

Frédéric-Georges Fontaine

List of Publications by Year in descending order

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papers

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101384

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docs citations

103
times ranked

3767
citing authors

#	ARTICLE	IF	CITATIONS
1	Metal-free catalytic C-H bond activation and borylation of heteroarenes. <i>Science</i> , 2015, 349, 513-516.	6.0	379
2	A Highly Active Phosphine-Borane Organocatalyst for the Reduction of CO ₂ to Methanol Using Hydroboranes. <i>Journal of the American Chemical Society</i> , 2013, 135, 9326-9329.	6.6	304
3	Reducing CO ₂ to Methanol Using Frustrated Lewis Pairs: On the Mechanism of Phosphine-Borane-Mediated Hydroboration of CO ₂ . <i>Journal of the American Chemical Society</i> , 2014, 136, 10708-10717.	6.6	204
4	Coordination Chemistry of Neutral (L) _n Z Amphoteric and Ambiphilic Ligands. <i>European Journal of Inorganic Chemistry</i> , 2008, 2008, 5439-5454.	1.0	176
5	Reactivity of Lewis pairs (R ₂ PCH ₂ AlMe ₂) ₂ with carbon dioxide. <i>Chemical Communications</i> , 2011, 47, 11131.	2.2	140
6	Rational Synthesis of Metal-Organic Framework Nanocubes and Nanosheets Using Selective Modulators and Their Morphology-Dependent Gas-Sorption Properties. <i>Crystal Growth and Design</i> , 2012, 12, 3091-3095.	1.4	131
7	Transition-Metal-Free Catalytic Reduction of Carbon Dioxide. <i>Chemistry - A European Journal</i> , 2014, 20, 2990-2996.	1.7	126
8	Intramolecular B/N frustrated Lewis pairs and the hydrogenation of carbon dioxide. <i>Chemical Communications</i> , 2015, 51, 9797-9800.	2.2	123
9	Me ₂ AlCH ₂ PMe ₂ : A New, Bifunctional Cocatalyst for the Ni(II)-Catalyzed Oligomerization of PhSiH ₃ . <i>Journal of the American Chemical Society</i> , 2004, 126, 8786-8794.	6.6	113
10	A Tris(triphenylphosphine)aluminum Ambiphilic Precatalyst for the Reduction of Carbon Dioxide with Catecholborane. <i>Organometallics</i> , 2013, 32, 6804-6811.	1.1	112
11	Hydroboration of Carbon Dioxide Using Ambiphilic Phosphine-Borane Catalysts: On the Role of the Formaldehyde Adduct. <i>ACS Catalysis</i> , 2015, 5, 2513-2520.	5.5	112
12	Metal-Free Borylation of Heteroarenes Using Ambiphilic Aminoboranes: On the Importance of Sterics in Frustrated Lewis Pair C-H Bond Activation. <i>Journal of the American Chemical Society</i> , 2017, 139, 14714-14723.	6.6	101
13	Ambiphilic Molecules: From Organometallic Curiosity to Metal-Free Catalysts. <i>Accounts of Chemical Research</i> , 2018, 51, 454-464.	7.6	99
14	Design principles in frustrated Lewis pair catalysis for the functionalization of carbon dioxide and heterocycles. <i>Coordination Chemistry Reviews</i> , 2017, 334, 124-135.	9.5	92
15	On the concept of frustrated Lewis pairs. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20170004.	1.6	92
16	Bench-stable frustrated Lewis pair chemistry: fluoroborate salts as precatalysts for the C-H borylation of heteroarenes. <i>Chemical Communications</i> , 2016, 52, 5387-5390.	2.2	84
17	A Route to Bimodal Micro-Mesoporous Metal-Organic Frameworks Nanocrystals. <i>Crystal Growth and Design</i> , 2012, 12, 1008-1013.	1.4	81
18	Hydrosilylation of alkenes and ketones catalyzed by nickel(II) indenyl complexes. <i>Canadian Journal of Chemistry</i> , 2003, 81, 1299-1306.	0.6	78

