

Conference Presentations

Biological Chemistry

Protein Structure and Function

29th Lorne Conference on Protein Structure and Function, Lorne, Victoria, 8–12 February. The following posters were presented:

A Y Park, P Prosselkov, G Pintacuda, M A Keniry, P D Carr, D L Ollis, G Otting and N E Dixon: *Stabilization of the proofreading exonuclease subunit of E coli DNA polymerase III by backbone cyclization*

G Pintacuda, M A Keniry, T Huber, A Y Park, N E Dixon and G Otting: *Fast methods for NMR in structural biology*

P M Schaeffer, K Loscha, A J Oakley, E Liepinsh, B Bancia, M C J Wilce, G Otting and N E Dixon: *Primase-helicase interaction in the Escherichia coli replisome*

3rd East Coast *Bacillus* Meeting, Newcastle, New South Wales, 27 August. The following invited lectures were presented:

S Jergic: *Subunit interactions in DNA polymerase III*

K V Loscha: *Primase-helicase interactions*

P M Schaeffer: *Introduction to the E coli replisome*

ComBio2004, Perth, Western Australia, 26–30 September. The following invited lectures were presented:

K Loscha, A J Oakley, P M Schaeffer, E Liepinsh, M C J Wilce, G Otting and N E Dixon: *Structure and function of the DnaB binding domain of Escherichia coli primase*

S J Watt, N K Williams, P Prosselkov, G Otting, N E Dixon, M M Sheil and J L Beck: *Comparison of ^1H - ^2H exchange kinetics of linear and cyclized DnaB-N (helicase) using mass spectrometry*

The following posters were presented:

M J Headlam, K Ozawa, D Mouradov, T Huber, S J Watt, J L Beck, K J Rodgers, R T Dean, G Otting and N E Dixon: *Translational incorporation of dihydroxyphenylalanine into proteins*

K Ozawa, S Jergic, M J Headlam, P M Schaeffer, G Otting and N E Dixon: *In vitro cell-free protein synthesis for NMR studies of protein-ligand interactions*

A Y Park, G Pintacuda, M A Keniry, P D Carr, P Prosselkov, D L Ollis, G Otting and N E Dixon: *Structure and function of cyclized versions of the proofreading exonuclease subunit of E coli DNA polymerase III*

A Robinson, P S-C Wu, S J Harrop, P M Schaeffer, N E Dixon, M R Gillings, A J Holmes, K M H Nevalainen, G Otting, H W Stokes, P M G Curmi and B C Mabbutt: *New proteins from the mobile genome: structural definitions of function*

Nuclear Magnetic Resonance

29th Lorne Conference on Protein Structure and Function, Lorne, Victoria, 8–12 February. The following posters were presented:

A Y Park, P Prosselkov, G Pintacuda, M A Keniry, P D Carr, D L Ollis, G Otting and N E Dixon: *Stabilization of the proofreading exonuclease subunit of E coli DNA polymerase III by backbone cyclization*

G Pintacuda, M A Keniry, T Huber, A Y Park, N E Dixon and G Otting: *Fast methods for NMR in structural biology*

ComBio2004, Perth, Western Australia, 26–30 September. The following poster was presented:

A Y Park, G Pintacuda, M A Keniry, P D Carr, P Prosselkov, D L Ollis, G Otting and N E Dixon: *Structure and function of cyclized versions of the proofreading exonuclease subunit of E coli DNA polymerase III*

2nd Workshop on Biomolecular NMR, University of Wollongong, New South Wales, 6–10 December

M A Keniry presented a lecture entitled: *Coherence selection: phase cycling and gradient pulses*, and participated at the Australian NMR Workshop



Structural Biology

29th Lorne Conference on Protein Structure and Function, Lorne, Victoria, 8–12 February The following poster was presented:

P M Schaeffer, K Loscha, A J Oakley, E Liepinsh, B Bancia, M C J Wilce, G Otting and N E Dixon: *Primase-helicase interaction in the Escherichia coli replisome*

ComBio2004, Perth, Western Australia, 26–30 September

The following lectures were presented:

K Loscha, A J Oakley, P M Schaeffer, E Liepinsh, M C J Wilce, G Otting and N E Dixon: *Structure and function of the DnaB binding domain of Escherichia coli primase*

A J Oakley, R Bourgault, J D Bewley and M C J Wilce: *Endo-beta-mannanase from ripening tomatoes: structure and mechanism*

Biomolecular NMR

ANZMAG 2004, Barossa Valley, South Australia, 15–19 February

G Otting presented the invited lecture: G Otting, G Pintacuda, S Bennett and N E Dixon: *Paramagnetic tagging for protein NMR*

