Robert SchlÃ¶gl

List of Publications by Year
in descending order

229 papers	20,233 citations	11651 70 h-index	11607 135 g-index
257 all docs	257 docs citations	257 times ranked	18791 citing authors

#	Article	IF	Citations
1	The potential of NO⁺ and O₂^{+â€¢} in switchable reagent ion proton transfer reaction timeâ€ofâ€flight mass spectrometry. Mass Spectrometry Reviews, 2023, 42, 1688-1726.	5.4	6
2	Chemical Batteries with CO₂. Angewandte Chemie - International Edition, 2022, 61, .	13.8	23
3	Electrocatalysis Beyond 2020: How to Tune the Preexponential Frequency Factor. ChemElectroChem, 2022, 9, .	3.4	5
4	The rise of electrochemical NAPXPS operated in the soft X-ray regime exemplified by the oxygen evolution reaction on IrO_{<i>x</i>} electrocatalysts. Faraday Discussions, 2022, 236, 103-125.	3.2	11
5	Transition-Metal-Doping of CaO as Catalyst for the OCM Reaction, a Reality Check. Frontiers in Chemistry, 2022, 10, 768426.	3.6	7
6	Insights into the electronic structure of hydroxyl on Ag(110) under near ambient conditions. Physical Chemistry Chemical Physics, 2022, 24, 8832-8838.	2.8	2
7	Quo Vadis Dry Reforming of Methane?â€”A Review on Its Chemical, Environmental, and Industrial Prospects. Catalysts, 2022, 12, 465.	3.5	9
8	Interfacial catalytic materials; challenge for inorganic synthetic chemistry. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2022, 77, 475-485.	0.7	2
9	Role of Nanoscale Inhomogeneities in Co₂FeO₄ Catalysts during the Oxygen Evolution Reaction. Journal of the American Chemical Society, 2022, 144, 12007-12019.	13.7	52
10	Modular Design of Highly Active Unitized Reversible Fuel Cell Electrocatalysts. ACS Energy Letters, 2021, 6, 177-183.	17.4	22
11	Perspective on experimental evaluation of adsorption energies at solid/liquid interfaces. Journal of Solid State Electrochemistry, 2021, 25, 33-42.	2.5	4
12	Is direct seawater splitting economically meaningful?. Energy and Environmental Science, 2021, 14, 3679-3685.	30.8	158
13	In situ and operando electron microscopy in heterogeneous catalysisâ€”insights into multi-scale chemical dynamics. Journal of Physics Condensed Matter, 2021, 33, 153001.	1.8	22
14	Isolated Pd atoms in a silver matrix: Spectroscopic and chemical properties. Journal of Chemical Physics, 2021, 154, 184703.	3.0	10
15	Surface composition of AgPd single-atom alloy catalyst in an oxidative environment. Journal of Chemical Physics, 2021, 154, 174708.	3.0	4
16	Ultrathin 2D Fe-Nanosheets Stabilized by 2D Mesoporous Silica: Synthesis and Application in Ammonia Synthesis. ACS Applied Materials & Interfaces, 2021, 13, 30187-30197.	8.0	3
17	Coordination Number-Dependent Complete Oxidation of Methane on NiO Catalysts. ACS Catalysis, 2021, 11, 9837-9849.	11.2	9
18	Determination of trace compounds and artifacts in nitrogen background measurements by proton transfer reaction timeâ€ofâ€flight mass spectrometry under dry and humid conditions. Journal of Mass Spectrometry, 2021, 56, e4777.	1.6	2

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19	Complexions at the Electrolyte/Electrode Interface in Solid Oxide Cells. Advanced Materials Interfaces, 2021, 8, 2100967.	3.7	8
20	Surface Electron-Hole Rich Species Active in the Electrocatalytic Water Oxidation. Journal of the American Chemical Society, 2021, 143, 12524-12534.	13.7	62
21	The Influence of the Chemical Potential on Defects and Function of Perovskites in Catalysis. Frontiers in Chemistry, 2021, 9, 746229.	3.6	4
22	Operation of calcium-birnessite water-oxidation anodes: interactions of the catalyst with phosphate buffer anions. Sustainable Energy and Fuels, 2021, 5, 5535-5547.	4.9	3
23	Chemical energy storage enables the transformation of fossil energy systems to sustainability. Green Chemistry, 2021, 23, 1584-1593.	9.0	34
24	The Effect of Iron Impurities on Transition Metal Catalysts for the Oxygen Evolution Reaction in Alkaline Environment: Activity Mediators or Active Sites?. Catalysis Letters, 2021, 151, 1843-1856.	2.6	46
25	Imaging the dynamics of catalysed surface reactions by in situ scanning electron microscopy. Nature Catalysis, 2020, 3, 30-39.	34.4	51
26	Compositional Decoupling of Bulk and Surface in Open-Structured Complex Mixed Oxides. Journal of Physical Chemistry C, 2020, 124, 23069-23077.	3.1	7
27	Towards Experimental Handbooks in Catalysis. Topics in Catalysis, 2020, 63, 1683-1699.	2.8	28
28	In situ observation of oscillatory redox dynamics of copper. Nature Communications, 2020, 11, 3554.	12.8	27
29	Preparation of Solid Solution and Layered IrO<i>_x</i>â€"Ni(OH)₂ Oxygen Evolution Catalysts: Toward Optimizing Iridium Efficiency for OER. ACS Catalysis, 2020, 10, 14640-14648.	11.2	40
30	Graphene-Capped Liquid Thin Films for Electrochemical Operando X-ray Spectroscopy and Scanning Electron Microscopy. ACS Applied Materials & Interfaces, 2020, 12, 37680-37692.	8.0	33
31	Influence of Contaminants in Steel Mill Exhaust Gases on Cu/ZnO/Al₂O₃ Catalysts Applied in Methanol Synthesis. Chemie-Ingenieur-Technik, 2020, 92, 1525-1532.	0.8	16
32	The HÃ¼GaPropâ€Container: Analytical Infrastructure for the Carbon2ChemÂ® Challenge. Chemie-Ingenieur-Technik, 2020, 92, 1514-1524.	0.8	6
33	Chemische Batterien mit CO2. Angewandte Chemie, 2020, , .	2.0	1
34	Calorimetric Signature of Deuterated Ice II: Turning an Endotherm to an Exotherm. Journal of Physical Chemistry Letters, 2020, 11, 8268-8274.	4.6	3
35	Methane Pyrolysis for CO₂â€Free H₂ Production: A Green Process to Overcome Renewable Energies Unsteadiness. Chemie-Ingenieur-Technik, 2020, 92, 1596-1609.	0.8	109
36	Oxygen Poisoning in Laboratory Testing of Ironâ€Based Ammonia Synthesis Catalysts and its Potential Sources. Chemie-Ingenieur-Technik, 2020, 92, 1567-1573.	0.8	8

