

RSC NEWS Vol 37 : Issue No. 5

August 2006



Is this the last edition of RSC News as we know it?

*Let rsc.admin@rsc.anu.edu.au know what you think about the following proposed titles for monthly newsletter, *A Chemical Insight*, *Research School Chatter* or *The Monthly Chronical*.*

Don't forget there is chocolate or wine to be won if you can come up with something better, send your suggestions in by 15th September.

This month's news is packed full of information including a review of the Birch Lecture, scholarship dates to remember, how to book a room using the online system, why there are red dots around the place and who won this month's lovely lab competition.

WEEKLY HIGHLIGHTS

CONGRATULATIONS

Our congratulations go to **Associate Professor Mick Sherburn** who recently won the Le Fevre Memorial Prize for Chemistry.

Congratulations to **Dr. Michelle Coote** who has been awarded the 2006 Rennie Medal of the Royal Australian Chemical Institute. The Rennie Medal is awarded each year to an early career researcher who, in the opinion of the Board of the Institute, has contributed most toward the development of any area of chemical science.

as well as to the following completing PhD scholar:

Mr Joseph Lee Hughes BSc ANU
Magneto-Optic and Selective Spectroscopies of Natural Photosystems
Supervisor: Professor E R Krausz
Submitted 2 August 2006

and the following student who has been admitted:

Dr Bradley James Stevenson BSc Lincoln NZ
Directed Evolution of Pyruvate Decarboxylase for in Vitro Glycolysis
Supervisor: Professor D L Ollis
Submitted 7 April 2006, Admitted 26 July 2006

Our congratulations go to **Professor Ray Withers** for winning the August Excellent Networking Skills award for his activities at the recent conference in Leuven, Belgium (see opposite).

RECENT ARRIVALS

A sincere welcome is extended to the following people who have joined us recently:

Dr Ann Larsson has taken up a position as Research Fellow with Professor Withers' group (room E107, ext. 53508).

Mrs Yen Hai Pham has commenced PhD studies under the supervision of Dr Aaron Oakley (Yen Hai is currently based in Sydney, email: yen.pham@csiro.au).

Ms Kristine Knudsen is here from Denmark accompanying her husband who is a Visiting Fellow in the Department of Applied Mathematics. Kristine will spend some time working with Dr Aaron Oakley until December (room E205, ext. 54181).

Mr Joseph Hughes has commenced a one year Postdoctoral Fellowship in Professor Krausz's group following the submission of his thesis.

Ms Sylvia Hsu Chen Yip has commenced PhD studies with Professor David Ollis (room A216, ext. 54377).

Mr Sajid Noor has commenced PhD studies under the supervision of Professor Gottfried Otting (room E4B, ext. 56508).



DEPARTURES

Farewell and best wishes to the following who have left the School since our last issue:

Dr Mario Knoke left RSC at the end of July to take up a position at BASF in Ludwigshafen, Germany.

Dr Richard Webster has left to commence a position as Assistant Professor at Nanyang Technological University in Singapore.

Dr Shane Simonsen has left at the end of his appointment to return to Queensland.

Ms Luisa Fernside has left to commence a position at CSIRO Discovery.

Professor Nick Dixon has left to be the Professor of Biological Chemistry at the University of Wollongong.

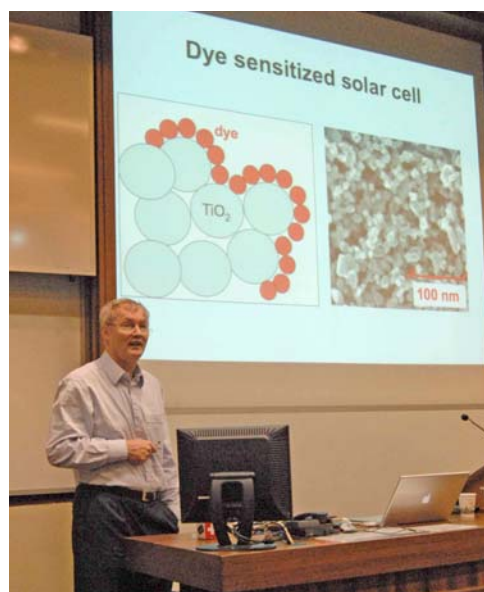


COMMUNICATION & MEDIA REPORTS

Please let Seona Meharg, smeharg@rsc.anu.edu.au, know if you have been in the media or if you have participated in communication activities.

