The photostability of dye-sensitized solid state photovoltaic cells: factors determining the stability of the pigment in a nanoporous n-TiO_2/cyanidin/p-CuI cell

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Abstract. The factors determining the stability of the pigment in a dye-sensitized solid state photovoltaic nanoporous n-TiO_2/cyanidin/p-CuI cell was investigated by varying the gaseous environment around the cell and the sources of light used. It is found that photodegradation of the pigment cyanidin is almost completely suppressed provided oxygen, moisture and UV-light ($\lambda \leq 348$ nm) are excluded.