

Bert M Weckhuysen

List of Publications by Year in descending order

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859
papers

61,012
citations

727

117
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1634

208
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952
all docs

952
docs citations

952
times ranked

34642
citing authors

#	ARTICLE	IF	CITATIONS
1	The Catalytic Valorization of Lignin for the Production of Renewable Chemicals. <i>Chemical Reviews</i> , 2010, 110, 3552-3599.	49.4	3,813
2	Paving the Way for Lignin Valorisation: Recent Advances in Bioengineering, Biorefining and Catalysis. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 8164-8215.	14.2	1,658
3	Catalytic Dehydrogenation of Light Alkanes on Metals and Metal Oxides. <i>Chemical Reviews</i> , 2014, 114, 10613-10653.	49.4	1,583
4	Beyond Mechanical Recycling: Giving New Life to Plastic Waste. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 15402-15423.	14.2	970
5	Chemistry, spectroscopy and the role of supported vanadium oxides in heterogeneous catalysis. <i>Catalysis Today</i> , 2003, 78, 25-46.	4.8	831
6	Fluid catalytic cracking: recent developments on the grand old lady of zeolite catalysis. <i>Chemical Society Reviews</i> , 2015, 44, 7342-7370.	39.0	769
7	The renaissance of iron-based Fischer-Tropsch synthesis: on the multifaceted catalyst deactivation behaviour. <i>Chemical Society Reviews</i> , 2008, 37, 2758.	39.0	761
8	Surface Chemistry and Spectroscopy of Chromium in Inorganic Oxides. <i>Chemical Reviews</i> , 1996, 96, 3327-3350.	49.4	735
9	New insights into the structure and composition of technical lignins: a comparative characterisation study. <i>Green Chemistry</i> , 2016, 18, 2651-2665.	9.1	686
10	Structure and reactivity of surface vanadium oxide species on oxide supports. <i>Applied Catalysis A: General</i> , 1997, 157, 67-90.	4.5	646
11	Catalytic processes monitored at the nanoscale with tip-enhanced Raman spectroscopy. <i>Nature Nanotechnology</i> , 2012, 7, 583-586.	29.6	583
12	Recent trends and fundamental insights in the methanol-to-hydrocarbons process. <i>Nature Catalysis</i> , 2018, 1, 398-411.	27.4	543
13	Formation, Molecular Structure, and Morphology of Humins in Biomass Conversion: Influence of Feedstock and Processing Conditions. <i>ChemSusChem</i> , 2013, 6, 1745-1758.	7.2	511
14	The Production of Propene Oxide: Catalytic Processes and Recent Developments. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 3447-3459.	3.7	470
15	Stability and Reactivity of γ -Fe ₅ C ₄ Iron Carbide Catalyst Phases in Fischer-Tropsch Synthesis: Controlling γ -Fe ₅ C ₄ . <i>Journal of the American Chemical Society</i> , 2010, 132, 14928-14941.	14.1	451
16	Unravelling structure sensitivity in CO ₂ hydrogenation over nickel. <i>Nature Catalysis</i> , 2018, 1, 127-134.	27.4	427
17	The renaissance of the Sabatier reaction and its applications on Earth and in space. <i>Nature Catalysis</i> , 2019, 2, 188-197.	27.4	419
18	Heterogeneities of individual catalyst particles in space and time as monitored by spectroscopy. <i>Nature Chemistry</i> , 2012, 4, 873-886.	13.7	397

