



Lead Iodide Perovskites

Source: [PIB](#)

- A study led by [Bharat Ratna Professor C.N.R. Rao](#) explores **atomic rearrangements** in [lead iodide perovskites](#) during phase transitions caused by **temperature** and **pressure changes**.
 - **Perovskite structure:** perovskite refers to any material that has a **crystal structure** like the **mineral perovskite**. Ex: Lead Iodide Perovskites and calcium titanium Perovskites.
- **Lead iodide perovskites** exhibit excellent **optoelectrical properties**, making them promising materials for [solar cells](#). However, their **instability (decomposition in humid air)** is a concern due to structural changes under varying conditions.
 - Despite instability issues, it has commercial potential due to their unique crystalline structures and optoelectronic properties.
 - Lead iodide perovskites's **energy conversion efficiency can be higher than** even that of commercial **silicon-based solar cells**
- Addressing instability could lead to more efficient renewable energy generation using lead iodide perovskites in solar cells, [LEDs](#), [X-ray](#) shielding, and [Energy Storage Systems](#).

Read More: [Viability Gap Funding Scheme for Battery Energy Storage Systems](#)

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