

Mark R Crimmin

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114
papers

4,326
citations

35
h-index

62
g-index

160
ext. papers

4,941
ext. citations

8.3
avg, IF

5.98
L-index

#	Paper	IF	Citations
114	Calcium-mediated intramolecular hydroamination catalysis. <i>Journal of the American Chemical Society</i> , 2005 , 127, 2042-3	16.4	345
113	Intramolecular hydroamination of aminoalkenes by calcium and magnesium complexes: a synthetic and mechanistic study. <i>Journal of the American Chemical Society</i> , 2009 , 131, 9670-85	16.4	237
112	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	2.4	228
111	Calcium-Catalyzed Intermolecular Hydrophosphination. <i>Organometallics</i> , 2007 , 26, 2953-2956	3.8	173
110	Heavier Group 2 Element Catalyzed Hydrophosphination of Carbodiimides. <i>Organometallics</i> , 2008 , 27, 497-499	3.8	129
109	Triazenide complexes of the heavier alkaline earths: synthesis, characterization, and suitability for hydroamination catalysis. <i>Inorganic Chemistry</i> , 2008 , 47, 7366-76	5.1	127
108	Heavier group 2 metals and intermolecular hydroamination: a computational and synthetic assessment. <i>Journal of the American Chemical Society</i> , 2009 , 131, 12906-7	16.4	125
107	Cation Charge Density and Precatalyst Selection in Group 2-Catalyzed Aminoalkene Hydroamination. <i>Organometallics</i> , 2011 , 30, 1493-1506	3.8	110
106	Heavier alkaline Earth amides as catalysts for the Tischenko reaction. <i>Organic Letters</i> , 2007 , 9, 331-3	6.2	95
105	Oxidative addition of carbon-fluorine and carbon-oxygen bonds to Al(I). <i>Chemical Communications</i> , 2015 , 51, 15994-6	5.8	93
104	Kinetic stability of heteroleptic (beta-diketiminato) heavier alkaline-earth (Ca, Sr, Ba) amides. <i>Dalton Transactions</i> , 2005 , 278-84	4.3	91
103	Homogeneous Catalysis with Organometallic Complexes of Group 2. <i>Topics in Organometallic Chemistry</i> , 2013 , 191-241	0.6	90
102	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, 11292-5	4.8	89
101	A step beyond the Feltham-Enemark notation: spectroscopic and correlated ab initio 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, 18785-801	16.4	83
100	Zirconocene dichloride catalyzed hydrodefluorination of C(sp ²)-F bonds. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 12559-63	16.4	81
99	Reactions of Fluoroalkenes with an Aluminium(I) Complex. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 6638-6642	16.4	72
98	Heavier Group-2-Element Catalyzed Hydroamination of Carbodiimides. <i>European Journal of Inorganic Chemistry</i> , 2008 , 2008, 4173-4179	2.3	72

