Martin Muhler

List of Publications by Year
in descending order

546 papers	31,599 citations	4658 85 h-index	7950 149 g-index
592 all docs	592 docs citations	592 times ranked	28805 citing authors

#	Article	IF	Citations
1	CO Oxidation over Supported Gold Catalystsâ€"â€œInertâ€•and â€œActiveâ€•Support Materials and Their Role for the Oxygen Supply during Reaction. Journal of Catalysis, 2001, 197, 113-122.	6.2	1,094
2	Co@Co₃O₄ Encapsulated in Carbon Nanotubeâ€Grafted Nitrogenâ€Doped Carbon Polyhedra as an Advanced Bifunctional Oxygen Electrode. Angewandte Chemie - International Edition, 2016, 55, 4087-4091.	13.8	1,027
3	Thermal Stability and Reducibility of Oxygen-Containing Functional Groups on Multiwalled Carbon Nanotube Surfaces: A Quantitative High-Resolution XPS and TPD/TPR Study. Journal of Physical Chemistry C, 2008, 112, 16869-16878.	3.1	799
4	Amorphous Cobalt Boride (Co₂B) as a Highly Efficient Nonprecious Catalyst for Electrochemical Water Splitting: Oxygen and Hydrogen Evolution. Advanced Energy Materials, 2016, 6, 1502313.	19.5	686
5	Metal@MOF: Loading of Highly Porous Coordination Polymers Host Lattices by Metal Organic Chemical Vapor Deposition. Angewandte Chemie - International Edition, 2005, 44, 6237-6241.	13.8	662
6	On the Role of Metals in Nitrogenâ€Doped Carbon Electrocatalysts for Oxygen Reduction. Angewandte Chemie - International Edition, 2015, 54, 10102-10120.	13.8	583
7	Electrocatalytic Activity and Stability of Nitrogen-Containing Carbon Nanotubes in the Oxygen Reduction Reaction. Journal of Physical Chemistry C, 2009, 113, 14302-14310.	3.1	530
8	Mn_{<i>x</i>}O_{<i>y</i>}/NC and Co_{<i>x</i>}O_{<i>y</i>}/NC Nanoparticles Embedded in a Nitrogenâ€Doped Carbon Matrix for Highâ€Performance Bifunctional Oxygen Electrodes. Angewandte Chemie - International Edition, 2014, 53, 8508-8512.	13.8	482
9	The nature of the iron oxide-based catalyst for dehydrogenation of ethylbenzene to styrene 2. Surface chemistry of the active phase. Journal of Catalysis, 1992, 138, 413-444.	6.2	401
10	Catalysis of Carbon Dioxide Photoreduction on Nanosheets: Fundamentals and Challenges. Angewandte Chemie - International Edition, 2018, 57, 7610-7627.	13.8	361
11	Ultrathin High Surface Area Nickel Boride (Ni<i>_x</i>B) Nanosheets as Highly Efficient Electrocatalyst for Oxygen Evolution. Advanced Energy Materials, 2017, 7, 1700381.	19.5	348
12	The formation of nitrogen-containing functional groups on carbon nanotube surfaces: a quantitative XPS and TPD study. Physical Chemistry Chemical Physics, 2010, 12, 4351.	2.8	321
13	The identification of hydroxyl groups on ZnO nanoparticles by infrared spectroscopy. Physical Chemistry Chemical Physics, 2008, 10, 7092.	2.8	320
14	Photocatalytic Activity of Bulk<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>TiO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Anatase and Rutile Single Crystals Using Infrared Absorption Spectroscopy. Physical Review Letters, 2011, 106, 138302.	7.8	320
15	Nitrogen-doped carbon nanotubes as a cathode catalyst for the oxygen reduction reaction in alkaline medium. Electrochemistry Communications, 2010, 12, 338-341.	4.7	303
16	Electrocatalytic Oxidation of 5â€(Hydroxymethyl)furfural Using Highâ€Surfaceâ€Area Nickel Boride. Angewandte Chemie - International Edition, 2018, 57, 11460-11464.	13.8	283