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37	On the Activity/Selectivity and Phase Stability of Thermally Grown Copper Oxides during the Electrocatalytic Reduction of CO₂. ACS Catalysis, 2020, 10, 11510-11518.	11.2	39
38	Quo Vadis Micro-Electro-Mechanical Systems for the Study of Heterogeneous Catalysts Inside the Electron Microscope?. Topics in Catalysis, 2020, 63, 1623-1643.	2.8	14
39	Fluctuating Storage of the Active Phase in a Mnâ€Na₂WO₄/SiO₂ Catalyst for the Oxidative Coupling of Methane. Angewandte Chemie - International Edition, 2020, 59, 14921-14926.	13.8	50
40	Fluctuating Storage of the Active Phase in a Mnâ€Na₂WO₄/SiO₂ Catalyst for the Oxidative Coupling of Methane. Angewandte Chemie, 2020, 132, 15031-15036.	2.0	19
41	A Metalâ€Free Electrode: From Biomassâ€Derived Carbon to Hydrogen. ChemSusChem, 2020, 13, 4064-4068.	6.8	21
42	Revealing the Active Phase of Copper during the Electroreduction of CO₂ in Aqueous Electrolyte by Correlating <i>In Situ</i> X-ray Spectroscopy and <i>In Situ</i> Electron Microscopy. ACS Energy Letters, 2020, 5, 2106-2111.	17.4	84
43	Visualizing the importance of oxide-metal phase transitions in the production of synthesis gas over Ni catalysts. Journal of Energy Chemistry, 2020, 50, 178-186.	12.9	10
44	CO₂ Hydrogenation with Cu/ZnO/Al₂O₃: A Benchmark Study. ChemCatChem, 2020, 12, 3216-3222.	3.7	45
45	Investigation of Electrocatalysts Produced by a Novel Thermal Spray Deposition Method. Materials, 2020, 13, 2746.	2.9	1
46	Transition from 2D to 3D SBAâ€15 by Highâ€Temperature Fluoride Addition and its Impact on the Surface Reactivity Probed by Isopropanol Conversion. Chemistry - A European Journal, 2020, 26, 11571-11583.	3.3	5
47	The Coalescence Behavior of Two-Dimensional Materials Revealed by Multiscale <i>In Situ</i> Imaging during Chemical Vapor Deposition Growth. ACS Nano, 2020, 14, 1902-1918.	14.6	35
48	Heteronuclear cross-relaxation effect modulated by the dynamics of N-functional groups in the solid state under 15N DP-MAS DNP. Journal of Magnetic Resonance, 2020, 312, 106688.	2.1	13
49	Nanocatalysts Unravel the Selective State of Ag. ChemCatChem, 2020, 12, 2977-2988.	3.7	9
50	The Mechanism of Interfacial CO₂ Activation on Al Doped Cu/ZnO. ACS Catalysis, 2020, 10, 5672-5680.	11.2	21
51	Put the Sun in the Tank: Future Developments in Sustainable Energy Systems. Angewandte Chemie - International Edition, 2019, 58, 343-348.	13.8	34
52	Highly Dispersed Ni⁰/Ni_{<i>x</i>}Mg_{1â€“<i>x</i>}O Catalysts Derived from Solid Solutions: How Metal and Support Control the CO₂ Hydrogenation. ACS Catalysis, 2019, 9, 8534-8546.	11.2	39
53	Facile Protocol for Alkaline Electrolyte Purification and Its Influence on a Niâ€“Co Oxide Catalyst for the Oxygen Evolution Reaction. ACS Catalysis, 2019, 9, 8165-8170.	11.2	59
54	Correlation Between Reactivity and Oxidation State of Cobalt Oxide Catalysts for CO Preferential Oxidation. ACS Catalysis, 2019, 9, 8325-8336.	11.2	58

