



**Showcasing research on the development of highly efficient and sustainable indoor solar cells for self-powered applications, led by Dr. Suraj Soman, CSIR-NIIST, India.**

Enhanced indoor photovoltaic efficiency of 40% in dye-sensitized solar cells using cocktail starburst triphenylamine dyes and dual-species copper electrolyte

Precise structural modifications of dye and electrolyte components create a robust barrier against recombination, marking a transformative leap in sustainable indoor light harvesting. We unveil starburst triphenylamine dye cocktails paired with dual-species copper (II/I) electrolyte, driving dye-sensitized solar cells to 40% efficiency under indoor lighting. This innovation paves the way for self-powered electronics, significantly reducing the environmental impact of discarded batteries and contributing to a greener, low-carbon future.

### As featured in:



See Jubi John, Suraj Soman *et al.*,  
*J. Mater. Chem. A*, 2024, **12**, 32721.