Jan Dierk Grunwaldt

List of Publications by Year
in descending order

402 papers	20,908 citations	7551 77 h-index	17546 121 g-index
425 all docs	425 docs citations	425 times ranked	17423 citing authors

#	Article	IF	Citations
1	A review of catalytic upgrading of bio-oil to engine fuels. Applied Catalysis A: General, 2011, 407, 1-19.	2.2	1,414
2	In Situ Investigations of Structural Changes in Cu/ZnO Catalysts. Journal of Catalysis, 2000, 194, 452-460.	3.1	523
3	Preparation of Supported Gold Catalysts for Low-Temperature CO Oxidation via â€œSize-Controlledâ€• Gold Colloids. Journal of Catalysis, 1999, 181, 223-232.	3.1	416
4	Screening of Catalysts for Hydrodeoxygenation of Phenol as a Model Compound for Bio-oil. ACS Catalysis, 2013, 3, 1774-1785.	5.5	348
5	Comparative Study of Au/TiO2 and Au/ZrO2 Catalysts for Low-Temperature CO Oxidation. Journal of Catalysis, 1999, 186, 458-469.	3.1	322
6	Future Challenges in Heterogeneous Catalysis: Understanding Catalysts under Dynamic Reaction Conditions. ChemCatChem, 2017, 9, 17-29.	1.8	304
7	Gold/Titania Interfaces and Their Role in Carbon Monoxide Oxidation. Journal of Physical Chemistry B, 1999, 103, 1002-1012.	1.2	252
8	The adhesion and shape of nanosized Au particles in a Au/TiO2 catalyst. Journal of Catalysis, 2004, 225, 86-94.	3.1	240
9	X-ray absorption spectroscopy under reaction conditions: suitability of different reaction cells for combined catalyst characterization and time-resolved studies. Physical Chemistry Chemical Physics, 2004, 6, 3037.	1.3	225
10	Tracking the formation, fate and consequence for catalytic activity of Pt single sites on CeO2. Nature Catalysis, 2020, 3, 824-833.	16.1	209
11	Tuning the Structure of Platinum Particles on Ceria Inâ€…Situ for Enhancing the Catalytic Performance of Exhaust Gas Catalysts. Angewandte Chemie - International Edition, 2017, 56, 13078-13082.	7.2	201
12	CO hydrogenation to methanol on Cuâ€“Ni catalysts: Theory and experiment. Journal of Catalysis, 2012, 293, 51-60.	3.1	195
13	Transportation fuels from biomass fast pyrolysis, catalytic hydrodeoxygenation, and catalytic fast hydropyrolysis. Progress in Energy and Combustion Science, 2018, 68, 268-309.	15.8	194
14	Hard and soft X-ray microscopy and tomography in catalysis: bridging the different time and length scales. Chemical Society Reviews, 2010, 39, 4741.	18.7	165
15	Combining XRD and EXAFS with on-Line Catalytic Studies for in situ Characterization of Catalysts. Topics in Catalysis, 2002, 18, 37-43.	1.3	162
16	Sunlight induced photo-thermal synergistic catalytic CO₂ conversion <i>via</i> localized surface plasmon resonance of MoO_{3â^’x}. Journal of Materials Chemistry A, 2019, 7, 2821-2830.	5.2	161
17	Substrate Sizeâ€Selective Catalysis with Zeoliteâ€Encapsulated Gold Nanoparticles. Angewandte Chemie - International Edition, 2010, 49, 3504-3507.	7.2	160
18	Tuning the Pt/CeO₂ Interface by in Situ Variation of the Pt Particle Size. ACS Catalysis, 2018, 8, 4800-4811.	5.5	157

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19	2D-Mapping of the Catalyst Structure Inside a Catalytic Microreactor at Work:Â Partial Oxidation of Methane over Rh/Al2O3. Journal of Physical Chemistry B, 2006, 110, 8674-8680.	1.2	150
20	Potential of an Alumina-Supported Ni₃Fe Catalyst in the Methanation of CO₂: Impact of Alloy Formation on Activity and Stability. ACS Catalysis, 2017, 7, 6802-6814.	5.5	150
