

Section 2

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Introduction

The Australian Institute of Nuclear Science and Engineering (AINSE) was established in 1958 to provide a mechanism for access to the special facilities at Lucas Heights by universities and other tertiary institutions and to provide a focus for cooperation in the nuclear scientific and engineering fields. It has a specific mandate to arrange for the training of scientific research workers and the award of scientific research studentships in matters associated with nuclear science and engineering.

Today nuclear science at the Lucas Heights Science and Technology Centre is devoted to supporting activities and research in a wide range of disciplines. These have applications in advanced technology, manufacturing, mining, agriculture, medicine and environmental protection. All are of vital importance to Australia's future. Many of the techniques and much of the expertise at Lucas Heights cannot be found elsewhere in Australia.

AINSE plays an indispensable role in providing universities with access to major scientific facilities and encouraging a national cooperative research effort. It is a role that is conducted both efficiently and cost effectively. Universities are saved from duplicating expensive items of equipment and Commonwealth funding can be directed at one national facility instead of several with sub-critical funding.

Mission

AINSE will advance research, education and training in the field of nuclear science and engineering and related fields within Australasia by being, in particular, the key link between universities, ANSTO, other member organisations and major nuclear science and associated facilities.

Goals

To achieve this vision AINSE will implement strategies in the following key areas:

- access to major facilities
- scientific outcomes
- membership
- networking

We will know that we have achieved this vision when the following goals are attained:

- **Goal 1**
By the end of 2008 members will have access to the Australian major nuclear and related research facilities and some overseas, through AINSE.
- **Goal 2**
By the end of 2008 the research performance of our scientific outcomes will have increased substantially.
- **Goal 3**
By end 2008 all universities in Australasia, the some sections of CSIRO, many major museums, many non teaching hospitals and a significant proportion of the scientific institutes in Australasia will be members of AINSE.
- **Goal 4**
By the end of 2008, we will have expanded AINSE's existing set of excellent scientific networks.

Contact AINSE

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Dr Dennis Mather
Scientific Secretary

AINSE Council 2005

Member Organisations and Representation

2 Council Meetings held in 2005

| Organisation | Membership Commenced | Councillor | Meetings Attended |
|--|----------------------------|--|-------------------|
| ANSTO CEO | 1958 | Dr Ian Smith | 1 |
| ANSTO, Institute for Nuclear Geophysiology | | Professor Ann Henderson-Sellers | 2 |
| ANSTO, Materials & Engineering Science | | Dr George Collins | 2 |
| ANSTO, Bragg Institute | | Dr Robert Robinson | 2 |
| ANSTO, Chief Operations | | Dr Ron Cameron | 1 |
| The University of Queensland | 1958 | Dr Paul Meredith | 2 |
| The University of New England | 1958 | Dr Peter Grave | 0 |
| The University of Sydney | 1958 | A/Professor Brendan Kennedy | 2 |
| The University of New South Wales | 1958 | Professor Robert Burford | 1 |
| The Australian National University | 1958 | Professor John White, President | 2 |
| The University of Melbourne | 1958 | Professor Jim Camakaris | 1 |
| University of Tasmania | 1958 | Professor Allan Canty | 1 |
| The University of Adelaide | 1958 | Dr Gerald Laurence | 2 |
| The University of Western Australia | 1958 | Dr Jasmine Henry | 2 |
| Monash University | 1961 | Dr Trevor Hicks | 2 |
| The University of Newcastle | 1965 | A/Professor Bruce King | 2 |
| Flinders University of SA | 1966 | A/Professor Michael Brunger | 0 |
| La Trobe University | 1966 | Dr John Webb | 1 |
| Macquarie University | 1966 | Professor James Piper | |
| James Cook University | 1970 | Professor Richard Keene | 1 |
| University of Wollongong | 1975 | Professor Allan Chivas | 2 |
| Griffith University | 1975 | A/Professor Greg Hope | 0 |
| Murdoch University | 1985-1997 rejoined 1998 | A/Professor Stephen Thurgate | 2 |
| University of Technology, Sydney | 1988 | Professor Greg Skilbeck | 1 |
| RMIT University | 1988 | Professor Peter Johnston | 2 |
| Curtin University of Technology | 1989 | E/Professor Brian O'Connor, Vice President | 1 |
| Central Queensland University | 1991 | Dr David Druskovich | 1 |
| University of South Australia | 1991 | A/Professor Namita Choudhury | 1 |
| Swinburne University of Technology | 1991 | Dr Anthony Bartel | 2 |
| Queensland University of Technology | 1992 | A/Professor Ray Frost | 2 |
| University of Western Sydney | 1993 | Dr Robyn Crumby | 1 |
| Victoria University | 1994 | Professor Michelle Towstoles | 2 |
| Southern Cross University | 1994 | A/Professor Bill Boyd | 0 |
| The University of Auckland | 1995 | Professor Jim Metson | 1 |
| Charles Sturt University | 1995 | Dr Michael Antolovich | 2 |
| Charles Darwin University | 1995 | A/Professor David Parry | 0 |
| Edith Cowan University | 1996 | Professor Patrick Garnett | 0 |
| University of Canberra | 1996 | Professor Andrew Cheetham | 0 |
| The University of Southern Queensland | 1996 | Professor Graham Baker | 1 |
| Deakin University | 1997 | Professor Pip Hamilton | 0 |

| Organisation | Membership Commenced | Councillor | Meetings Attended |
|---|----------------------|-----------------------------|-------------------|
| University of Ballarat | 1997 | Mr Stafford McKnight | 0 |
| Australian Catholic University | 2001 | Dr Neil Saintilan | 1 |
| University of Canterbury | 2005 | Dr Steven Durbin | 1 |
| GNS Science | 2005 | Dr Frank Bruhn | 2 |
| Secretary to AINSE Council (non-voting) | | Dr Dennis Mather, AINSE | 2 |
| AINSE | | Mr Benjamin Thompson, AINSE | 1 |

Alternate Representatives and other attendees

| | | | |
|---|--|---------------------------------|---|
| Professor Philippa Black | | University of Auckland | 1 |
| Dr Roger Reeves | | University of Canterbury | 1 |
| Dr Dick Metcalfe | | Central Queensland University | 1 |
| Professor Craig Buckley | | Curtin University of Technology | 1 |
| Dr Steven Hinckley | | Edith Cowan University | 2 |
| Professor Peter Teubner | | Flinders University | 1 |
| Dr Christopher Brown | | Griffith University | 2 |
| Dr Damian Gore | | Macquarie University | 1 |
| Professor Rob Norris | | Monash University | 1 |
| Professor Leigh Sullivan | | Southern Cross University | 1 |
| Dr Steve Abbott | | Southern Cross University | 1 |
| Professor Hans Coster, Immediate Past President | | University of Sydney | 1 |
| Dr Paul Wormell | | University of Western Sydney | 1 |

Executive Committee

Four Executive Committee Meetings held in 2005

| Councillor | Office/Position | Organisation | Meetings Attended |
|---------------------------------|------------------|------------------------------------|-------------------|
| Professor Hans Coster | President | The University of New South Wales | 4 |
| Professor John White | Vice – President | The Australian National University | 3 |
| Professor Brian O'Connor | | Curtin University of Technology | 4 |
| Dr Robert Robinson | | ANSTO | 4 |
| Professor Ann Henderson-Sellers | | ANSTO | 4 |
| Dr George Collins | | ANSTO | 2 |
| Dr Ian Smith | | ANSTO | 1 |
| Dr Ron Cameron | | ANSTO | 1 |
| Dr Dennis Mather | | AINSE | 4 |

AINSE Staff

Scientific Secretary Dr Dennis Mather

Secretariat

Mr Benjamin Thompson

Miss Rhiannon Still

Miss Kylie Miles

Mrs Nerissa Phillips (part-time)

Mrs Sandy O'Connor (part-time)

from 18 April

until 29 April

on leave July 05 til June 06

Specialist Committees for 2005

The Scientific Secretary, AINSE, is an ex-officio (non-voting) member of all Committees

(a) indicates alternate; (e) indicates executive observer; (c) indicates councillor; (o) indicates observer

| | | Meetings Attended |
|---|--|----------------------|
| Archaeology and Geosciences Committee | | |
| Professor Glenn Summerhayes Convenor | The Australian National University | 1 |
| Professor Philippa Black (o) | University of Auckland | 1 |
| A/Professor Bill Boyd | Southern Cross University | 1 |
| Professor Allan Chivas (e) | University of Wollongong | 1 |
| Professor Patrick De Deckker | The Australian National University | 2 |
| Dr David Garnett | Charles Darwin University | 1 |
| Professor Bruce King (a) (c) | University of Newcastle | 1 |
| Dr David Fink | ANSTO | 1 |
| Dr Henk Heijnis | ANSTO | 0 |
| Dr Gerry Jacobsen | ANSTO | 1 |
| Professor Ann Henderson-Sellers (e) | ANSTO | 2 |
| Dr Quan Hua | ANSTO | 1 |
| Mr Ben Thompson (o) | Minutes Secretary, AINSE | 2 |
| Dr Dennis Mather | Scientific Secretary, AINSE | 1 |
| Biomedical Science and Biotechnology Committee | | |
| A/Professor James Camakaris, Convenor | University of Melbourne | 2 |
| Dr Rey Casse | University of Adelaide, Queen Elizabeth Hospital | 1 |
| Professor Hans Coster (e) | The University of New South Wales | 2 |
| Dr George Larcos | The University of Sydney | 1 |
| Dr Michael Hay | University of Auckland | 2 |
| E/Professor Brian O'Connor (e) | Curtin University of Technology | 1 |
| Professor John White (e) | AINSE President | 1 |
| Professor Roger Martin (a) | University of Melbourne | 2 |
| Dr Nabil Morcos | ANSTO | 2 |
| Dr Dennis Mather | Scientific Secretary, AINSE | 1 |
| Mr Ben Thompson (o) | Minutes Secretary, AINSE | 2 |
| Environmental Sciences Committee | | |
| Dr Bear McPhail, Convenor | The Australian National University | 1 |
| Professor Don Bradshaw | University of Western Australia | 1 |
| Professor Andrew McMinn (a) | University of Tasmania | 1 |
| Dr Joachim Ribbe | University or Southern Queensland | 1 |
| Professor Greg Skilbeck (c) | University of Technology Sydney | 2 |
| Dr Geraldine Jacobsen | ANSTO | 1 |
| Dr Suzanne Hollins | ANSTO | 2 |
| Professor Ann Henderson-Sellers (e) | ANSTO | 1 |
| Dr Rainer Seigele | ANSTO | 1 |
| Dr Andrew Smith | ANSTO | 1 |
| Dr Dennis Mather | Scientific Secretary, AINSE | 1 |
| Mr Ben Thompson (o) | Minutes Secretary, AINSE | 2 |

Materials - Structures and Dynamics Committee

| | | |
|----------------------------|-------------------------------------|---|
| Dr Craig Buckley, Convenor | Curtin University of Technology | 2 |
| Professor Stewart Campbell | ADFA, University of New South Wales | 2 |
| A/Prof Ian Gentle (a) | University of Queensland | 0 |
| Dr Trevor Hicks (c) | Monash University | 2 |
| Professor Valerie Linton | University of Adelaide | 2 |
| Dr Chris Ling | The University of Sydney | 2 |
| Dr Michael James | ANSTO | 2 |
| Dr Jamie Schulz (o) | ANSTO | 2 |
| Dr Rob Robinson (e) | ANSTO | 1 |
| Mr Ben Thompson (o) | Minutes Secretary, AINSE | 2 |
| Dr Dennis Mather | Scientific Secretary, AINSE | 1 |

Materials - Properties and Engineering Committee

| | | |
|------------------------------------|-----------------------------|---|
| Professor Peter Johnston, Convenor | RMIT University | 2 |
| Dr Michael Brunger | Flinders University | 2 |
| Professor Anatoly Rozenfeld (a) | University of Wollongong | |
| Dr Andrew Whittaker | University of Queensland | 2 |
| Dr David Cohen | ANSTO | 2 |
| Dr Kathryn Prince | ANSTO | 1 |
| Dr Zhaoming Zhang | ANSTO | 1 |
| Mr Ben Thompson (o) | Minutes Secretary, AINSE | 2 |
| Dr Dennis Mather | Scientific Secretary, AINSE | 1 |

Conference Planning Committees

14th Nuclear and Complementary Techniques of Analysis Conference

20 – 22 November 2005, Te Papa Museum, Wellington, New Zealand

| | |
|----------------------------|---------------------------------|
| Dr Frank Bruhn | GNS Science Conference Chairman |
| Dr David Cohen | ANSTO |
| Professor Robert Elliman | Australian National University |
| A/Professor David Jamieson | University of Melbourne |
| A/Professor Bruce King | University of Newcastle |
| Dr Andreas Markwitz | GNS Science |
| Dr Chris Ryan | CSIRO |
| Dr Dennis Mather | AINSE |
| Ben Thompson | AINSE |

International Conference on Neutron Scattering 2005

27 November to 2 December 2005, Sydney Convention Centre

| | |
|-----------------------------|--|
| A/Professor Brendan Kennedy | University of Sydney, Conference Chairman, |
| Dr Robert Robinson | ANSTO |
| Professor Stewart Campbell | ADFA @ The University of New South Wales |
| Dr Walter Kalceff | University of Technology, Sydney |
| A/Professor Evan Gray | Griffith University |
| Dr Dennis Mather | AINSE |

Radiation Science Conference 2006

Thursday 20 – Friday 21 April 2006, The University of Sydney

| | |
|------------------------------|--|
| A/Professor Roger Martin | Peter McCallum Cancer Centre, Conference President |
| A/Professor Robert Anderson | The University of Auckland |
| Professor Clive Baldock | The University of Sydney |
| Professor Jim Camakaris | The University of Melbourne |
| Dr Rey Casse | The University of Adelaide |
| Dr Paul Mulvaney | The University of Melbourne |
| Prof Pam Sykes | Flinders University |
| A/Professor Andrew Whittaker | The University of Queensland |

Auditor's Report

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**Escott
Aston**
CHARTERED ACCOUNTANTS

Australian Institute of Nuclear Science and Engineering Inc Independent Audit Report to the Members For the Year Ended 31 December 2005

SCOPE

We have audited the financial report of the Institute for the year ended 31 December 2005. The Executive Committee is responsible for the financial report. We have conducted an independent audit of these financial statements in order to express an opinion on them to the members.

Our audit has been conducted in accordance with Australian Auditing Standards to provide reasonable assurance whether the financial report is free of material misstatement. Our procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial statements and the evaluation of significant accounting estimates. These procedures have been undertaken to form an opinion whether, in all material respects, the financial report is presented fairly in accordance with the Accounting Standards and other mandatory professional reporting requirements in Australia so as to present a view which is consistent with our understanding of the Institute's financial position and performance as represented by the results of its operations and its cash flows.

The audit opinion expressed in this report has been formed on the above basis.

AUDIT OPINION

In our opinion, the financial report of the Australian Institute of Nuclear Science and Engineering Incorporated presents a true and fair view in accordance with the Accounting Standards and other mandatory professional reporting requirements in Australia, the financial position as at 31 December 2005, and the results of its operations and its cash flows for the year then ended.

Escott Aston
Chartered Accountants

Phillip R Escott FCA – Partner

Signed at Sydney on this 6TH day of APRIL 2006

Phillip R. Escott F.C.A.

David G. Aston C.A.

Liability limited by the Accountants Scheme, approved
under the Professional Standards Act 1994 (NSW)

Executive Committee Report

Australian Institute of Nuclear Science and Engineering Executive Committees Report

The Executive Committee of the Australian Institute of Nuclear Science and Engineering Incorporated submits the financial accounts of the Institute for the financial year ended 31 December 2005.

Committee Members

| | | |
|---------------------------------|---------------------------------|----------------------|
| Professor John White | Australian National University | President |
| Professor Brian O'Connor | Curtin University of Technology | Vice President |
| Professor Allan Chivas | Wollongong University | |
| Professor Hans Coster | The University of Sydney | |
| Dr Robert Robinson | ANSTO | |
| Dr Ian Smith | ANSTO (CEO) | |
| Professor Ann Henderson Sellers | ANSTO | |
| Dr Dennis Mather | AINSE | Scientific Secretary |

Principal Activities

The Principal activities of the Institute during the financial year were

- To carry out research and investigations in connection with matters associated with nuclear science and engineering;
- To arrange for the training of scientific research workers and the establishment and award of scientific research studentships in matters associated with nuclear science and engineering;
- To collect and distribute information relating to nuclear science and engineering.

Significant Changes

No significant change in the nature of these activities occurred during the year.

Operating Result

The surplus for the year amounted to \$138,234.

Signed in accordance with a resolution of the Members of the Committee.



Dr Dennis Mather
Public Officer & Scientific Secretary

Dated this 22nd day of March 2006.



Statement by Members of the Executive Committee

Australian Institute of Nuclear Science and Engineering Inc
Statement by Members of the Executive Committee
For the Year Ended 31 December 2005

In the opinion of the Executive Committee the financial report as set out in the accompanying pages:

1. Presents a true and fair view of the financial position of the Australian Institute of Nuclear Science and Engineering Incorporated as at 31 December 2005 and its performance for that year ended on that date in accordance with Australian Accounting Standards, mandatory professional reporting requirements and other authoritative pronouncements of the Australian Accounting Standards Board.
2. At the date of this statement, there are reasonable grounds to believe that the Institute will be able to pay its debts as and when they fall due.

This statement is made in accordance with a resolution of the Executive Committee and is signed for and on behalf of the Executive Committee by:


.....
President –

.....
Scientific Secretary

Dated this 22 ——— day of March 2006

Balance Sheet

as at 31st December 2005

| | Notes | 31-Dec-05 \$ | 31-Dec-04 \$ |
|--------------------------------------|-------|-------------------------|-------------------------|
| Current Assets | | | |
| Cash | 2 | 29,454 | 327,481 |
| Receivables | 3 | 76,395 | 50,295 |
| Investments | 4 | 2,344,728 | 2,101,485 |
| Other | 5 | 26,431 | 24,801 |
| Total Current Assets | | <u>2,477,008</u> | <u>2,504,061</u> |
| Non-Current Assets | | | |
| Plant and Equipment | 6 | 2,994,853 | 2,996,694 |
| Total Non-Current Assets | | <u>2,994,853</u> | <u>2,996,694</u> |
| Total Assets | | 5,471,861 | 5,500,755 |
| Current Liabilities | | | |
| Creditors | 7 | 476,086 | 674,632 |
| External Grants Received in Advance | 8 | 1,013,754 | 1,013,755 |
| Other Payments Received in Advance | 9 | 1,080,724 | 1,073,000 |
| Provisions for Employee Entitlements | 10 | 66,134 | 41,660 |
| Total Current Liabilities | | <u>2,636,698</u> | <u>2,803,046</u> |
| Non-Current Liabilities | | | |
| Provisions for Employee Entitlements | 10 | 3,095 | 3,876 |
| Total Non-Current Liabilities | | <u>3,095</u> | <u>3,876</u> |
| Total Liabilities | | 2,639,793 | 2,806,922 |
| NET ASSETS | | <u><u>2,832,068</u></u> | <u><u>2,693,833</u></u> |
| Equity | | | |
| Awards Reserve | 16 | 2,366,000 | 2,198,644 |
| Long Term Projects Reserve | 16 | 500,000 | 500,000 |
| Accumulated results of operations | | (33,932) | (4,810) |
| TOTAL EQUITY | | <u><u>2,832,068</u></u> | <u><u>2,693,834</u></u> |

Income and Expenditure Statement

for the period ended 31 December 2005

| | Notes | 31-Dec-05 \$ | 31-Dec-04 \$ |
|---|-------|------------------------|-----------------------|
| Operating Revenue | | | |
| Payments from members | | 2,366,993 | 2,233,698 |
| External Grants | 13 | 391,250 | 391,250 |
| Interest Received | | 169,843 | 165,261 |
| Profit on sale of assets | | 2,131 | - |
| Other | 15 | 85,445 | 16,601 |
| Total Operating Revenue | | <u>3,015,662</u> | <u>2,806,810</u> |
| Operating Expenses | | | |
| Wages & Salaries | | 185,677 | 178,609 |
| Superannuation | | 23,428 | 22,442 |
| AINSE Awards | | | |
| Students | 11 | 515,464 | 480,630 |
| Research Awards | 11 | 1,464,493 | 1,447,293 |
| Conference Subsidies | | 81,647 | 38,279 |
| External Grants | 13 | 400,000 | 442,997 |
| Other Expenses | 14 | 206,719 | 235,570 |
| Total Operating Expenses | | <u>2,877,428</u> | <u>2,845,820</u> |
| Surplus/(Deficit) for the year | | 138,234 | (39,010) |
| Accumulated funds brought forward | | (4,810) | (288,092) |
| Accumulated Surplus (Deficit) | | <u>133,424</u> | <u>(327,102)</u> |
| Add(Less): transfer from Reserves | | | |
| Grants Reserve | 16 | 167,356 | (322,292) |
| Accumulated results of operations at end of financial year | | <u><u>(33,932)</u></u> | <u><u>(4,810)</u></u> |

Statement of Cash Flows

for period ended 31 December 2005

| | Notes | 31-Dec-05 \$ Inflows/(Outflows) | 31-Dec-04 \$ Inflows/(Outflows) |
|--|-------|---------------------------------------|---------------------------------------|
| CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES | | | |
| Inflows: | | | |
| Receipts from members | | 2,436,193 | 2,272,993 |
| Receipts from grants | | 391,250 | 391,250 |
| Interest received | | 168,213 | 167,659 |
| | | <u>2,995,656</u> | <u>2,831,902</u> |
| Outflows: | | | |
| Grant expenditures | | (2,461,604) | (2,409,199) |
| Payments to suppliers and employees | | (577,992) | (243,949) |
| | | <u>(3,039,596)</u> | <u>(2,653,148)</u> |
| Net cash flows provided by (used in) operating activities | 18 | <u>(43,940)</u> | <u>178,754</u> |
| CASH FLOWS PROVIDED BY (USED IN) INVESTING ACTIVITIES | | | |
| Outflows: | | | |
| Proceeds from sale of property, plant and equipment | | 16,364 | - |
| Purchase of property, plant and equipment | | (27,208) | (288,187) |
| Net cash flows provided by (used in) investing activities | | <u>(10,845)</u> | <u>(288,187)</u> |
| Net increase (decrease) in cash held | | (54,785) | (109,433) |
| Cash at beginning of reporting period as at 31/12/04* | | 2,428,966 | 2,538,399 |
| Cash at end of reporting period | 2/4 | <u>2,374,181</u> | <u>2,428,966</u> |

Statement of Changes in Equity

for period ended 31 December 2005

| | Notes | Retained Earnings \$ | Long Term Projects \$ | Awards Reserve \$ | Total \$ |
|---------------------------------|-------|----------------------------|-----------------------------|-------------------------|------------------|
| Balance at 1 January 2004 | | (288,092) | 500,000 | 2,520,936 | 2,732,844 |
| Profit attributable to entity | | (39,010) | - | - | (39,010) |
| Transfers to and from reserves | | | | | - |
| Awards Reserve | | - | - | (322,292) | (322,292) |
| Transfers from retained profits | | 322,292 | - | - | 322,292 |
| Balance at 31 December 2004 | | <u>(4,810)</u> | <u>500,000</u> | <u>2,198,644</u> | <u>2,693,834</u> |
| Profit attributable to entity | | 138,234 | - | - | 138,234 |
| Transfers to and from reserves | | | | | - |
| Awards Reserve | | - | - | 167,356 | 167,356 |
| Transfers from retained profits | | (167,356) | - | - | (167,356) |
| Balance at 31 December 2005 | | <u>(33,932)</u> | <u>500,000</u> | <u>2,366,000</u> | <u>2,832,068</u> |

Notes to and Forming Part of the Accounts

1. Statement of Significant Accounting Policies

The financial report is a general purpose financial report that has been prepared in accordance with Accounting Standards, Urgent Issues Group Interpretations, other authoritative pronouncements of the Australian Accounting Standards Board and the *Associations Incorporation Act 1984 (NSW)*.

The financial report covers the economic entity of The Australian Institute of Nuclear Science and Engineering ("The Institute") as an individual entity. The Institute is an association incorporated in New South Wales under the *Associations Incorporation Act 1984*.