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19	Chemocatalytic Conversion of Ethanol into Butadiene and Other Bulk Chemicals. <i>ChemSusChem</i> , 2013, 6, 1595-1614.	7.2	385
20	Nanoscale chemical imaging of a working catalyst by scanning transmission X-ray microscopy. <i>Nature</i> , 2008, 456, 222-225.	35.3	383
21	Product shape selectivity dominates the Methanol-to-Olefins (MTO) reaction over H-SAPO-34 catalysts. <i>Journal of Catalysis</i> , 2009, 264, 77-87.	6.4	356
22	Alkane dehydrogenation over supported chromium oxide catalysts. <i>Catalysis Today</i> , 1999, 51, 223-232.	4.8	352
23	Recent advances in zeolite chemistry and catalysis. <i>Chemical Society Reviews</i> , 2015, 44, 7022-7024.	39.0	352
24	In Situ Spectroscopic Investigation of Molecular Structures of Highly Dispersed Vanadium Oxide on Silica under Various Conditions. <i>Journal of Physical Chemistry B</i> , 1998, 102, 10842-10852.	2.6	345
25	Bis(μ -oxo)dicopper in Cu-ZSM-5 and Its Role in the Decomposition of NO: A Combined in Situ XAFS, UV-Vis-Near-IR, and Kinetic Study. <i>Journal of the American Chemical Society</i> , 2003, 125, 7629-7640.	14.1	345
26	Chemical Imaging of Spatial Heterogeneities in Catalytic Solids at Different Length and Time Scales. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 4910-4943.	14.2	343
27	Determining the active site in a catalytic process: Operando spectroscopy is more than a buzzword. <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 4351.	2.8	328
28	Confirmation of Isolated Cu ²⁺ Ions in SSZ-13 Zeolite as Active Sites in NH ₃ -Selective Catalytic Reduction. <i>Journal of Physical Chemistry C</i> , 2012, 116, 4809-4818.	3.2	314
29	Local Environment and Nature of Cu Active Sites in Zeolite-Based Catalysts for the Selective Catalytic Reduction of NO _x . <i>ACS Catalysis</i> , 2013, 3, 413-427.	11.3	306
30	Space- and Time-Resolved In situ Spectroscopy on the Coke Formation in Molecular Sieves: Methanol-to-Olefin Conversion over H-ZSM-5 and H-SAPO-34. <i>Chemistry - A European Journal</i> , 2008, 14, 11320-11327.	14.8	305
31	The concept of active site in heterogeneous catalysis. <i>Nature Reviews Chemistry</i> , 2022, 6, 89-111.	21.7	297
32	Shale Gas Revolution: An Opportunity for the Production of Biobased Chemicals?. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 11980-11987.	14.2	293
33	A New Templated Ordered Structure with Combined Micro- and Mesopores and Internal Silica Nanocapsules. <i>Journal of Physical Chemistry B</i> , 2002, 106, 5873-5877.	2.6	287
34	Ruthenium-catalyzed hydrogenation of levulinic acid: Influence of the support and solvent on catalyst selectivity and stability. <i>Journal of Catalysis</i> , 2013, 301, 175-186.	6.4	286
35	High performing and stable supported nano-alloys for the catalytic hydrogenation of levulinic acid to β -valerolactone. <i>Nature Communications</i> , 2015, 6, 6540.	12.8	283
36	Thermally Stable and Regenerable Platinum-Tin Clusters for Propane Dehydrogenation Prepared by Atom Trapping on Ceria. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 8986-8991.	14.2	281

