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18 years of Wombat – the high intensity diffractometer at OPAL

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Wombat is a high intensity neutron diffractometer located in the OPAL Neutron Guide Hall. It is primarily used as a high-speed powder diffractometer, but the high-performance area detector means that measurements have also expanded into texture characterisation and single-crystal measurements. Wombat is particularly optimized for the study of materials in situ and in operando, measurements which are often carried out in partnership with the ACNS sample environment team.

Over 18 years of operation, Wombat has been used to explore a broad range of materials, including: novel hydrogen-storage materials, negative-thermal-expansion materials, cryogenic minerals, piezoelectrics, high performance battery anodes and cathodes, high strength alloys, multiferroics, superconductors and novel magnetic materials. Our poster will highlight the capacity of the instrument, recent comprehensive characterisation measurements, and some recent results.

Topics

Neutron Instruments and Techniques

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