

R Tom Baker

List of Publications by Year in descending order

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56
papers

2,564
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236925

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189892

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all docs

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docs citations

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times ranked

2531
citing authors

#	ARTICLE	IF	CITATIONS
1	Iron Complex-Catalyzed Ammonia-Borane Dehydrogenation. A Potential Route toward N-Containing Polymer Motifs Using Earth-Abundant Metal Catalysts. <i>Journal of the American Chemical Society</i> , 2012, 134, 5598-5609.	13.7	195
2	Strategies and mechanisms of metal-ligand cooperativity in first-row transition metal complex catalysts. <i>Chemical Society Reviews</i> , 2020, 49, 8933-8987.	38.1	181
3	Coordination of aminoborane, NH ₂ BH ₂ , dictates selectivity and extent of H ₂ release in metal-catalysed ammonia borane dehydrogenation. <i>Chemical Communications</i> , 2008, , 6597.	4.1	168
4	Comparison of Copper and Vanadium Homogeneous Catalysts for Aerobic Oxidation of Lignin Models. <i>ACS Catalysis</i> , 2011, 1, 794-804.	11.2	168
5	Aerobic Oxidation of Lignin Models Using a Base Metal Vanadium Catalyst. <i>Inorganic Chemistry</i> , 2010, 49, 5611-5618.	4.0	167
6	Highly Selective Formation of <i>n</i> -Butanol from Ethanol through the Guerbet Process: A Tandem Catalytic Approach. <i>Journal of the American Chemical Society</i> , 2015, 137, 14264-14267.	13.7	154
7	Knocking on Wood: Base Metal Complexes as Catalysts for Selective Oxidation of Lignin Models and Extracts. <i>Accounts of Chemical Research</i> , 2015, 48, 2037-2048.	15.6	138
8	Aerobic Oxidation of β -1 Lignin Model Compounds with Copper and Oxovanadium Catalysts. <i>ACS Catalysis</i> , 2013, 3, 3111-3122.	11.2	102
9	Transition metal catalysed ammonia-borane dehydrogenation in ionic liquids. <i>Chemical Communications</i> , 2011, 47, 3177.	4.1	99
10	Fluorocarbon Refrigerants and their Syntheses: Past to Present. <i>Chemical Reviews</i> , 2020, 120, 9164-9303.	47.7	92
11	Copper Catalysts for Selective C-C Bond Cleavage of β -O ₄ Lignin Model Compounds. <i>Advanced Synthesis and Catalysis</i> , 2014, 356, 3563-3574.	4.3	80
12	Cobalt Fluorocarbenes: Cycloaddition Reactions with Tetrafluoroethylene and Reactivity of the Perfluorometallacyclic Products. <i>Journal of the American Chemical Society</i> , 2013, 135, 18296-18299.	13.7	79
13	Efficient and Selective Iron-Complex-Catalyzed Hydroboration of Aldehydes. <i>ACS Catalysis</i> , 2018, 8, 1076-1081.	11.2	71
14	Perfluoroalkyl Cobalt(III) Fluoride and Bis(perfluoroalkyl) Complexes: Catalytic Fluorination and Selective Difluorocarbene Formation. <i>Journal of the American Chemical Society</i> , 2015, 137, 16064-16073.	13.7	63
15	Probing the second dehydrogenation step in ammonia-borane dehydrocoupling: characterization and reactivity of the key intermediate, B-(cyclotriborazanyl)amine-borane. <i>Chemical Science</i> , 2015, 6, 618-624.	7.4	58
16	Cobalt Fluorocarbene Complexes. <i>Organometallics</i> , 2013, 32, 12-15.	2.3	56
17	Stepwise addition of difluorocarbene to a transition metal centre. <i>Chemical Communications</i> , 2014, 50, 1128-1130.	4.1	47
18	Selective Copper Complex-Catalyzed Hydrodefluorination of Fluoroalkenes and Allyl Fluorides: A Tale of Two Mechanisms. <i>Journal of the American Chemical Society</i> , 2019, 141, 11506-11521.	13.7	42