Birch Lecture Series – 5th to 13th August 2006 (article by Prof. Peter Gill)

The world's appetite for cheap, safe energy is almost insatiable and, as oil prices climb ever higher and nuclear alternatives remain contentious, it is exciting to contemplate the possibility of harnessing the inexhaustible resources provided by our sun. Some years ago, Prof Michael Graetzel revolutionized the field of solar cell technology by developing a cell that uses organic dyes to collect solar photons and uses their energy to create excited electrons in microparticles of titanium dioxide. The Graetzel cell continues to be developed and improved and we were fortunate to be able to attract Prof Graetzel to give the 2006 Birch lecture on August 7. In this lecture, and two specialized seminars on the following days, Prof Graetzel described the fundamental strengths and weaknesses of recent incarnations of the cell and captivated his audience with a fascinating blend of organic and physical chemistry. Many of our previous Birch lecturers have been Nobel laureates: although Prof Graetzel has not yet this particular accolade, it seems likely that this honour will not elude him for much longer...



Professor Michael Grätzel directs the Institute of Photonics and Interfaces at the EPFL at the Swiss Federal Institute of Technology in Lausanne, Switzerland.

BUSINESS NEWS

How to access the online meeting room booking system

Step 1 – access the RSC web site and click on 'For staff and students'

Step 2 – click on the RSC Meeting Room Booking System

Step 3 – Log in (click the button on the top right hand corner of the screen), use your email/web user name and password

Step 4 – Select the building the room you would like to book is located in, ie Birch or Craig

Step 5 – Select the date and time of the room you wish to book, adding a note on what the meeting is for, a contact name and telephone number.

Please note this system does not allow you to alter someone else's booking or to book a room at the same time a someone else. This is why it is important to have a contact name and telephone number.

Reminder that -

International Scholarship round closes 31st August 2006.

www.anu.edu.au/graduate/scholarships/

Summer Research Scholar applications close 31st August 2006.

www.anu.edu.au/graduate/srs/

Australian Postgraduate Award (APA) Scholarship round closes 31st October 2006

www.anu.edu.au/graduate/scholarships/

KEV'S COLUMN

Contract Cleaners have been cleaning the School for 5 weeks to help them recognizes which doors are to be locked red dots have been placed above the locks. If you would like your area locked on completion of night cleaning please contact me and I will add your area to the new system.

The Non-Secure paper recycling bins will be emptied on Thursday evenings by the cleaners. Please ensure you only place Non-Secure paper in these bins.

SAFETY MATTERS

At the time of writing, I can report that in the period since the last Safety Committee Meeting (3 months) the School has recorded zero Incident Notifications (Accident Reports). This suggests you've all been working with admirable diligence and due care and attention, or else you've been doing no work, at all. Either way, you are to be congratulated. If the former is true, then you've made the School a safer place to work in, and if the latter is true, congratulations for getting away with it.

I'm pleased to report that the unannounced monthly Safety Inspection carried out recently, produced no nasty surprises. There are a couple of general observations, though, that are worthy of mention. The first concerns the perennial problem of excessive ice build-up in freezers that, in many cases, is engulfing the flasks within them. Would people who use fridges please check them periodically and, if necessary, defrost them. The second concern the inspection team had was the number of food and beverage containers they saw in waste bins in the labs. Everyone in the School knows that eating and drinking in laboratories is not permitted under any circumstances.

Finally, the Lovely Lab competition this month goes to the occupants of Room 240 and it is awarded for very much the same reasons as those given in last month's citation. It's gone from tip, to tip top – congratulations!

Each student lab member wins a voucher for a coffee & muffin at the Purple Pickle.

STUDENT MATTERS (please feel free to change the name of this column)

We are still looking for a student/students to add their voice to RSC News the editorial team. Email rsc.admin@rsc.anu.edu.au

FOR YOUR INFORMATION

Tuggeranong Vikings Cycling Club are holding a series of criterium style races at the ANU on Saturday 2nd September. Included will also be a novice race for ANU staff and students who might be interested in trying road race cycling, please see details below.

Saturday 2nd September - come and try road racing at the ANU (and get free food)

A unique opportunity for new and experienced cyclists to race around the beautiful ANU campus in a once-off Criterium Extravaganza. There will be grades for experienced cyclists ranging from A to C grade and Juniors, as well as special Men's and Women's Novice grades following a skills session.

The cost for non-Cycling Australia members is an incredible \$3 which includes the race fee for the Novice grade, insurance and the skills session.

For current Cycling Australia members the cost will be \$5 entry.

Racing starts at 10.30 am for C grade, followed by B, A and Junior grades. Following this will be a Novice Skills Session at 12.30, followed by the Men's and Women's races. A free BBQ will be provided for everyone that turns up with a bike!

The race hub will be on Balmain Cres, ANU, just past the entrance to University House (follow the signs from the bike path).

The Criterium is being organised by the Tuggeranong Vikings Cycling Club and is co-run with ANU Green. The Vikings also have a special sign up deal for Novice Women, with new members able to join for the first year with the club for free.

So take advantage of these excellent deals and come and race at the ANU. Put the date in your diary now!

JOKE OF THE MONTH

A school teacher was arrested today at JFK International Airport attempting to board a flight while in possession of a ruler, a protractor, a set square, a slide rule, and a calculator.

At a press conference, Attorney General Alberto Gonzalez said he believes the man is a member of the notorious Al-gebra movement.

