

# Robert Knowles

## List of Publications by Year in descending order

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52  
papers

7,002  
citations

94269

37  
h-index

174990

52  
g-index

63  
all docs

63  
docs citations

63  
times ranked

4945  
citing authors

#	ARTICLE	IF	CITATIONS
1	Photochemical and Electrochemical Applications of Proton-Coupled Electron Transfer in Organic Synthesis. <i>Chemical Reviews</i> , 2022, 122, 2017-2291.	23.0	211
2	Ir(III)-Naphthoquinone complex as a platform for photocatalytic activity. <i>Journal of Photochemistry and Photobiology</i> , 2022, 9, 100098.	1.1	2
3	Contra-Thermodynamic Positional Isomerization of Olefins. <i>Journal of the American Chemical Society</i> , 2022, 144, 137-144.	6.6	34
4	Ion-pair reorganization regulates reactivity in photoredox catalysts. <i>Nature Chemistry</i> , 2022, 14, 746-753.	6.6	28
5	Expeditious synthesis of aromatic-free piperidinium-functionalized polyethylene as alkaline anion exchange membranes. <i>Chemical Science</i> , 2021, 12, 3898-3910.	3.7	47
6	Intermolecular Crossed [2 + 2] Cycloaddition Promoted by Visible-Light Triplet Photosensitization: Expedient Access to Polysubstituted 2-Oxaspiro[3.3]heptanes. <i>Journal of the American Chemical Society</i> , 2021, 143, 4055-4063.	6.6	39
7	Mechanistic Investigation and Optimization of Photoredox Anti-Markovnikov Hydroamination. <i>Journal of the American Chemical Society</i> , 2021, 143, 10232-10242.	6.6	28
8	Depolymerization of Hydroxylated Polymers via Light-Driven C=C Bond Cleavage. <i>Journal of the American Chemical Society</i> , 2021, 143, 12268-12277.	6.6	56
9	1,3-Alkyl Transposition in Allylic Alcohols Enabled by Proton-Coupled Electron Transfer. <i>Angewandte Chemie</i> , 2021, 133, 20352-20357.	1.6	3
10	1,3-Alkyl Transposition in Allylic Alcohols Enabled by Proton-Coupled Electron Transfer. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 20190-20195.	7.2	29
11	PCET-Based Ligand Limits Charge Recombination with an Ir(III) Photoredox Catalyst. <i>Journal of the American Chemical Society</i> , 2021, 143, 13034-13043.	6.6	20
12	Light-Driven Depolymerization of Native Lignin Enabled by Proton-Coupled Electron Transfer. <i>ACS Catalysis</i> , 2020, 10, 800-805.	5.5	82
13	Catalytic generation of alkoxy radicals from unfunctionalized alcohols. <i>Chemical Science</i> , 2020, 11, 11124-11141.	3.7	116
14	Photocatalytic Generation of Aminium Radical Cations for C=N Bond Formation. <i>ACS Catalysis</i> , 2020, 10, 11712-11738.	5.5	93
15	Enantioselective Hydroamination of Alkenes with Sulfonamides Enabled by Proton-Coupled Electron Transfer. <i>Journal of the American Chemical Society</i> , 2020, 142, 5974-5979.	6.6	91
16	Catalytic Hydroetherification of Unactivated Alkenes Enabled by Proton-Coupled Electron Transfer. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 11845-11849.	7.2	56
17	Catalytic Hydroetherification of Unactivated Alkenes Enabled by Proton-Coupled Electron Transfer. <i>Angewandte Chemie</i> , 2020, 132, 11943-11947.	1.6	15
18	C-H Alkylation via Multisite-Proton-Coupled Electron Transfer of an Aliphatic C-H Bond. <i>Journal of the American Chemical Society</i> , 2019, 141, 13253-13260.	6.6	100

