemistry of Materials, 2020, 32, 10200-10206.	6.7	37
25	Combining Intra- and Intermolecular Charge Transfer with Polycationic Cyclophanes To Design 2D Tessellations. Journal of the American Chemical Society, 2019, 141, 18727-18739.	13.7	36
26	Charge and Spin Transport in an Organic Molecular Square. Angewandte Chemie - International Edition, 2015, 54, 11971-11977.	13.8	35
27	Using Molecular Design to Enhance the Coherence Time of Quintet Multiexcitons Generated by Singlet Fission in Single Crystals. Journal of the American Chemical Society, 2022, 144, 2276-2283.	13.7	35
28	An Electrically Conductive Tetrathiafulvalene-Based Hydrogen-Bonded Organic Framework. , 2022, 4, 128-135.		34
29	Spin-Selective Photoreduction of a Stable Radical within a Covalent Donorâ€“Acceptorâ€“Radical Triad. Journal of the American Chemical Society, 2017, 139, 15660-15663.	13.7	33
30	Photogenerated Spin-Entangled Qubit (Radical) Pairs in DNA Hairpins: Observation of Spin Delocalization and Coherence. Journal of the American Chemical Society, 2019, 141, 2152-2160.	13.7	33
31	Influence of Constitution and Charge on Radical Pairing Interactions in Tris-radical Tricationic Complexes. Journal of the American Chemical Society, 2016, 138, 8288-8300.	13.7	29
32	Covalent Radical Pairs as Spin Qubits: Influence of Rapid Electron Motion between Two Equivalent Sites on Spin Coherence. Journal of the American Chemical Society, 2018, 140, 13011-13021.	13.7	29
33	Picosecond Control of Photogenerated Radical Pair Lifetimes Using a Stable Third Radical. Journal of Physical Chemistry A, 2016, 120, 2841-2853.	2.5	27
34	A Boatâ€shaped Tetracationic Macrocycle with a Semiconducting Organic Framework. Angewandte Chemie - International Edition, 2017, 56, 5795-5800.	13.8	27
35	Stabilization of Photocatalytically Active Uranyl Species in a Uranylâ€“Organic Framework for Heterogeneous Alkane Fluorination Driven by Visible Light. Inorganic Chemistry, 2020, 59, 16795-16798.	4.0	26
36	Influence of the heavy-atom effect on singlet fission: a study of platinum-bridged pentacene dimers. Chemical Science, 2019, 10, 11130-11140.	7.4	25

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37	Photoinduced Charge and Energy Transfer within meta- and para-Linked Chlorophyll a-Perylene-3,4:9,10-bis(dicarboximide) Donorâ€“Acceptor Dyads. Journal of Physical Chemistry B, 2016, 120, 756-765.	2.6	24
38	Selectively Addressable Photogenerated Spin Qubit Pairs in DNA Hairpins. Journal of the American Chemical Society, 2020, 142, 3346-3350.	13.7	24
39	Supramolecular Porous Assemblies of Atomically Precise Catalytically Active Cerium-Based Clusters. Chemistry of Materials, 2020, 32, 8522-8529.	6.7	23
40	Fast photo-driven electron spin coherence transfer: the effect of electron-nuclear hyperfine coupling on coherence dephasing. Journal of Materials Chemistry C, 2015, 3, 7962-7967.	5.5	22
41	Zero Quantum Coherence in a Series of Covalent Spin-Correlated Radical Pairs. Journal of Physical Chemistry A, 2017, 121, 2241-2252.	2.5	21
42	Using Photoexcited Core/Shell Quantum Dots To Spin Polarize Appended Radical Qubits. Journal of the American Chemical Society, 2020, 142, 13590-13597.	13.7	19
43	Spin Dynamics of Quintet and Triplet States Resulting from Singlet Fission in Oriented Terrylenediimide and Quaterrylenediimide Films. Journal of Physical Chemistry C, 2020, 124, 9822-9833.	3.1	19
44	Interstitial Nature of Mn²⁺ Doping in 2D Perovskites. ACS Nano, 2021, 15, 20550-20561.	14.6	19
45	A Caged, Destabilized, Free Radical Intermediate in the Qâ€Cycle. ChemBioChem, 2013, 14, 1745-1753.	2.6	18
46	Formation and Electronic Structure of an Atypical Cu_A Site. Journal of the American Chemical Society, 2019, 141, 4678-4686.	13.7	18
47	Spin Polarization Transfer from a Photogenerated Radical Ion Pair to a Stable Radical Controlled by Charge Recombination. Journal of Physical Chemistry A, 2017, 121, 4455-4463.	2.5	17
48	Effect of Electronâ€“Nuclear Hyperfine Interactions on Multiple-Quantum Coherences in Photogenerated Covalent Radical (Qubit) Pairs. Journal of Physical Chemistry A, 2018, 122, 9392-9402.	2.5	17
