Kolloquium Energie- und Halbleiterforschung

Universität Oldenburg
Institut für Physik
Abteilung Energie- und
Halbleiterforschung

Dienstag, 23.05.2017, 16.15 Uhr in W0 0-001

Johannes Schoneberg

AG LCP, EHF

Simulation of Cu(In,Ga)(S,Se)2 solar cells with varied buffer- and i-layer Configuration

The investigation of $Cu(In,Ga)(S,Se)_2$ (CIGSSe) solar cells has been a research topic over decades and within this time, the cell structure ran through many steps of improvements. Consequently, also the complexity of the system grew. One approach to handle this complexity is the combination of intensive device characterization and electro-optical simulation.

The studies presented in this work should help improving a simulation tool, which is calibrated on CIGSSe-based solar cells provided by the AVANCIS R&D center in Munich. This presentation focusses on the update of the calibration by a full solar cell characterization over a wide range of temperatures and the subsequent adjustments of the set of parameters.