The Institute complies with all Australian equivalents to International Financial Reporting Standards (IFRS) in their entirety.

The following is a summary of the material accounting policies adopted in the preparation of the financial report. The accounting policies have been consistently applied, unless otherwise stated.

Basis of Preparation

First time adoption of Australian Equivalents to International Financial Reporting Standards

The Institute has prepared financial statements in accordance with the Australian equivalents to International Financial Reporting Standards (IFRS) from 1 January 2005.

In accordance with the requirements of AASB 1: First-time adoption of Australian Equivalents to International Financial Reporting Standards, adjustments to the accounts resulting from the introduction of IFRS have been applied retrospectively to 2005 comparative figures excluding cases where optional exemptions available under AASB 1 have been applied. These accounts are the first financial statements of The Institute to be prepared in accordance with Australian equivalents to IFRS.

The accounting policies set out below have been consistently applied to all years presented.

A reconciliation of the transition from previous Australian GAAP to IFRS have been included in Note 23 to this report.

Reporting Basis and Conventions

The financial report has been prepared on an accruals basis and is based on historical costs modified by the revaluation of selected non-current assets, and financial assets and financial liabilities for which the fair value basis of accounting has been applied.

Accounting Policies

a) **Income Tax**

The Institute is exempt from income tax.

b) **Property, Plant and Equipment**

Each class of property, plant and equipment is carried at cost or fair value, less where applicable, any accumulated depreciation and impairment losses.

Plant and Equipment

Plant and equipment are measured on the cost basis less depreciation and impairment losses.

The cost of fixed assets constructed within the economic entity includes the cost of materials, direct labour, borrowing costs and appropriate proportion of fixed and variable overheads.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the group and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the income statement during the financial period in which they are incurred.

Depreciation

The depreciable amount of all fixed assets excluding plant and equipment currently under construction, is depreciated on a straight line basis over their useful lives to The Institute commencing from the time the asset is held ready for use. The depreciation rates used for each class of depreciable assets are:

| Class of Fixed Asset | Depreciation Rate |
|----------------------|-------------------|
| Plant and Equipment | 15 - 35% |

The asset's residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains or losses are included in the income statement.

c) Financial Instruments

Recognition

Financial instruments are initially measured at cost on trade date, which includes transaction costs, when the related contractual or obligations exist. Subsequent to initial recognition these instruments are measured as set out below.

Financial assets at fair value through profit and loss

A financial asset is classified in this category if acquired principally for the purpose of selling in the short term or if so designated by management and within the requirements of AASB 139: Recognition and Measurement of Financial Instruments. Realised and unrealised gains and losses arising from changes in the fair value of these assets are included in the income statement in the period in which they arise.

Fair Value

Fair value is determined based on current bid prices for all quoted investments. Valuation techniques are applied to determine the fair value for all unlisted securities, including recent arm's length transactions, reference to similar instruments and option pricing models.

Impairment of Assets

At each reporting date, the group assesses whether there is objective evidence that a financial instrument has been impaired.

d) Impairment of Assets

At each reporting date, the Institute reviews the carrying values of its tangible and intangible assets to determine whether there is any indication that those assets have been impaired. If such an indication exists, the recoverable amount of the asset, being the higher of the asset's fair value less costs to sell and value in use, is compared to the asset's carrying value. Any excess of the asset's carrying value over its recoverable amount is expensed to the income statement.

Impairment testing is performed annually for goodwill and intangible assets with indefinite lives.

Where it is not possible to estimate the recoverable amount of an individual asset, the Institute estimates the recoverable amount of the cash-generating unit to which the asset belongs.

e) Employee Benefits

Provision is made for The Institute's liability for employee benefits arising from services rendered by employees to balance date. Employee benefits that are expected to be settled within one year have been measured at the amounts expected to be paid when the liability is settled, plus related on-costs. Employee benefits payable later than one year have been measured at the present value of the estimated future cash outflows to be made for those benefits.

f) Provisions

Provisions are recognised when the Institute has a legal or constructive obligation, as a result of past events, for which it is probable that an outflow of economic benefits will result and that outflow can be reliably measured.

g) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are shown within short-term borrowings in current liabilities on the balance sheet.

h) Revenue

Revenue from the rendering of a service is recognised upon the delivery of the service to the customers.

Interest revenue is recognised on a proportional basis taking into account the interest rates applicable to the financial assets.

All revenue is stated net of the amount of Goods and Services Tax.

i) Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office. In these circumstances, the GST is recognised as part of the cost of acquisition of the asset or as part of an item of expense. Receivable and payables in the balance sheet are shown inclusive of GST.

Cash flows are presented in the cash flow statement on a gross basis, except for the GST component of investing and financing activities, which are disclosed as operating cash flows.

j) Comparative Figures

When required by Accounting Standards, comparative figures have been adjusted to conform to changes in presentation for the current financial year.

Notes to the Financial Statements

| | 31-Dec-05 \$ | 31-Dec-04 \$ |
|-------------------------------------|------------------|------------------|
| 2. CASH | | |
| Operating Account | 28,954 | 326,981 |
| Petty Cash | 500 | 500 |
| | <u>29,454</u> | <u>327,481</u> |
| 3. RECEIVABLES | | |
| Current | | |
| Trade Debtors | 8,003 | 9,235 |
| Other Receivables | 68,392 | 41,059 |
| | <u>76,395</u> | <u>50,295</u> |
| 4. INVESTMENTS | | |
| Cash Deposit Account | 344,728 | 101,485 |
| Term Deposit Account | 2,000,000 | 2,000,000 |
| | <u>2,344,728</u> | <u>2,101,485</u> |
| 5. OTHER CURRENT ASSETS | | |
| Current | | |
| Prepayments | - | - |
| Interest Accrued | 26,431 | 24,801 |
| | <u>26,431</u> | <u>24,801</u> |
| 6. PLANT AND EQUIPMENT | | |
| Plant & Equipment | | |
| At Cost | 95,476 | 95,476 |
| Accumulated Depreciation | (88,525) | (83,638) |
| Total Plant and Equipment | <u>6,951</u> | <u>11,838</u> |
| Plant & Equipment -STAR Accelerator | | |
| At Cost | 2,968,252 | 2,968,252 |
| Accumulated Depreciation | - | - |
| Total Plant and Equipment | <u>2,968,252</u> | <u>2,968,252</u> |
| Motor Vehicles | | |
| At Cost | 27,208 | 28,465 |
| Accumulated Depreciation | (7,558) | (11,861) |
| Total Plant and Equipment | <u>19,650</u> | <u>16,605</u> |

Notes to the Financial Statements

| Movements in Carrying Amounts | Plant & Equipment | STAR Accelerator | Motor Vehicles | Total |
|--------------------------------|-------------------|------------------|----------------|------------------|
| Balance at Beginning of Year | 11,838 | 2,968,252 | 16,605 | 2,996,694 |
| Additions | - | - | 27,208 | 27,208 |
| Disposals | - | - | (28,465) | (28,465) |
| Depreciation Expense | (4,887) | - | 4,303 | (584) |
| Carrying Amount at End of Year | <u>6,951</u> | <u>2,968,252</u> | <u>19,650</u> | <u>2,994,853</u> |

Plant & Equipment includes the STAR accelerator which has been purchased from Grant monies received from the ARC and members and from monies provided by AINSE. This facility is the subject of negotiations which should result in its transfer to ANSTO. Refer to note 20 for further details.

| | 31-Dec-05 \$ | 31-Dec-04 \$ |
|---|------------------|------------------|
| 7. CREDITORS | | |
| Unsecured Liabilities | | |
| Trade Payables | 4,240 | 1,121 |
| Sundry Payables and Accrued Expenses | 471,846 | 673,511 |
| | <u>476,086</u> | <u>674,632</u> |
| 8. EXTERNAL GRANTS RECEIVED IN ADVANCE | | |
| AINSE Grant ARC STAR (refer note 20) | 1,013,754 | 1,013,754 |
| | <u>1,013,754</u> | <u>1,013,754</u> |
| 9. OTHER PAYMENTS RECEIVED IN ADVANCE | | |
| Member STAR Contribution (refer note 20) | 1,073,000 | 1,073,000 |
| Memberships in Advance | 7,724 | - |
| | <u>1,080,724</u> | <u>1,073,000</u> |
| 10. PROVISIONS FOR EMPLOYEE ENTITLEMENTS | | |
| Opening Balance at 1 January | 45,535 | 45,535 |
| Additional Provisions Raised | 23,694 | 9,349 |
| Amounts Used | - | - |
| Balance at 31 December | <u>69,229</u> | <u>45,535</u> |
| Analysis of Provisions | | |
| Current | 66,134 | 41,660 |
| Non-Current | 3,095 | 3,876 |
| | <u>69,229</u> | <u>45,535</u> |

Notes to the Financial Statements

| | 31-Dec-05 \$ | 31-Dec-04 \$ |
|---|-----------------|-----------------|
| 11. AINSE AWARDS | | |
| AINSE AWARDS - Post Graduate Awards | | |
| Lucas Heights Costs | 191,681 | 186,865 |
| University Travel and Equipment | 50,337 | 32,891 |
| Stipends | 260,125 | 238,771 |
| AINSE Winter School | 13,321 | 22,103 |
| | 515,464 | 480,630 |
| AINSE AWARDS - Awards | | |
| Lucas Heights Costs | 1,369,131 | 1,356,975 |
| Minor Equipment and Materials | 3,959 | - |
| Travel and Accomodation | 91,403 | 81,677 |
| Other Costs | - | 8,640 |
| | 1,464,493 | 1,447,293 |
| 12. SEGMENT REPORTING | | |
| The Institute operates in the research sector providing funds for research to members within Australia and New Zealand. | | |
| 13. EXTERNAL GRANTS | | |
| <u>AINSE ARC ISIS Grant</u> | | |
| Grant Revenue | 240,000 | 235,000 |
| Member Contributions | 151,250 | 156,250 |
| | 391,250 | 391,250 |
| Grant Expenditure | | |
| External Payments | 400,000 | 400,000 |
| Total Expenditure | 400,000 | 400,000 |
| <u>Grants - ARC Tandem</u> | | |
| Grant Revenue | - | - |
| Grant Expenditure | | |
| External Payments | | |
| Equipment and Materials | - | 42,997 |
| Contract Labour/Consultancies | | |
| Others | | |
| Total Expenditure | - | 42,997 |

Notes to the Financial Statements

| | 31-Dec-05 \$ | 31-Dec-04 \$ |
|--|-----------------|-----------------|
| <u>Reconciliation</u> | | |
| Total External Grants Revenue | 391,250 | 391,250 |
| less transferred to Grants Received In Advance (Balance Sheet) | - | - |
| External Grant Revenue (Income & Expenditure Statement) | <u>391,250</u> | <u>391,250</u> |
| Represented by: | | |
| Total Grant Expenditure (Income & Expenditure Statement) | 400,000 | 442,997 |
| Amount to be met by AINSE | (8,750) | (51,747) |
| External Grants Expenditure | <u>391,250</u> | <u>391,250</u> |
| | | |
| 14. OTHER EXPENDITURE | | |
| Conference Management | <u>24,889</u> | <u>76,565</u> |
| Publications and Promotions | <u>18,837</u> | <u>12,918</u> |
| Meetings and Committees | <u>62,320</u> | <u>65,192</u> |
| EA/IRMS | <u>-</u> | <u>-</u> |
| | | |
| AINSE Secretariat | | |
| Audit Fees | 9,020 | 6,614 |
| Bank Charges | 1,711 | 4,732 |
| Depreciation | 14,817 | 15,042 |
| Advertising and Printing | 120 | - |
| Office Supplies | 1,959 | 2,367 |
| Postage and Telephone | 1,973 | 2,621 |
| Insurance | 10,106 | 6,046 |
| Entertaining | 458 | 488 |
| Books and Software | 2,461 | 1,700 |
| Office Equipment and Repairs | 1,237 | 925 |
| Administration and Staff Training | 22,939 | 2,148 |
| Travel and Accommodation | 15,019 | 17,461 |
| Vehicle Expenses | 11,007 | 13,260 |
| Publications and Promotions | 862 | - |
| Staff Recruitment | - | 33 |
| FBT Expense & Payments | 4,111 | 4,834 |
| Miscellaneous | 2,873 | 2,624 |
| Total AINSE Secretariat | <u>100,673</u> | <u>80,895</u> |
| | | |
| Total Other Expenditure | <u>206,719</u> | <u>235,570</u> |

Notes to the Financial Statements

| | 31-Dec-05 \$ | 31-Dec-04 \$ |
|--|------------------|------------------|
| 15. OTHER INCOME | | |
| Sponsorships: | | |
| NTA Conference | 18,616 | 424 |
| SANS Symposium | | 5,455 |
| ICNS | 45,000 | |
| Conference Registrations | 11,858 | 5,257 |
| Other | 9,971 | 5,465 |
| | <u>85,445</u> | <u>16,601</u> |
| 16. MOVEMENT IN RESERVES | | |
| Awards Reserve | | |
| Opening Balance | 2,198,644 | 2,520,936 |
| Transfer to Accumulated Funds | 167,356 | (322,292) |
| Balance as at 31 December 2005 | <u>2,366,000</u> | <u>2,198,644</u> |
| Long Term Projects Reserve | 500,000 | 500,000 |
| Transfer from accumulated funds | - | - |
| Balance as at 31 December 2005 | <u>500,000</u> | <u>500,000</u> |
| <p>The Long Term Projects Reserve has been established to ensure that a reasonable proportion of Institute surplus of each year is preserved for investment in new research infrastructure if need be.</p> | | |
| 17. AUDITORS REMUNERATION | | |
| Remuneration of the auditor of the entity for: | | |
| Auditing or reviewing the financial report | 7,000 | 5,750 |
| Acquittal of Grants | 420 | 864 |
| Other Services | 1,600 | - |
| | <u>9,020</u> | <u>6,614</u> |
| 18. RECONCILIATION OF OPERATING RESULT WITH CASHFLOWS FROM ORDINARY ACTIVITIES | | |
| Profit from Ordinary Activities | <u>138,234</u> | <u>(39,010)</u> |
| Changes in assets & liabilities | | |
| (Increase)/Decrease in Trade Debtors | (26,100) | 22,694 |
| Increase/(Decrease) Trade Payables | (198,546) | 168,280 |
| (Increase)/Decrease Accrued Interest | (1,630) | 2,398 |
| Increase/(Decrease) Employee Entitlements | 23,693 | 9,349 |
| Increase/(Decrease) Other Current Liabilities | 7,724 | - |
| | <u>(194,859)</u> | <u>202,722</u> |

Notes to the Financial Statements

| | 31-Dec-05 \$ | 31-Dec-04 \$ |
|---|-----------------|-----------------|
| Non-Cash Items | | |
| Depreciation | 14,816 | 15,042 |
| Gain on sale of asset | (2,131) | - |
| | <u>12,685</u> | <u>15,042</u> |
| Net cash provided by (used in) operating activities | <u>(43,940)</u> | <u>178,754</u> |

19. FINANCIAL INSTRUMENTS

Financial Risk Management

The Institute's financial instruments consist mainly of deposits with banks, local money market instruments, short-term investments and accounts receivable & payable.

The main purpose of non-derivative financial instruments is to raise finance for the Institutes operations.

The Institute does not have any derivative instruments at 31 December 2005.

Financial Instruments are held under normal commercial policies, terms and conditions regularly adopted by businesses in Australia.

The main risks the Institute is exposed to through its financial instruments are liquidity risk, credit risk and interest rate risk.

a) Liquidity Risk

The Institute manages liquidity risk by monitoring forecast cash flows and ensuring that adequate utilised borrowing facilities are maintained.

b) Credit risk

The maximum exposure to credit risk, excluding the value of any collateral or other security at balance date to recognised financial assets, is the carrying amount, net of any provisions for impairment of those assets, as disclosed in the balance sheet and notes to the financial statements.

The Institute does not have any material credit risk exposure to any single receivable or group of receivables under financial instruments entered into by the economic entity.

c) Interest Rate Risk

The Institute's exposure to interest rate risk, which is the risk that a financial instrument's value will fluctuate as a result of changes in market interest rates and the effective weighted average interest rates on those financial assets and financial liabilities, is as follows:

Notes to the Financial Statements

19. FINANCIAL INSTRUMENTS (cont'd)

| | Weighted Average Effective Interest Rate | | Floating Interest Rate | | Fixed Interest Rate Maturing | | | | | | Total | |
|------------------------------|--|-------|------------------------|-----------|------------------------------|------|--------------|------|----------------------|--------|-----------|-----------|
| | | | | | Within 1 year | | 1 to 5 years | | Non-interest bearing | | | |
| | 2005 | 2004 | 2005 | 2004 | 2005 | 2004 | 2005 | 2004 | 2005 | 2004 | | |
| Financial Assets | | | | | | | | | | | | |
| Cash and cash equivalents | 5.25% | 4.75% | 373,682 | 428,466 | - | - | - | - | 500 | 500 | 374,182 | 428,966 |
| Receivables | | | - | - | - | - | - | - | 76,395 | 50,295 | 76,395 | 50,295 |
| Investments | 6.08% | 5.42% | 2,000,000 | 2,000,000 | - | - | - | - | - | - | 2,000,000 | 2,000,000 |
| Total Financial Assets | | | 2,373,682 | 2,428,466 | 0 | 0 | 0 | 0 | 76,895 | 50,795 | 2,450,577 | 2,479,261 |
| Financial Liabilities | | | | | | | | | | | | |
| Trade and other payables | | | - | - | - | - | - | - | - | - | - | - |
| Total Financial Liabilities | | | - | - | - | - | - | - | - | - | 0 | 0 |

Notes to the Financial Statements

19. FINANCIAL INSTRUMENTS (cont'd)

Interest Received

| | 2005 | 2004 |
|--|-------------------|-------------------|
| From Data Sheet | (169,842.75) | (165,260.72) |
| Made up of: | | |
| Cash & Cash equivalents | 46,930.82 | 55,985.85 |
| Receivables | - | - |
| Investments | 121,281.85 | 86,474.87 |
| Reverse 2004 Interest Receivable on Cash | (2,000.52) | (24,800.52) |
| Reverse 2004 Interest Receivable on Investment | (22,800.00) | |
| Take up 2005 Interest Receivable on Cash | 3,234.71 | 26,430.60 |
| Take up 2005 Interest Receivable on Investment | 23,195.89 | 22,800.00 |
| | <u>169,842.75</u> | <u>165,260.72</u> |
| Difference | 0.00 | 0.00 |

Net Fair Values

The net fair value of financial assets and liabilities approximates their carrying value because of their short term to maturity. No financial assets and financial liabilities are readily traded on organised markets in standardised form. Financial assets where the carrying amount exceeds net fair values have not been written down as the Institute intends to hold the assets to maturity.

The aggregate net fair values and carrying amounts of financial assets and financial liabilities are disclosed in the Statement of Financial Position and in the Notes to the Financial Statements.

Aggregate net fair values and carrying amounts of financial assets and financial liabilities at balance date:

| | 2005 | | 2004 | |
|------------------------------|------------------|------------------|------------------|------------------|
| | Carrying amount | Net Fair Value | Carrying amount | Net Fair Value |
| Financial assets | \$ | \$ | \$ | \$ |
| Cash | 374,182 | 374,182 | 428,966 | 428,966 |
| Receivables | 76,395 | 76,395 | 50,295 | 50,295 |
| Investments | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 |
| | <u>2,450,577</u> | <u>2,450,577</u> | <u>2,479,261</u> | <u>2,479,261</u> |
| Financial liabilities | | | | |
| Trade and other payables | 476,086 | 476,086 | 674,632 | 674,632 |
| | <u>476,086</u> | <u>476,086</u> | <u>674,632</u> | <u>674,632</u> |

Fair values are materially in line with carrying values.

Notes to the Financial Statements

20. EVENTS OCCURRING AFTER THE BALANCE DATE

During commissioning, the STAR Accelerator has been on the property of and under control of ANSTO and its Technical & Research staff. On 13 December 2005 AINSE received advice from the Australian Research Council (ARC) that they are willing to vary the conditions of the grant to enable the sale or transfer of the asset to ANSTO. This is subject to a number of conditions and AINSE is currently negotiating these.

It is anticipated the paperwork will be returned to ARC before the end of March 2006 and that their approval will be granted shortly after.

The likely result of the transfer on the financial results for the year ended 31 December 2006 will be:

| | | |
|--|--|------------------|
| Operating Revenue | | |
| External Grants | | 1,013,754 |
| Member Contributions | | 1,073,000 |
| | | <u>2,086,754</u> |
| Operating Expenses | | |
| STAR Accelerator | | 2,968,252 |
| Operating Deficit relating to STAR Accelerator | | <u>(881,498)</u> |

The cash position of AINSE will not be affected by this transaction.

21. COMMITMENTS

| | | | |
|---|--------|------------------|------------------|
| ISIS | | 8,750 | 8,750 |
| Awards and Studentships Awarded in 2005 for payment in 2006 | Note A | <u>2,366,000</u> | <u>2,198,644</u> |
| | | <u>2,374,750</u> | <u>2,882,026</u> |

Note A

Invoices for membership fees are raised in January and payment is subsequently received over the first three quarters. Accordingly, funds received from membership fees in 2005 are used for grants and studentships during 2006. AINSE commits \$400,000 pa to studentships

22. ASSOCIATION DETAILS

The principal place of business of the Institute is:
 Australian Institute of Nuclear Science Inc
 New Illawarra Road,
 Lucas Heights, NSW AUSTRALIA

Notes to the Financial Statements

23. FIRST-TIME ADOPTION OF AUSTRALIAN EQUIVALENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS

Reconciliation of Equity at 31 December 2004

| | Previous GAAP at 31 December 2004 | Adjustments on introduction of AIFRS | Australian equivalents to IFRS at 31 December 2004 |
|-----------------------------------|--------------------------------------|--|---|
| Equity | | | |
| Awards Reserve | 2,198,644 | - | 2,198,644 |
| Long Term Projects Reserve | 500,000 | - | 500,000 |
| Accumulated Results of Operations | (4,810) | - | (4,810) |
| | <u>2,693,834</u> | <u>-</u> | <u>2,693,834</u> |

Reconciliation of Equity at 31 December 2005

| | Previous GAAP at 31 December 2005 | Adjustments on introduction of AIFRS | Australian equivalents to IFRS at 31 December 2005 |
|-----------------------------------|--------------------------------------|--|---|
| Equity | | | |
| Awards Reserve | 2,366,000 | - | 2,366,000 |
| Long Term Projects Reserve | 500,000 | - | 500,000 |
| Accumulated Results of Operations | (33,932) | - | (33,932) |
| | <u>2,832,068</u> | <u>-</u> | <u>2,832,068</u> |

Reconciliation of Profit for the year ending 31 December 2005

There are no effects on profits during the transition from previous GAAP to AIFRS.

AINSE Postgraduate Research Awards

To be nominated for one of these awards, an applicant must hold an Australian Postgraduate Award (APA) or equivalent scholarship.

In addition to providing a student with a tax-free supplement for up to 3 years, the Award gives additional access to ANSTO's world-class facilities and expertise. A stipend of \$7500 pa and \$5500 pa is provided towards the costs involved in using facilities at Lucas Heights. Travel and accommodation costs are also awarded to enable students to work at Lucas Heights.

In 2005 AINSE supported 60 Postgraduate Research Awards and 11 of these commenced during 2005. Through its Post-Graduate Research Award scheme, AINSE has now helped train 209 students in aspects of nuclear science and associated techniques of analysis. Many more students have been assisted with their research by gaining access to Lucas Heights facilities through AINSE Awards made to their supervisors. The Council believes that one of the most valuable roles fulfilled by AINSE is the provision of these AINSE Post-Graduate Research Awards.

