Jakob Kibsgaard

List of Publications by Year
in descending order

69 papers	24,115 citations	76196 40 h-index	91712 69 g-index
72 all docs	72 docs citations	72 times ranked	23471 citing authors

#	Article	IF	Citations
1	Increasing Current Density of Li-Mediated Ammonia Synthesis with High Surface Area Copper Electrodes. ACS Energy Letters, 2022, 7, 36-41.	8.8	45
2	<i>In Situ</i> Analysis of the Facets of Cu-Based Electrocatalysts in Alkaline Media Using Pb Underpotential Deposition. Langmuir, 2022, 38, 1514-1521.	1.6	8
3	Electrolyte acidification from anode reactions during lithium mediated ammonia synthesis. Electrochemistry Communications, 2022, 134, 107186.	2.3	18
4	The low overpotential regime of acidic water oxidation part I: the importance of O₂ detection. Energy and Environmental Science, 2022, 15, 1977-1987.	15.6	23
5	The low overpotential regime of acidic water oxidation part II: trends in metal and oxygen stability numbers. Energy and Environmental Science, 2022, 15, 1988-2001.	15.6	35
6	Quantitative Operando Detection of Electro Synthesized Ammonia Using Mass Spectrometry. ChemElectroChem, 2022, 9, .	1.7	9
7	Monitoring oxygen production on mass-selected iridiumâ€“tantalum oxide electrocatalysts. Nature Energy, 2022, 7, 55-64.	19.8	108
8	Transients in Electrochemical CO Reduction Explained by Mass Transport of Buffers. ACS Catalysis, 2022, 12, 5155-5161.	5.5	7
9	A spin promotion effect in catalytic ammonia synthesis. Nature Communications, 2022, 13, 2382.	5.8	38
10	Oxygen-Enhanced Chemical Stability of Lithium-Mediated Electrochemical Ammonia Synthesis. Journal of Physical Chemistry Letters, 2022, 13, 4605-4611.	2.1	18
11	Highly active, selective, and stable Pd single-atom catalyst anchored on N-doped hollow carbon sphere for electrochemical H2O2 synthesis under acidic conditions. Journal of Catalysis, 2021, 393, 313-323.	3.1	43
12	Towards understanding of electrolyte degradation in lithium-mediated non-aqueous electrochemical ammonia synthesis with gas chromatography-mass spectrometry. RSC Advances, 2021, 11, 31487-31498.	1.7	30
13	Is There Anything Better than Pt for HER?. ACS Energy Letters, 2021, 6, 1175-1180.	8.8	304
14	The Importance of Potential Control for Accurate Studies of Electrochemical CO Reduction. ACS Energy Letters, 2021, 6, 1879-1885.	8.8	20
15	Tracking oxygen atoms in electrochemical CO oxidation â€“ Part I: Oxygen exchange via <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si4.svg"><mml:msub><mml:mtext>CO</mml:mtext><mml:mn>2</mml:mn></mml:msub></mml:math> hydration. Electrochimica Acta, 2021, 374, 137842.	2.6	6
16	Dynamic Interfacial Reaction Rates from Electrochemistryâ€“Mass Spectrometry. Analytical Chemistry, 2021, 93, 7022-7028.	3.2	5
17	Tracking oxygen atoms in electrochemical CO oxidation - Part II: Lattice oxygen reactivity in oxides of Pt and Ir. Electrochimica Acta, 2021, 374, 137844.	2.6	9
18	Origins of the Instability of Nonprecious Hydrogen Evolution Reaction Catalysts at Open-Circuit Potential. ACS Energy Letters, 2021, 6, 2268-2274.	8.8	44

