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Photo galvanics: Studies of Green Photo Sensitizer (*Prosopis cenaria* Leaf Extract) for Solar Energy Conversion and Storage with Triton X-100-EDTA- System

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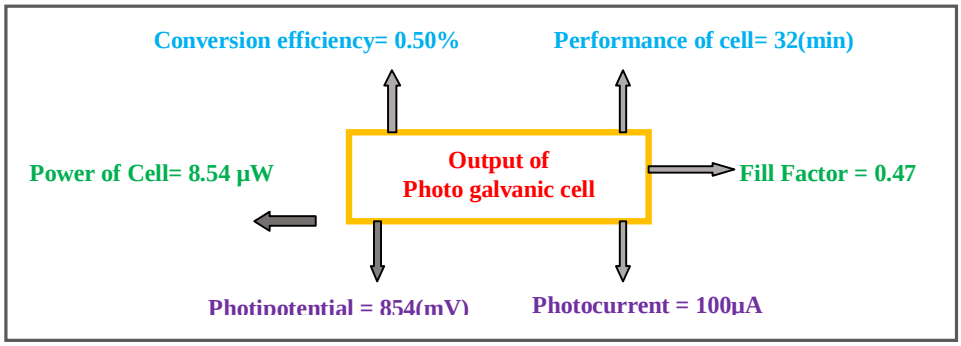
ABSTRACT

The Photo galvanic effect was studied in Photo galvanic cell comprises with Prosopis cinneria leaf extract as green photo sensitizer with Triton X-100-EDTA systems. EDTA used as a reductant and Triton X-100 as a surfactant. Natural photo sensitizer (Prosopis cinneria leaf extract) has been studied to applicable some insight with intent of finding relatively cheaper, cost effective and eco friendly photo sensitizer for further improvement of the efficiency of the photo galvanic cell. The observed cell performance in terms of photo potential, photocurrent, fill factor and storage capacity are 854.0 mV, 100.0 μA, 0.47 and 32 min, respectively. The effects of different parameters on electrical output of the cell were observed and a mechanism has been proposed for the renewable energy production system is discussed in this work, together with the future outlook on the impact of green photo sensitizer for applied alternative green energy source for the Sustainable development in present scenario.

Graphical Abstract



Keywords: *Proscopis cineria* Extract, Trition X-100, EDTA, Photo potential, Photocurrent.