17	Spinel Mnâ€"Co Oxide in N-Doped Carbon Nanotubes as a Bifunctional Electrocatalyst Synthesized by Oxidative Cutting. Journal of the American Chemical Society, 2014, 136, 7551-7554.	13.7	275
18	The Ammonia-Synthesis Catalyst of the Next Generation: Barium-Promoted Oxide-Supported Ruthenium. Angewandte Chemie - International Edition, 2001, 40, 1061-1063.	13.8	271

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19	Ruthenium catalysts for ammonia synthesis at high pressures: Preparation, characterization, and power-law kinetics. Applied Catalysis A: General, 1997, 151, 443-460.	4.3	263
20	Loading of MOF-5 with Cu and ZnO Nanoparticles by Gas-Phase Infiltration with Organometallic Precursors: Properties of Cu/ZnO@MOF-5 as Catalyst for Methanol Synthesis. Chemistry of Materials, 2008, 20, 4576-4587.	6.7	260
21	Interaction of oxygen with silver at high temperature and atmospheric pressure: A spectroscopic and structural analysis of a strongly bound surface species. Physical Review B, 1996, 54, 2249-2262.	3.2	248
22	PtRu nanoparticles supported on nitrogen-doped multiwalled carbon nanotubes as catalyst for methanol electrooxidation. Electrochimica Acta, 2009, 54, 4208-4215.	5.2	247
23	Title is missing!. Catalysis Letters, 2001, 71, 37-44.	2.6	246
24	Structural Complexity in Metalâ€“Organic Frameworks: Simultaneous Modification of Open Metal Sites and Hierarchical Porosity by Systematic Doping with Defective Linkers. Journal of the American Chemical Society, 2014, 136, 9627-9636.	13.7	240
25	Multifunctional, Defectâ€Engineered Metalâ€“Organic Frameworks with Ruthenium Centers: Sorption and Catalytic Properties. Angewandte Chemie - International Edition, 2014, 53, 7058-7062.	13.8	237
26	On the Role of Oxygen Defects in the Catalytic Performance of Zinc Oxide. Angewandte Chemie - International Edition, 2006, 45, 2965-2969.	13.8	235
27	Metallic NiPS₃@NiOOH Coreâ€“Shell Heterostructures as Highly Efficient and Stable Electrocatalyst for the Oxygen Evolution Reaction. ACS Catalysis, 2017, 7, 229-237.	11.2	233
28	Catalytic CO oxidation over rutheniumâ€“â€“bridging the pressure gap. Progress in Surface Science, 2003, 72, 3-17.	8.3	199
29	Active Sites on Oxide Surfaces: ZnO-Catalyzed Synthesis of Methanol from CO and H2. Angewandte Chemie - International Edition, 2005, 44, 2790-2794.	13.8	192
30	Surface characterization of oxygen-functionalized multi-walled carbon nanotubes by high-resolution X-ray photoelectron spectroscopy and temperature-programmed desorption. Applied Surface Science, 2007, 254, 247-250.	6.1	185
31	Deactivation of Supported Copper Catalysts for Methanol Synthesis. Catalysis Letters, 2003, 86, 77-80.	2.6	180
32	On the role of monomeric vanadyl species in toluene adsorption and oxidation on V2O5/TiO2 catalysts: a Raman and in situ DRIFTS study. Journal of Molecular Catalysis A, 2000, 162, 401-411.	4.8	161
33	On the nature of the active state of silver during catalytic oxidation of methanol. Catalysis Letters, 1993, 22, 215-225.	2.6	160
34	A highly efficient gas-phase route for the oxygen functionalization of carbon nanotubes based on nitric acid vapor. Carbon, 2009, 47, 919-922.	10.3	160
35	Chemical Activity of Thin Oxide Layers: Strong Interactions with the Support Yield a New Thinâ€Film Phase of ZnO. Angewandte Chemie - International Edition, 2013, 52, 11925-11929.	13.8	158
