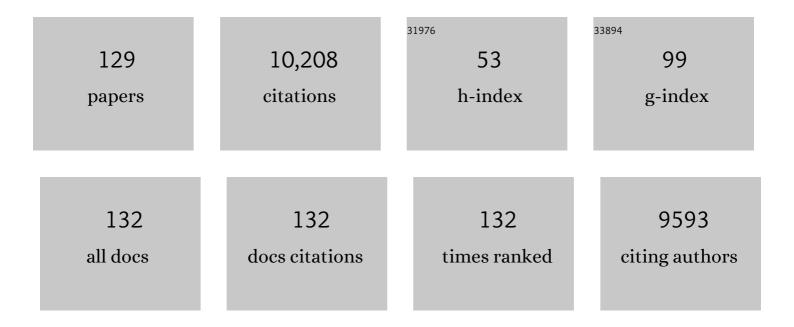
## **Robert J Davis**

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Cascade Reaction of Ethanol to Butadiene over Multifunctional Silica-Supported Ag and ZrO <sub>2</sub> Catalysts. ACS Sustainable Chemistry and Engineering, 2022, 10, 1020-1035.	6.7	8
2	Oxidative Alkenylation of Arenes Using Supported Rh Materials: Evidence that Active Catalysts are Formed by Rh Leaching. ChemCatChem, 2021, 13, 260-270.	3.7	9
3	Influence of Co on Ethylene Steam Reforming Over Co–Cr–O Spinel Catalysts. Catalysis Letters, 2021, 151, 1456-1466.	2.6	1
4	Calcium Phosphate Catalysts for Ethanol Coupling to Butanol and Butadiene. Catalysis Letters, 2021, 151, 648-657.	2.6	2
5	Enhanced Coke Gasification Activity of the Mn <sub>1.5</sub> Cr <sub>1.5</sub> O <sub>4</sub> Spinel Catalyst during Coking in Ethylene–Steam Mixtures. Energy & Fuels, 2021, 35, 5271-5280.	5.1	5
6	Effect of the Co-cation on Cu Speciation in Cu-Exchanged Mordenite and ZSM-5 Catalysts for the Oxidation of Methane to Methanol. ACS Catalysis, 2021, 11, 4973-4987.	11.2	31
7	Steam reforming kinetics of olefins and aromatics over Mn-Cr-O spinel oxides. Journal of Catalysis, 2021, 404, 964-976.	6.2	4
8	Anticoking Performance of Electrodeposited Mn/MnO Surface Coating on Fe–Ni–Cr Alloy during Steam Cracking. ACS Engineering Au, 2021, 1, 73-84.	5.1	1
9	Reaction Kinetics and Mechanism for the Catalytic Reduction of Propionic Acid over Supported ReO <i><sub>x</sub></i> Promoted by Pd. ACS Catalysis, 2021, 11, 1435-1455.	11.2	21
10	Reduction of Propanoic Acid over Pdâ€₽romoted Supported WO x Catalysts. ChemCatChem, 2020, 12, 314-325.	3.7	3
11	Steam reforming of ethylene over nickel based spinel oxides. Applied Catalysis A: General, 2020, 603, 117739.	4.3	10
12	Computational and Experimental Mechanistic Insights into the Ethanol-to-Butanol Upgrading Reaction over MgO. ACS Catalysis, 2020, 10, 15162-15177.	11.2	16
13	Gasification of Radical Coke with Steam and Steam–Hydrogen Mixtures over Manganese–Chromium Oxides. Industrial & Engineering Chemistry Research, 2020, 59, 10813-10822.	3.7	7
14	High-throughput <i>operando</i> -ready X-ray absorption spectroscopy flow reactor cell for powder samples. Review of Scientific Instruments, 2020, 91, 013107.	1.3	7
15	Mechanistic Studies of Single-Step Styrene Production Catalyzed by Rh Complexes with Diimine Ligands: An Evaluation of the Role of Ligands and Induction Period. ACS Catalysis, 2019, 9, 7457-7475.	11.2	23
16	Steam reforming of ethylene over manganese-chromium spinel oxides. Journal of Catalysis, 2019, 380, 224-235.	6.2	9
17	α-Alumina supported doped ceria catalysts for steam gasification and oxidation of radical coke. Chemical Engineering Research and Design, 2019, 151, 1-9.	5.6	8
18	Ru Promoted MgO and Al-Modified MgO for Ethanol Upgrading. Topics in Catalysis, 2019, 62, 894-907.	2.8	10

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19	Insights into the Speciation of Cu in the Cu-H-Mordenite Catalyst for the Oxidation of Methane to Methanol. ACS Catalysis, 2019, 9, 5308-5319.	11.2	70
20	Hydrogen transfer reactions relevant to Guerbet coupling of alcohols over hydroxyapatite and magnesium oxide catalysts. Catalysis Science and Technology, 2018, 8, 1722-1729.	4.1	34
21	Thermally stable α-alumina supported ceria for coking resistance and oxidation of radical coke generated in-situ. Fuel, 2018, 218, 357-365.	6.4	9
