

The Newsletter of the School of Chemistry UNSW

Exciting Times for Chemistry at UNSW

Regular readers of *News from F10NA* will know the last three years have seen incredible change in the School of Chemistry at UNSW. As amazing as it seems, the pace of change is increasing. We recently had a new degree program in Medicinal Chemistry approved for which I must thank the tireless work of Gavin Edwards. This is an exceedingly important initiative between Chemistry and Pharmacology which will help increase our student numbers across all year levels. Gavin has also driven our undergraduate teaching review, which saw our new 1st year being rolled out this year. Next year sees a new 2nd year program coming on line and in 2011 the new 3rd year will be taught. The report from an external review of science was recently released in which the external panel praised the work being done

in Chemistry and strongly recommended providing chemistry with greater support. Our Outreach program goes from strength to strength thanks to the leadership of Naresh Kumar and the work of many others. Members of the School are receiving even more recognition for their fine work with Kris Kilian winning the U Committee prize for the best PhD in Science at UNSW in 2007. Emeritus Professor Paddon-Row received recognition for his lifetime's work with an honorary DSc from Sydney University. Justin Gooding is a finalist for the 2009 Eureka Prize, a great honour – we await the outcome for this in August. These successes in many ways reflect the hard work of the School as a whole and the positive environment we all create.

- Barbara Messerle

Chemistry Students Just Can't Stop Winning Prizes

In the last issue we reported on a number of prestigious prizes won by students from UNSW Chemistry, most notable of which was the 2008 RACI Cornforth Medal won by Dr Kris Kilian for the best Chemistry PhD thesis submitted in 2007. The accolades for Kris and the quality of the PhD he did with us keep rolling in. At the May 11th graduation ceremony Kris not only conferred his PhD but was also awarded the University of New South Wales U Committee Award for Research Excellence in Science. As part of receiving that award he was given the honour of giving the occasional address to the new graduates. Kris's sense of enquiry and open-mindedness certainly made a strong impression on all. Prior to the ceremony Kris joined the members of the U Committee, along with his co-supervisor Professor Mike Gal from Physics, Associate Professor Roger Read and our Head of School Barbara Messerle

for a lunch. To attend the ceremony Kris flew back to Australia from Chicago, the cost of which was generally supported by the Science Faculty. We congratulate Kris on yet another fine achievement and wish him many more successes in the future.

- Justin Gooding



Dr. Kris Kilian (centre) with members of the U Committee, A/Prof Roger Read, Prof Barbara Messerle and Prof Mike Gal (co-supervisor and Associate Dean (Research Training))

Honorary Degree for Emeritus Professor Michael Paddon-Row



Emeritus Professor Michael Paddon-Row receiving his honour doctorate from her Excellency Professor Marie Bashir

May the 22nd was a very special day for the acknowledgement of the pioneering work performed in Australia on understanding electron transfer in molecular systems. On that day The University of Sydney conferred upon Emeritus Professor Michael Paddon-Row of the UNSW Chemistry School, the degree of DSc (honoris causa) which was presented to him by the Chancellor of The University of Sydney and NSW Governor her Excellency Professor Marie Bashir. The citation read during the ceremony stated “Professor Paddon-Row occupies a unique place in contemporary Australian chemical research, in that his work combines skills in synthesising unusual and complex organic molecules, computational quantum molecular and molecular dynamics calculation to design the engineering of their structures and of their physical properties, and extensive experimental physico-chemical, mainly spectroscopic, investigations. The aim of this focussed threefold attack is to gain quantitative insight into fundamental chemical problems, particularly of the nature of pathways by which reactions proceed (i.e., mechanisms) and the rates at which they do so (dynamics).” And “Professor

Paddon-Row’s research career is an outstanding example of the success that can be achieved through a combination of synthetic skills of the highest order guided by fundamental theory targeted on the solution of basic scientific problems.” Mike was also given the honour of presenting the occasional address. Mike is still one of our most prolific and highest quality scientific contributors to the School today and there is no doubt his great contributions to science will continue for many years to come. What made the day even more special was that Mike shared the stage and honour with his long time friend and collaborator, Emeritus Professor Noel Hush of The University of Sydney. Professor Hush is also one of the pioneers of our understanding of electron transfer. His best known contribution, of which there are many, is the development of a model for electron transfer frequently referred to as the ‘Marcus-Hush’ theory. His citation said it best, “Professor Hush is truly a great Australian scientist, a unique intellect, and is a wonderful presence in our University”. We applaud the University of Sydney for honouring both Noel and Mike in this way.

- Justin Gooding

UNSW Chemist Short-Listed for a Eureka Prize

The Eureka Prizes are possibly Australia’s most prestigious science awards and the finalists for this year have been announced with our very own Professor Justin Gooding a finalist for Scientific Research which is the prize for curiosity driven scientific research. Justin has been nominated for ‘pioneering surface chemistry producing better biosensors for use in medicine, environmental science, defence and security’. Although the award is given to an individual, the nomination as a finalist is a fitting reward for the

excellent research conducted not just by Justin but his entire research group over the last 10 years. Justin is one of three RACI members nominated as finalists for prizes this year with Professor Anthony Weiss from the University of Sydney and Dr Joanne Jaimie from Macquarie also being nominated as members in team prizes. The winners will be announced at a gala dinner on August the 18th in Sydney. We wish Justin the best of luck.

- Barbara Messerle

*UNSW Chemist shortlisted
for a Eureka Prize!*

Our Publications for Quarter 2

Our publication numbers are showing some impressive growth over previous years. Part of the reason for this is an outstanding performance by Professor Roger Bishop who published 7 papers in the last quarter and Associate Professor Naresh Kumar with 6 papers coming from his group. Other reasons for the good performance are the emergence of the research groups of Marcus Cole and Palli Thordarson as publication forces within the school. Congratulations is extended to all authors, with a special mention for the high profile papers in *Angewandte Chemie* and *Nanoletters* marked in blue.

