

# RSC NEWS Vol 40 : Issue No. 6

July 2009



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Roving Reporter: Gavin Perri

Editor: Peter Gill

*Dear Reader,*

*The campus seems a little quieter right now with the undergraduates having finished their exams and (hopefully) enjoying a well-earned rest before the start of Semester 2. This doesn't mean that all is quiet for the RSC staff and postgraduate students – invariably, there have been exams to mark, meetings to attend and research to be done.*

*Now that money has been specifically allocated, through EIF, for new chemistry buildings, there has been a burst of activity involving the design phase of the project, although many details still have to be worked out, especially with respect to the interiors of labs, offices and service areas. A number of you will have attended a recent presentation by Lyons Architects in which they revealed the latest plans for the external parts of the chemistry and biology buildings. Suddenly, then, the whole project seems much more real and I encourage you all to make sure you have your say about the design and fit-out of our new home by conveying your comments and suggestions to Geoff Deeble, to Lee Welling and/or to me.*

*At a slightly less dramatic but nevertheless important scale, and after an extensive tendering and selection process, I am pleased to be able to tell you that we have placed an order for a new Varian 400 MHz NMR spectrometer. We have also taken the opportunity to order a new probe for the Innova 300 spectrometer meaning, effectively, that we will actually have two “new” NMR machines operating in the School within the next three months or so.*

*At the end of this month Ms Maureen Slocum, who has served the School in so many different ways over the last 18 years, will retire. Her great knowledge of all things administrative, her willingness to help in so many different ways, her good humour and her infinitely caring nature will be sadly missed. I will have more to say about her contributions at a morning tea to be held in Maureen's honour from 10:30 am on Thursday, July 16th. You are all most welcome to attend.*

*Finally, I note with sadness the passing of Mrs Val Murray after a long battle with cancer. Val diligently served as our postgraduate student officer for many years. Our condolences go to her family.*

**Martin Banwell**  
Director, RSC

## MONTHLY HIGHLIGHTS

### CONGRATULATIONS

Congratulations to the prizewinners at the *Free Radical Winter Carnival 2009*, held on the Gold Coast, 3-4 June: **Dr Allan Gamble** and **Mr Hiroshi Yoshida** both won prizes for their talks, and **Ms Kelly Morris** won a poster prize!

Congratulations to **Mr Alex Bissember** who has been awarded, through the American Australian Association, a prestigious Merck Company Foundation Fellowship. This will allow Alex to undertake postdoctoral studies with Professor Greg Fu at the Massachusetts Institute of Technology from early 2010.

*Congratulations to the following student who recently submitted their PhD thesis:*

**Mr Lesley Debono**, Krausz group, submitted 19/06/09:  
*Low Temperature Spectroscopy of Photosystem II in Higher Plants*

*Congratulations to the following student who was recently approved to graduate:*

**Mr Jee-Loon Foo**, Ollis group, approved 19/06/09:  
*Mechanism Study of Enzymes Involved in Phosphate Ester Hydrolysis*

## RECENT DEPARTURES

**Professor Jeffrey Keillor** has returned to the University of Montreal at the conclusion of his Visiting Fellowship with the Easton Group.

## STUDENT MATTERS

### Student Profile



**Name:** Liam Kirwan  
**Qualifications/Degree:**  
BSc, currently doing Honours

**Favourite TV Show:** Tom Goes to the Mayor  
**Favourite Movie:** Withnail and I  
**Favourite Music/Band:** I like 2 tone and reggae.  
Favourite band probably The Specials  
**Sporting Code and Favourite Team/Player:** I don't like sport. Does the Capital Hill Kyokushin Karate club count?

**What is your thesis topic/field of interest?**  
Dendralene chemistry. I'm thinking of calling my thesis "how to coat your glassware with gross yellow polymer"

**If you could be a chemical element for a day which one would you choose and why?**  
Magnesium, I'd be useful, shiny and a bit dangerous (But in a cool way right?)

