Bruce C Gates

List of Publications by Year
in descending order

202 papers	13,641 citations	20759 60 h-index	24915 109 g-index
218 all docs	218 docs citations	218 times ranked	11415 citing authors

#	Article	IF	Citations
1	Upgrading of lignin-derived bio-oils by catalytic hydrodeoxygenation. Energy and Environmental Science, 2014, 7, 103-129.	15.6	764
2	Catalysis by Metal Organic Frameworks: Perspective and Suggestions for Future Research. ACS Catalysis, 2019, 9, 1779-1798.	5.5	622
3	Catalysis by Supported Gold:Â Correlation between Catalytic Activity for CO Oxidation and Oxidation States of Gold. Journal of the American Chemical Society, 2004, 126, 2672-2673.	6.6	496
4	Atomically Dispersed Supported Metal Catalysts. Annual Review of Chemical and Biomolecular Engineering, 2012, 3, 545-574.	3.3	486
5	Coreâ€“shell structured catalysts for thermocatalytic, photocatalytic, and electrocatalytic conversion of CO₂. Chemical Society Reviews, 2020, 49, 2937-3004.	18.7	479
6	Sinter-resistant metal nanoparticle catalysts achieved by immobilization within zeolite crystals via seed-directed growth. Nature Catalysis, 2018, 1, 540-546.	16.1	297
7	A Singleâ€Site Platinum CO Oxidation Catalyst in Zeolite KLTL: Microscopic and Spectroscopic Determination of the Locations of the Platinum Atoms. Angewandte Chemie - International Edition, 2014, 53, 8904-8907.	7.2	263
8	A Pd@Zeolite Catalyst for Nitroarene Hydrogenation with High Product Selectivity by Sterically Controlled Adsorption in the Zeolite Micropores. Angewandte Chemie - International Edition, 2017, 56, 9747-9751.	7.2	248
9	Product Selectivity Controlled by Nanoporous Environments in Zeolite Crystals Enveloping Rhodium Nanoparticle Catalysts for CO₂ Hydrogenation. Journal of the American Chemical Society, 2019, 141, 8482-8488.	6.6	242
10	Metalâ€“Organic Framework Nodes as Nearly Ideal Supports for Molecular Catalysts: NU-1000- and UiO-66-Supported Iridium Complexes. Journal of the American Chemical Society, 2015, 137, 7391-7396.	6.6	228
11	Catalytic Conversion of Guaiacol Catalyzed by Platinum Supported on Alumina: Reaction Network Including Hydrodeoxygenation Reactions. Energy & Fuels, 2011, 25, 3417-3427.	2.5	222
12	Atomically dispersed supported metal catalysts: perspectives and suggestions for future research. Catalysis Science and Technology, 2017, 7, 4259-4275.	2.1	221
13	Supported molecular catalysts: metal complexes and clusters on oxides and zeolites. Dalton Transactions, 2003, , 3303.	1.6	190
14	Toward Benchmarking in Catalysis Science: Best Practices, Challenges, and Opportunities. ACS Catalysis, 2016, 6, 2590-2602.	5.5	190
15	Molecular Metal Catalysts on Supports: Organometallic Chemistry Meets Surface Science. Accounts of Chemical Research, 2014, 47, 2612-2620.	7.6	187
16	Direct imaging of single metal atoms and clusters in the pores of dealuminated HY zeolite. Nature Nanotechnology, 2010, 5, 506-510.	15.6	172
17	Imaging Isolated Gold Atom Catalytic Sites in Zeolite NaY. Angewandte Chemie - International Edition, 2012, 51, 5842-5846.	7.2	163
18	Single-site catalyst promoters accelerate metal-catalyzed nitroarene hydrogenation. Nature Communications, 2018, 9, 1362.	5.8	161

