

Mark R Crimmin

List of Publications by Year in descending order

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119
papers

5,402
citations

100601

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107981

68
g-index

160
all docs

160
docs citations

160
times ranked

2935
citing authors

#	ARTICLE	IF	CITATIONS
1	Calcium-Mediated Intramolecular Hydroamination Catalysis. <i>Journal of the American Chemical Society</i> , 2005, 127, 2042-2043.	6.6	369
2	Intramolecular Hydroamination of Aminoalkenes by Calcium and Magnesium Complexes: A Synthetic and Mechanistic Study. <i>Journal of the American Chemical Society</i> , 2009, 131, 9670-9685.	6.6	261
3	Heterofunctionalization catalysis with organometallic complexes of calcium, strontium and barium. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010, 466, 927-963.	1.0	248
4	Calcium-Catalyzed Intermolecular Hydrophosphination. <i>Organometallics</i> , 2007, 26, 2953-2956.	1.1	193
5	Heavier Group 2 Element Catalyzed Hydrophosphination of Carbodiimides. <i>Organometallics</i> , 2008, 27, 497-499.	1.1	139
6	Heavier Group 2 Metals and Intermolecular Hydroamination: A Computational and Synthetic Assessment. <i>Journal of the American Chemical Society</i> , 2009, 131, 12906-12907.	6.6	139
7	Triazenide Complexes of the Heavier Alkaline Earths: Synthesis, Characterization, And Suitability for Hydroamination Catalysis. <i>Inorganic Chemistry</i> , 2008, 47, 7366-7376.	1.9	138
8	Cation Charge Density and Precatalyst Selection in Group 2-Catalyzed Aminoalkene Hydroamination. <i>Organometallics</i> , 2011, 30, 1493-1506.	1.1	118
9	Oxidative addition of carbon-fluorine and carbon-oxygen bonds to Al. <i>Chemical Communications</i> , 2015, 51, 15994-15996.	2.2	114
10	Heavier Alkaline Earth Amides as Catalysts for the Tischenko Reaction. <i>Organic Letters</i> , 2007, 9, 331-333.	2.4	105
11	Homogeneous Catalysis with Organometallic Complexes of Group 2. <i>Topics in Organometallic Chemistry</i> , 2013, , 191-241.	0.7	102
12	Bis(trimethylsilyl)methyl Derivatives of Calcium, Strontium and Barium: Potentially Useful Dialkyls of the Heavy Alkaline Earth Elements. <i>Chemistry - A European Journal</i> , 2008, 14, 11292-11295.	1.7	101
13	Kinetic stability of heteroleptic (η^2 -diketiminato) heavier alkaline-earth (Ca, Sr, Ba) amides. <i>Dalton Transactions</i> , 2005, , 278-284.	1.6	99
14	Zirconocene Dichloride Catalyzed Hydrodefluorination of C-F bonds. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 12559-12563.	7.2	97
15	Reactions of Fluoroalkenes with an Aluminium(I) Complex. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 6638-6642.	7.2	94
16	A Step beyond the Feltham-Enemark Notation: Spectroscopic and Correlated Computational Support for an Antiferromagnetically Coupled M(II)-NO Description of Tp*M(NO) (M = Co, Ni). <i>Journal of the American Chemical Society</i> , 2011, 133, 18785-18801.	6.6	89
17	Organometallic chemistry using partially fluorinated benzenes. <i>Chemical Communications</i> , 2017, 53, 3615-3633.	2.2	88
18	A combined experimental and computational study on the reaction of fluoroarenes with Mg-Mg, Mg-Zn, Mg-Al and Al-Zn bonds. <i>Chemical Science</i> , 2018, 9, 2348-2356.	3.7	86

