Bert M Weckhuysen

List of Publications by Year
in descending order

792 papers	58,178 citations	993 — 114 h-index	2171 — 202 g-index
879 all docs	879 docs citations	879 times ranked	34563 citing authors

#	Article	IF	Citations
1	The Catalytic Valorization of Lignin for the Production of Renewable Chemicals. Chemical Reviews, 2010, 110, 3552-3599.	23.0	3,704
2	Paving the Way for Lignin Valorisation: Recent Advances in Bioengineering, Biorefining and Catalysis. Angewandte Chemie - International Edition, 2016, 55, 8164-8215.	7.2	1,576
3	Catalytic Dehydrogenation of Light Alkanes on Metals and Metal Oxides. Chemical Reviews, 2014, 114, 10613-10653.	23.0	1,473
4	Chemistry, spectroscopy and the role of supported vanadium oxides in heterogeneous catalysis. Catalysis Today, 2003, 78, 25-46.	2.2	825
5	Beyond Mechanical Recycling: Giving New Life to Plastic Waste. Angewandte Chemie - International Edition, 2020, 59, 15402-15423.	7.2	809
6	The renaissance of iron-based Fischerâ€“Tropsch synthesis: on the multifaceted catalyst deactivation behaviour. Chemical Society Reviews, 2008, 37, 2758.	18.7	730
7	Surface Chemistry and Spectroscopy of Chromium in Inorganic Oxides. Chemical Reviews, 1996, 96, 3327-3350.	23.0	729
8	Fluid catalytic cracking: recent developments on the grand old lady of zeolite catalysis. Chemical Society Reviews, 2015, 44, 7342-7370.	18.7	716
9	New insights into the structure and composition of technical lignins: a comparative characterisation study. Green Chemistry, 2016, 18, 2651-2665.	4.6	648
10	Structure and reactivity of surface vanadium oxide species on oxide supports. Applied Catalysis A: General, 1997, 157, 67-90.	2.2	636
11	Catalytic processes monitored at the nanoscale with tip-enhanced Raman spectroscopy. Nature Nanotechnology, 2012, 7, 583-586.	15.6	570
12	Recent trends and fundamental insights in the methanol-to-hydrocarbons process. Nature Catalysis, 2018, 1, 398-411.	16.1	507
13	Formation, Molecular Structure, and Morphology of Humins in Biomass Conversion: Influence of Feedstock and Processing Conditions. ChemSusChem, 2013, 6, 1745-1758.	3.6	482
14	The Production of Propene Oxide:Â Catalytic Processes and Recent Developments. Industrial & Engineering Chemistry Research, 2006, 45, 3447-3459.	1.8	456
15	Stability and Reactivity of Ïµâˆ’Ï‡âˆ’Î¸ Iron Carbide Catalyst Phases in Fischerâˆ’Tropsch Synthesis: Controlling Î¼_C. Journal of the American Chemical Society, 2010, 132, 14928-14941.	6.6	426
16	Heterogeneities of individual catalyst particles in space and time as monitored by spectroscopy. Nature Chemistry, 2012, 4, 873-886.	6.6	392
17	Unravelling structure sensitivity in CO2 hydrogenation over nickel. Nature Catalysis, 2018, 1, 127-134.	16.1	386
18	Nanoscale chemical imaging of a working catalyst by scanning transmission X-ray microscopy. Nature, 2008, 456, 222-225.	13.7	376

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19	Chemocatalytic Conversion of Ethanol into Butadiene and Other Bulk Chemicals. ChemSusChem, 2013, 6, 1595-1614.	3.6	371
20	The renaissance of the Sabatier reaction and its applications on Earth and in space. Nature Catalysis, 2019, 2, 188-197.	16.1	369
21	Alkane dehydrogenation over supported chromium oxide catalysts. Catalysis Today, 1999, 51, 223-232.	2.2	344
