

Can luminescent materials be used in solid-state led-based lighting & display applications?

Luminescent materials are continually sought for application in solid-state LED-based lighting and display applications. This has traditionally required extensive experimental effort. More recently...

How are new Luminescent materials developed?

The development of new luminescent materials for lighting and display applications still largely relies on simple design rules, systematic materials synthesis, or serendipitous discovery.

What are the characteristics of persistent luminescence materials?

3.1.1. Luminescence characteristics Persistent luminescence materials absorb various light sources, including sunlight and fluorescence, and convert the accumulated light energy into visible light, which frequently consist of an inorganic matrix (known as host) and activated doping ions (activator).

Why do we need personalized features for luminescent materials?

Personalized features are often required in each specific task to maximize the model's accuracy. Although massive research effort has gone into encoding complex materials data, developing features more specifically for luminescent materials is still critical.

Are nanorods a good choice for LED lighting?

We have developed nanorods with a QY of up to 99%, resulting in ultra-efficient LEDs. These LEDs have achieved a record-high luminous efficacy of 214 lm W⁻¹ (certified by the National Accreditation Service), making them suitable for general lighting applications.

What is a lm w 1 LED luminous efficacy standard?

By 2025, the United States Department of Energy (DOE) has set a goal to achieve the market standard of LE_{ele} = 200 lm W⁻¹ for white LED luminous efficacy; however, this has been challenging due to various reasons.

DOI: 10.1016/j.ensm.2019.02.005 Corpus ID: 139706386; Self-luminous wood composite for both thermal and light energy storage @article{Yang2019SelfluminousWC, title={Self-luminous ...

Overall, strontium aluminate doped with Eu ³⁺ co-doped with Dy ³⁺ (SrAl₂O₄:Eu ³⁺, Dy ³⁺) phosphors and self-luminous pavement for energy storage had great prospects ...

Here we review (1) fundamental physics and efficiency of LEDs, (2) the current efficacy of LEDs, (3) the effect of spectral quality on crop yield, and (4) the potential efficacy of ...

We developed NR-LEDs based on pure nanomaterials with more than 214 lm W⁻¹ luminous efficiency and environmentally robust luminous properties. We have also studied the degradation mechanism of these LEDs

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The great versatility of perovskite materials makes them good candidates to be applied as light storage materials, especially those with persistent luminescence. These solids ...

Lyrow 120 Pcs Luminous Glass Beads 8mm Round Beads Bulk Glow in The Dark Beads Glass Round Loose Spacer Ball Beads Bracelet Beads for Jewelry Making DIY Craft Bracelet (Multicolor) \$15.99 \$ 15 . 99 (\$0.13/Count)

?Glow-In-The-Dark Water Beads?By placing them under indoor lighting or any light source for a while (test confirmation is about 2-4minutes,The time required and the brightness of the water ...

Luminous Energy is committed to enhancing society as well as the environment. In 2013, Luminous embarked on a mission to pioneer world-class renewable energy projects, aiming to ...

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