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19	Heavier Group 2 Element Catalyzed Hydroamination of Carbodiimides. <i>European Journal of Inorganic Chemistry</i> , 2008, 2008, 4173-4179.	1.0	76
20	Magnesium, zinc, aluminium and gallium hydride complexes of the transition metals. <i>Chemical Communications</i> , 2017, 53, 1348-1365.	2.2	74
21	Addition of Carbon-Fluorine Bonds to a Mg(I)-Mg(I) Bond: An Equivalent of Grignard Formation in Solution. <i>Journal of the American Chemical Society</i> , 2016, 138, 12763-12766.	6.6	72
22	A hexagonal planar transition-metal complex. <i>Nature</i> , 2019, 574, 390-393.	13.7	72
23	Reversible alkene binding and allylic C-H activation with an aluminium complex. <i>Chemical Science</i> , 2019, 10, 2452-2458.	3.7	71
24	η^2 -Diketiminato Calcium and Magnesium Amides; Model Complexes for Hydroamination Catalysis. <i>Inorganic Chemistry</i> , 2009, 48, 4445-4453.	1.9	66
25	Selective Oxidation of Methane to Methanol Over Cu- and Fe-Exchanged Zeolites: The Effect of Si/Al Molar Ratio. <i>Catalysis Letters</i> , 2016, 146, 483-492.	1.4	66
26	Synthesis, Characterization, and Solution Lability of N-Heterocyclic Carbene Adducts of the Heavier Group 2 Bis(trimethylsilyl)amides. <i>Organometallics</i> , 2008, 27, 3939-3946.	1.1	65
27	Trifluoromethyl Coordination and C-F Bond Activation at Calcium. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 6339-6342.	7.2	63
28	Room temperature catalytic carbon-hydrogen bond alumination of unactivated arenes: mechanism and selectivity. <i>Chemical Science</i> , 2018, 9, 5435-5440.	3.7	63
29	Dimerization of η^2 -Diketiminato Calcium Complexes through Dihapto-Acetylide Ligation. <i>Organometallics</i> , 2005, 24, 1184-1188.	1.1	60
30	Carbon Chain Growth by Sequential Reactions of CO and CO ₂ with [W(CO) ₆] and an Aluminum(I) Reductant. <i>Journal of the American Chemical Society</i> , 2018, 140, 13614-13617.	6.6	60
31	η^2 -Diketiminato Calcium Acetylides: Synthesis, Solution Dimerization, and Catalytic Carbon-Carbon Bond Formation. <i>Organometallics</i> , 2008, 27, 6300-6306.	1.1	58
32	Heavier group 2 element-catalysed hydroamination of isocyanates. <i>Chemical Communications</i> , 2008, , 5206.	2.2	57
33	Defluorosilylation of Industrially Relevant Fluoroolefins Using Nucleophilic Silicon Reagents. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 12514-12518.	7.2	56
34	Addition of aluminium, zinc and magnesium hydrides to rhodium. <i>Chemical Science</i> , 2015, 6, 5617-5622.	3.7	50
35	Reactions of η^2 -Diketiminato-Stabilized Calcium Amides with 9-Borabicyclo[3.3.1]nonane (9-BBN). <i>Organometallics</i> , 2007, 26, 4076-4079.	1.1	47
36	Reactions of Fluoroalkenes with an Aluminium(I) Complex. <i>Angewandte Chemie</i> , 2018, 130, 6748-6752.	1.6	44

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37	Solution- and solid-state characterisation of a configurationally-stable η^2 -diketiminato-supported calcium primary amide. Dalton Transactions, 2004, , 3166-3168.	1.6	41
38	Cooperative strategies for CO homologation. Dalton Transactions, 2020, 49, 16587-16597.	1.6	41
39	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
40	Enantioselective Synthesis of the Cyclopirozonic Acid Family Using Sulfur Ylides. Angewandte Chemie - International Edition, 2018, 57, 1346-1350.	7.2	39
41	Carbodiimide insertion reactions of homoleptic heavier alkaline earth amides and phosphides. Dalton Transactions, 2010, 39, 7393.	1.6	38
42	Beryllium derivatives of a phenyl-substituted η^2 -diketiminato: a well-defined ring opening reaction of tetrahydrofuran. Dalton Transactions, 2013, 42, 9720.	1.6	38
43	Catalytic hydroacetylenation of carbodiimides with homoleptic alkaline earth hexamethyldisilazides. Dalton Transactions, 2014, 43, 14249-14256.	1.6	37
44	Bis(diphenylphosphido) Derivatives of the Heavier Group 2 Elements. Inorganic Chemistry, 2007, 46, 10410-10415.	1.9	36
45	Catalytic 2,3,4-hexatriene formation by terminal alkyne coupling at calcium. Chemical Communications, 2009, , 2299.	2.2	35
46	Weakly Coordinated Zinc and Aluminum η^f -Complexes of Copper(I). Organometallics, 2014, 33, 2685-2688.	1.1	35
47	Ligand-Based Carbon π -Nitrogen Bond Forming Reactions of Metal Dinitrosyl Complexes with Alkenes and Their Application to C π -H Bond Functionalization. Accounts of Chemical Research, 2014, 47, 517-529.	7.6	35
48	Bis(η^f -B π -H) complexes of copper($\langle scp \rangle i \langle /scp \rangle$): precursors to a heterogeneous amine π -borane dehydrogenation catalyst. Dalton Transactions, 2015, 44, 12530-12534.	1.6	33
49	Selective Reduction of CO ₂ to a Formate Equivalent with Heterobimetallic Gold π -Copper Hydride Complexes. Angewandte Chemie - International Edition, 2017, 56, 15127-15130.	7.2	33
50	Catalytic and Stoichiometric Cumulene Formation within Dimeric Group 2 Acetylides. Organometallics, 2013, 32, 4961-4972.	1.1	32
51	Functionalisation of Carbon π -Fluorine Bonds with Main Group Reagents. Synthesis, 2017, 49, 810-821.	1.2	32
52	Synthesis of η^2 -diketiminato calcium silylamides and their reactions with triethylaluminium. New Journal of Chemistry, 2010, 34, 1572.	1.4	31
53	Rhodium Catalyzed, Carbon π -Hydrogen Bond Directed Hydrodefluorination of Fluoroarenes. Organometallics, 2014, 33, 7027-7030.	1.1	31
54	Trajectory of Approach of a Zinc π -Hydrogen Bond to Transition Metals. Angewandte Chemie - International Edition, 2016, 55, 16031-16034.	7.2	31

