

Structural Enzymology on EMBL beamlines at PETRA III

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The Hamburg site of the European Molecular Biology Laboratory, EMBL, is operating three endstations – P13, P14, T-REXX - for macromolecular crystallography on the PETRA III synchrotron in Hamburg. T-REXX is operated in collaboration with HARBOR (<https://www.cui.uni-hamburg.de/en/harbor.html>). Instrumentation for sample characterization and crystallization is available in the adjacent Sample Preparation and Characterization Facility. We will present an overview of recent applications of the facilities in structural enzymology including crystal structure determination at atomic resolution, time-resolved crystallography, structure determination from micro-crystals via serial crystallography and from large crystals of large complexes. New opportunities arising with the recently installed EIGER2 16M CdTe detector and the planned fourth generation synchrotron PETRA IV will be discussed. We gratefully acknowledge funding from the BMBF and iNext-Discovery. For access to the facilities: smis.embl-hamburg.de.