

News from the UK cwEPR National Service at The University of Manchester

Facilities: Bruker Elexsys E500, EMX-hybrid, EMX-micro; Elexsys E600 EPR spectrometers L-band 1 GHz; S-band 4 GHz; X-band 9 GHz (\parallel and \perp mode); K-band 24 GHz; Q-band 34 GHz; W-band 94 GHz; Magnetic fields up to 2 Tesla (up to 6 T at W-band); Temperature range 4-300 K (up to 600 K at X-band); Simulation software for $S = \frac{1}{2}$ and $S > \frac{1}{2}$ systems; *in situ* electrochemical EPR spectroscopy; *in situ* optical excitation; on-site training, remote access to software, user group meetings, biannual training workshops

The new Service web-site at www.epr.chemistry.manchester.ac.uk contains information about application procedures, forms, membership of the Management Advisory Panel (MAP) and their terms of reference and Service Benchmarks, and on-line applications can be made. Computing facilities now include password-protected remote access to simulation software for users with current projects. Spectrum simulation programs, such as those devised by the late Prof Phil Rieger (Brown University) and Manchester software, are available by downloading.

Applications can be made to the Service by any academics eligible for EPSRC funding. The Service is free at the point of use and access is guaranteed to EPSRC grant-holders. All other applicants must supply a justification for use of the Service (no more than half a page), which will be reviewed by two members of the MAP under the direction of its Chair (Professor C.D. Garner, FRS). Unsuccessful applications receive feedback from the MAP. Users should discuss their requirements with Service personnel before making an application. Training on the spectrometers is available to all users. Projects awarded time on the EPR Service can also have access to the National Service for Computational Chemistry Software (NSCCS), subject to agreement of that Service. Details of the 2007 Users' Meeting (Summer) and Training Workshop (Autumn 2007) will be posted on the web-site.

To discuss applications for time on the Service contact: eric.mcinnnes@manchester.ac.uk, tel: 0161-275-4469, david.collison@manchester.ac.uk, tel: 0161-275-4660 or ruth.edge@manchester.ac.uk, tel: 0161-275-4580/2. Contact Carmine Ruggiero at carmine.ruggiero@epsrc.ac.uk for information about other EPSRC services.

THANKS Thanks go to retiring committee members Brian Hoffman, Philip James and Christiane Timmel who left the committee at the AGM. The organisation of our conference in Oxford has been due in large part to the efforts of the local organising team chaired by Dr Christiane Timmel and assisted by Dr Janet Banham, Mr Chris Rodgers and Dr Ilya Kuprov, together with Dr Shirley Fairhurst (retiring Chair), Dr Chris Kay (Secretary) and Dr Victor Chechik (Treasurer).

Membership of the ESR Group currently stands at about 100. All scientists who are members of the Royal Society of Chemistry, and have an interest in ESR/EPR spectroscopy, are invited to join by ticking the ESR Group box on their RSC membership renewal forms. The cost is only £2 per annum! Membership carries entitlement to reduced registration fees at the ESR Group annual conference.

Website: <http://www.esr-group.org.uk> **Web Editor:** Dr Chris Kay

Newsletter Editors: Dr Shirley Fairhurst and Dr David Collison

ELECTRON SPIN RESONANCE GROUP

Newsletter May 2007

The 40th Annual ESR Conference took place from Sunday 25th – Thursday 29th March 2007 at New College, Oxford with lectures and posters in the Inorganic Chemistry Laboratory and included joint sessions with the COST P15 action: Advanced Paramagnetic Resonance Methods in Molecular Biophysics.

The 2007 Bruker Prize Lecture by Professor Daniella Goldfarb (Weizmann Institute, Israel) described *High field ENDOR – opportunities and frustrations*. In an entertaining talk we learned that the path to high field ENDOR could be a tortuous one, but that many interesting results were obtained en route.



Dieter Schmalbein (Bruker BioSpin), Daniella Goldfarb (2007 Bruker Prize), Shirley Fairhurst (ESR Group Chair) and Peter Höfer, (Bruker BioSpin)

As this was the 40th Meeting of the ESR Group we were delighted that thirteen

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former Bruker Prize lecturers were able to join us. We were able to learn about the latest work of many of them.