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37	Complexity behind CO ₂ Capture on NH ₂ -MIL-53(Al). <i>Langmuir</i> , 2011, 27, 3970-3976.	3.6	276
38	CoMo sulfide-catalyzed hydrodeoxygenation of lignin model compounds: An extended reaction network for the conversion of monomeric and dimeric substrates. <i>Journal of Catalysis</i> , 2012, 285, 315-323.	6.4	274
39	Snapshots of a working catalyst: possibilities and limitations of in situ spectroscopy in the field of heterogeneous catalysis. <i>Chemical Communications</i> , 2002, , 97-110.	4.1	272
40	A combined in situ time-resolved UV-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. <i>Journal of Catalysis</i> , 2010, 276, 268-279.	6.4	269
41	Morphology-dependent zeolite intergrowth structures leading to distinct internal and outer-surface molecular diffusion barriers. <i>Nature Materials</i> , 2009, 8, 959-965.	25.8	256
42	Conversion of Methane to Benzene over Transition Metal Ion ZSM-5 Zeolites. <i>Journal of Catalysis</i> , 1998, 175, 338-346.	6.4	255
43	Catalytic Lignin Valorization Process for the Production of Aromatic Chemicals and Hydrogen. <i>ChemSusChem</i> , 2012, 5, 1602-1609.	7.2	251
44	Isolated Cu ²⁺ ions: active sites for selective catalytic reduction of NO. <i>Chemical Communications</i> , 2011, 47, 800-802.	4.1	250
45	Coke Formation during the Methanol-to-Olefin Conversion: In Situ Microspectroscopy on Individual H-ZSM-5 Crystals with Different Brønsted Acidity. <i>Chemistry - A European Journal</i> , 2011, 17, 2874-2884.	3.8	250
46	Implementation of a combined SAXS/WAXS/QEXAFS set-up for time-resolved in situ experiments. <i>Journal of Synchrotron Radiation</i> , 2008, 15, 632-640.	2.3	247
47	Selective Catalytic Reduction of NO with NH ₃ over Supported Vanadia Catalysts. <i>Journal of Catalysis</i> , 1996, 161, 211-221.	6.4	238
48	Platinum-Promoted Ga/Al ₂ O ₃ as Highly Active, Selective, and Stable Catalyst for the Dehydrogenation of Propane. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 9251-9256.	14.2	233
49	Structure-performance descriptors and the role of Lewis acidity in the methanol-to-propylene process. <i>Nature Chemistry</i> , 2018, 10, 804-812.	13.7	232
50	Spectroscopy and coordination chemistry of cobalt in molecular sieves. <i>Microporous and Mesoporous Materials</i> , 1998, 22, 165-178.	4.4	231
51	Role of Sn in the Regeneration of Pt/Al ₂ O ₃ Light Alkane Dehydrogenation Catalysts. <i>ACS Catalysis</i> , 2016, 6, 2257-2264.	11.3	212
52	Co ₃ O ₄ @SiO ₂ Nanocomposite: A Very Active Catalyst for CO Oxidation with Unusual Catalytic Behavior. <i>Journal of the American Chemical Society</i> , 2011, 133, 11279-11288.	14.1	193
53	NaYF ₄ :Er ³⁺ ,Yb ³⁺ /SiO ₂ Core/Shell Upconverting Nanocrystals for Luminescence Thermometry up to 900 K. <i>Journal of Physical Chemistry C</i> , 2017, 121, 3503-3510.	3.2	193
54	Combined DRSA-XAFS-XANES-TPR study of supported chromium catalysts. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995, 91, 3245-3253.	1.8	191

