



Contribution ID : 88

Type : Poster

Single Crystal High Pressure Crystallography on the Australian Synchrotron MX1 Beamline

The application of pressure on crystalline systems has been shown to induce significant structural changes. The ongoing development of diamond anvil cells (DACs) has allowed the study of single crystal systems under high pressure through X-ray diffraction.

In collaboration with Prof. Stephen Moggach at the University of Western Australia, the MX beamline team have developed capability for high pressure crystallography in DACs on the MX1 beamline. The use of mini-DACs has allowed us to mount the DAC on the goniometer as we would a normal pin, allowing high-pressure experiments to be undertaken with minimal disruption to the beamline setup.

Here we will discuss the challenges which were overcome to make this technique as user friendly as possible, and the results from some of the first data we collected on crystals under pressure on MX1. These include surprising and exciting results from the application of pressure to a highly porous framework, data which was impossible to collect using home source diffraction techniques.

Level of Expertise

Experience Researcher

Presenter Gender

Woman

Pronouns

Do you intend to attend UM2022

In person - Melbourne

Students Only - if available would you be interested in student travel funding

Students Only – Do you wish to take part in the Student Poster Slam

Terms and conditions (Please confirm that you have read all the requirements and agree to the conditions)

Yes

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Session Classification : Poster

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