

Bert M Weckhuysen

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773 papers	45,394 citations	103 h-index	180 g-index
879 ext. papers	51,297 ext. citations	9 avg, IF	8.05 L-index

#	Paper	IF	Citations
773	The catalytic valorization of lignin for the production of renewable chemicals. <i>Chemical Reviews</i> , 2010 , 110, 3552-99	68.1	3089
772	Paving the Way for Lignin Valorisation: Recent Advances in Bioengineering, Biorefining and Catalysis. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 8164-215	16.4	1136
771	Catalytic dehydrogenation of light alkanes on metals and metal oxides. <i>Chemical Reviews</i> , 2014 , 114, 10613-53	68.1	1022
770	Chemistry, spectroscopy and the role of supported vanadium oxides in heterogeneous catalysis. <i>Catalysis Today</i> , 2003 , 78, 25-46	5.3	728
769	Surface Chemistry and Spectroscopy of Chromium in Inorganic Oxides. <i>Chemical Reviews</i> , 1996 , 96, 3327-3350	63.5	637
768	The renaissance of iron-based Fischer-Tropsch synthesis: on the multifaceted catalyst deactivation behaviour. <i>Chemical Society Reviews</i> , 2008 , 37, 2758-81	58.5	596
767	Structure and reactivity of surface vanadium oxide species on oxide supports. <i>Applied Catalysis A: General</i> , 1997 , 157, 67-90	5.1	549
766	New insights into the structure and composition of technical lignins: a comparative characterisation study. <i>Green Chemistry</i> , 2016 , 18, 2651-2665	10	491
765	Catalytic processes monitored at the nanoscale with tip-enhanced Raman spectroscopy. <i>Nature Nanotechnology</i> , 2012 , 7, 583-6	28.7	489
764	Fluid catalytic cracking: recent developments on the grand old lady of zeolite catalysis. <i>Chemical Society Reviews</i> , 2015 , 44, 7342-70	58.5	478
763	The Production of Propene Oxide: Catalytic Processes and Recent Developments. <i>Industrial & Engineering Chemistry Research</i> , 2006 , 45, 3447-3459	3.9	388
762	Formation, molecular structure, and morphology of humins in biomass conversion: influence of feedstock and processing conditions. <i>ChemSusChem</i> , 2013 , 6, 1745-58	8.3	380
761	Stability and reactivity of γ -Fe ₂ C catalyst phases in Fischer-Tropsch synthesis: controlling (C). <i>Journal of the American Chemical Society</i> , 2010 , 132, 14928-41	16.4	343
760	Heterogeneities of individual catalyst particles in space and time as monitored by spectroscopy. <i>Nature Chemistry</i> , 2012 , 4, 873-86	17.6	330
759	Nanoscale chemical imaging of a working catalyst by scanning transmission X-ray microscopy. <i>Nature</i> , 2008 , 456, 222-5	50.4	319
758	Recent trends and fundamental insights in the methanol-to-hydrocarbons process. <i>Nature Catalysis</i> , 2018 , 1, 398-411	36.5	315
757	Product shape selectivity dominates the Methanol-to-Olefins (MTO) reaction over H-SAPO-34 catalysts. <i>Journal of Catalysis</i> , 2009 , 264, 77-87	7.3	308