21	Sensing low concentrations of CO using flame-spray-made Pt/SnO2 nanoparticles. Journal of Nanoparticle Research, 2006, 8, 783-796.	0.8	149
22	Imaging Catalysts at Work: A Hierarchical Approach from the Macroâ€•to the Mesoâ€•and Nanoâ€•scale. ChemCatChem, 2013, 5, 62-80.	1.8	143
23	Methanation of CO2: Structural response of a Ni-based catalyst under fluctuating reaction conditions unraveled by operando spectroscopy. Journal of Catalysis, 2015, 327, 48-53.	3.1	143
24	Internal steam reforming in solid oxide fuel cells: Status and opportunities of kinetic studies and their impact on modelling. Journal of Power Sources, 2011, 196, 25-38.	4.0	139
25	Facile synthesis of surface N-doped Bi2O2CO3: Origin of visible light photocatalytic activity and in situ DRIFTS studies. Journal of Hazardous Materials, 2016, 307, 163-172.	6.5	138
26	Structureâ€“activity relationships of Pt/Al2O3 catalysts for CO and NO oxidation at diesel exhaust conditions. Applied Catalysis B: Environmental, 2012, 126, 315-325.	10.8	136
27	Confinedâ€Space Alloying of Nanoparticles for the Synthesis of Efficient PtNi Fuelâ€Cell Catalysts. Angewandte Chemie - International Edition, 2014, 53, 14250-14254.	7.2	136
28	In situ formation of ZnOx species for efficient propane dehydrogenation. Nature, 2021, 599, 234-238.	13.7	133
29	Supercritical Fluids in Catalysis: Opportunities of In Situ Spectroscopic Studies and Monitoring Phase Behavior. Catalysis Reviews - Science and Engineering, 2003, 45, 1-96.	5.7	132
30	Stabilizing Cu⁺ in Cu/SiO₂ Catalysts with a Shattuckite-Like Structure Boosts CO₂ Hydrogenation into Methanol. ACS Catalysis, 2020, 10, 14694-14706.	5.5	129
31	Flexibility and Sorption Selectivity in Rigid Metalâ€“Organic Frameworks: The Impact of Etherâ€Functionalised Linkers. Chemistry - A European Journal, 2010, 16, 14296-14306.	1.7	128
32	Selective Catalytic Reduction of NO Over Fe-ZSM-5: Mechanistic Insights by Operando HERFD-XANES and Valence-to-Core X-ray Emission Spectroscopy. Journal of the American Chemical Society, 2014, 136, 13006-13015.	6.6	128
33	Influence on nickel particle size on the hydrodeoxygenation of phenol over Ni/SiO 2. Catalysis Today, 2016, 259, 277-284.	2.2	126
34	Intermetallic GaPd₂ Nanoparticles on SiO₂ for Low-Pressure CO₂ Hydrogenation to Methanol: Catalytic Performance and In Situ Characterization. ACS Catalysis, 2015, 5, 5827-5836.	5.5	125
35	One-Step Synthesis of Submicrometer Fibers of MoO3. Chemistry of Materials, 2004, 16, 1126-1134.	3.2	120
36	Oxidic or Metallic Palladium:Â Which Is the Active Phase in Pd-Catalyzed Aerobic Alcohol Oxidation?. Journal of Physical Chemistry B, 2006, 110, 25586-25589.	1.2	120

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37	Mn(III)(salen)-catalyzed synthesis of cyclic organic carbonates from propylene and styrene oxide in â€œsupercriticalâ€•CO2. Journal of Molecular Catalysis A, 2008, 279, 94-103.	4.8	118
38	Quasi-Homogeneous Methanol Synthesis Over Highly Active Copper Nanoparticles. Angewandte Chemie - International Edition, 2005, 44, 7978-7981.	7.2	117
39	Selective liquid-phase oxidation of alcohols catalyzed by a silver-based catalyst promoted by the presence of ceria. Journal of Catalysis, 2009, 266, 320-330.	3.1	115
40	Catalytic hydrodeoxygenation of guaiacol over platinum supported on metal oxides and zeolites. Applied Catalysis A: General, 2015, 490, 181-192.	2.2	112