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55	Combining operando techniques in one spectroscopic-reaction cell: New opportunities for elucidating the active site and related reaction mechanism in catalysis. <i>Catalysis Today</i> , 2006, 113, 3-15.	4.8	190
56	Carbon Nanofiber Supported Transition-Metal Carbide Catalysts for the Hydrodeoxygenation of Guaiacol. <i>ChemCatChem</i> , 2013, 5, 2964-2972.	3.7	186
57	Olefin polymerization over supported chromium oxide catalysts. <i>Catalysis Today</i> , 1999, 51, 215-221.	4.8	185
58	Determining the storage, availability and reactivity of NH ₃ within Cu-Chabazite-based Ammonia Selective Catalytic Reduction systems. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 1639-1650.	2.8	183
59	Initial Carbon-Carbon Bond Formation during the Early Stages of the Methanol-to-Olefin Process Proven by Zeolite-Trapped Acetate and Methyl Acetate. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 15840-15845.	14.2	179
60	Recent progress in diffuse reflectance spectroscopy of supported metal oxide catalysts. <i>Catalysis Today</i> , 1999, 49, 441-451.	4.8	178
61	ZrO ₂ Is Preferred over TiO ₂ as Support for the Ru-Catalyzed Hydrogenation of Levulinic Acid to Î ³ -Valerolactone. <i>ACS Catalysis</i> , 2016, 6, 5462-5472.	11.3	177
62	Title is missing!. <i>Catalysis Letters</i> , 1998, 52, 31-36.	2.7	176
63	Infrared and Raman imaging of heterogeneous catalysts. <i>Chemical Society Reviews</i> , 2010, 39, 4615.	39.0	176
64	Sub-Second Time-Resolved Surface-Enhanced Raman Spectroscopy Reveals Dynamic CO Intermediates during Electrochemical CO ₂ Reduction on Copper. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 16576-16584.	14.2	172
65	Plugged hexagonal templated silica: a unique micro- and mesoporous composite material with internal silica nanocapsules Electronic 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/b2014244f/ . <i>Chemical Communications</i> , 2002, , 1010-1011.	4.1	171
66	A quantitative diffuse reflectance spectroscopy study of supported chromium catalysts. <i>The Journal of Physical Chemistry</i> , 1993, 97, 4756-4763.	2.9	169
67	EXAFS as a tool to interrogate the size and shape of mono and bimetallic catalyst nanoparticles. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 5562.	2.8	168
68	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. <i>Journal of Catalysis</i> , 2001, 197, 160-171.	6.4	167
69	In Situ X-ray Absorption of Co/Mn/TiO ₂ Catalysts for Fischer-Tropsch Synthesis. <i>Journal of Physical Chemistry B</i> , 2004, 108, 16201-16207.	2.6	167
70	Glycerol Etherification over Highly Active CaO-Based Materials: New Mechanistic Aspects and Related Colloidal Particle Formation. <i>Chemistry - A European Journal</i> , 2008, 14, 2016-2024.	3.8	163
71	Local and long range order in promoted iron-based Fischer-Tropsch catalysts: A combined in situ X-ray absorption spectroscopy/wide angle X-ray scattering study. <i>Journal of Catalysis</i> , 2009, 262, 244-256.	6.4	163
72	Spatial and temporal exploration of heterogeneous catalysts with synchrotron radiation. <i>Nature Reviews Materials</i> , 2018, 3, 324-340.	39.0	163

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73	Liquid-phase reforming and hydrodeoxygenation as a two-step route to aromatics from lignin. <i>Green Chemistry</i> , 2013, 15, 3049.	9.1	161
74	Phosphorus promotion and poisoning in zeolite-based materials: synthesis, characterisation and catalysis. <i>Chemical Society Reviews</i> , 2015, 44, 7406-7428.	39.0	161
75	Wege zur Verwertung von Lignin: Fortschritte in der Biotechnik, der Bioraffination und der Katalyse. <i>Angewandte Chemie</i> , 2016, 128, 8296-8354.	2.1	161
76	Aerobic oxidation of cyclohexane by gold-based catalysts: New mechanistic insight by thorough product analysis. <i>Journal of Catalysis</i> , 2010, 270, 16-25.	6.4	160
77	Mesopore formation in zeolite H-SSZ-13 by desilication with NaOH. <i>Microporous and Mesoporous Materials</i> , 2010, 132, 384-394.	4.4	158
78	Cu-ZSM-5 Zeolites for the Formation of Methanol from Methane and Oxygen: Probing the Active Sites and Spectator Species. <i>Catalysis Letters</i> , 2010, 138, 14-22.	2.7	155
79	Identification of a diagnostic structural motif reveals a new reaction intermediate and condensation pathway in kraft lignin formation. <i>Chemical Science</i> , 2018, 9, 6348-6360.	7.5	155
80	Transition metal catalyzed oxidation of Alcell lignin, soda lignin, and lignin model compounds in ionic liquids. <i>Green Chemistry</i> , 2010, 12, 1225.	9.1	154
81	Surface- and Tip-Enhanced Raman Spectroscopy in Catalysis. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1570-1584.	4.7	154
82	Envisaging the Physicochemical Processes during the Preparation of Supported Catalysts: A Raman Microscopy on the Impregnation of Mo onto Al ₂ O ₃ Extrudates. <i>Journal of the American Chemical Society</i> , 2004, 126, 14548-14556.	14.1	151
83	Propene epoxidation over Au/Ti-SBA-15 catalysts. <i>Journal of Catalysis</i> , 2007, 248, 235-248.	6.4	148
84	Chemical imaging of catalytic solids with synchrotron radiation. <i>Chemical Society Reviews</i> , 2010, 39, 4656.	39.0	145
85	Determining the location and nearest neighbours of aluminium in zeolites with atom probe tomography. <i>Nature Communications</i> , 2015, 6, 7589.	12.8	145
86	Conversion of Methane to Benzene over Transition Metal Ion ZSM-5 Zeolites. <i>Journal of Catalysis</i> , 1998, 175, 347-351.	6.4	144
87	Structural characterization of ¹³ C-enriched humins and alkali-treated ¹³ C humins by 2D solid-state NMR. <i>Green Chemistry</i> , 2015, 17, 4383-4392.	9.1	144
88	Influence of acid-base properties on the Lebedev ethanol-to-butadiene process catalyzed by SiO ₂ -MgO materials. <i>Catalysis Science and Technology</i> , 2015, 5, 2869-2879.	4.1	142
89	Molybdenum Speciation and its Impact on Catalytic Activity during Methane Dehydroaromatization in Zeolite ZSM-5 as Revealed by Operando X-Ray Methods. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 5215-5219.	14.2	142
90	Effect of water vapor on the molecular structures of supported vanadium oxide catalysts at elevated temperatures. <i>Journal of Molecular Catalysis A</i> , 1996, 110, 41-54.	4.8	141

