

Plenary Talk PV XIV Fri 9:15 H1
Transparent Electronics — ●MARIUS GRUNDMANN — Universität
Leipzig, Institut für Experimentelle Physik II

The use of transparent conductors such as indium tin oxide or ZnO:Al is already wide spread, e.g. in front contacts to displays and solar cells, in low emissivity windows and current spreading layers. Further

advances in transparent semiconductors and transparent gate contacts allow the fabrication of transparent thin film transistors (TTFT) and will enable completely new applications such as fully transparent displays and functional surfaces. We review the state of the field, the device concepts and the material physics behind it, and present high-gain inverters and transparent logic integrated circuits based on transparent Schottky contacts to zinc oxide.