



## SEMINAR

# The Potential of Valence Electron Energy-Loss Spectroscopy to Probe Optical Properties and Band Structure Information in (S)TEM

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4 to 5 pm, Tuesday 22 July 2008  
Science Lecture Theatre S11, Bldg 25

### Abstract

Valence electron energy-loss spectroscopy (VEELS) in (scanning) transmission electron microscopy is a promising technique that potentially provides detailed information about band structure and optical properties of nano-materials. In this presentation, an overview of experimental results is given, particularly focusing on applications that aim at characterizing semiconductor materials by VEELS. The results are discussed in a theoretical context, also revealing shortcomings of the currently available theoretical concepts to fully explain experimental results.

In a second part of the talk, a summary of recent results obtained from the newly installed double aberration-corrected transmission electron microscope at NCEM is presented.

Convenor: Dr. Joanne Etheridge

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*Visitors are most welcome: Please note that there is a designated Visitors Car Park (N1) clearly ground-marked by white paint and tickets, at a cost of \$1.4/hour for up to 3 hours, available from a dispensing machine. This high-rise carpark is located on the following Clayton Campus Map, Ref. B2.*

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