

Appendix – Invited Conference Presentations & Lectures

Legend: * *External to the University*
 # *Member of another area of this University other than this School*
 Presenter of contributed paper is underlined

Petrotech-2003: 5th International Petroleum Conference and Exhibition, New Delhi, India, 9-12 January

Arns, C.H., Sakellariou, A., Senden, T.J., Sheppard, A.P., Sok, R.M., Pinczewski, W.V.* and Knackstedt, M.A. — *Virtual Core Laboratory: A Facility for Imaging and Modeling Petrophysical Properties of Sedimentary Rock*

International Conference on Phonons in Condensed Materials, Bhopal, India, 20-23 January

Das, M.P. — *Coupled Plasmon-phonon Modes in a Two Dimensional Electron Gas in Presence of Spin-orbit Interaction*

NUPP Summer School 2003, Victor Harbor, 20-24 January

Byrne, A.P. — *Shell Model Approaches to Multiparticle States in Heavy Nuclei*

Dasgupta, M. — *Nuclear Fusion: Towards the Driplines*

Hinde, D.J. — *Nuclear Fusion: Towards Superheavy Elements*

Sydney University XAFS Workshop, Sydney, 28 January

Ridgway, M.C. — *An EXAFS Beamline for the Australian Synchrotron*

1st Australian Synchrotron Users Workshop, Melbourne, 29-31 January

Ridgway, M.C. — *An EXAFS Beamline for the Australian Synchrotron*

Centre of Nonlinear Studies Workshop: Advances in Raman-Based, High Speed Photonics: Raman Amplifiers, Data Transmission and Signal Processing, Los Alamos, USA, 3-5 February

Akhmediev, N.N. — *Dissipative Solitons*

Conference on Advanced Materials and Nanotechnology, Wellington, New Zealand, 10-14 February

Jagdish, C. — *Atomic Interdiffusion for Photonic Integrated Circuits*

TMS 2003: 132nd Annual Meeting & Exhibition, San Diego, USA, 2-6 March

Williams, J.S. — *Ion-irradiation of Electronic Materials: Defects and Microstructures*

International Workshop: Chaos in Nuclei from a Dynamical Point of View, Beijing, China, 12-15 March

Kun, S.Yu. — *Critical Phenomena in Finite Quantum Many-body Systems*

International Electric Propulsion Conference, Toulouse, France, 17-21 March

Charles, C. and Boswell, R.W. — *The Helicon Double Layer Plasma Thruster*

Number Theory and Combinatorics in Physics, Gainesville, USA, 21-23 March

Batchelor, M.T. — *The XXZ Spin Chain and Combinatorics*

Current Trends in International Fusion Research: Review and Assessment,
Washington, USA, 23-29 March

Sen, S. — *Transport Barrier by RF Waves*

11th International Workshop on Optical Waveguide Theory & Numerical Modelling,
Prague, Czech Republic, 4-5 April

Love, J.D. — *Passive Planar Devices for Light Processing in Telecommunications*

Materials Research Society Spring Meeting, San Francisco, USA, 21-25 April

Smith, N., Lederer, M.J.*, Samoc, M., Luther-Davies, B. and Elliman, R.G. — *Pump-probe Measurements Using Silicon Nanocrystal Waveguides*

Williams, J.S., Jagadish, C. and Kucheyev, S.O. — *Challenges for Device Processing of Group-III Nitrides and Zinc Oxide Using Ion Beam Technologies*

Material Research Society Meeting, Symposium Y: Advanced Optical Processing of Materials, San Francisco, USA, 22-25 April

Luo, X., Zha, C. and Luther-Davies, B. — *Anhydrous Sol-gel Synthesis of Zirconia-doped Siloxane Polymer for Integrated Optics*

Luo, X., Zha, C. and Luther-Davies, B. — *Synthesis of Photosensitive Organic-inorganic Hybrid Polymers via Anhydrous Sol-gel Process for Integrated Optics*

Luther-Davies, B., Kolev, V.Z., Lederer, M.J.*, Yinlan, R., Samoc, M., Jarvis, R.A., Rode, A.V., Gieseckus, J.*, Du, K.-M.* and Duering, M.* — *Ultrafast Pulsed Laser Deposition of Chalcogenide Glass Films for Low-loss Optical Waveguides*