22	Atomically Dispersed Co and Cu on N-Doped Carbon for Reactions Involving C–H Activation. ACS Catalysis, 2018, 8, 3875-3884.	11.2	63
23	Propane dehydrogenation over supported Pt-Sn nanoparticles. Journal of Catalysis, 2018, 367, 181-193.	6.2	100
24	Turnover rates on complex heterogeneous catalysts. AICHE Journal, 2018, 64, 3778-3785.	3.6	20
25	Reduction of Propionic Acid over a Pd-Promoted ReO <sub><i>x</i></sub> /SiO <sub>2</sub> Catalyst Probed by X-ray Absorption Spectroscopy and Transient Kinetic Analysis. ACS Sustainable Chemistry and Engineering, 2018, 6, 12353-12366.	6.7	14
26	Mechanistic Studies of Single-Step Styrene Production Using a Rhodium(I) Catalyst. Journal of the American Chemical Society, 2017, 139, 1485-1498.	13.7	36
27	Catalytic reactions of coke with dioxygen and steam over alkaline-earth-metal-doped cerium-zirconium mixed oxides. Applied Catalysis A: General, 2017, 535, 17-23.	4.3	13
28	Influence of surface acid and base sites on the Guerbet coupling of ethanol to butanol over metal phosphate catalysts. Journal of Catalysis, 2017, 352, 182-190.	6.2	76
29	Deactivation of Supported Pt Catalysts during Alcohol Oxidation Elucidated by Spectroscopic and Kinetic Analyses. ACS Catalysis, 2017, 7, 6745-6756.	11.2	33
30	Conversion of n-hexane and n-dodecane over H-ZSM-5, H-Y and Al-MCM-41 at supercritical conditions. Applied Catalysis A: General, 2017, 546, 149-158.	4.3	27
31	Catalytic oxidation of solid carbon and carbon monoxide over ceriumâ€zirconium mixed oxides. AICHE Journal, 2017, 63, 725-738.	3.6	23
32	Selective Aerobic Oxidation of Alcohols over Atomicallyâ€Ðispersed Nonâ€Precious Metal Catalysts. ChemSusChem, 2017, 10, 359-362.	6.8	79
33	Aqueousâ€Phase Hydrogenation of Saturated and Unsaturated Ketones and Aldehydes over Supported Platinum–Rhenium Catalysts. ChemCatChem, 2016, 8, 1074-1083.	3.7	18
34	Aldol Condensation of Acetaldehyde over Titania, Hydroxyapatite, and Magnesia. ACS Catalysis, 2016, 6, 3193-3202.	11.2	114
35	In Situ Generation of Radical Coke and the Role of Coke-Catalyst Contact on Coke Oxidation. Industrial & Engineering Chemistry Research, 2016, 55, 5271-5278.	3.7	19
36	Formation and Oxidation/Gasification of Carbonaceous Deposits: A Review. Industrial & Engineering Chemistry Research, 2016, 55, 9760-9818.	3.7	82

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37	Vapor phase deoxygenation of heptanoic acid over silica-supported palladium and palladium-tin catalysts. Journal of Catalysis, 2016, 344, 202-212.	6.2	17
38	Influence of Dioxygen on the Promotional Effect of Bi during Pt-Catalyzed Oxidation of 1,6-Hexanediol. ACS Catalysis, 2016, 6, 4206-4217.	11.2	21
39	A study of glycerol hydrogenolysis over Ru–Cu/Al2O3 and Ru–Cu/ZrO2 catalysts. Journal of Molecular Catalysis A, 2016, 415, 27-36.	4.8	50
40	Multiproduct Steady-State Isotopic Transient Kinetic Analysis of the Ethanol Coupling Reaction over Hydroxyapatite and Magnesia. ACS Catalysis, 2015, 5, 1737-1746.	11.2	93
41	Reactivity and stability of supported Pd nanoparticles during the liquid-phase and gas-phase decarbonylation of heptanoic acid. Applied Catalysis A: General, 2015, 504, 295-307.	4.3	21
42	DRIFTS of Probe Molecules Adsorbed on Magnesia, Zirconia, and Hydroxyapatite Catalysts. Journal of Physical Chemistry C, 2015, 119, 9186-9197.	3.1	68
43	Restructuring of supported PtSn bimetallic catalysts during aqueous phase oxidation of 1,6-hexanediol. Journal of Catalysis, 2015, 332, 38-50.	6.2	17
