Contribution ID : **84** Type : **Poster**

# Opportunities for Catalysis Studies using the Beryllium Filter Spectrometer

*Thursday, 12 November 2020 17:43 (1)*

The Beryllium Filter Spectrometer (BeF) is one of the inelastic neutron spectrometers located on Taipan, the other being a classical thermal triple axis spectrometer (TAS). The BeF is ideal for vibrational spectroscopy investigations on a molecular level. In particular as the total scattering cross-section of hydrogen is about 82 barn, which is mainly due to incoherent nuclear scattering from the protium isotope, neutron spectroscopy is incredibly sensitive to hydrogen vibrations that can be interpreted on a localised molecular level, over and above most scattering from other isotopes. With this in mind and given the experience gained in successfully using the BeF spectrometer over the last three years, a review of catalysis work is presented that have involved such filter-based spectrometers. In particular studies focusing on hydrogen are highlighted. One of the overarching goals of catalytic studies is the elucidation of structure-function relationships which neutron spectroscopy in Australia could significantly contribute to using the filter spectrometer on Taipan.

## Speakers Gender

Male

## Level of Expertise

Expert

## Do you wish to take part in the poster slam

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**Session Classification :** Poster Session

**Track Classification :** Neutron Instruments & Techniques