



A **dye-sensitized solar cell (DSSC, DSC or DYSC)** is a relatively new class of low-cost solar cells that belong to the group of thin-film solar cells. It is based on a system formed between a photo-sensitized anode and a cathode system. This cell was invented by Michael Grätzel and Brian O'Regan at the University of Cambridge in 1991 and are also known as **Grätzel cells**.

This cell is extremely promising because it is made of low-cost materials and does not need elaborate apparatus to manufacture. In bulk it should be significantly less expensive than older solid-state cell designs. It can be engineered into flexible sheets and is mechanically robust, requiring no protection from minor events like hail or tree strikes. Although its efficiency is less than the best thin-film cells, its cost (kWh/(m²·annum·dollar)) should be high enough to allow them to compete with silicon. Commercial applications, which were held up due to chemical stability problems are now forecast in the near future to be a potentially significant contributor to solar energy generation by 2020.

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