44	Evidence for the Bifunctional Nature of Pt–Re Catalysts for Selective Glycerol Hydrogenolysis. ACS Catalysis, 2015, 5, 5679-5695.	11.2	108
45	Kinetics and mechanism of 5-hydroxymethylfurfural oxidation and their implications for catalyst development. Journal of Molecular Catalysis A, 2014, 388-389, 123-132.	4.8	89
46	The Important Role of Hydroxyl on Oxidation Catalysis by Gold Nanoparticles. Accounts of Chemical Research, 2014, 47, 825-833.	15.6	181
47	Decarbonylation of heptanoic acid over carbon-supported platinum nanoparticles. Green Chemistry, 2014, 16, 683-694.	9.0	66
48	Supported K/MoS2 and K/Mo2C Catalysts for Higher Alcohol Synthesis from Synthesis Gas: Impact of Molybdenum Precursor and Metal Oxide Support on Activity and Selectivity. Catalysis Letters, 2014, 144, 825-830.	2.6	13
49	Rapid, cost-effective DNA quantification via a visually-detectable aggregation of superparamagnetic silica-magnetite nanoparticles. Nano Research, 2014, 7, 755-764.	10.4	14
50	On the deactivation of supported platinum catalysts for selective oxidation of alcohols. Journal of Catalysis, 2014, 311, 295-305.	6.2	61
51	Selective production of 1,2-propanediol by hydrogenolysis of glycerol over bimetallic Ru–Cu nanoparticles supported on TiO2. Applied Catalysis A: General, 2014, 482, 137-144.	4.3	57
52	Multi-product steady-state isotopic transient kinetic analysis of CO hydrogenation over supported molybdenum carbide. Journal of Catalysis, 2013, 306, 91-99.	6.2	30
53	Influence of Cobalt on Rubidium-Promoted Alumina-Supported Molybdenum Carbide Catalysts for Higher Alcohol Synthesis from Syngas. Topics in Catalysis, 2013, 56, 1740-1751.	2.8	12
54	Perspectives on the kinetics of diol oxidation over supported platinum catalysts in aqueous solution. Journal of Catalysis, 2013, 308, 50-59.	6.2	34

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55	Use of infrared spectroscopy and density functional theory to study the influence of rubidium on alumina-supported molybdenum carbide catalyst for higher alcohol synthesis from syngas. Journal of Catalysis, 2013, 299, 150-161.	6.2	22
56	lsotopic transient analysis of the ethanol coupling reaction over magnesia. Journal of Catalysis, 2013, 298, 130-137.	6.2	95
57	Heterogeneous Catalysts for the Guerbet Coupling of Alcohols. ACS Catalysis, 2013, 3, 1588-1600.	11.2	312
58	Influence of the Precipitation Method on Acid–Baseâ€Catalyzed Reactions over Mg–Zr Mixed Oxides. ChemCatChem, 2013, 5, 1989-1997.	3.7	26
59	Selective oxidation of alcohols and aldehydes over supported metal nanoparticles. Green Chemistry, 2013, 15, 17-45.	9.0	659
60	Sodium modification of zirconia catalysts for ethanol coupling to 1-butanol. Journal of Energy Chemistry, 2013, 22, 58-64.	12.9	65
61	Origins of Unusual Alcohol Selectivities over Mixed MgAl Oxide-Supported K/MoS <sub>2</sub> Catalysts for Higher Alcohol Synthesis from Syngas. ACS Catalysis, 2013, 3, 1665-1675.	11.2	58
62	Selective Oxidation/Dehydrogenation Reactions. Springer Briefs in Molecular Science, 2013, , 11-31.	0.1	0
63	Gold Catalysts Stability. Springer Briefs in Molecular Science, 2013, , 47-49.	0.1	0
64	On the mechanism of selective oxidation of 5-hydroxymethylfurfural to 2,5-furandicarboxylic acid over supported Pt and Au catalysts. Green Chemistry, 2012, 14, 143-147.	9.0	334
