



Books, journal articles and reports, along with conference and workshop presentations, are the primary means by which research accomplishments are communicated. Their measure, together with patents and the award of special honours, medals and distinctions, are clear indicators of the achievements of the School during the year. Some highlights of the latter are mentioned at greater length in the Director's report. A complete list of awards is presented below.

Over 250 papers were published in refereed journals this year, as detailed below. Also listed in this section are *invited* and/or *keynote* presentations, totalling 111 that were presented at domestic and international workshops and conferences. Details of other conference and workshop presentations may be found on the School web by department: <http://rsphysse@anu.edu.au>

The papers published by staff of the School are listed in this section according to the authors' affiliation. Many papers have authors from more than one department. These have been assigned according to the affiliation of the first RSPHYSSE author. In a few cases, this author has a joint appointment with two departments. In these cases, the paper appears in both lists, with the words "also listed under Theoretical Physics", for example, following the reference.

Honours and Awards



Professor Rod Boswell, PRL, was elected to Fellowship of the International Union of Pure and Applied Chemistry.

Ms Jodie Bradby, EME, was awarded an Australian-American Fellowship to study in the USA and a Gold Medal student prize at the Fall Meeting of the Materials Research Society, Boston, USA.

Ms Christine Carmody, EME, won Best Student Poster Award at COMMAD 2002 in Sydney.

Professor Lew Chadderton, AMPL, was awarded Honorary Membership of the International Nuclear Track Society by the General Assembly of the International Nuclear Track Society (INTS), in final session, for his important contributions in research on tracks of fast charged particles in solid materials, and in scientific and practical applications of the nuclear track technique.

Professor Bob Crompton, AMPL, was made an Honorary Fellow of the Australian Institute of Physics.

Dr Mukunda Das, TC, was invited to join the Advisory Committee of the *Journal of Physics: Condensed Matter*, UK.

Mr Colin Dedman, AMPL, was awarded a Council Medal for General Staff Excellence.

Professor Robert Elliman, EME, was appointed to the Editorial Board of the journal *Vacuum* published by Elsevier, Amsterdam, The Netherlands.

Dr Steve Gibson, AMPL, was elected to Council of The Australian Optical Society.

Anthony Hyde and Tim Sawkins, AM, were awarded a 2002 Council Medal for General Staff Excellence – Team Award.

Professor Chennupati Jagadish, EME, was elected as a Fellow of The Australian Academy of Technological Sciences and Engineering (ATSE), was appointed to the Editorial Board of the *Journal of Materials Science: Materials in Electronics*, Kluwer Academic Publishers, Dordrecht, Netherlands, and was also appointed to the steering committee of IEEE/OSA *Journal of Lightwave Technology*



Dr Jodie Bradby, recipient of a Australian-American Fellowship to study in the USA



Participants in the Graduate Program in Physical Sciences seminar competition

Dr Anatoli Kheifets, TC and AMPL, received a Visiting Fellowship from the Japan Society for Promotion of Science and was an Invited Professor at the University of Metz, France.

The 2nd Anatoli Kheifets Workshop on Atomic Photoionization at the National Laboratory for High Energy Physics (KEK) in Tsukuba, Japan, was held on 21 November 2002.

Professor Yuri Kivshar, TC, was elected Fellow of the Australian Academy of Science. He also received a Federation Fellowship awarded by the Australian Research Council and was named among the 25 most prolific Optics Letters authors by *Optics & Photonic News* magazine of the Optical Society of America.

Dr Sergey Kun, TC and DU, received a one-year Visiting Professorship at the Center of Physical Sciences, University of Mexico, and a two-month Visiting Fellowship at the Max Planck Institute for Nuclear Physics, Germany. Both fellowships are to commence in 2003.

Mr Sergei Kucheyev, EME, won one of the four Graduate Student Fellowships awarded by the Electron Devices Society and was also awarded the prestigious Lawrence Fellowship at Lawrence Livermore National Laboratories, California, USA.

Professor Brenton Lewis, AMPL, was elected to Fellowship of the Optical Society of America.

Vanessa Leung, AMPL & LPC, won the John Carver Prize for best talk at the Graduate Student Seminar Series

Megan O'Mara, TC, was the winner of the Director's Award for the most outstanding published research paper by a PhD student during the year



Legend

- # Member of another area of this University other than this School
- * Not a member of this University
- † Publication appearing in more than one department due to first author having a joint appointment

Applied Mathematics

Books and Book Chapters

Arns, C.H., Knackstedt, M. and Mecke, K.R.*
Characterising the Morphology of Disordered Materials in Morphology of Condensed Matter: Physics and Geometry of Spatially Complex Systems, Springer-Verlag, Germany (2002) 37–74

Robins, V.
Computational Topology for Point Data: Betti Numbers of Alpha-shapes in Morphology of Condensed Matter: Physics and Geometry of Spatially Complex Systems, Springer-Verlag, Germany (2002) 261–274

Publications in Refereed Journals

Arns, C., Knackstedt, M. and Pinczewski, W.*
Accurate Vp:Vs Relationship for Dry Consolidated Sandstones
Geophysical Research Letters 29 (2002) 1–4

Arns, C., Knackstedt, M., Pinczewski, W.* and Garboczi, E.*
Computation of Linear Elastic Properties from Microtomographic Images: Methodology and Agreement between Theory and Experiment
Geophysics 67 (2002) 1396–1405

Boström, M., Longdell, J. and Ninham, B.
Molecular Resonance Interaction in Channels
Europhysics Letters 59 (2002) 21–27

Boström, M., Williams, D. and Ninham, B.
Influences of Hofmeister Effects on Surface pH and Binding of Peptides to Membranes
Langmuir 18 (2002) 8609–8615

Boström, M., Williams, D. and Ninham, B.
Ion Specificity of Micelles Explained by Ionic Dispersion Forces
Langmuir 18 (2002) 6010–6014

Boström, M., Williams, D. and Ninham, B.
The Influence of Ionic Dispersion Potentials on Counterion Condensation on Polyelectrolytes
Journal of Physical Chemistry B 106 (2002) 7908–7912

García Ruiz, J.M.*, Carnerup, A., Christy, A.G., Welham, N.J. and Hyde, S.T.
Morphology: An Ambiguous Indicator of Biogenicity
Astrobiology 2 (2002) 335–351

Haupt, B.#, Senden, S.T. and Sevick, E.#
AFM Evidence of Rayleigh Instability in Single Polymer Chains
Langmuir 18 (2002) 2174–2182

Knackstedt, M., Sahimi, M.* and Sheppard, A.
Nonuniversality of Invasion of Percolation in Two-dimensional Systems
Physical Review E 65 (2002) 035101–1–4

