

oxides other than perovskite pdf

Recently, a new candidate has emerged: resistance random access memory (ReRAM). It is based on new materials, such as metal oxides^{1, 2} and organic compounds^{3, 4, 5}, which show a resistive switching phenomenon. The ReRAM memory cell has a capacitor-like structure composed of insulating or semiconducting materials sandwiched between two metal electrodes ().

Resistive switching in transition metal oxides - ScienceDirect

Research into the use of perovskite materials as solar cells has boomed in the last several years, following reports of high energy conversion efficiencies, which have continued to climb.

A new approach to highly efficient, air-stable perovskite

Organic-inorganic perovskite solar cells have recently emerged at the forefront of photovoltaics research. Power conversion efficiencies have experienced an unprecedented increase to reported values exceeding 19% within just four years.

Carbon Nanotube/Polymer Composites as a Highly Stable Hole

Despite the demonstrated high power conversion efficiency (PCE) of perovskite solar cells (PVSC), long-term stability of the device operated in humid environments under photo- and thermal stresses is still a serious concern prior to any commercialization.

Highly Efficient and Stable Perovskite Solar Cells Enabled

A zigzag-like design for Li-ion batteries is proposed to simultaneously achieve superior foldability up to 180° and high energy density. A foldable battery thus fabricated demonstrates an energy density of 275 Wh L⁻¹ and is resilient to fatigue over 45 000 dynamic cycles with a folding angle of 130°, while retaining stable electrochemical performance.

Advanced Energy Materials: Early View

At present world facing major problems of rapid growth of population and global economy due to this demand for energy consumption has been considerably increased.

Overview of nanostructured metal oxides and pure nickel

Distinct Binding of Rhenium Catalysts on Nanostructured and Single-Crystalline TiO₂ Surfaces Revealed by Two-Dimensional Sum Frequency Generation Spectroscopy

The Journal of Physical Chemistry C (ACS Publications)

Titanium dioxide, also known as titanium(IV) oxide or titania, is the naturally occurring oxide of titanium, chemical formula TiO₂. When used as a pigment, it is called titanium white, Pigment White 6 (PW6), or CI 77891. Generally, it is sourced from ilmenite, rutile and anatase. It has a wide range of applications, including paint, sunscreen and food coloring.

Titanium dioxide - Wikipedia

Characteristics Physical properties. As a metal, titanium is recognized for its high strength-to-weight ratio. It is a strong metal with low density that is quite ductile (especially in an oxygen-free environment), lustrous, and metallic-white in color. The relatively high melting point (more than 1,650 °C or 3,000 °F) makes it useful as a refractory metal.

Titanium - Wikipedia

Make it a double: A method for the selective α -dehydrogenation of amides in the presence of other carbonyl moieties under mild conditions has been developed. This strategy relies on electrophilic activation coupled to in situ selective selenium-mediated dehydrogenation. Mechanistic experiments suggest formation of an electrophilic Se IV species.

Angewandte Chemie International Edition: Early View

Published monthly, Superconductor Science and Technology is a truly multidisciplinary journal providing an essential forum for members of the superconductivity research community. More...

Superconductor Science and Technology - IOPscience

Fundamental properties of black phosphorus for biomedical applications. Compared to other 2D materials, BP has been known as a more favorable material for biomedical applications due to its exceptional properties.

Black Phosphorus and its Biomedical Applications

Semiconductor Today : the first choice for professionals who demand timely, focused, top-quality coverage of the compound semiconductor industry.

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