36	The nature of the iron oxide-based catalyst for dehydrogenation of ethylbenzene to styrene I. Solid-state chemistry and bulk characterization. Journal of Catalysis, 1990, 126, 339-360.	6.2	154

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37	The Kinetics of Ammonia Synthesis over Ru-Based Catalysts. Journal of Catalysis, 1997, 165, 33-44.	6.2	150
38	Pentlandite rocks as sustainable and stable efficient electrocatalysts for hydrogen generation. Nature Communications, 2016, 7, 12269.	12.8	150
39	Structural Characterization and Catalytic Activity of Nanosized Ce_{<i>x</i>}M_{1-<i>x</i>}O₂ (M = Zr and Hf) Mixed Oxides. Journal of Physical Chemistry C, 2008, 112, 11729-11737.	3.1	149
40	Ceria-Based Materials for Thermocatalytic and Photocatalytic Organic Synthesis. ACS Catalysis, 2021, 11, 9618-9678.	11.2	146
41	Experimental and Theoretical Understanding of Nitrogen-Doping-Induced Strong Metalâ€“Support Interactions in Pd/TiO₂ Catalysts for Nitrobenzene Hydrogenation. ACS Catalysis, 2017, 7, 1197-1206.	11.2	138
42	Iron Metalâ€“Organic Frameworks MILâ€88B and NH₂â€MILâ€88B for the Loading and Delivery of the Gasotransmitter Carbon Monoxide. Chemistry - A European Journal, 2013, 19, 6785-6790.	3.3	134
43	Influence of the Fe:Ni Ratio and Reaction Temperature on the Efficiency of (Fe_{<i>x</i>}Ni_{1â€“<i>x</i>})₉S₈ Electrocatalysts Applied in the Hydrogen Evolution Reaction. ACS Catalysis, 2018, 8, 987-996.	11.2	134
44	The surface chemistry of ZnO nanoparticles applied as heterogeneous catalysts in methanol synthesis. Surface Science, 2009, 603, 1776-1783.	1.9	131
45	The influence of strongly reducing conditions on strong metalâ€“support interactions in Cu/ZnO catalysts used for methanol synthesis. Physical Chemistry Chemical Physics, 2006, 8, 1525.	2.8	130
46	Oxidation Reactions over RuO2: A Comparative Study of the Reactivity of the (110) Single Crystal and Polycrystalline Surfaces. Journal of Catalysis, 2001, 202, 296-307.	6.2	129
47	Metal-free catalysts for oxygen reduction in alkaline electrolytes: Influence of the presence of Co, Fe, Mn and Ni inclusions. Electrochimica Acta, 2014, 128, 271-278.	5.2	129
48	Nitrogenâ€•and Oxygenâ€Functionalized Multiwalled Carbon Nanotubes Used as Support in Ironâ€Catalyzed, Highâ€Temperature Fischerâ€“Tropsch Synthesis. ChemCatChem, 2012, 4, 350-355.	3.7	125
49	Hafnium Doped Ceria Nanocomposite Oxide as a Novel Redox Additive for Three-Way Catalysts. Journal of Physical Chemistry C, 2007, 111, 1878-1881.	3.1	124
50	Trace metal residues promote the activity of supposedly metal-free nitrogen-modified carbon catalysts for the oxygen reduction reaction. Electrochemistry Communications, 2013, 34, 113-116.	4.7	124
51	Adsorptive removal of methylene blue from colored effluents on fuller's earth. Journal of Colloid and Interface Science, 2003, 261, 32-39.	9.4	120
52	New Synthetic Routes to More Active Cu/ZnO Catalysts Used for Methanol Synthesis. Catalysis Letters, 2004, 92, 49-52.	2.6	120
53	Counting of Oxygen Defects versus Metal Surface Sites in Methanol Synthesis Catalysts by Different Probe Molecules. Angewandte Chemie - International Edition, 2014, 53, 7043-7047.	13.8	119
54	Synergistic Effect of Cobalt and Iron in Layered Double Hydroxide Catalysts for the Oxygen Evolution Reaction. ChemSusChem, 2017, 10, 156-165.	6.8	117

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55	High-Temperature Stable Ni Nanoparticles for the Dry Reforming of Methane. ACS Catalysis, 2016, 6, 7238-7248.	11.2	116
