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Photovoltaic Cell Based on the Near-IR Sensitization of Zn Chlorin- e_6 Adsorbed on a Nanocrystalline TiO_2 Film Electrode

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The photovoltaic cell using visible and near-infrared sensitization of nanocrystalline TiO_2 films by chlorophyll derivative, zinc chlorin- e_6 (ZnChl- e_6), is developed. The short-circuit photocurrent (I_{SC}) is $0.27 \text{ mA}\cdot\text{cm}^{-2}$, the open-circuit photovoltage (V_{OC}) is 422 mV, and the fill factor (FF) of device using ZnChl- e_6 adsorbed on nanocrystalline TiO_2 film electrode is estimated to be 41.0%, respectively.

Keywords: [Chlorophyll](#), [Photovoltaic cell](#), [Photosynthesis](#), [Zinc chlorin](#)



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