Mark R Crimmin

List of Publications by Year
in descending order

119 papers	5,402 citations	100601 38 h-index	107981 68 g-index
160 all docs	160 docs citations	160 times ranked	2935 citing authors

#	Article	IF	Citations
1	Functionalization and Hydrogenation of Carbon Chains Derived from CO**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	10
2	Au(I) Catalyzed HF Transfer: Tandem Alkyne Hydrofluorination and Perfluoroarene Functionalization. ACS Catalysis, 2022, 12, 3411-3419.	5.5	18
3	Cooperative Câ€“H Bond Activation by a Low-Spin d⁶ Ironâ€“Aluminum Complex. Journal of the American Chemical Society, 2022, 144, 8770-8777.	6.6	20
4	Magnesium-stabilised transition metal formyl complexes: structures, bonding, and ethenediolate formation. Chemical Science, 2022, 13, 6592-6598.	3.7	10
5	Repurposing of F-gases: challenges and opportunities in fluorine chemistry. Chemical Society Reviews, 2022, 51, 4977-4995.	18.7	24
6	Stereoselective insertion of cyclopropenes into Mgâ€“Mg bonds. Chemical Communications, 2022, 58, 8282-8285.	2.2	1
7	Chemoselective Câ^’C Ïƒâ€Bond Activation of the Most Stable Ring in Biphenylene**. Angewandte Chemie - International Edition, 2021, 60, 2619-2623.	7.2	25
8	Palladiumâ€Catalysed Câ^’H Bond Zincation of Arenes: Scope, Mechanism, and the Role of Heterometallic Intermediates. Angewandte Chemie - International Edition, 2021, 60, 6145-6153.	7.2	23
9	Chemoselective Câ^’C Ïƒâ€Bond Activation of the Most Stable Ring in Biphenylene**. Angewandte Chemie, 2021, 133, 2651-2655.	1.6	7
10	Palladiumâ€Catalysed Câ^’H Bond Zincation of Arenes: Scope, Mechanism, and the Role of Heterometallic Intermediates. Angewandte Chemie, 2021, 133, 6210-6218.	1.6	10
11	Catalytic Câ€“H to Câ€“M (M = Al, Mg) bond transformations with heterometallic complexes. Chemical Science, 2021, 12, 1993-2000.	3.7	22
12	Complete deconstruction of SF₆ by an aluminium(<scp>i</scp>) compound. Chemical Communications, 2021, 57, 7096-7099.	2.2	17
13	Group 11 Borataalkene Complexes: Models for Alkene Activation. Angewandte Chemie, 2021, 133, 12120-12126.	1.6	13
14	Group 11 Borataalkene Complexes: Models for Alkene Activation. Angewandte Chemie - International Edition, 2021, 60, 12013-12019.	7.2	21
15	Benzene rings broken for chemical synthesis. Nature, 2021, 597, 33-34.	13.7	2
16	1st row transition metal aluminylene complexes: preparation, properties and bonding analysis. Dalton Transactions, 2021, 50, 7810-7817.	1.6	15
17	Reactions of aluminium(<scp>i</scp>) with transition metal carbonyls: scope, mechanism and selectivity of CO homologation. Chemical Science, 2021, 12, 14845-14854.	3.7	17
18	Alumination of aryl methyl ethers: switching between sp² and sp³ Câ€“O bond functionalisation with Pd-catalysis. Chemical Communications, 2021, 57, 11673-11676.	2.2	4

