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What is Brilliant and BRIGHT at the Australian Synchrotron

Thursday 29 August 2024 12:00 (15 minutes)

The Australian Nuclear Science & Technology Organisation (ANSTO) operates, maintains, and develops a wide range of research infrastructure (worth ~1billion) for the benefit of all Australians, including some of the largest research facilities

The Clayton campus in Melbourne is home to the Australian Synchrotron, a 3 GeV electron accelerator that is used to generate brilliant beams of infrared and X-ray light for use in a vary array of scientific research –studies in radiotherapy, biomedical imaging and 3-D computed tomography; macromolecular crystallography for the study of the biomolecular basis of disease and the development of new medicines; agricultural, environmental and climate change research; studies in advanced electronics and advanced energy materials; planetary sciences; engineering; advanced manufacturing; and cultural heritage studies. The Australian Synchrotron currently hosts over 1000 experiments per annum across its 14 operational beamlines and is currently in the middle of the 100million BRIGHT Program to design, build and commission the new suite of next – generation beamlines at the facility.

This presentation will showcase recent capability upgrades, as well as a range of impactful research outcomes from the Australian Synchrotron in the fields of health, advanced and energy materials, environmental and climate change research, engineering materials and cultural heritage studies. I will also highlight the new research capabilities from our next-generation BRIGHT Beamlines and look to the future of Synchrotron research capabilities for Australia.

I plan to submit also conference proceedings

Yes

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Track Classification: 11. Synchrotron radiation facilities: Facility updates and new facilities