Projects supported during 2005

Procedures for radiologically contaminated biological evidence: a counter terrorism initiative
Serena Abbondante Forensic Analysis, University of Canberra Commenced 01/07/05

Corals as biomonitors of Darwin Harbour health
Yasmin Antwertinger Health and Science Charles Darwin University Commenced 01/07/03

A fine-resolution reconstruction of climatic fluctuations over the last 2000 years in south-eastern Australia
Cameron Barr Geography & Environmental Studies University of Adelaide Commenced 01/07/04

Evidence for H₂ sorption by a nanoporous coordination polymer by in-situ single crystal neutron diffraction
Joseph Bevitt Chemistry University of Sydney Commenced 01/07/05

Fate of metal pollutants released from the Rum Jungle uranium/copper mine into the Finnis River, NT Australia
Jennifer Brazier Science and Primary Industries Charles Darwin University Commenced 01/07/02

Monitoring of freshwater heavy metal contamination using turtle shell
Carol Browne Biological Sciences The University of Sydney Commenced 16/02/00

High temperature fatigue behaviour and life prediction of advanced engineering materials
Mark Callaghan Chemistry Materials and Forensic Science University of Technology Sydney Commenced 01/07/04

Plasma surface modification of polymers for biomedical applications
Chanokporn Chaiwong Applied and Plasma Physics The University of Sydney Commenced 01/07/04

Negative thermal expansion in molecular framework materials
Karena Chapman Chemistry The University of Sydney Commenced 01/07/03

Calixarenes as potential ionophores for ion-selective electrodes
Ryan Chester Applied Chemistry Curtin University of Technology Commenced 01/07/04

The palaeoecological basis of prehistoric settlements, agricultural development and climate change in the South Caucasus during the Holocene
Simon Connor Anthropology, Geography & Environmental Studies The University of Melbourne Commenced 01/07/02

Relaxation and microstructural studies in triglycine sulphate ferroelectrics
John Daniels Physics and Materials Engineering Monash University Commenced 01/07/04

Radiocarbon dating of rice husk temper from Angkorean brick temples
Damian Evans Archaeology University of Sydney Commenced 01/07/05

Gold processing using thiosulfate lixivants
Adam Fischmann Chemistry Monash University Commenced 01/07/03

Historical ecology and the record of human impact in the Galapagos Islands
Iona Flett Archaeology and Natural History Australian National University Commenced 01/07/03

Development of a composite conjugated polymer/dye sensitiser/carbon nanotube blend organic solar cell
Roland Goh Mechanical, Manufacturing and Medical Engineering Queensland University of Technology Commenced 01/07/04

Past processes in peats: untangling the origin of dried peat in the Australian Alps
Samantha Grover Agricultural Sciences La Trobe University Commenced 01/07/04

Site formation processes of prehistoric mounds, Upper Mun River Floodplain, north-east Thailand
Jeremy Habberfield-Short Resource Science and Management Southern Cross University Commenced 01/01/01

Reversible addition-fragmentation chain-transfer (RAFT) polymerization using γ -radiation initiation of high-conversion glassy polymers and novel polymeric materials
Geoffrey Hall Chemical Engineering and Industrial Chemistry The University of New South Wales Commenced 01/07/04

Macromolecular orientation induced by injection molding processes
John Healy Physics and Materials Engineering Monash University Commenced 01/07/03

Development of radiolabelled peripheral benzodiazepine receptor ligands for imaging and therapy of tumours and neurodegeneration
Taryn Homes Chemistry University of Wollongong Commenced 01/07/04

Human response to shifts in environmental boundaries in the Sydney Basin during the Holocene
Rosalind James Human & Environmental Studies The University of New England Commenced 03/02/00

Quantification of the contribution of fossil fuel and biomass combustion to air pollution using radiocarbon analyses
Timothy Jordan Chemistry University of Tasmania Commenced 01/07/02

Characterisation of reinforced hydroxyapatite ceramics and their applications to strengthening biocompatible implants
Catherine Kealley Applied Physics Curtin University of Technology Commenced 01/07/03

ZnO thin films doped by ion implantation
Jim Lee Engineering The University of Auckland Commenced 01/07/03

Compositional analysis of ZnO single crystal thin films grown by RF-PAMBE
William Lee Electrical and Computer Engineering University of Canterbury Commenced 01/07/05

Stratigraphic and climatic evolution of Nelly Bay, Magnetic Island
Stephen Lewis Earth Sciences James Cook University Commenced 01/07/04

Use of cosmogenic nuclides to constrain the glacial history of the Lambert-Amery Basin, East Antarctica
Katherine Lilly Research School of Earth Science Australian National University Commenced 01/07/04

Investigation of crystallisation of scale in the Bayer process
Jennifer Lowe Applied Chemistry Curtin University of Technology Commenced 01/04/00

A palaeoecological reconstruction of the lower Snowy River, East Gippsland: environmental response to climate change, land use and river regulation
Angus MacGregor Geographical & Environmental University of Adelaide Commenced 01/07/03

Analysing small-angle scattering data using the correlation function
Clinton Maitland Applied Physics Curtin University of Technology Commenced 01/07/04

Trace element variability in speleothems: a total system model for palaeoclimatic reconstruction based on stalagmites & karst systems from central NSW
Janece McDonald Geography and Environmental Science The University of Newcastle Commenced 26/02/01tbc

Hydrogen in metallic and metal-like systems
Keith McLennan Science Griffith University Commenced 17/01/00

The surface chemistry of DNA recognition interfaces
Freya Means Chemical Sciences The University of New South Wales Commenced 01/07/02

Investigation of cathode materials for lithium secondary batteries
Manickam Minakshi Chemistry Murdoch University Commenced 01/06/04

New proxies for the climate debate: AMS dates and stable carbon isotopes of peat deposits from NE Queensland
Joanne Muller Earth Sciences James Cook University Commenced 01/07/03

Benthic diatoms as biological indicators of acid mine drainage in tropical areas of the Northern Territory
Louise Mutton Geographical & Environmental Studies University of Adelaide Commenced 01/07/04

Removal of trace contaminants using membrane technology
Long Nghiem Environmental Engineering University of Wollongong Commenced 01/07/03

Mathematical modelling of drying of colloidal nanoparticle sols
Glen Oberman Mathematical Sciences Queensland University of Technology Commenced 01/07/04

Evaluating residual stress measurements using neutron diffraction for welds in steel structures and pressure vessels and relating this to the design and fitness-for-purpose assessments
Anna Paradowska Mechanical Engineering Monash University Commenced 01/07/04

Impact of climate change on late Holocene penguin populations of the Vestfold Hills, Antarctica, using high resolution lake sediment cores
Rachael Parkinson Institute of Antarctic & Southern Ocean Studies University of Tasmania Commenced 01/07/04

Residual stress measurement in highly constrained welds
Susan Pearce Mechanical Engineering University of Adelaide Commenced 01/07/04

Protein behaviour at interfaces
Adam Perriman Research School of Chemistry Australian National University Commenced 01/07/03

Groundwater remediation utilising a permeable reactive barrier in acid sulphate soils of the lower Shoalhaven River catchment
Mark Peterson Civil Mining and Environmental Engineering University of Wollongong Commenced 01/07/04

Elemental structure of fine particulates from the Asian continent under differing meteorological conditions
Fiona Rae Geography and Environmental Science The University of Newcastle Commenced 01/03/01

Tracing the origin of salinity and quantifying its future changes in the eastern Hopkins Catchment, western Victoria
Mattias Raiber Environmental Sciences La Trobe University Commenced 01/07/05

Floodplain wetland evolution and dynamics in the Macquarie Marshes, NSW
Timothy Ralph Physical Geography Macquarie University Commenced 01/07/02

Immobilising sol gel technology for biomining and biocatalysis
Lisa Rodgers Biotechnology & Biomolecular Sciences The University of New South Wales Commenced 01/07/02

Nanoscale multilayer materials

Luke Ryves Applied and Plasma Physics University of Sydney Commenced 01/07/05

Structural studies of ionic conductive defect perovskites

Paul Saines Chemistry University of Sydney Commenced 01/07/05

Effects of urban eutrophication in southeast Australian coastal lagoon ecosystems: three case studies

Krystyna Saunders Institute of Antarctic & Southern Ocean Studies University of Tasmania Commenced 01/07/04

Processing of TiO₂ based semiconducting ceramics

Leigh Sheppard Materials Science & Engineering The University of New South Wales Commenced 01/07/03

Hydrogen adsorption in intercalated graphite: comparison between experiment and simulation

Drew Sheppard Applied Physics Curtin University of Technology Commenced 01/07/03

Predictive modelling of the response of estuarine environments to changing environmental conditions using biostratigraphical and sedimentological evidence preserved in barrier estuaries on the NSW south coast

Craig Sloss Geosciences University of Wollongong Commenced 01/07/02

The effects of short term post weld heat treatment on residual stresses in flash butt welded rails

David Tawfik Mechanical Engineering Monash University Commenced 01/07/05

Characterisation of arsenic doped mercury cadmium telluride grown by molecular beam epitaxy for infrared detector applications

Gordon Tsen Electrical, Electronic & Computer Engineering University of Western Australia Commenced 01/07/05

Experimental charge density studies of hydrogen bonding

Mark Waller Chemistry The University of Sydney Commenced 01/07/03

Obtaining atomic displacement parameters for hydrogen atoms from multi-temperature x-ray diffraction data

Andrew Whitten Chemistry The University of New England Commenced 01/07/02

Microdosimetry and nanodosimetry in proton therapy

Andrew Wroe Engineering Physics University of Wollongong Commenced 01/07/04

Disposal of unfolded proteins by members of the LDL receptor superfamily

Amy Wyatt Biological Sciences University of Wollongong Commenced 01/07/05

Summary of AINSE Awards

The primary purpose of AINSE Awards is to facilitate access by university researchers and research students to the nuclear science and technology facilities at Lucas Heights and other AINSE supported facilities, including travel and accommodation during periods of attachment. These awards are principally in the form of "credits" against which payments are made by AINSE on behalf of the award holder on receipt of appropriate invoices. In this manner, some allowance can be made for the uncertainties associated with research and enables AINSE to achieve the high degree of flexibility and control needed to ensure the allocation of time on the facilities is fully utilised. AINSE Awards very often provide the valuable initial support which leads to additional external funding, estimated to have been worth several million dollars to member organisations.

The disciplines involved during 2005 included the following

physics applied, electronic materials, mathematical, nuclear and high energy, plasma

chemistry applied, biochemistry, chemical technology, polymer science

engineering chemical, electrical, mechanical, microelectronics

biology biological science, biomaterials, biomedical science and engineering, biophysics, genetics

environmental & earth sciences environmental biology, environmental geology, geochemistry,

geography, information, coastal management, marine science

medicine medical and health physics, nuclear, positron emission tomography

plus Aboriginal and Torres Strait Studies, Antarctic and Southern Ocean studies, anthropology, applied geology, archaeology, botany, cultural studies, earth sciences, geology, geophysics, geomorphology, materials science and engineering, microscopy and microanalysis, natural history, resource science and management, safety science, zoology.

Awards for 2005 are shown on the following pages in order of university, department and surname to highlight the diversity of institutions and disciplines within which projects occur. This includes arrangements for general research students' access to Lucas Heights facilities but does not include access arrangements for AINSE postgraduate scholars, see page 27. Awards marked with an asterisk (*) have industry linkages. The total amount of the awards for each university is also shown. Nearly all of these projects involved close cooperation between university people and ANSTO staff and required substantial use of the reactor, accelerators and other facilities at the Lucas Heights Research Establishment.

For information on particular facilities utilised, see progress reports are published on our home page.

<http://www.ainse.edu.au>.

During 2005 there were 189 Awards with a total value of \$1,934,090 involving thirty-one of the thirty-nine university members. The following table shows the distribution of awards by university and by specialist areas.

Specialist Areas *

| University | A | B | E | M | N | Total |
|------------|----|---|----|----|----|-------|
| ADE | | | 3 | | 1 | 4 |
| AKL | 3 | | | 3 | | 6 |
| ANU | 10 | | | 1 | 3 | 14 |
| CAN | 1 | | | 1 | | 2 |
| CDU | 1 | | 1 | | | 2 |
| CQU | | | 3 | 1 | | 4 |
| CSU | | | 1 | | | 1 |
| CUR | | | | 2 | 4 | 6 |
| ECU | | | | 1 | | 1 |
| FLI | 1 | | | 1 | 4 | 6 |
| GRI | | | 1 | 2 | | 3 |
| JAM | 3 | | 2 | | | 5 |
| LAT | 1 | | 1 | 1 | | 3 |
| MAC | 1 | | 1 | 2 | | 4 |
| MEL | 1 | 3 | | 2 | 2 | 8 |
| MON | 4 | 1 | 2 | | 7 | 14 |
| NCT | | | 1 | 1 | 2 | 4 |
| NSW | 2 | 1 | 1 | 6 | 7 | 17 |
| QLD | 2 | 1 | 1 | 1 | 1 | 6 |
| QUT | | | | 2 | | 2 |
| RMI | | | 1 | 4 | 1 | 6 |
| SCU | 1 | | 1 | | | 2 |
| SWI | | | | | 4 | 4 |
| SYD | 10 | 2 | 1 | 1 | 13 | 27 |
| TAS | 1 | | 4 | | | 5 |
| UNE | | | 1 | 1 | 1 | 3 |
| USA | | | | | 3 | 3 |
| USQ | | | 1 | | | 1 |
| UTS | 1 | | | 1 | 2 | 4 |
| UWA | 1 | | 3 | | 1 | 5 |
| UWS | | | | 1 | | 1 |
| WOL | 4 | 1 | 4 | 6 | 1 | 16 |
| Total | 48 | 9 | 34 | 41 | 57 | 189 |

* see abbreviations on page 86

University of Adelaide

Humanities and Social Sciences

| | | | |
|---------|---|---|----------|
| 05/062 | * | Dr Peter Gell Wetland histories as basis for restoration initiatives in the South Australian Riverland | \$12,566 |
| 05/162P | * | Dr John Tibby Determining the sources of sediment in Adelaide's largest water supply reservoirs | \$12,040 |

Sciences

| | | | |
|--------|---|---|----------|
| 05/136 | * | Professor John Prescott Low level uranium and thorium determinations for luminescence dating | \$5,421 |
| 05/209 | | A/Professor Allan Pring Transformations in nickel sulfides under hydrothermal conditions | \$21,175 |

The University of Adelaide Total \$51,166

The University of Auckland

Arts

| | | | |
|--------|--|---|---------|
| 05/002 | | Dr Melinda Allen Prehistoric obsidian exploitation and patterns of interaction, Bismarck Archipelago, ca 1400 BC–1500 AD | \$5,850 |
|--------|--|---|---------|

Science

| | | | |
|---------|--|--|----------|
| 05/004 | | Dr Paul Augustinus Extracting high resolution paleoclimate records from Auckland maar craters | \$7,040 |
| 05/034 | | Dr Donna D'Costa Why did the forests fall? Palaeoenvironmental causes of kauri forest demise | \$6,630 |
| 05/077P | | A/Professor Hicham Idriss The design and characterisation of novel gold/uranium oxide supported catalyst active for CO hydrogenation and coupling reactions | \$10,350 |
| 05/121P | | A/Professor Jim Metson Magnetically doped group III and transition metal nitrides | \$13,352 |

Engineering

| | | | |
|---------|--|--|--------|
| 05/127P | | Dr Kean Aw Characterization of low-k dielectric thin film for VLSI device | \$4024 |
|---------|--|--|--------|

University of Auckland Total \$47,246

Australian National University

Asia and the Pacific

| | | | |
|--------|---|---|---------|
| 05/008 | | Dr Peter Bellwood ¹⁴ C dating of Neolithic colonization and nephrite trade in the Batanes Islands, northern Philippines | \$4,224 |
| 05/051 | | Dr Andrew Fairbairn Resolving the chronology of occupation at pre-farming Pinarbasi, Turkey | \$2,816 |
| 05/065 | | Dr Richard Gillespie Radiocarbon reservoir effect in freshwater shells | \$3,520 |
| 05/075 | * | Professor Geoffrey Hope Improving the chronology for the Pleistocene termination at Bega Swamp and other montane mires | \$6,984 |

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|---|---|--|------------------|
| 05/156 | | Dr Janelle Stevenson Environmental change and early agriculture in the northern Philippines | \$12,360 |
| Science | | | |
| 05/036 | * | Dr Patrick De Deckker High-resolution record of sea-surface temperature changes for the Holocene offshore Kangaroo Island | \$8,730 |
| 05/047 | | Dr William Dunlap ⁴⁰ Ar/ ³⁹ Ar geochronology and diffusion experiments | \$18,144 |
| 05/052 | | Professor Graham Farquhar Soil organic carbon sequestration in recently "thickened" woodlands: How much carbon at what depth and for how long? | \$17,052 |
| 05/059 | | Dr Michael Gagan Climate between the tropics and the poles: coral AMS C-14 record of abrupt tropical cooling 8,000 years ago | \$14,080 |
| 05/199 | | Dr Darren Goossens Neutron diffuse scattering in para-terphenyl | \$21,270 |
| 05/230 | * | Dr Andrew Jackson Microphase structure in block copolymers | \$5,230 |
| 05/164 | | Dr Ulrike Troitzsch The synthesis of ordered zirconium titanate at highest possible purity and density | \$9,390 |
| 05/176 | | Dr Ray Withers Temperature-dependent structural studies of the A ₃ CoNb ₂ O ₉ (A = Ca ²⁺ , Sr ²⁺ , Ba ²⁺) 1:2 β-site substituted complex perovskites | \$12,920 |
| Engineering and Computer Science | | | |
| 05/140 | * | Dr Bryce Richards Understanding the role of hydrogen in passivating amorphous silicon nitride dielectric coatings | \$9,885 |
| Australian National University Total | | | \$139,648 |

University of Canterbury

Engineering

| | | | |
|--------|---|---|---------|
| 05/221 | * | Dr Milo Kral Transmission Electron Microscopy of ZnO and beta-AlFeSi | \$7,848 |
|--------|---|---|---------|

Science

| | | | |
|--------|--|---|---------|
| 05/219 | | A/Professor James Shulmeister Timing and glacio-sedimentological nature of late Quaternary mountain glaciations in the Rangitata Valley, eastern Southern Alps / New Zealand | \$8,579 |
|--------|--|---|---------|

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|---|--|--|-----------------|
| The University of Canterbury Total | | | \$16,427 |
|---|--|--|-----------------|

Central Queensland University

Sciences, Engineering and Health

| | | | |
|--------|--|---|----------|
| 05/003 | | Dr Nanjappa Ashwath Cellular and sub-cellular distribution of cadmium, manganese and zinc in single, bi and multi-element hyperaccumulating species, <i>Austromyrtus bidwillii</i> , <i>Arabidopsis halleri</i> and <i>Thlaspi caerulescens</i> , using micro-PIXE | \$11,327 |
|--------|--|---|----------|

| | | | |
|--|---|---|-----------------|
| 05/030P | * | Dr Jason Connor A study of the electrostatics, surface forces and physical properties of Central Queensland fly ash | \$16,925 |
| 05/132 | | A/Professor Graham Pegg Microchemistry signatures in coral reef fish otoliths | \$10,372 |
| 05/168P | * | A/Professor Kerry Walsh Use of PIXE for localisation of arsenic within leaf tissue of different arsenic hyperaccumulating plants | \$10,447 |
| Central Queensland University Total | | | \$49,071 |

Charles Darwin University

Education, Health and Science

| | | | |
|--|---|---|-----------------|
| 05/014 | | Dr Patricia Bourke Examining Late Holocene marine reservoir effect in archaeological fauna at Hope Inlet, Beagle Gulf | \$5,632 |
| 05/015 | * | Professor David Bowman Using ¹⁴ C and ¹³ C to date the conversion of mulga (<i>Acacia anuera</i>) to spinifex (<i>Triodia</i> sp.) grassland in Central Australia | \$10,560 |
| Charles Darwin University Total | | | \$16,192 |

Charles Sturt University

Wine and Food Sciences

| | | | |
|---------------------------------------|---|--|----------------|
| 05/184 | * | Dr Andrew Clark Wine oxidation mechanisms: production of pigments and their precursors by hydroxyl radicals | \$4,570 |
| Charles Sturt University Total | | | \$4,570 |

Curtin University of Technology

Applied Chemistry

| | | | |
|---------|---|---|----------|
| 05/037P | | A/Professor Roland De Marco A SIMS study of blocked interface polymeric ion sensors | \$14,216 |
| 05/038 | | A/Professor Roland De Marco A neutron reflectometry study of the water layer formed at the solid contacts of polymeric ion sensors | \$15,415 |
| 05/182 | | Dr Bill Richmond Structure determination of the molybdate analogue of akaganéite | \$4,255 |
| 05/211 | * | Dr Bill Richmond Structural studies of the molybdate substituted analogue of beta-FeOOH (akaganéite) | \$9,715 |

Applied Physics

| | | | |
|--|--|--|-----------------|
| 05/106P | | A/Professor It-Meng Low Depth-profiling of composition in vacuum-treated and air-oxidised titanium silicon carbide using SIMS | \$17,500 |
| 05/205 | | A/Professor It-Meng Low Effect of grain size on the thermal stability of aluminium titanate | \$12,360 |
| Curtin University of Technology Total | | | \$73,461 |

Edith Cowan University

Engineering and Mathematics

| | | | |
|-------------------------------------|--|--|-----------------|
| 05/074 | | Dr Steven Hinckley Morphology and topography of chemically deposited ZnO/CdS multilayer films | \$14,146 |
| Edith Cowan University Total | | | \$14,146 |

Flinders University

Chemistry, Physics and Earth Sciences

| | | | |
|--------|---|---|----------|
| 05/010 | * | Dr Erick Bestland ¹⁴ C age determinations of soil organic matter fractions from the Rocky River megafauna fossil site, Kangaroo Island, South Australia | \$4,656 |
| 05/028 | | Dr Stephen Clarke SANS analysis to identify size and shape of titania clusters in a poly(methylmethacrylate) matrix | \$16,380 |
| 05/066 | | Dr Milena Ginic-Markovic Identification of the thickness and conformation of polymer film encapsulated carbon nanotubes and its dispersion in polymer matrix | \$18,705 |
| 05/197 | | Dr Milena Ginic-Markovic Study on dispersion and interfacial adhesion of encapsulated carbon nanotubes in polymer matrix | \$8,415 |
| 05/138 | | Dr Jamie Quinton The influence of crystallinity on the optical properties of lumogen UV-conversion coatings | \$5,220 |
| 05/148 | | Dr Joseph Shapter AFM imaging and nanoindenting of bone | \$12,476 |

Flinders University Total

\$58,879

Griffith University

Environmental Sciences

| | | | |
|--------|---|---|---------|
| 05/120 | * | A/Professor Grant McTainsh Late Quaternary aeolian dust contributions to Kimberley Plateau, NW Australia | \$9,932 |
|--------|---|---|---------|

Engineering and Information Technology

| | | | |
|--------|---|--|---------|
| 05/070 | * | Dr Jisheng Han SIMS analysis on 3C-SiC based nonvolatile memories | \$6,988 |
|--------|---|--|---------|

Science

| | | | |
|---------|--|--|---------|
| 05/072P | | Professor Peter Healy Solid state NMR and NQR spectra of copper(I) complexes with phosphorus and nitrogen ligands | \$5,906 |
|---------|--|--|---------|

Griffith University Total

\$22,826

James Cook University

Science, Engineering and Information Technology

| | | | |
|--------|---|---|----------|
| 05/098 | | Dr Matthew Kosnik Time-averaging in tropical sediments | \$14,836 |
| 05/103 | | Dr Bernd Lottermoser Use of U-234 and U-238 isotopes to identify fertiliser-derived uranium in an agricultural catchment, Far North Queensland | \$6,320 |
| 05/108 | * | Dr Jon Luly Age structure and heartwood formation of tropical sandalwood (<i>Santalum</i> spp) in Australia and the Pacific | \$8,416 |
| 05/153 | | Dr Scott Smithers Sea-level and environmental significance of mangrove muds from 20-25 mbsl, Orpheus Island, Central Great Barrier Reef | \$3,520 |

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|--------|---|---------|
| 05/178 | Dr Raphael Wust Constraining geochemical and vegetational changes in Central Kalimantan for the past 22,000 C-14 years | \$8,448 |
|--------|---|---------|

James Cook University Total \$41,540

La Trobe University

Humanities and Social Sciences

| | | |
|--------|---|---------|
| 05/049 | Dr Phillip Edwards From village to empire on the Dead Sea Plain, Jordan: dating Zahrat adh-Dhra' 1 and Qasr al-Buleida | \$7,040 |
|--------|---|---------|

Science, Technology and Engineering

| | | |
|---------|---|---------|
| 05/167P | A/Professor Brian Usher Quantitative SIMS studies of the levels and forms of nitrogen in GaAs and InGaAs | \$7,248 |
|---------|---|---------|