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19	Light driven deracemization enabled by excited state electron transfer. <i>Science</i> , 2019, 366, 364-369.	6.0	188
20	Anti-Markovnikov Hydroamination of Unactivated Alkenes with Primary Alkyl Amines. <i>Journal of the American Chemical Society</i> , 2019, 141, 16590-16594.	6.6	81
21	Understanding Chemoselectivity in Proton-Coupled Electron Transfer: A Kinetic Study of Amide and Thiol Activation. <i>Journal of the American Chemical Society</i> , 2019, 141, 16574-16578.	6.6	26
22	Rate-Driving Force Relationships in the Multisite Proton-Coupled Electron Transfer Activation of Ketones. <i>Journal of the American Chemical Society</i> , 2019, 141, 2721-2730.	6.6	54
23	Catalytic Ring Expansions of Cyclic Alcohols Enabled by Proton-Coupled Electron Transfer. <i>Journal of the American Chemical Society</i> , 2019, 141, 8752-8757.	6.6	85
24	PCET-Enabled Olefin Hydroamidation Reactions with <i>N</i> -Alkyl Amides. <i>ACS Catalysis</i> , 2019, 9, 4502-4507.	5.5	64
25	Evaluation of excited state bond weakening for ammonia synthesis from a manganese nitride: stepwise proton coupled electron transfer is preferred over hydrogen atom transfer. <i>Chemical Communications</i> , 2019, 55, 5595-5598.	2.2	16
26	Decarboxylative Intramolecular Arene Alkylation Using <i>N</i> -(Acyloxy)phthalimides, an Organic Photocatalyst, and Visible Light. <i>Journal of Organic Chemistry</i> , 2019, 84, 8360-8379.	1.7	49
27	N-H Bond Formation in a Manganese(V) Nitride Yields Ammonia by Light-Driven Proton-Coupled Electron Transfer. <i>Journal of the American Chemical Society</i> , 2019, 141, 4795-4799.	6.6	43
28	A Redox Strategy for Light-Driven, Out-of-Equilibrium Isomerizations and Application to Catalytic C-C Bond Cleavage Reactions. <i>Journal of the American Chemical Society</i> , 2019, 141, 1457-1462.	6.6	167
29	Enantioselective Synthesis of Pyrroloindolines via Noncovalent Stabilization of Indole Radical Cations and Applications to the Synthesis of Alkaloid Natural Products. <i>Journal of the American Chemical Society</i> , 2018, 140, 3394-3402.	6.6	185
30	Intermolecular Anti-Markovnikov Hydroamination of Unactivated Alkenes with Sulfonamides Enabled by Proton-Coupled Electron Transfer. <i>Journal of the American Chemical Society</i> , 2018, 140, 741-747.	6.6	149
31	Applications and Prospects for Triplet-Triplet Annihilation Photon Upconversion. <i>Chimia</i> , 2018, 72, 501.	0.3	20
32	Catalytic intermolecular hydroaminations of unactivated olefins with secondary alkyl amines. <i>Science</i> , 2017, 355, 727-730.	6.0	282
33	Catalytic Carbocation Generation Enabled by the Mesolytic Cleavage of Alkoxyamine Radical Cations. <i>Angewandte Chemie</i> , 2016, 128, 10123-10127.	1.6	17
34	Catalytic C-N Bond-Forming Reactions Enabled by Proton-Coupled Electron Transfer Activation of Amide N-H Bonds. <i>ACS Catalysis</i> , 2016, 6, 2894-2903.	5.5	100
35	Proton-Coupled Electron Transfer in Organic Synthesis: Fundamentals, Applications, and Opportunities. <i>Topics in Current Chemistry</i> , 2016, 374, 30.	3.0	114
36	Catalytic alkylation of remote C-H bonds enabled by proton-coupled electron transfer. <i>Nature</i> , 2016, 539, 268-271.	13.7	623

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37	Catalytic Ring-Opening of Cyclic Alcohols Enabled by PCET Activation of Strong O-H Bonds. <i>Journal of the American Chemical Society</i> , 2016, 138, 10794-10797.	6.6	287
38	Synthetic Applications of Proton-Coupled Electron Transfer. <i>Accounts of Chemical Research</i> , 2016, 49, 1546-1556.	7.6	566
39	Catalytic Carbocation Generation Enabled by the Mesolytic Cleavage of Alkoxyamine Radical Cations. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 9969-9973.	7.2	78
40	Proton-Coupled Electron Transfer in Organic Synthesis: Fundamentals, Applications, and Opportunities. <i>Topics in Current Chemistry Collections</i> , 2016, , 145-203.	0.2	7
41	Discovery and mechanistic study of a photocatalytic indoline dehydrogenation for the synthesis of elbasvir. <i>Chemical Science</i> , 2016, 7, 2066-2073.	3.7	103
42	Catalytic Alkene Carboaminations Enabled by Oxidative Proton-Coupled Electron Transfer. <i>Journal of the American Chemical Society</i> , 2015, 137, 9226-9229.	6.6	258
43	Bond-Weakening Catalysis: Conjugate Aminations Enabled by the Soft Homolysis of Strong N-H Bonds. <i>Journal of the American Chemical Society</i> , 2015, 137, 6440-6443.	6.6	92
44	Catalytic Olefin Hydroamidation Enabled by Proton-Coupled Electron Transfer. <i>Journal of the American Chemical Society</i> , 2015, 137, 13492-13495.	6.6	249
45	Reaching Your Full (Over)Potential: A Novel Approach to Electrocatalytic Oxygen Reduction. <i>ACS Central Science</i> , 2015, 1, 224-225.	5.3	2
46	Proton-Coupled Electron Transfer in Organic Synthesis: Novel Homolytic Bond Activations and Catalytic Asymmetric Reactions with Free Radicals. <i>Synlett</i> , 2014, 25, 2819-2826.	1.0	71
47	Catalytic Olefin Hydroamination with Aminium Radical Cations: A Photoredox Method for Direct C-N Bond Formation. <i>Journal of the American Chemical Society</i> , 2014, 136, 12217-12220.	6.6	217
48	Enantioselective Photoredox Catalysis Enabled by Proton-Coupled Electron Transfer: Development of an Asymmetric Aza-Pinacol Cyclization. <i>Journal of the American Chemical Society</i> , 2013, 135, 17735-17738.	6.6	392
49	Catalytic Ketyl-Olefin Cyclizations Enabled by Proton-Coupled Electron Transfer. <i>Journal of the American Chemical Society</i> , 2013, 135, 10022-10025.	6.6	275
50	Concerning the Mechanism of the FeCl <sub>3</sub> -Catalyzed $\alpha$ -Oxyamination of Aldehydes: Evidence for a Non-SOMO Activation Pathway. <i>Journal of the American Chemical Society</i> , 2010, 132, 10012-10014.	6.6	142
51	Attractive noncovalent interactions in asymmetric catalysis: Links between enzymes and small molecule catalysts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 20678-20685.	3.3	650
52	Enantioselective Thiourea-Catalyzed Cationic Polycyclizations. <i>Journal of the American Chemical Society</i> , 2010, 132, 5030-5032.	6.6	297