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19	Palladium-catalysed Câ€“F alumination of fluorobenzenes: mechanistic diversity and origin of selectivity. Chemical Science, 2020, 11, 7842-7849.	3.7	19
20	Organocatalyzed Fluoride Metathesis. Organic Letters, 2020, 22, 9351-9355.	2.4	15
21	Defluorosilylation of trifluoromethane: upgrading an environmentally damaging fluorocarbon. Chemical Communications, 2020, 56, 12929-12932.	2.2	8
22	Cooperative strategies for CO homologation. Dalton Transactions, 2020, 49, 16587-16597.	1.6	41
23	Reactions of an Aluminum(I) Reagent with 1,2-, 1,3-, and 1,5-Dienes: Dearomatization, Reversibility, and a Pericyclic Mechanism. Inorganic Chemistry, 2020, 59, 4608-4616.	1.9	40
24	Catalyst control of selectivity in the Câ€“O bond alumination of biomass derived furans. Chemical Science, 2020, 11, 7850-7857.	3.7	15
25	Activation and Functionalization of Câ€“C Ïƒ Bonds of Alkylidene Cyclopropanes at Main Group Centers. Journal of the American Chemical Society, 2020, 142, 11967-11971.	6.6	25
26	Defluoroalkylation of sp³ Câˆ’F Bonds of Industrially Relevant Hydrofluoroolefins. Chemistry - A European Journal, 2020, 26, 5365-5368.	1.7	26
27	The partial dehydrogenation of aluminium dihydrides. Chemical Science, 2019, 10, 8083-8093.	3.7	11
28	Defluorosilylation of Industrially Relevant Fluoroolefins Using Nucleophilic Silicon Reagents. Angewandte Chemie, 2019, 131, 12644-12648.	1.6	17
29	A hexagonal planar transition-metal complex. Nature, 2019, 574, 390-393.	13.7	72
30	Breaking Carbonâ€“Fluorine Bonds with Main Group Nucleophiles. Synlett, 2019, 30, 2233-2246.	1.0	27
31	Dihydridoboranes: Selective Reagents for Hydroboration and Hydrodefluorination. Organic Letters, 2019, 21, 7289-7293.	2.4	13
32	Unravelling nucleophilic aromatic substitution pathways with bimetallic nucleophiles. Chemical Communications, 2019, 55, 1805-1808.	2.2	16
33	Reversible alkene binding and allylic Câ€“H activation with an aluminium(<scp>i</scp>) complex. Chemical Science, 2019, 10, 2452-2458.	3.7	71
34	Defluorosilylation of Industrially Relevant Fluoroolefins Using Nucleophilic Silicon Reagents. Angewandte Chemie - International Edition, 2019, 58, 12514-12518.	7.2	56
35	Reversible insertion of CO into an aluminiumâ€“carbon bond. Chemical Communications, 2019, 55, 6181-6184.	2.2	20
36	Selective Hydrodefluorination of Hexafluoropropene to Industrially Relevant Hydrofluoroolefins. Advanced Synthesis and Catalysis, 2019, 361, 3351-3358.	2.1	12

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37	Heterobimetallic Rebound: A Mechanism for Diene-to-Alkyne Isomerization with M---Zr Hydride Complexes (M = Al, Zn, and Mg). Organometallics, 2018, 37, 949-956.	1.1	16
38	Reactions of Fluoroalkenes with an Aluminium(I) Complex. Angewandte Chemie, 2018, 130, 6748-6752.	1.6	44
39	Reactions of Fluoroalkenes with an Aluminium(I) Complex. Angewandte Chemie - International Edition, 2018, 57, 6638-6642.	7.2	94
40	A combined experimental and computational study on the reaction of fluoroarenes with Mgâ€“Mg, Mgâ€“Zn, Mgâ€“Al and Alâ€“Zn bonds. Chemical Science, 2018, 9, 2348-2356.	3.7	86
41	Enantioselective Synthesis of the Cyclopiazonic Acid Family Using Sulfur Ylides. Angewandte Chemie - International Edition, 2018, 57, 1346-1350.	7.2	39
42	Enantioselective Synthesis of the Cyclopiazonic Acid Family Using Sulfur Ylides. Angewandte Chemie, 2018, 130, 1360-1364.	1.6	5
43	Palladium-catalysed magnesiation of benzene. Chemical Communications, 2018, 54, 12326-12328.	2.2	24
44	Carbon Chain Growth by Sequential Reactions of CO and CO₂ with [W(CO)₆] and an Aluminum(I) Reductant. Journal of the American Chemical Society, 2018, 140, 13614-13617.	6.6	60
45	Reactions of Fluoroalkanes with Mgâˆ'Mg Bonds: Scope, sp³Câˆ'F/sp²Câˆ'F Coupling and Mechanism. Chemistry - A European Journal, 2018, 24, 16282-16286.	1.7	29
46	Room temperature catalytic carbonâ€“hydrogen bond alumination of unactivated arenes: mechanism and selectivity. Chemical Science, 2018, 9, 5435-5440.	3.7	63
47	Preparation and characterisation of heterobimetallic copperâ€“tungsten hydride complexes. Dalton Transactions, 2018, 47, 10595-10600.	1.6	7
48	Tunable Binding of Dinitrogen to a Series of Heterobimetallic Hydride Complexes. Organometallics, 2018, 37, 4521-4526.	1.1	18
49	Binuclear Î²-diketiminate complexes of copper(<scp>i</scp>). Dalton Transactions, 2017, 46, 2081-2090.	1.6	15
50	Isolation of an unusual [Cu₆] nanocluster through sequential addition of copper(<scp>i</scp>) to a polynucleating ligand. Dalton Transactions, 2017, 46, 2077-2080.	1.6	8
51	Reversible Coordination of Boronâ€“, Aluminumâ€“, Zincâ€“, Magnesiumâ€“, and Calciumâ€“Hydrogen Bonds to Bent {CuL₂} Fragments: Heavy Ïƒ Complexes of the Lightest Coinage Metal. Inorganic Chemistry, 2017, 56, 8669-8682.	1.9	30
52	Stereoisomerism of bis(Ïƒâ€•Zincane) Complexes: Evidence for an Intramolecular Pathway. Chemistry - A European Journal, 2017, 23, 5682-5686.	1.7	11
53	Organometallic chemistry using partially fluorinated benzenes. Chemical Communications, 2017, 53, 3615-3633.	2.2	88
54	Functionalisation of Carbonâ€“Fluorine Bonds with Main Group Reagents. Synthesis, 2017, 49, 810-821.	1.2	32