65	Mechanistic Insights on the Hydrogenation of α,β-Unsaturated Ketones and Aldehydes to Unsaturated Alcohols over Metal Catalysts. ACS Catalysis, 2012, 2, 671-683.	11.2	206
66	Influence of Passivation on the Reactivity of Unpromoted and Rb-Promoted Mo <sub>2</sub> C Nanoparticles for CO Hydrogenation. ACS Catalysis, 2012, 2, 1408-1416.	11.2	36
67	Mixed MgAl Oxide Supported Potassium Promoted Molybdenum Sulfide as a Selective Catalyst for Higher Alcohol Synthesis from Syngas. Catalysis Letters, 2012, 142, 875-881.	2.6	31
68	Understanding Catalysis Through Characterization and Synthesis of Catalysts: Gabor A. Somorjai Award and Symposium for Creative Research 2011. Topics in Catalysis, 2012, 55, 1-2.	2.8	6
69	Influence of Reaction Conditions on Diacid Formation During Au-Catalyzed Oxidation of Glycerol and Hydroxymethylfurfural. Topics in Catalysis, 2012, 55, 24-32.	2.8	91
70	Selective Hydrogenolysis of Polyols and Cyclic Ethers over Bifunctional Surface Sites on Rhodium–Rhenium Catalysts. Journal of the American Chemical Society, 2011, 133, 12675-12689.	13.7	439
71	Inhibition of gold and platinum catalysts by reactive intermediates produced in the selective oxidation of alcohols in liquid water. Green Chemistry, 2011, 13, 3484.	9.0	75
72	Reactivity and in situ X-ray absorption spectroscopy of Rb-promoted Mo2C/MgO catalysts for higher alcohol synthesis. Journal of Catalysis, 2011, 282, 83-93.	6.2	49

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73	Oxidation of 5-hydroxymethylfurfural over supported Pt, Pd and Au catalysts. Catalysis Today, 2011, 160, 55-60.	4.4	353
74	Xâ€ray Absorption Spectroscopy of Bimetallic Pt–Re Catalysts for Hydrogenolysis of Glycerol to Propanediols. ChemCatChem, 2010, 2, 1107-1114.	3.7	134
75	Transesterification of tributyrin with methanol over basic Mg:Zr mixed oxide catalysts. Applied Catalysis B: Environmental, 2010, 96, 508-515.	20.2	27
76	Glycerol-Intercalated Mg-Al Hydrotalcite as a Potential Solid Base Catalyst for Transesterification. Clays and Clay Minerals, 2010, 58, 475-485.	1.3	11
77	Reactivity of the Gold/Water Interface During Selective Oxidation Catalysis. Science, 2010, 330, 74-78.	12.6	888
78	Intercalation of Ethylene Glycol into Yttrium Hydroxide Layered Materials. Inorganic Chemistry, 2010, 49, 3888-3895.	4.0	26
79	Comparative study of CO and CO2 hydrogenation over supported Rh–Fe catalysts. Catalysis Communications, 2010, 11, 901-906.	3.3	99
80	Fe-promotion of supported Rh catalysts for direct conversion of syngas to ethanol. Journal of Catalysis, 2009, 261, 9-16.	6.2	203
81	Influence of textural properties and trace water on the reactivity and deactivation of reconstructed layered hydroxide catalysts for transesterification of tributyrin with methanol. Journal of Catalysis, 2009, 268, 307-317.	6.2	41
82	Influence of Reactor Configuration on the Selective Oxidation of Glycerol over Au/TiO2. Topics in Catalysis, 2009, 52, 269-277.	2.8	44
83	Xâ€ray Absorption Spectroscopy of an Feâ€Promoted Rh/TiO <sub>2</sub> Catalyst for Synthesis of Ethanol from Synthesis Gas. ChemCatChem, 2009, 1, 295-303.	3.7	43
84	Influence of water on the activity and stability of activated MgAl hydrotalcites for the transesterification of tributyrin with methanol. Journal of Catalysis, 2008, 254, 190-197.	6.2	98
85	Basic Nanostructured Catalysts. , 2008, , 278-287.		0
86	Understanding Au-Catalyzed Low-Temperature CO Oxidation. Journal of Physical Chemistry C, 2007, 111, 11767-11775.	3.1	341