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91	Lignin up for break-down. <i>Nature Chemistry</i> , 2014, 6, 1035-1036.	13.7	141
92	Separation and Purification of Hydrocarbons with Porous Materials. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 18930-18949.	14.2	141
93	The Role of Gold in Gold-Titania Epoxidation Catalysts. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 1115-1118.	14.2	139
94	Characterization of Al ₂ O ₃ -Supported Manganese Oxides by Electron Spin Resonance and Diffuse Reflectance Spectroscopy. <i>Journal of Physical Chemistry B</i> , 1997, 101, 309-316.	2.6	137
95	An operando optical fiber UV-vis spectroscopic study of the catalytic decomposition of NO and N ₂ O over Cu-ZSM-5. <i>Journal of Catalysis</i> , 2003, 220, 500-512.	6.4	136
96	Understanding carbon dioxide activation and carbon-carbon coupling over nickel. <i>Nature Communications</i> , 2019, 10, 5330.	12.8	134
97	Fundamental Studies of Butane Oxidation over Model-Supported Vanadium Oxide Catalysts: Molecular Structure-Reactivity Relationships. <i>Journal of Catalysis</i> , 1997, 170, 75-88.	6.4	133
98	In Situ Raman Spectroscopy of Supported Transition Metal Oxide Catalysts: ¹⁸ O/ ¹⁶ O Isotopic Labeling Studies. <i>Journal of Physical Chemistry B</i> , 2000, 104, 7382-7387.	2.6	133
99	Changing active sites in Cu-CHA catalysts: deNO _x selectivity as a function of the preparation method. <i>Microporous and Mesoporous Materials</i> , 2013, 166, 144-152.	4.4	133
100	Insights into the Activity and Deactivation of the Methanol-to-Olefins Process over Different Small-Pore Zeolites As Studied with Operando UV-vis Spectroscopy. <i>ACS Catalysis</i> , 2017, 7, 4033-4046.	11.3	133
101	Propane to olefins tandem catalysis: a selective route towards light olefins production. <i>Chemical Society Reviews</i> , 2021, 50, 11503-11529.	39.0	133
102	Infrared and Raman spectroscopic study of pH-induced structural changes of l-histidine in aqueous environment. <i>Vibrational Spectroscopy</i> , 2005, 39, 114-125.	2.3	132
103	Catalytic activity in individual cracking catalyst particles imaged throughout different life stages by selective staining. <i>Nature Chemistry</i> , 2011, 3, 862-867.	13.7	132
104	Finned zeolite catalysts. <i>Nature Materials</i> , 2020, 19, 1074-1080.	25.8	132
105	Unraveling the Crystallization Mechanism of CoAPO-5 Molecular Sieves under Hydrothermal Conditions. <i>Journal of the American Chemical Society</i> , 2005, 127, 14454-14465.	14.1	131
106	Surface Acidity and Basicity of La ₂ O ₃ , LaOCl, and LaCl ₃ Characterized by IR Spectroscopy, TPD, and DFT Calculations. <i>Journal of Physical Chemistry B</i> , 2004, 108, 15770-15781.	2.6	130
107	In-situ Scanning Transmission X-Ray Microscopy of Catalytic Solids and Related Nanomaterials. <i>ChemPhysChem</i> , 2010, 11, 951-962.	2.3	130
108	Life and death of a single catalytic cracking particle. <i>Science Advances</i> , 2015, 1, e1400199.	10.7	128

