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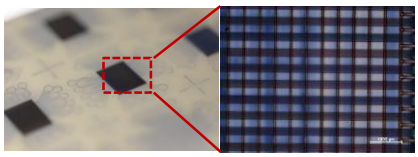
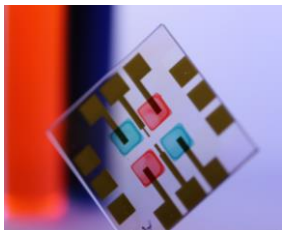
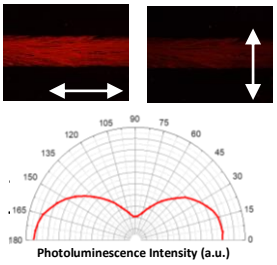
Master- | Bachelorarbeit | Praktikum

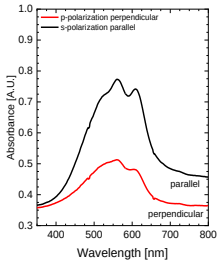
26.06.2020

Fabrication of Polarization Sensitive Organic Photodetectors









Motivation

Optical detectors hold a place of paramount importance in modern technology as crucial sensing elements in the fields of imaging, and consumer electronics. Besides intensity and wavelength, the determination of the state of polarization of light adds significant information that is beneficial for applications in telecommunications, material characterization or biosensing.

Tasks

This project proposes the development of novel solution-processed organic photodiodes capable of detecting the polarization state of light. In a new concept, you will fabricate photodiodes based on a self-assembly process for polymeric semiconductors. The induced anisotropy of the films will enable the detection of polarized light. You will be in charge of preparing thin films and characterize their optical properties. You will utilize the best films to fabricate photodetectors and characterize them in terms of their selectivity to polarization, spectral responsivity, detectivity and bandwidth.

Requirements

Interest for Research.
Background in Physics, Electrical Engineering, Materials Science or Chemistry
Previous knowledge in Organic Electronics is desirable but not necessary.

Research Field
Printed and Organic Electronics

Work Place
InnovationLab (iL)
Heidelberg

Practical Work in Laboratory

Electrical Engineering, Physics, Physical Chemistry

Start Date
Immediately

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