Energy storage materials phosphorescent materials

Chi et al. review recent advances in natural polymer-based room-temperature phosphorescent materials. They highlight strategies to improve the efficiency and stability of ...

Deng Z, Kong F, Deng Z, et al. Visualizing triplet energy transfer in organic near-infrared phosphorescent host-guest materials. Angew Chem Int Ed, 2024, 63: e202412182

Room temperature phosphorescence (RTP) in metal-free organic materials has attracted considerable attention due to its rich excited state properties, high quantum ...

The material exhibits a phosphorescence lifetime of 0.63 s with dual modulation capabilities: spatial color tuning (purple, green, orange) via controlled afterglow energy ...

The trap inside the long afterglow material can capture and store the excited electrons, and continue to release the excited electrons slowly for a long time after the ...

Persistent luminescence is an optical process by which luminescent materials emit light for minutes or even hours after excitation ceases. Its mystical properties, first ...

In the context of global climate change, the energy crisis, and the demand for reliable technologies based on non-fossil renewable energy sources, solar energy emerges as ...

Photoluminescent materials, characterized by their ability to absorb and re-emit light, have revolutionized diverse scientific and technological fields, including biomedical, lighting, display, ...

Energy Storage Materials is an international multidisciplinary journal for communicating scientific and technological advances in the field of materials and their devices for advanced energy ...

As global warming accelerates at an alarming rate, there has been growing interest in passive radiative cooling solutions that can spontaneously cool objects without ...

Pure organic room-temperature phosphorescent materials LIU Mengyang, SI Yue, DONG Yongqiang, Beijing Key Laboratory of Energy Conversion and Storage Materials, School of ...

Artificial light-harvesting systems based on phosphorescence-type energy transfer from the triplet excited states of organic room-temperature phosphorescence emitters ...

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6 ???· By integrating this time-dynamic feature with afterglow properties, we developed materials for time-multiplexed information encryption (Figure 1b). Information storage in these ...

Organic room-temperature phosphorescent (RTP) materials have garnered significant attention in recent years due to their unique advantages, including diverse molecular structures, excellent ...

Ultra-long room-temperature phosphorescent (URTP) materials offer promising applications in anti-counterfeiting and optoelectronics. This study introduces a one-step ...

This review summarizes leading strategies for constructing multicolor room temperature phosphorescent materials, including push-pull electron effect, ?-conjugation, ...

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