

Downsizing from conventional bulk state to nanoscale dimensions has been widely used as the means to increase the energy storage capacity of TiO<sub>2</sub>. In 1998, Kasuga et al. first reported ...

Using nanotube arrays as structural support allows for an increased surface area (more inner surface exposure) and decreased electrolyte/electrode interfacial resistance. Roh's team disclosed a simple ...

Electrochromic smart windows (ESWs) offer an attractive option for regulating indoor lighting conditions. Electrochromic materials based on ion insertion/desertion mechanisms also ...

Titanium dioxide- (TiO<sub>2</sub>-) based nanomaterials have been widely adopted as active materials for photocatalysis, sensors, solar cells, and for energy storage and conversion devices, especially rechargeable lithium-ion ...

The energy storage capacity strongly influenced by materials structure and morphologies, thus various structural forms should be explored to enhance the electrochemical performance of modified TiO<sub>2</sub> materials. The ...

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Electrochromic smart windows (ESWs) offer an attractive option for regulating indoor lighting conditions. Electrochromic materials based on ion insertion/desertion mechanisms also present the possibility for energy ...

In this study, the microencapsulated phase change material with paraffin as core and inorganic TiO<sub>2</sub> shell was successfully synthesized by in situ hydrolysis and polycondensation of ...

In this paper we presented an extensive study of the electrochemical properties of TiO<sub>2</sub>-based electrodes for energy-storage applications. The materials were prepared via a simple and scalable ...

The mixture of SiO<sub>2</sub> and TiO<sub>2</sub> nanoparticles with different concentrations was added to the base salt. The specific heat of molten salt was increased by 28.1% after added ...

Its unique optical properties lead to improved photovoltaic performance and its bifunctional mechanism produces anti-poisoning effects on catalysts. This review discusses recent scientific and technological advances of nanostructured TiO<sub>2</sub> ...

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