

EMU cold-neutron backscattering spectrometer at ACNS

Monday, 2 December 2019 18:00 (1)

EMU is the high-resolution neutron spectrometer installed at the OPAL reactor, ANSTO, which delivers 1 μeV FWHM energy transfer resolution for an accessible $\pm 31 \mu\text{eV}$ energy transfer range. The spectral resolution is achieved by neutron backscattering from Si (111) on the primary and secondary flight paths, allowing up to 1.95 \AA^{-1} momentum transfer range. The spectrometer is well suited for quasi-elastic and inelastic neutron scattering studies, notably in the field of soft-condensed matter including biophysics and polymer science, chemistry and materials science, and geosciences.

Most experiments since the start of operation late 2015 were carried out with standard cryo-furnaces (2 to 800 K temperature range). Spectrometer beam-time access is merit-based, thus welcoming as well experiments in other materials research areas, and including experiments that may require e.g. other ancillary equipment such as existing controlled-gas delivery, and potentially pressure, applied field set-ups, etc.

Examples of the spectrometer capabilities are shown through select case studies.

Speakers Gender

Travel Funding

No

Level of Expertise

Expert

Do you wish to take part in the poster slam

No

Primary author(s) : DE SOUZA, Nicolas (ANSTO - Australian Centre for Neutron Scattering); KLAPPROTH, Alice (ANSTO)

Presenter(s) : DE SOUZA, Nicolas (ANSTO - Australian Centre for Neutron Scattering)

Session Classification : Welcome Function