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55	Isomerization of Cyclooctadiene to Cyclooctyne with a Zinc/Zirconium Heterobimetallic Complex. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 6951-6953.	7.2	30
56	Reversible Coordination of Boron ⁺ , Aluminum ⁺ , Zinc ⁺ , Magnesium ⁺ , and Calcium ⁺ Hydrogen Bonds to Bent {CuL ₂ } Fragments: Heavy σ Complexes of the Lightest Coinage Metal. <i>Inorganic Chemistry</i> , 2017, 56, 8669-8682.	1.9	30
57	Reactions of Fluoroalkanes with Mg ⁺ Mg Bonds: Scope, sp ³ C ⁺ F/sp ² C ⁺ F Coupling and Mechanism. <i>Chemistry - A European Journal</i> , 2018, 24, 16282-16286.	1.7	29
58	Insertion reactions of η^2 -diketiminato-stabilised calcium amides with 1,3-dialkylcarbodiimides. <i>Dalton Transactions</i> , 2008, , 4474.	1.6	28
59	Cobalt-Mediated, Enantioselective Synthesis of $\langle i \rangle C \langle /i \rangle \langle sub \rangle 2 \langle /sub \rangle$ and $\langle i \rangle C \langle /i \rangle \langle sub \rangle 1 \langle /sub \rangle$ Dienes. <i>Journal of the American Chemical Society</i> , 2010, 132, 16365-16367.	6.6	28
60	η^2 -Diketiminato C ⁺ H activation with heavier group 2 alkyls. <i>Dalton Transactions</i> , 2009, , 9715.	1.6	27
61	Yttrium-Catalyzed Amine ⁺ Silane Dehydrocoupling: Extended Reaction Scope with a Phosphorus-Based Ligand. <i>Organometallics</i> , 2015, 34, 4369-4375.	1.1	27
62	Breaking Carbon ⁺ Fluorine Bonds with Main Group Nucleophiles. <i>Synlett</i> , 2019, 30, 2233-2246.	1.0	27
63	Defluoroalkylation of sp ³ C ⁺ F Bonds of Industrially Relevant Hydrofluoroolefins. <i>Chemistry - A European Journal</i> , 2020, 26, 5365-5368.	1.7	26
64	Activation and Functionalization of C ⁺ C ⁺ Bonds of Alkylidene Cyclopropanes at Main Group Centers. <i>Journal of the American Chemical Society</i> , 2020, 142, 11967-11971.	6.6	25
65	Chemoselective C ⁺ C ⁺ Bond Activation of the Most Stable Ring in Biphenylene**. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 2619-2623.	7.2	25
66	Reactivity of [HC{(C(Me)N(Dipp))} ₂ Ca{N(SiMe ₃) ₂ }(THF)] (Dipp=C ₆ H ₃ iPr ₂ -2,6) with C ⁺ H acids: Synthesis of heteroleptic calcium η^5 -organometallics. <i>Journal of Organometallic Chemistry</i> , 2006, 691, 1242-1250.	0.8	24
67	Reversibility in the protonolysis of a η^2 -diketiminato stabilised calcium bis(trimethylsilyl)amide with benzylamine. <i>Dalton Transactions</i> , 2008, , 1292.	1.6	24
68	Palladium-catalysed magnesiation of benzene. <i>Chemical Communications</i> , 2018, 54, 12326-12328.	2.2	24
69	Repurposing of F-gases: challenges and opportunities in fluorine chemistry. <i>Chemical Society Reviews</i> , 2022, 51, 4977-4995.	18.7	24
70	Palladium ⁺ Catalysed C ⁺ H Bond Zincation of Arenes: Scope, Mechanism, and the Role of Heterometallic Intermediates. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 6145-6153.	7.2	23
71	Palladium ⁺ Catalyzed Carbon ⁺ Fluorine and Carbon ⁺ Hydrogen Bond Almination of Fluoroarenes and Heteroarenes. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 12687-12691.	7.2	22
72	Catalytic C ⁺ H to C ⁺ M (M = Al, Mg) bond transformations with heterometallic complexes. <i>Chemical Science</i> , 2021, 12, 1993-2000.	3.7	22