56	Temperature-programmed reduction and oxidation experiments with V2O5/TiO2 catalysts. Physical Chemistry Chemical Physics, 2001, 3, 4633-4638.	2.8	115
57	The Kinetics of Ammonia Synthesis over Ruthenium-Based Catalysts: The Role of Barium and Cesium. Journal of Catalysis, 2002, 205, 205-212.	6.2	113
58	Perspective of Surfactantâ€Free Colloidal Nanoparticles in Heterogeneous Catalysis. ChemCatChem, 2019, 11, 4489-4518.	3.7	112
59	Effect of Reduction Temperature on the Preparation and Characterization of Ptâˆ'Ru Nanoparticles on Multiwalled Carbon Nanotubes. Langmuir, 2009, 25, 3853-3860.	3.5	110
60	Spinel-Structured ZnCr₂O₄ with Excess Zn Is the Active ZnO/Cr₂O₃ Catalyst for High-Temperature Methanol Synthesis. ACS Catalysis, 2017, 7, 7610-7622.	11.2	109
61	Identifying the nature of the active sites in methanol synthesis over Cu/ZnO/Al2O3 catalysts. Nature Communications, 2020, 11, 3898.	12.8	109
62	Spectroscopic evidence for the partial dissociation of H2O on ZnO(101Ì„0). Physical Chemistry Chemical Physics, 2006, 8, 1521.	2.8	104
63	The Interaction of Silver with Oxygen. Zeitschrift Fur Physikalische Chemie, 1991, 174, 11-52.	2.8	102
64	The microkinetics of ammonia synthesis catalyzed by cesium-promoted supported ruthenium. Chemical Engineering Science, 1996, 51, 1683-1690.	3.8	102
65	Metal-free and electrocatalytically active nitrogen-doped carbon nanotubes synthesized by coating with polyaniline. Nanoscale, 2010, 2, 981.	5.6	102
66	Hollow Zn/Co Zeolitic Imidazolate Framework (ZIF) and Yolkâ€“Shell Metal@Zn/Co ZIF Nanostructures. Chemistry - A European Journal, 2016, 22, 3304-3311.	3.3	102
67	Methanol synthesis over ZnO: A structure-sensitive reaction?. Physical Chemistry Chemical Physics, 2003, 5, 4736-4742.	2.8	101
68	MOFs for Electrocatalysis: From Serendipity to Design Strategies. Small Methods, 2019, 3, 1800415.	8.6	100
69	Mesoporous Nitrogenâ€Rich Carbon Materials as Catalysts for the Oxygen Reduction Reaction in Alkaline Solution. ChemSusChem, 2012, 5, 637-641.	6.8	99
70	CO2 Activation by ZnO through the Formation of an Unusual Tridentate Surface Carbonate. Angewandte Chemie - International Edition, 2007, 46, 5624-5627.	13.8	98
71	Au/ZnO as catalyst for methanol synthesis: The role of oxygen vacancies. Applied Catalysis A: General, 2009, 359, 121-128.	4.3	98
72	On the Nature of the Active State of Supported Ruthenium Catalysts Used for the Oxidation of Carbon Monoxide:Â Steady-State and Transient Kinetics Combined with in Situ Infrared Spectroscopyâ€. Journal of Physical Chemistry B, 2004, 108, 14634-14642.	2.6	97

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73	On the role of adsorbed atomic oxygen and CO2 in copper based methanol synthesis catalysts. Catalysis Letters, 1994, 25, 1-10.	2.6	96
74	MoSSe@reduced graphene oxide nanocomposite heterostructures as efficient and stable electrocatalysts for the hydrogen evolution reaction. Nano Energy, 2016, 29, 46-53.	16.0	94
75	Heck reactions catalyzed by oxide-supported palladium â€“ structureâ€“activity relationships. Topics in Catalysis, 2000, 13, 319-326.	2.8	93
76	Niâ€Metalloid (B, Si, P, As, and Te) Alloys as Water Oxidation Electrocatalysts. Advanced Energy Materials, 2019, 9, 1900796.	19.5	93
