

Bachelor/Master theses: Drift-diffusion simulations of solution processed solar cells

- We are investigating the influence of material properties and device architecture on the performance of solution processed solar cells (OPV and perovskite).
- We are extracting material properties from transient and steady state measurements.
- We use drift-diffusion simulations and combine them with machine learning methods.
- For a thesis, we are looking for students with an interest in device physics, numerical simulations and data analysis. Prior knowledge in programming languages such as Matlab or python is beneficial.
- You will analyze data of solar cells which are fabricated and characterized in our labs by high-throughput methods.
- Current theses topics are the analysis of vertical gradients in the absorber layer (master thesis) and the thickness-dependence of the fill factor in comparison with experimental data (bachelor thesis).

If you are interested, please contact Dr. Karen Forberich (k.forberich@fz-juelich.de, 09131-9398-156).

