Detre Teschner

List of Publications by Year
in descending order

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63 papers	10,220 citations	61857 43 h-index	102304 66 g-index
67 all docs	67 docs citations	67 times ranked	10852 citing authors

#	Article	IF	Citations
1	<i>Operando</i> Structureâ€"Activityâ€"Stability Relationship of Iridium Oxides during the Oxygen Evolution Reaction. ACS Catalysis, 2022, 12, 5174-5184.	5.5	40
2	Merging operando and computational X-ray spectroscopies to study the oxygen evolution reaction. Current Opinion in Electrochemistry, 2022, 35, 101039.	2.5	3
3	Modular Design of Highly Active Unitized Reversible Fuel Cell Electrocatalysts. ACS Energy Letters, 2021, 6, 177-183.	8.8	22
4	In Situ Formed â€œSn_{1â€"}<i>_X</i>In<i>_X</i>@In_{1â€"}<i>_Y</i>Sn<i>_Y</ Core@Shell Nanoparticles as Electrocatalysts for CO₂ Reduction to Formate. Advanced Functional Materials, 2021, 31, 2103601.	7.8	32
5	The ladder towards understanding the oxygen evolution reaction. Current Opinion in Electrochemistry, 2021, 30, 100842.	2.5	2
6	The Role of Surface Hydroxylation, Lattice Vacancies and Bond Covalency in the Electrochemical Oxidation of Water (OER) on Ni-Depleted Iridium Oxide Catalysts. Zeitschrift Fur Physikalische Chemie, 2020, 234, 787-812.	1.4	12
7	Compositional Decoupling of Bulk and Surface in Open-Structured Complex Mixed Oxides. Journal of Physical Chemistry C, 2020, 124, 23069-23077.	1.5	7
8	Towards Experimental Handbooks in Catalysis. Topics in Catalysis, 2020, 63, 1683-1699.	1.3	28
9	Key role of chemistry versus bias in electrocatalytic oxygen evolution. Nature, 2020, 587, 408-413.	13.7	405
10	In-situ structure and catalytic mechanism of NiFe and CoFe layered double hydroxides during oxygen evolution. Nature Communications, 2020, 11, 2522.	5.8	594
11	Correlation Between Reactivity and Oxidation State of Cobalt Oxide Catalysts for CO Preferential Oxidation. ACS Catalysis, 2019, 9, 8325-8336.	5.5	58
12	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.	1.6	0
13	Influence of Surface State on the Electrochemical Performance of Nickel-Based Cermet Electrodes during Steam Electrolysis. ACS Applied Energy Materials, 2019, 2, 7045-7055.	2.5	20
14	How to control selectivity in alkane oxidation?. Chemical Science, 2019, 10, 2429-2443.	3.7	28
15	Experimental Activity Descriptors for Iridium-Based Catalysts for the Electrochemical Oxygen Evolution Reaction (OER). ACS Catalysis, 2019, 9, 6653-6663.	5.5	136
16	Atomicâ€Scale Observation of the Metalâ€"Promoter Interaction in Rhâ€Based Syngasâ€Upgrading Catalysts. Angewandte Chemie - International Edition, 2019, 58, 8709-8713.	7.2	35
17	Atomicâ€Scale Observation of the Metalâ€"Promoter Interaction in Rhâ€Based Syngasâ€Upgrading Catalysts. Angewandte Chemie, 2019, 131, 8801-8805.	1.6	1
18	Ni Single Atom Catalysts for CO₂ Activation. Journal of the American Chemical Society, 2019, 141, 2451-2461.	6.6	291

