

## Improving Light-harvesting of Nanocrystalline TiO<sub>2</sub> in DSC

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The Grätzel cell offers one solution to the problem of meeting the worlds future energy needs in a green and renewable way. It consists of a working electrode of dye-sensitized nanocrystalline semiconductor film (usually TiO<sub>2</sub>) that is deposited onto a conducting support. A platinum counter electrode and hole-conducting medium (usually I<sup>+</sup>/I<sub>3</sub><sup>-</sup> redox couple) that connects the working and counter electrodes completes the cell. Such devices have shown promising efficiencies of up to 11% recorded.<sup>1-3</sup> Efforts to improve upon this efficiency are manifold ranging from modifications to the nanocrystalline film, dye sensitizer and redox couple. One of the many approaches we are investigating involves improving the spectral response of the sensitized film by the co-sensitization of 2 or more different dye sensitizers onto the TiO<sub>2</sub>, improving the current and voltage of the cell.<sup>4</sup>

### References

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