P Wu was selected for oral presentation of his poster: P Wu and G Otting: *Measurement and Φ angle dependence of CSA/DD cross-correlation effects between H^{α} and H^{β}*

The following poster was also presented:

G Pintacuda, G Otting, M A Keniry, T Huber, A Y Park and N E Dixon: *Fast structure-based assignment of ^{15}N -HSQC spectra of paramagnetic proteins*

28th Annual Scientific Meeting of the Australian Society for Biophysics, Fremantle, Western Australia, 29 September–2 October

G Otting presented the invited lecture: G Otting, G Pintacuda, T Huber, M A Keniry, A Y Park, N E Dixon, A Moshref, A Leonchik, A Sharipo and A Kaikkonen: *Paramagnetic labelling for protein NMR studies*

2nd Workshop on Biomolecular NMR, University of Wollongong, New South Wales, 6–10 December

G Otting initiated and organized the workshop, including scientific programme, course material and student admission, and gave two of the lectures entitled *Data Processing and 3D NMR*

Inorganic Chemistry

Coordination Chemistry and Spectro-electro Chemistry

9th AICCM Symposium of the Painting Special Interest Group, Hobart, Tasmania, 18–20 March The following lecture was presented:

Maria Kubik: *Fibre-optic analysis of artists' materials used by the "Angry Penguins"*

Synthetic Organometallic and Coordination Chemistry

Second Australia and New Zealand Symposium on Organometallic Chemistry (OZOM2), University of Adelaide, 11–14 January. The following lectures were presented:

R D Dewhurst, A F Hill, A D Rae, M K Smith, and A C Willis: *A simple synthesis of heterobimetallic C_3 complexes*

M Schultz, A F Hill, A D Rae, and A C Willis: *Alkyne coupling reactions of $\text{Ru}(0)$*

A F Hill and M K Smith: *Ruthenium(II) complexes of 2-mercapto-methylimidazole*

The following posters were presented:

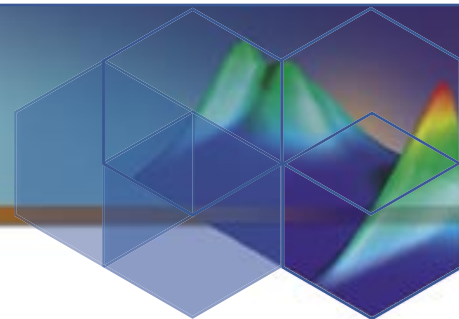
L M Caldwell, A F Hill, A G Hulkes, M K Smith, A J P White, D J Williams, and A C Willis: *Organometallic chemistry of alkynyl selenolates, alkynyl selenoethers and isoselenocyanates*

R J Abernethy, A F Hill, and M K Smith: *"Soft" sulfur-donor borate transition metal complexes*

6th Reactive Organometallic Symposium (ROMS-6), University of Sydney, 28 May. The following lectures were presented:

R J Abernethy: *Synthesis and reactivity of unusual alkoxy(pyrazoly)borato complexes of ruthenium*

I R Crossley: *New developments in the main group chemistry of perfluorovinyl and alkynyl reagents*



M K Smith: *Novel (2-mercaptomethimazolyl)borate complexes of a range of group 4, 5 and 14 metals*

Gordon Conference on Organometallic Chemistry, Newport RI, USA, 11–15 July. The following lectures were presented:

R D Dewhurst, A F Hill, A D Rae, M K Smith, and A C Willis: *Simple convergent routes to heterobimetallic C_3 complexes*, for which R D Dewhurst was awarded a National Institute of Physical Sciences Travel Assistance Grant

M Schultz, A D Rae, A C Willis, and A F Hill: *Alkyne coupling reactions of zero-valent ruthenium*

International Conference on Coordination Chemistry (ICCC 36), Mérida, Yucatán, México, 18–23 July. The following poster was presented:

L M Caldwell, P V Bernhardt, T B Chaston, P Chin, and D R Richardson: *Cytotoxic iron chelators: iron complexes of di-2-pyridyl keton isonicotonyl hydrazone (HPKIH) analogues*, for which L M Caldwell was awarded a National Institute of Physical Sciences Travel Assistance Grant

International Conference on Organometallic Chemistry (ICOMC 21), Vancouver, Canada, 25–30 July. The following lecture was presented:

M Schultz, A D Rae, A C Willis, and A F Hill: *Alkyne coupling reactions of Ru(0)*

The following posters were presented:

