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Contribution ID: 370

Type: **Poster Presentation**

Effects of the wetting process in wool and mohair fibres studied by small-angle neutron scattering (SANS)

Thursday, 12 July 2012 17:30 (2 hours)

Abstract content
 (Max 300 words)

Although the hygroscopic nature of wool has been known for many years and its overall effect on the properties of wool fibres, there are no reported observations of where the water molecules are situated within the fibre structure. SANS was used to observe the location of water in the fibres. Due to random neutron scattering cross-sections on different isotopes of the same element, heavy water (D₂O) with low scattering cross-section was used instead of light water (H₂O) so as to enhance the signal. The distinct signature observed provided an indication of where the water molecule is attached from the wool fibres. SANS as a technique using low-energy neutrons to study nano-material properties will be outlined and the results obtained from this method will be discussed.

Apply to be
 consider for a student
 award (Yes / No)?

Yes

Level for award
(Hons, MSc,
 PhD)?

MSc

Main supervisor (name and email)
and his / her institution

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Would you like to
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No

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Session Classification: Poster Session

Track Classification: Track A - Division for Condensed Matter Physics and Materials