

# Utilization of natural pigment extracted from pomegranate fruits as sensitizer in solid-state solar cells

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## Abstract

The juice extracted from pomegranate fruits containing cyanin (flavylium) is utilized as the light-harvesting analog in a dye sensitized solid-state photovoltaic cell. Strong chelation of flavylium with  $\text{TiO}_2$  changes it to quinonoidal form. A higher incident photon to current conversion efficiency is observed in solid-state  $\text{TiO}_2$ |pomegranate pigment|CuI solar cell compare to that of the cells ( $\text{TiO}_2$ |dye|CuI type) sensitized with other natural pigments.

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