ENERGY STORAGE FLUORESCENT AGENT

Can nanostructured fluorescent systems be efficient luminophores for LSC applications? The superior fluorescence intensity of SiLRNP-PDMS LSCs with respect to LR305-PDMS LSCs further confirms the potentialof such LR305-containing nanostructured fluorescent systems as efficient luminophores for LSC applications. Fig. 7.

Can nanostructured luminophores be used in luminescent solar concentrators? The nanostructured luminophores are based on hybrid core-shell silica nanoparticles. Such nanoparticles exhibit enhanced luminescence quantum yield and photostability. Their use as luminophores in luminescent solar concentrators (LSCs) is demonstrated. The obtained LSCs exhibit high efficiency and prolonged stability.

Are nanostructured luminescent species emissive fluorophores in thin-film LSC devices? In conclusion,novel nanostructured luminescent species based on hybrid core-shell fluorescent NPs featured by enhanced LQY and photostability were synthetized,characterized and used as highly emissive fluorophoresin thin-film LSC devices.

Are luminescent solar concentrators a viable spectral conversion technology? The obtained LSCs exhibit high efficiency and prolonged stability. Luminescent solar concentrators (LSCs) represent a viable spectral conversion technologyto maximize sunlight harvesting while promising to reduce the current gap for integration of solar cells into the built environment.

Can highly luminescent nanostructures reduce Dye aggregation? This result provides a first indication of the viability of the proposed strategy to obtain highly luminescent nanostructures and suggests a significant reductionof dye aggregation phenomena within the NPs.

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Do azo-bf2 photoswitches store and release energy during visible light irradiation? We present here a group of Azo-BF2 photoswitches that store and release energyin response to visible light irradiation. Unmodified Azo-BF2 switches have a planar structure with a large ??-conjugation system,which hinders E???Z isomerization when in a compacted state.

The development of luminescent materials is critical to humankind. The Nobel Prizes awarded in 2008 and 2010 for research on the development of green fluorescent proteins and super-resolved fluorescence imaging are proof ???

Carbon dots (CDs), as a new type of carbon-based nanomaterial, have attracted broad research interest for years, because of their diverse physicochemical properties and favorable attributes like good biocompatibility, ???

Our discovery highlights the potential of using double aliphatic functionalization as a promising approach to facilitate solid-state switching of large aromatic photoswitches. This finding opens up new possibilities for ???

Energy Storage provides a unique platform for innovative research results and findings in all areas of energy storage, including the various methods of energy storage and their incorporation into and integration with both conventional and ???

The covalent organic framework (COFs) were introduced by Yaghi et al. as the new type of crystalline porous organic polymers synthesized through reversible condensations of ???

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Due to the combined effect of increased relaxor behavior and fine grains, excellent comprehensive performances are obtained through doping appropriate amounts of Bi, Yb, Tm, and Zr, Ta, Hf in A- and B-sites of the NaNbO 3 ???

This smart fabric combines energy storage, self-heating, and triboelectric power generation at low temperatures, providing a feasible solution for creating flexible wearable devices for complex environments.

Fluorescence is a remarkable property exhibited by many chemical compounds and biomolecules. Fluorescence has revolutionized analytical and biomedical sciences due to its wide-ranging applications in ???

Carbon/graphene quantum dots are 0D fluorescent carbon materials with sizes ranging from 2 nm to around 50 nm, with some attractive properties and diverse applications. GQD can further ???