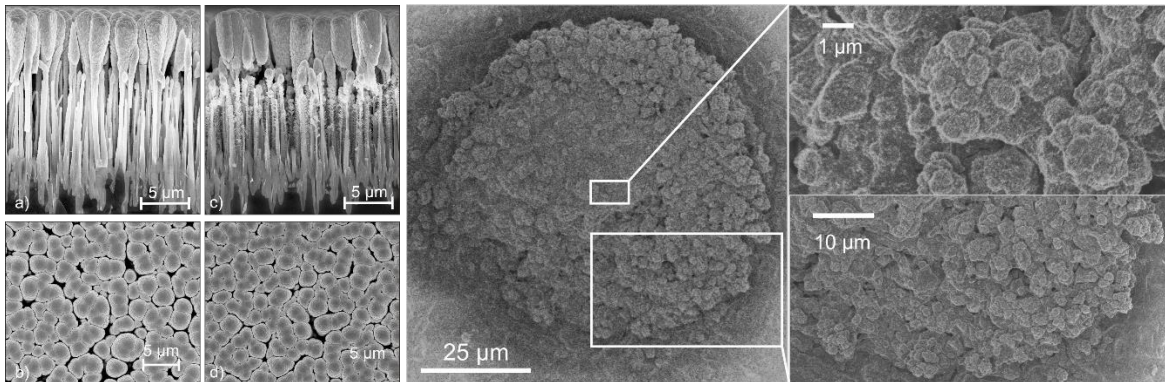


From Nano to Macro: Integration Strategies for Future Systems

Nanostructured materials are the key for a wide range of new applications in electronics, optics, fluidics and MEMS. Although the manufacturing of such structures is often well investigated and cost-effective, their integration in usable systems is often an unsolved and elaborate process. Therefore, the integration of such nanostructures into micro- and macrosystems is an ongoing challenge, which requires higher efforts with downscaling features. The researchers at the institute MacroNano® at TU Ilmenau focus exactly on this topic. The presentation will give some examples for possible integration strategies, which base for example on black silicon, thick film technology and LTCC ceramics.



Black silicon coated with a reactive layer for chip joining

Electropolymerized PEDOT on a thick film electrode decreases the impedance of microelectrodes