

GI-MS46-P17 | USER INFRASTRUCTURES AT THE HELMHOLTZ-ZENTRUM BERLIN FÜR MATERIALIEN UND ENERGIE HZB

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Helmholtz-Zentrum Berlin für Materialien und Energie is a world-class research centre for energy materials research, contributing to knowledge-based solutions to great societal challenges. HZB explores synergies by integrating excellent research with the operation of dedicated infrastructures to create a unique research environment. We provide BESSY II a third-generation synchrotron radiation source for the national as well as international scientific community and industry. BESSY II delivers brilliant X-ray light from Terahertz to hard X-rays with an emphasis on soft X-rays which allows the investigation of a wide range of materials from semiconductors and nanomaterials to polymers and proteins towards meteorites and archaeological artefacts. EMIL, our Energy Materials In-Situ Laboratory, directly adjoins BESSY II and enables insights into thin-film materials to be obtained during their actual fabrication processes. Our multi-user platform CoreLabs at HZB complements the synchrotron infrastructures. CoreLabs are dedicated to research and development of new and improved materials for energy conversion and storage applications as well as energy-efficient future IT. They provide state-of-the-art laboratories and unique equipment and will serve the wider scientific community by offering services and access to external academic and industrial partners. Modern X-ray diffractometers are available in the X-Ray CoreLab for crystallography analyses. The Correlative Microscopy and Spectroscopy CoreLab is being operated in collaboration with ZEISS labs@location. Researchers are able to fabricate and image nanomaterials using the very latest electron and ion microscopes. The development of hybrid materials and components based on silicon and perovskite used for energy conversion is the task of the HySPRINT CoreLab.