77	Chemisorption of N2O and H2 for the Surface Determination of Copper Catalysts. Chemical Engineering and Technology, 2000, 23, 956-959.	1.5	92
78	Understanding the Structural Deactivation of Ruthenium Catalysts on an Atomic Scale under both Oxidizing and Reducing Conditions. Angewandte Chemie - International Edition, 2005, 44, 917-920.	13.8	91
79	Understanding the complexity of a catalyst synthesis: Co-precipitation of mixed Cu,Zn,Al hydroxycarbonate precursors for Cu/ZnO/Al2O3 catalysts investigated by titration experiments. Applied Catalysis A: General, 2011, 392, 93-102.	4.3	91
80	Stable Performance of Ni Catalysts in the Dry Reforming of Methane at High Temperatures for the Efficient Conversion of CO₂ into Syngas. ChemCatChem, 2014, 6, 100-104.	3.7	91
81	Oxygen Evolution Electrocatalysis of a Single MOFâ€Derived Composite Nanoparticle on the Tip of a Nanoelectrode. Angewandte Chemie - International Edition, 2019, 58, 8927-8931.	13.8	91
82	The effect of sodium on the structureâ€“activity relationships of cobalt-modified Cu/ZnO/Al2O3 catalysts applied in the hydrogenation of carbon monoxide to higher alcohols. Journal of Catalysis, 2016, 335, 175-186.	6.2	90
83	Highly active metal-free nitrogen-containing carbon catalysts for oxygen reduction synthesized by thermal treatment of polypyridine-carbon black mixtures. Electrochemistry Communications, 2011, 13, 593-596.	4.7	89
84	Effect of nitrogen doping on the reducibility, activity and selectivity of carbon nanotube-supported iron catalysts applied in CO2 hydrogenation. Applied Catalysis A: General, 2014, 482, 163-170.	4.3	89
85	On the Nature and Accessibility of the BrÃ¸nsted-Base Sites in Activated Hydrotalcite Catalysts. Journal of Physical Chemistry B, 2006, 110, 9211-9218.	2.6	88
86	Pulsed electrodeposition of Pt nanoclusters on carbon nanotubes modified carbon materials using diffusion restricting viscous electrolytes. Electrochemistry Communications, 2007, 9, 1348-1354.	4.7	86
87	Bifunktionale Sauerstoffelektroden durch Einbettung von Co@Co₃O₄â€Nanopartikeln in CNTâ€gekoppelte Stickstoffâ€dotierte Kohlenstoffpolyeder. Angewandte Chemie, 2016, 128, 4155-4160.	2.0	85
88	Continuous Coprecipitation of Catalysts in a Micromixer: Nanostructured Cu/ZnO Composite for the Synthesis of Methanol. Angewandte Chemie - International Edition, 2003, 42, 3815-3817.	13.8	84
89	Faceted Branched Nickel Nanoparticles with Tunable Branch Length for Highâ€Activity Electrocatalytic Oxidation of Biomass. Angewandte Chemie - International Edition, 2020, 59, 15487-15491.	13.8	83
90	Temperature-programmed desorption of H2 as a tool to determine metal surface areas of Cu catalysts. Catalysis Letters, 1992, 14, 241-249.	2.6	82

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91	Surface-enhanced Raman scattering from surface and subsurface oxygen species at microscopically well-defined Ag surfaces. Physical Review Letters, 1994, 72, 1561-1564.	7.8	81
92	Highly Efficient Photocatalytic Degradation of Dyes by a Copperâ€“Triazolate Metalâ€“Organic Framework. Chemistry - A European Journal, 2018, 24, 16804-16813.	3.3	81
93	The effect of water on the formation of strongly bound oxygen on silver surfaces. Catalysis Letters, 1995, 32, 171-183.	2.6	79
94	On the relation between catalytic performance and microstructure of polycrystalline silver in the partial oxidation of methanol. Catalysis Letters, 1995, 33, 305-319.	2.6	79