87	Oxidation of H2and CO over Ion-Exchanged X and Y Zeolites. Journal of the American Chemical Society, 2007, 129, 3420-3425.	13.7	6
88	Synthesis of methacrylic acid by aldol condensation of propionic acid with formaldehyde over acid–base bifunctional catalysts. Catalysis Today, 2007, 123, 42-49.	4.4	63
89	Glycerol hydrogenolysis on carbon-supported PtRu and AuRu bimetallic catalysts. Journal of Catalysis, 2007, 251, 281-294.	6.2	271
90	Promotional effect of hydroxyl on the aqueous phase oxidation of carbon monoxide and glycerol over supported Au catalysts. Topics in Catalysis, 2007, 44, 307-317.	2.8	185

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91	A Quantum Chemical Study of the Decomposition of Keggin-Structured Heteropolyacids. Journal of Physical Chemistry B, 2006, 110, 4170-4178.	2.6	37
92	Hydrocarbon oxidation and aldol condensation over basic zeolite catalysts. Catalysis Today, 2006, 116, 226-233.	4.4	37
93	Oxygen-exchange reactions during CO oxidation over titania- and alumina-supported Au nanoparticles. Journal of Catalysis, 2006, 241, 407-416.	6.2	61
94	X-ray absorption spectroscopy and CO oxidation activity of Au/Al2O3 treated with NaCN. Catalysis Letters, 2005, 99, 21-26.	2.6	31
95	Ab Initio and Microcalorimetric Investigations of Alkene Adsorption on Phosphotungstic Acid. Langmuir, 2005, 21, 4738-4745.	3.5	25
96	Location, Acid Strength, and Mobility of the Acidic Protons in Keggin 12-H3PW12O40:  A Combined Solid-State NMR Spectroscopy and DFT Quantum Chemical Calculation Study. Journal of the American Chemical Society, 2005, 127, 18274-18280.	13.7	130
97	Investigation of Alumina-Supported Au Catalyst for CO Oxidation by Isotopic Transient Analysis and X-ray Absorption Spectroscopyâ€. Journal of Physical Chemistry B, 2005, 109, 2307-2314.	2.6	51
98	Anhydrous and Water-Assisted Proton Mobility in Phosphotungstic Acid. Journal of the American Chemical Society, 2005, 127, 5238-5245.	13.7	99
99	Raman Spectroscopy and Dioxygen Adsorption on Cs-Loaded Zeolite Catalysts for Butene Isomerization. Journal of Physical Chemistry B, 2005, 109, 7141-7148.	2.6	10
100	Influence of Dihydrogen and Water Vapor on the Kinetics of CO Oxidation over Au/Al2O3. Industrial & Engineering Chemistry Research, 2005, 44, 5403-5410.	3.7	64
101	Isotopic Transient Analysis of Ammonia Synthesis over Ba or Cs-Promoted Ru/Carbon Catalysts. Catalysis Letters, 2004, 93, 61-65.	2.6	24
102	Use of kinetic models to explore the role of base promoters on Ru/MgO ammonia synthesis catalysts. Journal of Catalysis, 2004, 225, 359-368.	6.2	119
103	Adsorption of CO2on Model Surfaces of Cesium Oxides Determined from First Principles. Journal of Physical Chemistry B, 2004, 108, 16798-16805.	2.6	25
104	A First Principles Analysis of the Location and Affinity of Protons in the Secondary Structure of Phosphotungstic Acid. Journal of Physical Chemistry B, 2004, 108, 12292-12300.	2.6	36
105	Use of kinetic models to explore the role of base promoters on Ru/MgO ammonia synthesis catalysts. Journal of Catalysis, 2004, 225, 359-359.	6.2	7
106	On the use of 1-butene double-bond isomerization as a probe reaction on cesium-loaded zeolite X. Applied Catalysis A: General, 2003, 239, 59-70.	4.3	27
107	A computational and experimental study of anhydrous phosphotungstic acid and its interaction with water molecules. Applied Catalysis A: General, 2003, 256, 51-68.	4.3	100