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109	Structure Sensitivity in Steam and Dry Methane Reforming over Nickel: Activity and Carbon Formation. <i>ACS Catalysis</i> , 2020, 10, 1428-1438.	11.3	128
110	Nanosheets of Nonlayered Aluminum Metal-Organic Frameworks through a Surfactant-Assisted Method. <i>Advanced Materials</i> , 2018, 30, e1707234.	23.6	127
111	Chemical deactivation of Cu-SSZ-13 ammonia selective catalytic reduction (NH ₃ -SCR) systems. <i>Applied Catalysis B: Environmental</i> , 2014, 154-155, 339-349.	20.2	126
112	Adding a third dimension to operando spectroscopy: a combined UV-Vis, Raman and XAFS setup to study heterogeneous catalysts under working conditions. <i>Chemical Communications</i> , 2005, , 3015.	4.1	124
113	Hydration effects on the molecular structure of silica-supported vanadium oxide catalysts: A combined IR, Raman, UV-vis and EXAFS study. <i>Vibrational Spectroscopy</i> , 2007, 43, 140-151.	2.3	124
114	Trimodal Porous Hierarchical SSZ-13 Zeolite with Improved Catalytic Performance in the Methanol-to-Olefins Reaction. <i>ACS Catalysis</i> , 2016, 6, 2163-2177.	11.3	124
115	The role of tungsten oxide in the selective hydrogenolysis of glycerol to 1,3-propanediol over Pt/WO _x /Al ₂ O ₃ . <i>Applied Catalysis B: Environmental</i> , 2017, 204, 260-272.	20.2	124
116	Intergrowth Structure of Zeolite Crystals as Determined by Optical and Fluorescence Microscopy of the Template-Removal Process. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 7228-7231.	14.2	121
117	Influence of the Reaction Temperature on the Nature of the Active and Deactivating Species during Methanol to Olefins Conversion over H-SSZ-13. <i>ACS Catalysis</i> , 2015, 5, 992-1003.	11.3	121
118	Diffuse reflectance spectroscopy study of the thermal genesis and molecular structure of chromium-supported catalysts. <i>The Journal of Physical Chemistry</i> , 1994, 98, 579-584.	2.9	120
119	Preface: recent advances in the in-situ characterization of heterogeneous catalysts. <i>Chemical Society Reviews</i> , 2010, 39, 4557.	39.0	120
120	Nonuniform Catalytic Behavior of Zeolite Crystals as Revealed by In Situ Optical Microspectroscopy. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 3652-3655.	14.2	119
121	Lignin Solubilization and Aqueous Phase Reforming for the Production of Aromatic Chemicals and Hydrogen. <i>ChemSusChem</i> , 2011, 4, 369-378.	7.2	118
122	Characterization and Comparison of Fast Pyrolysis Bio-oils from Pinewood, Rapeseed Cake, and Wheat Straw Using ¹³ C NMR and Comprehensive GC-MS. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 4974-4985.	6.7	118
123	Insight into the Effect of Water on the Methanol-to-Olefins Conversion in H-SAPO-34 from Molecular Simulations and in Situ Microspectroscopy. <i>ACS Catalysis</i> , 2016, 6, 1991-2002.	11.3	118
124	Spatially resolved UV-vis microspectroscopy on the preparation of alumina-supported Co Fischer-Tropsch catalysts: Linking activity to Co distribution and speciation. <i>Journal of Catalysis</i> , 2006, 242, 287-298.	6.4	117
125	Visualizing the Crystal Structure and Locating the Catalytic Activity of Micro- and Mesoporous ZSM-5 Zeolite Crystals by Using In Situ Optical and Fluorescence Microscopy. <i>Chemistry - A European Journal</i> , 2008, 14, 1718-1725.	3.8	116
126	Mechanistic Study into the Direct Epoxidation of Propene over Gold/Titania Catalysts. <i>Journal of Physical Chemistry B</i> , 2005, 109, 19309-19319.	2.6	114