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19	A T-shaped Ni ^{II} -(CF ₂) ₄ NHC complex: unusual C _{sp3} -F and M-C _F bond functionalization reactions. <i>Chemical Science</i> , 2015, 6, 6392-6397.	7.4	41
20	d ¹⁰ Nickel Difluorocarbenes and Their Cycloaddition Reactions with Tetrafluoroethylene. <i>Organometallics</i> , 2015, 34, 5683-5686.	2.3	40
21	Towards lignin valorisation: comparing homogeneous catalysts for the aerobic oxidation and depolymerisation of organosolv lignin. <i>RSC Advances</i> , 2015, 5, 70502-70511.	3.6	32
22	Activation of C-F and N-C Bonds of [P,S]-Ligated Nickel Perfluorometallacycles. <i>Organometallics</i> , 2013, 32, 7424-7430.	2.3	30
23	Selective Activation of Fluoroalkenes with N-Heterocyclic Carbenes: Synthesis of N-Heterocyclic Fluoroalkenes and Polyfluoroalkenyl Imidazolium Salts. <i>Chemistry - A European Journal</i> , 2016, 22, 8063-8067.	3.3	30
24	Aerobic Oxidation of 2-Phenoxyethanol Lignin Model Compounds Using Vanadium and Copper Catalysts. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 6244-6251.	6.7	25
25	Nickel Fluorocarbene Metathesis with Fluoroalkenes. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 5772-5776.	13.8	25
26	Tetracarbonyl(trifluoromethyl)cobalt(I) [Co(CO) ₄ (CF ₃)] as a Precursor to New Cobalt Trifluoromethyl and Difluorocarbene Complexes. <i>Organometallics</i> , 2015, 34, 4598-4604.	2.3	24
27	Mononuclear, Dinuclear, and Trinuclear Iron Complexes Featuring a New Monoanionic SNS Thiolate Ligand. <i>Inorganic Chemistry</i> , 2016, 55, 987-997.	4.0	23
28	High-throughput evaluation of in situ-generated cobalt catalysts for acyl fluoride synthesis. <i>Catalysis Science and Technology</i> , 2017, 7, 4996-5003.	4.1	23
29	A New Stepwise Mechanism for Formation of a Metallacyclobutane via a Singlet Diradical Intermediate. <i>Organometallics</i> , 2015, 34, 5210-5213.	2.3	22
30	Iron(II) Complexes of a Hemilabile SNS Amido Ligand: Synthesis, Characterization, and Reactivity. <i>Inorganic Chemistry</i> , 2017, 56, 13766-13776.	4.0	22
31	Cu(I)-SNS complexes for outer-sphere hydroboration and hydrosilylation of carbonyls. <i>Chemical Communications</i> , 2019, 55, 13574-13577.	4.1	22
32	Catalytic aerobic oxidation of lignin-derived bio-oils using oxovanadium and copper complex catalysts and ionic liquids. <i>Journal of Molecular Catalysis A</i> , 2016, 423, 414-422.	4.8	19
33	Generation of Hydrofluoronickelacycles from Trifluoroethylene and Ni(0): Ligand Effects on Regio-/Stereo-selectivity and Reactivity. <i>Journal of the American Chemical Society</i> , 2017, 139, 4075-4086.	13.7	18
34	Metal Heptafluoroisopropyl (M-hfip) Complexes for Use as hfip Transfer Agents. <i>Organometallics</i> , 2018, 37, 422-432.	2.3	17
35	Mechanistic Study of Metal-Ligand Cooperativity in Mn(II)-Catalyzed Hydroborations: Hemilabile SNS Ligand Enables Metal Hydride-Free Reaction Pathway. <i>ACS Catalysis</i> , 2021, 11, 9043-9051.	11.2	17
36	Brønsted acid-promoted C-F bond activation in [P,S]-ligated neutral and anionic perfluoronickelacyclopentanes. <i>Dalton Transactions</i> , 2015, 44, 19587-19596.	3.3	16