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19	Catalytic conversion of compounds representative of lignin-derived bio-oils: a reaction network for guaiacol, anisole, 4-methylanisole, and cyclohexanone conversion catalysed by Pt/Î³-Al₂O₃. Catalysis Science and Technology, 2012, 2, 113-118.	2.1	158
20	Simultaneous Presence of Cationic and Reduced Gold in Functioning MgO-Supported CO Oxidation Catalysts:Â Evidence from X-ray Absorption Spectroscopy. Journal of Physical Chemistry B, 2002, 106, 7659-7665.	1.2	157
21	Tuning the Surface Chemistry of Metal Organic Framework Nodes: Proton Topology of the Metal-Oxide-Like Zr₆ Nodes of UiO-66 and NU-1000. Journal of the American Chemical Society, 2016, 138, 15189-15196.	6.6	155
22	Structure and Reactivity of a Mononuclear Gold-Complex Catalyst Supported on Magnesium Oxide. Angewandte Chemie - International Edition, 2003, 42, 690-693.	7.2	152
23	Tuning Zr₆ Metalâ€“Organic Framework (MOF) Nodes as Catalyst Supports: Site Densities and Electron-Donor Properties Influence Molecular Iridium Complexes as Ethylene Conversion Catalysts. ACS Catalysis, 2016, 6, 235-247.	5.5	150
24	Structure and Dynamics of Zr₆O₈ Metalâ€“Organic Framework Node Surfaces Probed with Ethanol Dehydration as a Catalytic Test Reaction. Journal of the American Chemical Society, 2018, 140, 3751-3759.	6.6	150
25	Mononuclear AuIIIand AuIComplexes Bonded to Zeolite NaY:Â Catalysts for CO Oxidation at 298 K. Journal of Physical Chemistry B, 2004, 108, 16999-17002.	1.2	146
26	Atomically Dispersed Metals on Well-Defined Supports including Zeolites and Metalâ€“Organic Frameworks: Structure, Bonding, Reactivity, and Catalysis. Chemical Reviews, 2020, 120, 11956-11985.	23.0	137
27	Beyond Ordered Materials: Understanding Catalytic Sites on Amorphous Solids. ACS Catalysis, 2017, 7, 7543-7557.	5.5	134
28	Supported Molecular Iridium Catalysts: Resolving Effects of Metal Nuclearity and Supports as Ligands. Journal of the American Chemical Society, 2011, 133, 16186-16195.	6.6	132
29	Metal clusters on supports: synthesis, structure, reactivity, and catalytic properties. Chemical Communications, 2010, 46, 5997.	2.2	127
30	Silica accelerates the selective hydrogenation of CO2 to methanol on cobalt catalysts. Nature Communications, 2020, 11, 1033.	5.8	124
31	Catalytic Reactions of Guaiacol: Reaction Network and Evidence of Oxygen Removal in Reactions with Hydrogen. Catalysis Letters, 2011, 141, 779-783.	1.4	122
32	Oxide- and Zeolite-Supported Molecular Metal Complexes and Clusters:â€‰ Physical Characterization and Determination of Structure, Bonding, and Metal Oxidation State. Journal of Physical Chemistry B, 2006, 110, 13326-13351.	1.2	120
33	Structure and Bonding of a Site-Isolated Transition Metal Complex:Â Rhodium Dicarbonyl in Highly Dealuminated Zeolite Y. Journal of the American Chemical Society, 2000, 122, 8056-8066.	6.6	116
34	Surface Catalytic Sites Prepared from [HRe(CO)5] and [H3Re3(CO)12]: Mononuclear, Trinuclear, and Metallic Rhenium Catalysts Supported on MgO. The Journal of Physical Chemistry, 1990, 94, 8439-8450.	2.9	115
35	A site-isolated mononuclear iridium complex catalyst supported on MgO: Characterization by spectroscopy and aberration-corrected scanning transmission electron microscopy. Journal of Catalysis, 2010, 269, 318-328.	3.1	108
36	Selective Hydrodeoxygenation of Guaiacol Catalyzed by Platinum Supported on Magnesium Oxide. Catalysis Letters, 2012, 142, 1190-1196.	1.4	108