756	Chemical imaging of spatial heterogeneities in catalytic solids at different length and time scales. <i>Angewandte Chemie - International Edition</i> , 2009 , 48, 4910-43	16.4	307
755	Chemocatalytic conversion of ethanol into butadiene and other bulk chemicals. <i>ChemSusChem</i> , 2013 , 6, 1595-614	8.3	304
754	Bis(mu-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, 7629-40	16.4	292
753	Alkane dehydrogenation over supported chromium oxide catalysts. <i>Catalysis Today</i> , 1999 , 51, 223-232	5.3	291
752	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	3.4	290
751	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	3.8	282
750	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	3.4	267
749	Determining the active site in a catalytic process: Operando spectroscopy is more than a buzzword. <i>Physical Chemistry Chemical Physics</i> , 2003 , 5, 4351	3.6	266
748	Beyond Mechanical Recycling: Giving New Life to Plastic Waste. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 15402-15423	16.4	265
747	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, 11320-7	4.8	264
746	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	13.1	261
745	Complexity behind CO ₂ capture on NH ₂ -MIL-53(Al). <i>Langmuir</i> , 2011 , 27, 3970-6	4	256
744	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	7.3	240
743	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	7.3	233
742	High performing and stable supported nano-alloys for the catalytic hydrogenation of levulinic acid to Valerolactone. <i>Nature Communications</i> , 2015 , 6, 6540	17.4	232
741	Shale gas revolution: an opportunity for the production of biobased chemicals?. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 11980-7	16.4	232
740	Implementation of a combined SAXS/WAXS/QEXAFS set-up for time-resolved in situ experiments. <i>Journal of Synchrotron Radiation</i> , 2008 , 15, 632-40	2.4	231
739	Catalytic lignin valorization process for the production of aromatic chemicals and hydrogen. <i>ChemSusChem</i> , 2012 , 5, 1602-9	8.3	227

738	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	5.8	227
737	Isolated Cu ²⁺ ions: active sites for selective catalytic reduction of NO. <i>Chemical Communications</i> , 2011 , 47, 800-2	5.8	224
736	Unravelling structure sensitivity in CO ₂ hydrogenation over nickel. <i>Nature Catalysis</i> , 2018 , 1, 127-134	36.5	215
735	Morphology-dependent zeolite intergrowth structures leading to distinct internal and outer-surface molecular diffusion barriers. <i>Nature Materials</i> , 2009 , 8, 959-65	27	213
734	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	7.3	212
733	Conversion of Methane to Benzene over Transition Metal Ion ZSM-5 Zeolites. <i>Journal of Catalysis</i> , 1998 , 175, 338-346	7.3	208
732	Selective Catalytic Reduction of NO with NH ₃ over Supported Vanadia Catalysts. <i>Journal of Catalysis</i> , 1996 , 161, 211-221	7.3	208
731	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, 2874-84	4.8	205
730	The renaissance of the Sabatier reaction and its applications on Earth and in space. <i>Nature Catalysis</i> , 2019 , 2, 188-197	36.5	199
729	Spectroscopy and coordination chemistry of cobalt in molecular sieves. <i>Microporous and Mesoporous Materials</i> , 1998 , 22, 165-178	5.3	192
728	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	16.4	187
727	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	5.3	175
726	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, 9251-6	16.4	174
725	Combined DRSEXAFS/XANES/TPR study of supported chromium catalysts. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995 , 91, 3245-3253		167
724	Olefin polymerization over supported chromium oxide catalysts. <i>Catalysis Today</i> , 1999 , 51, 215-221	5.3	164
723	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, 11279-88	16.4	162
722	Plugged hexagonal templated silica: a unique micro- and mesoporous composite material with internal silica nanocapsules. <i>Chemical Communications</i> , 2002 , 1010-1	5.8	159
721	Carbon Nanofiber Supported Transition-Metal Carbide Catalysts for the Hydrodeoxygenation of Guaiacol. <i>ChemCatChem</i> , 2013 , 5, 2964-2972	5.2	155

