

Annual Report 2005



THE UNIVERSITY OF
MELBOURNE

SCHOOL OF

Chemistry



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Head of School's Report



The School of Chemistry has completed another year of successful operation with increased student enrolments and a number of notable achievements in research funding and community outreach activities. A milestone in the School's development was the successful transfer of major equipment facilities and the research activities of over 70 staff and postgraduate students to the new Bio21 Institute that was formally opened by the Premier of Victoria in June 2005. The \$100 million Bio21 Institute, located on the Western precinct of the University, now provides modern laboratory facilities for over 200 researchers from a number of departments and centres and this will rise to over 400 when it is operating at full capacity. The major infrastructure within the Institute will provide our staff and students with new opportunities to undertake internationally competitive interdisciplinary research programs in an environment that will promote commercialisation opportunities.

Staff members of the School were once again very successful with applications for external funding to support research activities. The School is the administrative centre for the new ARC Centre of Excellence for Free Radical Chemistry and Biotechnology, led by Carl Schiesser as Director, which received funding of \$12 million over 5 years, while other staff of the School are key researchers contributing to the ARC Centre of Excellence in Coherent X-ray Science and the continuing ARC Particulate Fluids Processing Centre. We were also delighted with the news that Paul Mulvaney had been awarded a prestigious ARC Federation Fellowship to undertake a research program on Energy Conversion and Signal Transduction on Nanomechanical Systems in the School. The achievements of a number of other staff were recognised through the year with the promotion of Frances Separovic to Professor and Franz Grieser being elected as a Fellow of the Australian Academy of Science. I congratulate these staff and other members of the School who have contributed to the high national and international profile our research enjoys.

Student demand for places in chemistry subjects continues to rise. Since 2001 there has been an increase of 38% in chemistry undergraduate EFTSL numbers and, with over 1600 students now enrolled in first year chemistry subjects in each semester, our teaching laboratories are running at maximum capacity. I am most grateful to our teaching, laboratory and technical staff whose efforts have continued to ensure the high quality delivery of our teaching programs. A challenge for the School over the next few years will be to obtain the necessary support and resources to upgrade our teaching and research facilities on the main campus to accommodate and meet the expectations of the increasing student numbers.

Community outreach programs supported under the Victorian Institute for Chemical Sciences (VICS) have allowed us to communicate the benefits of chemistry studies to secondary school students and teachers across the state. Mick Moylan, the Chemistry Outreach Fellow, has led these programs that now reach over 12,000 school students in a joint initiative between the VICS member Universities and CSIRO. The VICS initiative, supported under the STI program of the State Government, continued to allow us to promote chemistry programs to a wider community audience and provide

Head of School's Report

resources for targeted research projects across the member institutions for the benefit of Victoria.

Among the major projects undertaken during 2005 was a redevelopment of the School website. The site at <http://www.chemistry.unimelb.edu.au/> provides, in a new format, information of interest to students, staff and the broader community.

During 2005 we farewelled two long-serving staff members who retired from the University - Gillian Webster (Personal Assistant to the Head of School) and Russell Charles (Mechanical Workshop Supervisor). We wish them a long and enjoyable retirement and thank them for their contributions to the School over many years.

For its planning during 2006 the School will focus on the implications of implementing the new Growing Esteem strategic initiative of the University. Growing Esteem will provide further focus for the research, teaching and knowledge transfer activities of the University, including a proposal for a new Melbourne Model to deliver a reduced number of generalist undergraduate degree programs followed by more intensive graduate courses. The School looks forward to playing its role in developing and delivering teaching and research programs that will contribute to the realisation of the Growing Esteem vision.

Ken Ghiggino
Masson Professor of Chemistry
Head, School of Chemistry



Academic Staff

Head of School and Masson Professor of Chemistry

Kenneth Philip Ghiggino, BSc *NSW* PhD *NSW* DipEd *Melb.* FRACI

Professors of Chemistry

Franz Grieser, BSc *Melb.* PhD *Melb.* FRACI FAA

Francis Patrick Larkins, AM BEd *Melb.* MSc *Melb.* DSc *Melb.* DPhil
Oxf. DipAdvMath *Oxf.* FAA FTSE FRACI FAIE FAIP
(Deputy Vice-Chancellor [Research])

Frances Separovic, BA *Macq.* PhD *NSW* MRACI

Carl Herbert Schiesser, BSc *Adel.* PhD *ANU* DSc *Adel.* FRACI

Anthony Gordon Wedd, BSc *Tas.* PhD *Tas.* DSc *Tas.* FRACI

Associate Professors and Readers

Evan Bieske, BSc *Qld.* PhD *Griff.*

Michelle Louise Gee, BSc *Melb.* PhD *NYAS* MRACI

Paul Mulvaney, BSc *Melb.* PhD *Melb.* MRACI

Richard Alfred John O'Hair, BSc *Adel.* PhD *Adel.* DSc *Adel.* FRACI

Mark Anthony Rizzacasa, BSc *W.Aust.* PhD *W.Aust.* MRACI

Jonathan Michael White, BSc *Cant.* PhD *Cant.* FRACI

Charles Graham Young, BSc *ANU* PhD *ANU* FRACI

Associate Professors

William David McFadyen, BSc *Melb.* PhD *Melb.* DipEd *Melb.*

Peter Allan Tregloan, BSc *Adel.* PhD *Adel.* MRACI

Senior Lecturers

Muthupandian Ashokkumar, BSc *Madras* MSc *Madras* PhD *Madras*
MRACI

Brendan Francis Abrahams, BSc *Melb.* PhD *Melb.* DipEd *Melb.* SCA
MRACI

Stephen Peter Best, BSc *Syd.* PhD *Syd.* MRACI

Craig Hutton, BSc *Adel.* PhD *Adel.* MRACI

Spas Dimitrov Kolev, BSc *Sofia* PhD *TU Budapest*

Trevor Alexander Smith, BSc *Melb.* PhD *Melb.* MRACI

Lecturers

Colette Boskovic, BSc *Melb.* PhD *Melb.* MRACI

Uta Wille, DiplomChem *Kiel.* PhD *Kiel.* Habilitation *Kiel.* MRACI

Spencer James Williams, BSc *W.Aust.* PhD *W.Aust.* MRACI

Tutor

Alison Funston, BSc *Melb.* PhD *Melb.* MRACI

ARC Federation Fellow

Andrew Bruce Holmes, AM BSc *Melb.* MSc *Melb.* PhD *UC London*
MA *Camb.* ScD *Camb.* FRS

