

Jakob Kibsgaard

List of Publications by Year in descending order

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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.	17.4	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.	3.5	8
3	Electrolyte acidification from anode reactions during lithium mediated ammonia synthesis. Electrochemistry Communications, 2022, 134, 107186.	4.7	18
4	The low overpotential regime of acidic water oxidation part I: the importance of O ₂ detection. Energy and Environmental Science, 2022, 15, 1977-1987.	30.8	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.	30.8	35
6	Quantitative Operando Detection of Electro Synthesized Ammonia Using Mass Spectrometry. ChemElectroChem, 2022, 9, .	3.4	9
7	Monitoring oxygen production on mass-selected iridium-tantalum oxide electrocatalysts. Nature Energy, 2022, 7, 55-64.	39.5	108
8	Transients in Electrochemical CO Reduction Explained by Mass Transport of Buffers. ACS Catalysis, 2022, 12, 5155-5161.	11.2	7
9	A spin promotion effect in catalytic ammonia synthesis. Nature Communications, 2022, 13, 2382.	12.8	38
10	Oxygen-Enhanced Chemical Stability of Lithium-Mediated Electrochemical Ammonia Synthesis. Journal of Physical Chemistry Letters, 2022, 13, 4605-4611.	4.6	18
11	Highly active, selective, and stable Pd single-atom catalyst anchored on N-doped hollow carbon sphere for electrochemical H ₂ O ₂ synthesis under acidic conditions. Journal of Catalysis, 2021, 393, 313-323.	6.2	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.	3.6	30
13	Is There Anything Better than Pt for HER?. ACS Energy Letters, 2021, 6, 1175-1180.	17.4	304
14	The Importance of Potential Control for Accurate Studies of Electrochemical CO Reduction. ACS Energy Letters, 2021, 6, 1879-1885.	17.4	20
15	Tracking oxygen atoms in electrochemical CO oxidation – Part I: Oxygen exchange via CO_2 hydration. Electrochimica Acta, 2021, 374, 137842.	5.2	6
16	Dynamic Interfacial Reaction Rates from Electrochemistry-Mass Spectrometry. Analytical Chemistry, 2021, 93, 7022-7028.	6.5	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.	5.2	9
18	Origins of the Instability of Nonprecious Hydrogen Evolution Reaction Catalysts at Open-Circuit Potential. ACS Energy Letters, 2021, 6, 2268-2274.	17.4	44