720	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	7.3	153
719	Recent progress in diffuse reflectance spectroscopy of supported metal oxide catalysts. <i>Catalysis Today</i> , 1999 , 49, 441-451	5.3	150
718	Characterization of surface carbon formed during the conversion of methane to benzene over Mo/H-ZSM-5 catalysts. <i>Catalysis Letters</i> , 1998 , 52, 31-36	2.8	149
717	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, 1639-50	3.6	148
716	Structure-performance descriptors and the role of Lewis acidity in the methanol-to-propylene process. <i>Nature Chemistry</i> , 2018 , 10, 804-812	17.6	145
715	Liquid-phase reforming and hydrodeoxygenation as a two-step route to aromatics from lignin. <i>Green Chemistry</i> , 2013 , 15, 3049	10	144
714	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	7.3	144
713	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	3.4	144
712	Infrared and Raman imaging of heterogeneous catalysts. <i>Chemical Society Reviews</i> , 2010 , 39, 4615-25	58.5	143
711	A quantitative diffuse reflectance spectroscopy study of supported chromium catalysts. <i>The Journal of Physical Chemistry</i> , 1993 , 97, 4756-4763		143
710	Transition metal catalyzed oxidation of Alcell lignin, soda lignin, and lignin model compounds in ionic liquids. <i>Green Chemistry</i> , 2010 , 12, 1225	10	139
709	Glycerol etherification over highly active CaO-based materials: new mechanistic aspects and related colloidal particle formation. <i>Chemistry - A European Journal</i> , 2008 , 14, 2016-24	4.8	137
708	Role of Sn in the Regeneration of Pt/Al ₂ O ₃ Light Alkane Dehydrogenation Catalysts. <i>ACS Catalysis</i> , 2016 , 6, 2257-2264	13.1	135
707	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	2.8	135
706	NaYF ₄ :Er,Yb/SiO ₂ Core/Shell Upconverting Nanocrystals for Luminescence Thermometry up to 900 K. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 3503-3510	3.8	134
705	Propene epoxidation over Au/Ti-SBA-15 catalysts. <i>Journal of Catalysis</i> , 2007 , 248, 235-248	7.3	134
704	Aerobic oxidation of cyclohexane by gold-based catalysts: New mechanistic insight by thorough product analysis. <i>Journal of Catalysis</i> , 2010 , 270, 16-25	7.3	133
703	Wege zur Verwertung von Lignin: Fortschritte in der Biotechnik, der Bioraffination und der Katalyse. <i>Angewandte Chemie</i> , 2016 , 128, 8296-8354	3.6	132

702	EXAFS as a tool to interrogate the size and shape of mono and bimetallic catalyst nanoparticles. <i>Physical Chemistry Chemical Physics</i> , 2010 , 12, 5562-74	3.6	131
701	Mesopore formation in zeolite H-SSZ-13 by desilication with NaOH. <i>Microporous and Mesoporous Materials</i> , 2010 , 132, 384-394	5.3	129
700	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	16.4	128
699	ZrO ₂ Is Preferred over TiO ₂ as Support for the Ru-Catalyzed Hydrogenation of Levulinic Acid to γ -Valerolactone. <i>ACS Catalysis</i> , 2016 , 6, 5462-5472	13.1	127
698	Chemical imaging of catalytic solids with synchrotron radiation. <i>Chemical Society Reviews</i> , 2010 , 39, 4656-4675	5.8	125
697	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	3.4	123
696	Envisaging the physicochemical processes during the preparation of supported catalysts: Raman microscopy on the impregnation of Mo onto Al ₂ O ₃ extrudates. <i>Journal of the American Chemical Society</i> , 2004 , 126, 14548-56	16.4	123
695	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		123
694	Changing active sites in CuCHA catalysts: deNO _x selectivity as a function of the preparation method. <i>Microporous and Mesoporous Materials</i> , 2013 , 166, 144-152	5.3	121
693	Conversion of Methane to Benzene over Transition Metal Ion ZSM-5 Zeolites. <i>Journal of Catalysis</i> , 1998 , 175, 347-351	7.3	121
692	Surface- and Tip-Enhanced Raman Spectroscopy in Catalysis. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 1570-84	6.4	121
691	The role of gold in gold-titania epoxidation catalysts. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 1115-1118	16.4	118
690	Biomass conversion: Lignin up for break-down. <i>Nature Chemistry</i> , 2014 , 6, 1035-6	17.6	117
689	Unraveling the crystallization mechanism of CoAPO-5 molecular sieves under hydrothermal conditions. <i>Journal of the American Chemical Society</i> , 2005 , 127, 14454-65	16.4	116
688	Phosphorus promotion and poisoning in zeolite-based materials: synthesis, characterisation and catalysis. <i>Chemical Society Reviews</i> , 2015 , 44, 7406-28	58.5	113
687	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, 7228-31	16.4	113
686	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	7.3	113
685	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	5.5	110