95	Activation of Carbon Dioxide on ZnO Nanoparticles Studied by Vibrational Spectroscopy. Journal of Physical Chemistry C, 2011, 115, 908-914.	3.1	79
96	The structural and electronic promoting effect of nitrogen-doped carbon nanotubes on supported Pd nanoparticles for selective olefin hydrogenation. Catalysis Science and Technology, 2013, 3, 1964.	4.1	79
97	The role of carbonaceous deposits in the activity and stability of Ni-based catalysts applied in the dry reforming of methane. Catalysis Science and Technology, 2014, 4, 3317-3328.	4.1	78
98	3D atomic-scale imaging of mixed Co-Fe spinel oxide nanoparticles during oxygen evolution reaction. Nature Communications, 2022, 13, 179.	12.8	77
99	Chemical Vapor Deposition and Synthesis on Carbon Nanofibers:Â Sintering of Ferrocene-Derived Supported Iron Nanoparticles and the Catalytic Growth of Secondary Carbon Nanofibers. Chemistry of Materials, 2005, 17, 5737-5742.	6.7	76
100	Highly Concentrated Aqueous Dispersions of Graphene Exfoliated by Sodium Taurodeoxycholate: Dispersion Behavior and Potential Application as a Catalyst Support for the Oxygenâ€Reduction Reaction. Chemistry - A European Journal, 2012, 18, 6972-6978.	3.3	76
101	Effect of Potassium on the Kinetics of Ammonia Synthesis and Decomposition over Fused Iron Catalyst at Atmospheric Pressure. Journal of Catalysis, 1997, 169, 407-414.	6.2	74
102	The temperature-programmed desorption of hydrogen from copper surfaces. Catalysis Letters, 1999, 59, 137-141.	2.6	73
103	Perovskite-based bifunctional electrocatalysts for oxygen evolution and oxygen reduction in alkaline electrolytes. Electrochimica Acta, 2016, 208, 25-32.	5.2	73
104	Cobalt boride modified with N-doped carbon nanotubes as a high-performance bifunctional oxygen electrocatalyst. Journal of Materials Chemistry A, 2017, 5, 21122-21129.	10.3	73
105	Influence of Alumina, Silica, and Titania Supports on the Structure and CO Oxidation Activity of CexZr1-xO2Nanocomposite Oxides. Journal of Physical Chemistry C, 2007, 111, 10478-10483.	3.1	72
106	Ruthenium Metalâ€“Organic Frameworks with Different Defect Types: Influence on Porosity, Sorption, and Catalytic Properties. Chemistry - A European Journal, 2016, 22, 14297-14307.	3.3	72
107	Effects of oxy-fuel conditions on the products of pyrolysis in a drop tube reactor. Fuel Processing Technology, 2016, 150, 41-49.	7.2	72
108	Sulfur adsorbed on Pt catalyst: its chemical state and effect on catalytic properties as studied by electron spectroscopy and n-hexane test reactions. Applied Catalysis A: General, 1997, 149, 113-132.	4.3	71

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109	High-throughput screening under demanding conditions: Cu/ZnO catalysts in high pressure methanol synthesis as an example. Journal of Catalysis, 2003, 216, 110-119.	6.2	71
110	The influence of ZnO on the differential heat of adsorption of CO on Cu catalysts: a microcalorimetric study. Journal of Catalysis, 2003, 220, 249-253.	6.2	71
111	A new dual-purpose ultrahigh vacuum infrared spectroscopy apparatus optimized for grazing-incidence reflection as well as for transmission geometries. Review of Scientific Instruments, 2009, 80, 113108.	1.3	71
112	High-yield exfoliation of graphite in acrylate polymers: A stable few-layer graphene nanofluid with enhanced thermal conductivity. Carbon, 2013, 64, 288-294.	10.3	71
