



WEEKLY "E" NEWS- from the RACI NSW 5th December 2008

Dear NSW RACI readers

Below are this week's announcements from the RACI NSW Branch, a summary is given and then scroll down for the full text.

RACI member takes out NSW Scientist of the Year Award Professor Gordon Wallace, FRACI CChem, Executive Research Director of the ARC Centre of Excellence for Electromaterials Science at the University of Wollongong is the Chemistry Category Winner in the inaugural NSW Scientist of the Year Awards. The awards were for the area of applied sciences and technology. *Full story page 3*

Sydney students perform well at the Organic Symposium 2008 The Jolliffe Group and Todd Group from the University of Sydney were well represented at the RACI Organic symposium this week. *See page 4 for more details*

Electrochemistry Conference 2008 at UNSW Last week saw the culmination of 6 months of planning pay off, as close to a hundred chemists gathered at UNSW for the ECD conference. *See page 4 for more details*

RACI Assembly 2/08 – 29 November, 2008 : Report to NSW Branch The Assembly meeting was held on Saturday 29 November in Melbourne, at the RACI Head Office. *RACI members are particularly encouraged to read this report as it outlines some proposals to change the structure of the RACI. Page 5 and 6.*

The 2009 Honours prize (RACI Western Sydney Section) will be awarded for the best Honours thesis produced in 2008 by a student who is resident and/or has studied or undertaken research in western Sydney throughout the year. The RACI Western Sydney Section Honours Prize is now open. *Full details see page 7 Details have been updated*

Hans Freeman's Obituary- today's SMH For those who are interested, Hans Freeman's Obituary is in today's SMH. You can find it at: <http://www.smh.com.au/news/obituaries/from-riches-to-rags-to-protein-pioneer/2008/12/04/1228257223616.html>

ADVANCING BIOBUSINESS AWARD Applications are now open for the 2009 Advancing BioBusiness Award sponsored by Merck Sharp & Dohme and Advance *Full details see page 8*

Website of the Week: This week we look at **Chemical Free?**
<http://www.rsc.org/AboutUs/News/PressReleases/2008/ChemicalFree.asp>

New Members – in NSW We are pleased to announce that record numbers of new members were conferred at last weeks PAC Meeting (We led the way with 67 new members!! It was a tight race however- Victoria had 61) *See full list page 9*

Missed an edition of our weekly E-News? We now have an archive of old editions! Please see

<http://www.chem.unsw.edu.au/RACI/News.html>

Its here!!! **The New 2008/2009 Entertainment Book has arrived:** This book has been an important fundraiser for our branch the last few years. Purchase your brand new 2008/2009 Entertainment™ Book *now*

Important Dates in Chemistry's History Dec 4 -11*Pioneers in Vitamins, Nitrous Oxide, and Ammonia feature heavily in this week's list of Birthdays! find out more here!*

Please scroll down for further details.....

RACI member takes out NSW Scientist of the Year Award

The NSW RACI was proud and excited when we were informed of Professor Gordon Wallace's success in being awarded the NSW Scientist of the Year (Chemistry Division). Professor Gordon Wallace currently is the Executive Research Director at the ARC Centre of Excellence for Electromaterials Science, and Director of the Intelligent Polymer Research Institute at the University of Wollongong.

He is the University of Wollongong's sole ARC Federation Fellow, and his research efforts promise to revolutionise medical science by creating new bionic materials. By challenging the conventional wisdom that instability in polymer materials should always be eliminated. He asserted that this instability could be used to advantage if understood, directed and controlled, allowing the creation of "intelligent" polymers, that is, materials that sense and respond to stimuli. In 1990, Professor Wallace established the world's first intelligent polymer research laboratory in NSW, and he is now widely recognised as a world leader in the development of these materials.

More recently he has combined nanotechnology with his research into intelligent materials and is now a recognised world expert and pioneer in the emerging area of nanobionics. Professor Wallace's work has resulted improvements in the Cochlear bionic ear, whilst his work on the electrical stimulation to release nerve growth factors from polymers, significantly enhanced growth from nerve cells. This has provided great potential for nerve cell repair in patients with damaged hearing or spinal cords. The Professor pioneered the development of artificial muscle fibres containing carbon nanotubes, as well as the further development of a rehabilitation glove to help repair injured hands and fingers (in collaboration with Royal North Shore Hospital). The Professor's work also extends into the development of electronic textiles including the development of wearable human movement sensors for the Australian Football League (AFL).

Professor Wallace and his team have attracted over \$27 million in research funds, which includes research contracts from BlueScope Steel, Rio Tinto and the USA's Defence Advanced Research Program Agency. Appointed a professor at just 32, he has so far published 433 refereed journal papers, helped establish 20 patents and successfully supervised 53 PhD students to completion. It is little wonder the NSW office for Science and Medical research has recognised Professor Gordon Wallace this year in their awards, and we will keenly follow his and the ARC Centre of Excellence for Electromaterials Science, and the Intelligent Polymer Research Institute at the University of Wollongong exciting work in the future.

(Information obtained

*http://www.osmr.nsw.gov.au/science_communication/science_promotion/scientist_of_the_year/
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Sydney students perform well at the Organic Symposium 2008

The Jolliffe Group and Todd Group from the University of Sydney were well represented this week at the RACI Organic symposium.

The Symposium held at the School of Chemistry at the University of Sydney on Wednesday 3 December 2008. Several students from Sydney University walked away with Student prizes. Congratulations to PhD student Stephen Butler (Jolliffe Group) and Honours Student Fiona Ky (Todd group) for winning both the oral presentation prizes (1st and 2nd respectively). Stephen Butler's talk on "Cyclic peptide platforms as selective sensors for phosphate oxoanions" was an exceptional presentation, whilst new RACI member Honours Student Fiona Ky's presentation saw her follow her success from last week (after she received a prize at the RACI NSW Analytical Presentation evening) and receive a Prize too at this Organic Symposium.

Poster Presentations were also outstanding. Congratulations also to James Cochrane (PhD) and Michelle Wong (Honours), both from the Jolliffe group, who won two of the three poster prizes.

Electrochemistry Conference 2008 at UNSW

Last week saw the culmination of 6 months of planning pay off, as close to a hundred chemists gathered at UNSW for the ECD conference. Two days of exceptional presentations were given by chemists from Australia and New Zealand, also the international plenary speakers Professor Lo Gorton, Professor Lee Yook Heng and Associate Professor Alison Downard were well received.

The Bloom-Gutmann Prize, which honours the founders of the Electrochemistry Division of the RACI, the late Professor Harry Bloom and Dr Felix Gutmann, is awarded to the student presentation at conference. The prize was first awarded in 1978, the award comprises an inscribed medal and a cheque for \$100. This year the award was presented to South Australian Ben Flavel for his talk titled *Solution Chemistry Approach to Fabricate Vertically Aligned CNT on Gold Wire: Towards Vertically Integrated Electronics*. The Australian Microscopy and Microanalysis Research Facility (AMMRF) located at University of Sydney also sponsored a student poster prize. The prize - a cheque of \$500 was presented to UNSW student Simon Ciampi for his poster *Silicon Electrodes Resistant to Oxidation in Aqueous Solutions: Preparing Redox Assemblies via Click Chemistry on Acetylanlyl Silicon (100) Surface*.

The event was a great success and has put the division on a steady footing as it goes into 2009.

RACI Assembly 2/08 – 29 November, 2008 : Report to NSW Branch

The Assembly meeting was held on Saturday 29 November in Melbourne, at the RACI Head Office. An Awards Dinner was held on the Friday evening at University House in Melbourne University, well attended by 60 members and guests – presentations were made for most of the Institute's many Awards, and the evening was a festive and enjoyable occasion – UNSW featured largely in the awards.

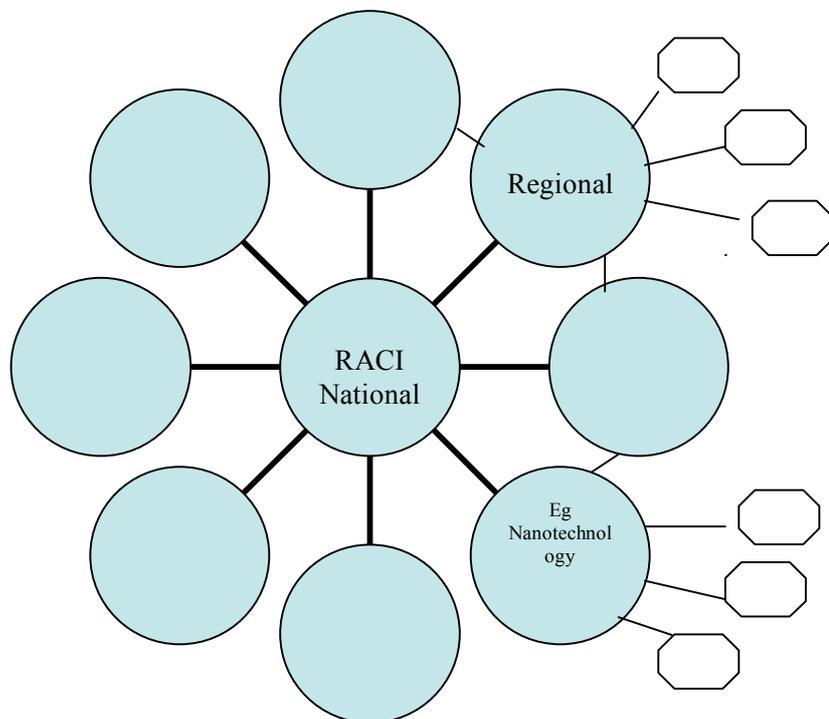
The Assembly was preceded by the AGM, during which the new Board was elected and the changes to the Constitution voted on and ratified, to make all Board members also members of the Assembly, and allow the Board President to be chosen from the whole Board.

Assembly next day was presided over by Bob Watts, the incoming President. Ian Rae was absent – Ian has bowel cancer, and is reported to be doing well after an operation. Following the precedent set in May, the main Assembly meeting, over by lunch, was followed by two workshops, which resulted in some new and quite revolutionary proposals.

The first workshop discussed the paper written by Bob Watts on Restructuring RACI Membership. The discussion was mediated ably by David Woods, the newly elected President Elect – David is a Chemical Engineer, previously Head of School at the Chem Eng Department in Melbourne University. The workshop produced much useful discussion and changes to the wording of the paper, which was generally approved in principle. The most significant change to the published paper was an agreement to have C Chem retained as a post-nominal for chemists with a degree from an accredited course and two years experience – this is intended to allow an extra point of recognition.

The paper will be modified and published soon in ChemAust with a call for comment.

The second workshop was much more contentious. In it we discussed a paper by Joe Shapter, the Western Representative on the Board. The thrust of the paper is that the RACI is seen as “old and out of step with some of the things currently happening in chemistry”. His solution is to make radical changes in the Division/Branch structure, to reduce the number of entities and replace them with ‘key areas’. He proposes 8 key areas of interest (colleges?) (e.g. Nanotechnology) plus RACI National (Head Office), each of them interacting with H/O and each other – funds to be distributed according to members nomination of interest.



Much discussion resulted, with points being made for and against. The idea will be developed and discussed again in May. *****

Some other points arising from the AGM and Assembly were:

- Audited financial accounts were not presented at the AGM due to a mistake by the Auditors (who will be changed). Accounts will be presented to Branch Presidents and Division Chairs for immediate (24 hr) comment, and voted on at a subsidiary AGM on Dec 12.
- The names of two signatories for each Group must be sent to Glenda ASAP
- A number of complaints re lack of financial information and lack of reports were voiced by various representatives. Glenda reported that statements had not been sent recently because of roll-over of accounts. The impression gained is that the office is understaffed and struggling to maintain a service.
- The Leighton Medal fund has nearly run out of money. There was discussion on whether awards in this position should be abandoned or supplemented. A list of awards will be sent to Branches and Divisions to be divided into categories (A or B – retain or discontinue). David Hadley is already looking at sponsorship.
- Annual Reports from all entities are due, and some are still missing
- IT Report – the introduction of the CMS is being implemented. It should roll out by the end of December.
- Branch and Division reps voted on the representatives for Board Committees, and Phil Marriot (Vic) and Mark Buntine (Phys Chem) were elected.

Neil Galbraith
2 December, 2008

******* RACI members have been invited to comment on the proposal for changing the structure of the RACI –they have asked his comments to be supplied by Dec 15. If you pass these to NSW office (racinsw@chem.unsw.edu.au) they will be directed to the right person**

Do you supervise Hons students?

Did chemistry provide a solution?

Is your student eligible for an RACI prize...

... of \$200 and one year's RACI membership?

YOUR HONOURS STUDENTS have had some sleep since finishing their thesis – NOW is a good time to consider their eligibility for the 2009 Honours prize (Western Sydney Section) if they reside, or have done their research, in Western Sydney. ALL WE NEED IS AN EXTRA COPY OF THEIR THESIS. NO NEED to wait for examiners' reports. Deadline 31st March, 2009; earlier submissions encouraged. Contact Deidre Tronson, deidre@bowtie.com.au **Please pass this information on to any colleagues in other departments who have Hons students who may be eligible*

The 2009 Honours prize (RACI Western Sydney Section) will be awarded for the best Honours thesis produced in 2008 by a student who is resident and/or has studied or undertaken research in western Sydney[1] throughout the year.

The RACI Western Sydney Section Honours Prize is now open to

... eligible applicants may be enrolled in ANY University, within ANY department/school/faculty. The project must include either 'pure' or 'applied' **chemistry**. This could be applied to fields such as agriculture, horticulture material science, nanotechnology, pharmacy, neuroscience, medicine, biochemistry, biology, environmental analysis, forensics, or any other discipline.

The winner will give an oral presentation at a meeting of the Royal Australian Chemical Institute Western Sydney Section during 2009 (date to be determined). **This is an opportunity to showcase the research to a range of RACI members and other students.** The prize will be awarded to a project that demonstrates a high level of innovation, creativity and contribution to chemical knowledge. If more convenient, the thesis may be spiral- or 'perfect'-bound and may be submitted prior to examination because the final grade is not a determining factor. **It is easy to apply. Students only need to forward a copy of the thesis, plus a covering letter containing personal details (including student's email address), to one of the contacts below. The thesis will be returned.**

DEADLINE: MARCH 31ST 2009. Earlier submission is encouraged

Enquiries and submission to:

Dr Deidre Tronson (FRACI), 21 Eagle Creek Rd, Werombi, 2570.

Ph 02 4653 1430; email: deidre@bowtie.com.au.

OR leave the thesis, clearly marked "WSS Honours Prize", at the RACI office, UNSW.

[1] 'Western Sydney' is defined by the following postcodes: 2076-2077; 2111-2126; 2128; 2133; 2140-2168; 2170;2171; 2173; 2174; 2176; 2177; 2190-2200; 2205-2214; 2216-2234; 2558-2560; 2563-2579; 2745; 2747-2768; 2770; 2773-2787; 2790

Hans Freeman's Obituary- today's SMH

For those who are interested, Hans Freeman's Obituary is in today's SMH. You can find it at: <http://www.smh.com.au/news/obituaries/from-riches-to-rags-to-protein-pioneer/2008/12/04/1228257223616.html>

ADVANCING BIOBUSINESS AWARD



Applications are now open for the 2009 Advancing BioBusiness Award sponsored by Merck Sharp & Dohme and Advance

The Award will support one Australian scientist to build valuable international networks and collaborations that will benefit their business and the Australian life sciences industry. The winner will attend the Bio International Convention in Atlanta, Georgia, May 2009, as well as participate in a tailored program of meetings with leading organisations involved in the life sciences sector.

Applications close on 30 January 2009. You can find application information for the Advancing BioBusiness Award here:

http://www.msdaustralia.com.au/page.asp?e_page=377323&article=456098

Website of the Week



Chemical Free?

<http://www.rsc.org/AboutUs/News/PressReleases/2008/ChemicalFree.asp>

A fundraising idea for the NSW RACI perhaps??? (hehehehe.....) If any members do have an fantastic proposal we would love to hear about it, of course we who attended this years workshop in February know all about the concept of "Chemical Free". All jokes aside however, it will be interesting to see if anyone from around the world claims the prize – I am tempted to notify Randwick City Council as their trucks state they spray with "Chemical Free herbicide" !

New Members – in NSW

We are pleased to announce that record numbers of new members were conferred at last weeks PAC Meeting (We led the way with 67 new members!! It was a tight race however- Victoria had 61)

<i>ADAMS, Kathleen</i>	<i>LYONS, Brian</i>
<i>ARYAL, Rupak Kumar</i>	<i>MAHONY, Patrick</i>
<i>BABAYIGIT, Dilek</i>	<i>MALEWSKA, Teresa</i>
<i>BALTPURVINS, Karlis</i>	<i>MARJO, Christopher Erik</i>
<i>BASSETT, Gabrielle</i>	<i>McKINNON, Adam Robert</i>
<i>BENBOW, Timothy James</i>	<i>MURPHY, Sarah Ann</i>
<i>BUTLER, Stephen Jonathan</i>	<i>NAZ, Tarannum</i>
<i>BUYS, Irmtraud Erna</i>	<i>NGUYEN, Teresa</i>
<i>CARA, Consulato</i>	<i>PAGE, Nathan</i>
<i>CHAN, Yuen Han</i>	<i>PAN, Eh Hau</i>
<i>CHING, Hong Yue Vincent</i>	<i>PHAM, Natallie</i>
<i>CLEGG, Jack Kay</i>	<i>PRASAD, James Dinesh</i>
<i>CLISSOLD, Meagan Elizabeth</i>	<i>QUINNELL, Anthony Raymond</i>
<i>DEAVES, Matthew Brian</i>	<i>SEMSARILAR, Mona</i>
<i>FIELDHOUSE, Robin</i>	<i>SHERMAN Durai</i>
<i>FISSER, David John Merrick</i>	<i>SINGLETON, Vivien Clare</i>
<i>GINGES, Joshua</i>	<i>SRIPROM, Wilasinee</i>
<i>GLORIA, Danmar</i>	<i>STEVENS, Andrew James</i>
<i>GOON, Ian</i>	<i>SUCHAO-IN, Nattaporn</i>
<i>GRAY-WEALE, Angus Anthony</i>	<i>TABA, Fargol</i>
<i>GUI, Lei</i>	<i>TREVITT, Adam</i>
<i>HALL, Janine</i>	<i>TSANG, Althea</i>
<i>HALL, Ulrich</i>	<i>UNTARU, Rosanna</i>
<i>HARRIS, Celia</i>	<i>Van HENSBERGEN, Johannes</i>
<i>HAUPTLI, Sandra Lee</i>	<i>VO, Khoa</i>
<i>HORNBY, Benjamin David</i>	<i>WEST, Andrew Graeme</i>
<i>HUYANG, George</i>	<i>WOLH THAT, Sören</i>
<i>JITCHUM, Varangkana</i>	<i>WU, Alex Hing-Fai</i>
<i>JOBANPUTRA, Pradeep</i>	<i>XUEREB, Vincent</i>
<i>KAKWERE, Hamilton</i>	<i>YANG, Yuguo</i>
<i>KODA, Yasuko</i>	<i>YAU, Hon Man</i>
<i>KY, Fiona</i>	<i>YOUNG, Paul Michael</i>
<i>LEE, Theresa</i>	<i>YOUNG, Philip Geoffrey</i>
	<i>YU, Lili</i>

The NSW Branch especially thanks the members at USyd and UNSW who have joined their students up recently – approximately half the new members are from your institutions!

Important Dates in Chemistry's History Dec 5-11

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b. 1896 Carl F. Cori, researcher in carbohydrate metabolism; Nobel Prize in Physiology or Medicine (1947) with wife Gerty T. Cori for their research on the hormone of the anterior lobe and its role in the metabolism of sugar; discovered how glycogen is catalytically converted and Bernardo Houssay for his discovery of the part played by the hormone of the anterior pituitary lobe in the metabolism of sugar.

b. 1901 Werner Heisenberg, researcher in quantum mechanics; developed the Heisenberg Principle, 1927; Nobel Prize in Physics (1932) for the creation of quantum mechanics, the application of which has, inter alia, led to the discovery of the allotropic forms of hydrogen.