684	Catalytic activity in individual cracking catalyst particles imaged throughout different life stages by selective staining. <i>Nature Chemistry</i> , 2011 , 3, 862-7	17.6	110
683	Nonuniform catalytic behavior of zeolite crystals as revealed by in situ optical microspectroscopy. <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 3652-5	16.4	110
682	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, 1718-25	4.8	110
681	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	3.4	110
680	In-situ scanning transmission X-ray microscopy of catalytic solids and related nanomaterials. <i>ChemPhysChem</i> , 2010 , 11, 951-62	3.2	109
679	Determining the location and nearest neighbours of aluminium in zeolites with atom probe tomography. <i>Nature Communications</i> , 2015 , 6, 7589	17.4	108
678	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	10	107
677	Fundamental Studies of Butane Oxidation over Model-Supported Vanadium Oxide Catalysts: Molecular Structure-Reactivity Relationships. <i>Journal of Catalysis</i> , 1997 , 170, 75-88	7.3	107
676	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 , 3015-7	5.8	106
675	Infrared and Raman spectroscopic study of pH-induced structural changes of l-histidine in aqueous environment. <i>Vibrational Spectroscopy</i> , 2005 , 39, 114-125	2.1	105
674	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	3.4	105
673	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		105
672	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	2.1	104
671	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, 5215-9	16.4	103
670	Mechanistic study into the direct epoxidation of propene over gold/titania catalysts. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 19309-19	3.4	102
669	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	7.3	101
668	Lignin solubilization and aqueous phase reforming for the production of aromatic chemicals and hydrogen. <i>ChemSusChem</i> , 2011 , 4, 369-78	8.3	100
667	Spatial and temporal exploration of heterogeneous catalysts with synchrotron radiation. <i>Nature Reviews Materials</i> , 2018 , 3, 324-340	73.3	99

666	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, 2505-15	8.3	99
665	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, 12386-7	16.4	96
664	1s2p resonant inelastic X-ray scattering of iron oxides. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 20751-52	9.4	96
663	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, 8626-39	3.4	96
662	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		96
661	Transition Metal Ions in Microporous Crystalline Aluminophosphates: Isomorphous Substitution. <i>European Journal of Inorganic Chemistry</i> , 1999 , 1999, 565-577	2.3	93
660	Life and death of a single catalytic cracking particle. <i>Science Advances</i> , 2015 , 1, e1400199	14.3	91
659	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	21.8	91
658	Supported Vanadium Oxide Catalysts: Quantitative Spectroscopy, Preferential Adsorption of V ⁴⁺ /V ⁵⁺ , and Al ₂ O ₃ Coating of Zeolite Y. <i>Journal of Physical Chemistry B</i> , 1998 , 102, 8005-8012	3.4	91
657	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	9.4	90
656	Revealing shape selectivity and catalytic activity trends within the pores of H-ZSM-5 crystals by time- and space-resolved optical and fluorescence microspectroscopy. <i>Chemistry - A European Journal</i> , 2007 , 13, 7057-65	4.8	90
655	Trimodal Porous Hierarchical SSZ-13 Zeolite with Improved Catalytic Performance in the Methanol-to-Olefins Reaction. <i>ACS Catalysis</i> , 2016 , 6, 2163-2177	13.1	89
654	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	21.8	89
653	Diffuse Reflectance Spectroscopy of Supported Chromium Oxide Catalysts: A Self-Modeling Mixture Analysis. <i>Journal of Catalysis</i> , 1997 , 166, 160-171	7.3	89
652	Modeling the 2-His-1-carboxylate facial triad: iron-catecholato complexes as structural and functional models of the extradiol cleaving dioxygenases. <i>Journal of the American Chemical Society</i> , 2007 , 129, 2275-86	16.4	89
651	Redox Behavior and Dispersion of Supported Chromium Catalysts. <i>The Journal of Physical Chemistry</i> , 1995 , 99, 320-326		89
650	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	13.1	87
649	Influence of the preparation method on the hydrotreating activity of MoS ₂ /Al ₂ O ₃ extrudates: A Raman microspectroscopy study on the genesis of the active phase. <i>Journal of Catalysis</i> , 2006 , 243, 292-302	7.3	87

