

## X-ray & Neutron Scattering in Multiferroics Research

### Programme:

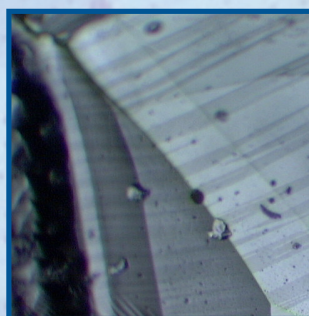
Multiferroics are an important class of material in which at least two ferroic orders (ferroelectric, (anti)ferromagnetic, or ferroelastic) coexist with potential applications for new multifunctional devices including novel sensors, filters and spin-valves, biosensors and memory storage. X-ray and neutron scattering techniques (both diffraction and inelastic experiments) enable the characterisation of structural and magnetic behaviour, as well as the complex coupling between the different order parameters that exists in these intrinsic materials and also in composite (magnetoelectric) structures.

This one-day workshop will bring together experts from the multiferroics and magnetoelectrics communities with neutron and synchrotron facility users to present the latest developments in this field. A discussion forum will be held during the afternoon, to examine the experimental uncertainties around applying in situ electric, magnetic and stress fields in x-ray and neutron experiments, as well as wider issues in materials processing, crystal growth and sample preparation.

This event is being co-hosted by the the XMaS beamline at ESRF, which comprises a unique combination of instrumentation for high resolution and magnetic single crystal diffraction, and the Multifunctional Materials Group at the UK's National Physical Laboratory (NPL), whose expertise lies in the development of metrology in multiferroics, piezoelectrics and ferroelectrics. The event is co-sponsored by the UK's Institute of Physics (IOP Dielectrics Group) and the Institute of Materials, Mining and Mineralogy (IOM3 Smart Materials and Systems Committee).

### Posters:

Workshop delegates are invited to present their recent work on multiferroics/magnetoelectrics during a lunchtime poster session. The posters should be A0 size and priority will be giving to those containing x-ray or neutron scattering results. Please e-mail a one page abstract (max 300 words) to [jenny.wooldridge@npl.co.uk](mailto:jenny.wooldridge@npl.co.uk) by 25th May 2009. The list of accepted posters will be communicated by 1st June 2009.



### Date:

10.00 am to 5.30 pm 17th June 2009

### Venue:

NPL (Teddington)

### Cost:

This event is free to attend

### Registration:

To secure your place at this workshop, please complete the online registration form at [www.npl.co.uk/events/multiferroic](http://www.npl.co.uk/events/multiferroic)

### Contact:

For further information on the workshop, please contact Markys Cain at [markys.cain@npl.co.uk](mailto:markys.cain@npl.co.uk) or Jenny Wooldridge at [jenny.wooldridge@npl.co.uk](mailto:jenny.wooldridge@npl.co.uk)