Ernst Awards 2009

In 1998 Prof. R. R. Ernst received the honorary membership of the "Fachgruppe Magnetische Resonanzspektroskopie". Since then, the German Chemical Society (GDCh) awards three "Ernst Awards" to eminent Ph.D. students from Germany and abroad.

Due to the ten years anniversary in 2008 the prize money was raised to 500€ (besides travelling and accommodation to participate the group meeting).

Candidates should be Ph.D. students on the basis of their genuine published work; the candidate's name should be first on the authors' list. The papers must have been refereed and accepted by an international scientific journal. Deadline for submission of manuscripts is July 1st, 2009; acceptance letters from journal referees may be supplied until July 31th, 2009.

All manuscripts will be evaluated by members of a scientific committee under the guidance of Dres. H. Kogler and W. Jahnke and should be send in electronic form to

Dr. E. Haupt  
erhard.haupt@uni-hamburg.de

The Ernst Awards will be presented during the Annual Meeting of the Discussion Group in Dresden and involve a lecture by the winners.


Vielen Dank nochmals an Herrn Dr. Kogler und seinen Helfern für diese Aufbereitung.

Prof. A. Garming 75


fie1 dann zwar die Aufrüstung des von ihm
Mitte der 90er Jahre in Betrieb
schemen 400 MHz NMR-Spektro-
mit Gradiententechnik schon in die
Zeit seines fachlichen Nachfolgers Dr. Jan
C. Namyslo, jedoch die fortwährende,
nahezu stete Anwesenheit im Institut für
Organische Chemie und die just zu
spürnde Begeisterung über die in diesem
Sommer in Clausthal anstehende
Installation eines 600 MHz Forschungs-
spektrometers unterstreicht:
Alfons Garming - ein NMR-Spektrosko-
kopiker mit Leib und Seele.

Dr. J.C. Namyslo, Clausthal-Zellerfeld

**New EPR (ESR) books**

This month three *Electron Spin
Resonance* books have become available,
which is a quite unusual peak. Two of
these had been planned for a release in
2008 but then either rescheduled
(*Brustolon - Giamello*) or just delayed
(*Hagen*). There are two more delayed 2008
ESR books still in the pipelines and
another two are scheduled for the next two
months (see my list of ESR books). Which
means that the current year should break all
records in ESR publishing! The three titles
which have just reached the distribution
channels are:

*Principles and Applications of Electron
Paramagnetic Resonance Spectroscopy*,
Edited by Marina Rosa Brustolon and Elio
Giamello, published by Wiley.

This book represents a pragmatic guide to
navigating through the maze of EPR/ESR
spectroscopy fundamentals, techniques,
and applications. In other words, if you are
about to operate an ESR spectrometer and
carry out actual measurements on your
own, this is what you should read first.
Contributions of 18 Authors had been
carefully stitched together by two Editors,
themselves foremost Italian EPR scientists,
each with decades of practical experience.

**Biomolecular EPR Spectroscopy**
by Wilfred Raymond Hagen, published by
CRC.

Unlike most bio-whatever books, this one
does not just *mention* EPR. It takes a broad
view of the whole area specifically from the
_EPR point of view_ and covers all
important bioEPR applications, including
low-spin and high-spin metalloproteins,
spin traps and spin labels, interaction
between active sites, redox systems, etc. It
is loaded with practical *do's* and *don'ts*
based on the Author's 30 years of
experience and contains also an
unprecedented set of software utilities
which allow readers to tackle many
problems of spectral analysis.

**High-Field EPR Spectroscopy on
Proteins and their Model Systems:
Characterization of Transient
Paramagnetic States**
by Klaus Möbius and Anton Savitsky,
published by RSC (Royal Society of
Chemistry).

This opus offers an overview of
experimental techniques in high-field EPR
spectroscopy applications to biology and
chemistry, focusing on the use of the
technique in conjunction with site-specific
mutation strategies and advanced quantum-
chemical computation methods to reveal
protein structure and dynamics. The
theoretical and instrumental background of
high-field EPR is described using
examples of paradigmatic protein systems,
such as photosynthesis. The information
obtained complements that obtained from
protein crystallography, solid-state NMR,
infrared and optical spectroscopy. Unique
features include comparisons of
information content of EPR, ENDOR,
Triple resonance, ESEEM and PELDOR
taken at different microwave frequencies
and magnetic fields.