Nostro, P.*, Lopes, J.*, Ninham, B. and Baglioni, P.*
Effect of Cations and Anions on the Formation of Polypseudorotaxanes
Journal of Physical Chemistry B 106 (2002) 2166–2174

Ohnishi, S. and Stewart, A.M.
Humidity Dependence of Interfacial Friction between Mica Surfaces
Langmuir 18 (2002) 6140–6146

Paterson, L.*, Sheppard, A. and Knackstedt, M.
Trapping Thresholds in Invasion Percolation
Physical Review E 66 (2002) 156122–1–6

Reinert, T., Reibetanz, U.*, Schwertner, M.*, Vogt, J.†, Butz, T.* and Sakellariou, A.
The Architecture of Cartilage: Elemental Maps and Scanning Transmission Ion Microscopy/Tomography Nuclear Instruments and Methods in Physics Research B 188 (2002) 1–8

Reinert, T.†, Sakellariou, A., Schwertner, M.*, Vogt, J.† and Butz, T.*
Scanning Transmission Ion Microscopy Tomography at the Leipzig Nanoprobe LIPSION
Nuclear Instruments and Methods in Physics Research B 190 (2002) 266–270

Schmidt, M. and Campbell, S.*
In situ Neutron Diffraction Study (300–1273 K) of Non-stoichiometric Strontium Ferrite SrFeOx
Journal of Physics and Chemistry of Solids 63 (2002) 2085–2092

Sok, R., Knackstedt, M., Sheppard, A., Pinczewski, W.*, Lindquist, W.*, Venkatarangan, A.* and Paterson, L.*
Direct and Stochastic Generation of Network Models from Tomographic Images: Effect of Topology on Residual Saturations
Transport in Porous Media 46 (2002) 345–372

Stewart, A.M., Yaminsky, V. and Ohnishi, S.
Measurement of Retarded Dispersion Forces of Mica
Langmuir 18 (2002) 1453–1456

Welham, N.J.
Activation of the Carbothermic Reduction of Manganese Ore
International Journal of Mineral Processing 67 (2002) 187–198

Welham, N.J.
Enhancing Oxygen Recovery from Ilmenite by Extended Milling
Materials Science and Engineering A 336 (2002) 143–149

Welham, N.J.
New Route for the Extraction of Crude Zirconia from Zircon
Journal of the American Ceramic Society 85 (2002) 2217–2221

Patents

Nair, C.*, Shats, E.†, Burch, W.#, Browitt, R.* and Senden, T.
Method for Detection of Fibrin Clots
Patent No 744489, Australia, with international search report

Atomic and Molecular Physics Laboratories

Books and Book Chapters

Dorn, A.*, Najjari, B.†, Sakhelashvili, G.†, Höhr, C.†, Schröter, C.†, Moshammer, R.†, Ullrich, J.†, Kheifets, A.S.† and Dubois, R.*
(e,3e) on Helium: Complete Pictures in Momentum Space
In Photonic, Electronic & Atomic Collisions, Rinton Press (2002) 423–428 (Also listed under TP)

Gilbert, S.J.†, Sullivan, J.P.†, Marler, J.P.†, Barnes, L.D.†, Schmidt, P.†, Buckman, S.J. and Surko, C.M.†
Low-energy Positron-matter Interactions using Trap-based Beams
In Non-Neutral Plasma Physics IV, American Institute of Physics (2002) 24–34

Kheifets, A.S.†
Close-coupling Calculations of Two-electron Atomic Ionization by Photon and Electron Impact
In Photonic, Electronic & Atomic Collisions, Rinton Press (2002) 185–196 (Also listed under TP)

Sullivan, J.P.†, Gilbert, S.J.†, Marler, J.P.†, Buckman, S.J. and Surko, C.M.†
Vibrational Excitation Cross Sections for Low Energy Positron Molecule Scattering
In Photonic, Electronic & Atomic Collisions, Rinton Press (2002) 185–196

