

Jongwoo Lim

List of Publications by Year in descending order

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35
papers

3,090
citations

304743

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docs citations

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times ranked

4101
citing authors

#	ARTICLE	IF	CITATIONS
1	Non-precious-metal catalysts for alkaline water electrolysis: <i>operando</i> characterizations, theoretical calculations, and recent advances. <i>Chemical Society Reviews</i> , 2020, 49, 9154-9196.	38.1	448
2	Origin and hysteresis of lithium compositional spatiodynamics within battery primary particles. <i>Science</i> , 2016, 353, 566-571.	12.6	367
3	Quantifying Surface Roughness Effects on Phonon Transport in Silicon Nanowires. <i>Nano Letters</i> , 2012, 12, 2475-2482.	9.1	285
4	Pt/Fe ₂ O ₃ with Pt-Fe pair sites as a catalyst for oxygen reduction with ultralow Pt loading. <i>Nature Energy</i> , 2021, 6, 614-623.	39.5	274
5	Redirecting dynamic surface restructuring of a layered transition metal oxide catalyst for superior water oxidation. <i>Nature Catalysis</i> , 2021, 4, 212-222.	34.4	266
6	Persistent State-of-Charge Heterogeneity in Relaxed, Partially Charged Li _{1-x} Ni _{1/3} Co _{1/3} Mn _{1/3} O ₂ Secondary Particles. <i>Advanced Materials</i> , 2016, 28, 6631-6638.	21.0	142
7	Physical Biology of the Materials-Microorganism Interface. <i>Journal of the American Chemical Society</i> , 2018, 140, 1978-1985.	13.7	115
8	Single-atom catalyst for high-performance methanol oxidation. <i>Nature Communications</i> , 2021, 12, 5235.	12.8	113
9	Formation of FeOOH Nanosheets Induces Substitutional Doping of CeO ₂ with High-Valence Ni for Efficient Water Oxidation. <i>Advanced Energy Materials</i> , 2021, 11, 2002731.	19.5	110
10	Fluid-enhanced surface diffusion controls intraparticle phase transformations. <i>Nature Materials</i> , 2018, 17, 915-922.	27.5	104
11	Critical differences in 3D atomic structure of individual ligand-protected nanocrystals in solution. <i>Science</i> , 2020, 368, 60-67.	12.6	103
12	Stable and High-Power Calcium-Ion Batteries Enabled by Calcium Intercalation into Graphite. <i>Advanced Materials</i> , 2020, 32, e1904411.	21.0	87
13	Controlling Residual Lithium in High-Nickel (>90%) Lithium Layered Oxides for Cathodes in Lithium-Ion Batteries. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 18662-18669.	13.8	81
14	A Review of Carbon-Supported Nonprecious Metals as Energy-Related Electrocatalysts. <i>Small Methods</i> , 2020, 4, 2000621.	8.6	76
15	Thermal Transport in Silicon Nanowires at High Temperature up to 700 K. <i>Nano Letters</i> , 2016, 16, 4133-4140.	9.1	74
16	Effects of Particle Size, Electronic Connectivity, and Incoherent Nanoscale Domains on the Sequence of Lithiation in LiFePO ₄ Porous Electrodes. <i>Advanced Materials</i> , 2015, 27, 6591-6597.	21.0	72
17	Dichotomy in the Lithiation Pathway of Ellipsoidal and Platelet LiFePO ₄ Particles Revealed through Nanoscale Operando State-of-Charge Imaging. <i>Advanced Functional Materials</i> , 2015, 25, 3677-3687.	14.9	72
18	Pd/Fe ₂ O ₃ with Electronic Coupling Single-Site Pd-Fe Pair Sites for Low-Temperature Semihydrogenation of Alkynes. <i>Journal of the American Chemical Society</i> , 2022, 144, 573-581.	13.7	69

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19	A new high-voltage calcium intercalation host for ultra-stable and high-power calcium rechargeable batteries. <i>Nature Communications</i> , 2021, 12, 3369.	12.8	59
20	Unlocking the Potential of Mechanochemical Coupling: Boosting the Oxygen Evolution Reaction by Mating Proton Acceptors with Electron Donors. <i>Advanced Functional Materials</i> , 2021, 31, 2008077.	14.9	40
21	Recent Advances of First d-Block Metal-Based Perovskite Oxide Electrocatalysts for Alkaline Water Splitting. <i>Catalysts</i> , 2020, 10, 770.	3.5	28
22	Suppressing High-Current-Induced Phase Separation in Ni-Rich Layered Oxides by Electrochemically Manipulating Dynamic Lithium Distribution. <i>Advanced Materials</i> , 2021, 33, e2105337.	21.0	26
23	Homogenizing Silicon Domains in SiO ₂ Anode during Cycling and Enhancing Battery Performance via Magnesium Doping. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 52202-52214.	8.0	20
24	Probing and Resolving the Heterogeneous Degradation of Nickel-Rich Layered Oxide Cathodes across Multi-Length Scales. <i>Small Methods</i> , 2020, 4, 2000551.	8.6	18
25	One-Pot Heterointerfacial Metamorphosis for Synthesis and Control of Widely Varying Heterostructured Nanoparticles. <i>Journal of the American Chemical Society</i> , 2021, 143, 3383-3392.	13.7	9
26	Tunable thermal conductivity in mesoporous silicon by slight porosity change. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	8
27	Tunable Dielectric and Thermal Properties of Oxide Dielectrics via Substrate Biasing in Plasma-Enhanced Atomic Layer Deposition. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 44912-44918.	8.0	8
28	Templated synthesis of microparticles with carbonaceous skeletal structures using polymer cubosomes as templates. <i>RSC Advances</i> , 2022, 12, 8429-8434.	3.6	6
29	Electrode Lithiation: Effects of Particle Size, Electronic Connectivity, and Incoherent Nanoscale Domains on the Sequence of Lithiation in LiFePO ₄ Porous Electrodes (<i>Adv. Mater.</i> 42/2015). <i>Advanced Materials</i> , 2015, 27, 6590-6590.	21.0	4
30	Calcium-Ion Batteries: Stable and High-Power Calcium-Ion Batteries Enabled by Calcium Intercalation into Graphite (<i>Adv. Mater.</i> 4/2020). <i>Advanced Materials</i> , 2020, 32, 2070029.	21.0	3
31	Controlling Residual Lithium in High-Nickel (>90%) Lithium Layered Oxides for Cathodes in Lithium-Ion Batteries. <i>Angewandte Chemie</i> , 2020, 132, 18821-18828.	2.0	2
32	Data on the effect of particle size, porosity and discharging rate on the performance of lithium-ion battery with NMC 622 cathode through numerical analysis. <i>Data in Brief</i> , 2021, 37, 107246.	1.0	1
33	Fluorescence: Dichotomy in the Lithiation Pathway of Ellipsoidal and Platelet LiFePO ₄ Particles Revealed through Nanoscale Operando State-of-Charge Imaging (<i>Adv. Funct. Mater.</i> 24/2015). <i>Advanced Functional Materials</i> , 2015, 25, 3676-3676.	14.9	0
34	Using Scanning Transmission X-ray Microscopy to Reveal the Origin of Lithium Compositional Spatiodynamics in Battery Materials. <i>Microscopy and Microanalysis</i> , 2017, 23, 888-889.	0.4	0
35	Suppressed phonon conduction by geometrically induced evolution of transport characteristics from Brownian motion into Lévy flight. <i>NPG Asia Materials</i> , 2022, 14, .	7.9	0