All three books are similarly priced and fall
into the $100 category - which is not too
bad, considering the relatively small size of
the EPR market.

**Quelle:**
Stan's NMR Blog (entry March 15,2009)
http://www.ebyte.it/stan/blog.html

Thanks for the efforts!
An open day at the University of Warwick will take place to provide information and to promote discussion about dynamic nuclear polarisation enhanced nuclear magnetic resonance (DNP-NMR). The day is aimed at people from a variety of backgrounds, from researchers that are interested in finding out if this technique could provide information on materials to experts in the magnetic resonance community. Please see http://go.warwick.ac.uk/dnp for more details and to register.

Model of neurotensin receptor 1: a G-protein coupled receptor. DNP will be used to provide significant insights into its structure and that of its natural agonist, neurotensin.

Timetable

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>9:45</td>
<td>Registration and refreshments</td>
<td>12:00 Hiroki Takahashi</td>
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<tr>
<td></td>
<td>In Dept. of Physics, room P521A</td>
<td>Gyrotron microwave sources</td>
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<tr>
<td>10:15</td>
<td>Mark Smith</td>
<td>12:20 Lunch and poster session</td>
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<tr>
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<td>Introduction and Overview</td>
<td>13:10 Walter Kockenberger</td>
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<tr>
<td>10:35</td>
<td>Kevin Pike</td>
<td>13:30 DNP at Nottingham</td>
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<tr>
<td></td>
<td>Background</td>
<td>13:30 Graham Smith</td>
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<tr>
<td>10:55</td>
<td>Refreshments</td>
<td>13:50 Microwave hardware</td>
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<tr>
<td>11:20</td>
<td>Mark Newton</td>
<td>14:10 Tony Watts</td>
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<tr>
<td></td>
<td>Microwave frequencies and EPR</td>
<td>Labelled samples</td>
</tr>
<tr>
<td>11:40</td>
<td>Ray Dupree</td>
<td>14:10 Tours of laboratories</td>
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<tr>
<td></td>
<td>Radio frequencies and NMR</td>
<td>15:00 In Millburn House</td>
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</tbody>
</table>

http://go.warwick.ac.uk/dnp
The DNP Project

This EPSRC funded Basic Technology Project is a collaboration between researchers from different backgrounds whose combined skills and knowledge are being used to face the challenges provided by this exciting technique. It aims to develop DNP-enhanced solid-state NMR spectrometers that will enable NMR to be used in areas of science previously inaccessible due to sensitivity limitations. These will include biomolecular structure and function, electrochemistry, fuel cells and catalyst technology, and defects in semiconducting materials.

Academic staff
Mark E. Smith, Warwick – Solid-state NMR
Mark E. Newton, Warwick – EPR
Ray Dupree, Warwick – Solid-state NMR
Andy P. Howes, Warwick – Solid-state NMR
Graham M. Smith, St Andrews – Microwave instrumentation
Tony Watts, Oxford – Biochemistry of biomembranes

Research project staff and students
Kevin J. Pike, Warwick – Project Manager
Eugeny V. Kryukov, Warwick – Postdoctoral Researcher
Tom F. Kemp, Warwick – Postdoctoral Researcher
Hiroki Takahashi, Warwick – Postdoctoral Researcher
James F. MacDonald, Warwick – PhD Student
David R. Bolton, St Andrews – Postdoctoral Researcher
Marcella Orwick, Oxford – PhD Student

The project also benefits from collaboration with companies that manufacture magnetic resonance and microwave hardware, and those in the field of materials science.

Registration and travel

Registration is free but we need everybody who wishes to attend to complete the on-line form at http://go.warwick.ac.uk/dnp/openday The deadline for registration is Wednesday 10th April 2009. Refreshments will be provided, including a buffet lunch.

Please visit http://go.warwick.ac.uk/dnp/miscellaneous for details about how to get to The University. The Open Day will start in the Main Physics Building. Members of the Magnetic Resonance groups will be available to take people to the Centre.

If you have any special requirements for food or access then please note this on the on-line registration form. Please also indicate any other help that we can offer you.