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|----------|--|---------|
| 05/172 * | Dr John Webb Understanding dryland salinisation on the basalt plains east of Hamilton, western Victoria | \$8,508 |
|----------|--|---------|

La Trobe University Total \$22,796

Macquarie University

Graduate School of the Environment

| | | |
|--------|---|---------|
| 05/159 | Dr Vladimir Strezov Analysis of trace element species from coal combustion systems | \$9,307 |
|--------|---|---------|

Physical Geography

| | | |
|--------|---|----------|
| 05/073 | Dr Paul Hesse Cosmogenic isotope dating of substrate burial age and accumulation rate of an Australian loess deposit | \$14,568 |
|--------|---|----------|

Physics

| | | |
|----------|---|----------|
| 05/022 * | Dr Scott Butcher Dopant effects for hydrogen and deuterium in nitride semiconductors grown at low temperatures | \$10,562 |
|----------|---|----------|

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|--------|---|---------|
| 05/023 | Dr Scott Butcher Low-k dielectric potential of diatoms | \$5,612 |
|--------|---|---------|

Macquarie University Total \$40,049

The University of Melbourne

Science

| | | |
|--------|---|----------|
| 05/024 | A/Professor James Camakaris Application of radiocopper for investigation of copper homeostasis and Alzheimer's disease | \$13,000 |
|--------|---|----------|

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|--------|---|----------|
| 05/041 | Dr Paul Donnelly The synthesis of new copper and rhenium chelators for application in medicine, industry and environment | \$13,340 |
|--------|---|----------|

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|---------|--|----------|
| 05/061P | A/Professor Michelle Gee Interfacial structure of adsorbed polymeric micelles | \$18,610 |
|---------|--|----------|

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|----------|---|----------|
| 05/067 * | Professor Andrew Gleadow The application of fission track analysis to fundamental problems in the Earth Sciences | \$10,800 |
|----------|---|----------|

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|--|---|--|-----------------|
| 05/124 | | Dr Terry Mulhern Small-angle scattering analysis of Tom70: a receptor component of the translocase of the outer mitochondrial membrane | \$11,680 |
| 05/127P | | Dr Paolo Olivero Study of deuterium incorporation in diamond nanocrystals embedded in a fused quartz matrix by means of secondary ion mass spectroscopy | \$20,524 |
| Medicine | | | |
| 05/112 | * | A/Professor Roger Martin Evaluation of the potential of iodine-124 for PET imaging and radioimmunotherapy of tumours | \$15,000 |
| 05/113 | * | A/Professor Roger Martin Pulse radiolysis studies with DNA-binding radioprotectors | \$6,720 |
| The University of Melbourne Total | | | \$109,67 |

Monash University

Arts

| | | | |
|--------|---|---|----------|
| 05/035 | | Dr Bruno David Landscape archaeology of Mua Island, Torres Strait | \$12,672 |
| 05/093 | * | Professor Peter Kershaw Environmental change and intensification of human occupation: Mt Eccles lava flow, SW Victoria | \$6,402 |
| 05/094 | | Professor Peter Kershaw The history of vegetation-fire-soil-climate relationships in the wet forests of the southern highlands of Victoria | \$9,612 |
| 05/119 | | Dr Ian McNiven Torres Strait Islanders origins project | \$4,224 |

Engineering

| | | | |
|--------|---|--|----------|
| 05/189 | | A/Professor Wayne Cook SANS analysis of nanostructured materials formed by controlled photopolymerization | \$16,960 |
| 05/190 | * | A/Prof Chris Davies Precipitate evolution in retrogression and re-aged aluminium alloy 7075-T6 | \$12,845 |
| 05/137 | * | Professor John Price Use of ultrasonics for detection of flaws in welds between cylinders | \$5,040 |

Sciences

| | | | |
|--------|--|---|---------|
| 05/006 | | Dr Patrick Baker Radiocarbon dating and the dendroecology of river red gum and black box in the Murray-Darling River Basin | \$8,904 |
| 05/007 | | Dr Stuart Batten Magnetic ordering in dicyanamide coordination polymers | \$9,060 |
| 05/218 | | A/Professor John Cashion Mössbauer study of ferromagnetic gold nanoparticles | \$1,164 |
| 05/053 | | A/Professor Trevor Finlayson Neutron residual stress measurements for welds in steel structures and pressure vessels | \$1,400 |

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|--------------------------------|--|------------------|
| 05/054 | A/Professor Trevor Finlayson Relaxation and microstructural studies in triglycine sulfate ferroelectrics | \$790 |
| 05/194 | A/Professor Trevor Finlayson Relaxation and microstructural studies in triglycine sulfate ferroelectrics | \$610 |
| 05/195 | * A/Professor Trevor Finlayson Studies of stresses in association with welds in steel structures and pressure vessels | \$700 |
| 05/201 | Dr Trevor Hicks The magnetic structure and anisotropy of NiPS ₃ | \$13,840 |
| 05/111 | Dr Geordie Mark Empirical assessment of halogen partitioning in metamorphic and hydrothermal minerals: a pilot study using SIMS | \$10,102 |
| Pharmacy | | |
| 05/185 | Dr Ben Boyd A SAXS investigation of the internal structure of liquid crystal particles for agricultural chemicals | \$13,470 |
| Monash University Total | | \$127,795 |

The University of New England

Chemistry

| | | |
|--------|--|---------|
| 05/020 | Dr Trevor Brown Identification and location of antimony oxide species within zeolite structures | \$2,172 |
|--------|--|---------|

Ecosystem Management

| | | |
|--------|---|----------|
| 05/011 | * Ms Nerida Bleakley Linking palaeoecological communities to flood history in a regulated floodplain river | \$13,946 |
|--------|---|----------|

Physics and Electronics

| | | |
|--------|--|---------|
| 05/131 | Dr Sarah Pearson Testing wavelet analysis of small-angle x-ray scattering from collagen | \$7,330 |
|--------|--|---------|

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|--|--|-----------------|
| The University of New England Total | | \$23,448 |
|--|--|-----------------|

The University of New South Wales

ADFA

| | | |
|---------|---|----------|
| 05/025 | Professor Stewart Campbell PrMn _{2-x} Fe _x Ge ₂ - interplay of structural and magnetic properties | \$26,620 |
| 05/076P | Dr Wayne Hutchison Rare earth magnetism studies via ion implanted probes | \$2,490 |
| 05/117 | Professor Roger McLean Determination of the stability of potentially vulnerable channelled swamps, Barrington Tops NSW | \$5,632 |
| 05/158 | Dr Glen Stewart Crystal field effects in rare earth compounds TmCrO ₄ and TmNiAl ₄ | \$1,854 |
| 05/163P | Dr Heiko Timmers Confirmation with SIMS of nitrogen-excess and band-gap/stoichiometry correlations for indium nitride | \$9,264 |

| | | |
|--|--|-----------|
| 05/187 | Professor Stewart Campbell Magnetic phase transitions in $\text{Pr}_{1-x}\text{R}_x\text{Mn}_2\text{Ge}_2$ (R=Y/Lu) | \$39,180 |
| Engineering | | |
| 05/029P | Dr Gavin Conibeer Compositional investigation of silicon quantum dot superlattices in a silicon nitride matrix | \$12,406 |
| 05/183 * | Professor Don Kelly Acoustic emission structural health monitoring of ageing aircraft structures | \$2,085 |
| 05/001 | Dr Laurie Aldridge Comparison between structures of geopolymer and hydrated cement paste | \$8,416 |
| Medicine | | |
| 05/165 | Professor Bernard Tuch Monitoring the mass of insulin-producing cells of the pancreas | \$17,335 |
| 05/181P | Dr Hala Zreiqat A mechanistic study of bone cells interaction with ion implanted hydroxyapatite coatings | \$5,887 |
| Science | | |
| 05/012 | Dr Till Boecking Biofunctional coatings on flat single-crystal silicon | \$8,400 |
| 05/043P | Professor Pauline Doran Studies on spatial distribution of copper and cobalt in leaves and stems of the metal hyperaccumulator <i>Haumaniastrum robertii</i> using micro-PIXE and EDXS techniques | \$9,322 |
| 05/122 | Dr Scott Mooney Archaeological sequences versus past fire activity: elucidation of the humans, climate, fire nexus | \$5,632 |
| 05/227 | Dr Nagarajan Valanoor Structural investigation of the morphotropic phase boundary in Pb free ferroelectrics | \$10,200 |
| 05/083 | Dr Jacob Jones Time-resolved electromechanical behaviour of lead zirconate titanate (PZT) | \$35,700 |
| 05/202 | Dr Jacob Jones Electromechanical, time-resolved fatigue of lead zirconate titanate (PZT) | \$19,345 |
| The University of New South Wales Total | | \$213,881 |

The University of Newcastle

Engineering and the Built Environment

| | | |
|---|--|----------|
| 05/222 * | A/Professor Erich Kisi Residual stress measurements in induction hardened steel | \$9,960 |
| 05/225 | Dr Daniel Riley Synthesis of higher order carbides | \$2,630 |
| Science and Information Technology | | |
| 05/186 | Dr Robert Burns Neutron diffraction studies of the anhydrous heterogeneous polyoxometalate catalysts $\text{H}_3[\text{PM}_{12}\text{O}_{40}]$, where M = Mo and W | \$11,120 |
| 05/109 * | Dr Geoff MacFarlane Metallic signatures and pearl quality | \$11,144 |
| The University of Newcastle Total | | \$34,854 |

Queensland University of Technology

Built Environment and Engineering

| | | |
|--|---|-----------------|
| 05/160P * | Dr Tuquabo Tesfamichael Nanostructured titania electrodes for solar cells and photocatalytic wastewater treatments | \$7,498 |
| 05/180 * | Dr Hao Zhou Influence of metal ion implantation on titania films | \$7,391 |
| Queensland University of Technology Total | | \$16,741 |

The University of Queensland

Biological and Chemical Sciences

| | | |
|---------|--|----------|
| 05/060P | A/Professor Lawrence Gahan Studies of polymeric encapsulating ligands with potential environmental applications for removal of nanomolar levels of heavy metals | \$10,180 |
| 05/212 | Dr Jeremy Ruggles Neutron reflection of Langmuir-Blodgett films on silicon substrates | \$16,110 |
| 05/179P | Dr Jian-xin Zhao The applicability of speleothems in the calibration of the radiocarbon clock beyond 20 ka | \$10,560 |

Engineering, Physical Sciences and Architecture

| | | |
|---------|--|---------|
| 05/115 | Dr Hamish McGowan Unlocking the archives: a Holocene record of Australian dust deposition in the New Zealand landscape: a proxy for inter-regional climate variability. | \$5,888 |
| 05/123P | Dr Anne Mueller Palaeoclimate variability in Australia: insights into climate modes of the Southern Hemisphere | \$6,690 |

Health Sciences

| | | |
|-----------|--|----------|
| 05/032P * | A/Professor Ross Cuneo Radioneuropeptides 2: diagnostic and therapeutic applications in pituitary tumours | \$20,100 |
|-----------|--|----------|

| | | |
|---|--|-----------------|
| The University of Queensland Total | | \$69,528 |
|---|--|-----------------|

RMIT University

Science, Engineering and Technology

| | | |
|-----------|---|----------|
| 05/021 | Dr Gary Bryant Location of solutes between dehydrated membranes using SANS | \$13,795 |
| 05/080P | Professor Peter Johnston Heavy ion beam nanolithography | \$20,694 |
| 05/110P | Professor David Mainwaring Irradiation induced electrical conductivity in polymeric thin films | \$41,388 |
| 05/125 | Dr Dayanthi Nugedoda Tracing the uptake and excretion of environmental heavy metals by the Australian freshwater crayfish <i>Cherax destructor</i> | \$11,150 |
| 05/155P | Professor Dinesh Sood Implantation induced seeding of silica nanowires on silicon (100) surfaces | \$30,593 |
| 05/169P * | Dr Liam Ward Structural and wear characteristics of Si and B modified Ni-Co-Cr-Al type coatings using MEVVA ion implantation | \$16,413 |

| | | |
|------------------------------|--|------------------|
| RMIT University Total | | \$134,033 |
|------------------------------|--|------------------|

University of South Australia

Molecular and Materials Sciences

| | | | |
|--------|---|--|----------|
| 05/133 | * | A/Professor Phillip Pendleton Surface chemistry analyses of porous and non-porous carbon cloths via contrast-matching SANS techniques | \$13,345 |
|--------|---|--|----------|

Ian Wark Research Institute

| | | | |
|--------|--|--|----------|
| 05/188 | | A/Professor Namita Choudhury Understanding the structure and fate of water in novel polymer-inorganic based electrolyte | \$11,040 |
| 05/193 | | Dr Naba Kumar Dutta Effect of salt concentration on the temporal stability and self organization in elastomeric protein | \$13,790 |

The University of South Australia Total \$38,175

Southern Cross University

Environmental Science and Management

| | | | |
|--------|---|--|---------|
| 05/018 | | A/Professor Bill Boyd Refining the late Holocene sea-level curve for northern Vietnam | \$5,632 |
| 05/087 | * | Dr Annabelle Keene Radiocarbon dating to determine the depositional history of a chain of ponds landscape | \$8,480 |

Southern Cross University Total \$14,112

The University of Southern Queensland

Biological and Physical Sciences

| | | | |
|--------|--|---|----------|
| 05/139 | | Dr Joachim Ribbe The distribution of radiocarbon in the south east Pacific Ocean | \$19,136 |
|--------|--|---|----------|

The University of Southern Queensland Total \$19,136

Swinburne University of Technology

Engineering and Science

| | | | |
|--------|---|--|----------|
| 05/045 | * | Professor Derry Doyle Residual stress measurement in dies | \$18,580 |
| 05/191 | * | Professor Derry Doyle Measurement of bulk residual stress in die steels | \$25,740 |

IRIS

| | | | |
|--------|---|---|----------|
| 05/048 | * | Dr Yvonne Durandet Characterisation of residual stresses and microstructures in laser clad Al7075-T6 alloy | \$37,272 |
| 05/192 | * | Dr Yvonne Durandet Characterisation of residual stresses in laser clad Al7075-T6 alloy | \$10,080 |

Swinburne University Total \$91,672

The University of Sydney

Agriculture, Food and Natural Resources

05/150 Dr Balwant Singh
Application of PIXE for localisation of heavy metals in the fronds of Australian native ferns \$12,421

Arts

05/013 Dr Stephen Bourke
Dating the cultic assemblages from the Bronze Age Fortress temple complex at Pella in Jordan \$7,040

05/040 Dr Trudy Doelman
Identifying the source of obsidian artefacts from the Russian Far East \$9,500

05/044 Dr Joe Dortch
A new radiometric history for Lancefield Swamp, with implications for dating the extinction of Australian megafauna \$7,040

05/055 A/Professor Roland Fletcher
Radiocarbon dating of rice husk temper from Angkorean brick temples \$8,448

05/056 A/Professor Roland Fletcher
A pilot ¹⁴C chronology of the environmental and residential history of Angkor in Cambodia (Greater Angkor Project program continuing) \$5,632

05/104 Dr Jaimie Lovell
El Khawarij and the Chalcolithic - Early Bronze Age transition in the southern Levant \$7,040

05/135 Professor Daniel Potts
An AMS chronology of Neolithic through Bronze Age occupation at Tol-e Nurabad (Fars Province), Iran \$10,560

05/174P Dr Peter White
Alongside the Kula. Obsidian distribution in southeast Papua \$16,625

Medicine

05/085 Dr Michael Kassiou
Effect of chronic nicotine treatment on sigma receptors in the rat brain \$49,550

05/086 Dr Michael Kassiou
Development and pharmacological evaluation of a sigma-2 receptor radioligand \$49,500

Science

05/046 A/Professor Deirdre Dragovich
Effects of catchment land use on sediment movement and sediment sources \$4,050

05/064 Professor Robert Gilbert
Polymerisation of polymer colloids \$1,850

05/090 A/Professor Brendan Kennedy
Structures and valence transitions in metal oxides \$11,900

05/092 A/Professor Brendan Kennedy
Phase transition in Sr₂MWO₆ (M = Ni, Zn, Co) double perovskites \$47,750

05/203 A/Professor Brendan Kennedy
Jahn-Teller distortion in Sr₂MnSbO₆ \$13,625

05/204 Dr Cameron Kepert
Evidence for H₂ sorption by a nanoporous coordination polymer by *in-situ* single crystal neutron diffraction \$2,150

| | | |
|---------|--|----------|
| 05/101P | Dr Chris Ling Optimising magnetic frustration: search for a “quantum spin-liquid” state in a variable crystal structure | \$47,600 |
| 05/134 | Dr Dan Penny The use of sediment and palynological records to trace the decline of Angkor | \$3,492 |
| 05/146 | Dr Siegbert Schmid Investigations of defect perovskites suitable for Li ion intercalation | \$13,600 |
| 05/213 | Dr Siegbert Schmid Investigation of defect perovskites suitable for Li ion intercalation | \$20,400 |
| 05/170 | Professor Gregory Warr Adsorbed layer structure of surfactants with polymerised counterions | \$11,600 |
| 05/171 | Professor Gregory Warr Domain structure in adsorbed surfactant bilayers from neutron reflectometry | \$19,760 |
| 05/215 | Professor Gregory Warr Near-surface structure in cylindrical micelle phases | \$14,630 |
| 05/216 | Professor Gregory Warr Liquid crystal formation in ionic liquids | \$15,540 |

Pharmacy

| | | |
|--------|--|----------|
| 05/200 | Dr David Hibbs Experimental electron densities, crystal engineering and molecular recognition: a supramolecular approach to drug design | \$15,050 |
|--------|--|----------|

The University of Sydney Total

\$425,200

University of Tasmania

Science, Engineering and Technology

| | | |
|--------|---|----------|
| 05/141 | Dr Donna Cragg High resolution environmental records from lakes and lagoons of Australia’s subantarctic Heard Island | \$6,650 |
| 05/063 | Dr John Gibson The history and palaeoecology of epiglacial lakes of the Framnes Mountains, Antarctica | \$12,672 |
| 05/095 | Dr Kevin Kiernan Glacial geochronology of the Arthur Range, Tasmanian Wilderness World Heritage Area | \$11,830 |
| 05/118 | Professor Andrew McMinn Introduction of the toxic dinoflagellate, <i>Gymnodinium catenatum</i> , into New Zealand | \$8,500 |
| 05/147 | Dr Andrew Seen Application of lead isotope ratios for identifying and quantifying sources of lead in a complex marine environment with multiple inputs | \$7,980 |

The University of Tasmania Total

\$47,623

University of Technology Sydney

Chemistry, Materials and Forensic Science

| | | |
|---------|---|---------|
| 05/009P | Dr Besim Ben-Nissan Fracture toughness and interfacial fracture energy of sol-gel developed nanocoatings | \$4,046 |
|---------|---|---------|

| | | |
|--|--|----------|
| 05/207 | Dr Philip Maynard Cellulose co-crystallisation and the aging of paper | \$11,875 |
| 05/226 | Dr Besim Ben-Nissan Study of bone derived hydroxyapatite | \$1,700 |
| Environmental Sciences | | |
| 05/151 | Professor Greg Skilbeck Late deglaciation-early Holocene el nino variability on the Peru continental margin | \$10,560 |
| The University of Technology Sydney Total | | \$28,181 |

The University of Western Australia

Life and Physical Sciences

| | | |
|--------|---|----------|
| 05/057 | Dr Shari Forbes Dating skeletal remains of forensic interest - contamination issues and further analysis | \$9,060 |
| 05/217 | Dr Robert Woodward Magnetic vs nuclear particle size of magnetic nanoparticles | \$14,305 |

Natural and Agricultural Sciences

| | | |
|--|---|----------|
| 05/019 | Professor Don Bradshaw Measurement of protein turnover in free-ranging honey possums | \$6,525 |
| 05/039 | ★ Professor John Dodson Late Quaternary palaeoenvironments and vegetation history of Lake Gore, Esperance, Western Australia | \$9,935 |
| 05/089 | ★ Dr Gary Kendrick Radiocarbon dating of rhodoliths collected from Esperance Bay, Western Australia | \$10,065 |
| The University of Western Australia Total | | \$49,890 |

University of Western Sydney

Engineering and Industrial Design

| | | |
|--------|---|---------|
| 05/042 | Dr Ken Doolan Modification of surface properties of thermoplastics by ion implantation | \$4,390 |
| 05/224 | Dr Ken Doolan Design, construction and testing of a temperature jump and control cell | \$1,440 |

Quantitative Methods and Mathematical Sciences

| | | |
|---|---|---------|
| 05/128 | ★ Dr Frederick Osman Theoretical methods for analysing density profiles in plasmas | \$3,630 |
| The University of Western Sydney Total | | \$9,460 |

University of Wollongong

Science

| | | |
|---|--|------------------|
| 05/027 | Professor Allan Chivas Pre-monsoon sedimentation in the Gulf of Carpentaria | \$2,910 |
| 05/220 | Professor Allan Chivas Pilot study: Black Sea palaeoenvironment | \$10,065 |
| 05/081P | Dr Dianne Jolley The use of radiotracer techniques to determine metal contaminant exposure pathways to organisms in marine ecosystems | \$8,000 |
| 05/082 | Dr Dianne Jolley The use of scanning and transmission electron microscopy to identify structural changes and cellular fate of copper and zinc in marine algae | \$9,465 |
| 05/084P | A/Professor Brian Jones Understanding the causes of excessive siltation in the Tamar Estuary, Tasmania: an integrated geochemical and sedimentological study | \$14,640 |
| 05/088 | Dr Paul Keller The development of radiolabelled EGF and VEGF receptor tyrosine kinase inhibitors as antitumour agents | \$28,145 |
| 05/142P | Dr Sharon Robinson Determining the age and growth rate of Antarctic moss shoots by radiocarbon analysis | \$24,775 |
| 05/166P * | Dr Chris Turney The last termination in the wet tropics of Australia | \$5,820 |
| 05/177 | A/Professor Colin Woodroffe Sustainability of reef islands in Torres Strait | \$10,560 |
| Engineering | | |
| 05/102P | Professor Hua Kun Liu Oxygen contamination and element depth profile in MgB ₂ thin films | \$3,139 |
| 05/129P | Dr Alexey Pan Structure and interface control in mono- and multi-layered high temperature superconducting films | \$3,139 |
| 05/208P * | Dr Dominic Phelan A neutron diffraction study of intermetallic phase stability in zinalume® baths | \$5,100 |
| 05/144 * | Dr Andrea Schäfer Analysis and characterisation of trace organic elements in the membrane filtration of remote community bore waters | \$14,070 |
| 05/154 | Dr Saeid Soltanian Study of critical current density, superconductivity, and crystal structure of bulk MgB ₂ prepared by the <i>in-situ</i> reaction technique | \$5,760 |
| The University of Wollongong Total | | \$158,064 |

Summary of experiments at ISIS

AINSE coordinates funding for Australia's membership of ISIS. This facility, situated in Oxfordshire in the United Kingdom, is the most powerful pulsed neutron source in the world. The membership fee was paid through contributions from the Australian Research Council's Linkage Infrastructure Equipment and Facilities Fund, The Australian National University, Curtin University of Technology, Griffith University, The University of Queensland, The University of Sydney, The University of Newcastle, Monash University, ANSTO and AINSE.

Proposals for experiments are submitted to ISIS for peer group review. The very high success rate that the Australian proposals achieve is well above the international average and attests to their very high quality.