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55	Innentitelbild: Atomicâ€Scale Observation of the Metalâ€“Promoter Interaction in Rhâ€Based Syngasâ€Upgrading Catalysts (Angew. Chem. 26/2019). Angewandte Chemie, 2019, 131, 8688-8688.	2.0	0
56	Insights into Water Interaction at the Interface of Nitrogen-Functionalized Hydrothermal Carbons. Journal of Physical Chemistry C, 2019, 123, 25146-25156.	3.1	6
57	Pack die Sonne in den Tank: Zur Weiterentwicklung nachhaltiger Energiesysteme. Angewandte Chemie, 2019, 131, 349-354.	2.0	4
58	Evolution of Oxygenâ€“Metal Electron Transfer and Metal Electronic States During Manganese Oxide Catalyzed Water Oxidation Revealed with Inâ€…Situ Soft Xâ€Ray Spectroscopy. Angewandte Chemie, 2019, 131, 3464-3470.	2.0	28
59	Development of a tubular continuous flow reactor for the investigation of improved gasâ€“solid interaction in photocatalytic CO2 reduction on TiO2. Photochemical and Photobiological Sciences, 2019, 18, 314-318.	2.9	12
60	How to control selectivity in alkane oxidation?. Chemical Science, 2019, 10, 2429-2443.	7.4	28
61	The Role of Supported Atomically Distributed Metal Species in Electrochemistry and How to Create Them. ChemElectroChem, 2019, 6, 3860-3877.	3.4	11
62	Influence of CO on the Activation, O-Vacancy Formation, and Performance of Au/ZnO Catalysts in CO₂ Hydrogenation to Methanol. Journal of Physical Chemistry Letters, 2019, 10, 3645-3653.	4.6	41
63	In Situ Quantification of Reaction Adsorbates in Low-Temperature Methanol Synthesis on a High-Performance Cu/ZnO:Al Catalyst. ACS Catalysis, 2019, 9, 5537-5544.	11.2	32
64	Atomicâ€Scale Observation of the Metalâ€“Promoter Interaction in Rhâ€Based Syngasâ€Upgrading Catalysts. Angewandte Chemie - International Edition, 2019, 58, 8709-8713.	13.8	35
65	Strong Metalâ€“Support Interactions between Copper and Iron Oxide during the Highâ€Temperature Waterâ€Gas Shift Reaction. Angewandte Chemie - International Edition, 2019, 58, 9083-9087.	13.8	82
66	Atomicâ€Scale Observation of the Metalâ€“Promoter Interaction in Rhâ€Based Syngasâ€Upgrading Catalysts. Angewandte Chemie, 2019, 131, 8801-8805.	2.0	1
67	Strong Metalâ€“Support Interactions between Copper and Iron Oxide during the Highâ€Temperature Waterâ€Gas Shift Reaction. Angewandte Chemie, 2019, 131, 9181-9185.	2.0	22
68	Single-Site Vanadyl Species Isolated within Molybdenum Oxide Monolayers in Propane Oxidation. ACS Catalysis, 2019, 9, 4875-4886.	11.2	28
69	Electrochemical Surface Oxidation of Copper Studied by in Situ Grazing Incidence X-ray Diffraction. Journal of Physical Chemistry C, 2019, 123, 13253-13262.	3.1	32
70	Electronic and Dielectric Properties of MoV-Oxide (M1 Phase) under Alkane Oxidation Conditions. Journal of Physical Chemistry C, 2019, 123, 13269-13282.	3.1	20
71	Synthesis and Characterization of Agâ€Delafossites Ag<i>B</i>O₂ (<i>B</i>: Al, Ga, In) from a Rapid Hydrothermal Process. European Journal of Inorganic Chemistry, 2019, 2019, 2319-2319.	2.0	1
72	Synthesis and Characterization of Agâ€Delafossites Ag<i>B</i>O₂ (<i>B</i>: Al, Ga, In) from a Rapid Hydrothermal Process. European Journal of Inorganic Chemistry, 2019, 2019, 2333-2345.	2.0	7

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73	Evolution of zincian malachite synthesis by low temperature co-precipitation and its catalytic impact on the methanol synthesis. Applied Catalysis B: Environmental, 2019, 249, 218-226.	20.2	38
74	In Situ X-ray Spectroscopy of the Electrochemical Development of Iridium Nanoparticles in Confined Electrolyte. Journal of Physical Chemistry C, 2019, 123, 9146-9152.	3.1	46
75	Negative Charging of Au Nanoparticles during Methanol Synthesis from CO₂/H₂ on a Au/ZnO Catalyst: Insights from Operando IR and Nearâ€Ambientâ€Pressure XPS and XAS Measurements. Angewandte Chemie - International Edition, 2019, 58, 10325-10329.	13.8	67
76	Low Reversible Capacity of Nitridated Titanium Electrical Terminals. Batteries, 2019, 5, 17.	4.5	1
77	Supported Ag Nanoparticles and Clusters for CO Oxidation: Size Effects and Influence of the Silverâ€“Oxygen Interactions. ACS Applied Nano Materials, 2019, 2, 2909-2920.	5.0	40
78	Activating a Cu/ZnOâ€‰:â€‰Al Catalyst â€“ Much More than Reduction: Decomposition, Selfâ€Doping and Polymorphism. ChemCatChem, 2019, 11, 1587-1592.	3.7	39
79	Elucidation of artefacts in proton transfer reaction timeâ€ofâ€flight mass spectrometers. Journal of Mass Spectrometry, 2019, 54, 987-1002.	1.6	7
80	Ni Single Atom Catalysts for CO₂ Activation. Journal of the American Chemical Society, 2019, 141, 2451-2461.	13.7	291
81	Oxygen Activation in Oxidative Coupling of Methane on Calcium Oxide. Journal of Physical Chemistry C, 2019, 123, 8018-8026.	3.1	16
82	The Role of the Copper Oxidation State in the Electrocatalytic Reduction of CO₂ into Valuable Hydrocarbons. ACS Sustainable Chemistry and Engineering, 2019, 7, 1485-1492.	6.7	121
83	Operando Electrical Conductivity and Complex Permittivity Study on Vanadia Oxidation Catalysts. Journal of Physical Chemistry C, 2019, 123, 8005-8017.	3.1	17
84	Phase Coexistence of Multiple Copper Oxides on AgCu Catalysts during Ethylene Epoxidation. ACS Catalysis, 2018, 8, 2286-2295.	11.2	34
85	Poly(ionic liquid) binders as ionic conductors and polymer electrolyte interfaces for enhanced electrochemical performance of water splitting electrodes. Sustainable Energy and Fuels, 2018, 2, 1446-1451.	4.9	15
86	The Selective Species in Ethylene Epoxidation on Silver. ACS Catalysis, 2018, 8, 3844-3852.	11.2	62
87	The Electro-Deposition/Dissolution of CuSO₄ Aqueous Electrolyte Investigated by <i>In Situ</i> Soft X-ray Absorption Spectroscopy. Journal of Physical Chemistry B, 2018, 122, 780-787.	2.6	26
88	Influence of Steam on a Vanadyl Pyrophosphate Catalyst During Propane Oxidation. Journal of Physical Chemistry B, 2018, 122, 695-704.	2.6	9
89	Are multiple oxygen species selective in ethylene epoxidation on silver?. Chemical Science, 2018, 9, 990-998.	7.4	55
90	A unique oxygen ligand environment facilitates water oxidation in hole-doped IrNiOx coreâ€“shell electrocatalysts. Nature Catalysis, 2018, 1, 841-851.	34.4	424

