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What is Brilliant and BRIGHT at the Australian Synchrotron

Tuesday, 19 November 2024 09:00 (30 minutes)

The Australian Nuclear Science & Technology Organisation (ANSTO) operates, maintains, and develops a wide range of research infrastructure (worth ˜1$billion$) $forthebenefitofallAustralians$, $includingsomeofthelargestresearchfacilities$

The Australian Synchrotron generates brilliant beams of infrared and X-ray synchrotron light for use in a vast 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 $100millionBRIGHTProgramtodesign$, $buildandcommissionthenewsuiteofnext-generationbeamlinesatthefacility$.

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.

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