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19	Recent Advances in the Separation of Rare Earth Elements Using Mesoporous Hybrid Materials. <i>Chemical Record</i> , 2018, 18, 1261-1276.	2.9	73
20	Highly Efficient and Selective Recovery of Rare Earth Elements Using Mesoporous Silica Functionalized by Preorganized Chelating Ligands. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 38584-38593.	4.0	72
21	Direct heteroarylation polymerization: guidelines for defect-free conjugated polymers. <i>Chemical Science</i> , 2017, 8, 3913-3925.	3.7	70
22	Phosphazenes: efficient organocatalysts for the catalytic hydrosilylation of carbon dioxide. <i>Chemical Communications</i> , 2015, 51, 6858-6861.	2.2	69
23	Polyhydrido(silylene)osmium and Silyl(dinitrogen)ruthenium Products Through Redistribution of Phenylsilane with Osmium and Ruthenium Pincer Complexes. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 216-219.	7.2	66
24	Dehydrogenative Oligomerization of PhSiH ₃ Catalyzed by (1-Me-Indenyl)Ni(PR ₃)(Me). <i>Organometallics</i> , 2002, 21, 401-408.	1.1	59
25	Lewis base activation of borane-dimethylsulfide into strongly reducing ion pairs for the transformation of carbon dioxide to methoxyboranes. <i>Chemical Communications</i> , 2014, 50, 11362-11365.	2.2	58
26	Isodesmic C-H Borylation: Perspectives and Proof of Concept of Transfer Borylation Catalysis. <i>Journal of the American Chemical Society</i> , 2019, 141, 12305-12311.	6.6	56
27	Nickel indenyl complexes as precatalysts for dehydropolymerization of phenylsilane. <i>Chemical Communications</i> , 1998, , 1253-1254.	2.2	55
28	Coordination of a Bifunctional Ligand to a Rhodium(III) Dimethyl Complex: Lewis Acidity Enhancement by Chelation. <i>Organometallics</i> , 2007, 26, 3807-3815.	1.1	52
29	Metal-free reduction of CO ₂ . <i>Current Opinion in Green and Sustainable Chemistry</i> , 2017, 3, 28-32.	3.2	51
30	Selective recovery of rare earth elements using chelating ligands grafted on mesoporous surfaces. <i>RSC Advances</i> , 2015, 5, 103782-103789.	1.7	47
31	Spontaneous Reduction of a Hydroborane To Generate a B-B Single Bond by the Use of a Lewis Pair. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 12722-12726.	7.2	47
32	Control of Selectivity in the Hydromethylation of Olefins via Ligand Modification in Scandocene Catalysts. <i>Organometallics</i> , 2005, 24, 4340-4342.	1.1	45
33	Aluminium complexes bearing functionalized trisamido ligands and their reactivity in the polymerization of ϵ -caprolactone and rac-lactide. <i>Dalton Transactions</i> , 2010, 39, 5688.	1.6	43
34	Size-Selective Separation of Rare Earth Elements Using Functionalized Mesoporous Silica Materials. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 23681-23691.	4.0	41
35	[(IMes) ₂ Pt(H)(ClBC ₅ H ₄ SiMe ₃)]: a Borabenzene-Platinum Adduct with an Unusual Pt-Cl Interaction. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 6695-6698.	7.2	40
36	Metal-free borylative dearomatization of indoles: exploring the divergent reactivity of aminoborane C-H borylation catalysts. <i>Chemical Science</i> , 2018, 9, 5057-5063.	3.7	40

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37	Lewis acidity quantification and catalytic activity of Ti, Zr and Al-supported mesoporous silica. Dalton Transactions, 2017, 46, 3864-3876.	1.6	38
38	Indium@silica core-shell nanoparticles as plasmonic enhancers of molecular luminescence in the UV region. Chemical Communications, 2013, 49, 9299.	2.2	37
39	Substantiating the Influence of Pore Surface Functionalities on the Stability of Grubbs Catalyst in Mesoporous SBA-15 Silica. Chemistry - A European Journal, 2011, 17, 4254-4265.	1.7	35
40	Frustrated Lewis Pair Mediated Csp ³ -H Activation. Chemistry - A European Journal, 2017, 23, 3567-3571.	1.7	34
41	Understanding Selectivity of Mesoporous Silica-Grafted Diglycolamide-Type Ligands in the Solid-Phase Extraction of Rare Earths. ACS Applied Materials & Interfaces, 2020, 12, 57003-57016.	4.0	34
42	Selective separation and preconcentration of Th(IV) using organo-functionalized, hierarchically porous silica monoliths. Journal of Materials Chemistry A, 2019, 7, 289-302.	5.2	33
43	Practical and Scalable Synthesis of Borylated Heterocycles Using Bench-Stable Precursors of Metal-Free Lewis Pair Catalysts. Organic Process Research and Development, 2018, 22, 1489-1499.	1.3	31
44	Synthesis of a 1-boratabenzene-(2,3,4,5-tetramethylphosphole): towards a planar monophosphole. Chemical Communications, 2010, 46, 6816.	2.2	30
45	Synthesis and Characterization of Tantalum(V) Boronate Clusters: Multifunctional Lewis Acid Cages for Binding Guests. Angewandte Chemie - International Edition, 2007, 46, 4979-4982.	7.2	28
46	Homogeneous asymmetric transfer hydrogenation of ketones using a ruthenium catalyst anchored on chitosan: natural chirality at work. New Journal of Chemistry, 2012, 36, 1548.	1.4	27
47	Synthesis and solid-state characterization of platinum complexes with hexadentate amino- and iminophosphine ligands. Dalton Transactions, 2009, , 7701.	1.6	25
48	Carbon Dioxide Oversolubility in Nanoconfined Liquids for the Synthesis of Cyclic Carbonates. ChemCatChem, 2017, 9, 1886-1890.	1.8	25
49	Designed Synthesis of Mesoporous Solid-Supported Lewis Acid-Base Pairs and Their CO ₂ Adsorption Behaviors. ACS Applied Materials & Interfaces, 2018, 10, 13199-13210.	4.0	25
50	Coordination of a Di- <i>tert</i> -butylphosphidoboratabenzene Ligand to Electronically Unsaturated Group 10 Transition Metals. Organometallics, 2012, 31, 6428-6437.	1.1	24
51	Insights into the Formation of Borabenzene Adducts via Ligand Exchange Reactions and TMSCl Elimination from Boracyclohexadiene Precursors. Organometallics, 2014, 33, 3596-3606.	1.1	24
52	Alkylammoniotrifluoroborate functionalized polystyrenes: polymeric pre-catalysts for the metal-free borylation of heteroarenes. Dalton Transactions, 2019, 48, 4846-4856.	1.6	24
53	Solid State Structures and Phosphine Exchange Reactions of (1-Me-Indenyl)(PR ₃)Ni ⁺ Cl ⁻ . Organometallics, 2001, 20, 5156-5161.	1.1	23
54	Spontaneous Reduction of a Hydroborane To Generate a B-B Single Bond by the Use of a Lewis Pair. Angewandte Chemie, 2016, 128, 12914-12918.	1.6	23