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91	LEED-<i>I</i>(<i>V</i>) Structure Analysis of the (7 Ã— âˆš3)rect SO₄ Phase on Ag(111): Precursor to the Active Species of the Ag-Catalyzed Ethylene Epoxidation. Journal of Physical Chemistry C, 2018, 122, 26998-27004.	3.1	14
92	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
93	In Situ Electrochemical Cells to Study the Oxygen Evolution Reaction by Near Ambient Pressure X-ray Photoelectron Spectroscopy. Topics in Catalysis, 2018, 61, 2064-2084.	2.8	37
94	A quasi in situ TEM grid reactor for decoupling catalytic gas phase reactions and analysis. Ultramicroscopy, 2018, 195, 121-128.	1.9	14
95	Operando Evidence for a Universal Oxygen Evolution Mechanism on Thermal and Electrochemical Iridium Oxides. Journal of Physical Chemistry Letters, 2018, 9, 3154-3160.	4.6	121
96	Formation Mechanism, Growth Kinetics, and Stability Limits of Graphene Adlayers in Metalâ€Catalyzed CVD Growth. Advanced Materials Interfaces, 2018, 5, 1800255.	3.7	15
97	Strong Metal Support Interaction as a Key Factor of Au Activation in CO Oxidation. ChemCatChem, 2018, 10, 3985-3989.	3.7	15
98	The Project Carbon2ChemÂ®. Chemie-Ingenieur-Technik, 2018, 90, 1365-1368.	0.8	60
99	Operando Insights into CO Oxidation on Cobalt Oxide Catalysts by NAP-XPS, FTIR, and XRD. ACS Catalysis, 2018, 8, 8630-8641.	11.2	153
100	The ESEM as In Situ Platform for the Study of Gas-Solid Interactions. Microscopy and Microanalysis, 2018, 24, 344-345.	0.4	1
101	Investigations of Cu/Zn Oxalates from Aqueous Solution: Singleâ€Phase Precursors and Beyond. Chemistry - A European Journal, 2018, 24, 15080-15088.	3.3	5
102	<i>In Situ</i> Atomic-Scale Observation of Surface-Tension-Induced Structural Transformation of Ag-NiP_{<i>x</i>} Coreâ€“Shell Nanocrystals. ACS Nano, 2018, 12, 7197-7205.	14.6	13
103	50 Years of German Catalysis Meetings: From Twin Roots to a Joint Success Story. ChemCatChem, 2017, 9, 527-532.	3.7	1
104	Highâ€Performance Supported Iridium Oxohydroxide Water Oxidation Electrocatalysts. ChemSusChem, 2017, 10, 1943-1957.	6.8	65
105	Catalysisâ€…4.0. ChemCatChem, 2017, 9, 533-541.	3.7	22
106	Restructuring of silica supported vanadia during propane oxidative dehydrogenation studied by combined synchrotron radiation based in situ soft X-ray absorption and photoemission. Journal of Lithic Studies, 2017, 3, 104-111.	0.5	4
107	Carbokatalyse in FlÃ¼ssigphasenreaktionen. Angewandte Chemie, 2017, 129, 956-985.	2.0	37
108	Standardized Benchmarking of Water Splitting Catalysts in a Combined Electrochemical Flow Cell/Inductively Coupled Plasmaâ€“Optical Emission Spectrometry (ICP-OES) Setup. ACS Catalysis, 2017, 7, 3768-3778.	11.2	73