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37	Oxidation of Supported Rhodium Clusters by Support Hydroxy Groups. Angewandte Chemie - International Edition, 2003, 42, 1391-1394.	7.2	107
38	Role of Cluster Size in Catalysis:Â Spectroscopic Investigation of Î³-Al2O3-Supported Ir4and Ir6during Ethene Hydrogenation. Journal of the American Chemical Society, 2003, 125, 7107-7115.	6.6	100
39	Homogeneity of Surface Sites in Supported Single-Site Metal Catalysts: Assessment with Band Widths of Metal Carbonyl Infrared Spectra. Journal of Physical Chemistry Letters, 2016, 7, 3854-3860.	2.1	100
40	A â€œSmartâ€•Catalyst: Sinterâ€Resistant Supported Iridium Clusters Visualized with Electron Microscopy. Angewandte Chemie - International Edition, 2012, 51, 5929-5934.	7.2	97
41	Tuning the Properties of Zr₆O₈ Nodes in the Metal Organic Framework UiO-66 by Selection of Node-Bound Ligands and Linkers. Chemistry of Materials, 2019, 31, 1655-1663.	3.2	97
42	Realâ€Time Characterization of Formation and Breakup of Iridium Clusters in Highly Dealuminated Zeoliteâ€…Y. Angewandte Chemie - International Edition, 2008, 47, 9245-9248.	7.2	94
43	Gold Nanoclusters Supported on MgO:â€‰ Synthesis, Characterization, and Evidence of Au6. Nano Letters, 2001, 1, 689-692.	4.5	92
44	Propane Dehydrogenation Catalyzed by Isolated Pt Atoms in â‰¡SiOZnâ€“OH Nests in Dealuminated Zeolite Beta. Journal of the American Chemical Society, 2021, 143, 21364-21378.	6.6	92
45	Tuning Zr₁₂O₂₂ Node Defects as Catalytic Sites in the Metalâ€“Organic Framework hcp UiO-66. ACS Catalysis, 2020, 10, 2906-2914.	5.5	90
46	Tuning Catalytic Sites on Zr₆O₈ Metalâ€“Organic Framework Nodes via Ligand and Defect Chemistry Probed with <i>tert</i>-Butyl Alcohol Dehydration to Isobutylene. Journal of the American Chemical Society, 2020, 142, 8044-8056.	6.6	83
47	A Pd@Zeolite Catalyst for Nitroarene Hydrogenation with High Product Selectivity by Sterically Controlled Adsorption in the Zeolite Micropores. Angewandte Chemie, 2017, 129, 9879-9883.	1.6	81
48	Structure, Dynamics, and Reactivity for Light Alkane Oxidation of Fe(II) Sites Situated in the Nodes of a Metalâ€“Organic Framework. Journal of the American Chemical Society, 2019, 141, 18142-18151.	6.6	80
49	Role of cationic gold in supported CO oxidation catalysts. Topics in Catalysis, 2007, 44, 103-114.	1.3	76
50	Dynamic Structural Changes in a Molecular Zeolite-Supported Iridium Catalyst for Ethene Hydrogenation. Journal of the American Chemical Society, 2009, 131, 15887-15894.	6.6	73
51	Zeolite- and MgO-Supported Molecular Iridium Complexes: Support and Ligand Effects in Catalysis of Ethene Hydrogenation and Hâ€“D Exchange in the Conversion of H₂ + D₂. ACS Catalysis, 2011, 1, 1549-1561.	5.5	69
52	Tuning Catalytic Selectivity: Zeolite- and Magnesium Oxide-Supported Molecular Rhodium Catalysts for Hydrogenation of 1,3-Butadiene. ACS Catalysis, 2012, 2, 2100-2113.	5.5	69
53	Molecular Rhodium Complexes Supported on the Metal-Oxide-Like Nodes of Metal Organic Frameworks and on Zeolite HY: Catalysts for Ethylene Hydrogenation and Dimerization. ACS Applied Materials & Interfaces, 2017, 9, 33511-33520.	4.0	69
54	Conversion of Anisole Catalyzed by Platinum Supported on Alumina: The Reaction Network. Energy & Fuels, 2011, 25, 4776-4785.	2.5	68