41	Aerobic Epoxidation of Olefins Catalyzed by the Cobaltâ€Based Metalâ€“Organic Framework STAâ€12(Co). Chemistry - A European Journal, 2012, 18, 887-898.	1.7	110
42	Intermetallic compounds of Ni and Ga as catalysts for the synthesis of methanol. Journal of Catalysis, 2014, 320, 77-88.	3.1	110
43	Insight into the structure of supported palladium catalysts during the total oxidation of methane. Chemical Communications, 2007, , 4635.	2.2	109
44	The role of monomeric iron during the selective catalytic reduction of NOx by NH3 over Fe-BEA zeolite catalysts. Applied Catalysis B: Environmental, 2009, 93, 166-176.	10.8	109
45	Promoted Ru?hydroxyapatite: designed structure for the fast and highly selective oxidation of alcohols with oxygen. Journal of Catalysis, 2005, 230, 406-419.	3.1	108
46	Flame-made Alumina Supported Pdâ€“Pt Nanoparticles: Structural Properties and Catalytic Behavior in Methane Combustion. Catalysis Letters, 2005, 104, 9-16.	1.4	108
47	Gold-Catalyzed Aerobic Oxidation of Benzyl Alcohol: Effect of Gold Particle Size on Activity and Selectivity in Different Solvents. Catalysis Letters, 2008, 125, 169-176.	1.4	108
48	In Situ Attenuated Total Reflection Infrared Spectroscopy of Imidazolium-Based Room-Temperature Ionic Liquids under â€œSupercriticalâ€•CO₂. Journal of Physical Chemistry B, 2009, 113, 114-122.	1.2	107
49	Interplay of Pt and Crystal Facets of TiO₂: CO Oxidation Activity and <i>Operando</i> XAS/DRIFTS Studies. ACS Catalysis, 2016, 6, 7799-7809.	5.5	107
50	Operando X-ray absorption spectroscopy studies on Pd-SnO2 based sensors. Physical Chemistry Chemical Physics, 2009, 11, 8620.	1.3	105
51	An Au clusters related spill-over sensitization mechanism in SnO2-based gas sensors identified by operando HERFD-XAS, work function changes, DC resistance and catalytic conversion studies. Physical Chemistry Chemical Physics, 2012, 14, 13249.	1.3	105
52	Surface reaction kinetics of methane oxidation over PdO. Journal of Catalysis, 2019, 370, 152-175.	3.1	105
53	On the mechanism of the SCR reaction on Fe/HBEA zeolite. Applied Catalysis B: Environmental, 2009, 93, 185-193.	10.8	103
54	Structural snapshots of the SCR reaction mechanism on Cu-SSZ-13. Chemical Communications, 2015, 51, 9227-9230.	2.2	101

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55	Studying the Solvothermal Formation of MoO3 Fibers by Complementary In Situ EXAFS/EDXRD Techniques. Angewandte Chemie - International Edition, 2005, 44, 5643-5647.	7.2	100
56	Activity and stability of Mo2C/ZrO2 as catalyst for hydrodeoxygenation of mixtures of phenol and 1-octanol. Journal of Catalysis, 2015, 328, 208-215.	3.1	100
57	Identification of the Active Species Generated from Supported Pd Catalysts in Heck Reactions: An in situ Quick Scanning EXAFS Investigation. Journal of the American Chemical Society, 2011, 133, 3921-3930.	6.6	97
58	In situ spectroscopic investigation of heterogeneous catalysts and reaction media at high pressure. Physical Chemistry Chemical Physics, 2005, 7, 3526.	1.3	96
59	Decreased CO production in methanol steam reforming over Cu/ZrO2 catalysts prepared by the microemulsion technique. Applied Catalysis A: General, 2006, 302, 215-223.	2.2	94
60	The Structure and Behavior of Platinum in SnO₂â€Based Sensors under Working Conditions. Angewandte Chemie - International Edition, 2011, 50, 2841-2844.	7.2	94