113	Investigations of Zeolites by Photoelectron and Ion Scattering Spectroscopy. 2. A New Interpretation of XPS Binding Energy Shifts in Zeolites. The Journal of Physical Chemistry, 1994, 98, 10920-10929.	2.9	70
114	Structural Characterization and Catalytic Activity of Nanosized Ceriaâˆ’Terbia Solid Solutions. Journal of Physical Chemistry C, 2008, 112, 16393-16399.	3.1	69
115	Atomic-Scale Explanation of O₂ Activation at the Auâ€"TiO₂ Interface. Journal of the American Chemical Society, 2018, 140, 18082-18092.	13.7	69
116	The Surface Science Approach for Understanding Reactions on Oxide Powders: The Importance of IR Spectroscopy. Angewandte Chemie - International Edition, 2012, 51, 4731-4734.	13.8	68
117	N-doped carbon synthesized from N-containing polymers as metal-free catalysts for the oxygen reduction under alkaline conditions. Electrochimica Acta, 2013, 98, 139-145.	5.2	68
118	Formation and Effect of NH₄⁺ Intermediates in NH₃â€"SCR over Fe-ZSM-5 Zeolite Catalysts. ACS Catalysis, 2016, 6, 7696-7700.	11.2	68
119	Copper nanoparticles stabilized on nitrogen-doped carbon nanotubes as efficient and recyclable catalysts for alkyne/aldehyde/cyclic amine A3-type coupling reactions. Applied Catalysis A: General, 2012, 431-432, 88-94.	4.3	67
120	Activated carbon supported molybdenum carbides as cheap and highly efficient catalyst in the selective hydrogenation of naphthalene to tetralin. Green Chemistry, 2012, 14, 1272.	9.0	67
121	The effect of Al-doping on ZnO nanoparticles applied as catalyst support. Physical Chemistry Chemical Physics, 2013, 15, 1374-1381.	2.8	66
122	Evolution of the Catalytic Activity in Pt/Sulfated Zirconia Catalysts: Structure, Composition, and Catalytic Properties of the Catalyst Precursor and the Calcined Catalyst. Journal of Catalysis, 1998, 178, 338-351.	6.2	65
123	Formic Acidâ€Assisted Selective Hydrogenolysis of 5â€Hydroxymethylfurfural to 2,5â€Dimethylfuran over Bifunctional Pd Nanoparticles Supported on Nâ€Doped Mesoporous Carbon. Angewandte Chemie - International Edition, 2021, 60, 6807-6815.	13.8	65
124	Thermal Decomposition of Silver Oxide Monitored by Raman Spectroscopy: From AgO Units to Oxygen Atoms Chemisorbed on the Silver Surface. Angewandte Chemie International Edition in English, 1994, 33, 85-86.	4.4	64
125	MOFâ€Templated Assembly Approach for Fe₃C Nanoparticles Encapsulated in Bambooâ€Like Nâ€Doped CNTs: Highly Efficient Oxygen Reduction under Acidic and Basic Conditions. Chemistry - A European Journal, 2017, 23, 12125-12130.	3.3	64
126	Probing the Reactivity of ZnO and Au/ZnO Nanoparticles by Methanol Adsorption: A TPD and DRIFTS Study. ChemPhysChem, 2010, 11, 2521-2529.	2.1	63

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127	Molecular Understanding of Reactivity and Selectivity for Methanol Oxidation at the Au/TiO₂ Interface. Angewandte Chemie - International Edition, 2013, 52, 5780-5784.	13.8	63
128	Oxidative coupling of methane: catalytic behaviour assessment via comprehensive microkinetic modelling. Applied Catalysis B: Environmental, 2014, 150-151, 496-505.	20.2	63
129	Kinetics and particle size effects in ethene hydrogenation over supported palladium catalysts at atmospheric pressure. Journal of Catalysis, 2009, 268, 150-155.	6.2	62
130	Knowledge-based development of a nitrate-free synthesis route for Cu/ZnO methanol synthesis catalysts via formate precursors. Chemical Communications, 2011, 47, 1701.	4.1	62