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19	Enhancement of lithium-mediated ammonia synthesis by addition of oxygen. <i>Science</i> , 2021, 374, 1593-1597.	12.6	123
20	Increasing stability, efficiency, and fundamental understanding of lithium-mediated electrochemical nitrogen reduction. <i>Energy and Environmental Science</i> , 2020, 13, 4291-4300.	30.8	124
21	Particle Size Effect on Platinum Dissolution: Considerations for Accelerated Stability Testing of Fuel Cell Catalysts. <i>ACS Catalysis</i> , 2020, 10, 6281-6290.	11.2	65
22	The Dissolution Dilemma for Low Pt Loading Polymer Electrolyte Membrane Fuel Cell Catalysts. <i>Journal of the Electrochemical Society</i> , 2020, 167, 164501.	2.9	32
23	Trace anodic migration of iridium and titanium ions and subsequent cathodic selectivity degradation in acid electrolysis systems. <i>Materials Today Energy</i> , 2019, 14, 100352.	4.7	8
24	Transition Metal Arsenide Catalysts for the Hydrogen Evolution Reaction. <i>Journal of Physical Chemistry C</i> , 2019, 123, 24007-24012.	3.1	18
25	Considerations for the scaling-up of water splitting catalysts. <i>Nature Energy</i> , 2019, 4, 430-433.	39.5	759
26	A rigorous electrochemical ammonia synthesis protocol with quantitative isotope measurements. <i>Nature</i> , 2019, 570, 504-508.	27.8	1,006
27	A Versatile Method for Ammonia Detection in a Range of Relevant Electrolytes via Direct Nuclear Magnetic Resonance Techniques. <i>ACS Catalysis</i> , 2019, 9, 5797-5802.	11.2	97
28	The Difficulty of Proving Electrochemical Ammonia Synthesis. <i>ACS Energy Letters</i> , 2019, 4, 2986-2988.	17.4	122
29	Engineering Ni-MoS Nanoparticles for Hydrodesulfurization. <i>Nano Letters</i> , 2018, 18, 3454-3460.	9.1	21
30	Ambient Pressure Hydrodesulfurization of Refractory Sulfur Compounds in Highly Sensitive μ -Reactor Platform Coupled to a Time-of-Flight Mass Spectrometer. <i>Journal of Physical Chemistry C</i> , 2018, 122, 1699-1705.	3.1	6
31	Impact of nanoparticle size and lattice oxygen on water oxidation on NiFeOxHy. <i>Nature Catalysis</i> , 2018, 1, 820-829.	34.4	344
32	The Predominance of Hydrogen Evolution on Transition Metal Sulfides and Phosphides under CO ₂ Reduction Conditions: An Experimental and Theoretical Study. <i>ACS Energy Letters</i> , 2018, 3, 1450-1457.	17.4	66
33	A Highly Active Molybdenum Phosphide Catalyst for Methanol Synthesis from CO and CO ₂ . <i>Angewandte Chemie</i> , 2018, 130, 15265-15270.	2.0	15
34	A Highly Active Molybdenum Phosphide Catalyst for Methanol Synthesis from CO and CO ₂ . <i>Angewandte Chemie - International Edition</i> , 2018, 57, 15045-15050.	13.8	69
35	Combining theory and experiment in electrocatalysis: Insights into materials design. <i>Science</i> , 2017, 355, .	12.6	7,837
36	Investigating Catalyst-Support Interactions To Improve the Hydrogen Evolution Reaction Activity of Thiomolybdate [Mo ₃ S ₁₃] ²⁺ Nanoclusters. <i>ACS Catalysis</i> , 2017, 7, 7126-7130.	11.2	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. <i>ACS Catalysis</i> , 2017, 7, 5399-5409.	11.2	120
38	Mesoporous Ruthenium/Ruthenium Oxide Thin Films: Active Electrocatalysts for the Oxygen Evolution Reaction. <i>ChemElectroChem</i> , 2017, 4, 2480-2485.	3.4	39
39	Ammonia synthesis from N ₂ and H ₂ O using a lithium cycling electrification strategy at atmospheric pressure. <i>Energy and Environmental Science</i> , 2017, 10, 1621-1630.	30.8	342
40	Polyol Synthesis of Cobalt-Copper Alloy Catalysts for Higher Alcohol Synthesis from Syngas. <i>Catalysis Letters</i> , 2017, 147, 2352-2359.	2.6	10
41	Engineering Cobalt Phosphide (CoP) Thin Film Catalysts for Enhanced Hydrogen Evolution Activity on Silicon Photocathodes. <i>Advanced Energy Materials</i> , 2016, 6, 1501758.	19.5	134
42	Mesoporous platinum nickel thin films with double gyroid morphology for the oxygen reduction reaction. <i>Nano Energy</i> , 2016, 29, 243-248.	16.0	26
43	Two-Dimensional Molybdenum Carbide (MXene) as an Efficient Electrocatalyst for Hydrogen Evolution. <i>ACS Energy Letters</i> , 2016, 1, 589-594.	17.4	1,100
44	Polymer Electrolyte Membrane Electrolyzers Utilizing Non-precious Mo-based Hydrogen Evolution Catalysts. <i>ChemSusChem</i> , 2015, 8, 3512-3519.	6.8	51
45	Tweaking the composition of NiMoZn alloy electrocatalyst for enhanced hydrogen evolution reaction performance. <i>Nano Energy</i> , 2015, 12, 9-18.	16.0	139
46	Designing an improved transition metal phosphide catalyst for hydrogen evolution using experimental and theoretical trends. <i>Energy and Environmental Science</i> , 2015, 8, 3022-3029.	30.8	851
47	Building an appropriate active-site motif into a hydrogen-evolution catalyst with thiomolybdate [Mo ₃ S ₁₃]2 ⁴⁻ clusters. <i>Nature Chemistry</i> , 2014, 6, 248-253.	13.6	730
48	Molybdenum Phosphosulfide: An Active, Acid-Stable, Earth-Abundant Catalyst for the Hydrogen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 14433-14437.	13.8	908
49	Electrocatalysis of Water Oxidation by H ₂ O-Capped Iridium-Oxide Nanoparticles Electrodeposited on Spectroscopic Graphite. <i>ChemPhysChem</i> , 2014, 15, 2844-2850.	2.1	8
50	Designing Active and Stable Silicon Photocathodes for Solar Hydrogen Production Using Molybdenum Sulfide Nanomaterials. <i>Advanced Energy Materials</i> , 2014, 4, 1400739.	19.5	158
51	Catalyzing the Hydrogen Evolution Reaction (HER) with Molybdenum Sulfide Nanomaterials. <i>ACS Catalysis</i> , 2014, 4, 3957-3971.	11.2	1,355
52	Electrocatalytic Conversion of Carbon Dioxide to Methane and Methanol on Transition Metal Surfaces. <i>Journal of the American Chemical Society</i> , 2014, 136, 14107-14113.	13.7	1,253
53	Rapid Synthesis of Porous, Mixed Phase Titania Films with Tailored Orientation of Rutile for Enhanced Photocatalytic Performance. <i>Journal of Physical Chemistry C</i> , 2013, 117, 27039-27046.	3.1	10
54	Engineering the surface structure of MoS ₂ to preferentially expose active edge sites for electrocatalysis. <i>Nature Materials</i> , 2012, 11, 963-969.	27.5	2,896