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19	Enhancement of lithium-mediated ammonia synthesis by addition of oxygen. Science, 2021, 374, 1593-1597.	6.0	123
20	Increasing stability, efficiency, and fundamental understanding of lithium-mediated electrochemical nitrogen reduction. Energy and Environmental Science, 2020, 13, 4291-4300.	15.6	124
21	Particle Size Effect on Platinum Dissolution: Considerations for Accelerated Stability Testing of Fuel Cell Catalysts. ACS Catalysis, 2020, 10, 6281-6290.	5.5	65
22	The Dissolution Dilemma for Low Pt Loading Polymer Electrolyte Membrane Fuel Cell Catalysts. Journal of the Electrochemical Society, 2020, 167, 164501.	1.3	32
23	Trace anodic migration of iridium and titanium ions and subsequent cathodic selectivity degradation in acid electrolysis systems. Materials Today Energy, 2019, 14, 100352.	2.5	8
24	Transition Metal Arsenide Catalysts for the Hydrogen Evolution Reaction. Journal of Physical Chemistry C, 2019, 123, 24007-24012.	1.5	18
25	Considerations for the scaling-up of water splitting catalysts. Nature Energy, 2019, 4, 430-433.	19.8	759
26	A rigorous electrochemical ammonia synthesis protocol with quantitative isotope measurements. Nature, 2019, 570, 504-508.	13.7	1,006
27	A Versatile Method for Ammonia Detection in a Range of Relevant Electrolytes via Direct Nuclear Magnetic Resonance Techniques. ACS Catalysis, 2019, 9, 5797-5802.	5.5	97
28	The Difficulty of Proving Electrochemical Ammonia Synthesis. ACS Energy Letters, 2019, 4, 2986-2988.	8.8	122
29	Engineering Niâ€“Moâ€“S Nanoparticles for Hydrodesulfurization. Nano Letters, 2018, 18, 3454-3460.	4.5	21
30	Ambient Pressure Hydrodesulfurization of Refractory Sulfur Compounds in Highly Sensitive Î¼-Reactor Platform Coupled to a Time-of-Flight Mass Spectrometer. Journal of Physical Chemistry C, 2018, 122, 1699-1705.	1.5	6
31	Impact of nanoparticle size and lattice oxygen on water oxidation on NiFeOxHy. Nature Catalysis, 2018, 1, 820-829.	16.1	344
32	The Predominance of Hydrogen Evolution on Transition Metal Sulfides and Phosphides under CO₂ Reduction Conditions: An Experimental and Theoretical Study. ACS Energy Letters, 2018, 3, 1450-1457.	8.8	66
33	A Highly Active Molybdenum Phosphide Catalyst for Methanol Synthesis from CO and CO₂. Angewandte Chemie, 2018, 130, 15265-15270.	1.6	15
34	A Highly Active Molybdenum Phosphide Catalyst for Methanol Synthesis from CO and CO₂. Angewandte Chemie - International Edition, 2018, 57, 15045-15050.	7.2	69
35	Combining theory and experiment in electrocatalysis: Insights into materials design. Science, 2017, 355, .	6.0	7,837
36	Investigating Catalystâ€“Support Interactions To Improve the Hydrogen Evolution Reaction Activity of Thiomolybdate [Mo₃S₁₃]^{2â€“} Nanoclusters. ACS Catalysis, 2017, 7, 7126-7130.	5.5	76

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37	Effects of Gold Substrates on the Intrinsic and Extrinsic Activity of High-Loading Nickel-Based Oxyhydroxide Oxygen Evolution Catalysts. ACS Catalysis, 2017, 7, 5399-5409.	5.5	120
38	Mesoporous Ruthenium/Ruthenium Oxide Thin Films: Active Electrocatalysts for the Oxygen Evolution Reaction. ChemElectroChem, 2017, 4, 2480-2485.	1.7	39
39	Ammonia synthesis from N₂and H₂O using a lithium cycling electrification strategy at atmospheric pressure. Energy and Environmental Science, 2017, 10, 1621-1630.	15.6	342
40	Polyol Synthesis of Cobaltâ€“Copper Alloy Catalysts for Higher Alcohol Synthesis from Syngas. Catalysis Letters, 2017, 147, 2352-2359.	1.4	10
41	Engineering Cobalt Phosphide (CoP) Thin Film Catalysts for Enhanced Hydrogen Evolution Activity on Silicon Photocathodes. Advanced Energy Materials, 2016, 6, 1501758.	10.2	134
42	Mesoporous platinum nickel thin films with double gyroid morphology for the oxygen reduction reaction. Nano Energy, 2016, 29, 243-248.	8.2	26
43	Two-Dimensional Molybdenum Carbide (MXene) as an Efficient Electrocatalyst for Hydrogen Evolution. ACS Energy Letters, 2016, 1, 589-594.	8.8	1,100
44	Polymer Electrolyte Membrane Electrolyzers Utilizing Nonâ€precious Moâ€based Hydrogen Evolution Catalysts. ChemSusChem, 2015, 8, 3512-3519.	3.6	51
45	Tweaking the composition of NiMoZn alloy electrocatalyst for enhanced hydrogen evolution reaction performance. Nano Energy, 2015, 12, 9-18.	8.2	139
46	Designing an improved transition metal phosphide catalyst for hydrogen evolution using experimental and theoretical trends. Energy and Environmental Science, 2015, 8, 3022-3029.	15.6	851
47	Building an appropriate active-site motif into a hydrogen-evolution catalyst with thiomolybdate [Mo3S13]2âˆ’ clusters. Nature Chemistry, 2014, 6, 248-253.	6.6	730
48	Molybdenum Phosphosulfide: An Active, Acidâ€Stable, Earthâ€Abundant Catalyst for the Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2014, 53, 14433-14437.	7.2	908
49	Electrocatalysis of Water Oxidation by H₂Oâ€Capped Iridiumâ€Oxide Nanoparticles Electrodeposited on Spectroscopic Graphite. ChemPhysChem, 2014, 15, 2844-2850.	1.0	8
50	Designing Active and Stable Silicon Photocathodes for Solar Hydrogen Production Using Molybdenum Sulfide Nanomaterials. Advanced Energy Materials, 2014, 4, 1400739.	10.2	158
51	Catalyzing the Hydrogen Evolution Reaction (HER) with Molybdenum Sulfide Nanomaterials. ACS Catalysis, 2014, 4, 3957-3971.	5.5	1,355
52	Electrocatalytic Conversion of Carbon Dioxide to Methane and Methanol on Transition Metal Surfaces. Journal of the American Chemical Society, 2014, 136, 14107-14113.	6.6	1,253
53	Rapid Synthesis of Porous, Mixed Phase Titania Films with Tailored Orientation of Rutile for Enhanced Photocatalytic Performance. Journal of Physical Chemistry C, 2013, 117, 27039-27046.	1.5	10
54	Engineering the surface structure of MoS2 toÂpreferentially expose active edge sites forÂelectrocatalysis. Nature Materials, 2012, 11, 963-969.	13.3	2,896