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55	Magnesium, zinc, aluminium and gallium hydride complexes of the transition metals. Chemical Communications, 2017, 53, 1348-1365.	2.2	74
56	Selective Reduction of CO₂ to a Formate Equivalent with Heterobimetallic Goldâ€â€‰â€â€‰â€Copper Hydride Complexes. Angewandte Chemie - International Edition, 2017, 56, 15127-15130.	7.2	33
57	Selective Reduction of CO₂ to a Formate Equivalent with Heterobimetallic Goldâ€â€‰â€â€‰â€Copper Hydride Complexes. Angewandte Chemie, 2017, 129, 15323-15326.	1.6	11
58	Palladiumâ€Catalyzed Carbonâ€"Fluorine and Carbonâ€"Hydrogen Bond Alumination of Fluoroarenes and Heteroarenes. Angewandte Chemie, 2017, 129, 12861-12865.	1.6	6
59	Mild sp²Carbonâ€"Oxygen Bond Activation by an Isolable Ruthenium(II) Bis(dinitrogen) Complex: Experiment and Theory. Organometallics, 2017, 36, 3654-3663.	1.1	13
60	Palladiumâ€Catalyzed Carbonâ€"Fluorine and Carbonâ€"Hydrogen Bond Alumination of Fluoroarenes and Heteroarenes. Angewandte Chemie - International Edition, 2017, 56, 12687-12691.	7.2	22
61	Isomerization of Cyclooctadiene to Cyclooctyne with a Zinc/Zirconium Heterobimetallic Complex. Angewandte Chemie, 2016, 128, 7065-7067.	1.6	8
62	Trajectory of Approach of a Zincâ€"Hydrogen Bond to Transition Metals. Angewandte Chemie, 2016, 128, 16265-16268.	1.6	10
63	Trajectory of Approach of a Zincâ€"Hydrogen Bond to Transition Metals. Angewandte Chemie - International Edition, 2016, 55, 16031-16034.	7.2	31
64	Addition of Carbonâ€"Fluorine Bonds to a Mg(I)â€"Mg(I) Bond: An Equivalent of Grignard Formation in Solution. Journal of the American Chemical Society, 2016, 138, 12763-12766.	6.6	72
65	Isomerization of Cyclooctadiene to Cyclooctyne with a Zinc/Zirconium Heterobimetallic Complex. Angewandte Chemie - International Edition, 2016, 55, 6951-6953.	7.2	30
66	Selective Oxidation of Methane to Methanol Over Cu- and Fe-Exchanged Zeolites: The Effect of Si/Al Molar Ratio. Catalysis Letters, 2016, 146, 483-492.	1.4	66
67	Addition of aluminium, zinc and magnesium hydrides to rhodium(<scp>iii</scp>). Chemical Science, 2015, 6, 5617-5622.	3.7	50
68	Bis(Ïƒ-Bâ€"H) complexes of copper(<scp>i</scp>): precursors to a heterogeneous amineâ€"borane dehydrogenation catalyst. Dalton Transactions, 2015, 44, 12530-12534.	1.6	33
69	Re-evaluating selectivity as a determining factor in peroxidative methane oxidation by multimetallic copper complexes. Catalysis Science and Technology, 2015, 5, 4108-4115.	2.1	13
70	Yttrium-Catalyzed Amineâ€"Silane Dehydrocoupling: Extended Reaction Scope with a Phosphorus-Based Ligand. Organometallics, 2015, 34, 4369-4375.	1.1	27
71	Oxidative addition of carbonâ€"fluorine and carbonâ€"oxygen bonds to Al(<scp>i</scp>). Chemical Communications, 2015, 51, 15994-15996.	2.2	114
72	Rhodium Catalyzed, Carbonâ€"Hydrogen Bond Directed Hydrodefluorination of Fluoroarenes. Organometallics, 2014, 33, 7027-7030.	1.1	31