97	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	9.4	65
96	Organometallic chemistry using partially fluorinated benzenes. <i>Chemical Communications</i> , 2017 , 53, 3615-3633	5.8	63
95	Beta-diketiminato calcium and magnesium amides; model complexes for hydroamination catalysis. <i>Inorganic Chemistry</i> , 2009 , 48, 4445-53	5.1	63
94	Trifluoromethyl coordination and C-F bond activation at calcium. <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 6339-42	16.4	59
93	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	16.4	58
92	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	3.8	55
91	EDiketiminato Calcium Acetylides: Synthesis, Solution Dimerization, and Catalytic Carbon-Carbon Bond Formation. <i>Organometallics</i> , 2008 , 27, 6300-6306	3.8	52
90	Heavier group 2 element-catalysed hydroamination of isocyanates. <i>Chemical Communications</i> , 2008 , 5206-8	5.8	51
89	Dimerization of EDiketiminato Calcium Complexes through Dihapto-Acetylide Ligation. <i>Organometallics</i> , 2005 , 24, 1184-1188	3.8	51
88	Magnesium, zinc, aluminium and gallium hydride complexes of the transition metals. <i>Chemical Communications</i> , 2017 , 53, 1348-1365	5.8	50
87	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	2.8	50
86	Room temperature catalytic carbon-hydrogen bond aluminium of unactivated arenes: mechanism and selectivity. <i>Chemical Science</i> , 2018 , 9, 5435-5440	9.4	49
85	Reversible alkene binding and allylic C-H activation with an aluminium(i) complex. <i>Chemical Science</i> , 2019 , 10, 2452-2458	9.4	47
84	Reactions of EDiketiminato-Stabilized Calcium Amides with 9-Borabicyclo[3.3.1]nonane (9-BBN). <i>Organometallics</i> , 2007 , 26, 4076-4079	3.8	42
83	A hexagonal planar transition-metal complex. <i>Nature</i> , 2019 , 574, 390-393	50.4	39
82	Reactions of Fluoroalkenes with an Aluminium(I) Complex. <i>Angewandte Chemie</i> , 2018 , 130, 6748-6752	3.6	38
81	Addition of aluminium, zinc and magnesium hydrides to rhodium(iii). <i>Chemical Science</i> , 2015 , 6, 5617-5624	7.4	38
80	Solution- and solid-state characterisation of a configurationally-stable beta-diketiminato-supported calcium primary amide. <i>Dalton Transactions</i> , 2004 , 3166-8	4.3	38

- 79 Beryllium derivatives of a phenyl-substituted β -diketiminato: a well-defined ring opening reaction of tetrahydrofuran. *Dalton Transactions*, **2013**, 42, 9720-6 4.3 35
- 78 Bis(diphenylphosphido) derivatives of the heavier group 2 elements. *Inorganic Chemistry*, **2007**, 46, 10419-5 3.5 35
- 77 Carbodiimide insertion reactions of homoleptic heavier alkaline earth amides and phosphides. *Dalton Transactions*, **2010**, 39, 7393-400 4.3 33
- 76 Carbon Chain Growth by Sequential Reactions of CO and CO with [W(CO)] and an Aluminum(I) Reductant. *Journal of the American Chemical Society*, **2018**, 140, 13614-13617 16.4 33
- 75 Enantioselective Synthesis of the Cyclopirozonic Acid Family Using Sulfur Ylides. *Angewandte Chemie - International Edition*, **2018**, 57, 1346-1350 16.4 32
- 74 Ligand-based carbon-nitrogen bond forming reactions of metal dinitrosyl complexes with alkenes and their application to C-H bond functionalization. *Accounts of Chemical Research*, **2014**, 47, 517-29 24.3 32
- 73 Zirconocene Dichloride Catalyzed Hydrodefluorination of C-F bonds. *Angewandte Chemie*, **2012**, 124, 12727-12731 3.6 32
- 72 Bis(σ -H) complexes of copper(I): precursors to a heterogeneous amine-borane dehydrogenation catalyst. *Dalton Transactions*, **2015**, 44, 12530-4 4.3 30
- 71 Catalytic hydroacetylenation of carbodiimides with homoleptic alkaline earth hexamethyldisilazides. *Dalton Transactions*, **2014**, 43, 14249-56 4.3 30
- 70 Functionalisation of Carbon-Fluorine Bonds with Main Group Reagents. *Synthesis*, **2017**, 49, 810-821 2.9 28
- 69 Weakly Coordinated Zinc and Aluminum π -Complexes of Copper(I). *Organometallics*, **2014**, 33, 2685-2688 3.8 28
- 68 Catalytic 2,3,4-hexatriene formation by terminal alkyne coupling at calcium. *Chemical Communications*, **2009**, 2299-301 5.8 28
- 67 Selective Reduction of CO to a Formate Equivalent with Heterobimetallic Gold-Copper Hydride Complexes. *Angewandte Chemie - International Edition*, **2017**, 56, 15127-15130 16.4 26
- 66 Defluorosilylation of Industrially Relevant Fluoroolefins Using Nucleophilic Silicon Reagents. *Angewandte Chemie - International Edition*, **2019**, 58, 12514-12518 16.4 26
- 65 Yttrium-Catalyzed Amine-Bilane Dehydrocoupling: Extended Reaction Scope with a Phosphorus-Based Ligand. *Organometallics*, **2015**, 34, 4369-4375 3.8 26
- 64 Synthesis of β -diketiminato calcium silylamides and their reactions with triethylaluminum. *New Journal of Chemistry*, **2010**, 34, 1572 3.6 26
- 63 Catalytic and Stoichiometric Cumulene Formation within Dimeric Group 2 Acetylides. *Organometallics*, **2013**, 32, 4961-4972 3.8 25
- 62 Insertion reactions of beta-diketiminato-stabilised calcium amides with 1,3-dialkylcarbodiimides. *Dalton Transactions*, **2008**, 4474-81 4.3 25

