Aaron D Sadow

List of Publications by Year
in descending order

107 papers	4,900 citations	81889 39 h-index	102480 66 g-index
115 all docs	115 docs citations	115 times ranked	3813 citing authors

#	Article	IF	Citations
1	Upcycling Single-Use Polyethylene into High-Quality Liquid Products. ACS Central Science, 2019, 5, 1795-1803.	11.3	283
2	Catalytic upcycling of high-density polyethylene via a processive mechanism. Nature Catalysis, 2020, 3, 893-901.	34.4	262
3	Magnesium-catalyzed hydroboration of esters: evidence for a new zwitterionic mechanism. Chemical Science, 2014, 5, 959-964.	7.4	171
4	Nickel(II)-Catalyzed Highly Enantioselective Hydrophosphination of Methacrylonitrile. Journal of the American Chemical Society, 2004, 126, 14704-14705.	13.7	164
5	Dynamic Nuclear Polarization Solid-State NMR in Heterogeneous Catalysis Research. ACS Catalysis, 2015, 5, 7055-7062.	11.2	160
6	Enantioselective Addition of Secondary Phosphines to Methacrylonitrile:Â Catalysis and Mechanism. Journal of the American Chemical Society, 2005, 127, 17012-17024.	13.7	159
7	Homogeneous Catalysis with Methane. A Strategy for the Hydromethylation of Olefins Based on the Nondegenerate Exchange of Alkyl Groups and Ïƒ-Bond Metathesis at Scandium. Journal of the American Chemical Society, 2003, 125, 7971-7977.	13.7	148
8	Synthesis and Characterization of Scandium Silyl Complexes of the Type Cp*2ScSiHRRâ€˜. Ïƒ-Bond Metathesis Reactions and Catalytic Dehydrogenative Silation of Hydrocarbons. Journal of the American Chemical Society, 2005, 127, 643-656.	13.7	142
9	Tris(oxazolinyl)boratomagnesium-Catalyzed Cross-Dehydrocoupling of Organosilanes with Amines, Hydrazine, and Ammonia. Journal of the American Chemical Society, 2011, 133, 16782-16785.	13.7	139
10	Catalytic Functionalization of Hydrocarbons by Ïƒ-Bond-Metathesis Chemistry: Dehydrosilylation of Methane with a Scandium Catalyst. Angewandte Chemie - International Edition, 2003, 42, 803-805.	13.8	126
11	Magnesium-Catalyzed Mild Reduction of Tertiary and Secondary Amides to Amines. ACS Catalysis, 2015, 5, 4219-4226.	11.2	122
12	Selective Hydrogenation of Phenol Catalyzed by Palladium on High-Surface-Area Ceria at Room Temperature and Ambient Pressure. ACS Catalysis, 2015, 5, 2051-2061.	11.2	120
13	Concerted Câ€“N and Câ€“H Bond Formation in a Magnesium-Catalyzed Hydroamination. Journal of the American Chemical Society, 2010, 132, 17680-17683.	13.7	116
14	A Highly Enantioselective Zirconium Catalyst for Intramolecular Alkene Hydroamination: Significant Isotope Effects on Rate and Stereoselectivity. Angewandte Chemie - International Edition, 2011, 50, 1865-1868.	13.8	112
15	Lewis Acid-Mediated Î²-Hydride Abstraction Reactions of Divalent M(C(SiHMe₂)₃)₂THF₂ (M = Ca, Yb). Journal of the American Chemical Society, 2009, 131, 15110-15111.	13.7	91
16	Role Of CO₂ As a Soft Oxidant For Dehydrogenation of Ethylbenzene to Styrene over a High-Surface-Area Ceria Catalyst. ACS Catalysis, 2015, 5, 6426-6435.	11.2	90
17	Acceptorless Photocatalytic Dehydrogenation for Alcohol Decarbonylation and Imine Synthesis. Angewandte Chemie - International Edition, 2012, 51, 8607-8610.	13.8	89
18	Mesoporous Silica-Supported Amidozirconium-Catalyzed Carbonyl Hydroboration. ACS Catalysis, 2015, 5, 7399-7414.	11.2	87

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19	Coordinatively Saturated Tris(oxazolinyl)borato Zinc Hydride-Catalyzed Cross Dehydrocoupling of Silanes and Alcohols. ACS Catalysis, 2011, 1, 698-702.	11.2	86
