Solar constants and their properties

Lead halide perovskites serve as an important class of photoelectrical materials in modern technological applications, such as light emitting diodes, photodetectors, and solar cells. ...

To study the influence of optical constants of the polluting film on the efficiency of the photovoltaic module, a fractal model, and a complex medium model are proposed. The fractal dimension of ...

The aim of this study was to characterize four different bacteriophages infecting Salmonella Typhimurium, and to reveal the possibility of their use in melon. The research results showed ...

Over the past decade, III-V compounds have emerged as focal point in semiconductor research owing to their exceptional optoelectronic properties. However, conventional dielectric function ...

Dye-sensitized solar cells (DSSCs) are gaining attention for their high efficiency and low cost [6]. This research focuses on DSSCs owing to their low-temperature fabrication, the use of ...

All-inorganic metal halide perovskites have attracted increasing attention as promising materials for inorganic perovskite solar cells, owing to their superior thermal and chemical stability and ...

Sun, star around which Earth and the other components of the solar system revolve. It is the dominant body of the system, constituting more than 99 percent of its entire mass. The Sun is the source of an enormous ...

And was also impractical for verifying co-continuous structures due to their complex interfaces. Nevertheless, it was possible to predict that their dielectric constants fall within an intermediate ...

100 nm thick TiO2/TiN bilayers with varying thickness ratios were deposited via reactive sputtering of a Ti target in controlled oxygen and nitrogen atmospheres. Post-deposition annealing in air ...

This study investigates the influence of drying temperature and layer thickness on the drying kinetics, thermodynamic properties, and modeling of pomegranate peels using a hybrid solar ...

Abstract To study the influence of optical constants of the polluting film on the efficiency of the photovoltaic module, a fractal model, and a complex medium model are proposed. The fractal ...

Our results demonstrate that NiO x thin films sputtered under high magnetic field strengths exhibit increased Ni vacancies, larger lattice constants and reduced internal stress, leading to ...

To explore lead-free halide perovskites for optoelectronic applications, we studied the structural, electrical,

optical, elastic, and thermodynamic properties of Cs 3 Ag 2 Cl 5, Cs 3 Ag 2 Br 5, ...

Mathematics is an important branch that deals with numbers used in daily life. Scientists and scholars in olden times performed some daily life tasks like calculation of the area of circles and measurement of ancient civilizations ...

1 Introduction Perovskite solar cells (PSCs) have shown huge potential in next-generation photovoltaics due to their easy processibility and outstanding optoelectronic properties, such ...

Here, ferroelectric ceramic perovskite (BaTiO3) nanocrystalline particles were added to the PVA matrix in different amounts using the casting technique to create PVA-BaTiO3 films. The ...

These aspects are crucial for preventing local overheating and electrical breakdown, thereby ensuring reliable equipment operation. Traditional PI insulation materials often exhibit high ...

Thus, compositional tuning of Zn x Cd 1-x Se monolayers offers a versatile approach to tailor their optical absorption properties, making them promising candidates for optoelectronic ...

Photoelectrochemical (PEC) water splitting offers a promising route for solar hydrogen production, but current systems suffer from limited light absorption, poor charge separation, and ...

The CRC Handbook is a comprehensive, up-to-date resources for chemistry, physics and other scientific fields. It includes information on physical constants of organic compounds, thermochemistry, properties of the elements ...

2. Thermal Control Coatings: Principles and Function Thermal control coatings are engineered to either reflect incoming solar radiation or emit excess heat into space, depending on mission ...

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