➤ The first paper on ion chromatography was submitted on this date in 1974 to *Analytical Chemistry* by H. Small, T. S. Stevens, and W. C. Bauman (*Anal. Chem.*, 1975, 47, 1801- 1809). It was entitled "Novel Ion Exchange Chromatographic Method Using Conductimetric Detection".

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b. 1742 Nicholas LeBlanc invented the "Leblanc process" for industrial production of soda.

b. 1778 Joseph L. Gay-Lussac discovered law of expansion of gases with heat, 1802, & law of combining volumes of gases, 1809; isolated boron; researcher on fermentation, prussic acid & composition of water.

b. 1835 Rudolf Fittig synthesized organic compounds, e.g., lactones, with B. C. G. Tollens; synthesized toluene; discovered diphenyl, phenanthrene, 1872, & coumarone, 1883.

b. 1836 Charles F. Chandler, researcher in sugar, petroleum & illuminating gas industries; a founder of the ACS.

b. 1863 Charles M. Hall discovered method of extracting aluminum electrolytically from bauxite in his garage in 1886 as Paul Louis Toussaint Héroult discovered the same process for isolating aluminum, which is called the Hall-Héroult process

b. 1920 George Porter studied free radicals produced in gaseous photochemical reactions using flash-photolysis method that he developed; Nobel Prize in Chemistry (1967) with Manfred Eigen and Ronald G. W. Norrish for their studies of extremely fast chemical reactions, effected by disturbing the equilibrium by means of very short pulses of energy.

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b. 1810 Theodor Schwann named & investigated pepsin, 1836; coined the word metabolism.

➤ Patent granted for the first thermosetting man-made plastic from a reaction of phenol with formaldehyde, 1909.

➤ Imperial Chemical Industries (ICI) incorporated 1926.

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b. 1845 Thomas E. Thorpe, researcher on atomic weights, viscosity of liquids, & chemical analyses.

b. 1878 Eugene C. Bingham, researcher on plastic flow & viscosity.

b. 1947 Thomas R. Cech discovered role of ribonucleic acid (RNA) in cell; Nobel Prize (1989) with Sidney Altman for their discovery of catalytic properties of RNA.

➤ Three atoms of element 111 created at GSI, Darmstadt, Germany, 1994.

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b. 1742 Karl W. Scheele discovered chlorine (Cl, 17) 1774, phosphorus from bone ash, & action of light on silver salts; synthesized organic acids.

b. 1748 Claude L. Berthollet analysed ammonia; discovered bleaching action of chlorine & composition of prussic acid; showed that acids do not need to contain oxygen.

b. 1868 Fritz Haber synthesized ammonia from hydrogen & nitrogen under high pressures (Haber Process); Nobel Prize in Chemistry (1918) for the synthesis of ammonia from its elements.

b. 1919 William N. Lipscomb, researcher on boranes; among first to describe 3-dimensional structure of enzymes & proteins; Nobel Prize in Chemistry (1976) for his studies on the structure of boranes illuminating problems of chemical bonding.

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➤ Robert Hare, Jr., informed the Chemical Society of Philadelphia of his discovery of the oxy-hydrogen blowpipe that he called a "hydrostatic blowpipe", 1801.

➤ "Project Gasbuggy" was the world's first commercial experiment with nuclear mining under New Mexico desert, 1967.

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b. 1925 Paul Greengard, Nobel Prize in Physiology and Medicine (2000) for discoveries concerning signal transduction in the nervous system, with Arne Carlsson and Kric Kandel. for their discoveries concerning signal transduction in the nervous system

➤ Horace Wells, dentist, discovered the use of nitrous oxide as anesthetic, 1844.

➤ Vitamin B12 isolated by Merck, Sharp & Dohme Research Laboratories, 1947.