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BESSY II+ - Operando Capabilities for the Energy Transition

Tuesday 27 August 2024 13:00 (15 minutes)

In 2023 BESSY II celebrated 25 years of successful user operation. With over 12.000 publications and 30.000 beamtime proposals from 58 countries continuous demand for this state-of-the-art light source is impressively demonstrated, not least because it mirrors the requirements of a changing user community, scientific needs and societal demands.

BESSY II+ is now the upgrade program to keep BESSY II in a top position for the next decade while bridging to its successor source BESSY III which is expected to start user operation in 2035. The ambitious holistic BESSY II+ project is subtitled “Operando Capabilities for the Energy Transition”. Its focus is on understanding fundamental processes under real conditions, i.e. investigations of materials and systems “at work”(operando). BESSY II+ is mutually stimulated by intense interaction with its user community and by longstanding partnerships, for example with the Max-Planck Society (e.g. flagship projects like EMIL and CatLab), and the PTB (metrology with synchrotron radiation). In this presentation the main goals of BESSY II+ will be discussed:

- Innovative experimental infrastructures
- Operando capabilities, sample environment, and integrated laboratory concepts
- Automation, digitalization and big data methods
- Novel accelerator instrumentation

I plan to submit also conference proceedings

No

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