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Photoinduced energy storage fluorescent agent

Overview

Can a host-guest approach induce fluorescence quenching?

On the other hand, ultrafast photoinduced electron transfer from dyes (e.g., ICG, AG, and AV) to the fluorescent cage can induce fluorescence quenching. This study provides an insight into the construction of artificial photofunctional systems with energy and electron transfer functions via a host–guest approach in solution.

Which spectroscopic techniques induce fluorescence quenching?

Spectroscopic techniques that confirm energy transfer from the fluorescent cage to dyes (e.g., NiR, R700, and R800) are efficient, which induce the red shift of fluorescence. On the other hand, ultrafast photoinduced electron transfer from dyes (e.g., ICG, AG, and AV) to the fluorescent cage can induce fluorescence quenching.

What is photoinduced electron transfer (PET)?

1. Introduction Photoinduced electron transfer (PeT), a classical electron transfer process, is commonly used in the construction of fluorescent probes.

Can probe 21 be used as a fluorescent imaging agent?

Cell imaging studies indicate that probe 21 can be used as a fluorescent imaging agent for monitoring the dynamic levels of H 2 O 2 in lysosomes (Fig. 19C), brain tissues, and living nematodes.

Why are fluorescent probes used to detect pH?

Fluorescent probes that emit within the visible region of the electromagnetic spectra are widely used to detect pH due to their high sensitivity and specificity.

Is there a near-infrared fluorescent probe for Tyr and melanosome?

Using a similar design strategy, Ouyang and co-workers have developed a near-infrared fluorescent probe (probe 35) for TYR (Fig. 33A). 184 To improve the targeting ability of the probe for TYR and melanosome, m -hydroxybenzyl- and morpholine groups were added to the salicyladazine skeleton, respectively.

Photoinduced energy storage fluorescent agent

A Versatile Photoinduced Electron Transfer-Based ...

A Versatile Photoinduced Electron Transfer-Based Upconversion Fluorescent Biosensing Platform for the Detection of Disease Biomarkers and Nerve Agent

Photoresponsive ?-cyanostilbene-containing fluorescent liquid ...

The fluorescent LCP was obtained by the copolymerization of one LC monomer (CH) and another fluorescent monomer containing ? -cyanostilbene units (TP), designated as ...

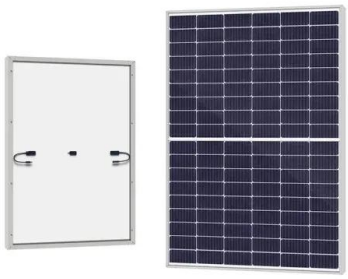
Photoinduced electron transfer (PeT) based ...

Cell imaging studies indicate that probe 21 can be used as a fluorescent imaging agent for monitoring the dynamic levels of H 2 O 2 in lysosomes (Fig. 19C), brain tissues, and living nematodes.

Steering Photoinduced Electron Transfer in Intramolecular

We show the application of a new type of spectator ligand in a bridged Ru-Pt photocatalyst.

In contrast to recently used peripheral ligands, those spectators enable ...



A "Push-Pull" Stabilized Phosphinidene Supported by a ...

A Novel Fluorescent Gemcitabine Prodrug That Follows a Nucleoside Transporter-Independent Internalization and Bears Enhanced Therapeutic Efficacy With Respect to Gemcitabine

Development of Fluorescent-Photothermal Probe Based on Photoinduced

Development of Fluorescent-Photothermal Probe Based on Photoinduced Energy Transfer: A Dual-Readout Immunosensor for the Detection of Illegal Additive Hongzhi Liang 1

A Versatile Photoinduced Electron Transfer-Based Upconversion

A Versatile Photoinduced Electron Transfer-Based Upconversion Fluorescent Biosensing Platform for the Detection of Disease Biomarkers and Nerve Agent

Utilizing Zinc Oxide and Fluorescent Agent as a ...

In this work, we have developed a novel, versatile ETL composed of zinc oxide (ZnO) and a fluorescent agent to enhance the photovoltaic performance and photostability of OSCs.

Photoswitchable diarylethenes: From molecular structures to ...

Diarylethene (DAE) photoswitches, known for their reversible photoinduced cyclization and cycloreversion reactions, have shown great promise in various fields such as ...

Efficient Photoinduced Energy and Electron ...

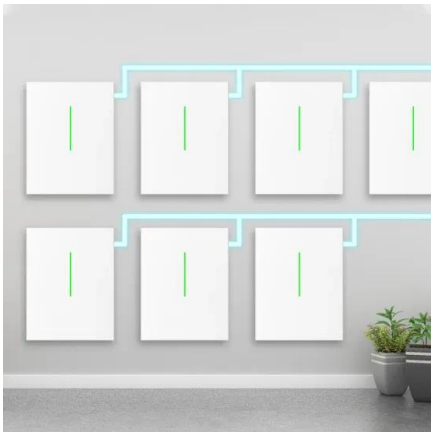
Herein, we report a host-guest approach by using a tetraphenylethene-based octacationic cage and fluorescent dyes to construct artificial photofunctional systems with energy and electron transfer functions.

A Versatile Photoinduced Electron Transfer-Based Upconversion

Upconversion nanoparticles (UCNPs) have emerged to be a new family of fluorescent probes for bioanalytical applications. In a typical design, the UCNPs act as the energy donors in a ...

Photochromic and photo-regulated fluorescent coordination ...

