

## National and International Links

---

### Outreach Activities

#### Australian Academy of Science (AAS)

Professor J.W. White is the AAS's spokesperson on stem cell research and contributed to the national debate on the potential scientific value of embryonic stem cell research in Australia. He also contributes to policy development for major national research facilities for the Academy of Science.

#### Royal Australian Chemical Institute (RACI)

As immediate past president Professor White has contributed to the continuing development of the role of the RACI Assembly in the development of policy on Chemistry in Australia. A particular interest is the question of attracting bright young school leavers into Chemistry and the proper staffing and course standards for accreditation of Chemistry departments.

#### UnIChe (Universities, Industry, Chemistry)

In collaboration with the Departments of Chemistry at the Universities of Melbourne, Newcastle, and the ANU, and the industrial partner Orica Ltd, the UnIChe program, financed by DEST and Orica Ltd., coordinated by Dr P.A. Reynolds and chaired by Professor J. W. White, completed another successful year. This project includes an undergraduate enrichment program for the ablest students to increase the flow of high quality chemistry graduates to industry; a school outreach program to raise awareness and value of the many interesting career options in chemistry; an industry relevant research PhD and Honours program; and a staff exchange program to strengthen the links between industry and university increasing the capacity of business to exploit and acquire university knowledge.

The undergraduate program continued with field trips for selected elite students from each of the three university departments. These included a Summer School (10-22 February) in both Canberra and Melbourne in which 28 students learnt about business and business practice in the classroom and followed this up in practice by visiting Orica industrial sites in Melbourne. This was augmented by a two-day winter field trip in July to Newcastle for 23 students to see for themselves the 'ammonium nitrate trail' from synthesis by Incitec Ltd to the final end use in open cut mining via the Orica explosives facilities.

Finally, UnIChe organised and financed seven honours students and their projects, and five PhD students, selected on fundamental scientific merit, but also of interest to five of Orica's business areas. The students also presented their results to a joint Orica-University "Emerging Science" symposium with sixty participants, which was held in Melbourne in November to facilitate technology transfer to and within the company.

Following a highly successful external review of UnIChe in 2002, the UnIChe management committee will continue and expand the program for 2004-2005 with funding from the all partner universities as well as Orica Pty Ltd. The University of Queensland has also joined the project as well as new partners in biomolecular science and chemical engineering and new school outreach programs by joining forces with programs in Queensland and at the Australian National University.



### National Youth Science Forum

Excerpt from a report to Council by Emeritus Professor Rod Rickards:

*The 2004 NYSF commenced with unbelievable goodwill and understanding by everyone concerned. Every activity proved to be outstandingly successful and appreciated very much by the students. .... The Academy provided a host of Fellows who "entertained" the students at morning refreshments. Professor John White had students talking about entropy within minutes.*

Professor A.F. Hill, Mr H. Neumann, and members of inorganic research groups hosted the National Youth Science Forum students. After attending a short introductory lecture given by either Professor Hill, Dr E. Humphrey or Dr M. Schultz, four groups each of sixteen students, prepared various transition metal complexes and characterized them by infrared spectroscopy. As usual, the students appeared to enjoy the opportunity to do hands-on chemistry and gave the RSC good to excellent evaluations. Student demonstrators from inorganic chemistry were Mr R. Dewhurst, Mr N. Tshabang, Ms H Kitto and Ms R. Warr.

### National Science Summer School

Emeritus Professor R. Rickards continued to serve on the Council and Executive Council of the National Science Summer School. This organisation runs the National Youth Science Forum, a two-week program held in Canberra in January for each of two groups of 144 year 12 school students from all over Australia who are considering careers in science, engineering and technology. He was also a member of the panel which conducted an extensive review of the Forum, which has now run for 20 years.

## National and International Links

---

### Fifth National Science Teachers' Summer School

Emeritus Professor R. Rickards, Professor S.B. Wild and Dr E. Sevick provided this School's contribution to the Fifth National Science Teachers' Summer School, held at the ANU for a week in January. Some forty teachers representing schools across Australia attended the Summer School, the theme of which was *Australian Science: the Cutting Edge*, and were informed about areas of current interest in organic, inorganic and physical chemistry. Dr Edie Sevick gave the lecture entitled *Optical Tweezers for Pulling Polymer Chains*.

### Symposia on Organometallic Chemistry

Dr M. Schultz coordinated a symposium on organometallic chemistry, which was hosted by the School and brought together the research groups of Professors A.F. Hill (RSC), Professor L. Field (University of Sydney) and B. Messerle (University of New South Wales). This was the fifth such meeting, the fourth being held at the University of New South Wales on 22<sup>nd</sup> May, that provided an opportunity for early career researchers (PhD and post-doctoral research fellows) to present their work.

### Collaboration with RMIT University, Melbourne

In the course of a collaboration between Professor M.A. Bennett and Professor S. Bhargava (RMIT University), a PhD student, Mr Steven Privér, spent a period working at the School. He prepared a series of dinuclear platinum complexes containing C<sub>6</sub>H<sub>3</sub>-5-Me-2-AsPh<sub>2</sub> as a bridging ligand, including a novel mixed oxidation state (+2.5) compound. Mr Privér will submit his thesis within the next few months.

### Visiting Students – University of Leipzig

The following postgraduate students from the University of Leipzig, who were funded by the Deutscher Akademischer Austausch Dienst e.V. (DAAD), worked with Professor S.B. Wild and Mr P.A. Gugger in the Inorganic Stereochemistry and Asymmetric Synthesis Group:

Ms Ulrike Helmstedt (December 2002–March)  
Ms Martina Hanner (October–November)  
Mr Thomas Höcher (October–November)  
Mr Uwe Polster (November–March 2004)

### CSIRO Student Research Scheme

The following students undertook research projects under the CSIRO student scheme:

Ms Gurleen Hans (Year 12) Canberra High School, with Professor Elmars Krausz  
Mr Andrew Tuckwell (Year 12) Canberra High School, with Professor Elmars Krausz

### Women in Engineering Seminar

Dr E.M. Sevick presented a seminar to the Women in Engineering (WIE), Australian Federal Police College, Canberra, 12<sup>th</sup> August, titled *A Story of a Recent Research Adventure*.