

The coordination of metallic ions and organic compounds having electron-donating ability can produce metal-organic frameworks (MOFs), a unique composite material with crystalline ...

The unique physiochemical features and varied production techniques of metal-organic framework (MOF) materials have piqued the scientific community's interest in solar cell research. ...

Two-dimensional metal-organic frameworks (2D MOFs) are emerging as a unique class of crystalline porous materials for photocatalytic hydrogen peroxide (H₂O₂) production owing to their ultrathin, ...

This study grafted a bulky azobenzene derivative, 4'-aminoazobenzene-4-sulfonic acid (AABS), onto the surface of ZIF-90, thereby preparing a metal-organic framework material, ZIF-90 ...

In summary, modified zirconium-based metal-organic frameworks (MOFs), particularly MIP-202, were selected for their straightforward and environmentally friendly synthesis approach, ...

Metal organic Framework is a family of 2D transition-metal carbides and nitrides, and has emerged as promising materials for a wide range of applications, particularly in electro- and ...

Metal-organic framework (MOF) is a reliable choice for redox flow battery membrane and electrode modification materials due to its three-dimensional porous structure, suitable specific ...

Metal-organic frameworks (MOFs) have gained attention for solar cells due to their natural porous architectures and tunable chemical structures. They are built by high-symmetry metal ...

This review delves into the application of metal-organic frameworks (MOFs) in solar cell technology, specifically as defect passivation materials crucial for enhancing the efficiency and ...

Covalent organic frame (COFs) are porous crystalline framework materials with topological structure formed by covalent bonding of organic building units [18], [19], [20]. Due to the ...

As a sustainable and green approach, solar-driven interfacial water evaporation (SIE) can recover clean water from diverse water resources such as seawater and wastewater by ...

Perovskite solar cells (PSCs) are emerging as leading contenders in next-generation photovoltaic technology due to their high theoretical power conversion efficiency (PCE) limits and ...

Organic metal framework materials for solar container

Abstract Metal-Organic Frameworks (MOFs) have emerged as versatile materials bridging inorganic and organic chemistry to address critical environmental challenges. Composed of ...

Carbon materials have gained extensive research attention as efficient solar absorbers for solar steam generation owing to the non-toxic nature and environmental friendliness. In this work, ...

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