20	Palladiumâ€Catalyzed Enantioselective Allylic Phosphination. Angewandte Chemie - International Edition, 2008, 47, 4878-4881.	13.8	80
21	Optically active, bulky tris(oxazolinyl)borato magnesium and calcium compounds for asymmetric hydroamination/cyclization. Journal of Organometallic Chemistry, 2011, 696, 228-234.	1.8	80
22	Highly Enantioselective Zirconium-Catalyzed Cyclization of Aminoalkenes. Journal of the American Chemical Society, 2013, 135, 7235-7250.	13.7	77
23	Concerted Câ€“N/Câ€“H Bond Formation in Highly Enantioselective Yttrium(III)-Catalyzed Hydroamination. ACS Catalysis, 2011, 1, 1637-1642.	11.2	67
24	A zwitterionic zirconium complex that catalyzes hydroamination of aminoalkenes at room temperature. Chemical Communications, 2010, 46, 339-341.	4.1	64
25	Intermolecular Î²-Hydrogen Abstraction in Ytterbium, Calcium, and Potassium Tris(dimethylsilyl)methyl Compounds. Organometallics, 2013, 32, 1300-1316.	2.3	63
26	Cationic Hafnium Silyl Complexes and Their Enhanced Reactivity in Ïƒ-Bond Metathesis Processes with Siâ€H and Câ€H Bonds. Journal of the American Chemical Society, 2003, 125, 9462-9475.	13.7	61
27	Size-Controlled Nanoparticles Embedded in a Mesoporous Architecture Leading to Efficient and Selective Hydrogenolysis of Polyolefins. Journal of the American Chemical Society, 2022, 144, 5323-5334.	13.7	60
28	Interconverting Lanthanum Hydride and Borohydride Catalysts for C=O Reduction and Câ€O Bond Cleavage. Angewandte Chemie - International Edition, 2019, 58, 2505-2509.	13.8	53
29	Conversion of a Zinc Disilazide to a Zinc Hydride Mediated by LiCl. Journal of the American Chemical Society, 2010, 132, 7582-7583.	13.7	52
30	Direct 3D Printing of Catalytically Active Structures. ACS Catalysis, 2017, 7, 7567-7577.	11.2	51
31	Catalytic carbon-carbon bond cleavage and carbon-element bond formation give new life for polyolefins as biodegradable surfactants. CheM, 2021, 7, 1347-1362.	11.7	50
32	Magnesium-catalyzed hydrosilylation of Î±,Î²-unsaturated esters. Chemical Science, 2015, 6, 6901-6907.	7.4	49
33	A New Scorpionate Ligand: Tris(4,4-dimethyl-2-oxazolinyl)borate and Its Zirconium(IV) Complexes. Organometallics, 2008, 27, 2399-2401.	2.3	48
34	Remarkably Robust Monomeric Alkylperoxyzinc Compounds from Tris(oxazolinyl)boratozinc Alkyls and O₂. Journal of the American Chemical Society, 2012, 134, 13018-13026.	13.7	48
35	Homoleptic Divalent Dialkyl Lanthanide-Catalyzed Cross-Dehydrocoupling of Silanes and Amines. Organometallics, 2016, 35, 1674-1683.	2.3	48
36	Enhanced Reactivity of Cationic Hafnocene Complexes toward Ïƒ-Bond Metathesis Reactions. Siâ€H and Siâ€C Bond Activations in Stoichiometric and Catalytic Organosilane Conversions. Organometallics, 2003, 22, 3577-3585.	2.3	46

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37	Enhanced Reactivity of Cationic vs Neutral Hafnocene Complexes in Stoichiometric and Catalytic Ïƒ-Bond Metathesis Reactions Involving Siâˆ’H and Siâˆ’C Bonds. Organometallics, 2001, 20, 4457-4459.	2.3	43
38	Zirconium-Catalyzed Desymmetrization of Aminodialkenes and Aminodialkynes through Enantioselective Hydroamination. Journal of the American Chemical Society, 2015, 137, 425-435.	13.7	43
39	Activation of Arene Câˆ’H Bonds by a Cationic Hafnium Silyl Complex Possessing an Î±-Agostic Siâˆ’H Interaction. Journal of the American Chemical Society, 2002, 124, 6814-6815.	13.7	41