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73	Group 11 Borataalkene Complexes: Models for Alkene Activation. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 12013-12019.	7.2	21
74	Preparation and properties of a series of structurally diverse aluminium hydrides supported by β^2 -diketiminato and bis(amide) ligands. <i>Dalton Transactions</i> , 2013, 42, 15199.	1.6	20
75	Reversible insertion of CO into an aluminium-carbon bond. <i>Chemical Communications</i> , 2019, 55, 6181-6184.	2.2	20
76	Cooperative C-H Bond Activation by a Low-Spin d ⁶ Iron-Aluminum Complex. <i>Journal of the American Chemical Society</i> , 2022, 144, 8770-8777.	6.6	20
77	Palladium-catalysed C-F almination of fluorobenzenes: mechanistic diversity and origin of selectivity. <i>Chemical Science</i> , 2020, 11, 7842-7849.	3.7	19
78	Tunable Binding of Dinitrogen to a Series of Heterobimetallic Hydride Complexes. <i>Organometallics</i> , 2018, 37, 4521-4526.	1.1	18
79	Au(I) Catalyzed HF Transfer: Tandem Alkyne Hydrofluorination and Perfluoroarene Functionalization. <i>ACS Catalysis</i> , 2022, 12, 3411-3419.	5.5	18
80	A metal-amide dependent, catalytic C-H functionalisation of triphenylphosphonium methyllide. <i>Chemical Science</i> , 2013, 4, 691-695.	3.7	17
81	Defluorosilylation of Industrially Relevant Fluoroolefins Using Nucleophilic Silicon Reagents. <i>Angewandte Chemie</i> , 2019, 131, 12644-12648.	1.6	17
82	Complete deconstruction of SF ₆ by an aluminium compound. <i>Chemical Communications</i> , 2021, 57, 7096-7099.	2.2	17
83	Reactions of aluminium with transition metal carbonyls: scope, mechanism and selectivity of CO homologation. <i>Chemical Science</i> , 2021, 12, 14845-14854.	3.7	17
84	Heterobimetallic Rebound: A Mechanism for Diene-to-Alkyne Isomerization with M-Zr Hydride Complexes (M = Al, Zn, and Mg). <i>Organometallics</i> , 2018, 37, 949-956.	1.1	16
85	Unravelling nucleophilic aromatic substitution pathways with bimetallic nucleophiles. <i>Chemical Communications</i> , 2019, 55, 1805-1808.	2.2	16
86	[(TMEDA)Co(NO) ₂][BPh ₄]: A versatile synthetic entry point to four and five coordinate {Co(NO) ₂ } ₁₀ complexes. <i>Journal of Organometallic Chemistry</i> , 2011, 696, 3974-3981.	0.8	15
87	Binuclear β^2 -diketiminato complexes of copper. <i>Dalton Transactions</i> , 2017, 46, 2081-2090.	1.6	15
88	Organocatalyzed Fluoride Metathesis. <i>Organic Letters</i> , 2020, 22, 9351-9355.	2.4	15
89	Catalyst control of selectivity in the C-O bond almination of biomass derived furans. <i>Chemical Science</i> , 2020, 11, 7850-7857.	3.7	15
90	1 st row transition metal aluminylene complexes: preparation, properties and bonding analysis. <i>Dalton Transactions</i> , 2021, 50, 7810-7817.	1.6	15