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55	Meso-Structured Platinum Thin Films: Active and Stable Electrocatalysts for the Oxygen Reduction Reaction. Journal of the American Chemical Society, 2012, 134, 7758-7765.	6.6	195
56	High-quality Fe-doped TiO2 films with superior visible-light performance. Journal of Materials Chemistry, 2012, 22, 23755.	6.7	68
57	Atomic-scale insight into the origin of pyridine inhibition of MoS2-based hydrotreating catalysts. Journal of Catalysis, 2010, 271, 280-289.	3.1	67
58	Comparative atomic-scale analysis of promotional effects by late 3d-transition metals in MoS2 hydrotreating catalysts. Journal of Catalysis, 2010, 272, 195-203.	3.1	108
59	Size Threshold in the Dibenzothiophene Adsorption on MoS₂Nanoclusters. ACS Nano, 2010, 4, 4677-4682.	7.3	158
60	Nanostructuring MoS 2 for photoelectrochemical water splitting. , 2010, , .		7
61	Nanostructured MoS2 for Solar Hydrogen Production. ECS Meeting Abstracts, 2010, , .	0.0	0
62	Scanning tunneling microscopy studies of TiO2-supported hydrotreating catalysts: Anisotropic particle shapes by edge-specific MoS2â€“support bonding. Journal of Catalysis, 2009, 263, 98-103.	3.1	61
63	Recent STM, DFT and HAADF-STEM studies of sulfide-based hydrotreating catalysts: Insight into mechanistic, structural and particle size effects. Catalysis Today, 2008, 130, 86-96.	2.2	265
64	Atomic-Scale Structure of Mo₆S₆ Nanowires. Nano Letters, 2008, 8, 3928-3931.	4.5	68
65	Restructuring of Cobalt Nanoparticles Induced by Formation and Diffusion of Monodisperse Metal-Sulfur Complexes. Physical Review Letters, 2008, 100, 116104.	2.9	28
66	Size-dependent structure of MoS2 nanocrystals. Nature Nanotechnology, 2007, 2, 53-58.	15.6	638
67	Location and coordination of promoter atoms in Co- and Ni-promoted MoS2-based hydrotreating catalysts. Journal of Catalysis, 2007, 249, 220-233.	3.1	428
68	Cobalt growth on two related close-packed noble metal surfaces. Surface Science, 2007, 601, 1967-1972.	0.8	54
69	Clusterâ^'Support Interactions and Morphology of MoS2Nanoclusters in a Graphite-Supported Hydrotreating Model Catalyst. Journal of the American Chemical Society, 2006, 128, 13950-13958.	6.6	172