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127	X-ray Absorption Spectroscopy of Mn/Co/TiO ₂ Fischer-Tropsch Catalysts: Relationships between Preparation Method, Molecular Structure, and Catalyst Performance. <i>Journal of Physical Chemistry B</i> , 2006, 110, 8626-8639.	2.6	114
128	Effect of Preparation Method and CuO Promotion in the Conversion of Ethanol into 1,3-Butadiene over SiO ₂ -MgO Catalysts. <i>ChemSusChem</i> , 2014, 7, 2505-2515.	7.2	114
129	1s _{2p} Resonant Inelastic X-ray Scattering of Iron Oxides. <i>Journal of Physical Chemistry B</i> , 2005, 109, 20751-20762.	2.6	112
130	Bridging the Gap between the Direct and Hydrocarbon Pool Mechanisms of the Methanol-to-Hydrocarbons Process. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 8095-8099.	14.2	112
131	Engineering the acidity and accessibility of the zeolite ZSM-5 for efficient bio-oil upgrading in catalytic pyrolysis of lignocellulose. <i>Green Chemistry</i> , 2018, 20, 3499-3511.	9.1	111
132	Diffuse Reflectance Spectroscopy of Supported Chromium Oxide Catalysts: A Self-Modeling Mixture Analysis. <i>Journal of Catalysis</i> , 1997, 166, 160-171.	6.4	110
133	Nanoscale tomography reveals the deactivation of automotive copper-exchanged zeolite catalysts. <i>Nature Communications</i> , 2017, 8, 1666.	12.8	109
134	A Combined SAXS/WAXS/XAFS Setup Capable of Observing Concurrent Changes Across the Nano-to-Micrometer Size Range in Inorganic Solid Crystallization Processes. <i>Journal of the American Chemical Society</i> , 2006, 128, 12386-12387.	14.1	108
135	In Situ Raman Spectroscopy of Supported Chromium Oxide Catalysts: Reactivity Studies with Methanol and Butane. <i>The Journal of Physical Chemistry</i> , 1996, 100, 14437-14442.	2.9	107
136	Transition Metal Ions in Microporous Crystalline Aluminophosphates: Isomorphous Substitution. <i>European Journal of Inorganic Chemistry</i> , 1999, 1999, 565-577.	2.2	106
137	Selective, one-pot catalytic conversion of levulinic acid to pentanoic acid over Ru/H-ZSM5. <i>Journal of Catalysis</i> , 2014, 320, 33-41.	6.4	106
138	Influence of the Reaction Temperature on the Nature of the Active and Deactivating Species During Methanol-to-Olefins Conversion over H-SAPO-34. <i>ACS Catalysis</i> , 2017, 7, 5268-5281.	11.3	106
139	In Situ Luminescence Thermometry To Locally Measure Temperature Gradients during Catalytic Reactions. <i>ACS Catalysis</i> , 2018, 8, 2397-2401.	11.3	106
140	Operando monitoring of temperature and active species at the single catalyst particle level. <i>Nature Catalysis</i> , 2019, 2, 986-996.	27.4	106
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