61	Influence of gas composition on activity and durability of bimetallic Pd-Pt/Al2O3 catalysts for total oxidation of methane. Catalysis Today, 2015, 258, 470-480.	2.2	93
62	A review of catalyst performance and novel reaction engineering concepts in direct synthesis of hydrogen peroxide. Catalysis Today, 2015, 248, 149-159.	2.2	93
63	Supported gold- and silver-based catalysts for the selective aerobic oxidation of 5-(hydroxymethyl)furfural to 2,5-furandicarboxylic acid and 5-hydroxymethyl-2-furancarboxylic acid. Green Chemistry, 2018, 20, 3530-3541.	4.6	93
64	In Situ EXAFS Study of Rh/Al2O3 Catalysts for Catalytic Partial Oxidation of Methane. Journal of Catalysis, 2001, 200, 321-329.	3.1	91
65	Mapping the chemical states of an element inside a sample using tomographic x-ray absorption spectroscopy. Applied Physics Letters, 2003, 82, 3360-3362.	1.5	89
66	Platinum loaded tin dioxide: a model system for unravelling the interplay between heterogeneous catalysis and gas sensing. Journal of Materials Chemistry A, 2018, 6, 2034-2046.	5.2	88
67	Synthesis of Î³-valerolactone by hydrogenation of levulinic acid over supported nickel catalysts. Applied Catalysis A: General, 2015, 502, 18-26.	2.2	87
68	CAT-ACTâ€"A new highly versatile x-ray spectroscopy beamline for catalysis and radionuclide science at the KIT synchrotron light facility ANKA. Review of Scientific Instruments, 2017, 88, 113113.	0.6	87
69	Operando spatially and time-resolved X-ray absorption spectroscopy and infrared thermography during oscillatory CO oxidation. Journal of Catalysis, 2015, 328, 216-224.	3.1	86
70	Combined liquid-phase ATR-IR and XAS study of the Bi-promotion in the aerobic oxidation of benzyl alcohol over Pd/Al2O3. Journal of Catalysis, 2007, 252, 77-87.	3.1	85
71	Catalysts at work: From integral to spatially resolved X-ray absorption spectroscopy. Catalysis Today, 2009, 145, 267-278.	2.2	85
72	Interplay Between Size and Crystal Structure of Molybdenum Dioxide Nanoparticlesâ€"Synthesis, Growth Mechanism, and Electrochemical Performance. Small, 2011, 7, 377-387.	5.2	85

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73	The State of Cu Promoter Atoms in High-Temperature Shift Catalystsâ€"An in Situ Fluorescence XAFS Study. Journal of Catalysis, 2001, 198, 56-65.	3.1	84
74	Formation and stability of barium aluminate and cerate in NOx storage-reduction catalysts. Applied Catalysis B: Environmental, 2006, 63, 232-242.	10.8	83
75	Exhaust Gas Aftertreatment in Mobile Systems: Status, Challenges, and Perspectives. Chemie-Ingenieur-Technik, 2013, 85, 595-617.	0.4	83
76	Supported gold catalysts for CO oxidation: Effect of calcination on structure, adsorption and catalytic behaviour. Physical Chemistry Chemical Physics, 2001, 3, 3846-3855.	1.3	81
77	In situ EXAFS study on the oxidation state of Pd/Al2O3 and Biâ€“Pd/Al2O3 during the liquid-phase oxidation of 1-phenylethanol. Journal of Catalysis, 2004, 222, 268-280.	3.1	81
78	Nextâ€Generation Catalysis for Renewables: Combining Enzymatic with Inorganic Heterogeneous Catalysis for Bulk Chemical Production. ChemCatChem, 2010, 2, 249-258.	1.8	81
79	Phase- and Surface Composition-Dependent Electrochemical Stability of Ir-Ru Nanoparticles during Oxygen Evolution Reaction. ACS Catalysis, 2021, 11, 9300-9316.	5.5	79
80	One step flame-made fluorinated Pt/TiO2 photocatalysts for hydrogen production. Applied Catalysis B: Environmental, 2014, 160-161, 144-151.	10.8	77
