

Current high-pressure capabilities at ACNS and future plans

Friday, 13 November 2020 16:15 (20 minutes)

High-pressure (>1 Kbar) is a marvellous variable, which can reveal mechanical properties, structural transitions and exotic behaviours. This pairs very well with neutron scattering, where the highly penetrating nature of neutron beams is ideal for accessing sample within complex sample environments. The Australian Centre for Neutron Scattering (ACNS) has developed a number of capabilities for high-pressure experiments, mainly revolving around the use of our Paris-Edinburgh press but more recently with miniature diamond-anvil cells. Some of these, such as our ability to compress radioactive samples as well as combining high-pressure and high-electric fields are unique in the world. Here we review the high pressure capabilities at ACNS, and outline some directions for capabilities and measurements.

Level of Expertise

Experienced Research

Speakers Gender

Female

Do you wish to take part in the poster slam

No

Primary author: MAYNARD-CASELY, Helen (Australian Nuclear Science and Technology Organisation)

Co-authors: BOOTH, Norman (ANSTO); Dr SHUMACK, Amy (ANSTO); BALDWIN, Chris (ANSTO); WHITE, Rachel (ANSTO); RULE, Kirrily (ANSTO); MCINTYRE, Garry (Australian Nuclear Science and Technology Organisation); NOVELLI, Giulia (University of Edinburgh)

Presenter: MAYNARD-CASELY, Helen (Australian Nuclear Science and Technology Organisation)

Session Classification: Manufacturing & Engineering

Track Classification: Manufacturing & Engineering