

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

Facilities: Bruker Elecsys E500, EMX-hybrid, EMX-micro; Elecsys 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 $S = 1/2$ and $S > 1/2$ systems; *in situ* electrochemical EPR spectroscopy; *in situ* optical excitation; on-site training, remote access to software, user group meetings, biannual training workshops. www.epr.chemistry.manchester.ac.uk

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 Mark Hylton at mark.hylton@epsrc.ac.uk for information about other EPSRC services.

European Federation of EPR Groups Summer School, St Andrews, 22 Aug.– 1 Sept. 2008

The European Federation of EPR Groups (EFEP) initiated the idea of EPR summer schools on a triennial schedule. The first summer school was held in Caorle, Italy in 1999, the second in Retie, Belgium in 2002 and the third in Wiesbaden, Germany in 2005. For 2008, the EPR Summer School will be held in [St Andrews](http://www.st-andrews.ac.uk), Scotland. This school will also be the 64th Scottish Universities International Summer School in Physics, the major Training School of the COST P15 Action on Advanced Paramagnetic Resonance Methods in Molecular Biophysics. It will also be associated with the biannual UK EPSRC EPR Workshop.

The objective of the Summer School is to disseminate modern EPR methodology to the scientific community through its young researchers. It will start-off with two days of introductory lectures in EPR spectroscopy, which are then followed by more advanced lectures on modern EPR methods, theory and applications. The school will also provide computer courses on spectra simulations and DFT calculations as well as blackboard courses on spectra interpretation. The students will have the opportunity to present posters during the school.

THANKS Thanks go to retiring committee members David Lurie, Eric McInnes, David Keeble and Peter Meadows, who left the committee at the AGM, and to Shirley Fairhurst as previous Chair. The organisation of our conference at UCL has been due in large part to the efforts of the local organising team chaired by D Chris Kay and assisted by Katharina Pirker, Siddharth Jethwa, Daniel Klose, Gavin Morley, Marc Warner and Marta Wojnowska. And also thanks to Chris Rodgers and Ilya Kuprov for helping with the transfer of the web-site from Oxford to UCL, and for the computer support at UCL provided by Tom Knight and his team, together with Dr Shirley Fairhurst (previous Chair), David Collison (current 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 Spectroscopy Group box on their RSC membership renewal forms. The individual subscription fee of £5 is directly included in the annual RSC membership/Group fee, and 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 Editor: Prof. David Collison

ESR SPECTROSCOPY GROUP

Newsletter May 2008

The 41st Annual ESR Conference took place from Sunday 6th – Thursday 10th April 2008 at University College London in the Wilkins Building, with lectures in the Gustav Tuck Lecture Theatre and posters in the South Cloisters.

The 2008 Bruker Prize Lecture by Professor Edgar Groenen (Leiden University, The Netherlands) spoke under the title: $\Psi_{\text{ENDOR}}^{(\text{EPR})}$

Professor Klaus Möbius introduced the lecture, and in a fascinating talk from Professor Groenen we learned about the complementary use of EPR and modern electronic structural theory applied to a wide range of problems.



Dieter Schmalbein (Bruker BioSpin), David Collison (ESR Group Chair), Edgar Groenen (2008 Bruker Prize) and Peter Höfer (Bruker BioSpin)

There were over 125 attendees representing

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19 different countries, and over a quarter of the participants were graduate students, which suggests a healthy future for ESR spectroscopy.



The scientific programme was supported by social evenings and receptions sponsored by the ESR Group of the RSC, JEOL and Bruker. The free Tuesday afternoon and evening allowed delegates the chance to explore London, with the British Museum and the British Library nearby.