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37	Iron-SNS and -CNS Complexes: Selective C _{aryl} -S Bond Cleavage and Amine-Borane Dehydrogenation Catalysis. <i>Organometallics</i> , 2019, 38, 3844-3851.	2.3	16
38	Solid Phase Extraction of Bio-Oil Model Compounds and Lignin-Derived Bio-Oil Using Amine-Functionalized Mesoporous Silicas. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 9716-9724.	6.7	15
39	Experimental and Computational Evidence for 1,4-Diradical Intermediates in Reactions of Cobalt Fluorocarbene Complexes with Terminal Aryl-alkynes to give Metallacyclobutenes. <i>Organometallics</i> , 2017, 36, 2853-2860.	2.3	13
40	SNS ligand-assisted catalyst activation in Zn-catalysed carbonyl hydroboration. <i>Chemical Communications</i> , 2022, 58, 3795-3798.	4.1	13
41	Transition-Metal-Free Formation of C-E Bonds (E = C, N, O, S) and Formation of C-M Bonds (M = Mn, Tj ETQq1 1 0.784314 rgBT). <i>Organometallics</i> , 2017, 36, 849-857.	2.3	12
42	Nickel Fluorocarbene Metathesis with Fluoroalkenes. <i>Angewandte Chemie</i> , 2018, 130, 5874-5878.	2.0	11
43	Solvent-free Zn (NSNO) complex-catalysed dihydroboration of nitriles. <i>Chemical Communications</i> , 0, , .	4.1	10
44	Anion-Dependent Catalytic C-C Bond Cleavage of a Lignin Model within a Cationic Metal-Organic Framework. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 688-695.	8.0	9
45	Solution-based routes to ammine metal borohydrides: formation of ammonia-borane. <i>Chemical Communications</i> , 2016, 52, 2581-2584.	4.1	8
46	Safe and Expedient Preparation of Ni(cod) ₂ for Same-Day High-Throughput Screening. <i>Organic Process Research and Development</i> , 2020, 24, 2950-2952.	2.7	8
47	Nickel(II)-SNS Thiolate Complexes: Reactivity and Solution Dynamics. <i>Inorganic Chemistry</i> , 2021, 60, 10934-10942.	4.0	7
48	One-pot Suzuki-Heck relay to prepare industrially valuable intermediates using the Pd-Cy*Phine catalyst system. <i>Catalysis Science and Technology</i> , 2017, 7, 4599-4603.	4.1	6
49	A closer look at the reactivity between N-heterocyclic carbenes and fluoroalkenes. <i>Journal of Fluorine Chemistry</i> , 2017, 203, 81-89.	1.7	6
50	Regioselective formation of fluorinated metallacycles from fluoroalkenes and an electron-rich Ni(0) difluorocarbene. <i>Canadian Journal of Chemistry</i> , 2021, 99, 209-215.	1.1	6
51	Same ligand, three first-row metals: comparing M-amido bifunctional reactivity (Mn, Fe, Co). <i>Dalton Transactions</i> , 2021, 50, 14542-14546.	3.3	5
52	Base-Metal Nanoparticle-Catalyzed Hydrogen Release from Ammine Yttrium and Lanthanum Borohydrides. <i>Chemistry of Materials</i> , 2017, 29, 742-751.	6.7	4
53	Synthesis and Reactivity of Mn-CF ₃ Complexes. <i>Inorganics</i> , 2019, 7, 3.	2.7	4
54	Exploiting the photocatalytic activity of TiO ₂ towards the depolymerization of Kraft lignin. <i>New Journal of Chemistry</i> , 2021, 45, 15371-15377.	2.8	2

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55	Selective C—C Bond Cleavage in Diols and Lignin Models: High-Throughput Screening of Metal Oxide-Anchored Vanadium in Mesoporous Silica. <i>Catalysts</i> , 2021, 11, 901.	3.5	2
56	C6 Diacids from homocitric acid lactone using relay heterogeneous catalysis in water. <i>Catalysis Today</i> , 2019, 319, 191-196.	4.4	1