22	Product shape selectivity dominates the Methanol-to-Olefins (MTO) reaction over H-SAPO-34 catalysts. Journal of Catalysis, 2009, 264, 77-87.	3.1	344
23	Chemical Imaging of Spatial Heterogeneities in Catalytic Solids at Different Length and Time Scales. Angewandte Chemie - International Edition, 2009, 48, 4910-4943.	7.2	339
24	In Situ Spectroscopic Investigation of Molecular Structures of Highly Dispersed Vanadium Oxide on Silica under Various Conditions. Journal of Physical Chemistry B, 1998, 102, 10842-10852.	1.2	338
25	Bis(Î¼-oxo)dicopper in Cu-ZSM-5 and Its Role in the Decomposition of NO:Â A Combined in Situ XAFS, UVâˆ’Visâˆ’Near-IR, and Kinetic Study. Journal of the American Chemical Society, 2003, 125, 7629-7640.	6.6	338
26	Recent advances in zeolite chemistry and catalysis. Chemical Society Reviews, 2015, 44, 7022-7024.	18.7	333
27	Determining the active site in a catalytic process: Operando spectroscopy is more than a buzzword. Physical Chemistry Chemical Physics, 2003, 5, 4351.	1.3	321
28	Confirmation of Isolated Cu²⁺ Ions in SSZ-13 Zeolite as Active Sites in NH₃-Selective Catalytic Reduction. Journal of Physical Chemistry C, 2012, 116, 4809-4818.	1.5	310
29	Spaceâ€•and Timeâ€Resolved Inâ€situ Spectroscopy on the Coke Formation in Molecular Sieves: Methanolâ€toâ€Olefin Conversion over Hâ€ZSMâ€5 and Hâ€SAPOâ€34. Chemistry - A European Journal, 2008, 14, 11320-11327.	1.7	303
30	Local Environment and Nature of Cu Active Sites in Zeolite-Based Catalysts for the Selective Catalytic Reduction of NO_{<i>x</i>}. ACS Catalysis, 2013, 3, 413-427.	5.5	301
31	A New Templated Ordered Structure with Combined Micro- and Mesopores and Internal Silica Nanocapsules. Journal of Physical Chemistry B, 2002, 106, 5873-5877.	1.2	286
32	Ruthenium-catalyzed hydrogenation of levulinic acid: Influence of the support and solvent on catalyst selectivity and stability. Journal of Catalysis, 2013, 301, 175-186.	3.1	281
33	Shale Gas Revolution: An Opportunity for the Production of Biobased Chemicals?. Angewandte Chemie - International Edition, 2013, 52, 11980-11987.	7.2	278
34	High performing and stable supported nano-alloys for the catalytic hydrogenation of levulinic acid to Î³-valerolactone. Nature Communications, 2015, 6, 6540.	5.8	275
35	Complexity behind CO₂ Capture on NH₂-MIL-53(Al). Langmuir, 2011, 27, 3970-3976.	1.6	274
36	CoMo sulfide-catalyzed hydrodeoxygenation of lignin model compounds: An extended reaction network for the conversion of monomeric and dimeric substrates. Journal of Catalysis, 2012, 285, 315-323.	3.1	270

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37	Snapshots of a working catalyst: possibilities and limitations of in situ spectroscopy in the field of heterogeneous catalysis. Chemical Communications, 2002, , 97-110.	2.2	266
38	Thermally Stable and Regenerable Platinumâ€“Tin Clusters for Propane Dehydrogenation Prepared by Atom Trapping on Ceria. Angewandte Chemie - International Edition, 2017, 56, 8986-8991.	7.2	262
39	A combined in situ time-resolved UVâ€“Vis, Raman and high-energy resolution X-ray absorption spectroscopy study on the deactivation behavior of Pt and PtSn propane dehydrogenation catalysts under industrial reaction conditions. Journal of Catalysis, 2010, 276, 268-279.	3.1	256