61	Rhodium Catalyzed, Carbon-Hydrogen Bond Directed Hydrodefluorination of Fluoroarenes. <i>Organometallics</i> , 2014 , 33, 7027-7030	3.8	24
60	Cobalt-mediated, enantioselective synthesis of C(2) and C(1) dienes. <i>Journal of the American Chemical Society</i> , 2010 , 132, 16365-7	16.4	24
59	Beta-diketiminato C-H activation with heavier group 2 alkyls. <i>Dalton Transactions</i> , 2009 , 9715-7	4.3	24
58	Reversible Coordination of Boron-, Aluminum-, Zinc-, Magnesium-, and Calcium-Hydrogen Bonds to Bent {CuL} Fragments: Heavy σ -Complexes of the Lightest Coinage Metal. <i>Inorganic Chemistry</i> , 2017 , 56, 8669-8682	5.1	23
57	Reversibility in the protonolysis of a beta-diketiminato stabilised calcium bis(trimethylsilyl)amide with benzylamine. <i>Dalton Transactions</i> , 2008 , 1292-4	4.3	23
56	Isomerization of Cyclooctadiene to Cyclooctyne with a Zinc/Zirconium Heterobimetallic Complex. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 6951-3	16.4	22
55	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 σ -organometallics. <i>Journal of Organometallic Chemistry</i> , 2006 , 691, 1242-1250	2.3	21
54	Reactions of an Aluminum(I) Reagent with 1,2-, 1,3-, and 1,5-Dienes: Dearomatization, Reversibility, and a Pericyclic Mechanism. <i>Inorganic Chemistry</i> , 2020 , 59, 4608-4616	5.1	20
53	Trajectory of Approach of a Zinc-Hydrogen Bond to Transition Metals. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 16031-16034	16.4	20
52	Reactions of Fluoroalkanes with Mg-Mg Bonds: Scope, sp C-F/sp C-F Coupling and Mechanism. <i>Chemistry - A European Journal</i> , 2018 , 24, 16282-16286	4.8	20
51	Preparation and properties of a series of structurally diverse aluminium hydrides supported by β -diketiminato and bis(amide) ligands. <i>Dalton Transactions</i> , 2013 , 42, 15199-206	4.3	18
50	Palladium-Catalyzed Carbon-Fluorine and Carbon-Hydrogen Bond Almination of Fluoroarenes and Heteroarenes. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 12687-12691	16.4	18
49	Breaking Carbon-Fluorine Bonds with Main Group Nucleophiles. <i>Synlett</i> , 2019 , 30, 2233-2246	2.2	16
48	A metal-amine dependent, catalytic C-H functionalisation of triphenylphosphonium methyllide. <i>Chemical Science</i> , 2013 , 4, 691-695	9.4	15
47	Activation and Functionalization of C-C σ -Bonds of Alkylidene Cyclopropanes at Main Group Centers. <i>Journal of the American Chemical Society</i> , 2020 , 142, 11967-11971	16.4	14
46	A Highly Chemoselective, Zr-Catalyzed C-H Bond Functionalization of Benzofuran. <i>Organometallics</i> , 2013 , 32, 5260-5262	3.8	14
45	Binuclear β -diketiminato complexes of copper(I). <i>Dalton Transactions</i> , 2017 , 46, 2081-2090	4.3	13
44	Cooperative strategies for CO homologation. <i>Dalton Transactions</i> , 2020 , 49, 16587-16597	4.3	13