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73	Yttrium-catalysed dehydrocoupling of alanes with amines. Chemical Communications, 2014, 50, 9536.	2.2	8
74	Catalytic hydroacetylenation of carbodiimides with homoleptic alkaline earth hexamethyldisilazides. Dalton Transactions, 2014, 43, 14249-14256.	1.6	37
75	Weakly Coordinated Zinc and Aluminum Ïƒ-Complexes of Copper(I). Organometallics, 2014, 33, 2685-2688.	1.1	35
76	Ligand-Based Carbonâ€“Nitrogen Bond Forming Reactions of Metal Dinitrosyl Complexes with Alkenes and Their Application to Câ€“H Bond Functionalization. Accounts of Chemical Research, 2014, 47, 517-529.	7.6	35
77	Beryllium derivatives of a phenyl-substituted Î²-diketiminate: a well-defined ring opening reaction of tetrahydrofuran. Dalton Transactions, 2013, 42, 9720.	1.6	38
78	A metalâ€“amide dependent, catalytic Câ€“H functionalisation of triphenylphosphonium methylide. Chemical Science, 2013, 4, 691-695.	3.7	17
79	Homogeneous Catalysis with Organometallic Complexes of Group 2. Topics in Organometallic Chemistry, 2013, , 191-241.	0.7	102
80	Preparation and properties of a series of structurally diverse aluminium hydrides supported by Î²-diketiminate and bis(amide) ligands. Dalton Transactions, 2013, 42, 15199.	1.6	20
81	A Highly Chemoselective, Zr-Catalyzed Câ€“O Bond Functionalization of Benzofuran. Organometallics, 2013, 32, 5260-5262.	1.1	14
82	Catalytic and Stoichiometric Cumulene Formation within Dimeric Group 2 Acetylides. Organometallics, 2013, 32, 4961-4972.	1.1	32
83	Zirconocene Dichloride Catalyzed Hydrodefluorination of Cï£¿F bonds. Angewandte Chemie - International Edition, 2012, 51, 12559-12563.	7.2	97
84	Wittig-olefination via an yttrium-coordinated betaine. Chemical Communications, 2012, 48, 1745.	2.2	13
85	Synthesis and coordination chemistry of tri-substituted benzamidrazones. Dalton Transactions, 2011, 40, 514-522.	1.6	8
86	A Step beyond the Felthamâ€“Enemark Notation: Spectroscopic and Correlated<i>ab Initio</i>Computational Support for an Antiferromagnetically Coupled M(II)â€“(NO)^{âˆ’}Description of Tp*M(NO) (M = Co, Ni). Journal of the American Chemical Society, 2011, 133, 18785-18801.	6.6	89
87	[(TMEDA)Co(NO)2][BPh4]: A versatile synthetic entry point to four and five coordinate {Co(NO)2}10 complexes. Journal of Organometallic Chemistry, 2011, 696, 3974-3981.	0.8	15
88	Cation Charge Density and Precatalyst Selection in Group 2-Catalyzed Aminoalkene Hydroamination. Organometallics, 2011, 30, 1493-1506.	1.1	118
89	Synthesis of [RuCl₂(NO)₂(THF)] and its Double Cï£¿N Bondâ€Forming Reactions with Alkenes. Angewandte Chemie - International Edition, 2011, 50, 4484-4487.	7.2	13
90	Heterofunctionalization catalysis with organometallic complexes of calcium, strontium and barium. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 927-963.	1.0	248