Summer School
St Andrews, 22 Aug – 1 Sept 2008
<http://www.st-andrews.ac.uk/~eprschool/>

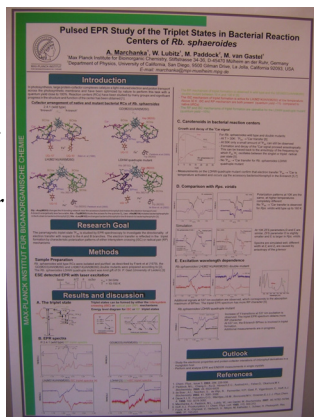
Next Conference:
Norwich, 19 – 23 April 2009
<http://www.uea-epr.eu>

Keynote lectures were presented by: Jim Norris (University of Chicago), *Exploring spin chemistry in melanin and retinal pigment epithelial eye cells using time-resolved EPR and static magnetic fields*; Gunnar Jeschke (University of Konstanz), *Structural models of proteins from pulsed EPR distance measurements*; Andrew Thomson (University of East Anglia), *Spin mapping of membrane proteins*; and Chris Kay (UCL), *Towards using electron spins as sensors*.

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 the JEOL student talk session.

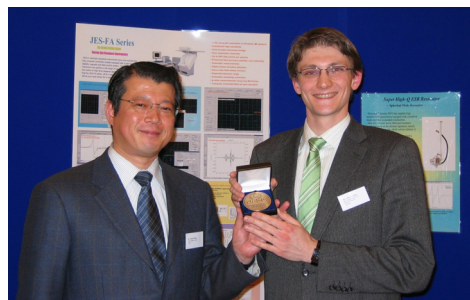
This year there were 50 posters and one was selected to win the poster prize with the traditional bottle of whisky going to Aliaksandr Marchanka (MPI, Mülheim) for his poster:

Low-temperature pulsed EPR study of the triplet state of the primary electron donor and the carotenoid in bacterial reaction centres of Rhodobacter sphaeroides.



The poster prize winner and two runners-up, Bela Bode and Christopher Smith each received a copy of the recently published *Electron Spin Resonance: Analysis and Interpretation*, by the late Phil Rieger, the copies being generously donated by the

publishers, the Royal Society of Chemistry. The JEOL prize medal attracted a 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 Aleksei Volkov (MPI, Mainz) for his talk: *Pulse EPR studies of membrane protein structure and folding on example of LHClIb*. Joint runners-up were Sofie Cambré (Antwerp) and Michał Kuźdzał (Wroclaw). All the student talks were of a very high calibre. The three students were also presented with cash prizes by Dr Yukio Mizuta (JEOL).



JEOL Student Talk Prize: Dr Yukio Mizuta and Aleksei Volkov.



1, 2 and 3 for the poster with books **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



41st RSC ESR Spectroscopy Group Conference, UCL 2008. Photograph by Arthur Heiss

INTERNATIONAL EPR/ESR SOCIETY (IES)

IES Awards 2008

Gold Medal: Professor Jan Schmidt

Silver Medal for Instrumentation: Professor Hitoshi Ohta

IES Fellows: Professor Sandra Eaton and Professor Gareth Eaton

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 Schedule 2009-2012

2009 - Biology/Medicine + Chemistry + Young Investigator

2010 - Physics/Materials

2011 - Gold + Instrumentation + Young Investigator

2012 - Biology/Medicine + Chemistry

EPR Conferences 2009-2011

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 at UCL on the 7th April 2008.

<i>Chairman</i>	Prof David Collison	2007-2010	david.collison@manchester.ac.uk
<i>Secretary</i>	Dr Chris Kay	2006-2011	c.kay@ucl.ac.uk
<i>Treasurer</i>	Dr Victor Chechik	2005-2010	vc4@york.ac.uk
<i>Ordinary Members</i>			
	Dr Mark Newton	2006-2009	mark.newton@warwick.ac.uk
	Mrs Helen Williams	2006-2009	helen.williams@astrazeneca.com
	Dr Fraser MacMillan	2007-2010	fraser.macmillan@uea.ac.uk
	Dr Louise Ottignon	2008-2011	louise.ottignon@bruker.co.uk
	Dr Rachel Haywood	2008-2011	haywoodr@raft.ac.uk
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