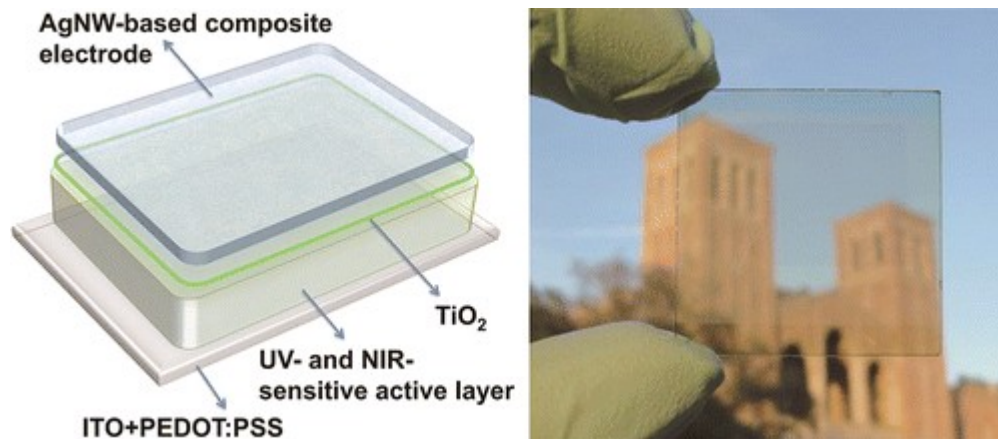


From basic solid state research to application (Prof. Franke)

Seminar talk by Zoltán Müller-Karpe on June 4th, 2013

Visibly Transparent Organic Solar Cells - Broader Applications for Photovoltaics



Img: CC. Chen, Visibly Transparent Polymer Solar Cells Produced by Solution Processing, July 2012

Abstract

Photovoltaics utilizes semiconductors to convert solar radiation into usable electrical power. It plays a globally growing role as a cheaper, cleaner and more sustainable alternative to fossil and nuclear energy.

This talk will give a rough overview of the history of the solar cell as well as an overview of the various different types of solar cells. It will then focus on the rather new field of research of visibly transparent solar cells. This type of solar cells might lead to broader applications for photovoltaics e.g. building integrated PV and integrated PV chargers for portable electronics.

The working principle of organic solar cells will be described. Some of the challenges in the development of commercial organic solar cells will be covered. The final part of this talk will discuss how a visible transparent solar cell can be manufactured using polymers absorbing in the near infrared and UV range.