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55	Supported Metal Pair-Site Catalysts. ACS Catalysis, 2020, 10, 9065-9085.	5.5	67
56	A Site-Isolated Iridium Diethylene Complex Supported on Highly Dealuminated Y Zeolite:â€‰ Synthesis and Characterization. Journal of Physical Chemistry C, 2007, 111, 15064-15073.	1.5	66
57	Agglomerative Sintering of an Atomically Dispersed Ir₁/Zeolite Y Catalyst: Compelling Evidence Against Ostwald Ripening but for Bimolecular and Autocatalytic Agglomeration Catalyst Sintering Steps. ACS Catalysis, 2015, 5, 3514-3527.	5.5	66
58	Beating Heterogeneity of Single-Site Catalysts: MgO-Supported Iridium Complexes. ACS Catalysis, 2018, 8, 3489-3498.	5.5	64
59	Molecular Heterogeneous Catalysis: A Singleâ€Site Zeoliteâ€Supported Rhodium Complex for Acetylene Cyclotrimerization. Chemistry - A European Journal, 2007, 13, 7294-7304.	1.7	62
60	Catalytic Conversion of Anisole: Evidence of Oxygen Removal in Reactions with Hydrogen. Catalysis Letters, 2011, 141, 817-820.	1.4	62
61	Upgrading of Lignin-Derived Compounds: Reactions of Eugenol Catalyzed by HY Zeolite and by Pt/Î³-Al2O3. Catalysis Letters, 2012, 142, 151-160.	1.4	62
62	Evidence from NMR and EXAFS Studies of a Dynamically Uniform Mononuclear Single-Site Zeolite-Supported Rhodium Catalyst. Angewandte Chemie - International Edition, 2006, 45, 574-576.	7.2	59
63	Isostructural Zeolite-Supported Rhodium and Iridium Complexes: Tuning Catalytic Activity and Selectivity by Ligand Modification. ACS Catalysis, 2015, 5, 5647-5656.	5.5	58
64	A Site-Isolated Rhodiumâˆ’Diethylene Complex Supported on Highly Dealuminated Y Zeolite:Â Synthesis and Characterization. Journal of Physical Chemistry B, 2005, 109, 24236-24243.	1.2	56
65	Zeolite-Supported Organorhodium Fragments: Essentially Molecular Surface Chemistry Elucidated with Spectroscopy and Theory. Journal of the American Chemical Society, 2009, 131, 8460-8473.	6.6	56
66	Atomically Dispersed Reduced Graphene Aerogel-Supported Iridium Catalyst with an Iridium Loading of 14.8 wt %. ACS Catalysis, 2019, 9, 9905-9913.	5.5	55
67	Atomically Dispersed Supported Metal Catalysts: Seeing Is Believing. Trends in Chemistry, 2019, 1, 99-110.	4.4	55
68	Effects of Adsorbates on Supported Platinum and Iridium Clusters:Â Characterization in Reactive Atmospheres and during Alkene Hydrogenation Catalysis by X-ray Absorption Spectroscopyâ€. Journal of Physical Chemistry B, 2005, 109, 2338-2349.	1.2	54
69	Prototype Supported Metal Cluster Catalysts: Ir₄ and Ir₆. ChemCatChem, 2011, 3, 95-107.	1.8	53
70	Selective molecular recognition by nanoscale environments in a supported iridium cluster catalyst. Nature Nanotechnology, 2014, 9, 459-465.	15.6	53
71	Controlling the hydrogenolysis of silica-supported tungsten pentamethyl leads to a class of highly electron deficient partially alkylated metal hydrides. Chemical Science, 2016, 7, 1558-1568.	3.7	53
72	Hydrogen Activation and Metal Hydride Formation Trigger Cluster Formation from Supported Iridium Complexes. Journal of the American Chemical Society, 2012, 134, 5022-5025.	6.6	52

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73	Dispersed Nickel Boosts Catalysis by Copper in CO₂ Hydrogenation. ACS Catalysis, 2020, 10, 9261-9270.	5.5	52