L M Caldwell, A F Hill, and A C Willis: *Group 6 selenoaryl complexes: isoselenocyanates as single atom selenium transfer reagents*, for which L M Caldwell was awarded a National Institute of Physical Sciences Travel Assistance Grant

R D Dewhurst, A F Hill, A D Rae, M K Smith, and A C Willis: *Simple convergent routes to heterobimetallic C_3 complexes*, for which R D Dewhurst was awarded a National Institute of Physical Sciences Travel Assistance Grant

New Developments in Metal Alkynyl Chemistry, Research School of Chemistry, ANU, 12 November. A F Hill chaired the *Synthetic Methods* session. The following lecture was presented:

R D Dewhurst, A F Hill, and A C Willis: *Investigating catalytic demercuration of bis(tricarbido) $[Hg(CCCWML)_2]$ complexes*

The following posters were presented:

M J Bartlett, A F Hill, and M K Smith: *Bimetallics spanned by C_4 , C_4H and C_4H_2 wires*

R D Dewhurst, A F Hill, and A C Willis: *The C_3 ligand: odd-numbered carbon bridges linking W with Rh, Ir and Hg*

The **2004 NZIC Inorganic and Organometallic Specialist Group Conference**, Portage, New Zealand, 5–8 December. The following lectures were presented:

I R Crossley, A F Hill, E R Humphrey, and A C Willis: *Metallaboranes: the synthesis and chemistry of a series of group 9 and 10 compounds exhibiting 'dative' metal-boron bonding*

R D Dewhurst, A F Hill, and A C Willis: *Investigating catalytic demercuration of bis(tricarbido) $[Hg(CCCWML)_2]$ complexes*

R J Abernethy, I R Crossley, A F Hill, E R Humphrey, M K Smith, N Tshabang, and A C Willis: *Methimazolyl-derived tripodal ligands—(only) if the cap fits*

The following posters were presented:

R J Abernethy, A F Hill, and A C Willis: *Solvent-mediated reactions of ruthenium complexes with poly(pyrazolyl) borates*, which was awarded second prize for a student contribution

R J Abernethy, A F Hill, and A C Willis: *Synthesis and reactivity of molybdenum-allyl scorpionate complexes: $[H_2B(mt)_2]^-$ vs $[H_2B(pz)_2]^-$*

L M Caldwell, A F Hill, and A C Willis: *Synthesis and reactivity of group 6 selenoaryl complexes*

R D Dewhurst, A F Hill, and A C Willis: *The C_3 ligand: odd-numbered carbon bridges linking W with Rh, Ir and Hg*

M J Bartlett, A F Hill, and M K Smith: *Bimetallics spanned by C_4 , C_4H and C_4H_2 wires*

M K Smith and A F Hill: *High valent group 4, 5 and 14 complexes of the poly(methimazolyl)borates*

N Tshabang, A F Hill, M K Smith, and A C Willis: *Heterobimetallic complexes of poly(methimazolyl)borate ligands*, for which N Tshabang was 'Highly Commended' for a student contribution



Inorganic Stereochemistry and Asymmetric Synthesis

Second Australia and New Zealand Symposium on Organometallic Chemistry (OZOM2), University of Adelaide, 11–14 January. The following lectures were presented:

E H Krenske, K A Porter, and S B Wild: *Phosphine-stabilised arsenium salts as precursors for the asymmetric synthesis of tertiary arsines, for which E H Krenske was awarded a prize for the best student lecture*

R J Warr and S B Wild: *Inorganic asymmetric synthesis of two-bladed propeller octahedral metal complexes*

The following poster was presented:

X Zhou, A C Willis, and S B Wild: *Burrows' compounds revisited*

The 2004 NZIC Inorganic and Organometallic Specialist Group Conference, Portage, New Zealand, 5–8 December

S B Wild gave a plenary lecture entitled: *Chiral phosphines and arsines: resolutions and asymmetric syntheses*

The following lectures were presented:

N L Kilah and S B Wild: *Deracemisation of chiral arsines and phosphines via asymmetric transformation*

H J Kitto and S B Wild: *Polytertiary phosphine helicates*

A D Rae, R J Warr, S B Wild, and A C Willis: *Inorganic asymmetric synthesis of two-bladed propeller octahedral metal complexes*

Solid State Inorganic Chemistry

The Sixth Conference of the Asian Crystallographic Association (AsCA'04), Hong Kong, 27–30 June. The following lectures were presented:

Y Liu, R L Withers, F J Brink, L Norén, and V Ting: *Cubic perovskite-related phases in the ternary SrO-CuO-Nb₂O₅*