In 2005 there were 17 successful proposals which had an aggregate of 56 days as follows.

| | | Days allocated |
|------------------------|--|----------------|
| Blach Dr T P | School of Science Griffith University <i>Neutron study of deuterium absorption by C24K</i> | 5 |
| Campbell Professor S J | ADFA @ The University of New South Wales <i>Magnetic and Valence Transitions in YbMn₂X₂ (X=Ge, Si) - MuSR Studies</i> | 2 |
| Gentle Dr I R | Department of Chemistry University of Queensland <i>SANS of novel multilayer polystyrene nanoparticles</i> | 2 |
| Gentle Dr I R | Department of Chemistry University of Queensland <i>Neutron reflection study of rigid monolayers</i> | 3 |
| Goossens Dr D J | Research School of Chemistry Australian National University <i>Diffuse neutron scattering from deuterated p-terphenyl, (C₁₈D₁₄)</i> | 6 |
| Gray Dr E M | School of Science Griffith University <i>Non-Born-Oppenheimer quantum dynamics and electronic excitations in neutron Compton scattering from protons</i> | 7 |
| Howard Dr C J | Materials & Engineering Science ANSTO <i>Crystal structures and phase transitions in strontium rich SrTiO₃-CaTiO₃</i> | 3 |
| Howard Dr C J | Materials & Engineering Science ANSTO <i>Crystal structures and phase transitions in the system CaTiO₃-La_{2/3}TiO₃</i> | 4 |
| James Dr M | Bragg Institute ANSTO <i>Structure and magnetism in perovskite cobaltates: Ln_{0.2}Sr_{0.8}CoO_{3-d} (Ln=Y³⁺, Ho³⁺)</i> | 2 |
| Kennedy Dr B J | School of Chemistry University of Sydney <i>The monoclinic to cubic transition in Sr doped Ca₂NiWO₆</i> | 3 |
| Kennedy Dr B J | School of Chemistry University of Sydney <i>Structures and phase transition behaviour in the perovskite Sr₃CoNb₂O₉</i> | 3 |
| Meredith Dr P | Department of Physics University of Queensland <i>Modelling proton diffusion in melanins using muons</i> | 3 |

| | | |
|---------------------|--|---|
| Meredith Dr P | Department of Physics University of Queensland <i>Mapping the vibrational structure of key melanin precursors</i> | 3 |
| Pring Professor A | Principal Curator of Minerals South Australian Museum <i>Structural characterisation of $(Ba_{1-x}La_x)_2In_2O_{5+x}$ solid solutions, with $0 \leq x \leq 0.6$</i> | 4 |
| Pring Professor A | Principal Curator of Minerals South Australian Museum <i>In-situ phase transformation studies in iron-nickel sulfides</i> | 4 |
| White Professor J W | Research School of Chemistry Australian National University <i>Differential effects in mixed diblock copolymer amphiphiles at the air/aqueous interface</i> | 2 |

Publication of ISIS Experiments

Hofmann M; Campbell S J; Edge A V J

EuMn₂Ge₂ and EuMn₂Si₂ - magnetic structures and valence transitions
Phys Rev B 69 174432-1 to 174432-9 (2004)

Garcia Y; Ksenofontov V; Campbell S J; Lord J S; Boland Y; Gütllich P
Muon spin relaxation study of the spin transition compound [Fe(Phen)₂(NCS)₂]
J Phys Chem B 108 17838-17844 (2004)

Garcia Y; Ksenofontov V; Campbell S J; Lord J S; Boland Y; Gütllich P
Spin transition in [Fe(Phen)₂(NCS)₂] - μ SR study
Phys Stat Sol (A) 201 3309-3313 (2004)

Goossens D J; Heerdegen A P; Welberry T R; Gutmann M J
Monte Carlo analysis of neutron diffuse scattering data
International Conference on Neutron Scattering 2005 161 2005

Finnigan B; Jack K; Campbell K; Halley P; Truss R; Casey P; Cookson D; King S, Martin D
Controlled size nanofiller thermoplastic polyurethane nanocomposites and their morphological response to uniaxial deformation
Macromolecules 38 7386-7396 2005

Howard C J; Stokes H T
Structures and phase transitions in perovskites - a group theoretical approach
Acta Cryst A 61 93-111 2005

Gretel Kristen Parker
Spectroelectrochemical investigation of chalcopyrite leaching
PhD Thesis Griffith University 2005

Munce C G; Parker G K; Holt S A; Hope G A
Formation processes of copper sulfide thin films
Electrode Processes VII (V I Birss; D H Evans & M Joswicz, eds) PV 04-18 The Electrochemical Society Pennington NJ 132-143 2005

Munce C G; Holt S A; Parker G K; Hope G A
Mechanistic study of the deposition of copper sulfide thin films using chemical bath deposition
Nuclear and Complementary Techniques of Analysis Conference 207 Wellington NZ November 2005

Howard C J; Barnes P W; Kennedy B J Woodward P M
Structures of the ordered double perovskites Sr₂YNbO₆ and Sr₂YTbO₆
Acta Crystallographica B 61 258-262 2005

Carpenter M A; Howard C J; Kennedy B J Knight K S
Strain mechanism for order parameter coupling through successive phase transitions in PrAlO₃
Phys Rev B 71 024118/1-15 2005

Wu E; Kisi E H; Riley D P; Smith R I
Reaction kinetics of Ti₃SiC₂ synthesis from 3Ti/SiC/C mixtures studied by *in-situ* neutron diffraction
J Europ Ceram Soc 25 3503-3508 2005

Kisi E H; Forrester J S
Crystal structure of the relaxor ferroelectric PZN: demise of the "x-phase"
J Phys: Condens Matter 17 L381-L384 2005

Low I M; Lawrence D; Smith R I
Factors controlling the thermal stability of aluminium titanate in vacuum
J Am Ceram Soc 88(10) 2957-2961 2005

Low I M
Depth-profiling of phase composition in a novel Ti_3SiC_2 -TiC system with graded interfaces
Mater Lett 58 2004 927-932

Low I M; Lawrence D; Jones A; Smith R I
Dynamic analyses of the thermal stability of aluminium titanate by time-of-flight neutron diffraction
Proc 29th Int Cocoa Beach Conference on Advanced Ceramics & Composites (D Zhu & W M Kriven eds) CESP 26 303-310 2005

Low I M; Oo Z; O'Connor B H
Characterisation of factors controlling the thermal stability of aluminium titanate
Proc AUSTCERAM 29 Nov – 5 Dec 2004 Melbourne VIC 2004

McLennan K
Structural studies of the palladium-hydrogen system
Ph D Thesis 2005

Wang H; Pring A; Ngothai Y; O'Neill B
A low-temperature kinetic study of the exsolution of pentlandite from the monosulfide solid solution using a refined Avrami method
Geochimica et Cosmochimica Acta 69 415-125 2005

Tenailleau C; Etschmann B; Wang H, Pring A; Grguric B A; Studer A
Thermal expansion of troilite and pyrrhotite determined by *in situ* cooling (873 to 373 K) neutron powder diffraction measurements
Mineralogical Magazine 69 205-216 2005

Chatzidimitriou-Dreismann C A; Vos M; Kleiner C; Abdul-Redah T
Comparison of electron and neutron Compton scattering from entangled protons in a solid polymer film
Phys Rev Lett 91 057403 2003

Vos M; Cooper G Chatzidimitriou-Dreismann C A
Quasi-elastic scattering of electrons at large momentum transfer
Electron and Photon Impact Ionization and Related Topics 2004 (B Piraux ed) Inst of Physics Conference Series 183 81-91 2005

Welberry T R; Gutmann M J; Hyungje Woo; Goossens D J; Guangyong Xuc; Stock C
Neutron diffuse scattering and Monte Carlo study of the relaxor ferroelectric $PbZn_{1/3}Nb_{2/3}O_3$ (PZN)
J Appl Cryst 38 639 647 2005

Henderson M J' Gibaud A; Bardeau J-F; Rennie A R; White J W
A zirconium oxide film self-assembled at the air-water interface
Physica B 357 27-33 2005

Publications

Notification of the following papers incorporating results from AINSE supported projects was received by AINSE in 2005. This list may not be a comprehensive list of all publications arising from AINSE supported work nor does it necessarily relate to Awards held in 2005.

The publications are listed in university order under the name of the chief investigator, in bold. Where the chief investigator is not an author the name is in brackets. Publications arising from AINSE Postgraduate Research Awards (PGRA) are also listed.

The references are as supplied by the chief investigator in the Annual Progress Report and other notifications provided to AINSE. The Progress Reports for AINSE Awards are published on our home page.

The format of the journal references is as follows: abbreviated name of journal, volume, page number, year of publication ISSN.

The format of Conference papers is generally: conference name, page, poster or abstract number, month year, ISSN. At the end of conference paper titles abstracts are marked with a carat ^ and refereed conference papers are marked with a star *.

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|----------------------------------|----------------------|-----------|
|----------------|----------------------------------|----------------------|-----------|

Australian Catholic University

| | | | |
|---------------------|-------------------------------------|--|------------------------------|
| 03/102 & 01/202S | Rogers K; Saintilan N; Heijnis H | Mangrove encroachment of salt marsh in Western Port Bay, Victoria: the role of sedimentation, subsidence, and sea level rise | Estuaries 28(4) 551-559 2005 |
|---------------------|-------------------------------------|--|------------------------------|

The University of Adelaide

| | | | |
|-------------------------------|---|--|---|
| 04/190 | Blau S; Yagodin Y | AMS dates of Kurgans located on the Ust'-Yurt Plateau, Uzbekistan | Radiocarbon 47(2) 235-241 2005 |
| PGRA | Cornelius I; Rosenfeld A; Siegele R; Cohen D | IBIC characterisation of silicon micro dosimeters for space and medical applications using a heavy ion microprobe | Nucl Instr Meth B 190 335-338 2002 |
| PGRA | Cornelius K I M; Ivo O; Siegele R; Rosenfeld; <i>et al</i> | Ion beam induced charge collection time imaging of a silicon microdosimeter | Nucl Instr Meth B 210 191-195 2003 |
| 04/055; PGRA | Barr C; Gell P; Tibby J; Williams M; Jacobsen G | A fine-resolution study of climatic fluctuations in south-eastern Australia over the last 2000 years ^ | IGBP PAGES Open Science meeting. 17 August 2005 Beijing, China |
| 95/R159; 94/073; 96/079 | Longmore M E; Heijnis H | Aridity in Australia: Pleistocene records of palaeohydrological and palaeoecological change from the perched lake sediments of Fraser Island, Queensland, Australia | Quatern Internat 57(8) 35-47 1999 |
| PGRA | Pearce S V; Linton V M | Neutron diffraction measurement of residual stress in high strength, highly restrained, thick sectioned steel welds ^ | International Conference on Neutron Scattering 241 November - December 2005 Sydney, Australia |
| PGRA | Pearce S V; Linton V M | Residual stress in thick sectioned highly restrained steel welds | International Trends in Welding Research Conference Proceedings 6440 May 2005 |
| 02/102; 02/103 | Wang H; Pring A; Ngothai Y; O'Neill B | A low temperature kinetic study of the exsolution of pentlandite from the monosulfide solid solution using a Refined Avrami equation | Geochemica et Cosmochemica 69 415-425 2005 0016-7037 |
| 02/102; 04/126 | Wai Y H; Tenailleau C; Pring A; Brugger J | Experimental study of the transformation of pentlandite/pyrrhotite to violarite regolith | Regolith 2004 - Proc CRC LEME Regional Regolith Symposium 146-150 2004 0040-6031 |
| 02/102; 04/126 | Wang H; (Pring A) | Kinetic studies in some solid-state reactions of metal sulfides | PhD Thesis 2005 0040-6031 |
| 02/102; 04/126 | Wang H; Pring A; Ngothai Y; O'Neill B | Phase evolution and kinetics of the oxidation of monosulfide solid solution under isothermal conditions | Thermochimica Acta 427 (1-2) 13-25 2005 0040-6031 |

The University of Auckland

| | | | |
|--------|---|--|--|
| 99/008 | Shulmeister J; Fink D; Augustinus P | A cosmogenic nuclide chronology of the last glacial transition in North-West Nelson, New Zealand - new insights in Southern Hemisphere climate forcing during the last deglaciation | Earth Planetary Sci Letters 233 455-466 2005 |
| 04/001 | Shulmeister J; Shane P; Lian O; Augustinus P <i>et al</i> | A ca 60 ka record from Lake Poukawa, Hawkes Bay, New Zealand: implications for a significant interstadial at the beginning of isotope stage 3 | Palaeogeogr Palaeoclimat Palaeoecol 269 1-27 2001 |
| 03/053 | Denny W A; Wilson W R; Stevenson R J; (Hay M) <i>et al</i> | Nitrobenzindoles and their use in cancer therapy | PCT Patent Application PCT/ NZ2005/000278 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|--|--|--|
| 04/220 | Idriss H; Senanayake S D | Coupling of CO to acetylene over defected UO ₂ (111) single crystal surfaces | J Am Chem Soc 227 U1561-U1561 March 2004 |
| 04/220 | Idriss H; Senanayake S D | Surface chemistry of UO ₂ (111) single crystal: CO hydrogenation and coupling reactions | J Am Chem Soc 227 U236-U236 March 2004 |
| 04/220 | Idriss H; Senanayake S D | Reaction of water on oxygen-defected UO ₂ (111) single crystal surface | J Am Chem Soc 227 U89-U90 March 2004 |
| 04/220 | Senanayake S D; Waterhouse GIN; Idriss H | Coupling reactions of carbon monoxide over uranium dioxide surfaces: a high resolution XPS study | J Am Chem Soc 229 527 2005 |
| PGRA | Lee J; Gao W; Li Z; Hodgson M; Asadov A; <i>et al</i> | Microstructure and properties of annealed ZnO thin films deposited by magnetron sputtering | Acta Metall Sin (English Letters) 18(3) 177-183 2005 |
| PGRA | Lee J; Metson J; Bhattacharyya D | Electrical conduction mechanism of ZnO thin films | 16th National Congress, Australian Institute of Physics 164 Canberra 2005 |
| PGRA | Lee J; Metson J; Evans P J; Bhattacharyya D | SIMS studies of the diffusion behaviour of implanted and annealed ZnO | 14th Australian Conference on Nuclear and Complementary Techniques of Analysis & 8th Vacuum Society of Australia Congress, 181-184 2005 Wellington, NZ 0 9758434 0 0 |
| PGRA | Lee J; Depagne C; Metson J; Evans P; Bhattacharyya D | Microstructure and optical study of Al implanted ZnO thin films | Second International Conference on Advanced Materials and Nanotechnology 121 2005 Queenstown, New Zealand |
| PGRA & 05/121P | Lee J; Gao W; Li Z; Hodgson M; Metson J; Hao G; Pal U | Sputtered deposited nanocrystalline ZnO films: a correlation between electrical, optical and microstructural properties | Appl Phys A 80 (8) 1641-1646 2005 |
| PGRA & 05/121P | Lee J; Metson J; Evans P; Bhattacharyya D | Effects of implantation on microstructure and properties of ZnO thin films | New Horizons for Materials and Processing Technologies International SAMPE Symposium and Exhibition 50 2255-2262 2005 |
| 01/094 | Borrmann T; McFarlane A; Johnston J; Dytlewski N; Markwitz A | Heavy-ion elastic recoil detection analysis as a useful tool for tracking experimental modifications in bulk calcium silicates | Surf Interf Anal 37 (8) 695 - 698 July 2005 |
| 05/121P | Granville S; Budde F; Koo A; Ruck B J; Trodahl H J; Bittar A; Metson J B; James B J; <i>et al</i> | Structural characterisation of GaN and GaN:O thin films | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 102 November 2005 Wellington NZ 0 9758434 0 0 |
| 05/121P | Granville S; Budde F; Koo A; Ruck B J; Trodahl H J; Bittar A; Metson J B; Kennedy V J; <i>et al</i> | Ion beam analysis of GaN thin films with a protective GaN capping layer | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 137 November 2005 Wellington NZ 0 9758434 0 0 |
| 05/121P | Xiong G; Ucer K B; Williams R T; Lee J; Metson J; <i>et al</i> | Donor-acceptor pair luminescence of nitrogen implanted ZnO single crystal | J Appl Phys 97(4) 1 2005 |
| 03/082 | Metson J B; Ruck B J; | Characterisation of amorphous GaN films | Appl Surf Sci 244 (1-4) 264-268 2005 |
| 03/082 | Ruck B J; Koo A; Lanke U; Budde F; Trodahl H J; Metson J B; <i>et al</i> | Filled and empty states of disordered GaN studied by x-ray absorption and emission | J Appl Phys 96(6) 3571-3573 2004 |
| 03/082 | Metson J B; Trodahl J; Ruck B; Lanke U; Bittar A | X-ray absorption spectroscopy in the analysis of GaN thin films | Surf Interf Analysis 35 719-722 2003 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|--|--|---|
| 03/082 | Ruck B J; Koo A; Lanke U D; Budde F; Granville S; Metson J B <i>et al</i> | Quantitative study of molecular N ₂ trapped in disordered GaN:O films | Phys Rev B 70 235202 2004 |
| 02/097P | Patterson A V; Degenkolbe A; Hogg A; Pullen S; Li D; Chappell A <i>et al</i> | SN 27744: a new hypoxic cytotoxin with activity <i>in vitro</i> and <i>in vivo</i> ^ | International Conference on Molecular Targets and Cancer Therapies 547 November 2003 Boston USA |

The Australian National University

| | | | |
|---------|--|--|--|
| 98/145R | Sayavongkhamdy T; (Bellwood P) | Archaeology in Laos | Ph D Thesis 2001 |
| 98/145R | Mahirta; (Bellwood P) | Archaeology on Rote and Savu Islands, Astern Indonesia | Ph D Thesis 2002 |
| 03/028 | Gingele F X; De Deckker P; Hillenbrand C D | Late Quaternary terrigenous sediments from the Murray Canyons area, offshore South Australia and their implications for sea level change, palaeoclimate and palaeodrainage of the Murray-Darling Basin | Marine Geology 212 183-197 2004 |
| 03/028 | Gingele F X; De Deckker P | Late Quaternary fluctuations of palaeoproductivity in the Murray Canyons area, South Australian continental margin | Palaeogeogr Palaeoclimat Palaeoecol 220 361-373 2005 |
| 01/100 | Tomkins A; (Dunlap W J) | Evolution of the granulite-hosted Challenger gold deposit, South Australia: implications for ore genesis | PhD Thesis 2002 |
| 03/035 | Dunlap W J | Crystallization versus cooling ages of white micas: dramatic effect of K-poor inclusions on ⁴⁰ Ar/ ³⁹ Ar age spectra | J Virtual Explorer http://www.virtualexplorer.com.au/ 13 2004 |
| 05/047 | McDougall I; Brown F H; Fleagle J G; (Dunlap W J) | Stratigraphic placement and age of modern humans from Kibish, Ethiopia | Nature 433 733-736 2005 |
| PGRA | Flett I | Fieldwork Report - Galápagos Islands, Ecuador | Quatern Australasia G54 17-19 2005 |
| 01/057 | Denham T; (Golson J) | The Kuk morass: multi-disciplinary investigations of early to mid Holocene plant exploitation at Kuk Swamp, Wahgi Valley, Papua New Guinea | Ph D Thesis 2004 |
| 05/199 | Goossens D J; Heerdegen A P; Welberry T R; Gutmann M J | Monte Carlo analysis of neutron diffuse scattering data ^ | International Conference on Neutron Scattering M228 Nov - Dec 2005 Sydney |
| 05/199 | Welberry T R; Goossens D J; Heerdegen A P; <i>et al</i> | Diffuse neutron scattering in benzil, C ₁₄ D ₁₀ O ₂ | ISIS Annual Report Science Highlights 2004 |
| 05/199 | Welberry T R; Gutmann M J, Woo H; Goossens D J; <i>et al</i> | Neutron diffuse scattering and Monte Carlo study of the relaxor ferroelectric PbZn _{1/3} Nb _{2/3} O ₃ (PZN) | J Appl Cryst 38 639-647 2005 |
| 04/061 | Goossens D J; Wilson K F K; James M | Structure and magnetism in Ho _{1-x} Sr _x CoO _{3-d} | J Phys Chem Solids 66 169-175 2005 |
| 04/061 | James M; Wallwork K S; Withers R L; Goossens D J; Wilson K F; Horvat J; <i>et al</i> | Structure and magnetism in the oxygen-deficient perovskites Ce _{1-x} Sr _x CoO _{3-d} (x ≥ 0.90) | Mat Res Bull 40(8) 1415-1431 2005 |
| 04/200 | Goossens DJ; Wu X; Prior M | Structural phase transition in d-benzil characterised by capacitance measurements and neutron powder diffraction | Solid State Communications 136 543-545 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|---------------------|--|--|--|
| 04/069 | Elwood C; (Haberle S) | A discontinuous late-glacial and Holocene vegetation record from Pine Lake, Central Plateau, Tasmania | AQUA Biennial Meeting 20 December 2004 Cradle Mountain, Tasmania |
| 01/074 | Prentice M L; Hope G S; Maryunani K; Peterson J A | An evaluation of snowline data across New Guinea during the last major glaciation, and area-based glacier snowlines in the Mt Jaya region of Papua, Indonesia, during the Last Glacial Maximum | Quatern Internat 138-139 93-117 2005 |
| 92/035 93/121 | Li G; Prince K E; Petracic M; Chua S J; Jagadish C | Substrate orientation effect on Zn d-doping in GaAs grown by metal organic vapour phase epitaxy | J Crystal Growth 191 357-360 1998 |
| 99/018 | Davids C; (McDougall I) | A thermochronological study of southern Fiordland, New Zealand | Ph D Thesis 2000 |
| 99/018 | Lus W; (McDougall I) | Metamorphic sole of the Papuan ultramafic belt ophiolite: field mapping, petrochemistry, geochemistry, geochronology and associated reconnaissance experimental studies on boninite genesis | PhD thesis 2004 |
| 03/145 | Brink F; (Noren L) | Oxygen/fluorine ordering, modulated structures and solid state solutions in metal oxyfluoride systems | PhD Thesis 2004 |
| 01/111 | Veth P; Spriggs M; O'Connor S | The continuity of cave use in the tropics: examples from East Timor and the Aru Islands, Maluku | Asian Perspectives 44(1) 180-192 2001 |
| 00/120 | O'Connor S; Aplin K; Szabó K; Pasveer J; Veth P; Spriggs M | Liang Lemdubu, a Pleistocene cave site in the Aru Islands | In O'Connor S; Spriggs M Veth P (eds) The Archaeology of the Aru Islands, Eastern Indonesia 23 171-204 2005 Terra Australis Canberra: Pandanus Press |
| 00/120 | O'Connor S; Aplin K A; Hope G | Nabulei Lisa: the Holocene sequence | In O'Connor S; Spriggs M Veth P (eds), The Archaeology of the Aru Islands, Eastern Indonesia 23 25-161 2005 Terra Australis Canberra: Pandanus Press |
| 04/117 | O'Connor S; Veth P | Early Holocene shell fish hooks from Lene Hara Cave, East Timor establish complex fishing technology was in use in Island Southeast Asia five thousand years before Austronesian settlement | Antiquity 79 1-8 June 2005 |
| 04/117 | Szabo K; O'Connor S | Migration and complexity in Holocene Island Southeast Asia | World Archaeology Special Issue, Peter Rowley-Conway (ed) Debates in World Archaeology) 36(4) 621-628 2004 |
| PGRA | Henderson M J; Perriman A; Robson-Marsden H; <i>et al</i> | Protein-poly(silicic) acid interactions at the air/solution interface | J Phys Chem B 109 (44) 20878-20886 2005 |
| 02/181 | O'Neill H StC; James M; Dollase W A; Redfern S A T | Temperature dependence of the cation distribution in CuAl ₂ O ₄ spinel | Europ J Mineral 17 581-586 2005 |
| 02/108P; 03/095P | Khalil A S; Llewellyn D J; Ridgway M C; Stewart A M; Byrne A P; Chadderton L T | Swift heavy ion irradiation of single crystal indium phosphide * | Proc Microscopy and Microanalysis 2004, IM Anderson, R Price, E Hall, E Clark, S Kernan (eds)10 580-581 August 2004 Savannah GA USA |
| 02/108P; 03/095P | Khalil A S; Stewart A M; Ridgway M C; Llewellyn D J; Byrne A P; Chadderton L T | Observation of track formation and track annealing in in swift heavy ion irradiated InP | 16th National Biennial Congress of the Australian Institute of Physics Paper FRC22 205 2005 Canberra ISBN 0-9598064-8-2 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|---------------------|--|--|--|
| 94/183; 95/R154 | Spriggs M | The archaeology of the Aru Islands, Eastern Indonesia | Spriggs M; O'Connor S; Spriggs M; Veth P (eds) 314 + vi pp 2005 Terra Australis 22 Canberra: Pandanus Books |
| 98/137R | Spriggs M | Bougainville 's early history: an archaeological perspective | In AJ Regan and HM Griffin (eds) Bougainville Before the Conflict 1-19 Pandanus Books 2005 Canberra |
| 97/192R; 95/R154 | Bedford S; (Spriggs M) | Pieces of the Vanuatu puzzle: archaeology of the north, south and centre | PhD Thesis 2000 |
| 97/192R | Spriggs M | Chronology of the Neolithic transition in island South-east Asia and the Western Pacific: a view from 2003 | The Review of Archaeology 24(2) 57-80 2003 |
| 95/R154 | Spriggs M; O'Connor S; Veth P | Vestiges of early pre-agricultural economy in the landscape of East Timor | In A Karlstrom and A Kallen (eds) Fishbones and Glittering Emblems: Southeast Asian Archaeology 49-58 2002 |
| 95/R154 | Veth P; O'Connor S; Spriggs M | Changing research perspectives from Australia's doorstep: the joint Australian-Indonesian Aru Islands Initiative and the Archaeology of East Timor Project | In T Murray (ed) Archaeology from Australia., Melbourne: Australian Scholarly Publishing 209-230 2004 |
| 01/134 | Summerhayes G R | Melanesian obsidian – its sources, characterisation and distribution | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 14 November 2005 Wellington NZ 0 9758434 0 0 |
| 04/171P | Katsifis A; Mattner F; Mana P; Linares D; Ballantyne P; (Willenborg D) <i>et al</i> | Evaluation of CLINDE, a radiolabelled peripheral benzodiazepine receptor ligand in a murine model of neuro-inflammation: potential probe for assessing neurodegeneration | J Lab Comp Radiopharm 48 S88 2005 |
| 04/173 | Ting V; Liu Y; Withers R L; Norén L; James M | A structure and phase analysis investigation of the "1:1" ordered $A_2\text{InNbO}_6$ perovskites (A = Ca^{2+} , Sr^{2+} , Ba^{2+}) | J Solid State Chem 179 551-562 2006 |