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109	Metastable Pd â†” PdO Structures During High Temperature Methane Oxidation. Catalysis Letters, 2017, 147, 1095-1103.	2.6	44
110	In situ observation of reactive oxygen species forming on oxygen-evolving iridium surfaces. Chemical Science, 2017, 8, 2143-2149.	7.4	258
111	Carbonic acid monoethyl ester as a pure solid and its conformational isomerism in the gas-phase. RSC Advances, 2017, 7, 22222-22233.	3.6	11
112	The Impact of the Bulk Structure on Surface Dynamics of Complex Moâ€“V-based Oxide Catalysts. ACS Catalysis, 2017, 7, 3061-3071.	11.2	53
113	Ammonia Decomposition and Synthesis over Multinary Magnesioferrites: Promotional Effect of Ga on Fe Catalysts for the Decomposition Reaction. ChemCatChem, 2017, 9, 659-671.	3.7	23
114	Multi-Scale Red-Ox Dynamics of Active Metal Catalysts Revealed by a Combination of <i>In Situ</i> Scanning and Transmission Electron Microscopy. Microscopy and Microanalysis, 2017, 23, 922-923.	0.4	2
115	Growth Dynamics, Stacking Sequence and Interlayer Coupling in Few-Layer Graphene Revealed by in Situ SEM. Microscopy and Microanalysis, 2017, 23, 1746-1747.	0.4	2
116	Reactive Electrophilic O^{Iâˆ’} Species Evidenced in Highâ€Performance Iridium Oxohydroxide Water Oxidation Electrocatalysts. ChemSusChem, 2017, 10, 4786-4798.	6.8	49
117	Isotope Studies in Oxidation of Propane over Vanadium Oxide. ChemCatChem, 2017, 9, 3434-3434.	3.7	3
118	IR-Spectroscopic Study on the Interface of Cu-Based Methanol Synthesis Catalysts: Evidence for the Formation of a ZnO Overlayer. Topics in Catalysis, 2017, 60, 1735-1743.	2.8	89
119	Isotope Studies in Oxidation of Propane over Vanadium Oxide. ChemCatChem, 2017, 9, 3446-3455.	3.7	20
120	Die mobilisierte Energiewende. Angewandte Chemie, 2017, 129, 11164-11167.	2.0	5
121	Ethylene Epoxidation at the Phase Transition of Copper Oxides. Journal of the American Chemical Society, 2017, 139, 11825-11832.	13.7	42
122	Identifying Key Structural Features of IrO_x Water Splitting Catalysts. Journal of the American Chemical Society, 2017, 139, 12093-12101.	13.7	179
123	Methanol Synthesis from Industrial CO2 Sources: A Contribution to Chemical Energy Conversion. Catalysis Letters, 2017, 147, 416-427.	2.6	102
124	Carbocatalysis in Liquidâ€Phase Reactions. Angewandte Chemie - International Edition, 2017, 56, 936-964.	13.8	209
125	Eâ€Mobility and the Energy Transition. Angewandte Chemie - International Edition, 2017, 56, 11019-11022.	13.8	25
126	Selective Alkane Oxidation by Manganese Oxide: Site Isolation of MnO_{<i>x</i>} Chains at the Surface of MnWO₄ Nanorods. Angewandte Chemie - International Edition, 2016, 55, 4092-4096.	13.8	39

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127	The electronic structure of iridium and its oxides. Surface and Interface Analysis, 2016, 48, 261-273.	1.8	288
128	Eutectic Syntheses of Graphitic Carbon with High Pyrazinic Nitrogen Content. Advanced Materials, 2016, 28, 1287-1294.	21.0	90
129	The Dynamics of Active Metal Catalysts Revealed by In Situ Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 4-5.	0.4	1
130	The Dynamics of Active Metal Catalysts Revealed by In-Situ Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 784-785.	0.4	2
131	Monitoring the Dynamics of Heterogeneous Catalysts by Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 736-737.	0.4	2
132	Different routes to methanol: inelastic neutron scattering spectroscopy of adsorbates on supported copper catalysts. Physical Chemistry Chemical Physics, 2016, 18, 17253-17258.	2.8	26
133	Bridging the Time Gap: A Copper/Zinc Oxide/Aluminum Oxide Catalyst for Methanol Synthesis Studied under Industrially Relevant Conditions and Time Scales. Angewandte Chemie, 2016, 128, 12900-12904.	2.0	36
134	Bridging the Time Gap: A Copper/Zinc Oxide/Aluminum Oxide Catalyst for Methanol Synthesis Studied under Industrially Relevant Conditions and Time Scales. Angewandte Chemie - International Edition, 2016, 55, 12708-12712.	13.8	109
135	Selective Oxidation: From a Still Immature Technology to the Roots of Catalysis Science. Topics in Catalysis, 2016, 59, 1461-1476.	2.8	44
136	High-Temperature Stable Ni Nanoparticles for the Dry Reforming of Methane. ACS Catalysis, 2016, 6, 7238-7248.	11.2	116
137	Investigating dry reforming of methane with spatial reactor profiles and particleâ€resolved CFD simulations. AIChE Journal, 2016, 62, 4436-4452.	3.6	76
138	Higher Alcohol Synthesis Over Rh Catalysts: Conditioning of Rh/N-CNTs by Co and Mn Entrapped in the Support. Catalysis Letters, 2016, 146, 2417-2424.	2.6	11
139	Acidâ€“Base Properties of N-Doped Carbon Nanotubes: A Combined Temperature-Programmed Desorption, X-ray Photoelectron Spectroscopy, and 2-Propanol Reaction Investigation. Chemistry of Materials, 2016, 28, 6826-6839.	6.7	95
140	In Situ Graphene Growth Dynamics on Polycrystalline Catalyst Foils. Nano Letters, 2016, 16, 6196-6206.	9.1	62
141	Reactive oxygen species in iridium-based OER catalysts. Chemical Science, 2016, 7, 6791-6795.	7.4	153
142	Probing the Structure of a Water-Oxidizing Anodic Iridium Oxide Catalyst using Raman Spectroscopy. ACS Catalysis, 2016, 6, 8098-8105.	11.2	104
143	Promotion Mechanisms of Iron Oxide-Based High Temperature Waterâ€“Gas Shift Catalysts by Chromium and Copper. ACS Catalysis, 2016, 6, 4455-4464.	11.2	98
144	Reverse water-gas shift reaction at the Cu/ZnO interface: Influence of the Cu/Zn ratio on structure-activity correlations. Applied Catalysis B: Environmental, 2016, 195, 104-111.	20.2	113