A D Rae: *Matching structure to cell distortion in twinned crystals*

V Ting, Y Liu, R L Withers, and L Norén: *Structural studies of the A₂InNbO₆ 1:1 and A₃CoNb₂O₉ 1:2 ordered perovskites (A = Ca²⁺, Sr²⁺, Ba²⁺)*

The following poster was presented:

W Somphon, K J Haller, and A D Rae: *The order disorder transition at 150 K of polymeric Ag(bipy)NO₃*

The Australian Conference on Microscopy and Microanalysis (ACMM 18), Geelong, 1–6 February

R L Withers gave a keynote lecture: *A TEM and rigid unit mode (RUM) study of some inherently flexible framework structures*

The following lectures were presented:

F J Brink, L Norén, and R L Withers: *Electron diffraction evidence for continuously variable, composition-dependent, oxygen/fluorine ordering in niobium oxyfluorides*

V Ting, Y Liu, R L Withers, and L Norén: *A TEM study of the space group symmetries and structures of the A₂InNbO₆ 1:1 and A₃CoNb₂O₉ 1:2 ordered perovskites (A = Ca²⁺, Sr²⁺, Ba²⁺)*

22nd European Crystallographic Meeting, Budapest, Hungary, 26–31 August. The following poster was presented:

A D Rae and A Linden: *Using symmetrized structure components to improve the refinement of an occupancy modulated structure*

Organic Chemistry

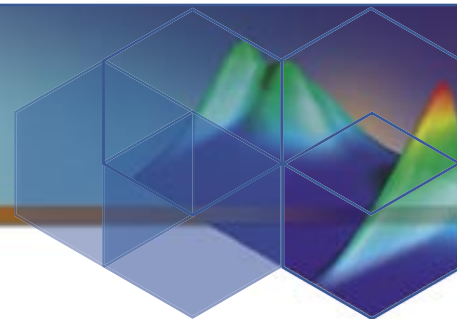
Synthesis and Mechanism

Colloquium for Humboldt Fellows and Awardees in Australia and New Zealand, Auckland, New Zealand, 20–22 February. The following workshop contributions were presented:

M G Banwell, *Natural products-inspired chemical synthesis studies*

M G Banwell and J Renner: *Towards practical total syntheses of the spinosyns – potent and environmentally benign insecticides*

The 3rd Chinese–Australian Organic Chemistry Symposium, Sydney, New South Wales, 25–26 February



M G Banwell presented the invited lecture: *The total synthesis of biologically active natural products*

20th Royal Australian Chemical Institute Organic Chemistry Conference, Cairns, Queensland, 4–8 July was attended by M G Banwell, M Bonnet, S Gross, O J Kokas, J Renner and P C Stanislawski

M G Banwell presented the 2004 Birch Medal Lecture

P Stanislawski presented the contributed lecture: *Towards the total synthesis of the erythrinan and homoerythrinan alkaloids*

The following posters were also presented:

M G Banwell, B D Kelly and J Renner: *Towards practical total syntheses of the spinosyns – potent and environmentally benign insecticides*

M G Banwell and O J Kokas: *Towards the total synthesis of (–)-brunsvigine*

M G Banwell, M J Coster and S Gross: *Studies directed towards the total synthesis of the marine alkaloid haliclonyclamine A*

IUPAC ICOS–15, 15th International Conference on Organic Synthesis, Nagoya, Japan, 1–6 August. The following poster was presented:

M G Banwell and D T J Loong: *Chemoenzymatic approaches to total syntheses of cladospolides B, C and D*

15th Southern Highlands Conference on Heterocyclic Chemistry, Moss Vale, New South Wales, 5–7 September. The following poster was presented:

M G Banwell and D W Lupton: *New methods for the construction of Aspidosperma alkaloids*

Biotransformations and Synthesis, Queens University of Belfast, Belfast, Northern Ireland, 24 September

M G Banwell presented the plenary lecture: *Bugs for drugs: exploiting whole-cell biotransformations in the total synthesis of natural products and other biologically active compounds*

Royal Australian Chemical Institute NSW Organic Chemistry Group 25th Annual One-day Symposium, University of New South Wales, 30 November was

attended by M G Banwell, M Bonnet, L Fearnside, M Friend, J C Jury, D T J Loong, D W Lupton and A T Phillis

D W Lupton presented the invited lecture: *A total synthesis of the alkaloid aspidospermidine for which he was awarded a prize for one of the best student talks*

The following posters were also presented:

M G Banwell and A T Phillis: *Approaches to functionalised gibbane skeleta using novel rearrangements of gem-dihalocyclopropanes*

M G Banwell and D T J Loong: *Chemoenzymatic approaches to the total synthesis of cladospolides B, C and D*