**What have you learnt about yourself during your time here?**  
Ask me again after I hand in my thesis...

**If you could dine with any three people who would you choose (alive or dead)?**  
Past teachers. I won't mention any names because you guys won't know them, but there are plenty of people who have taught me cool stuff who I'd like to catch up with.

**What do you see yourself doing upon completion of the program?**  
Being a millionaire cowboy spy astronaut. Clearly I have no idea.

**If you were stuck on a deserted island for one week what three essential items would you hope to have with you?**  
A case of beer, a stereo and a pair of sunnies. May as well enjoy myself while I am there...

### What has been the most enjoyable experience during your studies at RSC?

Making the first drop of my pure compound. That and first year demonstrating.

**Favourite Saying:** "Don't go out like Bromcorn's Uncle" – 2 time world series of Poker Champion, Doyle Brunson.

### Student Profile



**Name:** Caitlin McQueen  
**Qualifications/Degree:**  
BSc, currently doing Honours

**Favourite TV Show:** Dr Who  
**Favourite Movie:** Singing in the Rain  
**Favourite Music/Band:** None, bands remind me of columns...  
**Sporting Code and Favourite Team/Player:** Ice Hockey, The Halos

**What is your thesis topic/field of interest?**  
Hetero-substituted metal alkylidynes

**If you could be a chemical element for a day which one would you choose and why?**  
Element 113 – there's got to be 2 Nobel prizes in that

**What have you learnt about yourself during your time here?**  
That I am not good with machines

**If you could dine with any three people who would you choose (alive or dead)?**  
Chen Kenichi, Hiroyuki Sakai and Rokusaburo Michiba as long as they all cooked

**What do you see yourself doing upon completion of the program?**  
Still deciding

**If you were stuck on a deserted island for one week what three essential items would you hope to have with you?**  
Sunscreen, sunglasses and some books

**What has been the most enjoyable experience during your studies at RSC?**  
Beating everyone else at the Trivia Night

**Favourite Saying:** In theory there's no difference between practice and theory. But in practice there is.

## MONDAY SEMINAR SERIES - JULY RSC Lecture Theatre, 1pm.

July 6: Jennifer Hodgson **End of Term** (Coote group)  
July 7 **TUESDAY**: Jonathon Myrtle **Mid Term** (Barrow group)  
July 13: Roger Coulston **End of Term** (Easton group)  
July 14 **TUESDAY**: David Bon **Mid Term** (Banwell group)  
July 27: Rong Shang **Mid Term** (Hill group) + Alex Kampfe **Visiting Scholar Final Presentation** (20 mins) (Hill group)

## THURSDAY SEMINAR SERIES – JULY RSC Lecture Theatre, 4pm.

*No seminars scheduled.*

## TRIVIA NIGHT

The Trivia Night, which we hope will be the first in a series, was held in June with great success. As is required for any lively trivia night, Ray Withers took charge as Quizmaster being both loud and entertaining and looking intellectual in his specially chosen hat. The night consisted of 10 rounds from a variety of knowledge sources with a table of students, mostly inorganic, taking out the top prize. Second place went to a group with Steph and a team mostly of various Sherburns and third place – in somewhat of an upset – went to the ever conquering Lasse and his infamous team of ringers. One contestant was heard to remark, "In order to compete next time I will have to read more Women's Weekly". Perhaps that is why the student table did so well, or maybe it was that most of the carload full of pizzas ended up on their table. A special mention has to go to the team of Eastons who knew all things trashy and pointless but lacked the knowledge on things more substantial.

Of course there were also the mini rounds taking place in between the main event with a new game introduced to the RSC Trivia Night circuit. If you don't know what it was about then you will just have to ask someone who was there, but it is important to note that Jeff Keillor was so embarrassed about winning that he had to leave the country.

The success of a night like this requires the effort of many people. First of all Ray for sacrificing his voice to keep the night alive and kicking. Katrin for lending her music knowledge to write some questions and also helping mark on the night. Steph and Jo for selling tickets and drumming up participants, Rong for designing tickets and Matt for opening Bramley's bar on the night.