43	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, 4484-7	16.4	13
42	Mild spCarbon-Oxygen Bond Activation by an Isolable Ruthenium(II) Bis(dinitrogen) Complex: Experiment and Theory. <i>Organometallics</i> , 2017 , 36, 3654-3663	3.8	12
41	Wittig-olefination via an yttrium-coordinated betaine. <i>Chemical Communications</i> , 2012 , 48, 1745-7	5.8	12
40	[(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	2.3	12
39	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	3.8	11
38	Palladium-catalysed C-F aluminatation of fluorobenzenes: mechanistic diversity and origin of selectivity. <i>Chemical Science</i> , 2020 , 11, 7842-7849	9.4	11
37	Palladium-catalysed magnesiation of benzene. <i>Chemical Communications</i> , 2018 , 54, 12326-12328	5.8	11
36	Selective Reduction of CO ₂ to a Formate Equivalent with Heterobimetallic Gold--Copper Hydride Complexes. <i>Angewandte Chemie</i> , 2017 , 129, 15323-15326	3.6	10
35	Unravelling nucleophilic aromatic substitution pathways with bimetallic nucleophiles. <i>Chemical Communications</i> , 2019 , 55, 1805-1808	5.8	10
34	Reversible insertion of CO into an aluminium-carbon bond. <i>Chemical Communications</i> , 2019 , 55, 6181-6184	3.4	10
33	Defluoroalkylation of sp C-F Bonds of Industrially Relevant Hydrofluoroolefins. <i>Chemistry - A European Journal</i> , 2020 , 26, 5365-5368	4.8	10
32	Tunable Binding of Dinitrogen to a Series of Heterobimetallic Hydride Complexes. <i>Organometallics</i> , 2018 , 37, 4521-4526	3.8	10
31	Chemoselective C-C Bond Activation of the Most Stable Ring in Biphenylene*. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 2619-2623	16.4	10
30	Catalytic C-H to C-M (M = Al, Mg) bond transformations with heterometallic complexes. <i>Chemical Science</i> , 2020 , 12, 1993-2000	9.4	10
29	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	5.5	9
28	Isolation of an unusual [Cu] nanocluster through sequential addition of copper(i) to a polynucleating ligand. <i>Dalton Transactions</i> , 2017 , 46, 2077-2080	4.3	8
27	Dihydridoboranes: Selective Reagents for Hydroboration and Hydrodefluorination. <i>Organic Letters</i> , 2019 , 21, 7289-7293	6.2	8
26	Defluorosilylation of Industrially Relevant Fluoroolefins Using Nucleophilic Silicon Reagents. <i>Angewandte Chemie</i> , 2019 , 131, 12644-12648	3.6	8

