
In this issue:

- Out and about
- Publications
- Visitors to the CCL
- Meeting with members of EEE
- New member of CCL
- PhD success

The logo for the Ceramics and Composites Laboratory (CCL) at The University of Sheffield. It features the letters 'CCL' in a large, bold, black sans-serif font, centered between two horizontal yellow bars.

Ceramics and Composites Laboratory
The University of Sheffield

Out and about

Nik Reeves, Neil Hyatt and Jordi Biendicho travelled to Oxfordshire for 3 days of high temperature neutron diffraction studies on the POLARIS station at the Rutherford Appleton Laboratory. They were studying various spinel-structured lithium transition metal oxides, looking at order-disorder transitions, identifying possible conduction pathways, and the effect of oxygen loss on structure.

Ian Reaney and Derek Sinclair visited Penn State (Clive Randall, Susan Mckinstry, Mike Lanagan) and National Institute of Standards (Igor Levin and Terrell Vanderah). During this visit they discussed joint projects that include: TTB-structured Ferroelectrics; AgTaNbO₃ phase diagram and dielectric properties; High T_c piezoelectrics.

Denis Pasero spent a week (22nd - 28th Feb) in Hamburg at the HASYLAB doing in-situ synchrotron X-ray powder diffraction on lithium ion battery materials.

Ian Reaney travelled to Grenoble to attend a meeting on setting up a joint European Masters Programme through the FAME network.

Tony West visited Japan at the end of March to give the Fifth Chemical Record lecture, entitled "From solid state chemistry to materials engineering" at the spring meeting of the Japanese Chemical Society. He also attended an Editorial Board meeting of the Chemical Record.

Publications

Cairns DL, Reaney IM, Otten N, Iddles D, Price T, "Structural determination and microwave properties of (x)Re(Co_{1/2}Ti_{1/2})O₃-(1-x)CaTiO₃ (Re = La and Nd) solid solutions" J. Eur. Ceram. Soc. 26 (6): 875-882 2006

Stringer CJ, Shrout TR, Randall CA, Reaney IM, "Classification of transition temperature behaviour in ferroelectric PbTiO₃-Bi(Me' Me'')O₃ solid solutions" J. Apl. Phys. 99 (2): Art. No. 024106 2006

Stokes CW, van Noort R, Hand RJ, "Investigation of the chemical solubility of mixed-alkali fluorocarnasite forming glasses" J. Non-Cryst. Sol 352 (2): 142-149 2006

Miles GC and West AR, "Pyrrholre phases in the system ZnO-Bi₂O₃-Sb₂O₅: I. Stoichiometries and Phase Equilibria", J. Am. Ceram. Soc., 89 1042-`046 2006

Meeting with members of EEE

Several members of the CCL took part in a meeting between Electrical and Electronic Engineering and Engineering Materials. The purpose of the meeting was to explore possible areas of collaboration in the area of electroceramics between

the two departments. Derek Sinclair, Ian Reaney and Tony West all gave brief presentations on their research activities. Currently the CCL has one collaborative project with EEE; hopefully this meeting will lead to more in the future.

New CCL member

Welcome to Karl Whittle who joined the CCL at the beginning of March. Karl will be working with Ian Reaney on lead free piezo- and ferroelectrics. I hope that you will all join me in welcoming Karl to the CCL.

PhD Success

Congratulations to Yammin Wang who has successfully passed her PhD viva. Her PhD was on nanoparticulate PEDOT composites for smart microwave windows. Yammin will now go back to China.

Sources of conference funding

With conference season fast approaching I thought that some guidance on where to apply for travel and conference awards might be useful to some of you.

1. The worshipful company of armourers and brasiers. This organisation is a leading charity offering support to metallurgy and materials science. Grants are made from the Armourers & Brasiers' Gauntlet Trust, on the advice of the Company's Material Sciences Committee. They offer conference travel grants. Further information can be found by visiting their website (http://www.armourersandbrasiers.co.uk/science_postgrad.htm) or phoning them ((0) 20 7374 4000)

2. Royal Society of Chemistry. This charity has travel grants available to its members. There are four calls per year, the next in June. Further information and application forms can be found on the website <http://www.rsc.org/ScienceAndTechnology/AwardsAndFunding/index.asp>. In addition, student RSC members can apply for RSC conference bursaries to attend RSC conferences.

3. IOM³. Small travel grants are available to help with the costs of presenting papers at conferences, from the Andrew Carnegie Research Fund and the Metals and Metallurgy Trust. Application forms are available from Dallas Dinsmore, tel: +44(0)20 7451 7364, email: Dallas.Dinsmore@iom3.org.

4. The Royal Academy of Engineering. Here they have the International Travel Grant Scheme which is intended to help Engineering Researchers in the United Kingdom make study visits overseas. The scheme is open to postgraduate students, doctoral and postdoctoral researchers involved in research. To be eligible for funding applicants must be United Kingdom citizens or permanent residents. There are no age restrictions. Awards may be sought for the following activities:

- * Attendance at Conferences, particularly where the applicant is presenting a paper or poster.

- * Attendance at Summer Schools where the subject matter is related to the applicant's area of research interest.

- * Research Visits to institutions or universities for the purpose of collaborative work or to use specialist equipment.

The application procedure is available from their website <http://www.raeng.org.uk/research/researcher/travelgrant/default.htm>.

5. The Institute of Physics. The C R Barber Trust Fund is open to members of IOP, at the early stage of development in their careers, who wish to attend an overseas conference. The support given to successful applicants can be used to cover any part of the conference attendance (travel, registration fees, accommodation). Please note that only two applicants from the same University Department will be accepted to attend the same conference. Further information is available from their website <http://about.iop.org/IOP/Ymems/funding.html>

6. The Royal Society. This scheme supports UK-based scientists to either present their own paper/poster or chair a session at an overseas conference. Applicants must have a PhD or extensive experience at an equivalent level, by the date of conference. There are four calls to this scheme per year. Further information is available from the website <http://www.royalsoc.ac.uk/funding.asp?id=2348>.

7. UK resource centre for women in science and engineering. This money comes from the DTI; the organisation is set up to promote the careers of women in science and engineering. The scheme is open to nationals or permanent residents of the UK. Awards may be sought for attendance at conferences or events where the applicant is presenting a paper and for visits to research institutions and/or industrial sites. Guidance notes and application forms are available on the resource centre website http://extra.shu.ac.uk/nrc/section_2/2.5a.html.

Best Wishes

Helen Fletcher

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Diary dates:

Technical meeting - Tuesday 30th May, afternoon, LT21

Ryoji Kanno, Tokyo Institute of Technology, visiting the CCL June 5th-9th

Joint Sheffield-Liverpool Solid State Chemistry meeting 7th June

Remember - you can check CCL events on our website:

<http://www.sheffield.ac.uk/ccl/calendar.html>