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Showcasing research from Dr. Vikram Singh's laboratory, Environment Emission & CRM Section, CSIR-Central Institute of Mining and Fuel Research, Dhanbad, India.

Emergence of carbon dots as luminescent solar concentrators for building integrated photovoltaics

Luminescent solar concentrators are the most helpful tools for increasing the power conversion efficiency of photovoltaic cells through a solar harvesting mechanism. Carbon dots-integrated luminescent solar concentrators have emerged as the most promising building-integrated photovoltaic technology due to their broad absorption range, excellent quantum yield, high photostability, superior exciton optics, and cost-effectiveness. In addition to these qualities, this technology reduces overheating and provides a vibrant exterior colour to the building.

As featured in:



See Vikram Singh *et al.*, *Sustainable Energy Fuels*, 2024, 8, 5638.