40	Morphology-dependent zeolite intergrowth structures leading to distinct internal and outer-surface molecular diffusion barriers. Nature Materials, 2009, 8, 959-965.	13.3	251
41	Conversion of Methane to Benzene over Transition Metal Ion ZSM-5 Zeolites. Journal of Catalysis, 1998, 175, 338-346.	3.1	250
42	Catalytic Lignin Valorization Process for the Production of Aromatic Chemicals and Hydrogen. ChemSusChem, 2012, 5, 1602-1609.	3.6	248
43	Coke Formation during the Methanolâ€toâ€Olefin Conversion: In Situ Microspectroscopy on Individual Hâ€ZSMâ€5 Crystals with Different BrÃ¸nsted Acidity. Chemistry - A European Journal, 2011, 17, 2874-2884.	1.7	244
44	Implementation of a combined SAXS/WAXS/QEXAFS set-up for time-resolved<i>in situ</i>experiments. Journal of Synchrotron Radiation, 2008, 15, 632-640.	1.0	243
45	Isolated Cu²⁺ions: active sites for selective catalytic reduction of NO. Chemical Communications, 2011, 47, 800-802.	2.2	243
46	Selective Catalytic Reduction of NO with NH3over Supported Vanadia Catalysts. Journal of Catalysis, 1996, 161, 211-221.	3.1	232
47	Spectroscopy and coordination chemistry of cobalt in molecular sieves. Microporous and Mesoporous Materials, 1998, 22, 165-178.	2.2	229
48	Structureâ€“performance descriptors and the role of Lewis acidity in the methanol-to-propylene process. Nature Chemistry, 2018, 10, 804-812.	6.6	221
49	The concept of active site in heterogeneous catalysis. Nature Reviews Chemistry, 2022, 6, 89-111.	13.8	218
50	Platinumâ€Promoted Ga/Al₂O₃ as Highly Active, Selective, and Stable Catalyst for the Dehydrogenation of Propane. Angewandte Chemie - International Edition, 2014, 53, 9251-9256.	7.2	215
51	Combining operando techniques in one spectroscopic-reaction cell: New opportunities for elucidating the active site and related reaction mechanism in catalysis. Catalysis Today, 2006, 113, 3-15.	2.2	189
52	Co₃O₄â€“SiO₂ Nanocomposite: A Very Active Catalyst for CO Oxidation with Unusual Catalytic Behavior. Journal of the American Chemical Society, 2011, 133, 11279-11288.	6.6	189
53	Combined DRSâ€“RSâ€“EXAFSâ€“XANESâ€“TPR study of supported chromium catalysts. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 3245-3253.	1.7	188
54	Role of Sn in the Regeneration of Pt/Î³-Al₂O₃ Light Alkane Dehydrogenation Catalysts. ACS Catalysis, 2016, 6, 2257-2264.	5.5	188

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55	Olefin polymerization over supported chromium oxide catalysts. Catalysis Today, 1999, 51, 215-221.	2.2	185
56	NaYF₄:Er³⁺,Yb³⁺/SiO₂ Core/Shell Upconverting Nanocrystals for Luminescence Thermometry up to 900 K. Journal of Physical Chemistry C, 2017, 121, 3503-3510.	1.5	185
57	Determining the storage, availability and reactivity of NH₃within Cu-Chabazite-based Ammonia Selective Catalytic Reduction systems. Physical Chemistry Chemical Physics, 2014, 16, 1639-1650.	1.3	181
58	Carbon Nanofiber Supported Transitionâ€Metal Carbide Catalysts for the Hydrodeoxygenation of Guaiacol. ChemCatChem, 2013, 5, 2964-2972.	1.8	180
59	Recent progress in diffuse reflectance spectroscopy of supported metal oxide catalysts. Catalysis Today, 1999, 49, 441-451.	2.2	173
60	Infrared and Raman imaging of heterogeneous catalysts. Chemical Society Reviews, 2010, 39, 4615.	18.7	170
