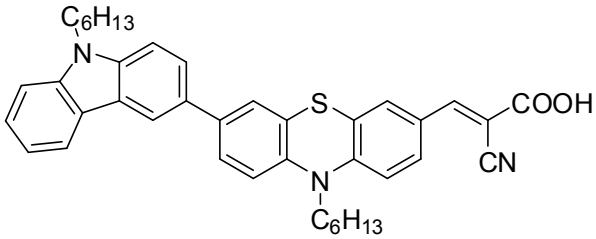
New Phenothiazine-Based Dyes for Efficient Dye-Sensitized Solar Cells

Product Specifications

LT-S9120 PTCbCA

Formula	$C_{40}H_{41}N_3O_2S$
Molecular Weight	627.84 g/mole
Absorption	306, 473 nm (in CH_2Cl_2)
Absorption	447 nm (on TiO_2)
J_{sc}	12.38 mA/cm^2
V_{oc}	0.829 V
FF	0.655
η	6.72 %

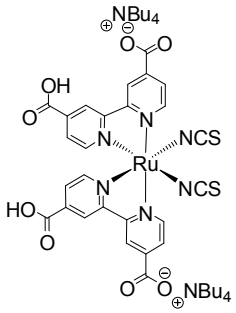


Reference : Journal of Power Sources 243 (2013) 253-259

Features

- New phenothiazine-based dyes have been synthesized, by conecting an aryl group at the C(7) position of phenothiazine extends the p-conjugation of the chromophore.
- The PT1-sensitized DSSC shows a high open-circuit voltage (V_{oc}) of 0.829 V and a final power conversion efficiency of 6.72%, which reaches 92% with respect to that of the reference Ru(II)-based N719 under the same conditions.

Device Application



LT-E409 CBP

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