Short Communication

Design of a Semiconductor Photoelectrochemical Cells Using Orange Dye and NaCl Aqueous Solutions

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This paper describes a new design of the semitransparent photo-electrochemical cells using the orange dye ($C_{17}H_{17}N_5O_2$) and NaCl aqueous solutions. In the proposed design, the semi-transparency is realized by fabrication of the light receiving surface using a series of transparent and opaque strips. This new design facilitates the easier fabrication of the semitransparent electrochemical devices. The photo-electrochemical cell showed promising results to be potentially used for the low power energy generation and photo-sensing applications.

Keywords: Semi-transparent, photo-electrochemical, energy harvesting, orange-dye, p-Si, open circuit voltage, short circuit current

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