Photochromic and photo-regulated fluorescent coordination polymers derived from thiazolothiazole extended viologen in solid state and polymer film



Utilizing Zinc Oxide and Fluorescent Agent as a Versatile Electron

The development of excellent electron transport layers (ETLs) is crucial for high-performance organic solar cells (OSCs). In this work, we have developed a novel, versatile ETL composed ...

Visible light-responsive azo-based smart ...

Then, we explore the applications of azo-based photoresponsive materials in energy storage, highlighting examples of visible light response. On this basis, the review classified the efforts to enhance ...

Photoinduced electron-transfer chemistry of the bielectrophoric N

Photoinduced electron-transfer chemistry of the bielectrophoric N-phthaloyl derivatives of the amino acids tyrosine, histidine and tryptophan

Unprecedented Photoinduced-Electron-Transfer ...

Introduction Photoinduced electron transfer (PeT) is a fundamental electron transfer mechanism, which is widely employed in the design of fluorescent probes. 1 A typical fluorescent PeT probe consists of ...

Photoinduced Energy

Photoinduced Energy- and Electron- Transfer Between a Photoactive Cage Based on a Thermally Activate Delayed Fluorescence Ligand and Encapsulated Fluorescent Dyes Diego Rota ...

photoinduced energy storage fluorescent molecules

The fluorescent LCP was obtained by the copolymerization of one LC monomer (CH) and another fluorescent monomer containing ?-cyanostilbene units (TP), designated as PCHTP, and it can ...

photoinduced energy storage fluorescent agent

Photoinduced reactions play an important role in the photocycle of fluorescent proteins from the green fluorescent protein (GFP) family. Among such processes are ...

Fluorescence modulation via photoinduced spin crossover switched energy

The photoinduced spin crossover switched the energy transfer from the fluorophore to the Fe II ion, resulting in fluorescence modulation. The presented results provide ...

A method for making a photoinduced energy storage fluorescent ...

Photo-induced energy storage luminous powder is a photo-induced energy storage luminous powder that stores light energy after being irradiated by natural light, daylight, ultraviolet light, ...

Recent Advances in Photoswitchable Fluorescent and ...

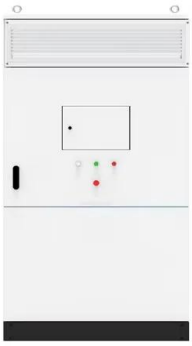
2. Types of Molecular Photoswitches and Construction Strategies for Photoswitchable Fluorescent and Colorimetric Probes Molecular photoswitches used to regulate the luminescent properties ...

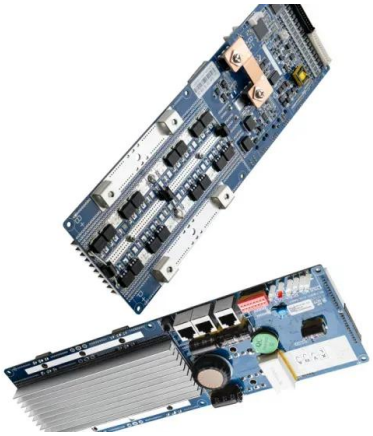
Direct Utilization of Photoinduced Charge Carriers to Promote

Abstract Electrochemical energy storage has been regarded as one of the most promising strategies for next-generation energy consumption. To meet the increasing demands ...

Fluorescent Conversion Agent Embedded in Zinc Oxide as an

The photoinduced charge transfer from CBS to ZnO significantly improves the charge transport properties of ZnO, resulting in faster electron extraction and reduced charge recombination in ...





Development of fluorescent-photothermal probe based on photoinduced

The development of advanced optical probes for point-of-care testing holds great importance in the field of diagnostic technologies. This study focused on the synthesis of a probe featuring ...

A method for making a photoinduced energy storage fluorescent ...

A technology of photo-induced energy storage and production method, applied in the field of painting, can solve the problems of short storage time of the base material and multiple ...

Smart Photochromic Materials Triggered with Visible Light

In this Review, various classes of molecular photoswitches triggered with visible light are reported together with their applications in phototriggered smart materials - polymers, hydrogels, ...

A GSH-Activatable Theranostic Prodrug Based on ...

Traditional chemotherapeutic drugs have limitations due to their non-targeted ability toward cancer cells. Stimuli-activatable prodrugs are designed to overcome these obstacles. However, the real-time monitoring ...

Smart Photochromic Materials Triggered with ...

In this Review, various classes of molecular photoswitches triggered with visible light are reported together with their applications in phototriggered smart materials - polymers, hydrogels, surfaces, porous ...

Photoinduced electron transfer-driven dual-ligand MOF ...

3.6. Sensing mechanism In general, there are several main detection mechanisms based on fluorescence sensing, 1 fluorescence resonance energy transfer (FRET) [36], 2 intramolecular ...

Photo-responsive functional materials based on light-driven ...

In this system, the continuous photoinduced rotation of the motors drives the system to work under far-from-equilibrium conditions, and store energy by converting incident ...

Fast photochromic and fluorescent switchable organohydrogels ...

Fast photochromic and fluorescent switchable organohydrogels based on photoinduced electron transfer for display and storage Na Chen a 1, Wanxiong Yong a 1, ...

Fast photochromic and fluorescent switchable organohydrogels ...

Under the condition that viologen molecules serve as suitable electron acceptors and interact with ZnO nanoparticles, a photoinduced electron transfer reaction can be ...

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