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91	A Highly Chemoselective, Zr-Catalyzed C=O Bond Functionalization of Benzofuran. <i>Organometallics</i> , 2013, 32, 5260-5262.	1.1	14
92	Synthesis of [RuCl ₂ (NO) ₂ (THF)] and its Double C≡N Bond-Forming Reactions with Alkenes. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 4484-4487.	7.2	13
93	Wittig-olefination via an yttrium-coordinated betaine. <i>Chemical Communications</i> , 2012, 48, 1745.	2.2	13
94	Re-evaluating selectivity as a determining factor in peroxidative methane oxidation by multimetallic copper complexes. <i>Catalysis Science and Technology</i> , 2015, 5, 4108-4115.	2.1	13
95	Mild sp ² Carbon-Oxygen Bond Activation by an Isolable Ruthenium(II) Bis(dinitrogen) Complex: Experiment and Theory. <i>Organometallics</i> , 2017, 36, 3654-3663.	1.1	13
96	Dihydridoboranes: Selective Reagents for Hydroboration and Hydrodefluorination. <i>Organic Letters</i> , 2019, 21, 7289-7293.	2.4	13
97	Group 11 Borataalkene Complexes: Models for Alkene Activation. <i>Angewandte Chemie</i> , 2021, 133, 12120-12126.	1.6	13
98	Selective Hydrodefluorination of Hexafluoropropene to Industrially Relevant Hydrofluoroolefins. <i>Advanced Synthesis and Catalysis</i> , 2019, 361, 3351-3358.	2.1	12
99	Stereoisomerism of bis(η ² -Zincane) Complexes: Evidence for an Intramolecular Pathway. <i>Chemistry - A European Journal</i> , 2017, 23, 5682-5686.	1.7	11
100	Selective Reduction of CO ₂ to a Formate Equivalent with Heterobimetallic Gold-Copper Hydride Complexes. <i>Angewandte Chemie</i> , 2017, 129, 15323-15326.	1.6	11
101	The partial dehydrogenation of aluminium dihydrides. <i>Chemical Science</i> , 2019, 10, 8083-8093.	3.7	11
102	Trajectory of Approach of a Zinc-Hydrogen Bond to Transition Metals. <i>Angewandte Chemie</i> , 2016, 128, 16265-16268.	1.6	10
103	Palladium-Catalysed C-H Bond Zincation of Arenes: Scope, Mechanism, and the Role of Heterometallic Intermediates. <i>Angewandte Chemie</i> , 2021, 133, 6210-6218.	1.6	10
104	Functionalization and Hydrogenation of Carbon Chains Derived from CO ^{**} . <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	10
105	Magnesium-stabilised transition metal formyl complexes: structures, bonding, and ethenediolate formation. <i>Chemical Science</i> , 2022, 13, 6592-6598.	3.7	10
106	Synthesis and coordination chemistry of tri-substituted benzamidrazones. <i>Dalton Transactions</i> , 2011, 40, 514-522.	1.6	8
107	Yttrium-catalysed dehydrocoupling of alanes with amines. <i>Chemical Communications</i> , 2014, 50, 9536.	2.2	8
108	Isomerization of Cyclooctadiene to Cyclooctyne with a Zinc/Zirconium Heterobimetallic Complex. <i>Angewandte Chemie</i> , 2016, 128, 7065-7067.	1.6	8

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109	Isolation of an unusual [Cu ₆] nanocluster through sequential addition of copper(<i>scp</i>) to a polynucleating ligand. Dalton Transactions, 2017, 46, 2077-2080.	1.6	8
110	Defluorosilylation of trifluoromethane: upgrading an environmentally damaging fluorocarbon. Chemical Communications, 2020, 56, 12929-12932.	2.2	8
111	Preparation and characterisation of heterobimetallic copper-tungsten hydride complexes. Dalton Transactions, 2018, 47, 10595-10600.	1.6	7
112	Chemoselective C-C Bond Activation of the Most Stable Ring in Biphenylene**. Angewandte Chemie, 2021, 133, 2651-2655.	1.6	7
113	Palladium-Catalyzed Carbon-Fluorine and Carbon-Hydrogen Bond Almination of Fluoroarenes and Heteroarenes. Angewandte Chemie, 2017, 129, 12861-12865.	1.6	6
114	Enantioselective Synthesis of the Cyclopirolic Acid Family Using Sulfur Ylides. Angewandte Chemie, 2018, 130, 1360-1364.	1.6	5
115	Almination of aryl methyl ethers: switching between sp ² and sp ³ C-O bond functionalisation with Pd-catalysis. Chemical Communications, 2021, 57, 11673-11676.	2.2	4
116	Benzene rings broken for chemical synthesis. Nature, 2021, 597, 33-34.	13.7	2
117	Stereoselective insertion of cyclopropenes into Mg-Mg bonds. Chemical Communications, 2022, 58, 8282-8285.	2.2	1
118	Calcium-Mediated Intramolecular Hydroamination Catalysis.. ChemInform, 2005, 36, no.	0.1	0
119	Functionalization and Hydrogenation of Carbon Chains Derived from CO**. Angewandte Chemie, 0, , .	1.6	0