We look forward to holding another trivia night later in the year so if you have any good trivia questions then let us know. If they get asked on the night then that is one question you will already know the answer to.

*- Tristan Reekie*

## PURPLE SHINS SOCCER UPDATE

The RSC soccer team is coming along nicely. After a slow start to the season, they are now on a two-game winning streak! Continued training efforts have sharpened the team's skills and now both RSISE and Life Sciences have fallen before their onslaught.

The return of 'The Axe' from injury has also helped things, with him scoring three goals in the last three games. When asked about his return, he said, "Well, yeah, I think my foot not being broken really helps me play".

The two upcoming games are against F&S on July 2nd and a make-up game against JCMSR (pending their availability) on July 9th. Come out and cheer the team on!

## FOR YOUR INFORMATION

The next **DAG meeting** will be held at 1.30pm on the 2<sup>nd</sup> of July in the Boardroom.

The next **School Forum** will be held at 10.30am on the 3<sup>rd</sup> of July in the tearoom.

## COMMUNICATION AND MEDIA REPORTS

### - Laboratory Safety Update:

#### **UCLA Researcher Dies After Tragic Lab Accident**

The recent death of a research assistant at the University of California, Los Angeles (UCLA), US, from injuries sustained while working with pyrophoric chemical have led to internal and external scrutiny of the university's laboratory safety procedures. The tragic event – involving *t*-butyl lithium, which spontaneously ignites in air – could have widespread implications for academic chemistry departments.

'Every university will have to look at their policies regarding the handling of this type of material and make adjustments accordingly,' Russ Phifer, who chairs the American Chemical Society's chemical safety committee, tells *Chemistry World*.

Phifer notes that several lab safety rules appear to have been violated by the victim – Sheharbano Sangji, a 23-year-old research assistant employed at UCLA since October 2008 – raising questions about her training and supervision. For example, Sangji was working alone in the lab, and appears not to have been wearing the appropriate protective clothing.

On 29 December Sangji was working with a bottle of *t*-butyl lithium in pentane. While using a syringe to withdraw a quantity of the reagent, it seems she accidentally pulled the plunger all the way out, creating a flash fire.

'Sangji was not familiar enough with the material and delivery means to be doing the experiment on her own,' says Phifer.

The university believes Sangji was wearing nitrile gloves, safety glasses, and a synthetic sweater with no lab coat. When the fire ignited the gloves and the sweater, she sustained second and third degree burns over 40 percent of her body. UCLA was notified on 16 January that she had died of her injuries.

After the incident UCLA launched a full review of its laboratory safety protocols. The university is also cooperating with the investigation being conducted by the Californian division of Occupational Safety and Health, which could take up to three months, the regulator says.

'My hope would be that this raises awareness about the dangers of working in a chemistry lab,' says Robert Latsch. A compliance officer at Case Western reserve University, US. He says the UCLA accident was preventable and hopes it triggers at least an evaluation of lab safety at his university and others.