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- Biava, D.A.*; Saha, H.P.*; Engel, E.*; Dreizler, R.M.*; McEachran, R.P.*; Haynes, M.A.*; Lohmann, B.*; Whelan, C.T.* and Madison, D.H.*
Exchange Effects in Low Energy Electron Impact Ionization of the Inner and Outer Shells of Argon
Journal of Physics B 35 (2002) 293–307
- Bray, I.*; Fursa, D.V.*; Kheifets, A.S.¹ and Stelbovics, A.T.*
Electrons and Photons Colliding with Atoms: Development and Application of the Convergent Close-coupling Method
Journal of Physics B 35 (2002) R117–R146 (Also listed under TP)
- Brunger, M.J.* and Buckman, S.J.
Electron-molecule Scattering Cross-sections. I. Experimental Techniques and Data for Diatomic Molecules
Physics Reports 357 (2002) 215–458
- Campeanu, R.I.*; McEachran, R.P. and Stauffer, A.*
Distorted-wave Models in Positron Impact Ionization of Atoms
Nuclear Instruments and Methods in Physics Research B 192 (2002) 146–149
- Chadderton, L.T. and Chen, Y.
A Model for the Growth of Bamboo and Skeletal Nanotubes: Catalytic Capillarity
Journal of Crystal Growth 240 (2002) 164–169
- Dall, R.G.¹; Hoogerland, M.H.*; Tierney, D.*; Baldwin, K.G.H. and Buckman, S.J.
Single-mode Hollow Optical Fibres for Atom Guiding
Applied Physics B 74 (2002) 11–18 (Also listed under LPC)
- Dorn, A.*; Kheifets, A.S.¹; Schröter, C.D.*; Najjari, B.*; Höhr, C.*; Moshhammer, R.* and Ullrich, J.*
Double Ionization of Helium by Electron Impact in the Impulsive Regime
Physical Review A 65 (2002) 032709–1–8 (Also listed under TP)
- Fink, D.*; Müller, M.*; Petrov, A.*; Klett, R.*; Palmstshofer, L.*; Hnatowicz, V.*; Vacik, J.*; Cervena, J.* and Chadderton, L.T.
Aqueous Marker Penetration into Ion Irradiated Polyimide
Nuclear Instruments and Methods in Physics Research B 191 (2002) 662–668
- Jacoby, G.* and Friedrich, H.¹
Near-threshold Properties of a $1/r^4$ plus $1/r^6$ Potential Tail
Journal of Physics B 35 (2002) 4839–4845 (Also listed under TP)
- Kheifets, A.S.¹ and Bray, I.*
Frozen-core Model of the Double Photoionization of Beryllium
Physical Review A 65 (2002) 012710–1–6 (Also listed under TP)
- Kheifets, A.S.¹ and Bray, I.*
Symmetrized Amplitudes of Helium-atom Double Photoionization
Physical Review A 65 (2002) 022708–1–8 (Also listed under TP)
- Kheifets, A.S.¹; Bray, I.*; Berakdar, J.* and Capello, C. Dal.*
Comparative Theoretical Study of (e,3e) on Helium: Coulomb-waves versus Close-coupling Approach
Journal of Physics B 35 (2002) L15–L21 (Also listed under TP)
- Knapp, A.*; Kheifets, A.S.¹; Bray, I.*; Weber, T.*; Landers, A.L.*; Schössler, S.*; Jahnke, T.*; Nickles, J.*; Kammer, S.*; Jagutzki, O.*; Schmidt, L.Ph.H.*; Osipov, T.*; Rösch, J.*; Prior, M.H.*; Schmidt-Böcking, H.*; Cocke, C.L.* and Dörner, R.*
Mechanisms of Photo Double Ionization of Helium by 530 eV Photons
Physical Review Letters 89 (2002) 033004–1–4 (Also listed under TP)
- Kono, M.
Laser-induced Fluorescence and Fluorescence Lifetime of Diphenylbenzobis (thiadiazole) in Supersonic Free Jets
Chemical Physics 282 (2002) 101–107
- Kono, M., Hoshina, K.* and Yamanouchi, K.*
Photofragment Emission Yield Spectroscopy of Acetylene in the $D^1\Pi_g$, E^1A , and $F^3\Sigma_g^+$ States by Vacuum Ultraviolet and Infrared Vacuum Ultraviolet Double-resonance Laser Excitation
Journal of Chemical Physics 117 (2002) 1040–1046
- Leung, V.Y.F.¹; Truscott, A.G. and Baldwin, K.G.H.
Nonlinear Atom Optics with Bright Matter-wave Soliton Trains
Physical Review A 66 (2002) 061602–1–4 (Also listed under LPC)
- Lewis, B.R., Gibson, S.T., Baldwin, K.G.H., Dooley, P.M. and Waring, K.
Comparative Very-high Resolution VUV Spectroscopy: Laser Spectroscopy of O_2
Surface Review and Letters 9 (2002) 31–38
- Lewis, B.R., Gibson, S.T., England, J.P., Stark, G.* and West, J.B.*
Anomalous Isotopic Predissociation in the $F^3\Pi_g(v=1)$ State of O_2
Journal of Chemical Physics 116 (2002) 3286–3296
- Li, B.*; White, R.D.* and Robson, R.E.¹
Spatially Period Structures in Electron Swarms: Ionization, NDC Effects and Multi-term Analysis
Journal of Physics D 35 (2002) 2914–2924 (Also listed under TP)
- Mackenzie-Ross, H.*; Brunger, M.J.*; Wang, F.*; Adcock, W.*; Maddern, T.*; Campbell, L.*; Newell, W.R.*; McCarthy, L.*; Weigold, E., Appelbe, B.* and Winkler, D.A.*
Comprehensive Experimental and Theoretical Study into the Complete Valence Electronic Structure of Norbornadiene
Journal of Physical Chemistry A 106 (2002) 9573–9581
- Matsumi, Y.*; Kono, M., Ichikawa, T.*; Takahashi, K.* and Kondo, Y.*
Laser-induced Fluorescence Instrument for the Detection of Tropospheric OH Radicals
Bulletin of the Chemical Society of Japan 75 (2002) 711–717
- McEachran, R.P. and Stauffer, A.*
Excitation of the $4s^1P_1$ and $3P_1$ States of Argon by Positron Impact
Physical Review A 65 (2002) 034703–1–3
- O’Keeffe, P.*; Ridley, T.*; Sheard, H.A.*; Lawley, K.P.*; Donovan, R.J.* and Lewis, B.R.
The $d^1\Pi_g(v=1)$ Rydberg State of O_2 : Optical-optical Double-resonance and Huggins-band Ozone-photolysis, Resonance-enhanced Multiphoton-ionization Studies with a $b^1\Sigma_g^+(v=0)$ -state Platform
Journal of Chemical Physics 117 (2002) 8705–8709
- Parcell, L.A.*; McEachran, R.P. and Stauffer, A.*
Positron Scattering from Xenon
Nuclear Instruments and Methods in Physics Research B 192 (2002) 180–184
- Roberts, E.H., Nixon, K.L., Dedman, C.J., Gibson, S.T. and Lewis, B.R.
New Magnetic-dipole Transition of the Oxygen Molecule: $B^2\Pi_g \leftarrow X^2\Sigma_g^-(0,0)$
Journal of Chemical Physics 116 (2002) 5503–5508
- Sashin, V.A., Bolorizadeh, M.A.* and Ford, M.J.*
Time-resolved Study of Beryllium Surface Reactions using Electron Momentum Spectroscopy of the Core-level
Surface Science 495 (2001) 35–43
- Srivastava, R.*; McEachran, R.P. and Stauffer, A.*
Electron Excitation of the Group IV Elements
Canadian Journal of Physics 80 (2002) 687–696
- Strecker, K.E.*; Partridge, G.B.*; Truscott, A.G. and Hulet, R.G.*
Formation and Propagation of Matter-wave Soliton Trains
Nature 417 (2002) 150–153
- Sullivan, J.P.*; Gilbert, S.J.*; Marler, J.P.*; Barnes, L.D.*; Buckman, S.J. and Surko, C.M.*
Low Energy Positron Scattering and Annihilation Studies using a High Resolution Trap-based Beam
Nuclear Instruments and Methods in Physics Research B 192 (2002) 3–16
- Sullivan, J.P.*; Gilbert, S.J.*; Marler, J.P.*; Greaves, R.G.*; Buckman, S.J. and Surko, C.M.*
Positron Scattering from Atoms and Molecules using a Magnetized Beam
Physical Review A 66 (2002) 042708–1–12
- Turri, G.*; Aivaldi, L.*; Bolognesi, P.*; Camillioni, R.*; Coreno, M.*; Berakdar, J.*; Kheifets, A.S.¹ and Stefani, G.*
Double Photoionization of He at 80 eV Excess Energy in the Equal-energy-sharing Condition
Physical Review A 65 (2002) 034702–1–4 (Also listed under TP)
- Vos, M.
Detection of Hydrogen by Electron Rutherford Backscattering
Ultramicroscopy 92 (2002) 143–149
- Vos, M.
Observing Atom Motion by Electron-atom Compton Scattering
Physical Review A 65 (2002) 012703–1–5
- Vos, M., Kheifets, A.S., Sashin, V.A., Weigold, E., Usuda, M.* and Aryasetiawan, F.*
Quantitative Measurement of the Spectral Function of Aluminum and Lithium by Electron Momentum Spectroscopy
Physical Review B 66 (2002) 155414–1–11
- Vos, M. and Weigold, E.
Particle-in-a-box Momentum Densities Compared with Electron Momentum Spectroscopy Measurements
Journal of Electron Spectroscopy and Related Phenomena 123 (2002) 333–344
- Wendt, A.*; Vidal, O.* and Chadderton, L.T.
Experimental Evidence for the Pressure Dependence of Fission Track Annealing in Apatite
Earth and Planetary Science Letters 201 (2002) 593–607
- Went, M.R.*; McEachran, R.P., Lohmann, B.* and MacGillivray, W.R.*
Spin Asymmetries for Elastic Scattering in Krypton at Intermediate Energies
Journal of Physics B 35 (2002) 4885–4897
- White, R.D.*; Ness, K.F.* and Robson, R.E.¹
Computation of Electron and Ion Transport Properties in Gases
Computer Physics Communications 142 (2001) 349–355 (Also listed under TP)
- White, R.D.*; Ness, K.F.* and Robson, R.E.¹
Development of Swarm Transport Theory in Radio-frequency Electric and Crossed Electric and Magnetic Fields
Applied Surface Science 192 (2002) 26–49 (Also listed under TP)

