

Organic and Perovskite Photovoltaic device fabrication & characterization at LIOS

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Abstract

OPV:

Organic PhotoVoltaics is a relatively young discipline in the field of photovoltaics. Plenty of advantages as compared to the conventional products on the market are:

- i.) they are lightweight, f
- ii.) flexible, and have a
- iii.) low production cost with scale up possibility using roll to roll printing.

These specific properties of the OPV device make this technology very interesting for many integrated applications.

Perovskite Solar Cell:

This is a new organic/inorganic hybrid PV concept. Perovskite Solar Cells. show a top efficiency of ~ 24% for photovoltaic energy conversion. This is remarkably high for such a young research field (Perovskite solar cells are in the literature since five years). Because of the rapid progress in improving the power conversion efficiency, some physical mechanisms in these organic/inorganic hybrid "ionic" semiconductors are still unknown.

LIOS:

LIOS is an Institute of the Johannes Kepler University of Linz. Worldwide highly ranked and having many young researchers coming from all over the world, this Institute focuses on Material Science for Solar Energy Conversion and CO₂ recycling. Sometimes the institute hosts researchers from more than 15 different nations. The Institute's facilities allow the preparation of photovoltaic solar cells with many different techniques. Standard and high-end measuring equipment is used for the investigation and characterization of prepared devices.

Biography

Since 2012 Senior Technician, Institute Physical Chemistry & Linz Institute for Organic Solar Cells, Johannes Kepler Universität Linz

2002 - 2011 Senior Technician, Konarka Technologies Austria