

**Martyn Symons** ESR pioneer and world leader died in February this year.

*Chris Rhodes writes:* He was born in Ipswich in 1925. He later moved to London where he entered Battersea Polytechnic; and then joined the army. On the strength of a scholarship from the army, he returned to Battersea to undertake a PhD, which he completed while working on the staff there. His PhD subject concerned organic radicals, formed in reactions involving metal ions in "unusual" oxidation states. Thus Martyn developed life-long interests in both "Organic Radicals", and "Inorganic Radicals", the title of his 1967 book with Peter Atkins. He continued his "Inorganic" research while working at Southampton University as a lecturer in "Organic" chemistry. It was at Southampton that Martyn began his interest in ESR, in cooperation with David Ingram, a physicist who had already built a range of ESR instrumentation. Martyn recognised the enormous potential for ESR in chemistry, and I guess, never looked-back. He was appointed as Professor in Physical Chemistry at Leicester University in 1960. Covering a huge range of topics, which developed increasingly into the bio-medical fields (I have on my desk a recent paper by him reporting on "a method for reducing the pain and danger of arthritic joints") he published well over 1,300 papers, and was elected a Fellow of the Royal Society in 1985. He was also a Fellow of the Royal Society of Water-Colour Artists. Many of us who worked with Martyn in Leicester, and elsewhere, are left with fond and abiding memories of those days.

## ESR GROUP COMMITTEE.

The ESR Group committee was elected at the AGM held in Bristol on 4th April 2001 and has the following members:

### *Chair*

Professor John C. Walton, School of Chemistry, University of St. Andrews

### *Secretary/Treasurer*

Dr Damien M. Murphy, Department of Chemistry, Cardiff University

### *Conference Organiser*

Dr David J. Lurie, Biomedical Physics & Bioengineering, University of Aberdeen

### *Ordinary Members*

Dr Shirley A. Fairhurst, John Innes Centre, Norwich

Dr Simon K. Jackson, Dept. Medical Microbiology, University of Wales College of Medicine, Cardiff

Dr Chris W. M. Kay, Institut für Experimentalphysik, Free University of Berlin, Germany

Dr Paul J. Krusic, DuPont, Wilmington, Delaware, USA

Dr David J. Lowe, John Innes Centre, Norwich

Dr Eric J. McInnes, Dept. of Chemistry, University of Manchester

Dr Graham Smith, School of Physics, University of St. Andrews

## ESR GROUP WEBSITE

Visit the ESR Group website regularly for up-to-date information.

<http://www.cardiff.ac.uk/esr/Group/homepage.html>

*Website maintained by Chris Rowlands.*

*Newsletter edited by John Walton.*

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# Electron Spin Resonance Group

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ROYAL SOCIETY OF CHEMISTRY

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## Newsletter March 2002

### **SpinDrift** *from John Walton*

Most scientists probably consider NMR to be king of the spectroscopic jungle but ESR is a close sibling and shares the royal mystique. After a period of mature stasis the technique has entered a time zone of virile evolution. New instruments have been developed that radically enlarge the frequency range, new chemical tools have been designed to enhance applications, and revolutionary new techniques like magnetic force microscopy and PEDRI imaging are challenging the EPR community. These developments have taken place on the world stage but in the UK the National EPR and ENDOR Centres have played a major role in catalysing progress. The ESR Group can look forward to an exciting and stimulating year ahead. In a different context, John Fischer declared that "What this country needs is radicals". Most modern ESR practitioners would whole-heartedly endorse that view.

**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 and urged to tick the ESR Group box on their membership renewal forms. The cost is only £2 per annum! Membership carries entitlement to reduced registration fees at ESR Group annual conferences.

**The 34<sup>th</sup> Group Meeting** took place against a backdrop of polished wooden elegance at **Bristol University's** Wills Hall. Participants were treated to a heady scientific melange. Proteins and enzymes figured high on the menu. The secrets of their folding and bending were laid bare by several spin label and transition metal probes. Particular proteins involved in photosynthesis, as well as mimics, enlarged the choice of entrees; although health warnings about potential damage by free radicals were also sounded. Appetisers like zeolites, transition metal complexes and surfaces bespoke the timeless fascination of catalysis. The bill of fare was garnished by glamorous EPR images of flawed as well as perfect diamonds. Dr *Dieter Schmalbeim* of *Bruker Analytik* invited us to imagine the road to maturity passing through three stages, from dependence, via independence to interdependence as he eloquently introduced Prof. *Jurgen Hüttermann*, Universität des Saarlandes, the recipient of the Bruker Prize for 2001. The social programme was remarkable for the exciting audio-visual impact of a masterly display of Morris dancing.

"I think we can safely assume that no one understands quantum mechanics". *Richard Feynman*

**THANKS . .** At the 2001 Group meeting in Bristol, **David Lowe** stood down as Group Chairman after three years in post. David, who is based at the John Innes Centre in Norwich, brought a healthy biochemical perspective to the Group's activities. We are indebted to him for his quiet efficiency, hard work in the organisation of the group's conferences, and for the dignity and courtesy he showed in office. The Group also thanks **John Maher** for his admirable work as local organiser of the Bristol conference.