From Molecular Devices cluster

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Other publication

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Beyond our Walls

As always UNSW Chemists have been found in all four corners of the globe in the last three months. Professor Roger Bishop attended the 12th International Seminar on Inclusion Compounds (ISIC-12) held at the University of Stellenbosch, South Africa over 4-9 April 2009 and gave a keynote lecture and two poster presentations on his research. Fortunately for Roger the closing ceremony of this meeting was held at Newlands Stadium in Cape Town, where unfortunately the locals successfully overpowered the Aussie one-day cricket eleven (see photo). Roger also attended the XIX International Conference on the Chemistry of the Organic Solid State (ICCOSS-19) held at Sestri Levante on the Italian Riviera near Genoa over 14-19 June 2009 and gave an invited lecture and two (different) poster presentations on his research.

Associate Professor Naresh Kumar, Professor David Black and Professor Justin Gooding all went to Delhi to meet with a colleague at the Indian Institute of Technology, Professor H.M. Chawla as part of discussions regarding writing an

Outreach Program Diversifies into Multimedia

The outreach program of the School of Chemistry has really begun to diversify the way it gets its message across. Recently UNSW Chemistry hosted a group of Year 10 science students from Sydney Girls High School. The group consisted of 150 students, with four science teachers leading the group. The girls spent a full day at the Chemistry laboratories and Analytical Centre. They took an active part in chemistry experiments, which involved fatty acid analysis of an oil sample, preparation of biodiesel, and the magic bottle and luminol reaction demonstrations. The girls showed a great enthusiasm in Chemistry and asked a lot of questions. The staff and students in Chemistry only hope the girls enjoyed the day as much as we did.

Australia-India research grant. On the Saturday of their visit, Professor Chawla declared work stopped and took his three Australian visitors to Agra and the Taj Mahal. Professor Chawla was an outstanding host who not only made sure his three Australian visitors were very productive, but also had an amazing time and for that we thank him.

Professor Gooding also travelled to Europe to give an invited lecture on DNA biosensors at the Dnatec09 conference in Dresden Germany in May, while Professor Margaret Harding attended the Fourth Joint International Symposium on Macrocyclic and Supramolecular Chemistry in Maastricht, Netherlands in June.

Dr Palli Thordarson and group members Danny Goldstein, Katie Tong and Dr. Sabrina Dehn ventured across the ditch and presented papers at the 4th Advanced Materials and Nanotechnology (AMN4) Conference at the University of Otago New Zealand. Danny and Sabrina gave talks while Katie gave a poster. All presentations were well received.



Roger in Newlands Stadium in Cape Town doing science the South African way

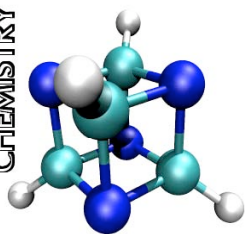


David, Naresh, and Justin in Professor Chawla's office in IT Delhi



Brynn receiving a medal from the Royal Society of New South Wales upon delivery of a lecture on "Scientists versus the Law"

Professor Brynn Hibbert has also been active in outreach presenting his lecture "Scientists versus the Law" to the Royal Society of New South Wales in May and will present a lecture entitled "Crooks, Cranks and Charlatans" to the Southern Highlands branch of the Royal Society of New South Wales in September. To demonstrate the possibility of extending outreach beyond given lectures while present in person, Brynn conducted a first in Chemistry and presented lectures and welcome to new students in our taught course masters via UNSW TV (see <http://tv.unsw.edu.au/collection/calm-and-chem7111-collection>). Such a medium opens up all sorts of opportunities for outreach.



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Major Events to put in your Diaries

There are a couple of events coming up in September which are of major importance to the School of Chemistry at UNSW.

On September the 17th we will officially launch the new Bachelor of Medicinal Chemistry undergraduate program which was developed by the School of Chemistry with the Department of Pharmacology in the School of Medical Science. According to the driving force in establishing this degree Dr Gavin Edwards "The Bachelor of Medicinal Chemistry is a professionally oriented, truly interdisciplinary program taught as a joint initiative between the School of Chemistry (Faculty of Science), and the Pharmacology section of the School of Medical Sciences (Faculty of Medicine). This four year degree program leads to the award of Honours based on successful completion of the program including a medicinal

chemistry oriented research project in the fourth year." This is the most significant addition to the Chemistry teaching program in many years.

The 2nd event to mark in your diaries is the School Poster Day on September 3rd. This year the poster day coincides with the School Visiting Committee coming to UNSW. The Poster Day is where the research groups in the School present posters of their research so potential new honours and PhD students can see what research we are doing.

Finally over August 25th-27th we will have the 2009 Andrews Lectures to be presented by Professor Samuel Stupp from the Institute for BioNanotechnology in Medicine, Northwestern University in Chicago. Judging from previous lectures members of the school have witnessed from Professor Stupp, this series of three lectures promises to be exceedingly memorable. You are all urged to come along.



Want to know more!

See us at:

www.chem.unsw.edu.au

We were wrong

In the last issue we stated that Dr. Kris Kilian was the first ever winner of the RACI Cornforth Medal from UNSW. We were in fact incorrect. The first winner of this prize from UNSW for the best Chemistry PhD in a given year was actually Darryl McConnell who won in 1996 and was supervised by Professor David Black. So UNSW Chemistry students have won 2 of the 16 Cornforth medals awarded.