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91	Cobalt-Mediated, Enantioselective Synthesis of <i>C</i>₂ and <i>C</i>₁ Dienes. Journal of the American Chemical Society, 2010, 132, 16365-16367.	6.6	28
92	Synthesis of Î²-diketiminato calcium silylamides and their reactions with triethylaluminium. New Journal of Chemistry, 2010, 34, 1572.	1.4	31
93	Carbodiimide insertion reactions of homoleptic heavier alkaline earth amides and phosphides. Dalton Transactions, 2010, 39, 7393.	1.6	38
94	Intramolecular Hydroamination of Aminoalkenes by Calcium and Magnesium Complexes: A Synthetic and Mechanistic Study. Journal of the American Chemical Society, 2009, 131, 9670-9685.	6.6	261
95	Catalytic 2,3,4-hexatriene formation by terminal alkyne coupling at calcium. Chemical Communications, 2009, , 2299.	2.2	35
96	Î²-Diketiminate Câ€“H activation with heavier group 2 alkyls. Dalton Transactions, 2009, , 9715.	1.6	27
97	Heavier Group 2 Metals and Intermolecular Hydroamination: A Computational and Synthetic Assessment. Journal of the American Chemical Society, 2009, 131, 12906-12907.	6.6	139
98	Î²-Diketiminato Calcium and Magnesium Amides; Model Complexes for Hydroamination Catalysis. Inorganic Chemistry, 2009, 48, 4445-4453.	1.9	66
99	Bis(trimethylsilyl)methyl Derivatives of Calcium, Strontium and Barium: Potentially Useful Dialkyls of the Heavy Alkaline Earth Elements. Chemistry - A European Journal, 2008, 14, 11292-11295.	1.7	101
100	Heavier Groupâ€2â€Element Catalyzed Hydroamination of Carbodiimides. European Journal of Inorganic Chemistry, 2008, 2008, 4173-4179.	1.0	76
101	Heavier group 2 element-catalysed hydroamination of isocyanates. Chemical Communications, 2008, , 5206.	2.2	57
102	Î²-Diketiminato Calcium Acetylides: Synthesis, Solution Dimerization, and Catalytic Carbonâˆ’Carbon Bond Formation. Organometallics, 2008, 27, 6300-6306.	1.1	58
103	Triazenide Complexes of the Heavier Alkaline Earths: Synthesis, Characterization, And Suitability for Hydroamination Catalysis. Inorganic Chemistry, 2008, 47, 7366-7376.	1.9	138
104	Insertion reactions of Î²-diketiminate-stabilised calcium amides with 1,3-dialkylcarbodiimides. Dalton Transactions, 2008, , 4474.	1.6	28
105	Reversibility in the protonolysis of a Î²-diketiminate stabilised calcium bis(trimethylsilyl)amide with benzylamine. Dalton Transactions, 2008, , 1292.	1.6	24
106	Heavier Group 2 Element Catalyzed Hydrophosphination of Carbodiimides. Organometallics, 2008, 27, 497-499.	1.1	139
107	Synthesis, Characterization, and Solution Lability of N-Heterocyclic Carbene Adducts of the Heavier Group 2 Bis(trimethylsilyl)amides. Organometallics, 2008, 27, 3939-3946.	1.1	65
108	Calcium-Catalyzed Intermolecular Hydrophosphination. Organometallics, 2007, 26, 2953-2956.	1.1	193

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109	Reactions of Î²-Diketiminate-Stabilized Calcium Amides with 9-Borabicyclo[3.3.1]nonane (9-BBN). Organometallics, 2007, 26, 4076-4079.	1.1	47
110	Heavier Alkaline Earth Amides as Catalysts for the Tischenko Reaction. Organic Letters, 2007, 9, 331-333.	2.4	105
111	Bis(diphenylphosphido) Derivatives of the Heavier Group 2 Elements. Inorganic Chemistry, 2007, 46, 10410-10415.	1.9	36
112	Trifluoromethyl Coordination and Cï£¿F Bond Activation at Calcium. Angewandte Chemie - International Edition, 2007, 46, 6339-6342.	7.2	63
113	Reactivity of [HC{(C(Me)N(Dipp))}2Ca{N(SiMe3)2}(THF)] (Dipp=C6H3iPr2-2,6) with Câ€"H acids: Synthesis of heteroleptic calcium Î·5-organometallics. Journal of Organometallic Chemistry, 2006, 691, 1242-1250.	0.8	24
114	Calcium-Mediated Intramolecular Hydroamination Catalysis.. ChemInform, 2005, 36, no.	0.1	0
115	Calcium-Mediated Intramolecular Hydroamination Catalysis. Journal of the American Chemical Society, 2005, 127, 2042-2043.	6.6	369
116	Kinetic stability of heteroleptic (Î²-diketiminato) heavier alkaline-earth (Ca, Sr, Ba) amides. Dalton Transactions, 2005, , 278-284.	1.6	99
117	Dimerization of Î²-Diketiminato Calcium Complexes through Dihapto-Acetylide Ligation. Organometallics, 2005, 24, 1184-1188.	1.1	60
118	Solution- and solid-state characterisation of a configurationally-stable Î²-diketiminato-supported calcium primary amide. Dalton Transactions, 2004, , 3166-3168.	1.6	41
119	Functionalization and Hydrogenation of Carbon Chains Derived from CO**. Angewandte Chemie, 0, , .	1.6	0