Zegrioti, I.*, Papazoglou, D.G.*, Gamaly, E.G., Rode, A.V. and Fotakis, C.* — *Studies on Ultra-sort Laser Microstructuring*

CSIRO Centre for Complex Systems Science Workshop, Canberra, 10-12 June

Ball, R. — *Stability and Control of Complex Dynamical Systems*

5th Dublin Differential Equations Conference, Dublin, Ireland, 10-14 June

Love, J.D. — *Differential Equations for Optical Communications – Rays, Modes & Light Processing*

7th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM), Bucharest, Romania, 10-15 June

Samoc, A., Samoc, M., Luther-Davies, B., Kelly, J.F.[#], Krausz E.[#], and Willis A.C.[#] — *New Second-order Nonlinear Octupolar Molecules*

Samoc, M., Samoc, A., Luther-Davies, B., Humphrey, M.G.[#], Cifuentes, M.P.[#], Powell, C.E.[#], Morrall, J.P. and Heath, G.A.[#] — *New Trends in the Studies of Third-order Nonlinearities of Organics*

International Conference on Dynamic Inhomogeneities in Complex Systems, Bled, Slovenia, 14-20 June

Gulacsi, M. — *Competing Interactions of Spin and Lattice in the Kondo Model*

The VIII International Conference on Nucleus-Nucleus Collisions, Moscow, Russia, 17-21 June

Dasgupta, M., Hinde, D.J., Morton, C.R. and Newton, J.O. — *Importance of Entrance Channel Dynamics on Heavy Element Formation*

CLEO-Europe 2003, Munich, Germany, 22-27 June

Kolev, V.Z., Lederer, M.J.*, Luther-Davies, B., Rode, A.V., Tan, H.H. and Jagadish C. — *Ultra-low Variable Repetition Rate Nd:YVO4 Laser Mode-locked with Semiconductor Saturable Absorber Mirrors*

European Quantum Electronics Conference, Munich, Germany, 22-27 June

Grelu, P.*, Belhache, F.*, Soto-Crespo, J.M.*, Akhmediev, N.N. — *Discrete Set of Separations Between Phase-locked Soliton Pairs in a Passively Mode-locked Fiber*

Materials Science & Ion Beams, Ontario, Canada, 25-27 June

Williams, J.S. — *Stitching: Cotton Buds and Scotchtape*

5th International Conference on Transparent Optical Networks, Warsaw, Poland, 29 June to 3 July

Tomljenovic-Hanic, S. — *Symmetry-selecting Gratings and their Applications*

5th International Congress on Industrial and Applied Mathematics, Sydney, 7-11 July

Akhmediev, N.N. — *Nonlinear Schrödinger Equation and its Varieties: Integrable, Hamiltonian and Dissipative Systems*

Sen, S. — *Effect of Parallel Flow on Ballooning Modes*

20th International Conference on Organometallic Chemistry, Corfu, Greece, 7-12 July

Humphrey, M.G.#, Cifuentes, M.P.#, Samoc, M., Isoshima, T.* and Persoons, A.* — *Hyper-structured Alkynylruthenium Complexes: Effect of Dimensional Evolution of NLO Properties*

Australian Conference on Optical Fibre Technology 2003 (COIN/ACOPT),
Melbourne, 13-16 July

Luo, X., Zha, C. and Luther-Davies, B. — *Synthesis of Low-OH Photosensitive Ormosil Polymers via Anhydrous Sol-gel Process for Integrated Optics*

Ruan, Y., Luther-Davies, B., Li, W.T., Rode, A.V. and Krolikowski, W. — *Fabrication and Characterisation of As_2S_3 Waveguides Etched by a Helicon Plasma*

NATO Advanced Research Workshop Nonlinear Waves: Classical and Quantum Aspects, Estoril, Portugal, 13-17 July

Akhmediev, N.N. — *Dissipative Solitons*

Space Futures Conference, Melbourne, 14-17 July

Charles, C., Boswell, R.W. and Sutherland, O. — *To Mars and Beyond, Plasma Thrusting into the Future*

23rd International Conference, on Photonic Electronic and Atomic Collisions,
Stockholm, Sweden, 23-29 July