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145	Cu,Zn-based catalysts for methanol synthesis: On the effect of calcination conditions and the part of residual carbonates. Applied Catalysis A: General, 2016, 516, 117-126.	4.3	68
146	Carbon: Eutectic Syntheses of Graphitic Carbon with High Pyrazinic Nitrogen Content (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	21.0	3
147	Synthesis of novel 2-d carbon materials: sp²carbon nanoribbon packing to form well-defined nanosheets. Materials Horizons, 2016, 3, 214-219.	12.2	28
148	A unified view on heterogeneous and homogeneous catalysts through a combination of spectroscopy and quantum chemistry. Faraday Discussions, 2016, 188, 181-197.	3.2	37
149	Modification of the carbide microstructure by N- and S-functionalization of the support in Mo_xC/CNT catalysts. Catalysis Science and Technology, 2016, 6, 3468-3475.	4.1	10
150	Strong metal-support interaction and alloying in Pd/ZnO catalysts for CO oxidation. Catalysis Today, 2016, 260, 21-31.	4.4	56
151	Photoelectron Spectroscopy at the Grapheneâ€"Liquid Interface Reveals the Electronic Structure of an Electrodeposited Cobalt/Graphene Electrocatalyst. Angewandte Chemie - International Edition, 2015, 54, 14554-14558.	13.8	135
152	Active Sites in Olefin Metathesis over Supported Molybdena Catalysts. ChemCatChem, 2015, 7, 4059-4065.	3.7	31
153	Electrochemical Degradation of Multiwall Carbon Nanotubes at High Anodic Potential for Oxygen Evolution in Acidic Media. ChemElectroChem, 2015, 2, 1929-1937.	3.4	90
154	Oxidative Dehydrogenation on Nanocarbon: Intrinsic Catalytic Activity and Structureâ€"Function Relationships. Angewandte Chemie - International Edition, 2015, 54, 13682-13685.	13.8	76
155	Hydrogenation of CO2 to methanol and CO on Cu/ZnO/Al2O3: Is there a common intermediate or not?. Journal of Catalysis, 2015, 328, 43-48.	6.2	252
156	Formation of a ZnO Overlayer in Industrial Cu/ZnO/Al₂O₃ Catalysts Induced by Strong Metalâ€"Support Interactions. Angewandte Chemie - International Edition, 2015, 54, 4544-4548.	13.8	420
157	Heterogeneous Catalysis. Angewandte Chemie - International Edition, 2015, 54, 3465-3520.	13.8	754
158	The Revolution Continues: Energiewende 2.0. Angewandte Chemie - International Edition, 2015, 54, 4436-4439.	13.8	56
159	The Mechanism of CO and CO₂ Hydrogenation to Methanol over Cuâ€Based Catalysts. ChemCatChem, 2015, 7, 1105-1111.	3.7	424
160	CO oxidation as a test reaction for strong metalâ€"support interaction in nanostructured Pd/FeO powder catalysts. Applied Catalysis A: General, 2015, 502, 8-17.	4.3	43
161	Direct Imaging of Octahedral Distortion in a Complex Molybdenum Vanadium Mixed Oxide. Angewandte Chemie - International Edition, 2015, 54, 6828-6831.	13.8	25
162	Electron Microscopy of Solid Catalystsâ€"Transforming from a Challenge to a Toolbox. Chemical Reviews, 2015, 115, 2818-2882.	47.7	200

#	Article	IF	Citations
163	Promoting Strong Metal Support Interaction: Doping ZnO for Enhanced Activity of Cu/ZnO:M (M = Al,) Tj ETQq1 1 0.784314 rgBT /Over	11.2	215
164	Insights into the Electronic Structure of the Oxygen Species Active in Alkene Epoxidation on Silver. ACS Catalysis, 2015, 5, 5846-5850.	11.2	71
165	Methane Activation by Heterogeneous Catalysis. Catalysis Letters, 2015, 145, 23-39.	2.6	512
166	Reactivity of mesoporous carbon against water â€“ An in-situ XPS study. Carbon, 2014, 77, 175-183.	10.3	114
167	Microstructural and Defect Analysis of Metal Nanoparticles in Functional Catalysts by Diffraction and Electron Microscopy: The Cu/ZnO Catalyst for Methanol Synthesis. Topics in Catalysis, 2014, 57, 188-206.	2.8	33
168	The influence of intercalated oxygen on the properties of graphene on polycrystalline Cu under various environmental conditions. Physical Chemistry Chemical Physics, 2014, 16, 25989-26003.	2.8	108
169	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
170	Combined Experimental and Ab Initio Multireference Configuration Interaction Study of the Resonant Inelastic X-ray Scattering Spectrum of CO₂. Journal of Physical Chemistry C, 2014, 118, 20163-20175.	3.1	36
171	Synthesis and Characterisation of a Highly Active Cu/ZnO:Al Catalyst. ChemCatChem, 2014, 6, 2889-2897.	3.7	95
172	Site-specific ionisation edge fine-structure of Rutile in the electron microscope. Micron, 2014, 63, 15-19.	2.2	3
173	Investigation of Coking During Dry Reforming ofÂMethane by Means of Thermogravimetry. Chemie-Ingenieur-Technik, 2014, 86, 1916-1924.	0.8	8
174	Towards Physical Descriptors of Active and Selective Catalysts for the Oxidation of <i>n</i>â€Butane to Maleic Anhydride. ChemCatChem, 2013, 5, 2318-2329.	3.7	29
175	<i>In Situ</i> Observations of the Atomistic Mechanisms of Ni Catalyzed Low Temperature Graphene Growth. ACS Nano, 2013, 7, 7901-7912.	14.6	163
176	The model oxidation catalyst Î±-V2O5: insights from contactless in situ microwave permittivity and conductivity measurements. Applied Physics A: Materials Science and Processing, 2013, 112, 289-296.	2.3	18
177	Performance Improvement of Nanocatalysts by Promoter-Induced Defects in the Support Material: Methanol Synthesis over Cu/ZnO:Al. Journal of the American Chemical Society, 2013, 135, 6061-6068.	13.7	201
178	The Role of the Oxide Component in the Development of Copper Composite Catalysts for Methanol Synthesis. Angewandte Chemie - International Edition, 2013, 52, 6536-6540.	13.8	180
179	The Haberâ€“Bosch Process Revisited: On the Real Structure and Stability of â€œAmmonia Ironâ€•under Working Conditions. Angewandte Chemie - International Edition, 2013, 52, 12723-12726.	13.8	489
180	Observing Graphene Grow: Catalystâ€“Graphene Interactions during Scalable Graphene Growth on Polycrystalline Copper. Nano Letters, 2013, 13, 4769-4778.	9.1	231