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- Haynes, M.A.*; Lohmann, B.*; Biava, D.A.*; McEachran, R.P., Whelan, C.T.* and Madison, D.H.*
Low Energy Inner Valence Ionization of the Rare Gases
Proceedings of the International Symposium on (e,2e), Double Photoionization and Related Topics and the 11th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Rolla, USA, American Institute of Physics (2002) 18–23
- Schmidt-Böcking, H.*; Mergel, V.*; Dörner, R.*; Jagutzki, O.*; Schmidt, L.Ph.H.*; Weber, T.*; Cocke, C.L.*; L. dde, H.*; Weigold, E., Popov, Y.*; Cederquist, H.*; Schmidt, H.*; Schuch, R.* and Berakdar, J.*
Wavefunction of the He Ground State
Proceedings of the International Symposium on (e,2e), Double Photoionization and Related Topics and the 11th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Rolla, USA, American Institute of Physics (2002) 120–126
- Srivastava, R.*; McEachran, R.P. and Stauffer, A.*
Electron Excitation of the D States of Mg: Calculation of the Stokes Parameters
Proceedings of the International Symposium on (e,2e), Double Photoionization and Related Topics and the 11th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Rolla, USA, American Institute of Physics (2002) 151–155
- Vos, M., Kheifets, A.S. and Weigold, E.
Electron Momentum Spectroscopy of Metals
Proceedings of the International Symposium on (e,2e), Double Photoionization and Related Topics and the 11th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Rolla, USA, American Institute of Physics (2002) 70–75
- Weigold, E., Lower, J., Berakdar, J.* and Mazevet, S.*
(e,2e) Collisions with Polarized Electrons and Excited, Oriented and Spin Polarized Targets
Proceedings of the International Symposium on (e,2e), Double Photoionization and Related Topics and the 11th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Rolla, USA, American Institute of Physics (2002) 32–37
- Went, M.R.*; McEachran, R.P., Lohmann, B.* and MacGillivray, W.R.*
Elastic Scattering of Spin Polarised Electrons from Krypton
Proceedings of the International Symposium on (e,2e), Double Photoionization and Related Topics and the 11th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Rolla, USA, American Institute of Physics (2002) 190–195

Electronic Materials Engineering

Books and Book Chapters

Comtet, G.*; Dujardin, G.*; Hellner, L.* and Petravic, M.
Photon Induced Fabrication of Atomic Scale Structures on Surfaces

In
Photonic, Electronic & Atomic Collisions, Rinton Press, Princeton, USA (2002) 92–100

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Structural Characterization of Amorphised InAs with Synchrotron Radiation
Nuclear Instruments and Methods in Physics Research B 190 (2002) 851–855

Azevedo, G.M. de, Williams, J.S., Young, I.M., Conway, M.J. and Kinomura, A.*

In situ Measurements of the Channeling Dependence of Ion-beam-induced Recrystallization in Silicon
Nuclear Instruments and Methods in Physics Research B 190 (2002) 772–776

Bartels, J.*; Vianden, R.* and Ridgway, M.C.

Impurity Gettering by Cavities in Si Investigated with the PAC Technique
Nuclear Instruments and Methods in Physics Research B 190 (2002) 846–850

Bradby, J.E., Kucheyev, S.O., Williams, J.S., Jagadish, C., Swain, M.V.*, Munroe, P.* and Phillips, M.R.*
Contact-induced Defect Propagation in ZnO
Applied Physics Letters 80 (2002) 4537–4539

Bradby, J.E., Kucheyev, S.O., Williams, J.S., Wong-Leung, J., Swain, M.V.*, Munroe, P.*, Li, G.* and Phillips, M.R.*
Indentation-induced Damage in GaN Epilayers
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Philosophical Magazine A 82 (2002) 1931–1939

Bradby, J.E., Williams, J.S., Wong-Leung, J., Swain, M.V.* and Munroe, P.*
Nanoindentation-induced Deformation of Ge
Applied Physics Letters 80 (2002) 2651–2653

Brown, R.A.* and Williams, J.S.
Crystalline-to-amorphous Phase Transformation in Ion-irradiated GaAs
Physical Review B 64 (2001) 155202–1–6

Butcher, K.S.A.*, Timmers, H.†, Chen, A.*, Chen, P.P.-T.*, Weijers, T.D.M., Goldys, E.M.*, Tansley, T.L.*, Elliman, R.G. and Freitas Jr, J.A.*
Crystal Size and Oxygen Segregation for Polycrystalline GaN
Journal of Applied Physics 92 (2002) 3397–3403 (Also listed under NP)

Carmody, C., Boudinov, H., Tan, H.H., Jagadish, C., Lederer, M.J., Kolev, V., Luther-Davies, B., Dao, L.V.* and Gal, M.*
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Journal of Applied Physics 92 (2002) 2420–2423

Chen, Y. and Chadderton, L.T.
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Journal of Crystal Growth 240 (2002) 164–169

Chen, Y., Conway, M., Williams, J.S. and Zou, J.*
Large-quantity Production of High-yield Boron Nitride Nanotubes
Journal of Materials Research 17 (2002) 1896–1899

Davies, G.*; Harding, R.*; Jin, T.*; Mainwood, A.* and Wong-Leung, J.
Optical Studies of Ion-implantation Centres in Silicon
Nuclear Instruments and Methods in Physics Research B 186 (2002) 1–9

Deenapanray, P.N.K.
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Journal of Vacuum Science and Technology A 20 (2002) 1261–1269

Deenapanray, P.N.K.
On Defects Created in 45 keV H⁺-implanted n-type Cz Si: A Fluence Dependence and Isochronal Annealing Study
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Deenapanray, P.N.K., Gong, B.*; Lamb, R.N.*; Martin, A.*; Fu, L., Tan, H.H. and Jagadish, C.
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Applied Physics Letters 80 (2002) 4351–4353

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Deenapanray, P.N.K., Martin, A.*; Doshi, S., Tan, H.H. and Jagadish, C.
Atomic Relocation Processes in Impurity-free Disordered p-GaAs Epilayers Studied by Deep Level Transient Spectroscopy
Applied Physics Letters 81 (2002) 3573–3575

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On the Pulsed Anodic Oxidation of n⁺-InP
Electrochemical and Solid-State Letters 5 (2002) G41–G44

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Acoustics Australia 30 (2002) 109–113

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Harmonic? Anharmonic? Inharmonic?
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Fletcher, N.H., McGee, W.T.* and Tarnopolsky, A.Z.*
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Journal of the Acoustical Society of America 111 (2002) 1189–1196

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Fortschritte der Physik–Progress of Physics 50 (2002) 646–651
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Journal of Physics A 35 (2002) 3289–3303
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Journal of Physics B 35 (2002) 4839–4845 (Also listed under AMPL)
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Philosophical Magazine B 82 (2002) 1211–1224
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Frozen-core Model of the Double Photoionization of Beryllium
Physical Review A 65 (2002) 012710–1–6 (Also listed under AMPL)
- Kheifets, A.S.[†] and Bray, I.^{*}
Symmetrized Amplitudes of Helium-atom Double Photoionization
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- Kheifets, A.S.[†], Bray, I.^{*}, Berakdar, J.^{*} and Capello, C. Dal.^{*}
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Journal of Physics B 35 (2002) L15–L21 (Also listed under AMPL)
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Journal of Biological Physics 28 (2002) 289–308
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Journal of Physics D 35 (2002) 2914–2924–(Also listed under AMPL)
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Localized Spin Ordering in Kondo Lattice Models
Physical Review B 65 (2002) 052410–1–4
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Chemical Physics Letters 365 (2002) 176–183
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Physics of Plasmas 9 (2002) 1990–1996
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International Journal of Modern Physics E 11 (2002) 555–566
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Double Photoionization of He at 80 eV Excess Energy in the Equal-energy-sharing Condition
Physical Review A 65 (2002) 034702–1–4 (Also listed under AMPL)
- White, R.^{*}, Ness, K.F.^{*} and Robson, R.E.[†]
Computation of Electron and Ion Transport Properties in Gases
Computer Physics Communication 142 (2001) 349–355 (Also listed under AMPL)
- White, R.D.^{*}, Ness, K.F.^{*} and Robson, R.E.[†]
Development of Swarm Transport Theory in Radio-Frequency Electric and Crossed Electric and Magnetic Fields
Applied Surface Science 192 (2002) 26–49 (Also listed under AMPL)



Legend:

*External to the University

Presenter of contributed paper
is underlined

Invited Conference Presentations and Lectures

Department of Applied Mathematics

The Physics and Engineering of Underground Reservoirs: Oil and Gas Fields and Groundwater Aquifers Workshop, Zanjan, Iran, 27 December 2001 – 2 January 2002

Knackstedt, M. – *Flow in Porous Media*

Conference on Stochastic Geometry and Statistical Physics, Oberwolfach, Germany, 10–16 February

Knackstedt, M. – *Characterisation of Complex Materials*

Workshop on Geometry and Mechanics of Structured Materials, Dresden, Germany, 29 September – 25 October

Aste, I. – *Geometry and Mechanics of Structured Materials*

Centre for Science and Engineering of Materials Nanomaterials Workshop, ANU, 21 October

Senden, T.J. – *Nanosopic Work on Molecular Assemblies*

Atomic and Molecular Physics Laboratories

85th Canadian Society for Chemistry Conference, Vancouver, Canada, 1–5 June

Vos, M. and Weigold, E. – *Investigation of Spectral Momentum Densities and the Electronic Structure of Solids using Electron Momentum Spectroscopy*

Wilhelm und Else Heraeus-Seminar Workshop on Highly Correlated States in Molecules, Atoms and Nuclei, Bad-Honnef, Germany, 2–7 June

Kheifets, A. – *Revisited Theory of Transfer Ionization at Distant Collisions*

Weigold, E. – *Asymptotic Wave Function of He Investigated by (e,2e) Experiments*

International Conference on Electron and Photon Impact Ionization and Related Phenomenon, Metz, France, 18–20 July

Lower, J.C.A., Panajotovic, R. and Weigold, E. – *Quantum State Resolved (e,2e) Experiments using a New Multiparameter Toroidal Spectrometer*

Sashin, V., Kheifets, A., Vos, M. and Weigold, E. – *High-resolution High-energy (e,2e) Spectroscopy of Metal Oxides*

International Workshop on Photoionization (IWP 2002), Spring-8, Hyogo, Japan, 22–26 August

Gibson, S.T., Lewis, B.R. and Baldwin, K.G.H. – *Dissociation Dynamics from Spectroscopic Measurements using Narrow-bandwidth Laser Generation VUV Radiation*

International Symposium on the Physics of Ionised Gases, Sokobanja, Yugoslavia, 26–30 August

Buckman, S.J. – *Atomic Physics Research with a Laser-Cooled Metastable Helium Facility*

Panajotovic, R., Kitajima, M., Lower, J.C.A., Jelisavcic, M., Tanaka, H. and Buckman, S.J. – *Cross Sections for Elastic and Inelastic Electron Scattering from C₂H₄, C₂F₄, and C₂F₆*

21st International Conference on Nuclear Tracks in Solids, New Delhi, India, 21–25 October

Chadderton, L.T. – *Nuclear Tracks in Solids: Registration Physics and the Compound Spike*

Cruz, S.A., Gamaly, E.G. and Chadderton, L.T. – *A Simple Model for Cluster Ion Stopping and Fragmentation in Solids*

Fink, D., Petrov, A.S., Muler, M., Dwivedi, K.K., Ghosh, S. and Chadderton, L.T. – *The Emergence of New Ion Track Applications*

Centre for the Mind

Dalai Lama Mind Science Forum, Canberra, 24 May

Snyder, A.W. – *The Nonconscious Mind*

National Symposium on Genes, Neurons and Mental Illness, Sydney, 21 June

Snyder, A.W. – *Genius, Madness and TMS*

Nonconscious Processing National Conference, Tokyo, Japan, 1 October

Snyder, A.W. – *Personalised Video Games*

Complex Systems National Symposium, Charles Sturt University, 2 December

Snyder, A.W. – *We're blinded by the Big Picture*

Electronic Materials Engineering

26th Australian Condensed Matter Physics Meeting, Wagga Wagga, 30 January – 1 February

Ridgway, M. – *Studying Order in Disordered Materials with Synchrotron Radiation*

3rd Australian Synchrotron Research Program Users Meeting, Melbourne, 7 February

Ridgway, M. – *Studying Order in Disordered Materials with EXAFS*

The 23rd International Conference on Microelectronics, Nis, Yugoslavia, 12–15 May

Buda, M., Fu, L., Deenapanray, P.N.K., Tan, H.H., Reece, P., Dao, L.V., Gal, M. and Jagadish, C. — *Quantum Well Intermixing for Optoelectronic Device Integration*

First International Symposium on Integrated Optoelectronics, Electrochemical Society Meeting, Philadelphia, USA, 12–17 May

Buda, M., Fu, L., Hay, J., Deenapanray, P.N.K., Tan, H.H., Jagadish, C., Reece, P. and Gal, M. — *Impurity Free Intermixing for Optoelectronic Device Integration*

The 8th IUMRS International Conference on Electronic Materials, Xi'an, China, 10–14 June

Deenapanray, P.N.K., Fu, L., Buda, M., Tan, H.H. and Jagadish, C. — *Quantum Well Intermixing: Understanding Defects and Dopant Redistribution in GaAs-based Systems*

12th International Semiconducting and Insulating Materials Conference, Bratislava, Slovakia, 1–5 July

Kucheyev, S.O., Deenapanray, P.N.K., Jagadish, C., Williams, J.S., Yano, M., Koike, K., Inoue, S.M. and Ogata, K.-I. — *Electrical Isolation of ZnO by Ion Irradiation*

International Conference on the Science and Technology Nanotubes (NT02), Boston, USA, 6–11 July

Chen, Y., FitzGerald, J. and Conway, M. — *Formation Mechanism and Controlled Growth of Boron Nitride Nanotubes Produced by Mechano-thermal Process*

The Second IEEE International Conference on Nanotechnology, Arlington, USA, 25–28 August

Jagadish, C. — *Nanotechnology Research Activities in Australia*

2nd Vacuum & Surface Sciences Conference of Asia and Australia (VASSCAA-2), Hong Kong, 26–30 August

Elliman, R.G.

— *Silicon Nanocrystals: An Illuminating Material System*

1st National Conference and Exhibition on Nanotechnology, Sydney, 25–27 September

Chen, Y. — *Nanotubes: Building Blocks of Nanotechnology*

Nanomaterials Workshop of Centre for Materials Science and Engineering, ANU, 21 October

Chen, Y. — *Nanotube Synthesis and Applications*

17th International Conference on the Application of Accelerators in Research and Industry, Denton, USA, 12–16 November

Weijers, T.D.M. — *Non-linear Effects in Gas Ionization Detectors: Consequences for Ion Beam Analysis*

Materials Research Society Fall Meeting, Boston, USA, 2–6 December

Lever, P., Fu, L., Jagadish, C., Gal, M. and Tan, H.H. — *Interdiffusion in Semiconductor Quantum Dot Structures*

NSF sponsored Tri-nation Workshop on "Advances in Micro and Nano Technologies for Sensing Applications, Silicon-based Photonics and the Role of Nanotechnology", Melbourne, 12–13 December

Elliman, R.G. — *Si-based Photonics: The Optical Properties of Si Nanocrystals*

6th International Conference on Optoelectronics, Fibre Optics and Photonics, Mumbai, India, 16–18 December

Buda, M., Fu, L., Tan, H.H., Josyula, L. and Jagadish, C. — *Laser Diode Structures with Asymmetric Design for High Power Operation*

Laser Physics Centre

4th International Conference on Transparent Optical Networks, Warsaw, Poland, 21–25 April

Tomljenovic-Hanic, S., Love, J.D., Ankiwicz, A. and Krolikowski, W. — *Effect of Added Layers on Bend Loss in Buried Channel Waveguides*

International Symposium on Modern Optics and its Applications (IS-MOA 2002), Bandung, Indonesia, 3–5 July

Samoc, M. and Humphrey, M.G. — *Nonlinear Optical Properties of Organometallics: Do They Have Advantages over other Nonlinear Materials?*

Nuclear Physics

Ninth International Conference on Heavy Ion Accelerator Technology, New Delhi, India, 14–18 January

Weisser, D.C. — *ANU LINAC Upgrade using Multi-stub Resonators*
Weisser, D.C. — *Novel Matching Lens System*

NUPP 2002, 19th Nuclear and Particle Physics Conference held in association with the 15th Biennial Congress of Australian Institute of Physics, Sydney, 7–11 July

Butt, R.D. — *Exotic Fission Fragment Angular Distributions*

Byrne, A.P., Dracoulis, G.D., Lane, G.J., Baxter, A.M., Wilson, A.N., Macchiavelli, A.O., Cromaz, M., Clark, R.M. and Fallon, P. — *Shape Coexistence and Isomeric States in ^{187}Tl*

Dasgupta, M., Butt, R.D., Gontchar, I.I., Hinde, D.J., Hagino, K., Morton, C.R., Mukherjee, A. and Newton, J.O. — *Surface Diffuseness of Nuclear Potential from Heavy-ion Fusion Reactions*
Dracoulis, G.D., Byrne, A.P., Lane, G.J., Baxter, A.M., Kibédi, T., Macchiavelli, A.O., Cromaz, M., Clark, R.M. and Fallon, P. — *Isomers as a Probe of Triple Shape-existence in Neutron Deficient Pb Nuclei*

Gontchar, I.I., Dasgupta, M., Hinde, D.J., Butt, R.D. and Mukherjee, A. — *Geometrical Effects in Fusion Cross Sections for Deformed Nuclei*

Hazel, J.C., Byrne, A.P., Dracoulis, G.D., Bark, R.A., Wilson, A.N., Lane, G.J., Kibédi, T. and Baxter, A.M. — *High Spin States in Light Radon Isotopes*

Kibédi, T., Dracoulis, G.D., Byrne, A.P. and Davidson, P.M. — *The Evolution of Shape Co-existence in $Z \leq 82$ Nuclei*

Lane, G.J., Byrne, A.P., Dracoulis, G.D., Alexander, A.L., Bark, R.A., Davidson, P.M., Kibédi, T. and Wilson, A.N. — *Yrast High-spin Isomer and Octupole Correlations in ^{213}At*

Mukherjee, A., Dasgupta, M., Hinde, D.J., Timmers, H., Butt, R.D. and Gomes, P.R.S. — *Absence of Fusion Suppression due to Breakup in the $^{-12}\text{C} + ^7\text{Li}$ Reaction*

Weijers, T.D.M., Timmers, H. and Elliman, R.G. — *Non-linear Effects in Gas Ionization Detectors*
Weisser, D.C. and Lobanov, N.R.

— *TROIKA: A Three-stub Superconducting RF Resonator for Heavy Ion Accelerators*

Wilson, A.N., LaFosse, D.R., Smith, J.F., Chiara, C.J., Boston, A.J., Carpenter, M.P., Chantler, H.J., Charity, R., Choy, P.T.W., Devlin, M., Fletcher, A.M., Fossan, D.B., Janssens, R.V.F., Jenkins, D.G., Kelsall, N.S., Kondev, F.G., Koike, T., Paul, E.S., Sarantites, D.G., Seweryniak, D., Starosta, K. and Wadsworth, R. — *Observation of Excited States in the Near-dripline Nucleus ^{129}Pr*

International Conference Frontiers of Nuclear Structure, Berkeley, USA, 29 July – 2 August

Dracoulis, G.D., Byrne, A.P., Lane, G.J., Baxter, A., Kibédi, T., Macchiavelli, A., Fallon, P., Clark, R. — *Isomers and E0 Transitions as a Probe of Triple Shape Co-existence in ^{188}Pb*
Lane, G.J., Byrne, A.P. and Dracoulis, G.D. — *High-spin Isomers, Residual Interactions and Octupole Correlations in the $N=128$ Isotones: ^{211}Bi , ^{212}Po and ^{213}At*

Goldschmidt 2002, Davos, Switzerland, 18–23 August

Fifield, L.K., Evans, J.M. and Stone, J.O. — *Calibration of the Production Rate of ^{39}Cl from Potassium*

Symposium on Measurement of g-factors and their use in Nuclear Structure Studies, Joint Institute for Heavy Ion Research, Oak Ridge, USA, 19 August

Stuchbery, A.E. — *What Makes G-Factors Interesting and Some Aspects of Measuring Them*

XXXVII Zakopane School of Physics, Trends in Nuclear Physics, Zakopane, Poland, 3–10 September

Byrne, A.P., Lane, G.J. and Dracoulis, G.D. — *Residual Interactions and High Spin States in $A=211$ Isobars*

9th International Conference on Accelerator Mass Spectrometry, Nagoya, Japan, 6–13 September

Fifield, L.K. — *Developments in Applications of AMS*

Symposium of North Eastern Accelerator Personnel 2002, Lafayette, USA, 7–10 October

Weisser, D.C. — *Evolution of a NEC Multi-cathode Sputter Negative Ion Source*

Weisser, D.C. — *TROIKA: A Three Stub Superconducting Resonator for Heavy Ion Accelerators*

Workshop on the Future of Gamma-Ray Spectroscopy, Fall meeting of the Division of Nuclear Physics of the American Physical Society, East Lansing, USA, 9–12 October

Stuchbery, A.E. — *Future of Excited-state Magnetic Moment Measurements*

Third International Conference on Fission and Properties of Neutron-Rich Nuclei, Sanibel Island, USA, 3–9 November

Hinde, D.J., Dasgupta, M. and Mukherjee, A. — *Inhibition of Fusion by Quasi-fission in Heavy Element Formation*

Workshop on Nuclear Structure and Decay Data Evaluation, International Atomic Energy Agency, Vienna, Austria, 18–22 November

Kibédi, T., Dracoulis, G.D., Byrne, A.P. and Davidson, P.M. — *The Evolution of Shape Co-existence in $Z \leq 82$ Nuclei*

International Symposium on Physics of Unstable Nuclei (ISPUN02), Halong Bay, Vietnam, 20–25 November

Dasgupta, M., Hinde, D.J. and Hagino, K. — *Insights into the Influence of Breakup on Fusion through Reactions with Weakly-bound Stable Nuclei*

Gontchar, I.I., Hinde, D.J., Dasgupta, M. and Newton, J.O. — *Surface Diffuseness of Nuclear Potential from Heavy-ion Fusion Reactions*

Plasma Research Laboratory

13th International Stellarator Workshop, Canberra, 25 February – 1 March

Howard, J. — *Imaging Diagnostic Systems on the H-1 Heliac*

Shats, M.G. — *Self-regulation of Fluctuations by Time-varying Flows*

Solomon, W.M. — *Modification of the Radial Electric Field by Fluctuation Generated Radial Currents*

National Institute for Engineering and Information Science, Canberra, 9 April

Borg, G.G. — *Bringing the Internet to Regional Australia ... Easy with BushLAN*

2nd International Workshop on Nano-technology and Plasma Application for Next Generation Processing, Taijon, Korea, 25 June

[Boswell, R.W.](#) —*Ion Pumping in a Helicon Discharge*

Annual Meeting Korean Vacuum Society, Kangwon National University, Korea, 28 June

[Boswell, R.W.](#) —*Ion Acceleration in an Expanding Plasma and Applications for Thin Films*

6th Asia Pacific Conference on Plasma Science and Technology, Jeju, Korea, 1–4 July

[Boswell, R.W.](#) —*Fabrication of Planar Waveguides using PECVD/RIE*

Mars Society Annual Meeting, Sydney, 11 July

[Boswell, R.W.](#) —*To Mars and Beyond, Plasma Thrusting into the Future*

11th International Congress on Plasma Physics, Sydney, 15–18 July

[Blackwell, B.D.](#) —*Overview of the H-1 National Facility*

[Boswell, R.W.](#) —*To Mars and Beyond, Plasma Thrusting into the Future*

[Charles, C.](#) —*Ion Energy Analysis in Low Pressure High Density Expanding Radiofrequency Plasmas*

[Shats, M.G.](#) —*Turbulence Self-regulation and Radial Electric Field Generation*

Gordon Research Conference on Plasma Chemistry, Tilton, USA, 21 July

[Boswell, R.W.](#) —*Plasma Processing in Photonics*

German-Polish EURO Conference on Plasma Diagnostics for Fusion and Applications, Greifswald, Germany, 4–6 September