61	Initial Carbonâ€“Carbon Bond Formation during the Early Stages of the Methanolâ€toâ€Olefin Process Proven by Zeoliteâ€Trapped Acetate and Methyl Acetate. Angewandte Chemie - International Edition, 2016, 55, 15840-15845.	7.2	170
62	ZrO₂ Is Preferred over TiO₂ as Support for the Ru-Catalyzed Hydrogenation of Levulinic Acid to Î³-Valerolactone. ACS Catalysis, 2016, 6, 5462-5472.	5.5	169
63	A quantitative diffuse reflectance spectroscopy study of supported chromium catalysts. The Journal of Physical Chemistry, 1993, 97, 4756-4763.	2.9	168
64	Title is missing!. Catalysis Letters, 1998, 52, 31-36.	1.4	168
65	Plugged hexagonal templated silica: a unique micro- and mesoporous composite material with internal silica nanocapsulesElectronic supplementary information (ESI) available: Fig. S1: X-ray diffractogram of a PHTS material. Fig. S2: TEM images of SBA-15 and PHTS-2. Fig. S3: hydrothermal stabilities. See http://www.rsc.org/suppdata/cc/b2/b201424f/. Chemical Communications, 2002, , 1010-1011.	2.2	168
66	MCM-48-Supported Vanadium Oxide Catalysts, Prepared by the Molecular Designed Dispersion of VO(acac)2: A Detailed Study of the Highly Reactive MCM-48 Surface and the Structure and Activity of the Deposited VOx. Journal of Catalysis, 2001, 197, 160-171.	3.1	166
67	In Situ X-ray Absorption of Co/Mn/TiO2Catalysts for Fischerâˆ'Tropsch Synthesis. Journal of Physical Chemistry B, 2004, 108, 16201-16207.	1.2	165
68	Glycerol Etherification over Highly Active CaOâ€Based Materials: New Mechanistic Aspects and Related Colloidal Particle Formation. Chemistry - A European Journal, 2008, 14, 2016-2024.	1.7	161
69	Local and long range order in promoted iron-based Fischerâ€“Tropsch catalysts: A combined in situ X-ray absorption spectroscopy/wide angle X-ray scattering study. Journal of Catalysis, 2009, 262, 244-256.	3.1	160
70	Liquid-phase reforming and hydrodeoxygenation as a two-step route to aromatics from lignin. Green Chemistry, 2013, 15, 3049.	4.6	159
71	Wege zur Verwertung von Lignin: Fortschritte in der Biotechnik, der Bioraffination und der Katalyse. Angewandte Chemie, 2016, 128, 8296-8354.	1.6	159
72	EXAFS as a tool to interrogate the size and shape of mono and bimetallic catalyst nanoparticles. Physical Chemistry Chemical Physics, 2010, 12, 5562.	1.3	157

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73	Aerobic oxidation of cyclohexane by gold-based catalysts: New mechanistic insight by thorough product analysis. Journal of Catalysis, 2010, 270, 16-25.	3.1	156
74	Transition metal catalyzed oxidation of Alcell lignin, soda lignin, and lignin model compounds in ionic liquids. Green Chemistry, 2010, 12, 1225.	4.6	153
75	Spatial and temporal exploration of heterogeneous catalysts with synchrotron radiation. Nature Reviews Materials, 2018, 3, 324-340.	23.3	153
76	Cu-ZSM-5 Zeolites for the Formation of Methanol from Methane and Oxygen: Probing the Active Sites and Spectator Species. Catalysis Letters, 2010, 138, 14-22.	1.4	152
77	Envisaging the Physicochemical Processes during the Preparation of Supported Catalysts:Â Raman Microscopy on the Impregnation of Mo onto Al2O3Extrudates. Journal of the American Chemical Society, 2004, 126, 14548-14556.	6.6	150
78	Mesopore formation in zeolite H-SSZ-13 by desilication with NaOH. Microporous and Mesoporous Materials, 2010, 132, 384-394.	2.2	150