Biochemical Reactions and Molecular Recognition

38th International Wood Composites Symposium, Seattle, USA, 5–8 April

A Philbrook presented the opening invited lecture: *Demonstration of co-polymerisation in melamine-urea-formaldehyde reactions using ¹⁵N NMR correlation spectroscopy*

9th International Symposium on Free Radicals, Porto-Vecchio, France, 6–11 June. The following posters were presented:

C J Easton and A Wright: *Evaluation of thiols as reagents to repair radical damage in peptides and proteins*

Z I Watts and C J Easton: *Regioselective radical chlorination of amino acids and peptides*

20th Royal Australian Chemical Institute Organic Chemistry Conference and 29th International Symposium on Macrocyclic Chemistry, Cairns, Queensland, 4–8 July were attended by L Barr, M M Cieslinski, R Dawson, C J Easton, I H W Li, A Philbrook, Y C Tsai, Z I Watts, and A Wright. The following lectures were presented:

M M Cieslinski, C J Easton, H Onagi, and S F Lincoln: *Cyclodextrins and stilbenes as components of molecular devices*



C J Easton, G P Savage, and G W Simpson: *Overcoming limitations in nitrile oxide cycloaddition chemistry*

Z I Watts and C J Easton: *Regioselective radical chlorination of amino acids and peptides*

A Wright and C J Easton: *Fighting an uphill battle: hydrogen atom transfer between thiols and amino acids*

The following posters were presented:

R Dawson, C J Easton, T Herlt, and S F Lincoln: *Stilbene and cyclodextrins as the basis of molecular shuttles, for which R Dawson was awarded the best poster prize*

I H W Li, B J W Barratt, C J Easton and J S Simpson: *α -Glycyl radical stability and PAM enzyme inhibition*

L Barr, C J Easton, A G Meyer and S F Lincoln: *Cyclodextrins as molecular reactors to reverse the regioselectivity of nitrile oxide cycloadditions*

A Philbrook, C J Blake, N Dunlop, C J Easton and M Keniry: *Demonstration of co-polymerisation in melamine-urea-formaldehyde reactions using ^{15}N NMR correlation spectroscopy*

Y C Tsai and C J Easton, *Oxidatively cleavable amino acid residues in peptides*

3rd Heron Island Conference on Reactive Intermediates and Unusual Molecules, Heron Island, Queensland, 17–23 July

C J Easton presented the invited lecture: *Exploiting free radical chemistry to design PAM enzyme inhibitors for the regulation of hormone production*

17th IUPAC Conference on Physical Organic Chemistry, Shanghai, China, 15–20 August

C J Easton presented the plenary lecture: *Cyclodextrins as the basis of catalysts, molecular reactors and machines and microelectronic devices*

Orica Emerging Science Symposium, Melbourne, 12 November

A Philbrook presented the invited lecture: *Melamine replacements in MUF resins*

1st Pacific Symposium on Radical Chemistry, Kanazawa, Japan, 14–16 November

C J Easton presented the invited lecture: *Inhibition of PAM to regulate hormone production*

Adelaide Organic Chemistry Symposium, Adelaide, 6 December

C J Easton presented the plenary lecture: *Cyclodextrins as the basis of catalysts, molecular reactors and machines and microelectronic devices*

Organic Synthesis

20th Royal Australian Chemical Institute Organic Conference, Cairns, Queensland, 4–9 July

L N Mander gave an invited lecture: *Synthesis of the Galbulimima alkaloids*

IUPAC ICOS–15, 15th International Conference on Organic Synthesis, Nagoya, Japan, 1–6 August The following poster was presented:

K A Fairweather: *Towards the total synthesis of the marine natural product diisocyanoadociane*

Organic Synthesis, Methodology and Host-guest Chemistry

The 3rd Chinese–Australian Organic Chemistry Symposium, Sydney, New South Wales, 25–26 February

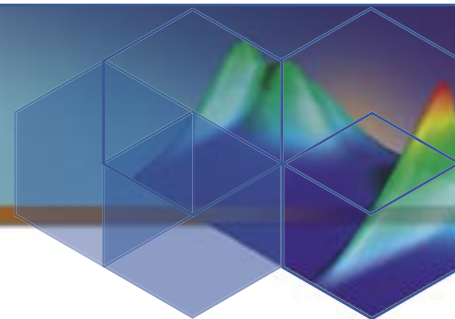
M S Sherburn presented the invited lecture: *Radicals and pericyclics as key steps in synthesis*