#	Article	IF	Citations
181	The effect of Al-doping on ZnO nanoparticles applied as catalyst support. Physical Chemistry Chemical Physics, 2013, 15, 1374-1381.	2.8	66
182	Carbonâ€Supported Gold Nanocatalysts: Shape Effect in the Selective Glycerol Oxidation. ChemCatChem, 2013, 5, 2717-2723.	3.7	54
183	Inâ€…Situ Study of Catalytic Processes: Neutron Diffraction of a Methanol Synthesis Catalyst at Industrially Relevant Pressure. Angewandte Chemie - International Edition, 2013, 52, 5166-5170.	13.8	68
184	How to Prepare a Good Cu/ZnO Catalyst or the Role of Solid State Chemistry for the Synthesis of Nanostructured Catalysts. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2013, 639, 2683-2695.	1.2	137
185	Die Rolle der Oxidkomponente fÃ¼r die Entwicklung von Kupferâ€Kompositâ€Katalysatoren zur Synthese von Methanol. Angewandte Chemie, 2013, 125, 6664-6669.	2.0	33
186	Radical detection in harsh environments by means of laser-induced fluorescence using a single bidirectional optical fiber. Applied Physics B: Lasers and Optics, 2012, 109, 19-26.	2.2	4
187	Labeling and monitoring the distribution of anchoring sites on functionalized CNTs by atomic layer deposition. Journal of Materials Chemistry, 2012, 22, 7323.	6.7	44
188	Thermolytic synthesis of graphitic boron carbon nitride from an ionic liquid precursor: mechanism, structure analysis and electronic properties. Journal of Materials Chemistry, 2012, 22, 23996.	6.7	69
189	Comment on â€œStrongly-Bound Oxygen Species on Silver Surfaces: A Molybdenum Oxide Contamination?â€ Journal of Physical Chemistry C, 2012, 116, 11408-11409.	3.1	2
190	Complementary metal-oxide-semiconductor-compatible and self-aligned catalyst formation for carbon nanotube synthesis and interconnect fabrication. Journal of Applied Physics, 2012, 111, .	2.5	13
191	The Active Site of Methanol Synthesis over Cu/ZnO/Al ₂ O ₃ Industrial Catalysts. Science, 2012, 336, 893-897.	12.6	2,018
192	Topology of silica supported vanadiumâ€“titanium oxide catalysts for oxidative dehydrogenation of propane. Catalysis Science and Technology, 2012, 2, 1346.	4.1	35
193	Quantitative High-Angle Annular Dark-Field Scanning Transmission Electron Microscope (HAADF-STEM) Tomography and High-Resolution Electron Microscopy of Unsupported Intermetallic GaPd₂ Catalysts. Journal of Physical Chemistry C, 2012, 116, 13343-13352.	3.1	38
194	Hierarchically aminated graphene honeycombs for electrochemical capacitive energy storage. Journal of Materials Chemistry, 2012, 22, 14076.	6.7	280
195	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
196	A Critical Assessment of Li/MgO-Based Catalysts for the Oxidative Coupling of Methane. Catalysis Reviews - Science and Engineering, 2011, 53, 424-514.	12.9	205
197	Morphology and Microstructure of Li/MgO Catalysts for the Oxidative Coupling of Methane. ChemCatChem, 2011, 3, 949-959.	3.7	66
198	A Novel Synthesis Route for Cu/ZnO/Al₂O₃ Catalysts used in Methanol Synthesis: Combining Continuous Consecutive Precipitation with Continuous Aging of the Precipitate. ChemCatChem, 2011, 3, 189-199.	3.7	47