University of Ballarat

| | | | |
|---------------------|--|---|---|
| 99/022 | Rankin E; (Bierlein F) | Petrology and geochemistry of intrusive dykes in central Victoria | BSc Hons Thesis 2000 |
| 03/033 & 04/043P | Pearce D; Dowling K; Waldron H; Garnett D | Child's play: investigating the exposure potential of environmental contaminants in soil | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 210 November 2005 Wellington NZ 0 9758434 0 0 |
| 03/033 | Harvey G; Dowling K; Waldron H; Garnett D | Trace element content of vegetables grown in the Victorian goldfields: characterization of a potential hazard | Proc Nuclear Science and Engineering in Australia 168 - 172 2003 |
| 01/148 | Callister K; (Westbrooke M) | <i>Casuarina pauper</i> (Belah) woodlands of Northwest Victoria: monitoring and regeneration | Ph D Thesis 2004 |

University of Canberra

| | | | |
|--------|---|---|---|
| 00/044 | Esslemont G; Russell R A; Maher W A | Coral record of harbour dredging: Townsville, Australia | J Marine Systems 52 51-64 2004 |
| 02/155 | Jeffree R A; Markich S J; Tucker A D | Patterns of metal accumulation in osteoderms of the Australian freshwater crocodile <i>Crocodylus johnstoni</i> | Science of the Total Environment 336 71-80 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|----------------------------------|----------------------|-----------|
|----------------|----------------------------------|----------------------|-----------|

Central Queensland University

| | | | |
|---------|---|---|---|
| 02/001P | Ashwath N; Bhatia N P; Orlic I; Siegele R; Ashwath N; Baker A J M; Walsh K B | Studies on spatial distribution of nickel in propagules of the metal hyperaccumulator <i>Stackhousia tryonii</i> Bailey using micro-PIXE and EDXMA techniques | 4th International Conference on Serpentine Ecology P 29 April 2003 Havana, Cuba |
| 05/030P | Metcalfe R D; Connor J N; Blackford M G; Smith K L | Electron microscope studies of fly ash deposition in an electrostatic precipitator | 19th Australian Conference on Microscopy and Microanalysis 147 February 2006 Sydney |

Charles Darwin University

| | | | |
|------|-----------------|--|-----------------------------|
| PGRA | Parry D; Jong T | Evaluation of the stability of arsenic immobilized by microbial sulfate reduction using TCLP extractions and long-term leaching techniques | Chemosphere 60 254-265 2005 |
|------|-----------------|--|-----------------------------|

Curtin University of Technology

| | | | |
|-----------------|--|--|---|
| PGRA | Chester R; De Marco R; Ogden M; Mocerino M; Lobler R; Skelton B; White A | <i>Calixarenes</i> as potential ionophores for thallium detection ^ | International Conference on Electrochemical Sensors 55 November 2005 |
| PGRA | Chester R | <i>Calixarenes</i> as potential ionophores for ion-selective electrodes | The 12th Annual RACI Analytical and Environmental Research & Development topics 23 December 2004 Melbourne |
| PGRA | John D; Blom A; Bailey S; Nelson A; Schulz J; De Marcon R; Kinsella B | The application of neutron reflectometry and atomic force microscopy in the study of corrosion inhibitor films ^ | International Conference on Neutron Scattering T252 November - December 2005 |
| 04/040 | De Marco R; Pejic B; Buckley C E; Knott R; <i>et al</i> | Tools for evaluating the nanostructure of a chalcogenide membrane electrochemical sensor | International Workshop on Nanotechnology 30 Perth Australia July 2005 |
| PGRA | Kirby N M; van Riessen A; Buckley C E; Wittorff V W | Oxalate-precursor processing for high quality BaZrO ₃ | J Mater Sci 40 97-106 2005 ISSN 0022-2461 |
| PGRA | Kirby N M; Trang A; van Riessen A; Buckley C E; <i>et al</i> | Solid-state processing of BaZrO ₃ for melt processing of high temperature superconductors | Superconductor Science and Technology 18 648 – 657 2005 |
| 05/106P | Low I M; Wren E; Oo E Z; Prince K E; Atanacio A | Depth-profiling of composition in air-oxidized Ti ₃ SiC ₂ by SIMS ^ | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 93-96 November 2005 Wellington NZ 0 9758434 0 0 |
| 04/207 | Tezuka N; Low I M; Davies I J; Prior M; Studer A | <i>In-situ</i> neutron diffraction investigation on the phase transformation sequence of kaolinite and halloysite to mullite ^ | International Conference on Neutron Scattering T158 November - December 2005 Sydney |
| 92/105 | Mackinnon C W; Deyu Li; Low I-M | Preparation of single-phase high T _c superconductor (Bi,Pb) ₂ Sr ₂ Ca ₂ Cu ₃ O _x (2223) with Hg substitution | J Am Ceram Soc 88 1201–1204 2005 |
| 99/030 & 03/176 | Low I M; Lawrence D; Smith R I | Factors controlling the thermal stability of aluminium titanate in vacuum | J Am Ceram Soc 88 2957-2961 October 2005 |
| 99/030 | Manurung P; Low I M; O'Connor B H; Kennedy S | Effect of β-spodumene on the phase development in an alumina/aluminium-titanate system | Materials Research Bulletin 40 2047-2055 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|---|---|--|--|
| 99/030 | Manurung P; (Low I M) | Microstructural design of alumina/aluminium-titanate composites | Ph D Thesis 2001 |
| 00/90P; 01/091; 02/075; 04/188 | Low I M; Oo Z; OConnor B; Prince K E | Effect of oxygen partial pressure on the thermal stability of Ti_3SiC_2 | Proc 29th Int Cocoa Beach Conference on Advanced Ceramics & Composites: (D. Zhu & W.M. Kriven, Eds.) CESP 26 323-330 2005 |
| 02/075; 04/188 | Oo Z; Low I M; OConnor B | Data analysis of <i>in-situ</i> study on the phase stability of Ti_3SiC_2 in argon using the Rietveld method | Proc 3rd Int Conf on Computer Applications 173-178 March 2005 Yangoon, Burma |
| 03/176 | Low I M; Oo Z; O'Connor B H | Characterisation of factors controlling the thermal stability of aluminium titanate | Proc AUSTCERAM 74 Nov - Dec Melbourne VIC 2004 |
| 04/207 | Tezuka N; Low I M; Davies I J | Diffraction studies of phase transformations in kaolin at elevated temperature | Proc 9th Japan international SAMPE symposium (JISSE-9) K Kageyama; J Takahashi (eds) S5-19 December 2005 Japan chapter of SAMPE, Tokyo, Japan CD-ROM |
| 04/207 | Tezuka N; Low I M; Davies I J | The effect of heating and cooling rate on the phase transformation of kaolinite and halloysite | Proc AXAA 2005 conference and exhibition 126 February 2005 Fremantle |
| 98/010; 99/029; 00/091P | Low I M | Ceramic matrix composites: microstructure – property relationship | Woodhead Publishing Ltd UK 540 January 2005 ISBN 1 85573 942 9 |
| PGRA | Smith P; Rohl A; Parkinson G; Lowe J | Understanding incorporation of impurity ions into DSP in the Bayer Process * | 15th International Symposium on Industrial Crystallisation 191-194 September 2002 Sorrento Italy |
| PGRA | Maitland C F; Buckley C E; Rowles M R ; Hart R D; O'Connor B H | Investigating the nanoporous structure of aluminosilicate geopolymers using small-angle scattering and electron microscopy ^ | International Conference on Neutron Scattering M111 November - December 2005 Sydney Australia |
| PGRA | Buckley C E; Maitland C F | Determining structural information from powders using small angle x-ray scattering (SAXS) ^ | 16th National AIP Congress 166 Canberra Jan – Feb 2005 |
| PGRA; 02/014 | Connolly J; Maitland C F; Rowles M R; O'Connor B H; Buckley C E | Investigating the structure of aluminosilicate geopolymers using x-ray and neutron scattering | Proceedings of the AXAA National Conference 46 Fremantle Australia Feb 2005 |
| PGRA | Boskovic S; Maitland C F; Connolly J D; Buckley C; Turney T, <i>et al</i> | Microemulsion templated mesoporous silica: characterisation via small angle x-ray scattering and stability in aqueous buffers | Studies in Surface Science and Catalysis Proc Nanoporous Materials-IV, Niagara Falls 156 717-724 June 2005 Ontario, Canada |
| 99/033 | Hamilton-Brown P; (O'Connor B H) | Diffraction study of structural transformations during chalcocite oxidation | MSc Thesis 2000 |
| 03/089 | Pratapa S; (O'Connor B H) | Diffraction-based modelling of microstructural size and strain effects in sintered ceramics | PhD Thesis 2003 |
| 95/111; 96/145; 97/143 | Sitepu H; O'Connor B H; Li D | Comparative evaluation of the march and generalized spherical harmonic preferred orientation models using x-ray diffraction data for molybdite and calcite powders | J Appl Cryst 38 158–167 2005 |
| PGRA | Buckley C; Rohl A; Gale J; Paglia G | Determination of the structure of gamma-alumina from interatomic potentials and first principle calculations | Phys Rev B 71 224115 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|-------------------|--|--|--|
| 02/196; 02/095 | Loan M; Richmond W; Hockridge J; St Pierre T; Hart R; Newman O G M; Farrow J B; Parkinson R; <i>et al</i> | Characterisation of iron(III) oxyhydroxides in hydrometallurgy * | EPD Congress 2005, M E Schlesinger (ed) The Minerals, Metals and Materials Society 13-31 2005 Pennsylvania |
| PGR9/00 | Pejčić B | Mechanistic studies of several chalcogenide based potentiometric chemical sensors in marine water | Ph D Thesis 2003 |
| PGRA | Sheppard D A; Maitland C F; Buckley C E | Preliminary results of hydrogen adsorption and SAXS modelling of mesoporous silica: MCM-41 | J Alloys Compounds 404–406 405–408 2004 |
| PGRA | Sheppard D A; Buckley C E; Maitland C F | Preliminary investigations of hydrogen adsorption in mesoporous silica ^ | 16th Biennial Australian Institute of Physics National Congress 190 January - February 2005 Canberra, Australian Capital Territory |
| PGRA | Sheppard D A; Maitland C F; Connolly J; Buckley C E | Modelling the structure and hydrogen adsorption characteristics of MCM-41 | Proceedings of the AXAA National Conference 55 Fremantle Australia February 2005 |
| PGRA | Sheppard D A; Buckley C E | Investigations of the structure of titanate nanoscrolls ^ | International Conference on Neutron Scattering M110 November - December 2005 Sydney Australia |
| 04/157P | Winter K; (van Riessen A) | Characterization of the organic/inorganic interface in nano-crystalline biomaterials | PhD Thesis 2005 |
| 04/191 | Fansuri H; (Zhang D-K) | Catalytic partial oxidation of propylene to acrolein: the catalyst structure, reaction mechanisms and kinetics | PhD Thesis 2005 |

Edith Cowan University

| | | | |
|---------|---|---|--------------------------------|
| 00/069P | Duncan P C; (Hinckley S) | Growth phases of chemically deposited CdS thin films | BSc Hons Thesis 2001 |
| 00/069P | Duncan P C; Hinckley S; Gluszak E A; Dytlewski N | PIXE and RBS investigation of growth phases of ultra-thin chemical bath deposited CdS films | Nucl Instr Meth B 190 615 2002 |
| 97/167R | Ryder D S; (Horwitz P) | Origin and fate of organic matter in south-west Australian wetlands | PhD Thesis 2000 |

Flinders University

| | | | |
|-------------------|--|---|---|
| 03/072; 04/097 | Baird D; Le Gal La Salle C; Simmons C | Understanding recharge and flow mechanisms in a confined, multi-layer aquifer system ^ | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 119 November 2005 Wellington NZ 0 9758434 0 0 |
| 05/066 | Hartley V F; Matisons J G; Bartlett J; Ginic-Markovic M; Skinner D; Kim F; <i>et al</i> | Inorganic-organic hybrid polymers by polymerisation of methylmethacrylate mechanical and optical properties | Pacificchem 2005 MATL-836 Honolulu, Hawaii, December 2005 |
| 04/109P | Hartley V; (Matisons J G) | Novel nanostructured materials based on inorganic-organic hybrid systems | BSc Nanotechnology (Biodevices) Hons Thesis |
| 04/109P | Hartley V; Matisons J G; Bartlett J; Ginic-Markovic M; Skinner D; Finnie K; <i>et al</i> | Creating novel nano-structured materials based on titania-organic hybrid networks ^ | 27th Australasian Polymer Symposium, (RACI Polymer Division) 3 Adelaide, South Australia, Australia, 18 Nov – 2 Dec 2004 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|--------------------|--|--|---|
| 04/109P | Hartley V; Matisons J G; Bartlett J | Recent developments in titania filled nanocomposite hybrid materials | Connect 2005 – The 12th RACI Convention 217 Sydney July 2005 |
| 94/099; 97/186R | Pate F D; Brodie R; Owen T D | Determination of geographic origin of unprovenanced Aboriginal skeletal remains in South Australia employing stable isotope analysis | Australian Archaeology 55 1-7 2002 |
| 98/146R | Pate F D; Owen T D; Lawson E M | AMS radiocarbon of bone collagen: establishing a chronology for the Swanport Aboriginal burial ground, South Australia | Australian Archaeology 56 8-11 2003 |
| 01/189S | Owen T D; (Pate D) | A bio-archaeological analysis of ancient indigenous skeletal material from the Swanport archaeological site, South Australia | Ph D Thesis 2002 |
| 05/138 | Keough S (Quinton J) | Grazing incidence x-ray studies of lumogen thin films | B Sc Hons Thesis 2005 |
| 99/035 | Rogers C; (Shapter J) | STM imaging of DNA in air on metal substrates | Ph D Thesis 2001 |
| 01/127 | Losic D; (Shapter J) | The exploitation of self-assembled monolayers for the fabrication of enzyme biosensors | PhD Thesis 2002 |
| 03/105 | Norman J; (Shapter J) | Investigation into the micro-mechanical properties of trabecular bone | B Sc Nano (Hons) 2004 |
| 04/135P | Gooding J; Shapter J | Carbon nanotube systems to communicate with enzymes | In Protein Nanotechnology: Protocols, Instruments and Applications ed Tuan Vo-Dinh 225-242 2005 1-58829-310-6 |
| 03/141 | Sykes P J | <i>In vivo</i> mutagenic effect of very low dose radiation ^ | Pacific Basin Nuclear Conference 19 2004 Honolulu Hawaii |

Griffith University

| | | | |
|---------|--|---|---|
| 02/052P | Cheong K; Dimitrijevic S; Han J | Optimisation of high temperature direct N ₂ O grown gate oxide on 4H-SiC: electrical and physical characterisations | J Appl Phys 93 5682-5686 2003 |
| 02/188 | Hanna J V; Boyd S E; Healy P C; Bowmaker G A; Skelton B W; White A H | Structural and solid state ³¹ P NMR studies of the four-coordinate copper(I) complexes [Cu(PPh ₃) ₃ X] and [Cu(PPh ₃) ₃ (CH ₃ CN)]X | Dalton Trans 2547-2556 June 2005 1497-9226 |
| 03/062P | Munce C G; Holt S A; Parker G K; Hope G A | Mechanistic study of the deposition of copper sulfide thin films using chemical bath deposition | NCTA Conference 207 Wellington NZ November 2005 |
| 03/062P | Parker G; (Hope G) | Spectroelectrochemical investigation of chalcopyrite leaching | Ph D Thesis 2005 |
| 98/016 | Li H-F; (Seatman D) | Investigating SiC metal-oxide-semiconductor (MOS) structures | Ph D Thesis 2001 |

James Cook University

| | | | |
|---------|--------------------------|---|------------------------------------|
| 03/005 | Prendergast K; (Baker T) | Porphyry-related hydrothermal systems in the Ertzberg District, Papua, Indonesia | PhD Thesis 2004 |
| 01/042P | Page M C; Dickens G R | Sediment fluxes to Marion Plateau (southern Great Barrier Reef province) over the last 130 ky: New constraints on transgressive-shedding off northeastern Australia | Marine Geology 219 27-45 July 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|---|--|---|
| 01/042P | Dunbar G B; Dickens G R | Late Quaternary shedding of shallow marine carbonate along a tropical mixed siliciclastic-carbonate shelf: Great Barrier Reef, Australia | Sedimentology 50 1061-1077 2005 |
| 03/056 | Olson S L; Wingate D; Hearty P J; and Grady F V | Prodromus of vertebrate paleontology and geochronology of Bermuda | Insular Vertebrate Evolution: the Palaeontological Approach 20 219-232 2005 |
| 05/098 | Kosnik M A; Wüst R A J; Walker E J; Kaufman D | Large diameter suction cores from Magnetic Island and Rib Reef (Central Great Barrier Reef): implications for understanding the history of sedimentary and biological processes at these locales | Consortium for Ocean Geosciences of Australian Universities Conference 22 Orpheus Island Qld June 25-29 2005 |
| 03/075 | Lottermoser B G; Ashley P M | Contaminant dispersion at the rehabilitated Radium Hill uranium mine, South Australia | Europ J Mineral, 83rd Annual Meeting of the German Mineralogical Association 17 85 2005 Aachen, Germany |
| 00/089 | Lottermoser B G; Ashley P M | Tailings dam seepage at the Mary Kathleen uranium mine Australia | J Geochem Explor 85 119-137 2005 |
| 03/075 | Lottermoser BG; Ashley P M | Environmental review of the Radium Hill uranium mine site, South Australia | World Mining Surface and Underground 57 113-117 2005 |
| 03/075; 00/089 | Lottermoser B G; Ashley P M | Environmental review of the Mary Kathleen and Radium Hill uranium mine sites: rehabilitation success in a modern world? | 4th Sprigg Symposium: Uranium - Exploration, Deposits, Mines and Minewaste Disposal Geology 78 Adelaide, Geological Society of Australia 2005 |
| PGRA | Muller J; Wüst R; Weiss D | Climate change in the Southern Hemisphere based on carbon isotopes and geochemical data - the Lynch's crater tropical lake record, Nth Qld, Australia | 32nd Int Geol Congr 388 2004 |
| PGRA | Muller J; Kylander M; Wüst R A J; Weiss D; Jacobsen G | 55,000 yrs of environmental change in the Southern Hemisphere: peat stratigraphy and inorganic geochemistry of Lynch's Crater, NE Queensland, Australia | American Geophysical Union Fall session PP22A-07 San Francisco USA 2005 |
| PGRA | Wüst, R; Kylander M; Garcia-Sanchez R; Muller J; Weiss D | A 50-ka Pb-isotope record from the southern hemisphere - Lynch's Crater, Queensland, Australia, and its implications for climate change | PAGES Open Science Meeting 107 Beijing, China 2005 |
| PGRA | Muller J; Kylander M; Wüst R; Weiss D | Geochemical climate proxies 1: trace elements in a 13 m record from Lynch's crater N-Queensland, Australia | DEKLIM Conference 172-173 Mainz Germany March 2005 |
| PGRA | Kylander M; Muller J; Garcia-Sanchez R; Wüst R A J; Weiss D | Geochemical climate proxies 2: rare earth elements and Pb isotopes in a 13 m terrestrial record from Lynch's Crater, North Queensland, Australia | DEKLIM Conference 159 Mainz Germany March 2005 |
| PGRA | Wüst R A J; Muller J; Kylander M; Weiss D | Lynch's Crater - suitability of a peat record for paleoclimatic constraints based on (multiple) geochemical proxies: trace elements, Pb-isotopes and REEs | DEKLIM Conference 228 Mainz Germany 2005 |
| PGR1/98 | Patterson B | Stereochemistry and applications of mono- and oligo-nuclear complexes of iron, ruthenium and osmium | Ph D Thesis 2002 |
| 02/107 | da Silva E T; Ridd M J; Klumpp D | Can body burden in the barnacle <i>Balanus amphitrite</i> indicate seasonal variation in cadmium concentrations | Estuarine, Coastal and Shelf Science 65 159-171 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|--|--|--|
| 02/107 | Teixeira da Silva E; (Ridd M) | Cadmium accumulation in the barnacle biomonitor <i>Balanus amphitrite</i> : combining field and laboratory observations with modelling | PhD Thesis 2005 |
| 03/107 | Pastor L; Wüst R A J; Luly J; Smithers S; Kosnik M A | Stratigraphic sequences deposited offshore Orpheus Island since the last transgression - implications for sea level change | Consortium for Ocean Geosciences of Australian Universities conference 30 Orpheus Island Qld June 2005 |
| 04/175 | Magnuson M; Heimann K; Wüst R | Assessment of the Quaternary paleoclimate and environmental conditions of tropical semi-arid Australia using diatom profiles | Australasian Society for Phycology and Aquatic Botany conference, Sardi 54 December 2004 Adelaide, Australia |

La Trobe University

| | | | |
|----------|--|---|---|
| 02/040 | Webb S G; Edwards P C | The natufian human skeletal remains from Wadi Hammeh 27 | Paléorient 28(1) 103-124 2002 Paris 0197-7482 |
| 02/040 | Meadows J; Sayej G; Westaway M; Edwards P | From the PPNA to the PPNB: new views from the southern Levant after excavations at Zahrat adh-Dhra' 2 in Jordan | Paléorient 30(2) 21-60 2004 Paris 0197-748 |
| 99/153SP | Webb J; Frankel D | Intensive site survey. Implications for estimating settlement size, population and duration in Prehistoric Bronze Age Cyprus | In M Iacovou (ed) Archaeological Field Survey in Cyprus. Past History, Future Potentials (British School at Athens Studies) 11 125-137 2004 |
| PGR7/99 | Gard F | Characterization of ZnSe/GaAs interface grown by MBE, using SIMS and RHEED | Ph D Thesis 2001 |
| PGRA | Grover S P P; Tisdall J M; Jacobsen G | Past processes in peats: untangling the origin of dried peat in the Australian Alps | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 19 November 2005 Wellington NZ 0 9758434 0 0 |
| PGRA | Grover S P P | Bogs: water, carbon and time. An investigation of ecohydrology, carbon dynamics and environmental change in subalpine peat bogs ^ | Australian Institute of Alpine Scientists Meeting January 2005 Jindabyne |
| 01/096P | Clode P; (Marshall A) | Microscopy and microanalysis of calcification in scleractinian corals | PhD Thesis 2001 |
| PGRA | Raiber M; Webb J A | Salt lakes and their influence on the salinity of surface waters in Mount Emu Creek and Fiery/Salt Creek, western Victoria | Geological Society of Australia Abstracts, Victorian Universities Earth and Environmental Sciences Conference, La Trobe University 38 September 2004 |
| PGRA | Raiber M; Webb J A | Geology and hydrogeology of a Tertiary deep lead palaeodrainage system in the Glenelg-Hopkins Catchment, western Victoria | Geological Society of Australia Abstracts, Victorian Universities Earth and Environmental Sciences Conference, University of Melbourne 49 September 2005 |
| 01/118P | James D; (Riley J) | Growth of metal overlayers on semiconductors | PhD Thesis 2003 |
| 03/096P | Dieing T; (Riley J) | MBE growth of GaAsN using an ECR plasma source | PhD Thesis 2005 |
| 05/167P | Dieing T; Usher B F; Warminski T; Prince K | Nitrogen plasma source characterisation by SIMS depth profiling and highresolution x-ray diffraction ^ | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 270 November 2005 Wellington NZ 0 9758434 0 0 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|----------------------------------|--|--|
| 01/185S | Bennetts D; (Webb J) | Quantification of groundwater discharge of salt in a local groundwater system using isotopic techniques | B Sc Honours Thesis 2001 |
| 01/185S | Bennetts D; Webb J | Sources of increased discharge to a catchment affected by dryland salinity, western Victoria, using hydrochemical and isotopic methods ^ | 17th Australian Geological Convention, Geological Society of Australia 73 4 February 2004 Hobart |
| 03/124 | Webb J A; Beatty B | Quantifying recharge to a deep lead aquifer in central Victoria using the Sr isotope composition of groundwater ^ | 8th Australasian Environmental Isotope Conference 85-87 December 2004 Melbourne |
| 04/165 | Edwards M; Webb J A | Hydrogeology of a Tertiary sand aquifer in the Mount William Creek catchment, Upper Wimmera region, western Victoria ^ | Australasian Hydrogeology Research Conference 37-39 December 2004 Melbourne |