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55	Urease inhibition and anti-leishmanial assay of substituted benzoylguanidines and their copper(ii) complexes. Dalton Transactions, 2011, 40, 9202.	1.6	22
56	Synthesis and Reactivity of Novel Mesityl Boratabenzene Ligands and Their Coordination to Transition Metals. Organometallics, 2014, 33, 3173-3181.	1.1	21
57	Ambiphilic molecules for trapping reactive intermediates: interrupted Nazarov reaction of allenyl vinyl ketones with Me ₂ PCH ₂ AlMe ₂ . Chemical Communications, 2012, 48, 11250.	2.2	20
58	New dimeric and supramolecular mixed ligand Palladium(II) dithiocarbamates as potent DNA binders. Polyhedron, 2012, 39, 1-8.	1.0	20
59	Ambiphilic Frustrated Lewis Pair Exhibiting High Robustness and Reversible Water Activation: Towards the Metal-Free Hydrogenation of Carbon Dioxide. Molecules, 2015, 20, 11902-11914.	1.7	20
60	Zirconium(IV) Metallocavitands As Blue-Emitting Materials. Inorganic Chemistry, 2014, 53, 2883-2891.	1.9	19
61	Frustrated Lewis Pair Catalyzed C-H Bond Borylation. Organometallics, 2017, 36, 2870-2876.	1.1	18
62	Boron Recycling in the Metal-Free Transfer C-H Borylation of Terminal Alkynes and Heteroarenes. ACS Catalysis, 2020, 10, 11046-11056.	5.5	17
63	Structural Study of Acidic Metallocavitands and Characterization of their Interactions with Lewis Bases. Inorganic Chemistry, 2009, 48, 1699-1710.	1.9	16
64	Revisiting the reduction of indoles by hydroboranes: A combined experimental and computational study. Tetrahedron, 2019, 75, 2118-2127.	1.0	16
65	On the Interaction of Phosphines with High Surface Area Mesoporous Silica. Journal of Physical Chemistry C, 2012, 116, 25919-25927.	1.5	15
66	Confinement of the Grubbs catalyst in alkene-functionalized mesoporous silica. Microporous and Mesoporous Materials, 2013, 175, 170-177.	2.2	15
67	Synthesis, characterization and reactivity of tetramethylphospholyl complexes of scandium. Journal of Organometallic Chemistry, 2006, 691, 4595-4600.	0.8	13
68	Reactivity of a Cl-boratabenzene Pt(ii) complex with Lewis bases: generation of the kinetically favoured Cl-boratabenzene anion. Dalton Transactions, 2011, 40, 12439.	1.6	13
69	Boric acid as a precatalyst for BH ₃ -catalyzed hydroboration. RSC Advances, 2021, 11, 31941-31949.	1.7	13
70	Synthesis and structural characterization of bis- and tris(3,5-dimethylpyrazolyl)methane complexes of Ni(NO ₃) ₂ . Inorganica Chimica Acta, 2006, 359, 2592-2598.	1.2	12
71	Phosphidoboratabenzene-rhodium(i) complexes as precatalysts for the hydrogenation of alkenes at room temperature and atmospheric pressure. Dalton Transactions, 2016, 45, 2130-2137.	1.6	12
72	Generation of Group VI Piano-Stool and Triple-Decker Complexes from [(IMes) ₂ PtH(Cl-boratabenzene)] Species. European Journal of Inorganic Chemistry, 2014, 2014, 5698-5702.	1.0	10