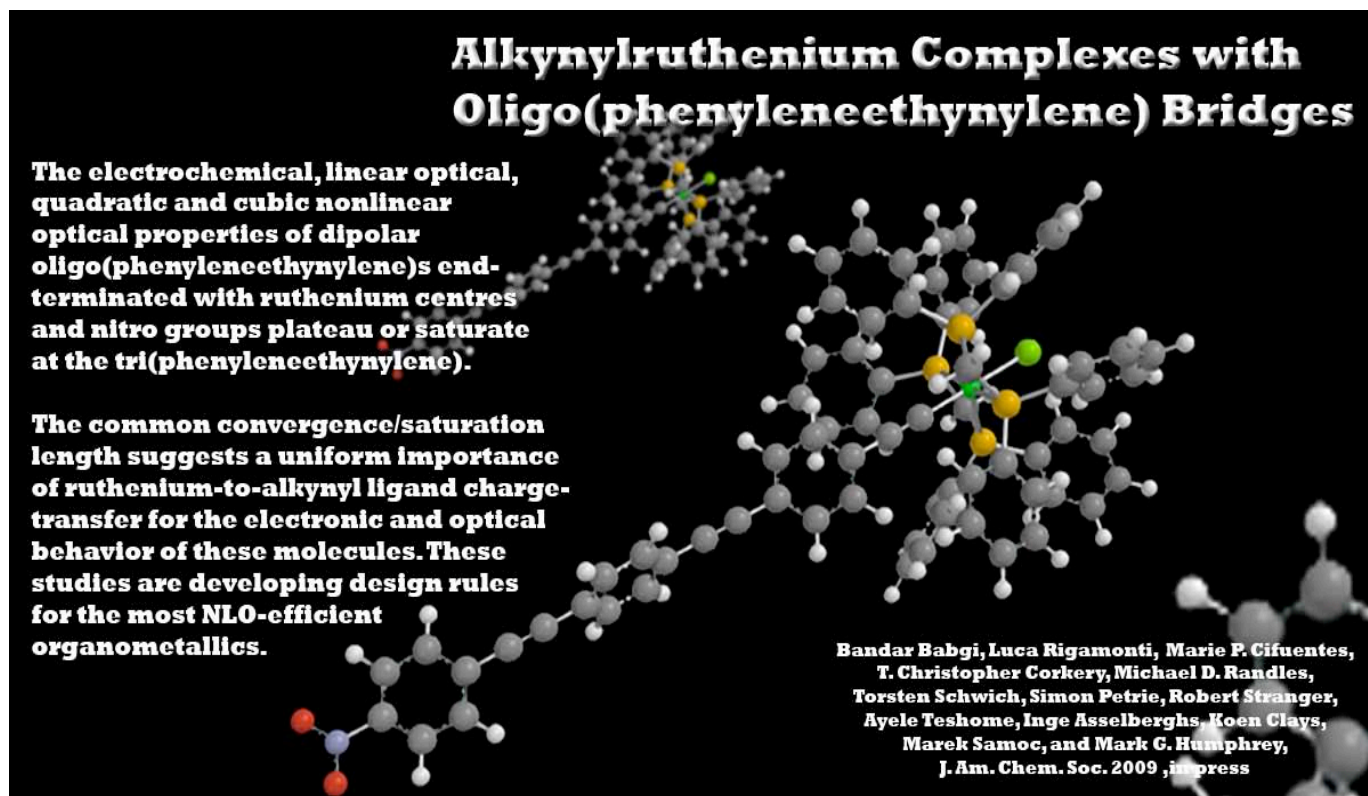
*Rebecca Trager, US correspondent for Research Day USA.  
Taken from Chemistry World, March 2009.*

## GUESS THE STAFF / STUDENT MEMBER

Mr June was Mr Hendrik Maat!

Who is this RSC staff member, aged 4?





### FUNNIES

A seven-year-old boy was at the center of a Parramatta, (NSW) courtroom drama yesterday when he challenged a court ruling over who should have custody of him.

The boy has a history of being beaten by his parents and the judge initially awarded custody to his aunt, in keeping with child custody law and regulations requiring that family unity be maintained to the degree possible.

The boy surprised the court when he proclaimed that his aunt beat him more than his parents and he adamantly refused to live with her. When the judge then suggested that he live with his grandparents, the boy cried out that they also beat him.

After considering the remainder of the immediate family and learning that domestic violence was apparently a way of life among them, the judge took the unprecedented step of allowing the boy to propose who should have custody of him.

After two recesses to check legal references and confer with child welfare officials, the judge granted temporary custody to the English Cricket Team, who they all firmly believed were not capable of beating anyone.

- Ray Withers

## FAREWELL TO VAL MURRAY

Val had a long association with the ANU. Setting out from Kalgoorlie, WA in 1968 for what was to be a 12 months working holiday with two friends and her sister, she eventually arrived in Canberra. Within a short time she applied for a position at the ANU in Central Administration and was successful. At one point Val worked with Penny Richardson (a previous School Secretary in the RSC) in the Central Scholarship Section, and later with Professor Matthews, Head of the Centre for Research on Federal Financial Relations.



