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AUSTRALIAN CENTRE FOR NEUTRON SCATTERING: SAMPLE ENVIRONMENT REPORT

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In the past 2 years since the 2016 AANSS symposium, the sample environment group of the Australian Centre for Neutron Scattering (ACNS) has continued to facilitate neutron experiments and expand sample environment capability. This report will present the current sample environment and laboratory facilities and recent developments.

We have made progress in light irradiation and spectroscopy developments; on a new temperature controlled multi-sample changer with tumbling capability; on a rotational PE Cell; and on new sample probes made from composite materials. Other improvements include new high pressure couplings for helium compressors and modifications to a dilution insert to allow larger samples and use in other cryostats extending the capability.

Ongoing major projects are a new superconducting split-coil magnet dedicated to SANS and TOF-PAS, two new cryostats (1.5 K to 800 K temperature range) with the aim of halving the system and sample cooling time and a new dilution fridge that will allow top-loading of samples and the ability to take much larger samples than the existing dilution insert.

There have also been staffing changes with previous Sample Environment Group Leader, Paolo Imperia moving into the Operations Manager position. The new group leader, Rachel White, was recently appointed. Our Laboratory Manager, Deborah Wakeham, joined us in July 2017.

Topic

Neutron Instruments & Techniques

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