74	Tuning the Selectivity of Single-Site Supported Metal Catalysts with Ionic Liquids. ACS Catalysis, 2017, 7, 6969-6972.	5.5	51
75	Atomically Dispersed Ru on Manganese Oxide Catalyst Boosts Oxidative Cyanation. ACS Catalysis, 2020, 10, 6299-6308.	5.5	51
76	Beyond Radical Rebound: Methane Oxidation to Methanol Catalyzed by Iron Species in Metalâ€"Organic Framework Nodes. Journal of the American Chemical Society, 2021, 143, 12165-12174.	6.6	51
77	Tracking Iridium Atoms with Electron Microscopy: First Steps of Metal Nanocluster Formation in One-Dimensional Zeolite Channels. Nano Letters, 2011, 11, 5537-5541.	4.5	49
78	Organometallic chemistry on the basic magnesium oxide surface: formation of [HIr4(CO)11]-, [Ir6(CO)15]2-, and [Ir8(CO)22]2-. Inorganic Chemistry, 1992, 31, 2939-2947.	1.9	48
79	MgO-Supported Rh6and Ir6:Â Structural Characterization during the Catalysis of Ethene Hydrogenation. Journal of Physical Chemistry B, 2003, 107, 5519-5528.	1.2	47
80	Kinetics of CO Oxidation Catalyzed by Supported Gold: A Tabular Summary of the Literature. Catalysis Letters, 2009, 130, 108-120.	1.4	47
81	Mononuclear Zeolite-Supported Iridium: Kinetic, Spectroscopic, Electron Microscopic, and Size-Selective Poisoning Evidence for an Atomically Dispersed True Catalyst at 22 Â°C. ACS Catalysis, 2012, 2, 1947-1957.	5.5	47
82	Cyclohexanone Conversion Catalyzed by Pt/Î³-Al2O3: Evidence of Oxygen Removal and Coupling Reactions. Catalysis Letters, 2011, 141, 1072-1078.	1.4	46
83	The Surface Chemistry of Metal Oxide Clusters: From Metalâ€"Organic Frameworks to Minerals. ACS Central Science, 2020, 6, 1523-1533.	5.3	46
84	Tracking Rh Atoms in Zeolite HY: First Steps of Metal Cluster Formation and Influence of Metal Nuclearity on Catalysis of Ethylene Hydrogenation and Ethylene Dimerization. Journal of Physical Chemistry Letters, 2016, 7, 2537-2543.	2.1	44
85	Neopentane cracking catalyzed by iron- and manganese-promoted sulfated zirconia. Catalysis Letters, 1995, 31, 153-163.	1.4	42
86	Formation of Gold Clusters on TiO2from Adsorbed Au(CH3)2(C5H7O2): Characterization by X-ray Absorption Spectroscopy. Catalysis Letters, 2004, 95, 77-86.	1.4	42
87	Time-Resolved Structural Characterization of Formation and Break-up of Rhodium Clusters Supported in Highly Dealuminated Y Zeolite. Journal of Physical Chemistry C, 2008, 112, 18039-18049.	1.5	42
88	Oxide- and Zeolite-Supported Isostructural Ir(C₂H₄)₂ Complexes: Molecular-Level Observations of Electronic Effects of Supports as Ligands. Langmuir, 2012, 28, 12806-12815.	1.6	42
89	Upgrading of Lignin-Derived Bio-oil Components Catalyzed by Pt/Î³-Al₂O₃: Kinetics and Reaction Pathways Characterizing Conversion of Cyclohexanone with H₂. Energy & Fuels, 2015, 29, 191-199.	2.5	41
90	Site-isolated iridium complexes on MgO powder: individual Ir atoms imaged by scanning transmission electron microscopy. Chemical Communications, 2009, , 4657.	2.2	40

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91	Conversion of 4-Methylanisole Catalyzed by Pt/Î³-Al2O3 and by Pt/SiO2-Al2O3: Reaction Networks and Evidence of Oxygen Removal. Catalysis Letters, 2012, 142, 7-15.	1.4	40
92	Controlling catalytic activity and selectivity for partial hydrogenation by tuning the environment around active sites in iridium complexes bonded to supports. Chemical Science, 2019, 10, 2623-2632.	3.7	40