108	Adsorption of N2and CO2on Zeolite X Exchanged with Potassium, Barium, or Lanthanum. Langmuir, 2003, 19, 4707-4713.	3.5	42

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109	CHEMISTRY: All That Glitters Is Not Au0. Science, 2003, 301, 926-927.	12.6	116
110	Importance of Product Readsorption during Isotopic Transient Analysis of Ammonia Synthesis on Ba-Promoted Ru/BaX Catalyst. Journal of Catalysis, 2002, 211, 379-386.	6.2	27
111	Importance of Product Readsorption during Isotopic Transient Analysis of Ammonia Synthesis on Ba-Promoted Ru/BaX Catalyst. Journal of Catalysis, 2002, 211, 379-386.	6.2	21
112	Lanthanum Promotion of Ru/Zeolite X Catalysts for Ammonia Synthesis. Catalysis Letters, 2002, 81, 265-269.	2.6	27
113	X-ray and IR Spectroscopy of Barium-Promoted, Zeolite-Supported Ruthenium Catalysts for Ammonia Synthesis. Journal of Physical Chemistry B, 2001, 105, 7525-7532.	2.6	32
114	Cycloaddition of CO2 to Epoxides over Solid Base Catalysts. Journal of Catalysis, 2001, 199, 85-91.	6.2	245
115	Effect of water on silica-supported phosphotungstic acid catalysts for 1-butene double bond shift and alkane skeletal isomerization. Applied Catalysis A: General, 2000, 200, 219-231.	4.3	58
116	Probing the Basic Character of Alkali-Modified Zeolites by CO2 Adsorption Microcalorimetry, Butene Isomerization, and Toluene Alkylation with Ethylene. Journal of Catalysis, 2000, 189, 79-90.	6.2	59
117	Structure of Pd/CeOx/Al2O3Catalysts for NOxReduction Determined By in Situ X-ray Absorption Spectroscopy. Journal of Physical Chemistry B, 2000, 104, 9653-9660.	2.6	14
118	Ammonia Adsorption on Keggin-Type Heteropolyacid Catalysts Explored by Density Functional Quantum Chemistry Calculations. Journal of Physical Chemistry B, 2000, 104, 3556-3562.	2.6	25
119	UVâ^`Vis Spectroscopy of Iodine Adsorbed on Alkali-Metal-Modified Zeolite Catalysts for Addition of Carbon Dioxide to Ethylene Oxide. Journal of Physical Chemistry B, 1999, 103, 6277-6282.	2.6	126
120	Title is missing!. Topics in Catalysis, 1998, 6, 77-86.	2.8	44
121	Synthesis, Characterization, and Photocatalytic Activity of Titania and Niobia Mesoporous Molecular Sieves. Chemistry of Materials, 1998, 10, 1468-1474.	6.7	332
122	Acidity of Keggin-Type Heteropolycompounds Evaluated by Catalytic Probe Reactions, Sorption Microcalorimetry, and Density Functional Quantum Chemical Calculations. Journal of Physical Chemistry B, 1998, 102, 10817-10825.	2.6	151
123	Titaniaâ^'Silica:Â A Model Binary Oxide Catalyst System. Chemistry of Materials, 1997, 9, 2311-2324.	6.7	289
124	On the Superacidity of Sulfated Zirconia Catalysts for Low-Temperature Isomerization of Butane. Journal of the American Chemical Society, 1996, 118, 12240-12241.	13.7	63
125	Structure of Fe, Mn-promoted sulfated zirconia catalyst by X-ray and IR absorption spectroscopies. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 1825-1833.	1.7	61
126	Use of catalytic reactions to probe Mg-Al mixed oxide surfaces. Catalysis Letters, 1994, 25, 87-95.	2.6	26

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127	Structure of Supported PdAu Clusters Determined by X-ray Absorption Spectroscopy. The Journal of Physical Chemistry, 1994, 98, 5471-5477.	2.9	79
128	Characterization of magnesium-aluminum mixed oxides by temperature-programmed reaction of 2-propanol. Langmuir, 1994, 10, 159-165.	3.5	40
129	A non-porous supported-platinum catalyst for aromatization of n-hexane. Nature, 1991, 349, 313-315.	27.8	151