Macquarie University

| | | | |
|---------|---|---|---|
| 01/025 | Ramelan A H; (Butcher S) | Aluminium gallium antimonide MOCVD growth and characterisation and Te-doping of GaSb using DMTe | PhD Thesis 2002 |
| 01/025 | Affuddin; (Butcher S) | The growth of gallium nitride and aluminium gallium nitride by laser induced chemical vapor deposition | PhD Thesis 2003 |
| 05/023 | Butcher K S A; Ferris J M; Phillips M R; <i>et al</i> | A luminescence study of porous diatoms | Materials Science and Engineering C 25 658-663 2005 |
| 04/021 | Butcher K S A; Wintrebert-Fouquet M; <i>et al</i> | Non-stoichiometry and non-homogeneity in InN | Physica Status Solidi C 2 2263-2266 2005 |
| 04/021 | Butcher K S A; Wintrebert-Fouquet M; Chen P P-T; <i>et al</i> | Revisiting electrochromism in InN | Physica Status Solidi C 2 2293- 2296 2005 |
| 04/021 | Chen P P-T; Butcher K S A; Wintrebert-Fouquet M; Prince K E | Properties of InN grown by remote plasma enhanced chemical vapour deposition | Proc Optoelectronic and Microelectronic Materials and Devices (COMMAD) 85-87 December 2004 Brisbane Australia |
| 98/026 | Patterson M J; (Cant N) | Comparison of platinum group metal catalysts for the oxidation of selected hydrocarbons | MSc (Hons) Thesis 1999 |
| 01/056 | Cheng P; (Goldys E) | Characterisation of LCVD GaN | MSc 2002 |
| 02/047P | Gelhausen O; (Goldys E) | Defect compensation mechanisms and transition metals in GaN | PhD Thesis 2004 |
| 02/056 | Ralph T; Hesse P | Scales and mechanisms of channel breakdown, lower Macquarie River and Macquarie Marshes, NSW ^ | Australian and New Zealand Geomorphology Group 11th Conference 58 February 2004 Melbourne 0-9751909-2-x |
| 03/001 | Wilkinson M; (Humphreys G) | Reaction of a passive margin: the interplay between vegetation dynamics, soil thickness, climate and incision | PhD Thesis December 2005 |
| PGRA | Hesse P P; Ralph T J; Yonge D | Dryland wetlands: the Holocene response of inland rivers in Australia ^ | Drylands - Linking Landscape Processes to Sedimentary Environments, BGRG-BSRG International Conference The Geological Society 54 February 2005 London |
| 02/134 | Carthew K; Drysdale R; Taylor M | An environmental model of the fluvial tufas of the seasonally humid tropics, northern Australia | Geomorphology 72 78-100 2006 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|--|---|--|
| 03/112 | Morris O N; (Taylor M) | The role of physical and chemical transport mechanisms in the dispersion of heavy metals and arsenic in the seasonally-wet tropical, East Branch of the Finnis River, Northern Territory, Australia | BSc Hons Thesis 2004 Lancaster University UK |
| 05/159 | Shah P; Strezov V; Prince K; Siegele R; Nelson P F | Trace element analysis and speciation for coal combustion systems using SIMS and PIXE | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 227-230 November 2005 Wellington, NZ |

The University of Melbourne

| | | | |
|-----------------|--|--|---|
| 04/022P | Greenough M; Pase L; Voskoboinik I; Petris M; Camakaris J <i>et al</i> | Signals regulating trafficking of the Menkes copper-translocating P-type ATPase in polarised MDCK cells | Am J Physiol Cell Physiol 287 1463-1471 2004 |
| 00/024P | Bellingham S; Camakaris J | Copper homeostasis and the alzheimer's disease amyloid precursor protein | Ph D Thesis 2005 |
| PGRA | Connor S | Fire records and the archaeology of the Caucasus | In A. Fairbairn (ed.), Australasian Archaeometry Conference: bProgram and Abstracts 54-55 December 2005 ANU, Canberra |
| PGRA | Connor S E; Kvavadze E V | Climatic and human influences on vegetation dynamics around Tbilisi over the past 6000 years | Proc Georgian Academy of Sciences B 3 64-76 2005 |
| PGRA | Kvavadze E V; Connor S E | <i>Zelkova carpiniifolia</i> (Pallas) K Koch in Holocene sediments of Georgia – an indicator of climatic optima | Review of Palaeobotany and Palynology 133 69-89 2005 |
| 03/152 & 05/062 | Nelson A; Gee M; McLean S; Schulz J | The structure of the di-block copolymer P2VPPEO as a function of pH and temperature ^ | International Conference on Neutron Scattering T280 November - December 2005 |
| 03/046 | Spikings R A; Foster D A; Kohn B P; Gleadow A | The low temperature (<110°C) thermal history of the Mt Isa and Murphy Inliers, NE Australia: evidence from apatite fission-track the rmochronology | Aust J Earth Sci 53 151-165 2006 0812-0099 |
| 03/046 | Weber U D; Kohn B P; Gleadow A J W | Muccan Batholith, Eastern Pilbara, Western Australia | In Anand R R de Broekert P (ed) Regolith Landscape Evolution Across Australia: A Compilation of Regolith Landscape Case Studies with Regolith Landscape Evolution Models, CRC LEME 338-343 2005 Perth |
| 03/046 | Osadetz KG; Kohn BP; Feinstein S; Price R; Gleadow A | Foreland belt thermal history using apatite fission track thermochronology: implications for Lewis Thrust and Flathead Fault in the Southern Canadian cordilleran petroleum province | In Swennen R Roure F and Granath J (eds) Chapter 2 - Deformation, Fluid Flow and Reservoir Appraisal in Foreland Fold and Thrust Belts. AAPG Hedberg Series, no 1 21-48 2004 |
| 00/054P | Raab M; Gleadow A | Morphotectonic evolution of Namibia | Ph D Thesis 2001 |
| 98/136 | Mitchell M M; Gleadow A | The thermal and tectonic development of the western Otway Basin and the Flinders Ranges, Australia from apatite fission track analysis | PhD Thesis 1997 |
| 00/054P | Sutriyono E; Gleadow A | Cenozoic thermotectonic history of the Birds Head region, Irian Jaya | PhD Thesis 2000 |
| 00/054P | Kendrick R; Gleadow A | Structure, tectonics and hydrocarbon potential of the Irian Jaya fold belt | PhD Thesis 2000 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|---|---|--|
| 01/055 | Carter T J; Gleadow A | Thermochronology and the morphotectonic evolution of extensional tectonic environments | PhD Thesis 2003 |
| 01/055 | Reilly, J; Gleadow A | Techniques for developing long-term landscape histories and sediment budget inventories from large, multidimensional thermochronologic data sets | PhD Thesis 2004 |
| 98/136 | Noble W N; Gleadow A | Post pan African tectonic evolution of eastern Africa: an apatite fission track study | PhD Thesis 457 1997 |
| 03/059P | Myers D E; Khan S; Liu D; O'Brien T J; Hicks R J; Williams D A | Hippocampal [3h]-flumazenil binding in rat models of temporal lobe epilepsy | 25th Annual "Silver Jubilee" Scientific Meeting of the Australian Neuroscience Society 16-33 August 2005 Paris, France 1034-3237 |
| 04/059 | Lorencak M; Kohn B P; Osadetz K G; Gleadow A J W | Combined apatite fission track and (U-Th)/He thermochronometry in a slowly cooled terrane: results from a 3440 m deep drill hole in the southern Canadian Shield | Earth and Planetary Science Letters 227 87-104 2004 |
| 02/090 | Forster S; Timmann A; Konrad M; Mulvaney P; <i>et al</i> | Scattering curves of ordered mesoscopic materials | J Phys Chem B 109 1347-1360 2005 |
| 99/150S | Jackson H; Pemberton H | A Hellenistic housing insula in North Syria | Ph D Thesis 2000 |
| PGRA | Phair J; Schulz J C; Bertram W K; Aldridge L P | Investigation of the microstructure of alkali-activated cements by neutron scattering | Cement and Concrete Research; 33(11) 1811-1824 2003 |
| PGRA | Phair J W; Schulz J C; Aldridge L P; Smith J D | Small-angle neutron scattering and rheological characterization of aluminosilicate hydrogels | J Am Ceram Soc 87(1) 129-137 2004 |
| 03/092 | Hare A; Cas RAF; Musgrave R; Gray C; Phillips D | A magnetic and chemical stratigraphy for the Werribee Plains basaltic lava flow-field, Newer Volcanic Province, SE Australia: implications for eruption frequency | Aust J Earth Sci 52 41-57 2005 |
| 02/099P | Olivero P; Prawer S D; Jamieson D N; McCallum J C; Peng J L; <i>et al</i> | Formation of carbon nanoclusters by implantation of keV carbon ions in fused silica followed by thermal annealing | Proc Micro- and Nanotechnology: Materials, Processes, Packaging, and Systems II 5650 35-43 December 2004 Bellingham, WA |
| 01/124 | Whitton E; Sagona A | Provenance and ware types: applications of proton induced x-ray emission and proton induced gamma-ray emission to analysis of northeast Anatolian pottery | MA thesis 2004 |
| 03/114 | Thomas I; Enrigh N; Kenyon C | The Holocene history of Mediterranean type plant communities, Little Desert National Park, Victoria, Australia | The Holocene 11 691-697 2001 |
| 03/114 | Connor S Thomas I | Sediments as archives of industrialisation: evidence of atmospheric pollution in coastal wetlands of southern Sydney, Australia | Water, Air, and Soil Pollution 149 189-210 2003 |

Monash University

| | | | |
|--------|--------------------------------------|--|---|
| 99/022 | Bales A; Bierlein F | The Wimmera Dyke Swarm - structure, alteration and gold mineralisation | BSc Hons Thesis 2000 |
| 04/215 | Morey AA; Weinberg R F; Bierlein F P | Deformation history and multiple gold mineralisation events within the Bardoc Tectonic Zone, Eastern Goldfields, Western Australia | In Mao J and Bierlein F P (eds) Mineral Deposit Research: Meeting the Global Challenge, Springer Verlag, Heidelberg, 557-560 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|-----------------------------|--|---|---|
| 04/008 | Vos I M A; Bierlein F P | Gold systems in northeastern Queensland: a key to tectonic evolution of the northern Tasman Fold Belt System, Australia | In Mao J Bierlein F P (eds) Mineral Deposit Research: Meeting the Global Challenge 593-596 Springer Verlag, Heidelberg 2005 |
| 01/219 | Gagliardi F; Cashion J | Applications of Mössbauer spectroscopy to gold mining | MSc 2001 |
| 01/219 | Greaves T; Cashion J | Mössbauer spectroelectrochemical technique development and its application to the characterisation of Prussian Blue and nontronite | Ph D Thesis 2004 |
| PGRA; 04/199; 05/054 | Daniels J E; Finlayson T R; Studer A J; Hagen M E | Time resolved studies near the ferroelectric transition in triglycine sulphate during the application of high-voltage fields ^ | 11th International Meeting on Ferroelectrics, Ferroelectrics IMF-18-003 2005 |
| PGRA; 05/054; 05/194; | Daniels J E; Finlayson T R; Studer A J; Hagen M E | Time resolved neutron diffraction studies of triglycine sulphate near the ferroelectric transition during the application of high voltage electric fields ^ | International Conference on Neutron Scattering OM19 November - December 2005 |
| 02/033 | David B; McNiven I; Manas L; Manas J; Savage S; <i>et al</i> | Goba of Mua: archaeology working with oral tradition | Antiquity 78 158-172 2004 |
| 04/038 | David B; Crouch J; Zoppi U | Historicizing the spiritual: by shell arrangements on Badu Island, Torres Strait | Cambridge Archaeol J 15(1) 71-91 2005 |
| 03/135 & 02/033 | Rowe C; David B | A Holocene history of vegetation change in the western Torres Strait Region, Queensland, Australia | PhD Thesis 2005 |
| 98/035 | David B; Hogan P; Walt H; McNiven I; Lawson E | Rio de las Vacas shelter and the distribution of Sudden and San Rafael Side-notched points: high country cultural links during the Late Archaic in the American Southwest | The Artefact 27 113-122 2005 |
| 03/150; 04/051 | Daniels J E; Piltz R; Hagen M E; Finlayson T R | Neutron diffraction studies of the ferroelectric/paraelectric transition in triglycine sulphate ^ | 16th National Congress of the Australian Institute of Physics CMMSP PTU 86 Jan / Feb 2005 Canberra ACT 0-9598064-8-2 |
| PGRA; 04/199; 05/054 | Daniels J E; Studer A J; Finlayson T R; Hagen M E | Development of a new instrument to observe time-resolved neutron diffraction intensities in association with phase transitions ^ | 16th National Congress of the Australian Institute of Physics CMMSP MOC 34 Jan/ Feb 2005 Canberra ACT 0-9598064-8-2 |
| 01/066 | Blumbach P; Haberle S | A high-resolution fire reconstruction based on the charcoal record from Lake Sondambile, Papua New Guinea: an El Nino sensitive region of the western Pacific | BA Thesis 2002 |
| 00/060 | Haberle S G; Haberle S | A 23,000-yr pollen record from Lake Euramoo, wet tropics of NE Queensland, Australia | Quat Res 64 343-356 2005 |
| PGRA | Healy J; Edward G H; Knott R B | Residual orientation in injection micro- molded parts: A SANS study ^ | International Conference on Neutron Scattering T164 Nov - Dec 2005 Sydney |
| PGRA | Healy J; Edward G H; Knott R B | Residual orientation in injection molding: a SANS study | Proc 62nd Annual Technical conference of the Society of Plastics Engineers 3433-34337 May 2004 |
| 97/200R | Barry M J; Tibby J; Tsitsilas A; Mason B; Kershaw P; <i>et al</i> | A long term lake-salinity record and its relationships to <i>Daphnia</i> populations | Archiv fur Hydrobiologie 163 (1) 1-23 2005 |
| 04/094 | White D C; Kershaw P | Change and environmental response in southeastern Australia: a palaeoecological record from Lake Surprise, Western Plains of Victoria ^ | Biennial Conference of the Australasian Quaternary Association, Cradle Mountain 45-46 December 2004 Tasmania |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|------------------------|--|---|--|
| 05/094 | McLeod A; Kershaw P | Spatial and temporal vegetation variation and soil processes interpreted from soil charcoal, Central Highlands, Victoria | Biennial Conference of the Australian Quaternary Association Abstracts 33-34 2004 Cradle Mountain, Tasmania, |
| 01/085 | Varasso N; Kershaw P | The environmental history of the Yarra parklands | M Env Sci 2000 |
| 98/034 | Harle K J; Kershaw A P; Heijnis H | The contributions of uranium thorium and marine palynology to the dating of the Lake Wangoom pollen record, western plains of Victoria, Australia | Quat Internat 57(8) 25-34 1999 |
| 97/095R | McKenzie G M; Kershaw A P | Holocene pollen record from cool temperate rainforest, Aire Crossing, the Otway region of Victoria, Australia | Rev Palaeobot Palynol 132 281-290 2004 |
| 02/161 | Leahy P G; Tibby J; Kershaw A P; Heijnis H; Kershaw J S | A palaeolimnological reconstruction of the impact of European settlement on the Yarra River floodplain, Victoria, Australia | River Research and Management 21 131-149 2005 Chichester, UK 1535-1459 |
| 02/085 | McNiven I; Feldman R | Ritually orchestrated seascapes: hunting magic and dugong bone mounds in Torres Strait, NE Australia | Cambridge Archaeol J 13(2) 169-94 2003 |
| 02/085 | McNiven I | Saltwater people: spiritscapes, maritime rituals and the archaeology of Australian indigenous seascapes | World Archaeology 35(3) 329-49 December 2003 Cambridge 0959-7743 |
| PGRA; 05/053; 05/195 | Price J W H; Paradowska A M; Ibrahim R; Finlayson T; | Residual stress evaluation in welds and implication for design for pressure vessel applications | ASME J Pressure Vessel Technology, Pressure Vessels & Piping Division Conference, PVP2005, PVP2005-71107 July 2005 |
| PGRA; 04/198; 05/053 | Paradowska A; Price J W H; Ibrahim R; Finlayson T; Blevins R; Ripley M | Residual stress measurements by neutron diffraction in multi-bead welding ^ | International Conference on Neutron Scattering 260 November - December 2005 Sydney, Australia |
| PGRA; 05/053; 05/195 | Paradowska A; Finlayson T; Price J W H; Steuwer A; Ibrahim R; Ripley M | Investigation of reference samples for residual strain measurements in a welded specimen by neutron and synchrotron x-ray diffraction ^ | International Conference on Neutron Scattering 261 November - December 2005 Sydney, Australia |
| PGRA; 04/198; 05/053 | Paradowska A; Price J W H; Ibrahim R; Finlayson T R; | A neutron diffraction study of residual stress due to welding | J Materials Processing Technology 164-165 1099-105 2005 |
| PGRA; 04/198; 05/053 | Paradowska A; Price J W H; Ibrahim R; Finlayson T; Blevins R; Ripley M | Neutron diffraction evaluation of residual for several weld arrangements | Materials & Testing 05' Science, Technology & Application 21 2005 Fremantle Western Australia |
| PGRA | Paradowska A; Price J W H; Ibrahim R; Finlayson T | Influence of restraint and increasing number of beads on residual stress distribution in steel weldments and implications for design for pressure vessel applications | Proc 8th International Conference on Operating Pressure Equipment, OPE 85-92 2005 |
| PGRA; 04/198; 05/053 | Paradowska A; Price J W H; Ibrahim R; Finlayson; Blevins R; Ripley M | Investigation of residual stress in single and multi-bead on plate ^ | Spring 2005 Conference on EPSRC-ILL Millennium Projects Engineering http://www.ill.fr/diff/epsrc/ONSITE/paradowska.pdf May 2005 |
| PGRA; 04/198; 05/053 | Paradowska A; Price J W H; Ibrahim R; Finlayson T; Ripley M; Blevins R | Residual stress evaluation in multi-bead steel weldments using neutron diffraction ^ | Welding in the World International Conference of International Institute of Welding IIW'2005 49 (9) 388-399 July 2005 |
| PGRA & 04/050 & 04/198 | Paradowska A; Price J W H; Ibrahim R; Finlayson T; Curfs C | Study of residual stress distribution and the influence of restraint for a single weld bead in a low carbon steel using neutron diffraction technique | Advances on Applied Mechanics The 4th Australasian Congress on Applied Mechanics 775-780 February 2005 Melbourne, Australia |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|--|--|---|
| 99/159S | Garvey C J; (Simon G) | A study of the hydration of paper sheets | Ph D Thesis 2000 |
| 04/138P | Garvey C J; Simon G P; Parker I H | On the interpretation of paper x-ray diffraction powder patterns in terms of the nanostructure of cellulose I fibres | Macromol Chem Phys 206 1568 2005 |
| PGRA | Tawfik D; Kirstein O; Mutton P J; Chiu W K | Verification of residual stresses in flash butt weld rails ^ | International Conference on Neutron Scattering T251 November - December 2005 Sydney, Australia |
| PGRA | Tawfik D; Mutton P J; Chiu W K | The effects of short-term post-weld heat treatments on residual stresses in flash butt welds | Proc 8th International Heavy Haul Conference 653-658 2005 Rio de Janeiro, Brazil |
| 03/127 | Wilde A R; McPhail D C; Brugger J; McKnight S; Garnett D | Source of metals in Pb-Zn deposits of the Canning Basin, Western Australia, using INAA & AAS | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 298 November 2005 Wellington NZ 0 9758434 0 0 |
| 03/127 | Wilde A; McPhail D; Brugger J; McKnight S; Garnett D | Preliminary study of the source of base metals in MVT deposits of the Canning Basin, Western Australia | Mineral Deposit Research: Meeting the Global Challenge: Proc. 8th Biennial SGA Meeting Mao J. and Bierlein F. (eds) 195-198 2005 Beijing China, Springer |

Murdoch University

| | | | |
|---------|--|--|--|
| 01/191S | Eberhard S; (Davis J) | Ecology and hydrology of the Jewel cave Karst system | PhD Thesis 2004 |
| 99/061 | Hughes R; (Lund C) | The ultra-high vacuum surface analysis of the photodegradation of hydrogenated amorphous silicon solar cell materials and devices | Ph D Thesis 2003 |
| PGRA | Meyrick D | Interaction of Sm-EDTMP and related phosphonates with bone | PhD Thesis 2005 |
| PGRA | Minakshi M; Singh P; Issa T B; Thurgate S; Prince K | Electrochemical behavior of LiFePO ₄ in aqueous lithium hydroxide electrolyte | 25th Electronics Division Meeting 28 2005 Japan |
| PGRA | Minakshi M; Singh P; Issa T B; Thurgate S; Prince K | Electrochemical behaviour of LiFePO ₄ in aqueous lithium hydroxide electrolyte | Connect 2005 Apte, SC and Kable, SH (eds)The Royal Australian Chemical Institute July 2005 Australia 0-9578632-2-X |
| PGRA | Minakshi M; Singh P; Issa T B; Thurgate S; De Marco R | Lithium insertion into manganese dioxide electrode in MnO ₂ /Zn aqueous battery Part III. Electrochemical behavior of γ -MnO ₂ in aqueous lithium hydroxide electrolyte | J Power Sources 153(1) 165-169 January 2006 Elsevier Science, Netherlands 0378-7753 |
| PGRA | Minakshi M; Singh P; Issa T B; Thurgate S; Prince K | Electrochemical delithiation of LiMnPO ₄ in aqueous battery system | Proc NTA/VSA conference 203 November 2005 Wellington, NZ |