81	Photothermal Catalysis over Nonplasmonic Pt/TiO₂ Studied by Operando HERFD-XANES, Resonant XES, and DRIFTS. ACS Catalysis, 2018, 8, 11398-11406.	5.5	76
82	The dynamic nature of Cu sites in Cu-SSZ-13 and the origin of the seagull NO_x conversion profile during NH₃-SCR. Reaction Chemistry and Engineering, 2019, 4, 1000-1018.	1.9	75
83	Increased Irâ€“Ir Interaction in Iridium Oxide during the Oxygen Evolution Reaction at High Potentials Probed by Operando Spectroscopy. ACS Catalysis, 2021, 11, 10043-10057.	5.5	75
84	Heterogeneous Catalytic Hydrogenation in Supercritical Fluids: Potential and Limitations. Industrial & Engineering Chemistry Research, 2008, 47, 4561-4585.	1.8	74
85	<i>Operando</i> Spatially- and Time-Resolved XAS Study on Zeolite Catalysts for Selective Catalytic Reduction of NO_{<i>x</i>} by NH₃. Journal of Physical Chemistry C, 2014, 118, 10204-10212.	1.5	74
86	A simple discrimination of the promoter effect in alcohol oxidation and dehydrogenation over platinum and palladium. Journal of Catalysis, 2004, 225, 138-146.	3.1	72
87	Flame-Made Pt/Ceria/Zirconia for Low-Temperature Oxygen Exchange. Chemistry of Materials, 2005, 17, 3352-3358.	3.2	72
88	High-throughput screening under demanding conditions: Cu/ZnO catalysts in high pressure methanol synthesis as an example. Journal of Catalysis, 2003, 216, 110-119.	3.1	71
89	Revealing the Structure and Mechanism of Palladium during Direct Synthesis of Hydrogen Peroxide in Continuous Flow Using Operando Spectroscopy. ACS Catalysis, 2018, 8, 2546-2557.	5.5	71
90	Combination of flame synthesis and high-throughput experimentation: The preparation of alumina-supported noble metal particles and their application in the partial oxidation of methane. Applied Catalysis A: General, 2007, 316, 226-239.	2.2	70

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91	Flame-synthesized LaCoO3-supported Pd1. Structure, thermal stability and reducibility. Journal of Catalysis, 2007, 252, 127-136.	3.1	70
92	Distinct spatial changes of the catalyst structure inside a fixed-bed microreactor during the partial oxidation of methane over Rh/Al2O3. Catalysis Today, 2007, 126, 54-63.	2.2	70
93	Stability and resistance of nickel catalysts for hydrodeoxygenation: carbon deposition and effects of sulfur, potassium, and chlorine in the feed. Catalysis Science and Technology, 2014, 4, 3672-3686.	2.1	69
94	Gold-Loaded Tin Dioxide Gas Sensing Materials: Mechanistic Insights and the Role of Gold Dispersion. ACS Sensors, 2016, 1, 1322-1329.	4.0	67
95	Recent Advances in Selective Propylene Oxidation over Bismuth Molybdate Based Catalysts: Synthetic, Spectroscopic, and Theoretical Approaches. ACS Catalysis, 2017, 7, 5628-5642.	5.5	67
96	Benzyl alcoholoxidation in supercritical carbon dioxide: spectroscopic insight into phase behaviour and reaction mechanism. Physical Chemistry Chemical Physics, 2005, 7, 278-285.	1.3	66
97	Electron microscopy and EXAFS studies on oxide-supported goldâ€“silver nanoparticles prepared by flame spray pyrolysis. Applied Surface Science, 2006, 252, 7862-7873.	3.1	66
98	Sulfur poisoning and regeneration of bimetallic Pd-Pt methane oxidation catalysts. Applied Catalysis B: Environmental, 2017, 218, 833-843.	10.8	66
99	Supercritical Carbon Dioxide:â€‰ An Inert Solvent for Catalytic Hydrogenation?. Journal of Physical Chemistry B, 2005, 109, 16794-16800.	1.2	65