20th Royal Australian Chemical Institute Organic Chemistry Conference and 29th International Symposium on Macrocyclic Chemistry, Cairns, Queensland, 4–8 July was attended by M S Sherburn, E S Barrett, S K Goodwin, N Kanizaj, L C H Kwan, N A Miller, E L Pearson, A D Payne, A J Scott, L A Sharp, D J Sinclair, R Tripoli and C I Turner. The following lectures were presented:

E S Barrett and M S Sherburn: *Superbowls and next generation container molecules*

L A Sharp and M S Sherburn: *The intramolecular radical carboxylation reaction: scope and application to natural product synthesis, for which L A Sharp won a prize for best student presentation*

N A Miller and M S Sherburn: *Synthesis and reactions of substituted dendralenes*



D J Sinclair and M S Sherburn: *Extending the chemistry of cavitands*

The following posters were also presented:

N Kanizaj and M S Sherburn: *Cooperative action of double cavity molecules? Synthesis and binding studies*

L Kwan and M S Sherburn: *Investigations into enantioselective catalysis of the intramolecular Diels–Alder reaction*

S K Goodwin, A D Payne and M S Sherburn: *Polycyclic molecules from acyclic precursors using the Diels–Alder reaction*

E L Pearson and M S Sherburn: *The intramolecular Diels–Alder reactions of benzo-tethered 1,3,9-decatrienes*

A J Scott and M S Sherburn: *Total synthesis of (–)-podophyllotoxin, for which A J Scott won a prize for best student poster*

R Tripoli and M S Sherburn: *A radical mechanism for the intramolecular Diels–Alder reaction?*

C I Turner and M S Sherburn: *A radical new approach to the total synthesis of (+)-podophyllotoxin*

IUPAC ICOS–15, 15th International Conference on Organic Synthesis, Nagoya, Japan, 1–6 August

N A Miller and M S Sherburn: *Synthesis and reactions of substituted dendralenes, for which N A Miller was awarded a prize for best poster*

15th Southern Highlands Conference on Heterocyclic Chemistry, Moss Vale, New South Wales, 5–7 September was attended by M S Sherburn, E S Barrett and C I Turner

E S Barrett was a postgraduate scholarship awardee and presented the invited lecture: *Synthesis and applications of cavitands to host-guest chemistry*

The following posters were also presented:

A J Scott and M S Sherburn: *Total synthesis of (–)-podophyllotoxin*

A J Reynolds, C I Turner and M S Sherburn: *A radical new approach to the total synthesis of (+)-podophyllotoxin*

C I Turner and M S Sherburn: *The intramolecular Diels–Alder reaction on steroids*

One-day Synthesis Symposium in Honour of Emeritus Professor Lew Mander, Canberra, 8 September was attended by M S Sherburn, E S Barrett, T N Cayzer, S K Goodwin, N Kanizaj, L C H Kwan, W Lording, N A Miller, E L Pearson, A D Payne, K Rands-Trevor, L A Sharp, D J Sinclair, R Tripoli and C I Turner

M S Sherburn presented the invited lecture: *From polyenes to polycycles*

1st Pacific Symposium on Free Radical Chemistry, Kanazawa, Japan, 15–16 November

M S Sherburn presented the invited lecture: *Total synthesis through radical carboxylation*

Royal Australian Chemical Institute NSW Organic Chemistry Group 25th Annual One-day Symposium, University of New South Wales, 30 November was attended by M S Sherburn, E S Barrett, S K Goodwin, N Kanizaj, L C H Kwan, W Lording, N A Miller, E L Pearson, A D Payne, D J Sinclair and C I Turner

L C H Kwan presented the invited lecture: *Towards an efficient construction of steroids using a domino IMDA reaction for which he was awarded a prize for one of the best student talks*

The following posters were presented:

N A Miller and M S Sherburn, *Synthesis and reactions of substituted dendralenes for which N A Miller was awarded a prize for one of the best student poster presentations*

E L Pearson and M S Sherburn: *The intramolecular Diels–Alder reactions of benzo-tethered 1,3,9-decatrienes*

Physical and Theoretical Chemistry

Theoretical Chemical Physics

RACI Conference on Physical Chemistry, Hobart, 1–5 February

M A Collins presented the Division Medal Lecture: *Chemical Reaction Mechanisms*

American Chemical Society Meeting, Anaheim, 1–4 April. The following lecture was presented:

M A Collins: *Nonadiabatic dynamics on interpolated diabatic potentials*



Faraday Discussion on Non-adiabatic Effects in Chemical Dynamics, Oxford, 5–7 April. The following poster was presented:

C R Evenhuis and M A Collins: *Growing diabatic potential energy surfaces*

1st Asian Pacific Conference on Theoretical and Computational Chemistry, Okazaki, 12–15 May. The following lecture was presented:

M A Collins: *Dynamics on interpolated adiabatic and diabatic potentials*

Dalian Institute of Chemical Physics Conference, Dalian, China, July 21–23. The following lecture was presented:

M A Collins: *Dynamics on interpolated adiabatic and diabatic potentials*

Computational Quantum Chemistry Polymer Chemistry

Royal Australian Chemical Institute Conference on Physical Chemistry (CPC2004), Hobart, 1–5 February

M L Coote presented the lecture: *What causes retardation in RAFT polymerization? A quantum-chemical approach*

1st Asian Pacific Conference on Theoretical and Computational Chemistry (APACTC), Okazaki, Japan, 12–15 May

M L Coote presented the invited lecture: *Ab Initio molecular orbital studies of RAFT polymerisation*

Orica Emerging Science Symposium, Melbourne, 12 November

M L Coote presented the invited lecture: *Modelling Polymer Formation*

1st Pacific Symposium on Radical Chemistry (PSRC-1), Kanazawa, Japan, 15–16 November

M L Coote presented the invited lecture: *Ab Initio studies of RAFT polymerisation*

Liquid State Chemical Physics

International Workshop on Dynamics in Viscous Liquids, Munich, Germany, 14–17 March

D J Evans: *The fluctuation theorem*

3rd International Conference Computational Modelling and Simulation of Materials Sicily, 30 May–4 June

D J Evans: *The fluctuation theorem*

CECAM Conference, Lyon, France, 19–22 July

D J Evans presented the invited lecture: *The fluctuation theorem*

Workshop – Stochastic and Deterministic Dynamics Equilibrium and Nonequilibrium Vienna, Austria, 25–28 August

D J Evans presented the invited lecture: *The fluctuation theorem*

Pacific Rim Conference on Nanotechnology Broome, 7–11 September

D J Evans presented the invited lecture: *The fluctuation theorem: Theory and experiment*

12th Biennial Computational Techniques Conference Melbourne, 27–29 September

D J Evans presented the invited lecture: *Fluctuation theorem: Simulation, theory and experiment*

Laser and Optical Spectroscopy

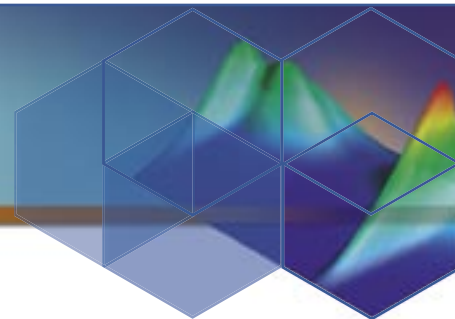
Australasian Conference on Physical Chemistry (CPC04), Hobart, Tasmania, 1–5 February

B Prince, S , P Smith, R Pace and E Krausz: *Spectral Identification of P680*

The following posters were presented:

L Debono, B Prince, S Peterson, P Smith, R Pace and E Krausz: *Optical and EPR spectroscopy of cytochrome B₅₅₉ in Photosystem II*

J L Hughes, B J Prince, H Riesen, P Smith, R Pace and E Krausz: *Persistent spectral hole-burning in active Photosystem II*



N Cox, P Smith, R Pace, G Fisher, B Prince and E Krausz: *An FTIR study on the oxygen evolving complex of Photosystem II*

Photosynthesis and Post-Genomic Era International Meeting, Trois Rivieres, Canada, 25–29 August. The following posters were presented:

E Krausz, J L Hughes, P J Smith, R J Pace, S Peterson Årsköld: *Assignment of the low-temperature fluorescence in oxygen-evolving Photosystem II*

J L Hughes, E Krausz, P J Smith R J Pace, H Riesen: *Probing the lowest energy chlorophyll a states of Photosystem II via selective spectroscopy: New insights on P680*

P J Smith, J L Hughes, B J Prince, E Krausz, S Peterson Årsköld, R J Pace: *S1 to S2 state turnover studies on Photosystem II core samples from higher plants*

N Cox, P J Smith, W Hillier, G Fischer, E Krausz, R J Pace, *FTIR studies on PS II core complexes from higher plants: First Identification of multiline and g4 1 features in S2/S1 turnover*

S Peterson Årsköld, P J Smith, J R Shen, R J Pace, E Krausz: *Key cofactors of Photosystem II cores from four organisms identified by 17-K*

13th International Congress on Photosynthesis, Montreal, Canada, August 29 – 3 September

J L Hughes, E Krausz, P J Smith, R J Pace, H Riesen: *The lowest-energy excited-state of P680 in oxygen-evolving Photosystem II extends to 700 nm*