93	Extending the Metal Clusterâ€"Metal Surface Analogy. Angewandte Chemie International Edition in English, 1993, 32, 228-229.	4.4	39
94	Surfaceâ€Mediated Synthesis of Dimeric Rhodium Catalysts on MgO: Tracking Changes in the Nuclearity and Ligand Environment of the Catalytically Active Sites by Xâ€ray Absorption and Infrared Spectroscopies. Chemistry - A European Journal, 2013, 19, 1235-1245.	1.7	38
95	Experimental investigation of upgrading of lignin-derived bio-oil component anisole catalyzed by carbon nanotube-supported molybdenum. RSC Advances, 2017, 7, 10545-10556.	1.7	38
96	A Silica-Supported Monoalkylated Tungsten Dioxo Complex Catalyst for Olefin Metathesis. ACS Catalysis, 2018, 8, 2715-2729.	5.5	38
97	Molecular Chemistry in a Zeolite: Genesis of a Zeolite Y-Supported Ruthenium Complex Catalyst. Journal of the American Chemical Society, 2008, 130, 13338-13346.	6.6	37
98	Hydroprocessing of 4â€methylanisole as a representative of ligninâ€derived bioâ€oils catalyzed by sulphided CoMo/Î³â€Al₂O₃: A semiâ€quantitative reaction network. Canadian Journal of Chemical Engineering, 2016, 94, 1524-1532.	0.9	37
99	Upgrading of Anisole in a Dielectric Barrier Discharge Plasma Reactor. Energy & Fuels, 2014, 28, 4545-4553.	2.5	36
100	Gold Nanoclusters Entrapped in the Î±-Cages of Y Zeolites:â€‰ Structural Characterization by X-ray Absorption Spectroscopy. Journal of Physical Chemistry C, 2007, 111, 6645-6651.	1.5	35
101	Supported gold catalysts: new properties offered by nanometer and sub-nanometer structures. Chemical Communications, 2013, 49, 7876.	2.2	35
102	Experimental Investigation on Upgrading of Ligninâ€Derived Bioâ€Oils: Kinetic Analysis of Anisole Conversion on Sulfided CoMo/Al₂O₃ Catalyst. International Journal of Chemical Kinetics, 2016, 48, 702-713.	1.0	35
103	Highâ€Energyâ€Resolution Xâ€ray Absorption Spectroscopy for Identification of Reactive Surface Species on Supported Singleâ€Site Iridium Catalysts. Chemistry - A European Journal, 2017, 23, 14760-14768.	1.7	35
104	Stable Rhodium Pair Sites on MgO: Influence of Ligands and Rhodium Nuclearity on Catalysis of Ethylene Hydrogenation and Hâ€"D Exchange in the Reaction of H₂ with D₂. ACS Catalysis, 2018, 8, 482-487.	5.5	35
105	Structural Changes of the Goldâˆ'Support Interface during CO Oxidation Catalyzed by Mononuclear Gold Complexes Bonded to Zeolite NaY:Â Evidence from Time-Resolved X-ray Absorption Spectroscopy. Langmuir, 2005, 21, 5693-5695.	1.6	34
106	Bulky Calixarene Ligands Stabilize Supported Iridium Pair-Site Catalysts. Journal of the American Chemical Society, 2019, 141, 4010-4015.	6.6	34
107	Dialing in Catalytic Sites on Metal Organic Framework Nodes: MIL-53(Al) and MIL-68(Al) Probed with Methanol Dehydration Catalysis. ACS Applied Materials & Interfaces, 2020, 12, 53537-53546.	4.0	34
108	Zeolite NaY-supported gold complexes prepared from Au(CH3)2(C5H7O2): reactivity with carbon monoxide. Catalysis Letters, 2005, 101, 265-274.	1.4	33

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109	Rhodium Complex with Ethylene Ligands Supported on Highly Dehydroxylated MgO:Â Synthesis, Characterization, and Reactivity. Langmuir, 2006, 22, 490-496.	1.6	32