Val left the ANU in 1982 to spend time at home with her baby daughter and later her son. During those years she was never idle as she took an active part in her local and church community. In 1999 Val returned to the ANU and took up a position in the RSC in the Academic Secretary's Office looking after the students, first with Penny Richardson then with Marilyn Holloway.

The bush fires in Canberra impacted on Val and her family – the night of the fire was to be her daughter Lynda's 21st birthday. The party did not take place as the Murray family was evacuated and could not return for four days, even then without electricity. Her neighbours all lost their homes! Panic set in as there was so much food in her freezer - RSC came to the rescue – freezers were located and it became a game each evening as Val was leaving to check what was on the menu that night.

Val was first diagnosed with cancer twenty odd years ago and unfortunately it returned with a vengeance just over two years ago. From the time of diagnosis in January 2007 until August 2008 Val continued to come to work. This was particularly amazing and showed her great strength and determination as she was having double strength doses of chemo and also bone treatment. From August 2008 until her death on 10 June 2009, Val's condition deteriorated causing blindness, loss of hearing and much pain which she accepted with typical stoicism.

Val we will miss you.

- Maureen Slocum

## Staff Publications as at 24 June 2009:

For a full list of RSC publications from 2002, see <http://rsc.anu.edu.au/research/Publications/index.php>

Bissember AC, Banwell MG **Microwave-assisted *trans*-halogenation reactions of various chloro-, bromo-, trifluoromethanesulfonyloxy- and nonafluorobutanesulfonyloxy-substituted quinolines, isoquinolines and pyridines leading to the corresponding iodinated heterocycles.** *J. Org. Chem.* (2009), 74(13), 4893–4895. <http://dx.doi.org/10.1021/jo9008386>

Chen J-B, Xu L, Elix JA **Parmeliaceae (Ascomycota) lichens from China's mainland V. The genera *Bulbothrix* and *Relicina*.** *Mycosystema* (2009), 28(1), 092–096.

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Matveenko M, Banwell MG, Joffe M, Wan S, Fantino E **Biological evaluation of *ent*-narciclasine, *ent*-lycoridine and certain enantiomerically-related congeners.** *Chem. Biodiv.* (2009), 6(5), 685–691. <http://dx.doi.org/10.1002/cbdv.200800319>

Namazian M, Coote ML **Gas-phase acidity, bond dissociation energy and enthalpy of formation of fluorine-substituted benzenes: a theoretical study.** *J. Fluorine Chem.* (2009), 130(7), 621–628. <http://dx.doi.org/10.1016/j.jfluchem.2009.04.003>

Nguyen TV, Sinclair DJ, Willis AC, Sherburn MS **Guest binding drives reversible atropisomerism in cavitand hosts.** *Chem. Eur. J.* (2009), 15(24), 5892–5895. <http://dx.doi.org/10.1002/chem.200900695>

Payne AD, Bojase G, Paddon-Row MN, Sherburn MS **Practical synthesis of the dendralene family reveals alternation in behavior.** *Angew. Chem. Int. Ed.* (2009), 48(26), 4836–4839. <http://dx.doi.org/10.1002/anie.200901733>

Roberts RL, Schwich T, Corkery TC, Cifuentes MP, Green KA, Farmer JD, Low PJ, Marder TB, Samoc M, Humphrey MG **Organometallic complexes for nonlinear optics. 45. Dispersion of the third-order nonlinear optical properties of triphenylamine-cored alkynylruthenium dendrimers.** *Adv. Mater.* (2009), 21(22), 2318–2322. <http://dx.doi.org/10.1002/adma.200803669>

Zare HR, Eslami M, Namazian M, Coote ML **Experimental and theoretical studies of redox reactions of *o*-chloranil in aqueous solution.** *J. Phys. Chem. B* (2009), 113(23), 8080–8085. <http://dx.doi.org/10.1021/jp8105265>