Equipment Name: X-ray Photoelectron/ Auger Surface Analyser:	**Category:** **C. Particle Characterisation in and ex-situ** **Institute: University of Leeds** **Location: IMR, Engineering Building, Leeds. LS2 9JT. UK** **Contact Details of Technology Expert:** **Name, Rik Brydson** **Phone, +44 113 3432369** **Fax, +44 1133432348** **E-mail mtlrmdb@leeds.ac.uk**

Short technology description/Overview *(approx 300 words)*:

X-ray Photoelectron Spectroscopy and Auger Electron Spectroscopy both provide a quantitative analysis of the surface composition which may be useful to identify the presence of surfactants.

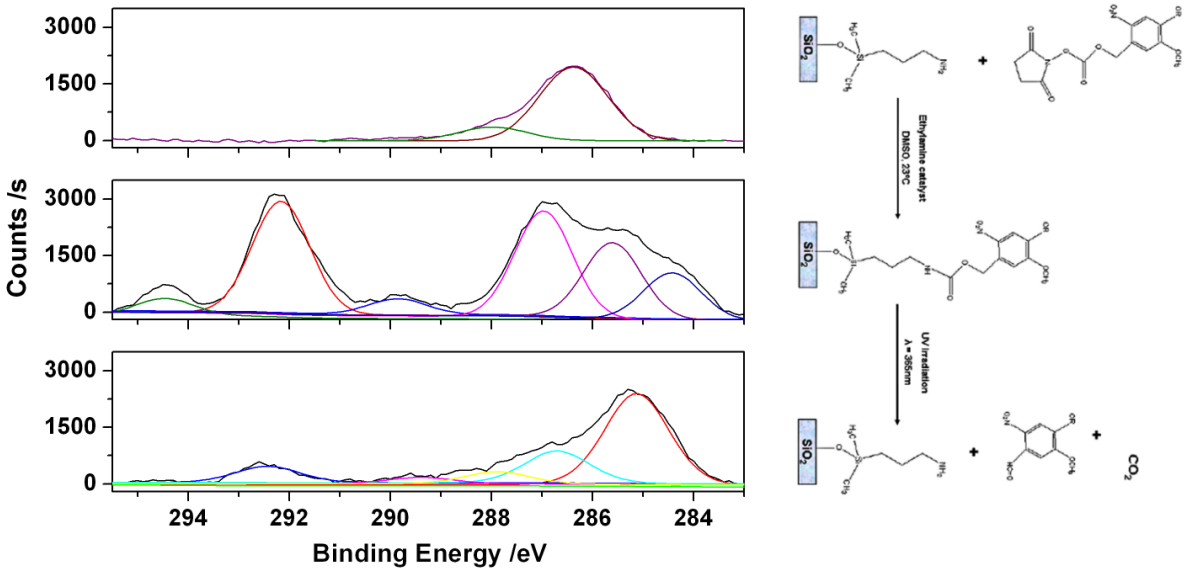
In XPS a spectrum of photoelectron binding energies is produced which identifies the composition of the surface (top 3 nm) of the material. Can perform quantitative analysis and also determine valence states of elements in some cases (note correction for sample charging). This is also an effective method of analysing the degree of contamination on the surface of a material.

Main Features (Equipment Capabilities):

- Monochromated X-ray Photoelectron Spectroscopy
- Argon Ion sputter depth profiling
- Auger Electron Spectroscopy and Auger Mapping

Typical Samples & Images:

Load powder onto a stub (similar to SEM). Degas inside XPS chamber. Perhaps heat or sputter clean the surface prior to analysis if appropriate.



Any further Information: