ChemNews

School of Chemistry—UTAS

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Welcome

From Head of School, Brian Yates

As we begin a new academic year I would like to welcome our new staff and all our new students, including those at undergraduate, honours and postgraduate level. It is great to see the corridors and labs filled with enthusiastic people! Much has happened over the summer in terms of a variety of research activities and the refurbishment of the building in Hobart, and some of those activities are reported in this edition. This is also a time of farewell as we begin to say goodbye to Mike Johnson and his team from Analytical Services Tasmania. The government analytical labs first came to the Chemistry Building in 1973 and after a long association with the university they are now moving to purpose-built accommodation at New Town. Many of the employees are graduates of the School of Chemistry and we have enjoyed the interaction over the years.

Welcome to the following new staff and students (some continuing into PhDs from Honours) who joined us thus far for 2007:

Staff

Professor Wolfgang Buchberger— visitor ACROSS
Dr Chris Evenhuis— Postdoc ACROSS
Professor Pavel Nesterenko— 5 year strategic appointment ACROSS
Dr Russell Watson— Postdoc Organometallic

PhD Students

Ruth Amos
Rowan Henderson
Samuel Karpiniec
Boon Ng
Sam Poynter

Honours Students

Carrie Bloomfield
Rowan Brown
Rebecca Smedley
Baden Wass

Grant Success

Congratulations to the following staff on their Grant success:

Eric Guiler Research Grant
Dr Emily Hilder & Dr Michael Breadmore
China International Research Linkage Grant
Roos Guijt
Endeavour Fellowship
Dr Karen Stack & Dr Trevor Lewis

Chemistry Students BBQ

Dave & Nigel doing a good job with the sausages!

The Chemistry BBQ in Hobart was put to good use at the beginning of semester with a mountain of sausages being cooked for the hungry students. Thank you to all the helpers.

Inorganic Chemistry Conference—Hobart

Dave, Michael, Roderick & Anissa participated

Allan Canty and Michael Gardiner organised the-above conference at the Casino. There were 243 delegates including 80 from over-seas. UTAS was strongly represented with talks by Michael Gardiner, David McGuinness and Rus-sell Watson, and a large number of posters from our school.

Organic & Physical Chemistry Conference—Adelaide

Brendon, Peter, Sarah & Nigel enjoy a break at the confer-ence

Jason Smith, Brendan Gourlay, Peter Mo-lesworth, Sarah Ng, Brian Yates and Nigel Brookes all attended the above conference in Adelaide in January. Between them they pre-sented three talks and several posters. It was a very successful meeting that brought chemists together from the organic and physical disci-plines. Brian gave one of the three joint session talks, while Peter Molesworth was a member of the winning team at the conference din-ner! The next Organic Chemistry conference will be held in Hobart in 2008.

New Fume Hoods—Teaching Labs in Hobart

Over the summer the fume hoods in the three large teaching labs in Hobart were replaced. We are very grateful to the University for providing considerable funds for this to hap-pen. Not only has it addressed important OH&S issues, but it has resulted in some very nice looking labs.

New fume hoods in Chemistry Laboratory

New Staff in Chemistry

Welcome to **Pavel Nesterenko**, who joined ACROSS, as Professor in Separartion Sciences. Prof Nesterenko obtained his MSc, PhD and DSc degrees from the M.V. Lomonosov Moscow State University of Russian Federation and has been Professor in Analytical Chemistry at this univer-sity since 2003. His research area is connected with development of new stationary phases for various separation techniques. He has had pro-ductive collaboration with ACROSS for more than ten years and visited UTAS in 1996, 1997 and 2001. Prof Nesterenko is based in room 407 and can be contacted on ext: 2165 or Pavel.Nesterenko@utas.edu.au.

Wolfgang Buchberger is spending a six months sabbatical in ACROSS. He studied chemistry in Vienna (Austria) and obtained a PhD in 1978. In 1996 he was appointed Full Professor for analytical chemistry at the Johannes-Kepler-University Linz (Austria). His research interests include organic trace analysis with special emphasis on determination of xenobiotics in the aquatic environment, advanced chromatographic and electrophoretic methods, and new mass spectrometric detectors for analytical separation techniques. He is also involved in development of novel methods for quality control during manufacturing of chemical products. Therefore, his group in Linz,Austria maintains various cooperations with the chemical industry in Europe. He had established cooperations with Paul Haddad at various occasions in the past. While being here at UTAS during 2007, he is involved in ongoing research projects of ACROSS, especially in the development of new monolithic chromatographic columns for high-performance ion-exchange chromatography, capillary ion chromatography, characterization of polymeric stationary phases, and development of novel applications inforensic and environmental analytical chemistry.

Chris Evenhuis' post-doc position involves fundamental research in separation science using monolithic (sponge like polymer) materials attached inside a capillary for ion chromatography. These materials offer the potential advantage of using much higher flow rates than traditional packed particle columns without very high back-pressures or a loss of performance. My aim is to see if contactless conductivity measurements can be used to characterise the monolith at each stage of its production.

There is a restless teacher inside Chris delighted to be involved in some lectures, tutorials and demonstrating to 1st yearstudents this semester.

Russell Watson obtained his PhD from the University of South Carolina in the USA working on supramolecular coordination chemistry under the guidance of Professor Daniel Reger. His postdoctoral studies, under Professor Allan Canty at the University of Tasmania, investigate reactions of (organo)iodine(III) reagents with palladium(II) and platinum(II) complexes to give organopalladium(IV) and organoplatinum(IV) compounds. These compounds are possible catalytic intermediates in important organic reactions, and the goals of the current work include better understanding both the stabilities of these intermediates and their decompositions to give organic reaction products.

Student Award

Congratulations to **Oscar Potter** (current PhD student) who has been awarded a Fullbright fellowship to visit the University of Berkeley for several months.

KRA331 Field Trip

The KRA331 (**Natural Products and Bioprospecting**) students recently participated in a field trip. A convoy of two buses and a support vehicle left the School of Chemistry at 9am on 4 March. First stop was near Shelley Beach, Orford where we rendezvoused with two divers from Zoology who collected marine material while the students sought out lichens from nearby rocks with the help of Jason Smith. Christian Narkowicz then guided the students with sorting and cataloguing the marine samples of sponges, ascidians, bryozoans and seaweeds. We then progressed to the Wielangta Reserve for lunch and to collect plant material for essential oil extraction. The area was recently subject to serious bushfires. Although we were still able to make a successful plant collection some ill effects were noted including the combustion of the (in) famous bush toilet block. Everyone returned safely by midafternoon. The students will spend the next few weeks working on the collected material with the aim of discovering bioactive compounds (bioprospecting).

Siemen's Science Schools

About 50 year 9 students enjoyed a Siemens Science Experience in **Hobart** at the School of Chemistry on 16 January 2007. They completed various experiments under the grouping of "Colourful Chemistry", Smelly Chemistry - Making Scents of Esters", Crystalline Chemistry" and Slimy Chemistry". The participants appreciated the "hands-on" approach Special thanks are due to the demonstrators Brendon Gourlay, Peter Molesworth, Sarah Ng, Oscar Potter and Damien Stringer as well as to Andrew Grosse whose attention to detail and planning ensured everything worked smoothly.

Again a full quota of 30 students attended the Siemens Science days in **Launceston** and participated in two Chemistry sessions. Firstly, Trevor Lewis introduced the group to the joys of synthetic organic chemistry in which the students synthesised, purified and checked the purity of aspirin, and produced rayon and multicoloured slime (for many, the highlight of the session).

In a second three hour session Andrew Seen led the group through some practical hands-on water analysis (dissolved oxygen, turbidity, pH, conductivity and macroinvertibrate identification). Again, chemistry rated highly in the student responses after these lab sessions. Thanks to Russell McGifford, Nathan Newman, Kym Knights and Barclay Sayer for their help in making these enjoyable and informative sessions for our young guests.

Marriage

Congratulations to Katrina Munting (nee Bolton) who was married at the end of January. Katrina obtained first class honours in chemistry in 2005 and still works part-time in chemistry.

Upcoming Seminars

Wednesday 4 April

Dr Richard Clark, University of Queensland

"Going round and round in circles to design stable peptide-based drugs"

Wednesday 18 April - Introductory PhD Seminars

Sarah Ng, "New synthetic technology for the synthesis of pyrrolidine alkaloids"

Oscar Potter "New materials and techniques for use in microfluidic bioanalytical devices"

Wednesday 2nd May Introductory Honours Seminar

Carrie Bloomfield, "Method Development for a Capillary Ion Chromatography System"

Rowan Brown, TBA

Rebecca Smedley, "SPME-IC of Charged Ionic Analytes from Liquids"

Baden Wass, "Factors effecting metal soap formation in paper making"

Wednesday 9 May

Dr Anissa Goemann, "Applied Surface Science - Surface modification of Strontiumtitanate under high temperature treatment"

Wednesday 16 May—Introductory PhD Seminar

Jeremy Deverell, "Microreactors for flow-through catalysis"

Peter Molesworth, TBA