Buckman, S.J. — *Electron-molecule Collisions at Low Incident Energies*

Lower, J.C.A. — *Developments in Quantum State Resolved ($e,2e$) Experiments*

8th International Meeting on Hole Burning, Single Molecule and Related Spectroscopies: Science and Applications, Bozeman, USA, 27-31 July

Sellars, M., Longdell, J.J., Fraval, E.L. and Manson, N.B. — *Rare Earth Quantum Computing*

International Symposium on (e,2e) Double Photoionization and Related Topics,
Königsstein, Germany, 30 July to 2 August

Kheifets, A.S. — *Double Photoionization: Beyond Helium Atom*

International Symposium on Electron-Molecule Collisions and Swarms, Prague,
Czech Republic, 30 July to 2 August

Robson, R.E., White, R.D.* and Morrison, M.A.* — *The Enduring e-H₂ Controversy: Is a New Transport Theory Required?*

Linear and Nonlinear Optics of Organic Materials III, San Diego, USA, 4 August

Lucas, N.T.[#], Notaras, E.G.A., Humphrey, M.G.[#], Samoc, M. and Luther-Davies, B. —
Syntheses, Characterization, and Optical Limiting Properties of Heterometallic Cluster-containing Polymers

Sagamore XIV, International Conference on Charge, Spin and Momentum Densities, Broome, 13-18 August

Vos, M., Bowles, C.*, Chen, C.*, Kheifets, A.S., Sashin, V.A. and Weigold, E. —
Electron Momentum Spectroscopy of Single Crystal Silicon and Nickel Targets

International Workshop on Energy Storage and other Opportunities with Nuclear Isomers, Idaho, USA, 14-15 August

Dracoulis, G.D. — Nuclear Structure Aspects of Isomer Formation

XII International Workshop on Sol-gel Science and Technology, Sydney, 25-29 August

Luo, X., Zha, C. and Luther-Davies, B. — *Anhydrous Sol-gel Synthesis of Titania-doped Siloxane Polymer for Integrated Optics*

CSIRO Complex Systems Science Symposium and Project Development Workshop,
Sydney, 27-29 August

Ball, R. — *Cross-disciplinary Bridges in Complex Systems Science*

12th International Conference on Radiation Effects in Insulators, Gramado, Brazil, 31
August to 5 September

Ridgway, M.C. — *Structural Perturbations and Amorphisation of Semiconductor
Nanocrystals in a Silica Matrix*

3rd European Conference on Neutron Scattering, Montpellier, France, 3-6 September

Vos, M., Abdul-Redah, T.*, Kleiner, C.* and Chatzidimitriou-Dreismann, C.A.* —
Anomalous Neutron Compton Scattering from Entangled Protons of a Solid Polymer

New Laser Technologies and Applications, Patras, Greece, 5-8 September

Rode, A.V., Gamaly, E.G., Uteza, O.P.*, Kolev, V.Z., Lederer, M.J.*, and Luther-
Davies, B. — *Generation of Third-harmonic Radiation of IR Picosecond Lasers for
Ultrafast Pulsed Laser Deposition*

**Joint Meeting of the 14th World Congress on Animal, Plant and Microbial Toxins
and Australian Society of Biophysics,** Adelaide, 14-19 September

Chung, S.-H. — *Plenary Lecture*

**X International Nicolas Cabrera Summer School, New Trends in Ion Beam Physics
and Applications: A Road to Nanotechnologies Miraflores de la Sierra,** Madrid,
Spain, 15-19 September

Elliman, R.G. — *Production of Si Nanocrystals by Ion-implantation in SiO₂ and Heavy-ion Elastic Recoil Detection Analysis*

The 27th International Workshop on Condensed Matter Theories, Toulouse, France, 15-20 September

Das, M.P. — *Landauer Formula without Landauer's Assumptions*

International Conference on Advances in Optoelectronics and Lasers, Alushta, Ukraine, 16-19 September

Jagadish, C. — *Quantum Well and Dot Intermixing for Photonic Integrated Circuits*

NATO Advanced Research Workshop on Molecular Nanowires and other Quantum Objects, Bled, Slovenia, 20-24 September

Gulacsi, M. — *Finite Temperature Luttinger Liquids*

17th European Colloid and Interface Society Meeting, Florence, Italy, 21-26 September

Hyde, S.T. — *Formation of Silica-carbonate Biomorphs*

14th International Stellarator Workshop, Greifswald, Germany, 22 September to 1 October

Howard, J., Michael, C.A., Glass, F. and Blackwell, B.D. — *Imaging of Ion Temperature and Flows in Edge Plasmas*

Shats, M.G., Punzmann, H., Xia, H. and Solomon, W.M. — *L-H Bifurcations as Phase Transitions, the Role of Zonal Flows and the Spectral Energy Transfer*

Dynamics Days Conference, Palma de Majorca, Spain, 23-26 September

Akhmediev, N.N. — *Dissipative Solitons*

Materials 2003: Adaptive Materials for a Modern Society, Sydney, 1-3 October

Williams, J.S. — *AMTN – The Vision*

NATO Advanced Research Workshop on Symmetry and Heterogeneity in High Temperature Superconductors, Erice, Italy, 4-10 October

Gulacsi, M. — *High Temperature Superconductivity: The Attractive Up Regime*

Frontiers in Optics: The 87th OSA Annual Meeting and Exhibit Laser Science X1X, Tuscon, USA, 5-9 October

Kivshar, Yu.S. — *Optical vs Matter-wave Solitons: Difference and Similarities*

Kivshar, Yu.S. — *Solitons in Optical and de Broglie Waves 11*

Conference on Laser Ablation COLA'03, Crete, Greece, 6-10 October

Luther-Davies, B., Kolev, V.Z., Lederer M.J.* , Rode, A.V., Gieseckus, J.* , Du, K-M* and Duering, D. — *Table-top 50 W Laser System for Ultra-fast Laser Ablation*

The 8th IUMRS International Conference on Advanced Materials, Yokohama, Japan 8-13 October

Williams, J.S. — *Materials Research, Education and Networking in Australia*

PIERS 2003, Hawaii, USA, 13-16 October

Kivshar, Yu.S. — *Nonlinear Photonic Crystals and Circuits: Towards All-optical Technologies*

2nd IFIP-TC6 International Conference on Optical Communications and Networks
Bangalore India, 20-22 October

Ankiewicz, A. — *Substantial Sidelobe Suppression in Optical Bandpass Filtering Using Grating-assisted and Apodized Directional Coupler*

57th Gaseous Electronics Conference, San Francisco, USA, 21-24 October

Buckman, S.J. — *Collisions with Laser-cooled Metastable He Atoms*

Herrick, A., Perry, A. and Boswell, R.W. — *Etching Silicon by SF₆ in a Continuous and Pulsed Power Helicon Reactor*

CONSEA*ACT 2003: Working Scientifically – Teaching and Experience, CSIRO, Canberra, 23-24 October

Williams, J.S. — *Nanoscience and Nanotechnology*

International Exposition and 73rd Annual Meeting of the Society of Exploration Geophysicists, Dallas, USA, 27-31 October

Arns, C.A., Sakellariou, A., Senden, T.J., Sheppard, A.P., Sok, R.M., Knackstedt, M.A., Pinczewski, W.* and Bunn, G.* — *Virtual Core Laboratory: Properties of Reservoir Rock Derived from X-ray Images*

Arns, C.A., Sakellariou, A., Senden, T.J., Sheppard, A.P., Sok, R.M., Knackstedt, M.A., Pinczewski, W.* and Bunn, G.* — *Micro-CT Facility for Imaging Reservoir Rocks at Pore Scale*

American Physical Society Division of Nuclear Physics Fall Meeting (DNP03), Tucson, USA, 29 October to 1 November

Lane, G.J. — *Structure of Neutron-rich Nuclei Near and Above Pb-208 Populated Using a Variety of Reaction Techniques*

International Network of Nuclear Structure and Decay Data Evaluators, Vienna, Austria, 10-14 November

Kibédi, T. and Spear, R.H. — *Electric Monopole Transitions*

Kibédi, T. — *ENSDFtools and Spectools*

FUSION03: From a Tunneling Nuclear Microscope to Nuclear Processes in Matter, Miyagi, Japan, 12-15 November

Dasgupta, M. — *The Nuclear Potential in Heavy Ion Fusion*

Hinde, D.J., Dasgupta, M., Morton, C.R. and Newton, J.O. — *Three Steps to Fusion*

Asia Pacific Nanotechnology Forum, Oz Nano'03, Cairns, 19-21 November

Elliman, R.G. — *Light Emission from Si Nanocrystals – Size Does Matter*

Rode, A.V., Gamaly, E.G., Christy, A.G., Fitz Gerald, J.G.[#], Hyde, S.T., Elliman, R.G., Luther-Davies, B., Veinger, A.I.*^{*}, Androulakis, J.*^{*} and Giapintzakis, J.*^{*} — *Unconventional Ferromagnetism in All-carbon Nanofoam*

Rode, A.V., Golberg, D.*^{*}, Madsen, N.R., Mitome, M.*^{*}, Bando M.*^{*}, Gamaly, E.G. and Luther-Davies, B. — *BN-nanostructures Formed by Ultra-fast Laser Ablation*

Workshop on Future Directions in Condensed Matter Physics, Melbourne, 26-27 November

Das, M.P. — *Condensed Matter Theory: Revolution Continues*

13th Nuclear Techniques of Analysis & 8th Vacuum Society of Australia Congress,
Sydney, 26-28 November

Elliman, R.G. — *Light Emission from Silicon Nanocrystals – Mechanisms and Applications*

Australian Conference on Lasers, Optics, and Spectroscopy ACOLS'03, Melbourne,
30 November – 4 December

Madsen, N.R., Duering, M.*, Gamaly, E.G., Rode, A.V., Kolev, V.Z., Gieseckus, J.* and Luther-Davies, B. — *High Repetition Rate Laser-solid Interaction: Cumulative Ablation*

Luther-Davies, B., Kolev, V.Z., Lederer, M.J.*, Madsen, N.R., Rode, A.V., Gieseckus, J.*, Du, K-M.* and Duering, M.* — *Table-top 50 W Laser System for Ultra-fast Laser Ablation*

Jarvis, R.A., Rode A.V. and Luther-Davies B. — *Laser-written Waveguides in As₂S₃ Chalcogenide Glass*

First International Symposium on Radiation Physics, Mexico, 1-3 December

Chadderton, L.T. — *Opening and Inaugural Presentation: The Nanotechnological World of Charged Particle Tracks in Solids*

Materials Research Society Fall Meeting, Boston, USA, 1-5 December

Deenapanray, P.N.K. — *Defect Engineering and Atomic Relocation Processes in Impurity-Free Disordered GaAs for Optoelectronic Devices Applications* (presented by Jagadish, C.)

13th Gordon-Godfrey Condensed Matter Workshop, Sydney, 3-4 December

Das, M.P. — *Physics of Mesoscopic Organic Transistors*

International Conference on Materials Advances and Technology, Singapore, 7-12 December

Tan, H.H. — *Interdiffusion in Quantum Wells and Quantum Dots and its Application to Optoelectronic Devices*

International Toki Conference, Toki City, Japan, 9-12 December

Dewar, R.L., Nuehrenberg, C.*, Tatsuno, T.* — *Quantum Chaos Theory and the Spectrum of Ideal-MHD Instabilities in Toroidal Plasmas*

5th CLEO Pacific Rim Conference, Taipei, Taiwan, 15-19 December

Akhmediev, N.N., Soto-Crespo, J.M.* — *Composite Soliton Generation in Systems with Two Peak Spectral Filtering*

Akhmediev, N.N., Soto-Crespo, J.M.*, Grelu, P.*, Belhache, F.* — *Generation of Interacting Pulse Pairs in Passively Mode-locked Fiber Lasers*

Love, J.D. — *Novel Adiabatic & Grating-Based Devices for WDM Wavelength Add/Drop Applications*

Maruno, K.-I., Ankiewicz, A., Akhmediev, N.N. — *Dissipative Solitons in Discrete Systems*

IEEE Conference on Electron Devices and Solid State Circuits, Hong Kong, 16-18 December

Lan, F. — *Spatial Selectivity of Impurity Free Vacancy Disorder Using Different Layers for Photonic/Optoelectronic Integrated Circuits*