

Summery

The proposed research project aims to investigate the interface formation in organic solar cells. A series of ZnO precursors with different doping levels will be synthesized and tested as n-type interfacial layer in organic solar cells. The correlation between the doping level and the work function of the metal oxide on the one hand and the Voc and device performance of the solar cell on the other hand will be established. From the comparison between experimental results and simulation, fundamental aspects in the function of interface materials in organic solar cells will be addressed:

- The origin of a 2nd diode
- Surface recombination
- Stability of electrode interfaces.