[Howard, J.](#), Michael, C., Glass, F. and Danielsson, A. —*Time-resolved 2D Plasma Spectroscopy using Coherence Imaging Techniques*

3rd World Congress on Microwave & Radiofrequency Applications, Sydney, 22–26 September

[Charles, C.](#) —*Using Low Pressure High Density Plasmas for the Fabrication of Optical Waveguides*

55th Gaseous Electronics Conference, Minneapolis, USA, 15–18 October

[Boswell, R.W.](#) —*Fabrication of Planar Optical Waveguides using PECVD/RIE*

OneTech02 – Canberra's Radio and Electro-Technical Symposium, Canberra, 17 November

[Borg, G.G.](#) — *Using Plasma to Produce Dynamically Configurable Antenna and Lens Structures*
[Heslop, B.J.](#) —*What is BushLAN?*

Theory Cluster

Applied Photonics Group & Nonlinear Physics Group

AAAS Annual Meeting, Boston, USA, 14–23 February

[Kivshar, Yu.S.](#) —*Optical Vortices*

12th Gaseous Electronics Meeting, Murramarang, 3–6 February

[Love, J.D.](#) —*The Role of Plasma Processing in Developing the Internet*

4th International Conference on Transparent Optical Networks, Warsaw, Poland, 21–25 April

[Tomljenovic-Hanic, S.](#), Love, J.D., Ankwicz, A. and Krollkowski, W. —*Effect of Added Layers on Bend Loss in Buried Channel Waveguides*

IOEC'2002,
Moscow, Russia, 22–28 June

[Kivshar, Yu.S.](#) —*Nonlinear Photonic Crystals*

AIP2002 Congress, Sydney, 8–11 July

[Stevenson, A.J.](#) and Love, J.D. —*Photonics Education & Training in Australia: New Initiatives in the Tertiary, High School and Industrial Sectors*

Nonlinear Optics NLO'2002, Hawaii, USA, 29 July– 2 August

[Kivshar, Yu.S.](#) —*Nonlinear Modes and Solitons in Photonic Crystals*

Photonics World 2002, Singapore, 8–9 October

[Love, J.D.](#) —*The Evolution of Photonics for Telecommunications Applications in Australia*

Optical Sciences Centre

Nonlinear Guided Waves and Their Applications Conference, Stresa, Italy, 1–4 September

[Akhmediev, N.N.](#) —*Observation of Soliton Explosions*—

Theoretical Physics

The 26th Condensed Matter Meeting, Wagga Wagga, 29 January – 1 February

[Das, M.P.](#) —*What is New in the World of Superconductors?*

International Workshop: Chaos in Few and Many Body Systems, Cuernavaca, Mexico, 15 February – 15 March

[Kun, S.Y.](#)

—*Coherent Dynamics and Chaos in Nuclei, Molecules and Nanostructures*

International Conference on Physics at Surfaces and Interfaces, Puri, India, 4–8 March

[Das, M.P.](#) —*Novel Superconducting Phenomena at Surfaces and Interfaces*

German Physical Society Plasma Physics Conference, Bochum, Germany, 18–22 March

[Robson, R.E.](#)

—*Swarm Kinetic Theory and Low Temperature Plasma Physics*

MSRI International Workshop on Conformal Field Theory and Supersymmetry, Berkeley, USA, 15–26 April

[Bazhanov, V.V.](#) —*Conformal Field Theory as a Completely Integrable Quantum System*

8th International Workshop on Similarity in Diversity, Buffalo, USA, 15–17 May

[Xu, W.](#) —*Hydrogen-like Impurities in Semiconductors in the Presence of Intense Terahertz Laser Fields*

International Conference on Superconductivity, CMR and Related Materials, Giens, France, 1–8 June

[Gulacsi, M.](#) —*The Attractive U_p -regime: Results from an Exact Infinite Order Transformation*

Wilhelm und Else Heraeus-Seminar Workshop, Bad-Honnef, Germany, 2–7 June

[Kheifets, A.](#) —*Highly Correlated States in Molecules, Atoms and Nuclei*

International Workshop: Chaos and Interactions – From Nuclei to Quantum Dots, Seattle, USA, 1 July – 6 September

[Kun, S.Y.](#) —*Slow Dephasing and Chaos in Quantum Many-body Systems*

19th AINSE Nuclear and Particle Physics Conference, Sydney, 7–11 July

[Robson, B.A.](#) —*A New Classification of the Fundamental Particles*

11th International Congress on Plasma Physics, Sydney, 15–18 July

[Ball, R.](#) —*Bifurcation and Metamorphosis of Plasma Mass Action Dynamics*

National Research Symposium on Combinatorics and Integrable Models, ANU, 15–19 July

[Batchelor, M.T.](#) —*The XXZ/0 (n) Loop Model Hamiltonians and Combinatorics*

International Conference on Excitons in Condensed Matter, Darwin, 22–26 July

[Das, M.P.](#) —*Excitonic Superconductivity*

World Space Environment Forum and High Performance Computing Conference, Adelaide, 22 July – 2 August

[Dewar, R.L.](#) —*Complex Systems Research at ANU*

[Sen, S.](#) —*Stabilizing Role of Parallel Inhomogeneous Flow on Low-frequency Space Fluctuations*

SSF International Summer School on Oxides and Ceramics, Tallberg, Sweden, 24–30 August

[Gulacsi, M.](#) —*Statistical Methods Applied to Oxide Systems*

The 26th International Workshop on Condensed Matter Theories, Luso, Portugal, 2–8 September

[Das, M.P.](#) and Green, F.

— *Transport in Mesoscopic Systems*

Computational Biophysics: Integrating Theoretical Physics and Biology, Barcelona, Spain, 7–12 September

[Kuyucak, S.](#) —*Structure-function Relationships in Ion Channels from Molecular and Brownian Dynamics Simulations*

NATO Advanced Research Workshop on Concepts in Electron Correlations, Hvar, Croatia, 29 September – 8 October

[Gulacsi, M.](#) —*Finite Temperature Luttinger Liquids*

Nanomaterials Workshop of the Centre for the Science and Engineering of Materials, ANU, 21 October

[Das, M.P.](#) —*Electron Transport in Nanomaterials*

Statistical Mechanics 2002/Lie Theory 2002, Melbourne, 2–4 December

[Batchelor, M.T.](#) —*Bethe Ansatz Phase Diagram for the Strong Coupling Ladder Compounds*

88th Statistical Mechanics Meeting, Rutgers, USA, 15–17 December

[Batchelor, M.T.](#) —*More Combinatorial Aspects of the Ice Model/XXZ Chain*