Recent Advances in Optimization of Photoanodes and Counter Electrodes of Dye-sensitized Solar Cells: A review.

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Abstract: Since 1991, Dye-sensitized Solar Cells (DSSCs) have emerged as a potential alternative to conventional silicon photovoltaics for conversion of solar energy to electric power, due to their advantages of cost-effectiveness, sustainability and ease of fabrication among many. Being a kind of molecular system in the manner that the functioning of the DSSC is over and above the sum of the functions of individual components, effective understanding and optimization of the components of the DSSCs is important for the optimization of the device itself. Therefore, this review is focused on the recent developments made in the fabrication of two particular components of the DSSC viz. the Photoanode and the Counter Electrode (CE).

Keywords: Dye-sensitized Solar Cells (DSSCs), Photoanode, Counter Electrode (CE), Bifacial DSSCs.