

Incorporating a phosphor material in solar cells is a promising strategy for absorbing and utilizing solar photon energy in the UV, blue and infrared (IR) range. Phosphor-induced wavelength up-conversion ...

Many progressive studies have been conducted to expand the family of light-conversion phosphors and exploit their application in sensitized solar cells, bringing emerging opportunities to ...

Furthermore, a photo-stimulated luminescence (PSL) originated from Tb^{3+} ions is realized in $SrGa_2O_4:Tb^{3+}$ phosphor induced by 980 nm laser diode with the releasing of the carriers trapped in ...

A unique type of bonding between Ta_3N_5 and $Co(OH)_2$ in the form of Ta-O-Co under photo-electrochemical conditions was found. It led to a surprising improvement in solar water ...

We report a simple method to mitigate ultra-violet (UV) degradation in TiO_2 based perovskite solar cells (PSC) using a transparent luminescent down-shifting (DS) $YVO_4:Eu^{3+}$ nano-phosphor layer. The ...

We report a deep-trap ultraviolet persistent phosphor with thermoluminescence glow peaks beyond 500 K that exhibits intense and long-lasting ultraviolet luminescence under indoor ...

In 2014, Li et al. reported Cr^{3+} -doped Zn-Ga-Sn-O photo-stimulated phosphor for deep and reproducible tissue imaging. ³⁷ After the radiation of ultraviolet light, this phosphor not only ...

First-principle studies within the formalism of density functional theory have been performed to investigate the photoinduced charge transfer in Zn-porphyrin based dye-sensitized solar ...

The photo-induced current of the hot-press-sintered body at 400 lx was ~100 and ~1000 times higher than those of the conventionally sintered body and thin film, respectively. ...

Materials with photochromic (PC) and photo-stimulated luminescence (PSL) properties have been increasingly recognized as promising candidates in information storage and anti-counterfeiting ...

Organic-based phosphors are promising alternatives to rare-earth metal based white light-emitting diodes (LEDs). Integrating phosphors into organic LED systems, however, is constrained by limited ...

A variety of research works have successively done by the researchers in $Ca_2ZnSi_2O_7$ host matrix such as Jiang et al. reported luminescence properties of yellow long-lasting phosphor ...

Perovskite solar cells have emerged as a promising technology for renewable energy generation. However, the

successful integration of perovskite solar cells with energy storage devices ...

The appropriate methods are highly significant for specific applications. For example, the phosphor with uniform morphology and small size prepared via sol-gel method is more suitable for ...

The lower enhancement (compared to 38.6% from silicon solar cells) could be due to the recombination of photo-induced holes and electrons caused by the doping-induced defects in TiO ...

To be specific, long-afterglow phosphor or long-afterglow phosphor/semiconductor composite can be used as a photocatalyst to simultaneously promote the photoredox processes and ...

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Sm³⁺ induced-SrWO₄ phosphor: analysis of photoluminescence and photocatalytic properties with electron density distribution studies Published: 22 April 2020 Volume 31, pages ...



Photo-induced solar container phosphor

Web: <https://lpsolar.co.za>