The following posters were presented:

E Krausz, J L Hughes, P J Smith, R J Pace, S Peterson Årsköld: *The reaction centre of PSII in oxygen-evolving preparations*

S Peterson Årsköld, J Ström, J F Allen and E Krausz: *Low-temperature absorption and magnetic circular dichroism of the four haems of the chloroplast cytochrome b_6/f complex*

P J Smith, J L Hughes, B Prince, E Krausz, R J Pace, S Peterson Årsköld: *Turnover studies using visible and far red light on PSII core samples from higher plants*

R J Pace, N Cox, P J Smith, W Hillier, G Fischer, E Krausz: *FTIR studies on PS II core complexes from higher plants: First identification of multiline and g4 1 features in S2-S1 turnover*

Fifth Student Conference on Physical Chemistry, Wagga Wagga, 27–30 September

L Debono: *The role of cytochrome b_{559} in photosystem II studied by MCD spectroscopy*

Computational Quantum Chemistry

Theory and Applications of Computational Chemistry, Gyeongju, Korea, 15–20 February

L Radom presented the invited lecture: *Stabilities and reactivities of free radicals*

Asian Pacific Symposium on Theoretical and Computational Chemistry, Okazaki, Japan, 12–15 May

L Radom presented the plenary lecture: *The mechanism of action of coenzyme B_{12}*

MM2004, Sydney, Australia, 30 June –3 July

L Radom presented the invited lecture: *The mechanism of B_{12} -mediated reactions*

Symposium in Honor of Professor H F Schaefer III, 228th National Meeting of the American Chemical Society, Philadelphia, USA, 22–26 August

L Radom presented the invited lecture: *Thermochemistry of calcium-containing molecules: An examination of the performance of high-level theoretical procedures*

One-day Synthesis Symposium in Honour of Emeritus Professor Lew Mander, Canberra, 8 September

L Radom presented the invited lecture: *Adventures in B_{12} chemistry: A theoretical mechanistic study*

Disordered Materials

European Crystallography Meeting, Budapest, Hungary

Welberry T R and R L Withers: *The importance of multisite correlations in disordered structures*

Australian Synchrotron Research Program User's Meeting, Australian National University

D J Goossens, T R Welberry and A P Heerdegen: *Measuring diffuse scattering*

Australian and New Zealand Institute of Physics 28rd Annual Condensed Matter Physics Meeting, Charles Sturt University, Wagga Wagga



D J Goossens, T R Welberry and A P Heerdegen: *Measuring diffuse scattering*

Asian Crystallography Association Meeting, Hong Kong, June

T R Welberry, D J Goossens, W I F David, M J Gutmann, M J Bull and A P Heerdegen: *Diffuse neutron scattering in benzil, $C_{14}D_{10}O_2$, using the time-of-flight Laue technique*

Solid State Molecular Science

Australian Synchrotron Research Program, Users Meeting, Canberra, ACT, Australia, 5–6 February. The following presentation was given:

M J Henderson: *Energy dispersive reflectometry*

Inter-Academy Forum, Academy of Science, Canberra, Australia, 23 March. The following presentation was given:

J W White: *Recent information on the UK's Research Assessment Exercise*

8th International Conference on Surface X-ray and Neutron Scattering, Bad Honnef, Germany, 28 June–2 July

M J Henderson presented the contributed talk: *High speed X-ray reflectometry*

Nanoethics Workshop, Australian National University, Canberra, Australia, 22 July

J W White gave the presentation: *Nanotechnology – ethical problems?*

Future Materials Workshop, Australian National University, Canberra, Australia, 24 August

J W White gave the presentation: *Material Science and the Research School of Chemistry*

Antarctic Science Symposium, Academy of Science, Canberra, Australia, 12 November

J W White gave the presentation: *Australia's Antarctic Research and National Research Priorities*

AINSE Neutron Symposium, Lucas Heights, Sydney, Australia, 14 December

J W White gave the presentation: *Mimicking biomineralisation*

R W Rickards – Visiting Fellow (Post-retirement)

25th Anniversary Conference of the Science Teachers' Association of Western Australia, Curtin University, Muresk, WA, 28–30 May

R W Rickards gave the keynote address: *Organic science: Why I did chemistry*

Royal Australian Chemical Institute, Natural Products Group Annual Symposium, Southern Cross University, Lismore, NSW, 1 October The following lecture was presented:

W-P Yin, T-Z Zhao, C Zhao, C Liao, S C Trowell, R W Rickards: *Discovery of natural products where others have already looked*