131	Product distribution of CO 2 hydrogenation by K- and Mn-promoted Fe catalysts supported on N -functionalized carbon nanotubes. Catalysis Today, 2016, 275, 59-65.	4.4	62
132	Role of Boron and Phosphorus in Enhanced Electrocatalytic Oxygen Evolution by Nickel Borides and Nickel Phosphides. ChemElectroChem, 2019, 6, 235-240.	3.4	62
133	Electronic State of Nickel in Barium Nickel Oxide, BaNiO3. Inorganic Chemistry, 1998, 37, 1513-1518.	4.0	61
134	Selective 2-Propanol Oxidation over Unsupported Co₃O₄ Spinel Nanoparticles: Mechanistic Insights into Aerobic Oxidation of Alcohols. ACS Catalysis, 2019, 9, 5974-5985.	11.2	61
135	Ruthenium as catalyst for ammonia synthesis. Studies in Surface Science and Catalysis, 1996, 101, 317-326.	1.5	60
136	MOCVD-Loading of Mesoporous Siliceous Matrices with Cu/ZnO: Supported Catalysts for Methanol Synthesis. Angewandte Chemie - International Edition, 2004, 43, 2839-2842.	13.8	60
137	Spinelâ€Type Cobaltâ€“Manganeseâ€Based Mixed Oxide as Sacrificial Catalyst for the Highâ€Yield Production of Homogeneous Carbon Nanotubes. ChemCatChem, 2010, 2, 1559-1561.	3.7	60
138	Ruthenium as oxidation catalyst: bridging the pressure and material gaps between ideal and real systems in heterogeneous catalysis by applying DRIFT spectroscopy and the TAP reactor. Catalysis Today, 2003, 85, 235-249.	4.4	59
139	The two-step chemical vapor deposition of Pd(allyl)Cp as an atom-efficient route to synthesize highly dispersed palladium nanoparticles on carbon nanofibers. Chemical Communications, 2005, , 282-284.	4.1	59
140	Dissociation of formic acid on anatase TiO2(101) probed by vibrational spectroscopy. Catalysis Today, 2012, 182, 12-15.	4.4	58
141	The structure of zinc and copper oxide species hosted in porous siliceous matrices. Physical Chemistry Chemical Physics, 2003, 5, 4325-4334.	2.8	57
142	Heterogeneous oxidation catalysis on ruthenium: bridging the pressure and materials gaps and beyond. Journal of Physics Condensed Matter, 2008, 20, 184017.	1.8	57
143	Methanol oxidation as probe reaction for active sites in Au/ZnO and Au/TiO2 catalysts. Journal of Catalysis, 2013, 299, 162-170.	6.2	57
144	Universal Method for Protein Immobilization on Chemically Functionalized Germanium Investigated by ATR-FTIR Difference Spectroscopy. Journal of the American Chemical Society, 2013, 135, 4079-4087.	13.7	57

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145	The nature of the active phase of the Fe/K-catalyst for dehydrogenation of ethylbenzene. Catalysis Letters, 1989, 2, 201-210.	2.6	56
146	Direct monitoring of photo-induced reactions on well-defined metal oxide surfaces using vibrational spectroscopy. Chemical Physics Letters, 2008, 460, 10-12.	2.6	56
147	The effect of the Au loading on the liquid-phase aerobic oxidation of ethanol over Au/TiO2 catalysts prepared by pulsed laser ablation. Journal of Catalysis, 2015, 330, 497-506.	6.2	56
148	Methanol Synthesis from Steel Mill Exhaust Gases: Challenges for the Industrial Cu/ZnO/Al₂O₃ Catalyst. Chemie-Ingenieur-Technik, 2018, 90, 1419-1429.	0.8	56
149	Synthesis of Cu Single Atoms Supported on Mesoporous Graphitic Carbon Nitride and Their Application in Liquid-Phase Aerobic Oxidation of Cyclohexene. ACS Catalysis, 2021, 11, 7863-7875.	11.2	56
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