

Here, we report a single-atom copper-alloyed Pd catalyst (Pd<sub>4</sub>Cu<sub>1</sub>) that can achieve highly efficient C-N coupling toward urea electrosynthesis.

Copper (Cu) has attracted extensive attention as an efficient catalyst for persulfate activation due to its diverse activation pathways [28], [29]. Herein, a single-atom Cu embedded ...

Article Published: 08 February 2024 Directing CO<sub>2</sub> electroreduction pathways for selective C<sub>2</sub> product formation using single-site doped copper catalysts Zhengyuan Li, Peng Wang, Xiang ...

Large-area single-crystal high-index copper and nickel foils with several types of facet are fabricated using mild pre-oxidation of the metal foil ...

Copper (Cu) single-atom catalysts (SACs) exhibit great potential for generating multicarbon (C<sub>2+</sub>) products, but the intrinsic activity of single ...

Engineering the coordination environment of single atom catalysts offers to opportunity to optimize electrocatalytic activity. In this work, the authors prepare an ...

The company noted that copper mineralization remains consistent throughout the hole, showing variable oxide minerals such as malachite, chrysocolla, and chalcocite within a primarily sulfide ...

The shock Hugoniot of single crystal copper is reported for stresses below 66 GPa. Symmetric impact experiments were used to measure the Hugoniot of three different crystal ...

Heterogeneous catalytic ozonation (HCO) is a promising strategy for removing organic pollutants from wastewater, but its practical deployment is limited by the scavenging ...

Here, we report the investigation of CO<sub>2</sub> electroreduction on single-atom copper (Cu) electrocatalysts. Atomically dispersed Cu is coordinated on ...

The inactivation of natural enzymes by radiation hinders their utility for radiotherapy. Here the authors report a single-atom copper nanozyme that ...

The long-term stability of single-atom catalysts is a major factor affecting their large-scale commercial application. How to evaluate the ...

A novel form of copper, i.e., microscale single crystal copper cube cluster, was successfully fabricated via

direct current electroplating in copper sulfate solution. The ...

Here, copper single atoms anchored to Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> MXene nanosheets are firstly demonstrated as effective and robust catalysts for electrochemical carbon monoxide reduction, ...

A KOH activation approach is used to create abundant vacancies on the porous graphitic carbon nanospheres, and the created vacancies are ...

Single-end conductor, also referred to as solid conductor or solid wire, is a single wire strand drawn to a specific size from a copper rod. At International Wire, we can produce various ...

Here, the authors report a Cu-CeO<sub>2</sub> single site nanozyme in which Cu single site modification can enhance the peroxidase-like activity and inhibit the hydroxyl radical ...

Herein, by the combination of experiments and first-principles calculations, we demonstrate that copper single atoms, attached in a porous ...

The drop-in design of this classic copper kitchen sink instantly elevates your space without an involved installation. The large single bowl ensures maximum workspace for ...

Crystalline copper Single Crystal Copper (Crystalline Copper) is a subtype of high purity copper metals. Other types include electrolytic copper, which however does not achieve same purity ...

Add artisan detail and refined durability to your home with our pure copper hand hammered toggle wall plate. Meticulously crafted from pure ...

Alloying copper with isolated heteroatoms enables the C protonation of CO<sub>2</sub> to HCOO\* on activated copper sites, resulting in exclusive electrochemical CO<sub>2</sub>-to-HCOOH ...

American Elements produces Single Crystal Copper Substrates in a variety of orientations and dimensions for thin film applications with both polished or unpolished sides.

The demand for high-performance non-precious-metal electrocatalysts to replace the noble metal-based catalysts for oxygen reduction reaction (ORR) is intensively increasing. ...

Copper single crystals oriented for single slip were fatigued (to failure) at room temperature at a constant plastic resolved shear strain amplitude of  $2 \times 10^{-3}$  in high vacuum ...

Cu-based single atom catalysts can convert CO<sub>2</sub> into multi-carbon products, however, the assignment of active sites needs great caution. In this comment, the authors ...

Here, the authors report a chelating strategy to obtain Cu-N/O single sites decorated Cu clusters, which enables energy- and carbon-efficient CH<sub>4</sub> electroproduction in ...

Electrocatalytic nitrate reduction (e-NO<sub>3</sub>RR) shows promise for NH<sub>3</sub> synthesis but suffer from insufficient activity. One mechanism is proposed ...

Application Bare Copper conductors are primarily used for grounding purposes as specified in the National Electrical Code. Soft-drawn solid or stranded conductors, for use as grounding ...

Here, we report a stable single-site copper coordination polymer (Cu (OH)BTA) with periodic neighboring coppers and it exhibits 1.5 times increase of C<sub>2</sub>H<sub>4</sub> selectivity ...

Selective hydrogenolysis of biomass glycerol to propanediol is a promising route for the production of high-value chemicals but remains a challenge. Here, the authors find a ...

Fatigue life prediction of the single crystal copper was conducted based upon the stress-strain response obtained from the cyclic plasticity model. The fatigue criterion takes ...

Efficient electroreduction of CO<sub>2</sub> to multi-carbon products is challenging. Here, the single atom Cu encapsulated on N-doped porous carbon catalysts are designed for reducing ...

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