100	Origin of the Normal and Inverse Hysteresis Behavior during CO Oxidation over Pt/Al₂O₃. ACS Catalysis, 2017, 7, 343-355.	5.5	65
101	High pressurein situx-ray absorption spectroscopy cell for studying simultaneously the liquid phase and the solid/liquid interface. Review of Scientific Instruments, 2005, 76, 054104.	0.6	64
102	Hydrothermal Formation of W/Mo-Oxides: A Multidisciplinary Study of Growth and Shape. Chemistry of Materials, 2008, 20, 3022-3033.	3.2	64
103	Behavior of homogeneous and immobilized zinc-based catalysts in cycloaddition of CO2 to propylene oxide. Journal of Catalysis, 2005, 234, 256-267.	3.1	62
104	Deactivation of Ni-MoS2 by bio-oil impurities during hydrodeoxygenation of phenol and octanol. Applied Catalysis A: General, 2016, 523, 159-170.	2.2	62
105	Elucidating the Nature of Active Sites and Fundamentals for their Creation in Zn-Containing ZrO₂â€“Based Catalysts for Nonoxidative Propane Dehydrogenation. ACS Catalysis, 2020, 10, 8933-8949.	5.5	62
106	Operando Raman spectroscopy on CO2 methanation over alumina-supported Ni, Ni3Fe and NiRh0.1 catalysts: Role of carbon formation as possible deactivation pathway. Applied Catalysis A: General, 2018, 556, 160-171.	2.2	61
107	Palladium Supported on an Acidic Resin: A Unique Bifunctional Catalyst for the Continuous Catalytic Hydrogenation of Organic Compounds in Supercritical Carbon Dioxide. Advanced Synthesis and Catalysis, 2008, 350, 691-705.	2.1	60
108	Visualizing a Catalyst at Work during the Ignition of the Catalytic Partial Oxidation of Methane. Journal of Physical Chemistry C, 2009, 113, 3037-3040.	1.5	60

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109	Inâ€…Situ Observation of Cuâ€"Ni Alloy Nanoparticle Formation by Xâ€Ray Diffraction, Xâ€Ray Absorption Spectroscopy, and Transmission Electron Microscopy: Influence of Cu/Ni Ratio. ChemCatChem, 2014, 6, 301-310.	1.8	60
110	High pressure view-cell for simultaneousin situinfrared spectroscopy and phase behavior monitoring of multiphase chemical reactions. Review of Scientific Instruments, 2003, 74, 4121-4128.	0.6	59
111	The Effect of Prereduction on the Performance of Pd/Al₂O₃ and Pd/CeO₂ Catalysts during Methane Oxidation. Industrial & Engineering Chemistry Research, 2019, 58, 12561-12570.	1.8	58
112	Unravelling the Different Reaction Pathways for Low Temperature CO Oxidation on Pt/CeO₂ and Pt/Al₂O₃ by Spatially Resolved Structureâ€"Activity Correlations. Journal of Physical Chemistry Letters, 2019, 10, 7698-7705.	2.1	58
113	In situ EXAFS study of Pd/Al2O3 during aerobic oxidation ofÂcinnamyl alcohol in an organic solvent. Journal of Catalysis, 2003, 213, 291-295.	3.1	57
114	Flame-synthesized LaCoO3-supported Pd2. Catalytic behavior in the reduction of NO by H2 under lean conditions. Journal of Catalysis, 2007, 252, 137-147.	3.1	57
115	PGM based catalysts for exhaust-gas after-treatment under typical diesel, gasoline and gas engine conditions with focus on methane and formaldehyde oxidation. Applied Catalysis B: Environmental, 2020, 265, 118571.	10.8	56
116	Continuous catalytic oxidation of solid alcohols in supercritical CO2: A parametric and spectroscopic study of the transformation of cinnamyl alcohol over Pd/Al2O3. Journal of Catalysis, 2006, 240, 126-136.	3.1	55
117	Surface Oxidation of Supported Ni Particles and Its Impact on the Catalytic Performance during Dynamically Operated Methanation of CO2. Catalysts, 2017, 7, 279.	1.6	55