ARC Research Fellow

Rachel Anne Caruso, BSc *Melb.* PhD *Melb.* MRACI

ARC Australian Post Doctoral Research Fellow

Paul Donnelly, BSc *W.Aust.* PhD *W.Aust.*

Transition Teaching Fellow

Robert Edward Charlesworth, BSc *Melb.* DipEd *Melb.*

Academic Staff

Chemistry Outreach Fellow

Michael Moylan, BSc *Melb.* MSc *Melb.* MRACI

Research Fellows

Damian K. Bird, BSc *Melb.* PhD *Melb.*

Martin Boland, BSc *MMU* PhD *UMIST*

Jens O. Bunte, MSc *Bielefeld* PhD *Bielefeld*

David Evans, BSc *Qld.* PhD *Melb.*

John D. Gehman, BSc *Phil.* MPhil *N.Haven* PhD *N.Haven*

Martin J Grannas, BSc *Melb.* PhD *Melb.*

Andrew C. Grimsdale, BSc *Auck.* MSc *Auck.* PhD *Auck.*

Stephan D. Hoffmann, BSc *Germ.* PhD *Germ.*

David J. Jones, BSc *Tas.* PhD *Tas.*

Parag M. Kanthale, BTech *Nagpur* MTech *Nagpur* PhD *Mumbai*

George Khairallah, BSc *Lebanon* PhD *Melb.*

Melissa J Laws, BSc *Melb.* PhD *Melb.*

Craig Lincoln, BSc *Melb.* PhD *Melb.*

Arindam Mukherjee, MSc *Darjeeling* PhD *Bangalore*

Long D. Nghiem, BEEng *NSW* PhD *Woll.*

Stuart Prescott, BSc *Syd.* PhD *Syd.*

Gowri Ramachandran, PhD *Madras*

Michelle Taylor, MSci *Glasgow* PhD *Glasgow*

Thu Thuc Truong, BSc *Melb.* PhD *Melb.*

Zhiguang Xiao, BSc *Fujian TU* MSc *Fujian TU PRC* PhD *Melb.*

JingLi Xie, BSc *Jilin* MSc *Jilin* PhD *Nanjing Riverside*

Meifang Zhou, BSc *East China* PhD *NSW*

Wilsmore Fellows

Weston T. Borden, BA *Harvard* MA *Harvard* PhD *Harvard*

Rainer Herges, Dip *Saarbrücken* BSc *Munich* PhD *LA*

Albert Padwa, BA *Columbia* PhD *Columbia*

Research Assistants

Laura Andrau, PhD *Fribourg*
Jilliarne Andropof, BSc *Melb.* PGDip *Melb.*
Stacey Borg, BSc *Melb.* PhD *Melb.*
Lucy Clasohm, BSc *Tianjin* PhD *SA*
Zoran Dinev, BSc *Melb.*
Chris Donner, BSc *Melb.* PhD *Melb.*
Carlie Gannon, BSc *Melb.* MRACI
Tim Hudson, BSc *Melb.* PhD *Melb.*
Luke Hunter, BSc *Syd.* PhD *Syd.*
John A. Kalaitzis, BSc *W.Syd* PhD *Griffith*
Judy Lee, BE BSc *Melb.* PhD *Melb.*
Peck Ling Lee, BSc *Melb.*
Barbara Li, BSc *NZ*
Jessica Pacifico, MSc *Neuchatel* PhD *Neuchatel*
Natalie Pereira, BSc *Curtin*
David Price, BSc *Mon.* PhD *Mon.*
Marisa Spiniello, BSc *Flind.* PhD *Melb.*
Kristine Tan, BSc *Melb.*
Christopher Thompson, BSc *ANU* PhD *Mon.*
Ian Walker, BSc *Curtin* PhD *ANU*

Honorary Staff

Professors Emeritus

Donald William Cameron, MSc *Qld.* MA *Camb.* PhD *Manch.* ScD *Camb.* FRACI

Thomas Aloysius O'Donnell, PhD *Melb.* DSc *Melb.* FRACI

Professorial Fellows

Calum J. Drummond, BSc *Melb.* PhD *Melb.*

Andrew Holmes, BSc *Melb.* MSc *Melb.* PhD *Lond.* MA *Camb.* ScD *Camb.* FRS

Roy Jackson, BSc *Manch.* PhD *Lond.* DSc *Lond.*

Richard Robson, BA *Oxf.* DPhil *Oxf.* FAA

Robert O. Watts, BSc *Lond.* PhD *ANU* FAA FRACI

Principal Fellows

Ronald Cooper, BSc *Leeds* PhD *Leeds* FRACI

Roger Francis Martin, BSc *Melb.* PhD *Melb.*

Peter McTigue, BSc *Melb.* MSc *Melb.* DPhil *Oxf.*

Peter James Thislewaite, BSc *Melb.* PhD *Melb.* DipEd *Melb.*

Senior Fellows

Kevin J. Barnham, BSc *Qld.* PhD *Qld.*

Colin J. Barrow, BSc *Canterbury* PhD *Canterbury*

Robert Craig, BSc *Melb.* MSc *Melb.* DPhil *Oxf.*

Donald Neil Furlong, BSc *Brun.* PhD *Brun.* FRACI

Patrick Hartley, BSc *Warw.* PhD *Imperial Coll of Sci. Tech & Med.*

Valda May McRae, BSc *Melb.* BEd *Melb.* PhD *Melb.*

Fellows

Noel Dunlop, BEd *Melb.* BSc *Melb.* MBAd *RMIT* PhD *Melb.*

Richard David Harcourt, BSc *Melb.* PhD *Mon.* DipEd *Melb.* MRACI

Tania Obranovich, BSc *Mon.* BLaw *Mon.* PhD *Mon.*

Makoto Takezaki, BSc *Osaka* MSc *Osaka* PhD *Kyoto*

Jan Romuald Zdysiewicz, BSc *Adel.* PhD *Adel.* FRACI

Visitors

Raymond Dagastine, BCE *Delaware* PhD *Carnegie Mellon Univ.*

Sandra Feyel

Gaik Beng Kok, BSc *Flind.* PhD *Flind.*

Thomas M Klapoetke, Dr.rer.nat. *TU Berlin*, Habilitation *TU Berlin*

Pardon Kusaziwa Kuipa, MScEng *Ivanovo Inst. of CE* PhD *Bradford*

Brenda Kwan Yi Leung, BSc *Melb* PhD *Melb* MRACI

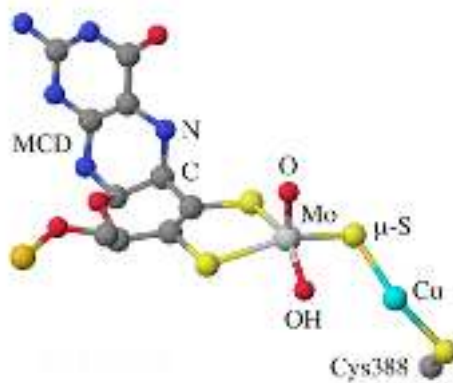
Yasuyuki Nagai, BA *Shizuoka*

Sachin Singh, BSc *S.Pac.* PGDipChem *S.Pac.*

Brad Edmond Sleebs, BSc *LaTrobe*

Gary Weddle, AB *Thiel* PhD *Delaware*

Gary Weisman, BSc *Kentucky* PhD *Wisconsin-Madison*



The Active Site of CO Dehydrogenase

Academic Staff News

News

The School farewelled Laura Andrau, John Kalaitzis, Joanne Kuluveovski, Melissa Laws, Peck Ling Lee, Barbara Li, Gowri Ramachandran, Thy Truong and Ian Walker.

The School welcomed Michael Moylan as Outreach Fellow and Alison Funston as Tutor. We also welcomed the following staff who joined various research groups within the School: Damian Bird, Martin Boland, Stacey Borg, Jens Bunte, Lucy Clasohm, David Evans, Andrew Grimsdale, Stephan Hoffman, Luke Hunter, David Jones, Parag Kanthale, Peck Ling Lee, Craig Lincoln, Arindam Mukherjee, Long Nghiem, Jessica Pacifico, Marissa Spiniello, KJ Tan and Michelle Taylor.

Academic Publications

A listing of research publications for 2005 is available on the School website at <http://www.chemistry.unimelb.edu.au/research>

Awards, Prizes & Medals

Kaye Merlin Brutton Prize for 2005 from the Faculty of Science – Paul Donnelly

Frances Separovic was appointed to the editorial board of *Biochimica Biophysica Acta – Biomembranes* and was elected Chair of the Membrane Structure and Assembly Subgroup of the Biophysical Society (USA).

David Price was awarded the Australian Journal of Chemistry Award for Best Poster presentation at the 2005 RACI Victorian Inorganic Chemistry Symposium.

Franz Grieser was elected as a Fellow of the Australian Academy of Science

Mark Rizzacasa was awarded the Organic Reactions Lectureship to present 8 lectures in North America.

Ken Ghiggino awarded the Jan Slavik prize at the 9th International Conference on Methods and Applications of Fluorescence, Lisbon, Portugal.

Richard O’Hair awarded a Doctor of Science by the University of Adelaide.