25	Synthesis and coordination chemistry of tri-substituted benzamidrazones. <i>Dalton Transactions</i> , 2011 , 40, 514-22	4.3	8
24	Group 11 Borataalkene Complexes: Models for Alkene Activation. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 12013-12019	16.4	8
23	Isomerization of Cyclooctadiene to Cyclooctyne with a Zinc/Zirconium Heterobimetallic Complex. <i>Angewandte Chemie</i> , 2016 , 128, 7065-7067	3.6	8
22	Yttrium-catalysed dehydrocoupling of alanes with amines. <i>Chemical Communications</i> , 2014 , 50, 9536-8	5.8	7
21	Defluorosilylation of trifluoromethane: upgrading an environmentally damaging fluorocarbon. <i>Chemical Communications</i> , 2020 , 56, 12929-12932	5.8	7
20	Stereoisomerism of bis(Zincane) Complexes: Evidence for an Intramolecular Pathway. <i>Chemistry - A European Journal</i> , 2017 , 23, 5682-5686	4.8	6
19	Selective Hydrodefluorination of Hexafluoropropene to Industrially Relevant Hydrofluoroolefins. <i>Advanced Synthesis and Catalysis</i> , 2019 , 361, 3351-3358	5.6	6
18	Catalyst control of selectivity in the C-O bond almination of biomass derived furans. <i>Chemical Science</i> , 2020 , 11, 7850-7857	9.4	6
17	Trajectory of Approach of a Zinc-Hydrogen Bond to Transition Metals. <i>Angewandte Chemie</i> , 2016 , 128, 16265-16268	3.6	6
16	Organocatalyzed Fluoride Metathesis. <i>Organic Letters</i> , 2020 , 22, 9351-9355	6.2	6
15	Group 11 Borataalkene Complexes: Models for Alkene Activation. <i>Angewandte Chemie</i> , 2021 , 133, 12120-12126	5.12	6
14	Enantioselective Synthesis of the Cyclopiazonic Acid Family Using Sulfur Ylides. <i>Angewandte Chemie</i> , 2018 , 130, 1360-1364	3.6	5
13	The partial dehydrogenation of aluminium dihydrides. <i>Chemical Science</i> , 2019 , 10, 8083-8093	9.4	5
12	Palladium-Catalyzed Carbon-Fluorine and Carbon-Hydrogen Bond Almination of Fluoroarenes and Heteroarenes. <i>Angewandte Chemie</i> , 2017 , 129, 12861-12865	3.6	4
11	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	16.4	4
10	Complete deconstruction of SF by an aluminium(I) compound. <i>Chemical Communications</i> , 2021 , 57, 7096-7099	5.899	4
9	Preparation and characterisation of heterobimetallic copper-tungsten hydride complexes. <i>Dalton Transactions</i> , 2018 , 47, 10595-10600	4.3	4
8	1 row transition metal aluminylene complexes: preparation, properties and bonding analysis. <i>Dalton Transactions</i> , 2021 , 50, 7810-7817	4.3	4

7	Palladium-Catalysed C-H Bond Zincation of Arenes: Scope, Mechanism, and the Role of Heterometallic Intermediates. <i>Angewandte Chemie</i> , 2021 , 133, 6210-6218	3.6	3
6	Repurposing of F-gases: challenges and opportunities in fluorine chemistry. <i>Chemical Society Reviews</i> ,	58.5	2
5	Reactions of aluminium(i) with transition metal carbonyls: scope, mechanism and selectivity of CO homologation. <i>Chemical Science</i> , 2021 , 12, 14845-14854	9.4	1
4	Chemoselective C-H Bond Activation of the Most Stable Ring in Biphenylene**. <i>Angewandte Chemie</i> , 2021 , 133, 2651-2655	3.6	1
3	Alumination of aryl methyl ethers: switching between sp and sp C-O bond functionalisation with Pd-catalysis. <i>Chemical Communications</i> , 2021 , 57, 11673-11676	5.8	0
2	Au(I) Catalyzed HF Transfer: Tandem Alkyne Hydrofluorination and Perfluoroarene Functionalization.. <i>ACS Catalysis</i> , 2022 , 12, 3411-3419	13.1	0
1	Synthesis of [RuCl ₂ (NO) ₂ (THF)] and its Double C-N Bond-Forming Reactions with Alkenes. <i>Angewandte Chemie</i> , 2011 , 123, 4576-4579	3.6	