110	Genesis of a Cerium Oxide Supported Gold Catalyst for CO Oxidation: Transformation of Mononuclear Gold Complexes into Clusters as Characterized by X-Ray Absorption Spectroscopy. Journal of Physical Chemistry C, 2009, 113, 3259-3269.	1.5	32
111	Zeolite- and MgO-supported rhodium complexes and rhodium clusters: Tuning catalytic properties to control carbonâ€“carbon vs. carbonâ€“hydrogen bond formation reactions of ethene in the presence of H2. Journal of Catalysis, 2013, 308, 201-212.	3.1	32
112	Reversible Metal Aggregation and Redispersion Driven by the Catalytic Water Gas Shift Half-Reactions: Interconversion of Single-Site Rhodium Complexes and Tetrarhodium Clusters in Zeolite HY. ACS Catalysis, 2019, 9, 3311-3321.	5.5	31
113	Structure and Reactivity of a Mononuclear Gold-Complex Catalyst Supported on Magnesium Oxide. Angewandte Chemie, 2003, 115, 714-717.	1.6	30
114	Atomic Resolution of the Structure of a Metalâ€“Support Interface: Triosmium Clusters on MgO(110). Angewandte Chemie - International Edition, 2010, 49, 10089-10092.	7.2	30
115	Tuning the properties of metalâ€“organic framework nodes as supports of single-site iridium catalysts: node modification by atomic layer deposition of aluminium. Faraday Discussions, 2017, 201, 195-206.	1.6	30
116	Elucidating and Tuning Catalytic Sites on Zirconium- and Aluminum-Containing Nodes of Stable Metalâ€“Organic Frameworks. Accounts of Chemical Research, 2021, 54, 1982-1991.	7.6	29
117	A Theory-Guided X-ray Absorption Spectroscopy Approach for Identifying Active Sites in Atomically Dispersed Transition-Metal Catalysts. Journal of the American Chemical Society, 2021, 143, 20144-20156.	6.6	28
118	Mononuclear, trinuclear, and metallic rhenium catalysts supported on magnesia: effects of structure on catalyst performance. The Journal of Physical Chemistry, 1990, 94, 8451-8456.	2.9	27
119	Intact and Fragmented Triosmium Clusters on MgO:â€‰ Characterization by X-ray Absorption Spectroscopy and High-Resolution Transmission Electron Microscopy. Journal of Physical Chemistry B, 2005, 109, 12738-12741.	1.2	27
120	Ir₆ Clusters Compartmentalized in the Supercages of Zeolite NaY: Direct Imaging of a Catalyst with Aberration-Corrected Scanning Transmission Electron Microscopy. ACS Catalysis, 2011, 1, 1613-1620.	5.5	27
121	Prototype Atomically Dispersed Supported Metal Catalysts: Iridium and Platinum. Small, 2021, 17, e2004665.	5.2	27
122	An active and selective alkane isomerization catalyst: iron- and platinum-promoted tungstated zirconia. Chemical Communications, 2001, , 321-322.	2.2	26
123	Imaging Gold Atoms in Site-Isolated MgO-Supported Mononuclear Gold Complexes. Journal of Physical Chemistry C, 2009, 113, 16847-16849.	1.5	26
124	Singleâ€Site Zeoliteâ€Anchored Organoiridium Carbonyl Complexes: Characterization of Structure and Reactivity by Spectroscopy and Computational Chemistry. Chemistry - A European Journal, 2015, 21, 11825-11835.	1.7	25
125	MgO-Supported Iridium Metal Pair-Site Catalysts Are More Active and Resistant to CO Poisoning than Analogous Single-Site Catalysts for Ethylene Hydrogenation and Hydrogenâ€“Deuterium Exchange. ACS Catalysis, 2019, 9, 9545-9553.	5.5	25
126	Formation of supported rhodium clusters from mononuclear rhodium complexes controlled by the support and ligands on rhodium. Physical Chemistry Chemical Physics, 2014, 16, 1262-1270.	1.3	24