648	Ex Situ and Operando Studies on the Role of Copper in Cu-Promoted SiO ₂ /MgO Catalysts for the Lebedev Ethanol-to-Butadiene Process. <i>ACS Catalysis</i> , 2015 , 5, 6005-6015	13.1	86
647	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	13.1	86
646	Dynamic X-ray diffraction computed tomography reveals real-time insight into catalyst active phase evolution. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 10148-52	16.4	86
645	Homogeneity of Titania-Silica Mixed Oxides: On UV-DRS Studies as a Function of Titania Content. <i>Journal of Catalysis</i> , 1996 , 163, 489-491	7.3	86
644	Reactivity Descriptor in Solid Acid Catalysis: Predicting Turnover Frequencies for Propene Methylation in Zeotypes. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 1516-21	6.4	85
643	The role of Cu on the reduction behavior and surface properties of Fe-based Fischer-Tropsch catalysts. <i>Physical Chemistry Chemical Physics</i> , 2010 , 12, 667-80	3.6	85
642	Hard X-ray nanotomography of catalytic solids at work. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 11986-90	16.4	84
641	Characterization and Comparison of Fast Pyrolysis Bio-oils from Pinewood, Rapeseed Cake, and Wheat Straw Using C NMR and Comprehensive GC-MS. <i>ACS Sustainable Chemistry and Engineering</i> , 2016 , 4, 4974-4985	8.3	84
640	Selective adsorption of manganese onto cobalt for optimized Mn/Co/TiO ₂ Fischer-Tropsch catalysts. <i>Journal of Catalysis</i> , 2010 , 270, 95-102	7.3	83
639	Electron paramagnetic resonance of heterogeneous chromium catalysts. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1996 , 92, 2431		83
638	Catalytic oxidation of aromatic oxygenates by the heterogeneous catalyst Co-ZIF-9. <i>Applied Catalysis A: General</i> , 2011 , 394, 79-85	5.1	82
637	Oxidation of methane to methanol and formaldehyde over Co-ZSM-5 molecular sieves: Tuning the reactivity and selectivity by alkaline and acid treatments of the zeolite ZSM-5 agglomerates. <i>Microporous and Mesoporous Materials</i> , 2011 , 138, 176-183	5.3	81
636	The porosity, acidity, and reactivity of dealuminated zeolite ZSM-5 at the single particle level: the influence of the zeolite architecture. <i>Chemistry - A European Journal</i> , 2011 , 17, 13773-81	4.8	81
635	In situ synchrotron-based IR microspectroscopy to study catalytic reactions in zeolite crystals. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 3543-7	16.4	81
634	Towards real-time spectroscopic process control for the dehydrogenation of propane over supported chromium oxide catalysts. <i>Chemical Engineering Science</i> , 2004 , 59, 5487-5492	4.4	80
633	Synthesis, spectroscopy and catalysis of. <i>Chemistry - A European Journal</i> , 2000 , 6, 2960-70	4.8	80
632	Nanosheets of Nonlayered Aluminum Metal-Organic Frameworks through a Surfactant-Assisted Method. <i>Advanced Materials</i> , 2018 , 30, e1707234	24	80
631	Selective, one-pot catalytic conversion of levulinic acid to pentanoic acid over Ru/H-ZSM5. <i>Journal of Catalysis</i> , 2014 , 320, 33-41	7.3	79

630	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	13.1	78
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