79	Surface- and Tip-Enhanced Raman Spectroscopy in Catalysis. Journal of Physical Chemistry Letters, 2016, 7, 1570-1584.	2.1	149
80	Propene epoxidation over Au/Ti-SBA-15 catalysts. Journal of Catalysis, 2007, 248, 235-248.	3.1	147
81	Phosphorus promotion and poisoning in zeolite-based materials: synthesis, characterisation and catalysis. Chemical Society Reviews, 2015, 44, 7406-7428.	18.7	147
82	Identification of a diagnostic structural motif reveals a new reaction intermediate and condensation pathway in kraft lignin formation. Chemical Science, 2018, 9, 6348-6360.	3.7	143
83	Conversion of Methane to Benzene over Transition Metal Ion ZSM-5 Zeolites. Journal of Catalysis, 1998, 175, 347-351.	3.1	142
84	Chemical imaging of catalytic solids with synchrotron radiation. Chemical Society Reviews, 2010, 39, 4656.	18.7	141
85	Subâ€Second Timeâ€Resolved Surfaceâ€Enhanced Raman Spectroscopy Reveals Dynamic CO Intermediates during Electrochemical CO₂ Reduction on Copper. Angewandte Chemie - International Edition, 2021, 60, 16576-16584.	7.2	141
86	Effect of water vapor on the molecular structures of supported vanadium oxide catalysts at elevated temperatures. Journal of Molecular Catalysis A, 1996, 110, 41-54.	4.8	140
87	Determining the location and nearest neighbours of aluminium in zeolites with atom probe tomography. Nature Communications, 2015, 6, 7589.	5.8	139
88	The Role of Gold in Gold-Titania Epoxidation Catalysts. Angewandte Chemie - International Edition, 2005, 44, 1115-1118.	7.2	138
89	Lignin up for break-down. Nature Chemistry, 2014, 6, 1035-1036.	6.6	138
90	Characterization of Al2O3-Supported Manganese Oxides by Electron Spin Resonance and Diffuse Reflectance Spectroscopy. Journal of Physical Chemistry B, 1997, 101, 309-316.	1.2	135

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91	Influence of acidâ€“base properties on the Lebedev ethanol-to-butadiene process catalyzed by SiO₂â€“MgO materials. Catalysis Science and Technology, 2015, 5, 2869-2879.	2.1	135
92	Structural characterization of ¹³C-enriched humins and alkali-treated ¹³C humins by 2D solid-state NMR. Green Chemistry, 2015, 17, 4383-4392.	4.6	134
93	Molybdenum Speciation and its Impact on Catalytic Activity during Methane Dehydroaromatization in Zeolite ZSMâ€5 as Revealed by Operando Xâ€Ray Methods. Angewandte Chemie - International Edition, 2016, 55, 5215-5219.	7.2	133
94	Fundamental Studies of Butane Oxidation over Model-Supported Vanadium Oxide Catalysts: Molecular Structure-Reactivity Relationships. Journal of Catalysis, 1997, 170, 75-88.	3.1	132
95	Catalytic activity in individual cracking catalyst particles imaged throughout different life stages by selective staining. Nature Chemistry, 2011, 3, 862-867.	6.6	132
96	In Situ Raman Spectroscopy of Supported Transition Metal Oxide Catalysts:Â18O2âˆ’16O2Isotopic Labeling Studies. Journal of Physical Chemistry B, 2000, 104, 7382-7387.	1.2	131
97	Changing active sites in Cuâ€“CHA catalysts: deNOx selectivity as a function of the preparation method. Microporous and Mesoporous Materials, 2013, 166, 144-152.	2.2	131
98	An operando optical fiber UVâ€“vis spectroscopic study of the catalytic decomposition of NO and N2O over Cu-ZSM-5. Journal of Catalysis, 2003, 220, 500-512.	3.1	129
99	Inâ€situ Scanning Transmission Xâ€Ray Microscopy of Catalytic Solids and Related Nanomaterials. ChemPhysChem, 2010, 11, 951-962.	1.0	129