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127	Rhodium pair-sites on magnesium oxide: Synthesis, characterization, and catalysis of ethylene hydrogenation. Journal of Catalysis, 2016, 338, 12-20.	3.1	24
128	Synthesis and characterization of tetrairidium clusters in the metal organic framework UiO-67: Catalyst for ethylene hydrogenation. Journal of Catalysis, 2020, 382, 165-172.	3.1	23
129	Synthesis and Characterization of Site-Isolated Hexarhodium Clusters on Titania Powder. Journal of Physical Chemistry B, 2001, 105, 3269-3281.	1.2	22
130	Sinter-Resistant Catalysts: Supported Iridium Nanoclusters with Intrinsically Limited Sizes. Catalysis Letters, 2012, 142, 1445-1451.	1.4	22
131	Isostructural Atomically Dispersed Rhodium Catalysts Supported on SAPO-37 and on HY Zeolite. Journal of the American Chemical Society, 2020, 142, 11474-11485.	6.6	22
132	Synthesis and Structure of Tetrairidium Clusters on TiO2 Powder:â€‰ Characterization by Infrared and Extended X-ray Absorption Fine Structure Spectroscopies. Journal of Physical Chemistry B, 2002, 106, 1229-1238.	1.2	21
133	Determination of Nanocluster Sizes from Dark-Field Scanning Transmission Electron Microscopy Images. Journal of Physical Chemistry C, 2008, 112, 1759-1763.	1.5	21
134	Atomically Resolved Site-Isolated Catalyst on MgO: Mononuclear Osmium Dicarbonyls formed from Os₃(CO)₁₂. Journal of Physical Chemistry Letters, 2012, 3, 1865-1871.	2.1	21
135	Site-Isolated Molecular Iridium Complex Catalyst Supported in the 1-Dimensional Channels of Zeolite HSSZ-53: Characterization by Spectroscopy and Aberration-Corrected Scanning Transmission Electron Microscopy. ACS Catalysis, 2012, 2, 1002-1012.	5.5	21
136	Propane conversion in the presence of iron- and manganese-promoted sulfated zirconia: evidence of Olah carbocation chemistry. Catalysis Letters, 1995, 34, 351-358.	1.4	20
137	Propene Hydrogenation Catalyzed by Î³-Al2O3-Supported Ir4 Clusters:â€‰ Inhibition by Dehydrogenated Propene Derivatives on Ir4. Langmuir, 2002, 18, 2152-2157.	1.6	20
138	Imine Metathesis Catalyzed by a Silica-Supported Hafnium Imido Complex. ACS Catalysis, 2018, 8, 9440-9446.	5.5	20
139	Catalytic Hydroprocessing of Aromatic Compounds:Â Effects of Nickel and Vanadium Sulfide Deposits on Reactivities and Reaction Networks. Industrial & Engineering Chemistry Research, 1996, 35, 3203-3209.	1.8	19
140	129Xe NMR Spectroscopy of Metal Carbonyl Clusters and Metal Clusters in Zeolite NaY. Journal of the American Chemical Society, 1999, 121, 7674-7681.	6.6	19
141	Synthesis and Structural Characterization of Iridium Clusters Formed Inside and Outside the Pores of Zeolite NaY. Journal of Physical Chemistry B, 2003, 107, 11589-11596.	1.2	19
142	Rhenium complexes and clusters supported on Î³-Al2O3: Effects of rhenium oxidation state and rhenium cluster size on catalytic activity for n-butane hydrogenolysis. Journal of Catalysis, 2009, 268, 89-99.	3.1	19
143	Dialing in single-site reactivity of a supported calixarene-protected tetrairidium cluster catalyst. Chemical Science, 2017, 8, 4951-4960.	3.7	18
144	Singleâ€Site Osmium Catalysts on MgO: Reactivity and Catalysis of CO Oxidation. Chemistry - A European Journal, 2017, 23, 2532-2536.	1.7	18

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