FotoFlex

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FotoFlex Boris Cergic, Valentin Rezsnyak HTL Dornbirn, Vorarlberg, Austria In 1991 Prof. Dr. Michael Grätzel published a solar cell, based on organic dyes (named after it's Inventor "Grätzelcell"), which is known to be an alternative to conventional silicium-based solar cell types. By replacing materials from the invention of Dr. Grätzel we transformed a rigid, fragile cell into a resilient, flexible solar cell. Therefore, we started our own basics research in order to gain better understanding on the impact of different fruit extracts as well as different electrode materials and conductive coatings on the power outcome of our cells. Following these steps, we started to change the dimension and structure of our prototypes, leading to a continuous developing process. In the current state of development, the rigid glass from the original Cell is replaced by special coated carbon fibres and carbon fibre tissues. Due to the high adsorption capacity of the large surface area of the individual fibres, the special adhesive, to which the dye attaches operate very well. This may lead us to an entirely new development which makes providing eco-friendly electricity while only using a small amount of low cost and easily accessible materials realistic for everybody.

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