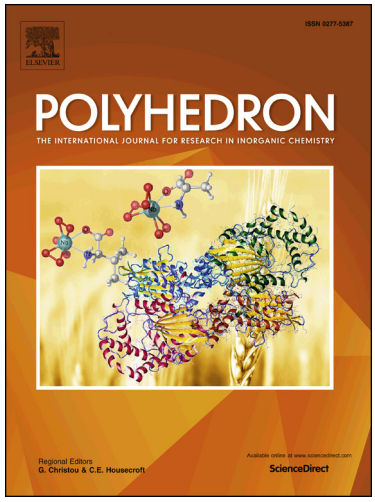

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Synthesis, characterization and use of highly stable trimethyl sulfonium tin(IV) halide defect perovskites in dye sensitized solar cells

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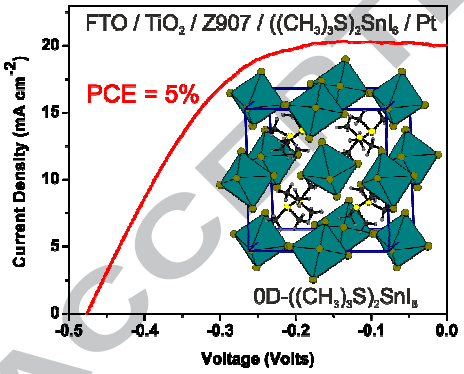

Synopsis

The novel $((CH_3)_3S)_2SnX_6$ (X = Cl, Br, I) defect perovskites form a 0D network of $[SnX_6]$ octahedra. The air-stable and non-toxic materials exhibit a tunable band gap in the range 1.4 – 4.1 eV. $((CH_3)_3S)_2SnI_6$ was successfully incorporated in dye-sensitized solar cells presenting a power conversion efficiency of 5%.