40	Ligand Exchange Reactions and Hydroamination with Tris(oxazolinyl)borato Yttrium Compounds. Inorganic Chemistry, 2009, 48, 8020-8029.	4.0	37
41	Toward hydrogen economy: Selective guaiacol hydrogenolysis under ambient hydrogen pressure. Applied Catalysis B: Environmental, 2020, 270, 118890.	20.2	37
42	Effects of biradical deuteration on the performance of DNP: towards better performing polarizing agents. Physical Chemistry Chemical Physics, 2016, 18, 65-69.	2.8	34
43	Bis(oxazolinyl)phenylborane: A Lewis acid-containing ligand for methide abstraction-based coordination to aluminum(III). Dalton Transactions, 2010, 39, 641-653.	3.3	32
44	In Silico Design of DNP Polarizing Agents: Can Current Dinitroxides Be Improved?. ChemPhysChem, 2017, 18, 2279-2287.	2.1	32
45	A tris(alkyl)yttrium compound containing six Î²-agostic Siâ€“H interactions. Chemical Communications, 2009, , 656-658.	4.1	28
46	Mild partial deoxygenation of esters catalyzed by an oxazolinylborate-coordinated rhodium silylene. Dalton Transactions, 2015, 44, 15897-15904.	3.3	28
47	Organometallic Complexes of Bulky, Optically Active, C₃-Symmetric Tris(4S-isopropyl-5,5-dimethyl-2-oxazolinyl)phenylborate (To^P*). Organometallics, 2015, 34, 3508-3519.	2.3	28
48	Improved strategies for DNP-enhanced 2D 1H-X heteronuclear correlation spectroscopy of surfaces. Solid State Nuclear Magnetic Resonance, 2017, 87, 38-44.	2.3	27
49	Transition metal-like carbocatalyst. Nature Communications, 2020, 11, 4091.	12.8	27
50	Direct ¹⁷O dynamic nuclear polarization of single-site heterogeneous catalysts. Chemical Communications, 2018, 54, 3472-3475.	4.1	26
51	Enhancing the Sensitivity of Solid-State NMR Experiments with Very Low Gyromagnetic Ratio Nuclei with Fast Magic Angle Spinning and Proton Detection. Journal of Physical Chemistry A, 2018, 122, 5635-5643.	2.5	26
52	Lewis Base Mediated Î²-Elimination and Lewis Acid Mediated Insertion Reactions of Disilazido Zirconium Compounds. Journal of the American Chemical Society, 2013, 135, 15225-15237.	13.7	25
53	Î²-SiH-Containing Tris(silazido) Rare-Earth Complexes as Homogeneous and Grafted Single-Site Catalyst Precursors for Hydroamination. Organometallics, 2017, 36, 1142-1153.	2.3	25
54	Two-step conversion of Kraft lignin to nylon precursors under mild conditions. Green Chemistry, 2020, 22, 4676-4682.	9.0	25

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55	Synthetic Lubricants Derived from Plastic Waste and their Tribological Performance. ChemSusChem, 2021, 14, 4181-4189.	6.8	25
56	Nonclassical Î²-Hydrogen Elimination of Hydrosilazido Zirconium Compounds via Direct Hydrogen Transfer. Journal of the American Chemical Society, 2012, 134, 9154-9156.	13.7	24
57	Ceriumâ€Catalyzed Hydrosilylation of Acrylates to Give Î±â€Silyl Esters. Angewandte Chemie - International Edition, 2017, 56, 628-631.	13.8	24
58	Silica-Supported Organolanthanum Catalysts for Câ€“O Bond Cleavage in Epoxides. Journal of the American Chemical Society, 2020, 142, 2935-2947.	13.7	23
59	Reactions of Tris(oxazolinyl)phenylborato Rhodium(I) with Câ^'X (X = Cl, Br, OTf) Bonds: Stereoselective Intermolecular Oxidative Addition. Organometallics, 2010, 29, 4105-4114.	2.3	22
60	Homoleptic Trivalent Tris(alkyl) Rare Earth Compounds. Journal of the American Chemical Society, 2017, 139, 16862-16874.	13.7	22
61	Title is missing!. Angewandte Chemie, 2003, 115, 827-829.	2.0	21
62	Easily Prepared Chiral Scorpionates: Tris(2-oxazolinyl)boratoiridium(I) Compounds and Their Interactions with MeOTf. Inorganic Chemistry, 2008, 47, 10208-10210.	4.0	21
