

They are useful in ambipolar charge transfer, high value to absorption coefficient, specific high dielectric constant, low value of exciton and binding energy, magento resistant (MR) properties,...

Perovskite materials have emerged as one of the most promising classes of compounds in recent years due to their unique combination of electrical, dielectric, and magnetic properties, ...

In this review, we overview the fundamentals and current progress for different applications of perovskite materials, including the commonly studied optoelectronic devices (solar cells, LEDs, photodetectors ...

This article review the structure, properties, synthesis and advantages of perovskite material .The general formula of perovskite materials may be written as ABX_3 , where A = large cation, B = small ...

Perovskite materials have emerged as a transformative class of compounds, capturing widespread interest due to their remarkable properties and diverse applications across various fields, ...

To keep researchers well-informed about the rapidly evolving field of materials science, this study provides a comprehensive evaluation of recent applications of perovskite materials-based ...

The transition of perovskite materials from laboratory breakthroughs to industrial-scale applications faces a complex set of interlinked challenges. These barriers span material properties, ...

To sum up, we systematically summarized the recent advances and outlined the future challenges for perovskite materials in applications of solar cells, LEDs, photodetectors, lasers, ...

Currently, diverse preparation methods have been developed for the synthesis of perovskite with different dimensions. For instance, solid phase synthesis method and sol-gel method ...

This review summarizes the recent research on perovskite NMWs, especially synthesis strategies, unique characteristics, and optoelectronic applications, and provides some future ...

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