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73	Reversible hydrogen activation by a bulky haloborane based FLP system. Dalton Transactions, 2016, 45, 6129-6135.	1.6	10
74	Insights into the Solubility of Carbon Dioxide in Grafted Mesoporous Silica for the Catalytic Synthesis of Cyclic Carbonates by Nanoconfinement. ACS Applied Materials & Interfaces, 2021, 13, 27019-27028.	4.0	9
75	MS-TOF Study of the Formation of Thiolato-Bridged Rhodium Oligomers. European Journal of Inorganic Chemistry, 2010, 2010, 2158-2164.	1.0	8
76	On the Interaction of Acetone with Electrophilic Metallocavitands Having Extended Cavities. Inorganic Chemistry, 2012, 51, 10384-10393.	1.9	8
77	FLP-Mediated C-H-Activation. Molecular Catalysis, 2021, , 113-166.	1.3	8
78	Synthesis of Carboxylate Cp*Zr(IV) Species: Toward the Formation of Novel Metallocavitands. Inorganic Chemistry, 2015, 54, 5547-5555.	1.9	7
79	Performance of catalytic cycloaddition of CO ₂ to styrene oxide in three-phase co-current (micro)fixed-bed and monolith reactors. Journal of CO ₂ Utilization, 2022, 60, 101977.	3.3	7
80	Mono-boratabenzene and -phospholyl zirconocene(IV) derivatives: Towards mixed heterocycles zirconocene complexes. Polyhedron, 2016, 108, 15-22.	1.0	6
81	Comparative Studies of Digestion Techniques for the Dissolution of Neodymium-Based Magnets. Metals, 2021, 11, 1149.	1.0	6
82	Synthesis and complexation study of new ExTTF-based hosts for fullerenes. Organic and Biomolecular Chemistry, 2014, 12, 4117.	1.5	5
83	Synthesis of tetrathiafulvalene-containing zirconium(IV) pincers and metallocavitands for hosting fullerenes. Inorganica Chimica Acta, 2014, 422, 235-242.	1.2	5
84	Bis[tris(3,5-dimethylpyrazolyl)methane]nickel(II) dibromide. Acta Crystallographica Section E: Structure Reports Online, 2005, 61, m784-m786.	0.2	3
85	[Bis[tris(3,5-dimethylpyrazolyl)methane]nickel(II)][tetrachloronickelate(II)]·methanol·water (1/1/1). Acta Crystallographica Section E: Structure Reports Online, 2005, 61, m904-m906.	0.2	3
86	trans-Dibromotetra(3-tert-butylpyrazole- η^5 N)nickel(II). Acta Crystallographica Section E: Structure Reports Online, 2005, 61, m846-m848.	0.2	1
87	rac-2,2-Bis(diphenylphosphino)-1,1-binaphthyl. Acta Crystallographica Section E: Structure Reports Online, 2007, 63, o2087-o2088.	0.2	1
88	Reactivity of a functionalized trisamido ligand with Zr(NMe ₂) ₄ and GaMe ₃ . Journal of Organometallic Chemistry, 2011, 696, 2211-2216.	0.8	1
89	(η^4 -Cycloocta-1,5-diene)diiodidoplatinum(II). Acta Crystallographica Section E: Structure Reports Online, 2009, 65, m1028-m1028.	0.2	1
90	(Diphenyl sulfoxide)dimethyl(η^5 -pentamethylcyclopentadienyl)rhodium(III). Acta Crystallographica Section E: Structure Reports Online, 2007, 63, m2253-m2253.	0.2	0

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91	6-Bromo-N-methylnaphthalen-2-amine. Acta Crystallographica Section E: Structure Reports Online, 2007, 63, o4338-o4338.	0.2	0
92	Chloridobis(η^5 -cyclopentadienyl)(4-methoxyphenethyl)zirconium(IV). Acta Crystallographica Section E: Structure Reports Online, 2007, 63, m2790-m2790.	0.2	0
93	Addition of boranes to (E)-(η^5 -C ₅ H ₅) ₂ Zr(CH=CHPh)Cl. Open Chemistry, 2013, 11, 811-816.	1.0	0