He did not identify the man, who has been charged by the FBI with carrying weapons of maths instruction.

"Al-gebra is a problem for us," Gonzalez said.

"They desire solutions by means and extremes, and sometimes go off on tangents in a search of absolute value.

They use secret code names like 'x' and 'y' and refer to themselves as 'unknowns,' but we have determined they belong to a common denominator of the axis of medieval with coordinates in every country.

As the Greek philosopher Isosceles used to say, 'There are 3 sides to every triangle.'

When asked to comment, President Bush said, "If God had wanted us to have better Weapons of Maths Instruction, He would have given us more fingers and toes."

White House aides told reporters they could not recall a more intelligent or profound statement by the president.

Staff Publications since last issue as at 17 August 2006:

Austin K A B, Banwell M G, Willis A C **Synthesis and X-ray crystal structure of a cyclic hemioorthoester.** *ARKIVOC* (2006), (xiii), 1–7.

Cai Z-L, Crossley M J, Reimers J R, Kobayashi R, Amos R D **Density functional theory for charge transfer: The nature of the N-bands of porphyrins and chlorophylls revealed through CAM-B3LYP, CASPT2, and SAC-CI calculations.** *J. Phys. Chem. B* (2006), 110(31), 15624–15632. <http://dx.doi.org/10.1021/jp063376t>

Cheah M C L, Kennedy B J, Withers R L, Yonemura M, Kamiyama T **Synthesis, structures and phase transitions in the double perovskites $\text{Sr}_{2-x}\text{Ca}_x\text{CrNbO}_6$.** *J. Solid State Chem.* (2006), 179(8), 2487–2494. <http://dx.doi.org/10.1016/j.jssc.2006.04.047>

Hughes J L, Smith P, Pace R, Krausz E **Charge separation in photosystem II core complexes induced by 690–730 nm excitation at 1.7 K.** *Biochim. Biophys. Acta, Bioenerg.* (2006), 1757(7), 841–851. <http://dx.doi.org/10.1016/j.bbabi.2006.05.035>

James V J **A place for fiber diffraction in the detection of breast cancer?** *Cancer Detect. Prev.* (2006), 30(3), 233–238. <http://dx.doi.org/10.1016/j.cdp.2006.04.001>

Kelly J F, Samoc A, Samoc M, Krausz E R, Willis A C **Anisotropy of second-order nonlinear optical susceptibilities of arsenic triiodide–sulfur addition complex: $\text{AsI}_3 \times 3\text{S}_8$.** *Opt. Commun.* (2006), 264(1), 35–44. <http://dx.doi.org/10.1016/j.optcom.2006.02.049>

Mahon P J, Oldham K B **An examination of the conditions resulting in a temporal convolution related to electrochemical processes.** *J. Solid State Electrochem.* (2006), 10(10), 785–791. <http://dx.doi.org/10.1007/s10008-006-0169-0>

Shao Y, Fusti-Molnar L, Jung Y, Kussmann J, Ochsenfeld C, Brown S T, Gilbert A T B, Slipchenko L V, Levchenko S V, O'Neill D P, DiStasio R A Jr, Lochan R C, Wang T, Beran G J O, Besley N A, Herbert J M, Lin C Y, Van Voorhis T, Chien S H, Sodt A, Steele R P, Rassolov V A, Maslen P E, Korambath P P, Adamson R D, Austin B, Baker J, Byrd E F C, Dachsel H, Doerksen R J, Dreuw A, Dunietz B D, Dutoi A D, Furlani T R, Gwaltney S R, Heyden A, Hirata S, Hsu C-P, Kedziora G, Khalliulin R Z, Klunzinger P, Lee A M, Lee M S, Liang W Z, Lotan I, Nair N, Peters B, Proynov E I, Pieniazek P A, Rhee Y M, Ritchie J, Rosta E, Sherrill C D, Simmonett A C, Subotnik J E, Woodcock H L III, Zhang W, Bell A T, Chakraborty A K, Chipman D M, Keil F J, Warshel A, Hehre W J, Schaefer H F III, Kong J, Krylov A I, Gill P M W, Head-Gordon M **Advances in methods and algorithms in a modern quantum chemistry program package.** *Phys. Chem. Chem. Phys.* (2006), 8(27), 3172–3191. <http://dx.doi.org/10.1039/b517914a>

Somphon W, Ting V, Liu Y, Withers R L, Zhou Q, Kennedy B J **Local crystal chemistry, structured diffuse scattering and the dielectric properties of $(\text{Bi}_{1-x}\text{Y}_x)_2(\text{M}^{\text{II}}\text{Nb}^{\text{V}})\text{O}_7$ ($\text{M} = \text{Fe}^{3+}, \text{In}^{3+}$) Bi-pyrochlores.** *J. Solid State Chem.* (2006), 179(8), 2495–2505. <http://dx.doi.org/10.1016/j.jssc.2006.04.046>