49	EPR Study of the Astaxanthin n-Octanoic Acid Monoester and Diester Radicals on Silicaâ€“Alumina. Journal of Physical Chemistry B, 2012, 116, 13200-13210.	2.6	15
50	X-Shaped Oligomeric Pyromellitimide Polyradicals. Journal of the American Chemical Society, 2018, 140, 515-523.	13.7	15
51	Discrete Open-Shell Tris(bipyridinium radical cationic) Inclusion Complexes in the Solid State. Journal of the American Chemical Society, 2021, 143, 163-175.	13.7	15
52	Unexpected suppression of spinâ€“lattice relaxation via high magnetic field in a high-spin iron(<scp>iii</scp>) complex. Chemical Communications, 2016, 52, 10175-10178.	4.1	14
53	Competition between Singlet Fission and Spinâ€Orbitâ€Induced Intersystem Crossing in Anthanthrene and Anthanthrone Derivatives. ChemPlusChem, 2019, 84, 1432-1438.	2.8	12
54	Time-Resolved EPR Study of H₂ Reductive Elimination from the Photoexcited Nitrogenase Janus E₄(4H) Intermediate. Journal of Physical Chemistry B, 2019, 123, 8823-8828.	2.6	12

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55	Interaction of Photogenerated Spin Qubit Pairs with a Third Electron Spin in DNA Hairpins. Journal of the American Chemical Society, 2021, 143, 4625-4632.	13.7	12
56	Effect of Magnetic Coupling on Water Proton Relaxivity in a Series of Transition Metal Gd^{III} Complexes. Inorganic Chemistry, 2018, 57, 5810-5819.	4.0	11
57	Spin-Selective Photoinduced Electron Transfer within Naphthalenediimide Diradicals. Journal of Physical Chemistry B, 2019, 123, 7731-7739.	2.6	10
58	Controlling the Dynamics of Three Electron Spin Qubits in a Donorâ€“Acceptorâ€“Radical Molecule Using Dielectric Environment Changes. Journal of Physical Chemistry Letters, 2021, 12, 2213-2218.	4.6	9
59	Large Dipolar Spinâ€“Spin Interaction in a Photogenerated U-Shaped Triradical. Journal of Physical Chemistry A, 2015, 119, 8040-8048.	2.5	8
60	Characterization of Water Coordination to Ferrous Nitrosyl Complexes with fac-N₂O, cis-N₂O₂, and N₂O₃ Donor Ligands. Inorganic Chemistry, 2015, 54, 6486-6497.	4.0	8
61	DFT and ENDOR Study of Bixin Radical Cations and Neutral Radicals on Silicaâ€“Alumina. Journal of Physical Chemistry B, 2015, 119, 7170-7179.	2.6	8
62	A Boatâ€Shaped Tetracationic Macrocycle with a Semiconducting Organic Framework. Angewandte Chemie, 2017, 129, 5889-5894.	2.0	8
63	Octacyanometallate qubit candidates. Dalton Transactions, 2018, 47, 11744-11748.	3.3	8
64	Mechanistic Study of Electron Spin Polarization Transfer in Covalent Donorâ€“Acceptor-Radical Systems. Applied Magnetic Resonance, 2022, 53, 949-961.	1.2	8
65	Spin-Polarized Molecular Triplet States as Qubits: Phosphorus Hyperfine Coupling in the Triplet State of Benzoisophosphinoline. Journal of Physical Chemistry Letters, 2020, 11, 7569-7574.	4.6	7
66	Metalated Porphyrin Stable Free Radicals: Exploration of Electron Spin Communication and Dynamics. Journal of Physical Chemistry A, 2020, 124, 6168-6176.	2.5	6
67	Charge Transfer and Spin Dynamics in a Zinc Porphyrin Donor Covalently Linked to One or Two Naphthalenediimide Acceptors. Journal of Physical Chemistry A, 2021, 125, 825-834.	2.5	6
68	Two-Photon Absorption in Electron Donorâ€“Acceptor Dyads and Triads Using Classical and Entangled Photons: Potential Systems for Photon-to-Spin Quantum Transduction. Journal of Physical Chemistry C, 2022, 126, 6334-6343.	3.1	6
69	Mechanistic Investigation of Enhanced Catalytic Selectivity toward Alcohol Oxidation with Ce Oxysulfate Clusters. Journal of the American Chemical Society, 2022, 144, 12092-12101.	13.7	6
70	The tetrahydrobiopterin radical interacting with high- and low-spin heme in neuronal nitric oxide synthase â€“ A new indicator of the extent of NOS coupling. Free Radical Biology and Medicine, 2016, 101, 367-377.	2.9	5
71	Effect of the Time Delay between Spin State Preparation and Measurement on Electron Spin Teleportation in a Covalent Donorâ€“Acceptorâ€“Radical System. Journal of Physical Chemistry Letters, 2022, 13, 156-160.	4.6	0