

## **EU-Funded PhD Studentship as Part of a Collaborative Project “Precipitation in High Manganese Steels”: University of Glasgow**

We invite applications for a 4-year PhD studentship to study precipitation in high manganese steels produced as part of an EU-funded collaboration involving major steel companies, universities and research institutes in 6 European countries. The specific focus of the work at the University of Glasgow will be on the characterization of the structure and chemistry of nanoscale precipitates in the steels down to the 1 nm scale or below, and will build on and extend our world-leading capability in the nanoanalysis of nanoscale precipitation.

The PhD student will be responsible for performing transmission electron microscopy studies of the steels using our suite of microscopes in the Kelvin Nanocharacterisation Centre, as well as other microscopes such as SuperSTEM, where appropriate. This will be coupled with detailed quantitative analysis of the data in order to fully understand the microscopy results and to deliver the information required by our collaboration partners. As such, we require a well organized and strongly motivated student with good experimental and analytical skills. The student will also be required to travel to half-yearly collaboration meetings with our partners and to present progress reports on the Glasgow work at these meetings, so a willingness to travel is essential.

The Glasgow Solid State Physics Group performs cutting edge research at the nanoscale using our facilities in the Kelvin Nanocharacterisation Centre, the premier electron microscopy and nanocharacterisation facility in Scotland and one of the leading facilities in the UK. We specialise in using advanced electron and ion beam techniques to explore complex materials and systems, with applications including novel magnetic sensors, nanostructured steels, ultrafast semiconductor devices, and ferroelectric materials. Our focus is to gain a clear understanding of the fundamental physics that underpins next-generation technological materials. Much of our research is collaborative and we are active members of consortia extending across Europe and worldwide; we also work closely with industry and have access to enviable fabrication and analysis facilities.

Further information on the Solid State Physics research group can be found at:

<http://www.ssp.gla.ac.uk>

and on the facilities in the Kelvin Nanocharacterisation Centre at:

<http://www.knc.gla.ac.uk>

Applicants should have a good undergraduate Bachelor's or Master's degree in a physical science or engineering subject. Funding is restricted to EU residents and applications from persons not resident in an EU country or not having citizenship of an EU country will not be considered.

For further information contact Dr Ian MacLaren at [i.maclaren@physics.gla.ac.uk](mailto:i.maclaren@physics.gla.ac.uk)

Applications are welcome until 15th August 2010.