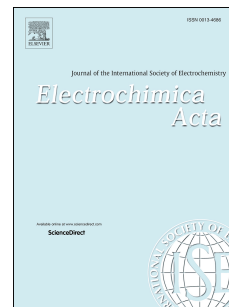


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## New Covalently Bonded Dye/Hole Transporting Material for Better Charge Transfer in Solid-State Dye-Sensitized Solar Cells

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### Abstract

A novel metal-free organic dye based on triarylamine functionalized by a carbazole unit is synthesized and used in solid state dye sensitized solar cells (sDSC). The carbazole is copolymerized with bis-EDOT by *in-situ* photo-electrochemical polymerization leading to a hole transporting polymer material covalently bonded to the light active centre. These first photovoltaic performances results are promising in sDSCs applications.

**Keywords:** Solid-State Dye-Sensitized Solar Cells, *in-situ* Photoelectrochemical Polymerization, Poly(3,4-ethylenedioxythiophene), Hole Transporting Material, Covalently Bonded Dye/HTM.

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