## CONGRATULATIONS

To Professors Sandra and Gareth Eaton, of the University of Denver, on their award of the Bruker Prize 2002 by the Royal Society of Chemistry ESR Group.

To Dr Mark Newton of King's College London on his receipt of the Young Investigator Award of the International ESR Society for 2001.

To A. Ferretti (Milano), M. Loyo (Dundee) and S. Smith (Cardiff) on their selection as candidates for the JEOL Young Investigator prizes for 2002.

## FORTHCOMING EVENTS

36<sup>th</sup> International Meeting of the RSC ESR Group will take place at Chancellors Hotel & Conference Centre, University of Manchester, 6-10<sup>th</sup> April 2003.

1<sup>st</sup> Workshop on Theory and Practice of EPR and ENDOR spectroscopy at Cardiff University, September 2002. The workshop will be organised by the UK National Service for EPR Spectroscopy (Manchester, Cardiff, St. Andrews) and funded by the EPSRC. Details will be given at: [http://www.cf.ac.uk/esr/ESR Group](http://www.cf.ac.uk/esr/ESR%20Group)

The EU-EPR School on Modern EPR Spectroscopy will now take place at Retie, Belgium, 31<sup>st</sup> November to 7<sup>th</sup> December 2002. Note the change of venue. Details at: <http://www.weizmann.ac.il/conferences/EUEPR/>

5<sup>th</sup> Meeting of the European Federation of EPR Groups will be held in Lisbon, Portugal, from Sunday 7<sup>th</sup> to Thursday 11<sup>th</sup> September 2003. Details at: [http://dequim.ist.utl.pt/EFEP/](http://dequim.ist.utl.pt/EFEP/EFEP/)

25<sup>th</sup> International EPR Symposium at the 44<sup>th</sup> Rocky Mountain Conference on Analytical Chemistry, will be held in Denver, Colorado, July 28<sup>th</sup> to August 1<sup>st</sup>, 2002. Details at: <http://rockychem.com/>

**MAGNETIC SPIN DIRECT** Items selected to stimulate the scientific psyche.

### Articles

*Comparison of EPR methods to determine distances between spin labels on human carbonic anhydrase II*, G. R. Eaton, S. S. Eaton, *etc. Biophys. J.* 2001, **80**, 2886.

*EPR data on the self-interstitial complex O3 in diamond*, M. E. Newton *etc. Phys. Rev. B*, 2000, **62**, 6587.

*Continuous-Wave MRI of Short T2 Materials*, D. J. Lurie *etc. J. Magn. Reson*, 2001, **148**, 289.

### Websites/Software

The NIEHS site at: <http://epr.niehs.nih.gov/> contains many useful resources including the Software dBase of the IESR Society, a Spin Trap dBase and a free download of the *WinSim* simulation package.

The ETHZ site at: <http://www.esr.ethz.ch/> contains extensive lists of ESR research groups and their WWW sites. *EasySpin* simulation software can be downloaded free.

**MERGER OF PERKIN 1 AND 2** An RSC Taskforce, chaired by Professor E. A. Underhill, and charged with setting future directions for RSC publications, recommended that Perkin 1 and Perkin 2 be combined to produce a "flagship core organic chemistry journal". The Perkin 2 Editorial Board was opposed to the merger, although opinions ranged from mildly in favour to strongly against. The main reason against the merger was that the unique position of Perkin 2 as a popular and high profile forum for physical organic chemistry would be lost in a merger. The views of the Perkin 2 Board were transmitted to the Journals Committee in writing and verbally by Professor Roger Alder. However, the overwhelming majority of members of the Journals Committee were in favour of the Task Force's recommendation and this was subsequently also approved by the RSC Publications Board. The RSC intends to form a new journal, to supersede Perkin 1 and 2, in 2003 under the chairmanship of Professor Ben Feringa, Groningen University.

**Rory More O'Ferrall Comments:** The news that the RSC intends to amalgamate Perkin 1 and 2 has come as a profound shock to many who read and publish in Perkin 2. Reports of the proposal have slowly filtered through to the wider physical organic chemistry community. At recent international meetings in Japan (KISPOC) and Venezuela (Sixth Latin American Conference in Physical Organic Chemistry) petitions were signed by staff from one hundred universities in twenty five countries requesting continuation of Perkin 2. Among those who signed were the chairman of the Organic Division and an ex-president of IUPAC, the chairman of the organic division of the German Chemical Society and many other distinguished organic chemists. The petitions have been sent to Professor Miller (RSC Publications Board), to Professor Steve Ley (President of the RSC) and to Professor Richard Taylor (Chairman to the Perkin Division) with copies to Caroline Potter and Roger Alder. In case ESR Group members wish to communicate their views they might write to any of the above % the RSC's Cambridge address. Otherwise I am sure Roger Alder and Caroline Potter will make appropriate use of letters received.

"Science is not everything. But science is very beautiful". *J. Robert Oppenheimer*