#	Article	IF	Citations
199	Synthesis of MoVTeNb Oxide Catalysts with Tunable Particle Dimensions. ChemCatChem, 2011, 3, 1597-1606.	3.7	45
200	Active Sites for Propane Oxidation: Some Generic Considerations. Topics in Catalysis, 2011, 54, 627-638.	2.8	82
201	Die Rolle der Chemie bei der Energiewende. Angewandte Chemie, 2011, 123, 6550-6553.	2.0	25
202	Chemistryâ€™s Role in Regenerative Energy. Angewandte Chemie - International Edition, 2011, 50, 6424-6426.	13.8	66
203	The Potential of Microstructural Optimization in Metal/Oxide Catalysts: Higher Intrinsic Activity of Copper by Partial Embedding of Copper Nanoparticles. ChemCatChem, 2010, 2, 816-818.	3.7	49
204	The Role of Chemistry in the Energy Challenge. ChemSusChem, 2010, 3, 209-222.	6.8	222
205	Dynamics of the MoVTeNb Oxide M1 Phase in Propane Oxidation. Journal of Physical Chemistry C, 2010, 114, 1912-1921.	3.1	92
206	Oxidation Stability of Multiwalled Carbon Nanotubes for Catalytic Applications. Chemistry of Materials, 2010, 22, 4462-4470.	6.7	94
207	A Study of the Influence of Composition on the Microstructural Properties of ZnO/Al₂O₃ Mixed Oxides. European Journal of Inorganic Chemistry, 2009, 2009, 910-921.	2.0	32
208	Minerals as Model Compounds for Cu/ZnO Catalyst Precursors: Structural and Thermal Properties and IR Spectra of Mineral and Synthetic (Zincian) Malachite, Rosasite and Aurichalcite and a Catalyst Precursor Mixture. European Journal of Inorganic Chemistry, 2009, 2009, 1347-1357.	2.0	108
209	Surface Chemistry of Ag Particles: Identification of Oxide Species by Aberrationâ€Corrected TEM and by DFT Calculations. Angewandte Chemie - International Edition, 2008, 47, 5005-5008.	13.8	97
210	Fuel for thought. Nature Materials, 2008, 7, 772-774.	27.5	47
211	Palladiumâ€“gallium intermetallic compounds for the selective hydrogenation of acetylenePart I: Preparation and structural investigation under reaction conditions. Journal of Catalysis, 2008, 258, 210-218.	6.2	269
212	<i>In Situ</i>X-Ray Photoelectron Spectroscopy Studies of Gas-Solid Interfaces at Near-Ambient Conditions. MRS Bulletin, 2007, 32, 1022-1030.	3.5	180
213	Commercial Fe- or Co-containing carbon nanotubes as catalysts for NH3decomposition. Chemical Communications, 2007, , 1916-1918.	4.1	119
214	Nanocarbon as Robust Catalyst: Mechanistic Insight into Carbonâ€Mediated Catalysis. Angewandte Chemie - International Edition, 2007, 46, 7319-7323.	13.8	226
215	Role of Lattice Strain and Defects in Copper Particles on the Activity of Cu/ZnO/Al₂O₃ Catalysts for Methanol Synthesis. Angewandte Chemie - International Edition, 2007, 46, 7324-7327.	13.8	223
216	Mechanism of ZrTiO4 Synthesis by Mechanochemical Processing of TiO2 and ZrO2. Journal of the American Ceramic Society, 2006, 89, 060427083300025-???.	3.8	20

#	Article	IF	Citations
217	The Microstructure of Copper Zinc Oxide Catalysts: Bridging the Materials Gap. Angewandte Chemie - International Edition, 2005, 44, 4704-4707.	13.8	123
218	Hierarchically Structured Carbon: Synthesis of Carbon Nanofibers Nested inside or Immobilized onto Modified Activated Carbon. Angewandte Chemie - International Edition, 2005, 44, 5488-5492.	13.8	82
219	Wet-Chemical Assembly of Carbon Tube-in-Tube Nanostructures. Small, 2004, 1, 107-110.	10.0	15
220	Nanocatalysis: Mature Science Revisited or Something Really New?. Angewandte Chemie - International Edition, 2004, 43, 1628-1637.	13.8	487
221	An interfactant for metal oxide heteroepitaxy: Growth of dispersed ZrO2(111) films on FeO(111) precovered Ru(0001). Physical Chemistry Chemical Physics, 2004, 6, 205-208.	2.8	8
222	Crystallographic shear defect in molybdenum oxides: Structure and TEM of molybdenum sub-oxides Mo18O52 and Mo8O23. Crystal Research and Technology, 2003, 38, 153-159.	1.3	32
223	Katalytische Ammoniaksynthese â€" eine â€œunendliche Geschichteâ€?. Angewandte Chemie, 2003, 115, 2050-2055.	2.0	152
224	Relations between Synthesis and Microstructural Properties of Copper/Zinc Hydroxycarbonates. Chemistry - A European Journal, 2003, 9, 2039-2052.	3.3	202
225	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
226	Catalytic Synthesis of Ammoniaâ€"A â€œNever-Ending Storyâ€?. Angewandte Chemie - International Edition, 2003, 42, 2004-2008.	13.8	956
227	Local Structure of Nanoscopic Materials:â€‰ V2O5 Nanorods and Nanowires. Nano Letters, 2003, 3, 1131-1134.	9.1	170
228	Self-Assembled Gold Nanoparticle/Alkanedithiol Films:Â Preparation, Electron Microscopy, XPS-Analysis, Charge Transport, and Vapor-Sensing Propertiesâ€. Journal of Physical Chemistry B, 2003, 107, 7406-7413.	2.6	285
229	Vacuum compatible flowâ€cell for highâ€quality in situ and operando soft Xâ€ray photonâ€inâ€"photonâ€out spectroelectrochemical studies of energy materials. Electrochemical Science Advances, 0, , .	2.8	4