Neil Atherton (1993), Jack Freed (1990), Gareth Eaton, Sandra Eaton (2002), Jan Schmidt (1999), Dante Gatteschi (2000), Daniella Goldfarb (2007), Keith McLauchlan (1997), John Pilbrow (1998), Yuri Tsvetkov (2006), Jürgen Hüttermann (2001), Klaus Möbius (1987), Klaus-Peter Dinse (2005), Wolfgang Lubitz (2003)

This was a very busy meeting with nearly 200 people attending. As well as the full scientific programme we had an introductory talk on Oxford on the Sunday evening, followed by an Organ Recital in New College Chapel. On the Tuesday afternoon many participants enjoyed guided walks around Oxford.

Next Conference:

April 6 – 10, 2008

University College London

www.esr-group.org.uk

Keynote lectures were presented by: Graham Smith (University of St Andrews) who described *The HIPER Project: sub-nanosecond pulse ESR*, Frank Neese (University of Bonn) described *Theoretical EPR spectroscopy of high-spin systems - challenges and opportunities* and Thomas Prisner (Johann-Wolfgang-Goethe University, Frankfurt) presented his lecture (generously sponsored by the British Biophysical Society) on *Structural information from decoupled spin pairs*. As well as the Keynote lectures we had a series of excellent invited and offered short talks, a poster session and the Bruker Lecture and JEOL student talk session.

This year there were 89 posters and one was selected to win the poster prize with the traditional bottle of whisky going to Esther Fischbach (Fritz-Haber Institute, Berlin) below, for her poster on the *Adaptation of a W-band spectrometer to UHV conditions*.



The JEOL prize medal attracted a large number of excellent applications from which three were selected to present their talks. The JEOL prize medal for the best oral presentation by a young scientist was awarded to Sharon Ruthstein (Weizmann Institute) for her talk: *Characterisation of nanostructures at equilibrium and during the synthesis of mesoporous materials by Double Electron-Electron Resonance (DEER)*.

Joint runners-up were Chris Rodgers and Olivier Rival (both from the University of Oxford). All the student talks were of a very high calibre. The three students were also presented with cash prizes by Peter Meadows (JEOL).



JEOL Student Talk Prize: Chris Rodgers, Peter Meadows (JEOL), Sharon Ruthstein (Medal Winner) and Olivier Rival.

This year we were delighted to welcome the International EPR/ESR Society who held their Annual Meeting on the Monday evening. This was the first time that this meeting has been held outside the USA.



Professor Wolfgang Lubitz (IES President) presents Professor Les Sutcliffe (Institute of Food Research, Norwich) with his certificate as a Fellow of the IES.

Full abstracts of the Keynote lectures, invited and offered short talks, posters and a photo gallery are on the website: www.esr-group.org.uk



40th RSC ESR Group Conference, Oxford 2007

INTERNATIONAL EPR/ESR SOCIETY (IES)

IES Awards 2007

Silver Medal for Physics/Materials Science: Professor Thomas Prisner

Young Investigator Medal: Dr Leonid Kulik

IES Fellow: Professor Les Sutcliffe

Further information in the International EPR Society (IES) can be found on their website: www.ieprs.org. Each year one issue of the EPR Newsletter is a public issue which can be downloaded free from: <http://www.epr-newsletter.ethz.ch/>.

IES Awards 2008

Nominations for IES awards in 2008 are sought for the IES Gold Medal, Silver Medal for Instrumentation and IES Fellow. The closing date for nominations is November 15 2007. See their website for details on how to make Award nominations.

EPR Conferences 2007-2008

A list of forthcoming EPR meetings is available at: www.ieprs.org

ESR GROUP COMMITTEE.

The ESR Group committee was elected at the AGM held in Oxford on the 28th March 2007. Shirley Fairhurst retired as Chairman and was replaced by David Collison.

Chairman Dr David Collison 2007-2010 david.collison@manchester.ac.uk

Secretary Dr Chris Kay 2006-2011 c.kay@ucl.ac.uk

Treasurer Dr Victor Chechik 2005-2010 vc4@york.ac.uk

Ordinary Members

Dr David Keeble 2005-2008 d.j.keeble@dundee.ac.uk

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