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55	Meso-Structured Platinum Thin Films: Active and Stable Electrocatalysts for the Oxygen Reduction Reaction. <i>Journal of the American Chemical Society</i> , 2012, 134, 7758-7765.	13.7	195
56	High-quality Fe-doped TiO ₂ films with superior visible-light performance. <i>Journal of Materials Chemistry</i> , 2012, 22, 23755.	6.7	68
57	Atomic-scale insight into the origin of pyridine inhibition of MoS ₂ -based hydrotreating catalysts. <i>Journal of Catalysis</i> , 2010, 271, 280-289.	6.2	67
58	Comparative atomic-scale analysis of promotional effects by late 3d-transition metals in MoS ₂ hydrotreating catalysts. <i>Journal of Catalysis</i> , 2010, 272, 195-203.	6.2	108
59	Size Threshold in the Dibenzothiophene Adsorption on MoS ₂ Nanoclusters. <i>ACS Nano</i> , 2010, 4, 4677-4682.	14.6	158
60	Nanostructuring MoS ₂ for photoelectrochemical water splitting. , 2010, , .		7
61	Nanostructured MoS ₂ for Solar Hydrogen Production. <i>ECS Meeting Abstracts</i> , 2010, , .	0.0	0
62	Scanning tunneling microscopy studies of TiO ₂ -supported hydrotreating catalysts: Anisotropic particle shapes by edge-specific MoS ₂ support bonding. <i>Journal of Catalysis</i> , 2009, 263, 98-103.	6.2	61
63	Recent STM, DFT and HAADF-STEM studies of sulfide-based hydrotreating catalysts: Insight into mechanistic, structural and particle size effects. <i>Catalysis Today</i> , 2008, 130, 86-96.	4.4	265
64	Atomic-Scale Structure of Mo ₆ S ₆ Nanowires. <i>Nano Letters</i> , 2008, 8, 3928-3931.	9.1	68
65	Restructuring of Cobalt Nanoparticles Induced by Formation and Diffusion of Monodisperse Metal-Sulfur Complexes. <i>Physical Review Letters</i> , 2008, 100, 116104.	7.8	28
66	Size-dependent structure of MoS ₂ nanocrystals. <i>Nature Nanotechnology</i> , 2007, 2, 53-58.	31.5	638
67	Location and coordination of promoter atoms in Co- and Ni-promoted MoS ₂ -based hydrotreating catalysts. <i>Journal of Catalysis</i> , 2007, 249, 220-233.	6.2	428
68	Cobalt growth on two related close-packed noble metal surfaces. <i>Surface Science</i> , 2007, 601, 1967-1972.	1.9	54
69	Cluster-Support Interactions and Morphology of MoS ₂ Nanoclusters in a Graphite-Supported Hydrotreating Model Catalyst. <i>Journal of the American Chemical Society</i> , 2006, 128, 13950-13958.	13.7	172