63	Divergent reaction pathways of tris(oxazolinyl)borato zinc and magnesium silyl compounds. Chemical Communications, 2013, 49, 4334-4336.	4.1	21
64	A Quasi-Atomic Analysis of Three-Center Two-Electron Zrâ€“Hâ€“Si Interactions. Journal of Physical Chemistry A, 2018, 122, 9653-9669.	2.5	21
65	Suppressing 1H Spin Diffusion in Fast MAS Proton Detected Heteronuclear Correlation Solid-State NMR Experiments. Solid State Nuclear Magnetic Resonance, 2020, 105, 101636.	2.3	19
66	Polymer-mounted N3P(MeNCH2CH2)3N: a green, efficient and recyclable catalyst for room-temperature transesterifications and amidations of unactivated esters. Tetrahedron Letters, 2011, 52, 6523-6529.	1.4	18
67	Synthesis and Oxidation Catalysis of [Tris(oxazolinyl)borato]cobalt(II) Scorpionates. European Journal of Inorganic Chemistry, 2016, 2016, 2486-2494.	2.0	18
68	Rare Earth and Main Group Metal Poly(hydrosilyl) Compounds. Organometallics, 2017, 36, 4546-4557.	2.3	18
69	Oxygen insertion reactions of mixed N-heterocyclic carbeneâ€“oxazolinylborato zinc alkyl complexes. Dalton Transactions, 2014, 43, 14368-14376.	3.3	17
70	Interconverting Lanthanum Hydride and Borohydride Catalysts for C=O Reduction and Câ^'O Bond Cleavage. Angewandte Chemie, 2019, 131, 2527-2531.	2.0	17
71	Cyclopentadienyl-bis(oxazoline) Magnesium and Zirconium Complexes in Aminoalkene Hydroaminations. Organometallics, 2015, 34, 5566-5575.	2.3	16
72	Zwitterionic Trivalent (Alkyl)lanthanide Complexes in Ziegler-Type Butadiene Polymerization. ACS Catalysis, 2019, 9, 827-838.	11.2	16

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73	Structure, bonding, and ligand-based reactions of zwitterionic boratoiridium(I) complexes with oxazolinyl scorpionate ligands. Inorganica Chimica Acta, 2009, 362, 4517-4525.	2.4	15
74	Anodic electrochemistry of Mn and Re tricarbonyl complexes of tris(oxazolinyl)phenyl borate ligands: comparison to tris(pyrazolyl) borate complexes. New Journal of Chemistry, 2011, 35, 2169.	2.8	15
75	Synthesis of Monomeric Fe(II) and Ru(II) Complexes of Tetradentate Phosphines. Inorganic Chemistry, 2011, 50, 3010-3016.	4.0	14
76	Mixed N-Heterocyclic Carbeneâ€“Bis(oxazolinyl)borato Rhodium and Iridium Complexes in Photochemical and Thermal Oxidative Addition Reactions. Organometallics, 2014, 33, 6840-6860.	2.3	14
77	Homoleptic organolanthanide compounds supported by the bis(dimethylsilyl)benzyl ligand. Chemical Communications, 2017, 53, 716-719.	4.1	13
78	Palladium(II)-Catalyzed Carbonylation of Alkane Dinitrite Esters to Polyoxalates. Organometallics, 1997, 16, 1339-1342.	2.3	12
79	Palladium(II)-Catalyzed Terpolymerization of Alkane-Î±,Ï‰-Dinitrite Esters, Alkenes, and Carbon Monoxide to Polysuccinates. Organometallics, 1997, 16, 5659-5663.	2.3	11
80	Piano-Stool Lutetium Amido and Imido Compounds Supported by a Constrained Bis(oxazoline)cyclopentadienyl Ligand. Inorganic Chemistry, 2015, 54, 6938-6946.	4.0	11
81	Cobalt(<scp>ii</scp>) acyl intermediates in carbonâ€“carbon bond formation and oxygenation. Dalton Transactions, 2018, 47, 12147-12161.	3.3	11
82	Allylic Câ€“H bond activation and functionalization mediated by tris(oxazolinyl)borato rhodium(i) and iridium(i) compounds. Dalton Transactions, 2011, 40, 6500.	3.3	10
83	Direct hydrosilylation by a zirconacycle with Î²-hydrogen. Dalton Transactions, 2014, 43, 8644-8653.	3.3	10