100	Infrared and Raman spectroscopic study of pH-induced structural changes of l-histidine in aqueous environment. Vibrational Spectroscopy, 2005, 39, 114-125.	1.2	128
101	Unraveling the Crystallization Mechanism of CoAPO-5 Molecular Sieves under Hydrothermal Conditions. Journal of the American Chemical Society, 2005, 127, 14454-14465.	6.6	128
102	Surface Acidity and Basicity of La2O3, LaOCl, and LaCl3Characterized by IR Spectroscopy, TPD, and DFT Calculations. Journal of Physical Chemistry B, 2004, 108, 15770-15781.	1.2	127
103	Adding a third dimension to operando spectroscopy: a combined UV-Vis, Raman and XAFS setup to study heterogeneous catalysts under working conditions. Chemical Communications, 2005, , 3015.	2.2	124
104	Life and death of a single catalytic cracking particle. Science Advances, 2015, 1, e1400199.	4.7	124
105	Understanding carbon dioxide activation and carbonâ€“carbon coupling over nickel. Nature Communications, 2019, 10, 5330.	5.8	124
106	Chemical deactivation of Cu-SSZ-13 ammonia selective catalytic reduction (NH3-SCR) systems. Applied Catalysis B: Environmental, 2014, 154-155, 339-349.	10.8	123
107	Hydration effects on the molecular structure of silica-supported vanadium oxide catalysts: A combined IR, Raman, UVâ€“vis and EXAFS study. Vibrational Spectroscopy, 2007, 43, 140-151.	1.2	122
108	Insights into the Activity and Deactivation of the Methanol-to-Olefins Process over Different Small-Pore Zeolites As Studied with Operando UVâ€“vis Spectroscopy. ACS Catalysis, 2017, 7, 4033-4046.	5.5	122

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109	Intergrowth Structure of Zeolite Crystals as Determined by Optical and Fluorescence Microscopy of the Templateâ€Removal Process. Angewandte Chemie - International Edition, 2007, 46, 7228-7231.	7.2	120
110	Diffuse reflectance spectroscopy study of the thermal genesis and molecular structure of chromium-supported catalysts. The Journal of Physical Chemistry, 1994, 98, 579-584.	2.9	119
111	The role of tungsten oxide in the selective hydrogenolysis of glycerol to 1,3-propanediol over Pt/WOx/Al2O3. Applied Catalysis B: Environmental, 2017, 204, 260-272.	10.8	119
112	Nonuniform Catalytic Behavior of Zeolite Crystals as Revealed by In Situ Optical Microspectroscopy. Angewandte Chemie - International Edition, 2007, 46, 3652-3655.	7.2	118
113	Separation and Purification of Hydrocarbons with Porous Materials. Angewandte Chemie - International Edition, 2021, 60, 18930-18949.	7.2	118
114	Lignin Solubilization and Aqueous Phase Reforming for the Production of Aromatic Chemicals and Hydrogen. ChemSusChem, 2011, 4, 369-378.	3.6	117
115	Nanosheets of Nonlayered Aluminum Metalâ€“Organic Frameworks through a Surfactantâ€Assisted Method. Advanced Materials, 2018, 30, e1707234.	11.1	117
116	Spatially resolved UVâ€“vis microspectroscopy on the preparation of alumina-supported Co Fischerâ€“Tropsch catalysts: Linking activity to Co distribution and speciation. Journal of Catalysis, 2006, 242, 287-298.	3.1	116
117	Visualizing the Crystal Structure and Locating the Catalytic Activity of Microâ€•and Mesoporous ZSMâ€5 Zeolite Crystals by Using In Situ Optical and Fluorescence Microscopy. Chemistry - A European Journal, 2008, 14, 1718-1725.	1.7	116
