Curated Research Articles

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- Decoding Short-Range Order in Amorphous Two-Dimensional Nanosheets for Efficient and Durable Ampere-Level Seawater Electrolysis: A Case Study of Amorphous Ni(OH)2 — score: 1.000
- In Situ Electrochemical Polymerization Enabling High-Performance Quasi-Solid-State Batteries — score: 1.000
- Electrolyte-Driven Suppression of Oxygen Dimerization and Oxygen Evolution in High-Voltage Li-Ion Batteries — score: 1.000
- Interplay Between the Dissolved Mn2+ and Solid Electrolyte Interphases of Graphite Anode — score: 1.000
- Low-Reactivity Electrolytes Achieve Safe and Durable Energy-Dense NCM955|SiC Pouch Cells — score: 1.000
- Asymmetric-Orbital-Hybridization Induced Electron Redistribution Enabling Stable Sodium Layered Oxides — score: 1.000
- Influence of Anode Reactivity and Chemical Crossover on the Formation of Cathode-Electrolyte Interphase in High-Nickel Layered Oxide Cathodes — score: 1.000
- Thick Electrode Design Enabled by a Carbon–Binder Domain–Resolved Dual-Pore Transmission Line Model for Lithium-Ion Batteries — score: 1.000
- A Quantitative Water-Speciation Identification Strategy Enables Efficient Four-Electron Conversion in Aqueous Zn-I2 Batteries — score: 1.000
- Understanding Structural and Compositional Evolution during NMC Cathode Direct Recycling via Solid-State NMR — score: 1.000
- Heterogeneity of the Dominant Causes of Performance Loss in End-of-Life Cathodes and Their Consequences for Direct Recycling — score: 1.000
- In Situ Diffraction and Ex Situ Transmission X-Ray Microscopy Studies of Solid-State Upcycling for NMC Cathodes — score: 1.000
- Cathode Upcycling for Direct Recycling of Lithium-Ion Batteries Using a Precipitation Approach — score: 1.000
- Multiscale Design Strategies of Interface-Stabilized Solid Electrolytes and Dynamic Interphase Decoding from Atomic-to-Macroscopic Perspectives — score: 1.000
- [ASAP] In situ X-ray Synchrotron Studies Reveal the Nucleation and Topotactic Transformation of Iron Sulfide Nanosheets — score: 1.000
- Probing the proton exchange kinetics of BaZr0.1Ce0.7Y0.1Yb0.1O3− ceramic electrolyte by operando diffuse reflectance infrared Fourier transform spectroscopy — score: 1.000
- Interfacial characterization in solid-state lithium metal batteries: advances in temporal, spatial, and energy resolution — score: 1.000
- Resting but not idle: unveiling the mechanistic origin of resting losses for zinc anodes — score: 1.000
- Utilising acoustic techniques to improve understanding of the formation process in sodium-ion batteries — score: 1.000
- Revisiting potassium intercalation in graphite: an operando characterisation and computational approach — score: 1.000
- Visualizing diverse lithium growth and stripping behaviors in anode-free solid-state batteries with operando X-ray tomography — score: 1.000
- Lithium solvation and anion-dominated domain structure in water-in-salt electrolytes — score: 1.000
- Spatially-resolved degradation in high-voltage single-crystal cathodes and its mitigation via surface structural pillar and kinetic promoter — score: 1.000
- Understanding operando electronic resistance variation in Li-ion battery cathode materials using in-plane analysis — score: 1.000
- Towards Understanding Electrolyte-Dependant Dynamics and Kinetics of Lithium Deposition and Stripping by Operando Neutron Imaging — score: 1.000
- Thermal Dynamics and Lithium Plating Detection in High-Power Li-Ion Batteries for eVTOL Applications — score: 0.900

- Ultrahigh-Rate Lithium Storage in MoS2 Enabled by Isotropic Ion Transport and Fe-Atomic Site Conversion — score: 0.900
- Challenges and Prospects of Alkali Metal Sulfide Cathodes Toward Advanced Solid-State Metal-Sulfur Batteries — score: 0.900
- Breaking the Durability–Power Trade-Off: Boron-Directed Faceted O3 Cathodes for High-Rate Sodium-Ion Batteries — score: 0.800
- Molecularly Integrated Additive Engineering for Rapid Rejuvenation of Spent Electrolyte — score: 0.800
- Hierarchical Fluorinated Polymer Separator Design Mitigating Bilateral Ionic Crosstalk in Aqueous Batteries — score: 0.800
- Digital Twin of Solid Oxide Electrochemical Cells: From 3D Microstructure Reconstruction to Multiphysics Modeling — score: 0.800
- Room-Temperature Single Li+ Ion Conducting Organic Solid-State Electrolyte with 10−4 S cm−1 Conductivity for Lithium-Metal Batteries — score: 0.800
- Unveiling Entropy-Driven Performance Enhancement in Double Perovskite Oxygen Electrodes for Protonic Ceramic Electrochemical Cells — score: 0.800
- Tip Effect-Driven Charge Transport Enhancement in Silicon-Carbon Anodes for All-Solid-State Lithium-Ion Batteries — score: 0.800
- Dynamic Zn2+-Coordinating Oxygen Sites and Electric Field Modulation in Boron-Integrated Cellulose Nanofiber Separators for Stable Zinc-Ion Batteries — score: 0.800
- In Situ Electrochemistry of Buried Interfaces in Metal Halide Perovskites: Probing Energy Bands, Halide Redox Activity, and Kinetics — score: 0.800
- From HF Scavenging to Li-Ion Transport Enhancement: Multifunctional Separator Enabling Stable Li Metal Batteries in Carbonate-Based Electrolytes — score: 0.800
- Constructing LiMn6 Superlattice Covalent Framework to Enable Reversible Anionic Redox Toward Layer-Structured Oxide for Sodium Batteries — score: 0.800
- Insight Into All-Solid-State Lithium-Sulfur Batteries: Challenges and Interface Engineering at the Electrode-Sulfide Solid Electrolyte Interface — score: 0.800
- Solvation Chemistry-Driven Interfacial Engineering Enables Reversible Anionic Redox in Sodium-Layered Oxide Cathodes — score: 0.800
- Prolonging Storage Shelf-Life of Lithium Metal Batteries with Phase-Change Electrolyte — score: 0.800
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- Reverse-Current Induced Cascade Degradation in Ni–Ru Electrodes: Tracing the Path from Noble Metal Loss to Substrate Corrosion — score: 0.800
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- Taming Metal–Solid Electrolyte Interface Instability via Metal Strain Hardening — score: 0.800
- Closed-Loop Regenerative Cycling of Spent LiFePO4 Cathodes via Integrated Lattice Reconstruction and Hydrometallurgy — score: 0.800