84	Surface ligands enhance the catalytic activity of supported Au nanoparticles for the aerobic Î±-oxidation of amines to amides. Catalysis Science and Technology, 2022, 12, 1922-1933.	4.1	10
85	Câ€“H bond activation of ethylene by a zirconacycle. Chemical Communications, 2013, 49, 3212.	4.1	9
86	Nucleophilicity of Neutral versus Cationic Magnesium Silyl Compounds. Organometallics, 2013, 32, 6834-6843.	2.3	9
87	Observing the three-dimensional dynamics of supported metal complexes. Inorganic Chemistry Frontiers, 2021, 8, 1416-1431.	6.0	9
88	Î²-SiH rich zinc silyl compounds: Reductive elimination and Î²-hydrogen abstraction. Inorganica Chimica Acta, 2014, 422, 134-140.	2.4	8
89	Ceriumâ€Catalyzed Hydrosilylation of Acrylates to Give Î±â€Silyl Esters. Angewandte Chemie, 2017, 129, 643-646.	2.0	8
90	Determining the Three-Dimensional Structures of Silica-Supported Metal Complexes from the Ground Up. Inorganic Chemistry, 2022, 61, 1067-1078.	4.0	8

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91	Hydrosilane Ïƒâ€Adduct Intermediates in an Adaptive Zincâ€Catalyzed Crossâ€dehydrocoupling of Siâ^'H and Oâ^'H Bonds. Chemistry - A European Journal, 2021, 27, 10428-10436.	3.3	7
92	Palladium and rhodium complexes containing 1,3-bis(oxazolinyl)propyl (Probox) ligands: Macrocycles and pincer compounds. Polyhedron, 2010, 29, 544-552.	2.2	6
93	Rapid and ordered carbonylation and oxygenation of a cobalt(<scp>ii</scp>) methyl. Chemical Communications, 2017, 53, 11020-11023.	4.1	5
94	Alkynylaluminum Synthesis Catalyzed by a Zwitterionic Neodymium(III) Heterobimetallic Compound. Organometallics, 2018, 37, 4409-4414.	2.3	5
95	Rare earth arylsilazido compounds with inequivalent secondary interactions. Chemical Communications, 2018, 54, 7318-7321.	4.1	4
96	Rareâ€Earth Catalyzed Câ^'H Bond Alumination of Terminal Alkynes. Chemistry - A European Journal, 2020, 26, 5479-5493.	3.3	4
97	CO Displacement in an Oxidative Addition of Primary Silanes to Rhodium(I). Inorganic Chemistry, 2019, 58, 3815-3824.	4.0	3
98	Supported Lanthanum Borohydride Catalyzes CH Borylation Inside Zeolite Micropores. Angewandte Chemie - International Edition, 2022, 61, .	13.8	3
99	Dipolar Heteronuclear Correlation Solid-State NMR Experiments between Half-Integer Quadrupolar Nuclei: The Case of ¹¹Bâ€“¹⁷O. Journal of Physical Chemistry C, 2022, 126, 11652-11666.	3.1	3
100	Virtual Special Issue on Catalysis at the U.S. Department of Energyâ€™s National Laboratories. ACS Catalysis, 2016, 6, 3227-3235.	11.2	2
101	Redox Chemistry of Bis(oxazolinyl)cyclopentadienyl and -fluorenyl Rhodium and Iridium Organometallic Compounds. Organometallics, 2018, 37, 4055-4069.	2.3	2
102	Ancillary Steric Effects on the Activation of SiH Bonds in Arylsilazido Rare-Earth Compounds. Organometallics, 2021, 40, 1654-1669.	2.3	2
103	Supported Lanthanum Borohydride Catalyzes CH Borylation Inside Zeolite Micropores. Angewandte Chemie, 2022, 134, .	2.0	2
104	Substituent-Enhanced Intermolecular Catalytic Ene-yne Metathesis for Efficient 1,3-Diene Synthesis. ACS Catalysis, 2022, 12, 226-234.	11.2	2
105	Heteroleptic Four-Coordinate Tris(oxazolinyl)borato Iron(II) Compounds. Inorganic Chemistry, 2019, 58, 6044-6051.	4.0	1
106	Synthesis and Characterization of Tris(oxazolinyl)borato Copper(II) and Copper(I) Complexes. Helvetica Chimica Acta, 2021, 104, e2000209.	1.6	0
107	Reversible Ligand Protonation in Noninnocent Constrained-Geometry-Like Group 4 Complexes. Organometallics, 2022, 41, 141-154.	2.3	0