

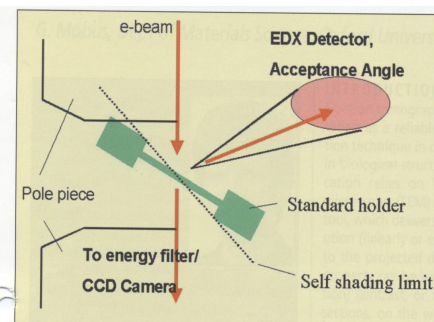
## 29006 3D Nanoscale Chemical Analysis Technique

### The Technology

A research group at the University of Sheffield has introduced a novel procedure for acquiring spectroscopic signals from nanomaterials and nanostructures which allows innovative three-dimensional chemical mapping. The method combines the previously separate technologies of x-ray spectroscopy in the electron microscope with computed tomography.

Particular features of the innovation include:

- Novel data acquisition procedures
- Novel data processing sequences
- Novel sample and sample holder geometries for unobstructed signal detection at high tilt



The preliminary technology has been demonstrated for several years and we are now looking for licensing and development collaborations with industrial partners for a 2nd generation approach.

### The Opportunity

Typical applications:

- Spatial mapping of microstructures in nanocomposites
- Analysis of biomedical materials
- Analysis of high-strength structural materials
- Examination of porous materials with more than one chemical phase
- Inspection of semiconductor nanostructures, e.g. 3D integrated devices.
- Catalysis

**For commercial enquiries on this technology, please contact Andrew Tingey, quoting reference 29006.**

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### FOR MORE INFORMATION

#### CONTACT:

Dr. Andrew Tingey

andrewtingey@fusionip.co.uk

+44(0) 114 275 5569

Fusion IP Licensing

The Sheffield Bioincubator

40 Leavygreave Road

Sheffield

S3 7RD