118	Preface: recent advances in the in-situ characterization of heterogeneous catalysts. Chemical Society Reviews, 2010, 39, 4557.	18.7	116
119	Trimodal Porous Hierarchical SSZ-13 Zeolite with Improved Catalytic Performance in the Methanol-to-Olefins Reaction. ACS Catalysis, 2016, 6, 2163-2177.	5.5	116
120	Finned zeolite catalysts. Nature Materials, 2020, 19, 1074-1080.	13.3	116
121	Mechanistic Study into the Direct Epoxidation of Propene over Gold/Titania Catalysts. Journal of Physical Chemistry B, 2005, 109, 19309-19319.	1.2	113
122	Influence of the Reaction Temperature on the Nature of the Active and Deactivating Species during Methanol to Olefins Conversion over H-SSZ-13. ACS Catalysis, 2015, 5, 992-1003.	5.5	112
123	X-ray Absorption Spectroscopy of Mn/Co/TiO2Fischerâˆ’Tropsch Catalysts:Â Relationships between Preparation Method, Molecular Structure, and Catalyst Performance. Journal of Physical Chemistry B, 2006, 110, 8626-8639.	1.2	111
124	Insight into the Effect of Water on the Methanol-to-Olefins Conversion in H-SAPO-34 from Molecular Simulations and in Situ Microspectroscopy. ACS Catalysis, 2016, 6, 1991-2002.	5.5	110
125	Effect of Preparation Method and CuO Promotion in the Conversion of Ethanol into 1,3â€Butadiene over SiO₂â€“MgO Catalysts. ChemSusChem, 2014, 7, 2505-2515.	3.6	109
126	Characterization and Comparison of Fast Pyrolysis Bio-oils from Pinewood, Rapeseed Cake, and Wheat Straw Using ¹³C NMR and Comprehensive GC Ã— GC. ACS Sustainable Chemistry and Engineering, 2016, 4, 4974-4985.	3.2	109

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127	Structure Sensitivity in Steam and Dry Methane Reforming over Nickel: Activity and Carbon Formation. ACS Catalysis, 2020, 10, 1428-1438.	5.5	109
128	1s2p Resonant Inelastic X-ray Scattering of Iron Oxides. Journal of Physical Chemistry B, 2005, 109, 20751-20762.	1.2	108
129	Diffuse Reflectance Spectroscopy of Supported Chromium Oxide Catalysts: A Self-Modeling Mixture Analysis. Journal of Catalysis, 1997, 166, 160-171.	3.1	106
130	A Combined SAXS/WAXS/XAFS Setup Capable of Observing Concurrent Changes Across the Nano-to-Micrometer Size Range in Inorganic Solid Crystallization Processes. Journal of the American Chemical Society, 2006, 128, 12386-12387.	6.6	106
131	In SituRaman Spectroscopy of Supported Chromium Oxide Catalysts:Â Reactivity Studies with Methanol and Butane. The Journal of Physical Chemistry, 1996, 100, 14437-14442.	2.9	105
132	Transition Metal Ions in Microporous Crystalline Aluminophosphates: Isomorphous Substitution. European Journal of Inorganic Chemistry, 1999, 1999, 565-577.	1.0	105
133	Nanoscale tomography reveals the deactivation of automotive copper-exchanged zeolite catalysts. Nature Communications, 2017, 8, 1666.	5.8	105
134	Bridging the Gap between the Direct and Hydrocarbon Pool Mechanisms of the Methanolâ€toâ€Hydrocarbons Process. Angewandte Chemie - International Edition, 2018, 57, 8095-8099.	7.2	104
135	Propane to olefins tandem catalysis: a selective route towards light olefins production. Chemical Society Reviews, 2021, 50, 11503-11529.	18.7	104
136	Catalytic oxidation of aromatic oxygenates by the heterogeneous catalyst Co-ZIF-9. Applied Catalysis A: General, 2011, 394, 79-85.	2.2	103
137	Selective, one-pot catalytic conversion of levulinic acid to pentanoic acid over Ru/H-ZSM5. Journal of Catalysis, 2014, 320, 33-41.	3.1	103
138	Influence of the preparation method on the hydrotreating activity of MoS2/Al2O3 extrudates: A Raman microspectroscopy study on the genesis of the active phase. Journal of Catalysis, 2006, 243, 292-302.	3.1	102
139	Homogeneity of Titania-Silica Mixed Oxides: On UV-DRS Studies as a Function of Titania Content. Journal of Catalysis, 1996, 163, 489-491.	3.1	101
140	Supported Vanadium Oxide Catalysts: Quantitative Spectroscopy, Preferential Adsorption of V4+/5+, and Al2O3Coating of Zeolite Y. Journal of Physical Chemistry B, 1998, 102, 8005-8012.	1.2	101
141	Engineering the acidity and accessibility of the zeolite ZSM-5 for efficient bio-oil upgrading in catalytic pyrolysis of lignocellulose. Green Chemistry, 2018, 20, 3499-3511.	4.6	101
142	Transition metal-catalyzed oxidative double bond cleavage of simple and bio-derived alkenes and unsaturated fatty acids. Catalysis Science and Technology, 2014, 4, 2182.	2.1	99
143	Operando monitoring of temperature and active species at the single catalyst particle level. Nature Catalysis, 2019, 2, 986-996.	16.1	99
144	Redox Behavior and Dispersion of Supported Chromium Catalysts. The Journal of Physical Chemistry, 1995, 99, 320-326.	2.9	98

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145	In situ Raman spectroscopy studies of bulk and surface metal oxide phases during oxidation reactions. Catalysis Today, 1996, 32, 47-55.	2.2	98
146	Revealing Shape Selectivity and Catalytic Activity Trends Within the Pores of Hâ€ZSMâ€5 Crystals by Timeâ€• and Spaceâ€Resolved Optical and Fluorescence Microspectroscopy. Chemistry - A European Journal, 2007, 13, 7057-7065.	1.7	98
147	Selective adsorption of manganese onto cobalt for optimized Mn/Co/TiO2 Fischerâ€"Tropsch catalysts. Journal of Catalysis, 2010, 270, 95-102.	3.1	98
148	Operando Raman spectroscopy study on the deactivation of Pt/Al2O3 and Ptâ€"Sn/Al2O3 propane dehydrogenation catalysts. Physical Chemistry Chemical Physics, 2013, 15, 12095.	1.3	98
149	Dynamic Xâ€Ray Diffraction Computed Tomography Reveals Realâ€Time Insight into Catalyst Active Phase Evolution. Angewandte Chemie - International Edition, 2011, 50, 10148-10152.	7.2	97
150	Mapping Metals Incorporation of a Whole Single Catalyst Particle Using Element Specific X-ray Nanotomography. Journal of the American Chemical Society, 2015, 137, 102-105.	6.6	97
151	Tandem Catalytic Depolymerization of Lignin by Waterâ€Tolerant Lewis Acids and Rhodium Complexes. ChemSusChem, 2016, 9, 2074-2079.	3.6	97
152	Electron paramagnetic resonance of heterogeneous chromium catalysts. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 2431.	1.7	96
153	The role of Cu on the reduction behavior and surface properties of Fe-based Fischerâ€"Tropsch catalysts. Physical Chemistry Chemical Physics, 2010, 12, 667-680.	1.3	96
154	Oxidation of methane to methanol and formaldehyde over Coâ€"ZSM-5 molecular sieves: Tuning the reactivity and selectivity by alkaline and acid treatments of the zeolite ZSM-5 agglomerates. Microporous and Mesoporous Materials, 2011, 138, 176-183.	2.2	96
155	Hard Xâ€ray Nanotomography of Catalytic Solids at Work. Angewandte Chemie - International Edition, 2012, 51, 11986-11990.	7.2	96
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