118	Morphological and Kinetic Studies on Hexagonal Tungstates. Chemistry of Materials, 2007, 19, 185-197.	3.2	54
119	Role of Bi promotion and solvent in platinum-catalyzed alcohol oxidation probed by in situ X-ray absorption and ATR-IR spectroscopy. Physical Chemistry Chemical Physics, 2010, 12, 5307.	1.3	54
120	Chemical gradients in automotive Cu-SSZ-13 catalysts for NOx removal revealed by operando X-ray spectrotomography. Nature Catalysis, 2021, 4, 46-53.	16.1	54
121	In Situ Extended X-ray Absorption Fine Structure Study during Selective Alcohol Oxidation over Pd/Al2O3in Supercritical Carbon Dioxide. Journal of Physical Chemistry B, 2006, 110, 9916-9922.	1.2	53
122	Identification of the iron oxidation state and coordination geometry in iron oxide- and zeolite-based catalysts using pre-edge XAS analysis. Journal of Synchrotron Radiation, 2015, 22, 410-426.	1.0	53
123	Microfluidically synthesized Au, Pd and AuPd nanoparticles supported on SnO2 for gas sensing applications. Sensors and Actuators B: Chemical, 2019, 292, 48-56.	4.0	53
124	Selective oxidation of benzyl alcohol to benzaldehyde in â€œsupercriticalâ€•carbon dioxide. Catalysis Today, 2004, 91-92, 1-5.	2.2	52
125	Exploiting Synergies in Catalysis and Gas Sensing using Noble Metalâ€Loaded Oxide Composites. ChemCatChem, 2018, 10, 864-880.	1.8	50
126	Gold supported on Cuâ€"Mgâ€"Al and Cuâ€"Ce mixed oxides: An in situ XANES study on the state of Au during aerobic alcohol oxidation. Journal of Catalysis, 2007, 250, 313-323.	3.1	49

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127	A versatilein situspectroscopic cell for fluorescence/transmission EXAFS and X-ray diffraction of heterogeneous catalysts in gas and liquid phase. Journal of Synchrotron Radiation, 2007, 14, 345-354.	1.0	49
128	The nature of the active site in the Fe-ZSM-5/N2O system studied by (resonant) inelastic X-ray scattering. Catalysis Today, 2007, 126, 127-134.	2.2	49
129	Understanding sulfur poisoning of bimetallic Pd-Pt methane oxidation catalysts and their regeneration. Applied Catalysis B: Environmental, 2020, 278, 119244.	10.8	49
130	Simple preparation routes towards novel Zn-based catalysts for the solventless synthesis of propylene carbonate using dense carbon dioxide. Journal of Molecular Catalysis A, 2006, 258, 165-171.	4.8	48
131	Gold-catalyzed aerobic oxidation of dibenzylamine: Homogeneous or heterogeneous catalysis?. Journal of Molecular Catalysis A, 2009, 300, 111-115.	4.8	48
132	Structural changes of noble metal catalysts during ignition and extinction of the partial oxidation of methane studied by advanced QEXAFS techniques. Physical Chemistry Chemical Physics, 2009, 11, 8779.	1.3	48
133	Oscillatory CO Oxidation Over Pt/Al2O3 Catalysts Studied by In situ XAS and DRIFTS. Topics in Catalysis, 2013, 56, 333-338.	1.3	48
134	Impact of Preparation Method and Hydrothermal Aging on Particle Size Distribution of Pt/Î³-Al₂O₃ and Its Performance in CO and NO Oxidation. Journal of Physical Chemistry C, 2019, 123, 5433-5446.	1.5	48
135	From agriculture residue to upgraded product: The thermochemical conversion of sugarcane bagasse for fuel and chemical products. Fuel Processing Technology, 2020, 197, 106199.	3.7	48
136	Structural dynamics in Niâ€“Fe catalysts during CO₂ methanation â€“ role of iron oxide clusters. Catalysis Science and Technology, 2020, 10, 7542-7554.	2.1	48