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19	Unravelling Degradation Pathways of Oxideâ€Supported Pt Fuel Cell Nanocatalysts under In Situ Operating Conditions. Advanced Energy Materials, 2018, 8, 1701663.	10.2	62
20	A unique oxygen ligand environment facilitates water oxidation in hole-doped IrNiOx coreâ€“shell electrocatalysts. Nature Catalysis, 2018, 1, 841-851.	16.1	424
21	Operando Evidence for a Universal Oxygen Evolution Mechanism on Thermal and Electrochemical Iridium Oxides. Journal of Physical Chemistry Letters, 2018, 9, 3154-3160.	2.1	121
22	Operando Insights into CO Oxidation on Cobalt Oxide Catalysts by NAP-XPS, FTIR, and XRD. ACS Catalysis, 2018, 8, 8630-8641.	5.5	153
23	Electrocatalytic Oxygen Evolution Reaction in Acidic Environments â€“ Reaction Mechanisms and Catalysts. Advanced Energy Materials, 2017, 7, 1601275.	10.2	847
24	The electronic structure of iridium and its oxides. Surface and Interface Analysis, 2016, 48, 261-273.	0.8	288
25	Addressing electronic effects in the semi-hydrogenation of ethyne by InPd2 and intermetallic Gaâ€“Pd compounds. Journal of Catalysis, 2016, 338, 265-272.	3.1	67
26	Electrochemical Catalystâ€“Support Effects and Their Stabilizing Role for IrO_{<i>x</i>} Nanoparticle Catalysts during the Oxygen Evolution Reaction. Journal of the American Chemical Society, 2016, 138, 12552-12563.	6.6	451
27	Reactivity descriptors for ceria in catalysis. Applied Catalysis B: Environmental, 2016, 197, 299-312.	10.8	112
28	Interplay between surface chemistry and performance of rutile-type catalysts for halogen production. Chemical Science, 2016, 7, 2996-3005.	3.7	21
29	Strong metal-support interaction and alloying in Pd/ZnO catalysts for CO oxidation. Catalysis Today, 2016, 260, 21-31.	2.2	56
30	Oxideâ€Supported IrNiO_{<i>x</i>} Coreâ€“Shell Particles as Efficient, Costâ€Effective, and Stable Catalysts for Electrochemical Water Splitting. Angewandte Chemie, 2015, 127, 3018-3022.	1.6	44
31	Oxideâ€Supported IrNiO_{<i>x</i>} Coreâ€“Shell Particles as Efficient, Costâ€Effective, and Stable Catalysts for Electrochemical Water Splitting. Angewandte Chemie - International Edition, 2015, 54, 2975-2979.	7.2	384
32	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.	2.2	43
33	Structure and reactivity of ceriaâ€“zirconia catalysts for bromine and chlorine production via the oxidation of hydrogen halides. Journal of Catalysis, 2015, 331, 128-137.	3.1	34
34	Reversible amorphization and the catalytically active state of crystalline Co3O4 during oxygen evolution. Nature Communications, 2015, 6, 8625.	5.8	694
35	Molecular Insight in Structure and Activity of Highly Efficient, Low-Ir Irâ€“Ni Oxide Catalysts for Electrochemical Water Splitting (OER). Journal of the American Chemical Society, 2015, 137, 13031-13040.	6.6	565
36	IrOx core-shell nanocatalysts for cost- and energy-efficient electrochemical water splitting. Chemical Science, 2014, 5, 2955-2963.	3.7	278

