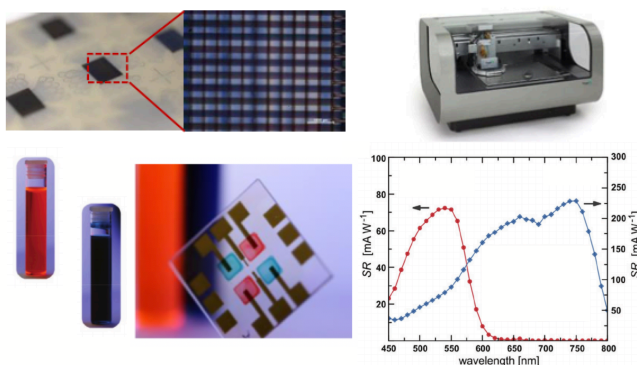


Fabrication of color-selective Organic Photodetectors



Motivation

Optical detectors hold a place of paramount importance in modern technology as crucial sensing elements in the fields of imaging, and consumer electronics. Currently, novel material systems for solution-processable organic photodiodes are of high interest in order to achieve a versatile functionality regarding wavelength selectivity combined with low-complexity and cost-efficient fabrication processes. The functionality of these devices particularly benefit applications in lightweight, flexible, and wearable electronics.

Tasks

This project proposes the development of novel material systems for solution-processed organic photodiodes capable of detecting selective wavelengths of light. In a new concept, you will fabricate photodiodes based on a strategic selection of materials and ink formulation for application-oriented devices. 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 crucial device parameters such as 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.

<https://www.innovationlab.de/en/research/device-physics/lti>

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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