137	Probing Active Sites During Palladium-Catalyzed Alcohol Oxidation in â€œSupercriticalâ€•Carbon Dioxide. Catalysis Letters, 2003, 90, 221-229.	1.4	47
138	Near-Critical CO2in Mesoporous Silica Studied by In Situ FTIR Spectroscopy. Langmuir, 2004, 20, 2890-2899.	1.6	47
139	Selective oxidation of alcohols with oxygen on Ruâ€“Co-hydroxyapatite: A mechanistic study. Journal of Molecular Catalysis A, 2005, 242, 224-232.	4.8	47
140	Mild hydrotreatment of the light fraction of fast-pyrolysis oil produced from straw over nickel-based catalysts. Biomass and Bioenergy, 2015, 83, 525-538.	2.9	47
141	Structure and chemistry of surface-doped Pt:SnO₂ gas sensing materials. RSC Advances, 2016, 6, 28149-28155.	1.7	47
142	Solventless synthesis of propylene carbonate catalysed by chromiumâ€“salen complexes: Bridging homogeneous and heterogeneous catalysis. Journal of Molecular Catalysis A, 2005, 242, 32-39.	4.8	45
143	Oscillatory Behavior during the Catalytic Partial Oxidation of Methane: Following Dynamic Structural Changes of Palladium Using the QEXAFS Technique. Journal of Physical Chemistry C, 2012, 116, 599-609.	1.5	45
144	Supported molybdenum carbide for higher alcohol synthesis from syngas. Catalysis Today, 2013, 215, 162-168.	2.2	43

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145	Continuous microfluidic synthesis of colloidal ultrasmall gold nanoparticles:<i>in situ</i>study of the early reaction stages and application for catalysis. Reaction Chemistry and Engineering, 2017, 2, 876-884.	1.9	43
146	Probing the Active Sites of MoS₂ Based Hydrotreating Catalysts Using Modulation Excitation Spectroscopy. ACS Catalysis, 2019, 9, 2568-2579.	5.5	43
147	High-resolution chemical imaging of gold nanoparticles using hard x-ray ptychography. Applied Physics Letters, 2013, 102, 203104.	1.5	42
148	Fe and Mnâ€Based Catalysts Supported on Î³â€Al₂O₃ for CO Oxidation under O₂â€Rich Conditions. ChemCatChem, 2014, 6, 1763-1773.	1.8	42
149	Selective oxidation of propylene to acrolein by hydrothermally synthesized bismuth molybdates. Applied Catalysis A: General, 2014, 482, 145-156.	2.2	41
150	Synthesis and Characterisation of Hierarchically Structured Titanium Silicaliteâ€1 Zeolites with Large Intracrystalline Macropores. Chemistry - A European Journal, 2019, 25, 14430-14440.	1.7	41
151	The fate of platinum in Pt/Ba/CeO2 and Pt/Ba/Al2O3 catalysts during thermal aging. Journal of Catalysis, 2007, 251, 28-38.	3.1	40
152	Oscillatory behaviour of catalytic properties, structure and temperature during the catalytic partial oxidation of methane on Pd/Al2O3. Physical Chemistry Chemical Physics, 2010, 12, 2288.	1.3	40
153	Highly dispersed PdS preferably anchored on In2S3 of MnS/In2S3 composite for effective and stable hydrogen production from H2S. Journal of Catalysis, 2019, 373, 48-57.	3.1	40
154	Piezo X-ray Absorption Spectroscopy for the Investigation of Solid-State Transformations in the Millisecond Range. Journal of Physical Chemistry B, 2001, 105, 5161-5168.	1.2	39
155	Solvent-modified supercritical CO: A beneficial medium for heterogeneously catalyzed oxidation reactions. Applied Catalysis A: General, 2006, 298, 50-56.	2.2	39
156	Flame spray synthesis of CoMo/Al2O3 hydrotreating catalysts. Applied Catalysis A: General, 2011, 397, 201-208.	2.2	39
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