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37	Dynamics of Palladium on Nanocarbon in the Direct Synthesis of H₂O₂. ChemSusChem, 2014, 7, 179-194.	3.6	78
38	Surface dynamics of the intermetallic catalyst Pd2Ga, Part I â€“ Structural stability in UHV and different gas atmospheres. Journal of Catalysis, 2014, 309, 209-220.	3.1	39
39	Stereoâ€•and Chemoselective Character of Supported CeO₂ Catalysts for Continuousâ€Flow Threeâ€Phase Alkyne Hydrogenation. ChemCatChem, 2014, 6, 1928-1934.	1.8	50
40	Gold Supported on Graphene Oxide: An Active and Selective Catalyst for Phenylacetylene Hydrogenations at Low Temperatures. ACS Catalysis, 2014, 4, 2369-2373.	5.5	99
41	Surface dynamics of the intermetallic catalyst Pd2Ga, Part II â€“ Reactivity and stability in liquid-phase hydrogenation of phenylacetylene. Journal of Catalysis, 2014, 309, 221-230.	3.1	62
42	Promoted Ceria: A Structural, Catalytic, and Computational Study. ACS Catalysis, 2013, 3, 2256-2268.	5.5	92
43	HCl Oxidation on IrO₂-Based Catalysts: From Fundamentals to Scale-Up. ACS Catalysis, 2013, 3, 2813-2822.	5.5	52
44	Do observations on surface coverage-reactivity correlations always describe the true catalytic process? A case study on ceria. Journal of Catalysis, 2013, 297, 119-127.	3.1	42
45	Order-Induced Selectivity Increase of Cu60Pd40 in the Semi-Hydrogenation of Acetylene. Materials, 2013, 6, 2958-2977.	1.3	49
46	Improved Selectivity by Stabilizing and Exposing Active Phases on Supported Pd Nanoparticles in Acetyleneâ€Selective Hydrogenation. Chemistry - A European Journal, 2012, 18, 14962-14966.	1.7	50
47	Alloys in catalysis: phase separation and surface segregation phenomena in response to the reactive environment. Catalysis Science and Technology, 2012, 2, 1787.	2.1	203
48	Structureâ€“Activity Studies on Highly Active Palladium Hydrogenation Catalysts by X-ray Absorption Spectroscopy. Journal of Physical Chemistry C, 2012, 116, 22375-22385.	1.5	43
49	In situ surface coverage analysis of RuO2-catalysed HCl oxidation reveals the entropic origin of compensation in heterogeneous catalysis. Nature Chemistry, 2012, 4, 739-745.	6.6	85
50	How to Control the Selectivity of Palladiumâ€based Catalysts in Hydrogenation Reactions: The Role of Subsurface Chemistry. ChemCatChem, 2012, 4, 1048-1063.	1.8	223
51	Influence of bulk composition of the intermetallic compound ZnPd on surface composition and methanol steam reforming properties. Journal of Catalysis, 2012, 285, 41-47.	3.1	99
52	An integrated approach to Deacon chemistry on RuO2-based catalysts. Journal of Catalysis, 2012, 285, 273-284.	3.1	111
53	Surface state during activation and reaction of high-performing multi-metallic alkyne hydrogenation catalysts. Chemical Science, 2011, 2, 1379.	3.7	18
54	Nanosizing Intermetallic Compounds Onto Carbon Nanotubes: Active and Selective Hydrogenation Catalysts. Angewandte Chemie - International Edition, 2011, 50, 10231-10235.	7.2	128

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55	Pdâ^'Ga Intermetallic Compounds as Highly Selective Semihydrogenation Catalysts. Journal of the American Chemical Society, 2010, 132, 14745-14747.	6.6	430
56	Role of Hydrogen Species in Palladium-Catalyzed Alkyne Hydrogenation. Journal of Physical Chemistry C, 2010, 114, 2293-2299.	1.5	71
57	Dynamics of the MoVTeNb Oxide M1 Phase in Propane Oxidation. Journal of Physical Chemistry C, 2010, 114, 1912-1921.	1.5	92
58	State of Transition Metal Catalysts During Carbon Nanotube Growth. Journal of Physical Chemistry C, 2009, 113, 1648-1656.	1.5	166
59	Understanding Palladium Hydrogenation Catalysts: When the Nature of the Reactive Molecule Controls the Nature of the Catalyst Active Phase. Angewandte Chemie - International Edition, 2008, 47, 9274-9278.	7.2	185
60	The Roles of Subsurface Carbon and Hydrogen in Palladium-Catalyzed Alkyne Hydrogenation. Science, 2008, 320, 86-89.	6.0	800
61	In Situ Determination of Hydrogen Inside a Catalytic Reactor Using Prompt Î³ Activation Analysis. Analytical Chemistry, 2008, 80, 6066-6071.	3.2	32
62	Alkyne hydrogenation over Pd catalysts: A new paradigm. Journal of Catalysis, 2006, 242, 26-37.	3.1	268
63	Methanol Oxidation on a Copper Catalyst Investigated Using in Situ X-ray Photoelectron Spectroscopyâ€. Journal of Physical Chemistry B, 2004, 108, 14340-14347.	1.2	221