General Staff

Marino Artuso
Bernice Bedford
Sara Brimfield
Mike Blake
Vicki Burley
Russell Charles
Fran Dynan, AdvDipAcctg. *VU*
Jim Dynan
Greg Ellis, BAppSci FIT DipEd *H'thorn. Inst. Ed.*
Anthea Ellison Dip Hom. Med. *Syd.*
Robert Gable, BSc *Melb.* PhD *Melb.*
Les Gamel
Francoise Gelb
Caithleen Jones, BA *Melb.*
Ben Kirk, B Comp. *Ballarat*
Peter Lehman, Appl.Chem. *RMIT* MSc *E. Anglia* PhD *E. Anglia*
Ross Lineham
Tang-Kuan Lim, BSc *Malaysia* PhD *Brit.Col.*
Brendan Mangan
Richard Mathys
Alf Meilak
Peter Mills, DipAppChem *RMIT* GradDip(Met) *RMIT*
Thu Nguyen
John Nuske
Des Odgers
George Papadopoulos, BEng *VUT* DipAppSc-OH&S *RMIT*
Marian Petrescu
Shaun Scanlon
Jennifer Scott
Doug Taylor, BAppSc(Chem) *RMIT* GradDip(ClinSc) *Riverina* CAE
GradDipEd. *Melb.* CAE
Joe Tyler
Joanne Tymms
Sioe See Volaric, BSc *Syd.* MSc *Syd.*
Gillian Webster
Jennifer York, BSc *Melb.* MSc *Melb.* PhD *Melb.* MA *Deakin*

General Staff News

Gilly Webster, PA to Head of School and Russell Charles, Mechanical Workshop Supervisor, retired in 2005. We wish them well in their retirement.

Francoise Gelb was appointed PA to Franz Greiser and Joanne Tymms was appointed PA to the Head of School.

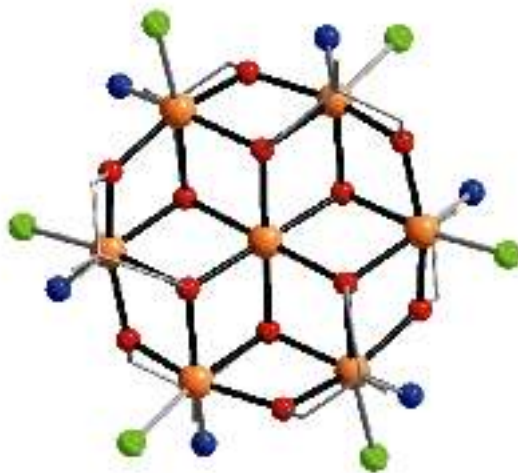
Anthea Ellison left the University.

Marian Petrescu was appointed IT Support Officer.

Joe Tyler was appointed as Supply Manager.

Mike Blake transferred to the Bio21 Institute and Shaun Scanlon transferred to the Department of Biochemistry and Molecular Biology.

Cait Jones transferred to the Melbourne Scholarships Office and was replaced by Sara Brimfield as Executive Assistant in the VICS office.



Solvothermal methods have provided this novel heptanuclear iron complex that is a candidate to be a new single-molecule magnet

2005 Melbourne University Chemical Society (MUCS)

President:	Michelle Gee
Secretary:	Colette Boskovic
Treasurer:	Uta Wille
Student representatives:	Chris Barlow, Damien Callahan, Nathan Fifer, Tim Quach, Alison Radford, Shinn Dee Yeoh

For 2005 MUCS Lecture program see the following website:

<http://www.chemistry.unimelb.edu.au/news/mucs/mucs2005.php>

It was another successful year for MUCS in terms of both finances and the lecture series. MUCS received an unprecedented amount of funding from sponsors. We thank the Australian Journal of Chemistry, Blakes Dawson Waldron Patent Services, the Royal Australian Chemical Institute and the Victorian Institute of Chemical Sciences for their sponsorship of MUCS. Their funding allowed us to bring in high profile guest lecturers from around Australia to take part in our seminar series. The range of speakers was multi-disciplinary, well reflecting the broad scope of Chemistry in modern science.

Chemistry Postgraduate Society 2005 (CPS)

The 2005 Chemistry Postgraduate Society was made up of Jacinta Watt (President), Karen Loft (Treasurer), Leigh Ford (Secretary), Tina Tan, Rachel Goh, Phil Wearne and James Johnston (General committee members). Vicki Burley was again the staff representative. This year the CPS aimed to foster good relations between the two campuses, making sure students from the Bio21 Institute and the Masson precinct did not lose their chemistry ties. Throughout the year we had three BBQs, several pub nights, and two annual events, the CPS dinner and trivia nights.

The year started with a BBQ on the chemistry lawn, which saw the introduction of the BBQ card, allowing holders free access to future CPS BBQ's and drink specials at the Clyde. This was successful with over 30 members participating, whilst also giving us some emergency funds. The annual dinner was held at the Pinarbasi Turkish restaurant, with over 100 people attending. The trivia night saw another good turnout. Numbers were capped at 80 people and we reached this easily. The event was held in the Chemistry building with dinner provided, with many people heading off to the pub afterwards to continue the evening.

Several events were held at the Bio21 Institute in conjunction with the Biochemistry student group, BAMBII. This included participating in Australia's Biggest Morning Tea, where we raised several hundred dollars to donate to cancer research, and holding a Careers afternoon. The Careers afternoon saw a large turnout, with speakers from both chemistry and biochemistry backgrounds available for students to listen to and talk with later.

This year the CPS has been financially stable, allowing us to have a catered BBQ for our final event, which also was a welcome event for the honours students. The initial struggle of maintaining the group over two campuses has not proved to be too much of a challenge, with the numbers of participants up for events. However this shows how important it is to ensure we keep this student body active for the years to come, making sure chemistry students remember their roots.

In the Postgraduate School

Awards, Prizes and Scholarships

Melbourne Abroad Travelling Scholarship (MATS)

Stephen Sproules
Damien Callahan

Monica Reum Prize

Anthony Cuzzupe

Post Graduate Overseas Research Experience Scholarship (PORES)

Joel van Embden, Tina Tan

Australian Bicentennial Scholarship, Kings College, London

Tina Tan

Faculty of Engineering Gilbert Rigg Research Scholarship

Patrick Mornane, Damien Callahan and Robert Piccinin - \$6000 each

T.W. Healy Award

Devi Sunartio, Daniel Gomez and Christopher Barlow

PFPC Travel Award

Emma Lees

ARCNN Travel Award

Ann Gooding

M A Bartlett Travelling Scholarship

Stephen Sproules

Albert Simmins Postgraduate Writing-up Award

Judy Lee

David Hay Postgraduate Writing-up Award

Shobha Muthukumanran

ANZSMS20 Conference, Adelaide

Best student talk category – Damien Callahan 1st, Chris Barlow 2nd prize.

Autumn Peptide Symposium, Bio21 Institute, Melbourne

Alison Dreschler, awarded student prize

2005 RACI Victorian Inorganic Chemistry Symposium

Bruce West Award – Best Oral Presentation – Marissa Haywood
Best question posed by student – Michael Cheah

Australian Journal of Chemistry and the RACI Student Award for Best Poster Presentation – 30th Annual Synthesis Symposium

Jacinta Watt

Postgraduate Degrees Awarded

Doctor of Philosophy and Master of Science

Attard, Troy Joseph	The synthesis of phosphopeptides and their biomedical applications
Borg, Stacey John	Redox interconversion chemistry of di-iron carbonyl complexes
Boyd, Simon	Photoactivated ligand release
Bullen, Craig Robert	Surface chemistry and photoluminescence studies of CdSe nanocrystals
Chen, Ming	Photoactive functional polymers
Fenner, Tahli	A synthetic and theoretical study of pyridine-fused selenium containing antioxidants
Hill, Lyndal Michelle Ruth	Molybdenum chemistry: bioinorganic meets polyoxometalic
Koppens, Merran Louise	Modified protecting group strategies to include trifunctional amino acids in the total solid-phase synthesis of peptide-oligonucleotide hybrids
Laws, Michelle Pamela	Reactions of kaolinite in the pre-desilication processing of bauxite ores
Malarek, Daniel Andrzej	Supramolecular self-assembly on a solid support metal-directed complementarity
Malarek, Michael Severyn	Organometallic chemistry of molybdenum and tungsten
Moylan, Michael David	Synthesis and structures of metal derivatives of aldaric acids
Muir, Ineke Lynn	The interactions between two mica surfaces with absorbed layers
Vu, Thanh Duc	Effects of organic and inorganic solutes on multibubble sonoluminescence in aqueous solutions
Waters, Tom	Gas phase reactivity and electronic structure of some group six oxometalate anions
Wee, Sheena	Studies of the interaction of metal complexes with ligand and biomolecules in the gas phase using mass spectrometry
Zeng, Le	Kinetic studies on free-radical reactions involving chiral radicals

Postgraduate Degrees in Progress

Amini, Nazanin	Online determination of mercury by membrane separation flow injection analysis
Aumann, Kylee Maree	Potential cardioprotective agents: selenium containing allosteric enhancers of adenosine
Barlow, Christopher	The hunt for gas phase peptide radicals
Bondin, Mark Ian	Characterisation of transiently stable redox activated iron-sulfur compounds
Boughton, Berin Alain	Inhibitors of lysine biosynthesis
Callahan, Damien Lee	Physiological and biochemical separation of Ni and Co by hyperaccumulator plants
Cebon, Benjamin Isaiah Martin	Synthesis of epidermal growth factor inhibitors
Cheah, Mun Hon	Electrocatalyses by biomimetic transition metal clusters
Ciawi, Envi	The investigation of the correlation between cavitation bubble temperature and sonochemistry
Daly, Alicia Margaret	Synthetic studies towards the zaragozic acids
Denehy, Emma Louise	Kinetic studies of sulfatases
Dinev, Zoran	Covalent capture of supramolecular assemblies
Djoko, Karrera Yani	Studies of the molecular properties of copper transfer proteins
Doherty, Cara Maxwell	High power nano-structured energy storage materials
Drechsler, Alison Patricia	NMR studies of equinatoxin
Egan, Caroline Elizabeth	Development of substrates and inhibitors for the study of mycobacterial cell wall biosynthesis
Fifer, Nathan	Synthesis of anti-tumour cyclic peptides
Ford, Leigh Robert	Investigations into single enantiomer outcomes in free-radical reactions
Ganame, Danny	Synthesis of biologically active molecules
Goh, Yit Wooi	Application of the structure correlation principle to the retro Diels Alder and retro cheletropic reactions
Gomez-Alviarez, Daniel Enrique	Material properties of nanocrystals
Gooding, Ann Kathleen	Single electron injection into 2D quantum dot arrays
Gourlay, Craig	New models for molybdoenzymes
Grange, Rebecca Louise	Toward selenium containing antioxidants and anti-inflammatory agents
Hassall, Kathryn Sarah	Synthesis and structural characterisation beta-silylated carbenium ions

Postgraduate Degrees in Progress

Haywood, Marissa Grace	Coordination polymers of simple oxyanions
He, Yuanhua	Degradation of chemical pollutants by non-scale sonophotocatalysis process
Hilli, Ferdows	Synthesis of cytotoxic macrolides
Huang, Fuzhi	Template synthesis of porous doped-titania for photocatalysis and photovoltaic application
Hutchison, James	Photoinduced electron transfer in porphyrin-based supramolecular systems
James, Simon Alexander	Metal specificity and structural characterisation of proposed zinc/copper transport proteins
Jasieniak, Jacek Jaroslaw	Quantum dot based optical device fabrication
Johnson, James Kenneth	Phosphatidylinositols for the investigation of PimA, an essential mycobacterial mannosyltransferase
Kaiser, Peter Franz	New methods for amino acid and peptide synthesis
Koay, Melissa Shao Tang	Molecular characterisation of the copper transport protein CopC
Lau, Tong Lay	NMR studies of amyloid A-peptide in membranes
Lees, Emma Elizabeth	Quantum dot-protein conjugates for cancer cell receptor studies
Li, Barbara Tsz Yam	Synthesis towards the antimetabolic cyclic peptides, the celogentins
Lie, Ferry	Nano-structured materials for energy storage devices
Lioe, Hadi	Chemistry and applications of novel reagents for proteomics
Lobachevsky, Sofia	Selenium-containing antioxidants
Loft, Karen Jean	Understanding and exploiting bacterial sulfatases
Loh, Zoe Miranda	Spectroscopic studies of gas phase ion-neutral interactions
Mariotti, Andrew Walter	Electrochemistry of polyoxometalate salts in ionic liquids and other media
Mathai, Sean	Photochemistry and imaging porphyrin photosensitisers
Mattsson, Eric	Bioactive natural products from marine microbes
McAllister, David	Analogues of the anti-angiogenic compound, 2-methoxyestradiol: a synthetic and pharmacological study
McGill, Nathan	Synthesis of carbohydrate antigens and production of monoclonal antibodies for biotechnological applications

Postgraduate Degrees in Progress

McKimmie, Lachlan James	Multi-dimensional time-resolved nonlinear spectroscopic studies of complex molecular systems
McLean, Scott Cameron	Protein adsorption and biocompatibility
Mitsakos, Voula	Inhibitors of lysine biosynthesis
Mornane, Patrick James	New extraction membranes and beads for use in industrial separation
Mulyana, Yanyan	Polynuclear metal complexes as molecular nanomagnets
Novo, Carolina Soares	Optical properties of nanorods
Nuhiji, Edin	Developing a novel microsphere colloid for ultrasensitive Whispering Gallery Mode detection
Padusinski, Karolina	Electrocatalytic proton reduction by transition metal clusters
Parcha, Bhargava Shashikanth	Direct measurement of molecular recognition forces on smooth muscle cells
Poad, Berwyck Lloyd James	Optical properties of confined nanoparticles
Quach, Tim	Studies towards the synthesis of the ajuvazols
Radford, Alison Louise	Synthesis of selenium analogues of known antioxidants and anti-inflammatory agents
Ritsner, Ina	Radicals masquerading as electrophiles – exploring frontier orbitals interactions in the radical reactions: the theoretical
Ryan, Helen Elizabeth	Performance chemistry of surface coatings
Schieber, Christine	Phospholipid-based chemical probes for biological enzymes
Scholes, Colin Anthony	Conformational aspects of macromolecular adsorption through evanescent wave spectroscopy
Sigmund, Duanne Camilla	Self-terminating radical reactions: an exploration of Elizabeth group VI (S, Se, Te) radicals
Singla, Ritu	Sonochemical degradation of organic pollutants in aqueous solutions
Sproules, Stephen Andrew	Molybdenum and tungsten sulfur chemistry in biological systems
Staples, Maree Kathleen	The development of selenium containing antioxidants
Sunartio, Devi Maria	Ultrasound-initiated chemical reactions in aqueous solutions

Postgraduate Degrees in Progress

Tan, Tina Ai Ting	Electroluminescent polymers: synthesis and characterisation of oligo-PPVs and water soluble derivatives of PPV
Tran, Tu Anh Xuan	Secondary orbital effects on radical chemistry
Trevitt, Adam John	Characterisation of microparticles contained in an electrodynamic trap
Tsegay, Sammi Ghebremedhin	Synthesis of spiroketals from marine sponges
Van Embden, Joel Leonard	Advanced quantum dot (QD) based optical devices and structures
Wade, Timothy Lawrence	High power carbon-based supercapacitors
Wang, Xingdong	Synthesis and photocatalytic properties of hierarchically structured porous titania nanohybrid materials
Watt, Jacinta Anne	The study of mycobacterial cell wall biosynthesis
Wearne, Philip Jerome	The optical properties of semiconductor nanocrystals in a QIT
Wilson, Rosemary Louise	Infrared spectroscopic studies of charged complexes in the gas phase
Yeoh, Shinn Dee	Application of the structure correlation principle to the retro Diels Alder reaction and other pericyclic fragmentation studies
Zahirovic, Sabina	Interfacial tension study and rheological characterisation of water in oil emulsions
Zammit, Steven	Synthesis of spiroketal and hemiketal natural products
Zanatta, Shannon Dean	Synthesis of spiroketal containing natural products
Zhang, Lianyi	Molecular characterisation of copper chaperones and molecular pumps
Zimmermann, Matthias	Photo-catalytic properties of polyoxometalate anions
Zukan, Jasmina	The sonochemical synthesis of nanoparticles

Undergraduate Scholarships and Prizes

100 Level

Exhibition – James Wan

Dwights Prize – David Riglar

200 Level

C.A. Taylor Prize – Linda Butcher

Huntsman Australia Prize – Pawel Jokisz

300 Level

Cuming Major Scholarship – Julia Eakins

Fred Walker Scholarship – Melissa Leung

J.S. Anderson Prize – Alexander St John

Cuming Minor Scholarship – Robert Borthwick

400 Level

Dulux Australia Prize 2005 – Joel Hooper

Dixon Research Scholarship – Joel Hooper

Huntsman Australia Award for Research Excellence – Georgia McCluskey

Professor Kernot Research Scholarship – Adam Brotchie

Riseborough Prize – Rachel Hart

Stanley Harvey Prize – Adam Brotchie



School Funding

The School is one of the largest budgeting departments in the University with an annual operating budget of \$6.6m and research income of \$8.8m.

In 2005 \$890k was spent on equipment in the School. Large items purchased included an ultrafast laser facility and a spectroscopic ellipsometer.

New Research Funding

New ARC, NHMRC, Government and Industry grants awarded to the School in 2005 totalled \$6.9m in value, with the new ARC Centre for Free Radical Chemistry Biochemistry awarded total ARC funding of \$12m over 5 years.

Details of New Grants Awarded in 2005

Ashokkumar, Dr M	Ultrasonic processing of dairy ingredients to control protein aggregation and promote heat stability
Ashokkumar, Dr M	STI – Advanced processing and innovative foods program
Best, Dr S	XAFS from short lived iron sulphur compounds
Bieske, A/Prof E	Towards a microscopic understanding of anion solvation
Boskovic, Dr C	Polynuclear metal complexes as molecular nanomagnets
Donnelly, Dr P	The synthesis of new copper and rhenium chelators for application in medicine, industry and environment
Gee, A/Prof M	Interfacial structure of adsorbed polymeric micelles
Gee, A/Prof M	Probing membrane rafts using surface-selective multi-dimensional microscopy
Ghiggino, Prof K	Porphyrin-based supramolecular assemblies and arrays II Model systems for the construction of photosynthetic mimics and devices
Grieser, Prof F	Control of acoustic cavitation in complex fluids
Grieser, Prof F	Sonochemical synthesis of nanoparticles for fuel cell applications
Kolev, Dr S	New extraction membranes and beads for use in industrial separation
McFadyen, A/Prof D	Mettler Toledo Balance PB equipment grant
McFadyen, A/Prof D	Heidolph Hotplate Stirrer (x2) equipment grant
Mulvaney, A/Prof P	Nanotribology-the chemical rolling resistance of single nanocrystals
Mulvaney, A/Prof P	Q-sand: whispering gallery mode detection system for ultrasensitive and label free testing in biotechnology

New Research Funding

O'Hair, A/Prof R	Gas phase studies to catalyze a better understanding of metal reactivity
Rizzacasa, A/Prof M	Chemical synthesis of bioactive metabolites and analogues from marine sources and myxobacteria
Robson, Prof R	Contributions to the foundations upon which true crystal engineering of functional solids will be based
Schiesser, Prof C	Centre for Free Radical Chemistry and Biotechnology
Smith, Dr T	Ultrafast laser facility for chemical, biological and physical investigations of advanced materials
Wedd, Prof A	Molecular characterisation of metal transport proteins
Wille, Dr U	Atmospheric free-radicals: exploring the role of nitrate radicals in the oxidative damage of bio-surfaces
Williams, Dr S	Synthesis of carbohydrate antigens and production of monoclonal antibodies for biotechnological applications
Young, A/Prof C	Bioinorganic chemistry of molybdenum



Victorian Institute for Chemical Sciences (VICS)

Victorian Institute for Chemical Sciences was formed in 2003 to promote the chemical sciences in Victoria. The founding members were the University of Melbourne, the Royal Melbourne Institute of Technology and Monash University. The Mission of the Institute is to build synergy between its participants in order to demonstrate excellence in:

- the education of new generations of chemical scientists, and
- the promotion of fundamental and applied science research, primarily in the chemical sciences.

In 2005, the VICS Program comprised 32 projects in four Theme areas : Drug Discovery and Chemical Synthesis, Chemistry Education and Outreach, Environmental Solutions and Molecular Analysis and Dynamics.

Highlights from the program included : discovery and identification of biologically active molecules in extracts of marine organisms and plants, a very successful outreach program to schools, now presented in conjunction with CSIRO Education, generation of two multimedia teaching aids, one dealing with laboratory safety and the other teaching chemical principles associated with everyday activities, development of instruments for determining water quality and application of Accelerated Solvent Extraction (ASE) and Microwave Extraction (ME) techniques for preparation of samples for chemical analysis. The VICS Centre for Scientific Instrumentation (VICS-CSI) has developed a number of scientific instruments for teaching and research. The VICS-CSI Polarimeter, for measuring optical rotation and applications in chemical kinetic studies, has been licensed to an Australian company for manufacture and distribution worldwide.

VICS has again contributed to the purchase of scientific instruments for research in the Member Universities and has sponsored seminars in the chemical sciences, attended by University and external participants.

Information about VICS and its Program can be obtained from Institute Director and CEO, Dr Peter Lehman, Telephone (03) 8344 3949 or pglehman@unimelb.edu.au

Alternatively, visit the website www.vicsco.com.au

Australian Research Council Centre of Excellence for Free Radical Chemistry and Biotechnology

The ARC Centre of Excellence for Free Radical Chemistry and Biotechnology was established in mid-2005 and is funded by the Australian Research Council and other participants with income in excess of \$15 million over five years.



The Centre draws together outstanding research capabilities and expertise from academic and commercial bodies around Australia and internationally in multidirectional, groundbreaking research. The Centre is administered from within the Bio21 Molecular Science and Biotechnology Institute at The University of Melbourne. Researchers are located in nodes at leading Australian universities that include Melbourne, ANU, Monash, Sydney and QUT, in specialist institutions and in commercial enterprises.

In the Melbourne node, Chief Investigators include Professor Carl Schiesser, Professor James Angus (Dean, MDHS and Pharmacology), Associate Professor Richard O'Hair and Dr Uta Wille, with research conducted in dedicated laboratories in the Chemistry zones of the Bio21 Institute, as well as the Department of Pharmacology. The research programs share a common commitment to the pursuit of breakthrough science that will expand the frontiers of understanding of the chemistry of free radical processes and enable the development of advanced materials and technologies for building and transforming industry.

For more information: www.freeradical.org.au

Carl Schiesser (Centre Director)



Centre Chief and Partner Investigators at a planning meeting in early 2005.

Bio21 Molecular Science and Biotechnology Institute

The Bio21 Molecular Science and Biotechnology Institute (Bio21 Institute) is the University of Melbourne's core research and development facility within the Parkville Precinct in Melbourne.



The \$100 million building was handed to the University in late 2004, and several Chemistry research groups, together with state-of-the-art instrumentation that includes NMR and mass spectrometry capabilities, relocated from the Masson precinct to the new facility in January 2005. Altogether, approximately 70 staff and students from the School are now located in the new Institute building.

The Bio21 Institute also provides a home for the research group of Professor Andrew Holmes (Federation Fellow), as well as the Australian Research Council Centre of Excellence for Free Radical Chemistry and Biotechnology.

For more information: www.bio21.org



Vice-chancellor, Professor Glyn Davis, inspects the relocation of Chemistry groups to the Bio21 Institute (pictured from left with: Leigh Ford, Alison Radford and Helen Ryan from the Centre for Free Radical Chemistry and biotechnology).

Conferences, Workshops

2005 Attendance at Conferences, Workshops, and Symposia and Special Studies Leave

Abrahams, Dr B	Mar	Crystallography Conference (SCANZ-24), Marysville, Victoria
	Dec	SICC-4, Singapore International Chemistry Conference, Singapore
Ashokkumar, Dr M	Feb	Australian Colloid and Interface Symposium, Sydney, New South Wales
	Jul	Sonochemistry Symposium, University of Melbourne, Victoria
	Aug	Dairy Ingredients Group of Australia Research Seminar, Werribee, Victoria
	Aug	Advanced Processing and Innovative Program Initiation Workshop, Food Science Australia, Werribee, Victoria
	Nov	8 th Japan-Australia Colloid and Interface Science Gakkai, Terrigal, New South Wales
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
Best, Dr S	Jul	20 th International Conference on X-ray and Inner Shell Processes, University of Melbourne, Victoria
	Dec	RACI Victorian Inorganic Chemistry Symposium, University of Melbourne, Victoria
Bieske, A/Prof E	Feb	Australian Institute of Physics 16 th Biennial Congress, Canberra, ACT
	Feb - May	Special Studies Program (L)
	Apr	FGLA Symposium, Dresden, Germany
	May	XXI International Symposium on Molecular Beams, Hersomissos, Crete
	Jul	CONNECT 2005: 12th RACI Convention, Sydney, New South Wales
	Sept	2005 Symposium for Free Radicals, Leysin, Switzerland
	Nov	Halpern Symposium, University of Wollongong, New South Wales

Conferences, Workshops

Bird, Dr D	Jul	XXII International Conference on Photochemistry, Cairns, Queensland
Boskovic, Dr C	Jul	CONNECT 2005: 12th RACI Convention, Sydney, New South Wales
	Nov	Chemistry Education Association November Chemistry Lectures, Melbourne, Victoria
	Dec	RACI Victorian Inorganic Chemistry Postgraduate Symposium, Melbourne, Victoria
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
Caruso, Dr R	Feb	Australian Colloid and Interface Science Symposium (ACIS 2005), Sydney New South Wales
	Jul	XXII International Conference on Photochemistry, Cairns, Queensland
	Dec	RACI Victorian Inorganic Chemistry Symposium, University of Melbourne, Victoria
Donnelly, Dr P	Jul	CONNECT 2005: 12th RACI Convention, Sydney, New South Wales
	Dec	RACI Victorian Inorganic Chemistry Symposium, University of Melbourne, Victoria
Funston, Dr A	Jul	XXII International Conference on Photochemistry, Cairns, Queensland
Gee, A/Prof M	Feb	Australian Colloid and Interface Symposium, Coogee Beach, New South Wales
	May	7 th International Symposium on the Characterization of Porous Solids, Aix-en-Provence, France
	Jun	European Science Foundation Conference on Biological Surfaces and Interfaces: Biomaterials, Biosensors and Analytical Techniques, San Feliu de Guixols, Spain
	Jul	XII International Photochemistry Conference, Cairns, Queensland
	Jul	7 th World Congress of Chemical Engineering, Glasgow, Scotland
	Oct	Australian Peptide Conference, Hamilton Island, Queensland

Conferences, Workshops

	Nov	Antimatter Matters: A workshop on Positron Applications – from Atoms to Materials to Cells, Canberra, ACT
	Dec	Sir Mark Oliphant Conference, BioNano: The Next Frontier, University of Queensland, Brisbane, Queensland
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
Ghigino, Prof K	Jan	Invited lecturer, Asian Photochemistry Conference, Taipei, Taiwan
	Jan	PHODS Conference, Canberra, ACT
	Feb	Deans and Heads Conference, Lorne, Victoria
	Feb	Invited lecturer, Professor Paddon-Row Festschrift Symposium, University of New South Wales, Sydney, New South Wales
	Jul	CONNECT 2005: 12th RACI Convention, Sydney, New South Wales
	Jul	Conference Chair, XXII International Conference on Photochemistry, Cairns, Queensland
	Sept	International Conference on Methods and Applications of Fluorescence, Lisbon, Portugal
Grannas, Dr M	Dec	RACI Victorian Inorganic Symposium, The University of Melbourne, Victoria
Grieser, Prof F	Feb	Australian Colloid and Interface Science Symposium (ACIS 2005), Sydney, New South Wales
	May	Australian Academy of Science, New Fellows Symposium, Canberra, ACT
	Jul	Sonochemistry Symposium, University of Melbourne, Victoria
	Aug	Dairy Ingredients Group of Australia Research Seminar, Werribee, Victoria
	Oct-Dec	Special Studies Program (L), University of Washington
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA

Conferences, Workshops

Grimsdale, Dr A	Jun	Novel Molecules, New Materials, and Small Rings: A Symposium to honour Prof. Brian Halton on his retirement, Wellington, New Zealand
	Jul	CONNECT 2005, Sydney, New South Wales
	Dec	Organic Chemistry Group RACI 30th Annual Synthesis Symposium, Melbourne, Victoria
Holmes, Prof A	Jan	Invited lecturer, National Tsing Hua University, Hsinchu, Taiwan, China
	Jan	Invited Merck-Pfister lecture, MIT, Melbourne, Victoria
	Mar	ACS National Meeting, Division of Organic Chemistry, San Diego, USA
	Mar	Organic Synthesis and Process Chemistry (2005) Conference, Indian Institute of Technology, Hyderabad, India
	Jul	CONNECT 2005: 12th RACI Convention, Sydney, New South Wales
	Aug	SPIE, San Diego, USA
	Sep	Southern Highlands Heterocyclic Conference, Bowral, New South Wales
	Nov	TOPLEDA Conference, Academia Sinica, Taipei
	Nov	MRS Fall Meeting, Boston, USA
	Dec	Pacific Polymer Conference, Maui, USA
Hutton, Dr C	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
	Apr	Tasmanian Alkaloids Lecturer, University of Tasmania, Hobart, Tasmania
	Jul	CONNECT 2005: 12th RACI Convention, Sydney, New South Wales
	Jul	Melbourne Protein Group Meeting, Melbourne, Victoria
	Dec	RACI Victorian Branch 30th Annual Synthesis Symposium, Melbourne, Victoria
Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA	

Conferences, Workshops

Kolev, Dr S	Apr	13th International Conference on Flow Injection Analysis, Las Vegas, USA
	Jul	Flow Injection Analysis and Analytical Conference, Marcoola Beach, Queensland
	Dec	The 13th Annual RACI Research and Development Topics Conference, Mt Eliza, Victoria
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
Lincoln, Mr C	Aug	XXII International Conference on Photochemistry, Cairns, Queensland
Moylan, Mr M	Feb	VCE Chemistry Conference, Melbourne
	Nov	Science Teachers Association of Victoria Conference, Melbourne, Victoria
Mulvaney, A/Prof P	Jan -	Special Studies Program, Stiftung
	Jul	Caesar, Nanotechnology Institute, Bonn, Germany
	Feb	Nanocrystal Chemistry and Physics, International Masters Course in Nanotechnology, Maestre, Italy
	Feb	CdSe quantum dot synthesis and surface passivation, University of Padua, Italy
	Feb	Update on gold nanorod optical properties and the role of nanoparticle interactions, University of Hamburg, Germany
	May	Molecular Plasmonics Conference, Jena, Germany
	May	NATO Workshop, Nanocomposites for a safer world, Ouranopoulos, Greece
	May	The Microelectrode Model, Henglein-Schiffirin Symposium on Nanoparticles, Caesar Institut, Germany
	Jun	Surface Chemistry of CdSe, Caesar Institut, Bonn, Germany
	Jun	Gold Rods – Chemistry and Nanomechanics, Trinity College, Dublin, Ireland
Jun	Surface Chemistry of CdSe, University of Liverpool, United Kingdom	

Conferences, Workshops

	Jul	Surface Chemistry of CdSe Qds, Freiburg Materials Research Institute, Freiburg, Germany
	Jul	Surface trapping and single QD spectroscopy, Single Molecule Workshop, University of Melbourne, Victoria
	Nov	Passivation of semiconductor nanocrystals, 8th Japan-Australia Symposium, Terrigal, New South Wales
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
O'Hair, A/Prof R	Jan	20 th Australian and New Zealand Society for Mass Spectrometry Conference, Glenelg, South Australia
	Jun	53 rd American Society for Mass Spectrometry Conference, San Antonio, Texas, USA
	Aug	Awarded Doctor of Science, University of Adelaide, South Australia
	Sep	Gas Phase Fragmentation of Peptide Ions: from fundamentals to new proteomics tool, St Vincent's Institute of Medical Research, Fitzroy, Victoria
	Nov	Frontiers of Mass Spectrometry, Drug Design & Synthesis, Halpern Symposium, University of Wollongong, New South Wales
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
Pacifico, Dr J	Mar	American Physical Society Conference, Los Angeles, USA
	Mar	American Chemical Society Meeting, San Diego, USA
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
Prescott, Dr S	Feb	Australian Colloid and Interface Symposium, Sydney, New South Wales
	Sep	19 th Conference of the European Colloid & Interface Society, Norway

Conferences, Workshops

Ramachandran, Dr G	Jul	XXII International Conference on Photochemistry, Cairns, Queensland
Rizzacasa, A/Prof M	Jul	Natural Products Gordon Research Conference, New Hampshire, USA
	Jul	RSC Synthesis in Organic Chemistry Symposium, Oxford, United Kingdom
	Aug	International Congress on Heterocyclic Chemistry, Palermo, Italy
	Sep	2005 Organic Reactions Lecturer, various Universities in USA
	Dec	30 th Annual Synthesis Symposium, Melbourne, Victoria
Schiesser, Prof C	Jan	PHODS Conference, Canberra, ACT
	Feb	Centre for Free-Radical Chemistry and Biotechnology meeting, Sydney, New South Wales
	Jul	Gordon Conference on Free Radical Reactions, Holderness School, Plymouth New Hampshire, USA
	Sep	Southern Highlands Conference on Heterocyclic Chemistry, Moss Vale, New South Wales
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
Separovic, Prof F	Jan	21 st International Conference on Magnetic Resolution and Biological Systems, Hyderabad, India
	Feb	Protein Structure and Function Conference, Lorne, Victoria
	Feb	49 th Annual Meeting of Biophysics Society, Long Beach, USA
	Aug	15 th IUPAB & 5 th EBSA International Biophysics Congress, Montpellier, France
	Sep	Australian Society for Biophysics, Canberra, ACT
	Oct	Australian Peptide Conference, Hamilton Island, Queensland
	Nov	1 st Asia-Pacific NMR Symposium, Yokohama, Japan
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA

Conferences, Workshops

Smith, Dr T	Jul	XXII International Conference on Photochemistry, Cairns, Queensland
	Sep	9 th International Conference on Methods and Applications of Fluorescence Spectroscopy, Imaging and Probes, Lisbon, Portugal
	Sep	11 th International Workshop on Single Molecule Detection and Ultrasensitive Analysis in Life Sciences, Berlin, Germany
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA
Tregloan, A/Prof P	Sep	Uniserve Science Symposium – Blended Learning in Science, Sydney, New South Wales
	Nov	Multimedia and Educational Technologies for Teaching and Learning Forum, Melbourne, Victoria
	Dec	Australasian Society for Computers in Tertiary Education Conference, Brisbane, Queensland
Wedd, Prof T	Feb	30 th Lorne Meeting, Phillip Island
	Jul	12 th Royal Australian Chemical Institute Convention, Sydney, New South Wales
	Aug	12 th International Conference on Biological Inorganic Chemistry, Ann Arbor, Michigan, USA
	Dec	Inorganic Symposium of RACT, Victorian Branch, Melbourne, Victoria
White, A/Prof J	Jun	2005 Gordon Research Conference on Physical Organic Chemistry, Holderness, New Hampshire, USA
	Dec	30 th Annual Synthesis Symposium, Melbourne, Victoria
Wille, Dr U	Feb	Centre for Free-Radical Chemistry and Biotechnology meeting, Sydney, New South Wales
	Jul	Gordon Conference of Free-Radical Reactions, Plymouth, New Hampshire, USA
	Dec	Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA

Conferences, Workshops

Williams, Dr S

- Dec Organic Synthesis Symposium, Melbourne, Victoria
- Apr Inaugural ANZ Glycosciences Group Glycoscience Symposium, Melbourne, Victoria
- Jul Royal Australian Chemical Institute CONNECT 2005, Sydney, New South Wales
- Sep Institute of Molecular Biosciences, University of Queensland, Brisbane, Queensland
- Sep Institute of Glycomics, Griffith University, Canberra, ACT
- Oct Department of Chemistry, University of Tasmania, Tasmania

Young, A/Prof C

- Dec 30th Annual Synthesis Symposium, Melbourne, Victoria
- Jul Gordon Research Conference on Molybdenum and Tungsten Enzymes, Oxford, United Kingdom
- Dec RACI Victorian Inorganic Chemistry Symposium, University of Melbourne, Victoria
- Dec ASRP-Australian Synchrotron Users Workshop, University of Melbourne, Victoria
- Dec Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA

Zhou, Dr M

- Nov 8th Japan-Australia Colloid and Interface Science Gakkai, Terrigal, New South Wales
- Dec Pacificchem 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, USA



School Seminars

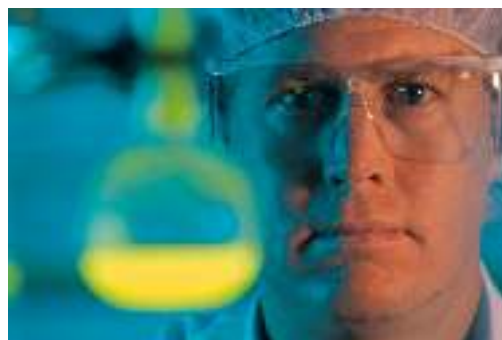
Feb. 11	Dr Jason Harper, University of New South Wales – <i>Mechanism of cyclisation of indolo oxime ethers</i>
Feb. 16	Professor Ulrich Leuning, Universitaet Kiel, Germany - <i>Supramolecular chemistry and molecular recognition: from concave reagents to multiple hydrogen bonds</i>
Feb. 17	Professor Craig Hill, Emory University, USA, who will give the following seminar at 12 noon in the West Theatre - <i>New polyoxometalate species, structures, and functional nano-materials.</i>
Feb. 17	Dr Andrew Grimsdale, Max Planck Institute for Polymer Research, Mainz, Germany - <i>New Polyphenylene-Based Polymers for Electronic Applications.</i>
Feb. 18	Professor Michael Gagne, University of North Carolina, USA - <i>New catalysts for the venerable cation-olefin reaction.</i>
Feb. 22	Professor David Waldeck, University of Pittsburgh, USA - <i>Fundamental studies of electron tunnelling in molecules and molecular assemblies.</i>
Feb. 28	Associate Professor Peter Tregloan, School of Chemistry, The University of Melbourne, <i>Hoch druck, haute pression, high pressure. Do some chemistry and see the world.</i>
March 2	Professor Keiji Morokuma, Emory University, USA - <i>Computational study of chemical reactions. From elementary chemical reactions and transition metal catalyses to mechanism of fullerene formation reaction.</i> Melbourne University Chemical Society.
March 7	Dr Rachel Caruso, School of Chemistry, The University of Melbourne - <i>The Sol-Gel templating technique for the fabrication of porous inorganic materials.</i>
March 11	Professor Albert Padwa, Emory University, USA – <i>Use of Sulfonium Ions for Alkaloid Synthesis</i>
March 14	Dr Scott Watkins, School of Chemistry, The University of Melbourne - <i>Towards roll-up televisions. Light-emitting metal complexes</i>
March 18	RACI Organic group seminar by Professor Dr. Edwin Constable, University of Basel, Switzerland - <i>Threads, rings and mirrors ... or a journey from metallopolymers to novel chiral structures.</i>
March 21	Dr Janet Scott, Monash University.
April 4	Dr Leigh Jones, Monash University - <i>Synthesis and magnetic properties of transition metal networks, clusters and networks of clusters.</i>
April 11	Professor Phillip Marriott, RMIT University - <i>Modulating your way into gas chromatography heaven</i>
April 13	Dr Andrew Clayton, Ludwig Institute for Cancer Research - <i>Photophysical and photochemical probes of molecular interactions in cellular signal transduction,</i> Melbourne University Chemical Society
April 13	Dr Gregory D Scholes, University of Toronto, Canada - <i>Designing materials for processing light.</i>
April 15	Organic Seminar, Dr Michael Perkins, Flinders University - <i>Adventures in the synthesis of polypropionate natural products</i>
April 18	Marissa Haywood, School of Chemistry, The University of Melbourne - <i>Mission to Titan:- The Cassini-huygens spacecraft and Craig Gourlay - the flame that burns coolest burns cleanest: the chemistry of cool flames.</i>
April 22	J.-K. Lee, School of Chemistry, The University of Melbourne - <i>The Heck reaction and diaryl ether synthesis in supercritical carbon dioxide</i>
April 29	Danny Ganame, School of Chemistry, The University of Melbourne - <i>Total synthesis of reveromycin A and synthesis towards the C15-C29 side chain of adjudazol A</i>
May 2	Mark Bondin, School of Chemistry, The University of Melbourne - <i>Redox-initiated structural change in iron-sulfur compounds.</i>

School Seminars

May 6	Dr Andrew Hughes, La Trobe University - <i>Natural product synthesis and synthetic methods with modified amino acids: first steps in an odyssey</i>
May 9	Lianyi Zhang, School of Chemistry, University Of Melbourne - <i>Imaging biological cells by mass spectrometry</i> , and Michael Cheah - <i>Studies of transition metal complexes by density functional theory</i> .
May 11	2005 Australian Journal of Chemistry Lecture by Dr Simon Petrie, Department of Chemistry, ANU - <i>Deep space metal chemistry: from stars to planets</i> . The Melbourne University Chemical Society
May 13	Dr Joanne Blanchfield, University of Queensland - <i>Strategies for the delivery of synthetic vaccines, oligonucleotides and peptide based drugs</i> .
May 16	Andrew Mariotti, School of Chemistry, University Of Melbourne - <i>Can a Musician do Electrochemistry in Ionic Liquids?</i>
May 20	Shannon Zanatta, School of Chemistry, University Of Melbourne - <i>Synthetic studies towards the spirofungins</i> .
May 23	Dr Richard Morrison, Monash University - <i>VICS-Centre for Scientific Instrumentation - From Concepts to Commercialisation</i> .
May 27	Steven Zammit, School of Chemistry, University Of Melbourne - <i>Synthesis of hemiketal and spiroketal containing natural products</i>
June 8	Victorian Institute of Chemical Sciences Lecture. Dr Janet Scott, School of Chemistry, Monash University - <i>Tools for greener chemistry: novel reaction media to new multicomponent reactions</i> . Melbourne University Chemical Society.
July 11	RACI Organic group seminar. Professor Minoru Isobe, Nagoya University, Japan – <i>Total synthesis of tetrodotoxin – from basic strategies to an accomplishment of total synthesis</i>
July 12	RACI Organic group seminar. Professor Scott Nelson, University of Pittsburgh, USA – <i>Catalytic asymmetric aldol additions and Claisen rearrangements in complex molecule synthesis</i>
Aug. 5	RACI Organic group seminar. Dr Pall Thordarson, University of Sydney – <i>Bio-mimetic chemistry: From organogels to bioelectronics and nonomachines</i>
Aug. 17	Stranks Memorial Lecture. Professor Chris Pickett, Biological Chemistry Department, John Innes Centre, Norwich – <i>Chemistry and the iron-only hydrogenases – can we replace platinum in hydrogen fuel cells by synthetic iron sulfur assemblies related to the natural catalytic site?</i>
Aug. 26	RACI Organic group seminar. Kate Hassall, School Of Chemistry, University Of Melbourne – <i>Towards a crystal structure of a β-silylated carbenium ion</i>
Sept. 2	RACI Organic group seminar. Dr Jason Smith, University of Tasmania – <i>Pyrrole as a template in organic synthesis</i>
Sept. 5	Joint Chemistry/Pharmacology seminar. Associate Professor David McFadyen, School of Chemistry – <i>Metal-based drugs</i>
Sept. 9	Joint Chemistry/Pharmacology seminar. Dr Vijay Nair, CSIR, Trivandrum, India – <i>Heterocyclic constructions via novel multicomponent reactions</i>
Sept. 14	Blake Dawson Waldron Patent Services Lecture. Dr Jamie Rossjohn, Department of Biochemistry and Molecular Biology, Monash University – <i>Rational drug design & structural biology</i>
Oct. 7	Joint Chemistry/Pharmacology seminar. Professor Frank Turecek, University of Washington, USA – <i>Peptide radicals and cation-radicals: The intricacies of electron capture and transfer</i>
Oct. 14	Joint Chemistry/Pharmacology seminar. Dr Jamie Simpson, VCP, Monash University – <i>Understanding and exploiting mechanism in chemistry and biology</i>
Oct. 18	Joint Chemistry/Pharmacology seminar. Dr David Alker, Pfizer Global Research and Development – <i>CCR5 antagonists for HIV Therapy</i>
Oct. 21	Joint Chemistry/Pharmacology seminar. Associate Professor Alastair Stewart, Department of Pharmacology – <i>Activity-based drug discovery</i>

School Seminars

Oct. 26	Feutrill Memorial Lecture. Professor Rainer Herges, Institut für Organische Chemie, Kiel, Germany – <i>Moebius, Escher, Bach: the endless loop in arts and science</i>
Oct. 28	Joint Chemistry/Pharmacology seminar. Professor Weston Borden, University of North Texas, USA – <i>The Schizophrenic effect of geminal fluorination on the kinetic stabilities of molecules containing small rings. Calculations, predictions and experimental tests.</i>
Nov. 4	Joint Chemistry/Pharmacology seminar. Dr Leon Wong, CSIRO Molecular & Health Technologies – <i>Himbacine: Bigger than Ben-Hur?</i>
Nov. 11	Joint Chemistry/Pharmacology seminar. Dr Cam Cowden, Merck Research Laboratories
Nov. 16	RACI Lecture. Professor Hans Griesser, Ian Wark Research Institute, University of South Australia – <i>Understanding and control of interfaces between materials and biological environments</i>
Nov. 25	Joint Chemistry/Pharmacology seminar. Professor Chris Easton, ANU – <i>Exploiting free radical chemistry to regulate peptide hormones levels</i>
Nov. 30	MUCS President's Report and AGM. Associate Professor Michelle Gee, School of Chemistry, University of Melbourne – <i>Chemistry and Physics at the Interface – A superficial reflection on 2005</i>
Dec. 8	Professor Delano Chong, Department of Chemistry, University of British Columbia, Canada – <i>DFT Calculations and Electron Spectroscopy</i>
Dec. 15	Dr Jonathon Doye, University Chemical Laboratory, Cambridge, UK – <i>The small world of cluster science</i>



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