The University of Newcastle

| | | | |
|--------|-------------------------|--|----------------------|
| 99/066 | Shimeld P; (Colhoun E) | The vegetation and climate history of the Lower Hunter Valley | Ph D Thesis 2001 |
| 98/087 | Kelly M D; (Drysdale R) | Fresh water stromatolites as potential paleoenvironmental indicators: a case study from lower south east South Australia | BSc Hons Thesis 1998 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|---------------------|---|---|--|
| 03/157 & 03/070P | Forrester J S; Kisi E H; Studer A J | Direct observation of ferroelastic domain switching in polycrystalline BaTiO ₃ using <i>in situ</i> neutron diffraction | J European Ceramic Society 25 447-454 2005 |
| 04/060 | Goodwin I D | A mid-shelf wave direction climatology for south-eastern Australia, and its relationship to the El Nino - southern oscillation, since 1877 AD | Int Climatology 25 1715-1729 2005 |
| 02/073 | Kisi E | <i>In-situ</i> neutron diffraction study of a liquid nitrogen quenched Mg-PSZ under load: a microcrack dominated system? | J Am Ceram Soc 88 2510-2514 2005 1551-2916 |
| 03/070P | Wu E; Kisi E H; Riley D P; Smith R I | Reaction kinetics of Ti ₃ SiC ₂ synthesis from 3Ti/SiC/C mixtures studied by <i>in-situ</i> neutron diffraction | J Europ Ceram Soc 25 2503-2508 2005 0955-2219 |
| 01/086 | Riley D; (Kisi E H) | Self-propagating high-temperature synthesis of Ti ₃ SiC ₂ | PhD Thesis 2002 |
| 01/086 | Forrester J; (Kisi E H) | <i>In-situ</i> diffraction study of perturbed ferroelectric crystal structures | PhD Thesis 2002 |
| 98/086 | Grice K; (Lawrance G) | Lithiated manganese oxides for use in rechargeable lithium ion cells | Ph D Thesis 2000 |
| 03/079P | Zoppi U; Skopec J; McCluskey A; Fink D; <i>et al</i> | Radiocarbon dating of illicit drug samples | Radiocarbon 18 Conference 125 September 2003 Wellington New Zealand |
| 01/141 | Paul M C; Toia R; von Nagy-Felsobuki E I | The determination of mercury and selenium in shark tissue | 4th International Conference on High Resolution Sector Field ICPMS 36 2003 Venice, Italy |
| 01/141 | Wilson D J D; Marsden C J; von Nagy-Felsobuki E I | <i>Ab initio</i> structures and stabilities of HeTM ³⁺ (TM=3DSc-Cu) | Chemical Physics 284(3) 555-563 2002 0301-0104 |
| 01/141 | Wilson D J D; von Nagy-Felsobuki E I | <i>Ab initio</i> structures and stabilities of transition metal helides | Coastal Voyage in Quantum Chemistry Troms=C8 =FB 2004 Trondheim, Norway |
| 01/141 | Sahureka F; Burns R C; von Nagy-Felsobuki E I | Electrospray characterization of perhenate systems | J Am Soc Mass Spectrom 1 12(10) 1136-1143 2001 1044-0305 |
| 01/141 | Wilson D J D; Marsden C J; von Nagy-Felsobuki E I | <i>Ab initio</i> structures and stabilities of doubly charged diatomic metal helides for the first row transition metals | J Phys Chem A 106(32) 7348-7354 2002 1089-5639 |
| 01/141 | Wilson D J D; von Nagy-Felsobuki E I | <i>Ab initio</i> vibrational spectra and structure of the ground state HeSch ²⁺ | Molecular Physics 103(4) 507-520 2005 0026-8976 |
| 01/141 | Wilson D J D; Marsden C J; von Nagy-Felsobuki E I | <i>Ab initio</i> structures and stability of diatomic transition metal helides cations | 19th Austin Symposium in Molecular Structure 8 2002 Austin USA |
| 01/141 | Sudarko; von Nagy-Felsobuki E I | The ro-vibrational spectra of non-linear triatomic molecules | PhD Thesis 2001 |
| 01/141 | Wilson D J D; von Nagy-Felsobuki E I | <i>Ab initio</i> investigation of the electronic structure and vibrational states of transition-metal helide cations | PhD Thesis 2004 |
| 01/141 | Wilson D J D; Marsden C J; von Nagy-Felsobuki E I | <i>Ab initio</i> calculations on first row transition metal hydrides tmhn+ and helides TMHe ⁽ⁿ⁺¹⁾⁺ (TM =3D Sc-Cu, n =3D 0-2) | Physical Chemistry Chemical Physics 5(2) 252-258 2003 1463-9076 |
| 01/141 | Sudarko; von Nagy-Felsobuki E I | Rotational and ro-vibrational transitions of He ₂ C ²⁺ | Phys Chem Chem Phys 6(19) 4542-4545 2004 1463-9076 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|---|---|--|
| 01/141 | Hughes J M; von Nagy-Felsobuki E I; Sudarko | <i>Ab initio</i> vibration and ro-vibrational spectrum of the 1A1 state He ₂ Si ²⁺ | Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 58(4) 747-761 2002 1386-1425 |
| 01/141 | Sutrisno; Baran Y; Lawrance G A; von Nagy-Felsobuki E I | Determination of acid dissociation constants of neamine by potentiometric and electrospray mass spectral techniques | Struct Chem 12(2) 189-195 2001 1040-0400 |
| 01/141 | Wilson D J D; von Nagy-Felsobuki E I | The electronic structure of transition metal dihalide dications | 12th Royal Australian Chemical Institute Convention Abstract M152 2005 Sydney |
| 99/065 | Wnukowska A; (Willgoose G) | Microcrack initiation in mine waste rock from the Ranger uranium mine | ME Thesis 2001 |

The University of New England

| | | | |
|---------|---|--|---|
| 01/062P | Grave P; Lisle L; Maccheroni M | Multivariate comparison of ICP-OES and PIXE/PIGE analysis of East Asian Storage Jars | J Archeol Sci 32 885-896 2005 |
| 01/062P | Grave P; Lisle L; Maccheroni M | The transition to the early modern economy in East and Southeast Asia, 1400-1750 AD: production and exchange of stoneware jars | International Conference: Chinese Export Ceramics and Maritime Trade, 12th-15th Centuries, (Pei-kai Cheng ed) 32 163-186 2005 Hong Kong 962-8885-50-2 |
| 04/099 | Lockwood P; Tighe M; Zawadzki A; Heijnis H | Floodplain soil dating to investigate metalloid contaminant deposition history [^] | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 191 November 2005 Wellington NZ 0 9758434 0 0 |
| PGRA | Priest J | Nitriding mechanisms and the nature of the treated layer in rf-plasma nitriding of austenitic stainless steel | Ph D Thesis 2001 |
| PGRA | Dittrich B; Whitten A E; Spackman M A | Anisotropic displacement parameters (ADPs) of hydrogen atoms. Can invariom modelling contribute? | Acta Crystallog A61 C40 2005 |
| PGRA | Whitten A E; Spackman M A | Estimating ADPs of hydrogen nuclei for charge density analysis | Acta Crystallog A61 C426 2005 |
| PGRA | Whitten A E; Spackman M A; Turner P; Klooster W T; Piltz R C; Tachibana M | Charge density analysis and dipole moment enhancement in MNA 2-methyl-4-nitroaniline | AsCA'03/Crystal-23 AsCA'03/Crystal-23, Broome International Crystallography Meeting 269 2003 Broome |
| PGRA | Whitten A E; Spackman M A | Estimating anisotropic displacement parameters for x-ray charge density analysis | Crystal 24, Society of Crystallographers in Australia and New Zealand 32 April 2005 Marysville, Victoria |
| PGRA | Jiang B; Spackman M A; Groy T L; Whitten A E <i>et al</i> | Phase measurement for accurate mapping of chemical bonds in acentric space groups | Phys Rev Lett 95 085502 2005 |
| PGRA | Spackman M A; Whitten A E; McKinnon J J; Meng X; <i>et al</i> | Molecular electric properties using Hirshfeld surfaces: a novel application of surface integrals [^] | Sagamore XIV Meeting International Crystallography Meetings 319 2003 Broome |

The University of New South Wales

| | | | |
|--------|--|--|---------------------------------|
| 98/115 | Du T; Smith S V; Baker A T | Potential of ⁵⁷ Ni/ ⁵⁷ Co generator system for radiolabelling proteins for imaging | Radiation '98 66 Melbourne 1998 |
| 98/116 | Orsini S; Di Bartolo N; Smith S V; Baker A T | Complexation behaviour of DACDA and DAPDA with ¹⁶⁶ Dy/ ¹⁶⁶ Ho parent-daughter system | Radiation '98 65 Melbourne 1998 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|-----------------|--|--|---|
| PGRA | Coster H; James M; Chilcott T; Barrow K; Boecking T | Biofunctionalisation of silicon substrates | Australian Colloid and Interface Symposium imstec199 February 2003 Coogee |
| PGRA | Coster H; Chilcott T; James M; Barrow K; Boecking T | Characterisation of electrolyte-organic insulator-silicon structures using electrical impedance spectroscopy | Frontiers of Science & Technology Workshop on Soft Condensed Matter and Nanoscale Physics 30-31 December 2003 Coogee |
| 03/178 | Hallal T; Box G P | Seasonal variations in size-resolved chemistry of aerosols in Sydney | 14th AINSE Conference on Nuclear and Complementary Techniques of Analysis & 9th Vacuum Society of Australia Congress 14-1 November 2005 Wellington NZ |
| 03/178 | Hallal T; Box G P | Seasonal variations in size-resolved properties of aerosols in the Sydney Region | 16th National Congress Australian Institute of Physics TUB14 January 2005 Canberra |
| 03/178 | Hallal T; Box G P | Seasonal variation in size-resolved chemistry and aerosol optical properties in Sydney, Australia | 17th International Clean Air and Environment Conference 65 Hobart, May 2005 |
| 03/178 | Box G P; Hallal T; Bouya Z | Seasonal variations in aerosol chemical and physical properties in Sydney, Australia | EOS Transactions AGU Fall Meeting Suppl2005 AGU Fall Meeting 86(52) A53A-0164 December 2005 San Francisco |
| 01/201 | Burford R P; Markotsis M G; Knott R B | Real-Time SANS study of interpenetrating polymer network (IPN) formation ^ | International Conference on Neutron Scattering T277 Nov- Dec 2005 Sydney |
| 01/201 | Markotsis M; (Burford R) | Preparation and characterisation of TPE IPNs using radiation methods | Ph D Thesis 2003 |
| 03/016 & 03/155 | Fei Y; Kennedy S J; Campbell S J; Hofmann M | Neutron polarization analysis of nanostructured ZnFe ₂ O ₄ | Physica B 356 264-268 2005 |
| 05/187 | Wang J L; Studer A J; Campbell S J <i>et al</i> | Magnetic properties of PrMn _{1.2} Fe _{0.8} Ge ₂ ^ | International Conference on Neutron Scattering M38 Nov- Dec 2005 Sydney |
| 04/031 | Cohen D R; Seigele R | Differential effects of selective geochemical extractions within plumbogorite | 22nd International Geochemical Exploration Symposium 68 September 2005 Perth |
| 04/032P | Cho Y H; Green M A; Cho E C; Huang Y; Conibeer G <i>et al</i> | Silicon quantum dots in SiN _x matrix for third generation photovoltaics | Proc 20th European Photovoltaic Solar Energy conf 47 June 2005 Barcelona |
| 03/040 | Foster L J R; Knott R; Sanguanchaipaiwong V; Holden P J | Polyhydroxyalkanoate based natural- synthetic hybrid polymer films: a small angle neutron scattering study ^ | International Conference on Neutron Scattering T278 November - December 2005 Sydney |
| 03/040 | Foster L; Holden P; Garvey C; Russell R; Stone D | <i>In vivo</i> deuteration of a native bacterial biopolymer for structural elucidation using SANS | Physica B 350(1-3) 643-646 2004 |
| 05/012 | Böcking T; Kilian K A; Hanley T; Ilyas S; Gaus K; Gal M; Gooding J J | The formation of tetraethylene oxide terminated Si-C linked monolayers and their derivatization of with glycine: an example of a generic strategy for the modification of silicon surfaces with biomolecules | Langmuir 21 10522-10529 2005 |
| 05/012 | Boecking T; Gal M; Gaus K; Gooding J J | Evidence for why tri(ethylene oxide) functionalized Si-C linked monolayers on Si(III) have inferior protein antifouling properties relative to the equivalent alkanethiol monolayers assembled on gold | Aust J Chem 58 660-663 2005 |
| 02/201; 05/083 | Jones J L; Hoffman M; Daniels J E; Studer A J | Intrinsic and extrinsic contributions to the piezoelectric effect in soft lead zirconate titanate (PZT) ceramics by time-resolved neutron diffraction ^ | International Conference on Neutron Scattering 193 November - December 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|-------------------|--|--|---|
| 00/071P | Lickorish D; (Howlett R) | Development of a collagen-hydroxyapatite composite biomaterial for the repair of bone | PhD Thesis 2002 |
| 03/153 | Hutchison W D; Gossens D J; Nishimura K; Mori K, Isikawa Y; Studer A J | Magnetic structure of TbNiAl ₄ | 4th AINSE Symposium on Neutron Scattering 41 December 2004 Lucas Heights |
| 94/033; 95/034 | Hutchison W D; Chaplin D H; Dickenscheid W; Gleiter H | NMRON measurements of nano-crystalline cobalt [^] | Proc 16th AIP National Congress 177 February 2005 0-9598064-8-2 |
| 01/076; 02/064 | Hutchison W D; Chaplin D H; Bowden G J | Magnetic order in HoF ₃ studied via Ho nuclear spin probes | Hyperfine Interactions 158 169-173 2004 0304-3843 |
| 02/064; 03/063 | Nishimura K; Mori K; Teraoka S; Hutchison W D; Chaplin D H; Ohya S; <i>et al</i> | Low-temperature nuclear orientation of ¹⁴⁴ Pm in metamagnetic (RE)NiAl ₄ single crystals | Hyperfine Interactions 158 199-203 2004 0304-3843 |
| 00/188S | Fisher A G; (Melville M) | The geomorphic evolution of Australian stony deserts: an application of in situ-produced cosmogenic radionuclide analysis at the Fowlers Gap Ard Zone Research Station | PhD Thesis 2004 |
| PGRA | Wong E L S; Mearns F J; Gooding J J | Further development on an electrochemical DNA hybridization biosensor based on long-range electron transfer | Sensors and Actuators B 111 515-521 November 2005 0925 4005 |
| 02/086P | Smith J; (Melville M) | Iron monosulfide formation and oxidation in the drainage system of a coastal acid sulfate soil environment | PhD Thesis 2005 |
| PGRA | Rodgers L E; Holden P J; Knott R B; Foster L J R <i>et al</i> | Structural evolution and stability of sol-gel biocatalysts [^] | International Conference on Neutron Scattering 128 Nov - Dec 2005 Sydney |
| PGRA | Rodgers L E; Knott R B; Holden P J; Foster L J R; Bartlett J R | Small angle neutron scattering studies on the structural evolution of sol-gel biocatalysts | Proc 13th International Workshop on Sol-gel Science and Technology 159 August 2005 Los Angeles, California |
| PGRA | Holden P J; Knott R B; Finnie K S; Bartlett J R; Foster L J R; Rodgers L E | Effect of sol-gel encapsulation on lipase structure and function: a small angle neutron scattering study | Sol-Gel Science & Technology 33 65-69 2005 |
| 98/080P | Hyvarinen J; (Schindhelm C) | Surface modified carbon as a wear resistant material in artificial joints | Ph D Thesis 2000 |
| PGRA | Nowotny J; Sorrell C C; Sheppard L R; Bak T | Solar hydrogen: environmentally safe fuel for the future | International J Hydrogen Energy 30 521-544 2005 |
| PGRA | Nowotny J; Sorrell C C; Bak T; Sheppard L | Solar-hydrogen: a solid-state perspective | J Solar Energy 78 593-602 2005 |
| PGRA | Nowotny J; Sorrell C C; Bak T; Sheppard L R | Defect disorder, transport, and photo-electrochemical properties of titanium dioxide | Materials for Energy Conversion Devices Nowotny J, Sorrell C C Sugihara S (eds) Woodhead Publishing 84-116 2005 Cambridge |
| PGRA | Nowotny J; Sorrell C C; Bak T; Sheppard L R | Solar hydrogen: unresolved problems in solid-state science | Solar Energy 78 593-602 2005 |
| PGR5/96 | Southon P | Structural evolution during the preparation and heating of nanophase zirconia gels | Ph D Thesis 2000 |
| 98/077P | Koschier L; (Sproul A) | Multijunction and novel silicon photovoltaic device structures | Ph D Thesis 2000 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|-------------------|--|---|--|
| 98/077P | Nash O; (Sproul A) | The aluminium-induced layer exchange forming polycrystalline silicon on glass for thin-film solar cells | Ph D Thesis 2000 |
| 98/077P | McIntosh K; (Sproul A) | Lumps, humps and bumps : three detrimental effects in the current-voltage curve of silicon solar cells | Ph D Thesis 2001 |
| 03/109 | Harker S J; Stewart G A; Gubbens P C M; <i>et al</i> | Crystal field interaction in RFe ₂ Si ₂ (R = Er and Tm) | J Alloys and Compounds 402 17 - 20 2005 0925-8388 |
| 03/109 | Harker S J; Stewart G A; Gubbens P C M; <i>et al</i> | Crystal Field Interaction in RFe ₂ Si ₂ (R = Er, Tm) | 16th National Congress of the Australian Institute of Physics 194 Canberra Feb 2005 |
| 03/109 | Jiminez E; Gubbens P C M; Stewart G A; Harker <i>et al</i> | Magnetic & structural properties of thulium chromate | International Conference on Neutron Scattering 107 Sydney Nov – Dec 2005 |
| 03/109 | Jiminez E; Gubbens P C M; Sakarya S; Stewart G A; <i>et al</i> | Interplay between Tm ³⁺ and Cr ⁶⁺ magnetic sublattices in TmCrO ₄ | Sixteenth National Congress of the Australian Institute of Physics 175 Canberra Jan – Feb 2005 |
| 98/171S | Stokes C; (Waite D) | The interaction between dissolved organic matter and iron coagulants in the water treatment process | Ph D Thesis 2000 |
| 98/171S | Li S; (Waite D) | Membrane filtration of reactive dyes in textile wastewater recycling | Ph D Thesis 2000 |
| 03133P; 04179P | Zreiqat H; Valenzuela S M; Nissan B B; Roest R <i>et al</i> | Mechanisms by which surface chemistry modification of titanium alloy affects bone formation | Biomaterials 26(36) 7579-86 2005 |

The University of Queensland

| | | | |
|---------|---|---|---|
| 01/006 | MacPherson B; (Bernhardt P) | Discrete cyano bridged mixed valence systems | PhD Thesis 2004 |
| 01/006 | Evan Moore; (Bernhardt P) | A macrocyclic scaffold for electronic energy transfer and photoinduced electron transfer | PhD Thesis 2004 |
| PGRA | Johnston-Hall G; Theis A; Monteiro M J; Davis T P; Stenzel M H; Barner-Kowollik C | Accessing chain length dependent termination rate coefficients of methyl methacrylate (MMA) via the reversible addition fragmentation chain transfer (RAFT) process | Macromolecular Chemistry and Physics 206 2047-2053 2005 |
| 99/083 | Alexander M; (Hill D) | The effects of simulated low earth orbit conditions on high performance polymers | BSc Hons Thesis 1999 |
| 00/067 | Dargaville T; (Hill D) | The radiation chemistry and radiation grafting of PFA | PhD Thesis 2002 |
| 01/071 | Zainnudin; (Hill D) | Properties of biomedical hydrogels | PhD Thesis 2004 |
| 98/144R | Roche N; (Lourandos H) | Reading the bones: an analysis of cultural and palaeoenvironmental trends at Hay Cave, S E Cape York | BSc Hons Thesis 1999 |
| 98/144R | Holden A; (Lourandos H) | A technological analysis of the lithic assemblage from Hay Cave, S E Cape York Peninsula: considering diachronic variations in patterns of 'intensity of site use | BSc Hons Thesis 1999 |
| 04/111 | Marx S; Kamber B S; McGowan H A | Atmospheric trace element calibrated 210-Pb as a monitor of Australian dust flux | 14th AINSE Conference on Nuclear and Complementary Techniques of Analysis and 9th Vacuum Society of Australia Congress 22-24 November 2005 Wellington, NZ |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|--|---|---|
| 04/111 | McGowan H; Kamber B; Marx S; McTainsh G | High resolution provenance of long travelled dust deposition in the Southern Alps, New Zealand | Geomorphology 69 208-221 2005 |
| 04/111 | Marx S K; Kamber B S; McGowan H | Long term estimates of Australian dust flux into New Zealand: quantifying the eastern Australian dust plume pathway using trace element calibrated ^{210}Pb as a monitor | Earth and Planetary Science Letters 239 336-351 2004 |
| 04/111 | Marx S K; Kamber B S; McGowan H | Provenance of long travelled dust determined with ultra trace element composition: a pilot study with samples from New Zealand glaciers | Earth surfaces and landforms 30 699-716 2005 |
| 04/111 | Marx S; Kamber B S; McGowan H A | Long term estimates of Australian dust flux into New Zealand: the use of modern analogues to assess the sensitivity of dust to environmental change using trace element calibrated ^{210}Pb as a monitor | Geophysical Research Abstracts/European Geosciences Union General Assembly 7 00541 April 2005 Vienna, Austria |
| 04/111 | Marx S; McGowan H | A re-examination of the 1928 trans-Tasman dust transport event | Weather and Climate 24 35-55 2005 |
| 04/113P | Tavener E; Meredith P; Wood B; Curry M; Giedd R | Electrical and structural properties of ion implanted and ion beam mixed polymers [^] | Proc International Congress on Synthetic Metals, Wollongong 262 July 2004 |
| 04/113P | Micolich A; Tavener E; Powell B; McKenzie R; Hamilton A; Meredith P; | Superconductivity in ion implanted plastic films [^] | Quantum Materials Workshop 10 June 2005 |
| 04/178 | Hua Q; Yu K; Zhao J-X; Hodge E; Barbetti M; Fink D; Zoppi U | Variations in marine reservoir ages for the South China Sea during the Holocene | 10th International Conference on Accelerator Mass Spectrometry P-II E1 84 September 2005 Berkeley, CA |
| 04/178 | Zhao J-X; Yu K F; Hua Q; Barbetti M; Fink D; Hodge E; Zoppi U | Calibration of Holocene ^{14}C marine reservoir ages based on U-series-dated corals in the South China Sea | In Fairbairn A (ed) Australasian Archaeometry Conference 60 2005 Canberra |

Queensland University of Technology

| | | | |
|---------------------|--|---|--|
| PGRA | Goh R; Waclawik E; Bell J | STM of self-organised supramolecular assembly [^] | 2nd International Conference on Advanced Materials and Nanotechnology (AMN-2) 333 2005 |
| PGRA | Goh R; Waclawik E; Motta N; Bell J | Nano-assembly of conjugated polymer and carbon nanotubes: an STM study ^{*^} | AIP Congress Handbook 161 February 2005 |
| 03/008P | Tesfamichael T; Will G; Bell J | Nitrogen ion implanted nanostructured titania films used in dye-sensitised solar cells and photocatalyst | Appl Surf Sci 245(1-4) 172-178 May 2005 |
| 01/005P; 02/004 | Tesfamichael T; Will G; Bell J; Prince K E; Dytlewski N | Characterisation of a commercial dye-sensitised titania solar cell electrode | J Solar Energy Materials and Solar Cells 76(1) 25-35 2003 |
| 03/008P & 04/152 | Zhou H; Tesfamichael T; Bell J M; Prince K | Characterization of nitrogen-implanted TiO_2 nanostructured films | Mater Sci Eng B 126 (1) 44-48 January 2006 |
| 01/039 | Ezzy T; (Cox M) | Groundwater occurrence and chemical character within a Quaternary coastal plain. Meldale, Pumicestone Passage | B App Sc 2000 |
| 00/049P | Martens W N; (Frost R) | The structure and peptisation of alumina prepared from the hydrolysis of trisecbutoxyaluminium(III) | Ph D Thesis 2001 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|---------------------|--|---|--|
| PGRA | Goh R; Motta N; Bell J; Waclawik E | Effects of substrate curvature on the absorption of poly(3-hexylthiophene) | Appl Phys Lett 88 053101 2006 |
| PGRA | Waclawik E R; Bell J H; Goh R; Musumeci A; Motta N | Self-organization in composites of poly(3-hexylthiophene) and single-walled carbon nanotubes designed for use in photovoltaic applications * | Proc SPIE 6036 603607 2005 |
| PGRA | Goh R; Waclawik E; Motta N; Bell J | Influence of dispersed carbon nanotubes on the optical and structural properties of a conjugated polymer * | Proc SPIE 6037 60370Z 2005 |
| 99/086 | Venz P; (Johnston P) | The effect of organic small chain acids on the peptisation kinetics of titania | Ph D Thesis 2000 |
| PGRA | Oberman G J; Farrell T W; Sizgek E | Drying of a liquid droplet suspended in its own vapour | Aust & NZ Industrial and Applied Mathematics J 46 1155-1169 2005 |
| 03/008P; 01/005P | Will G; Bell J; Tesfamichael T | Characterization of nitrogen implanted dye-sensitised titania solar cell electrode | Appl Surf Sci 126(1) 44-48 2005 |
| 04/152 | Tesfamichael T; Bell J | Nitrogen ion implantation and characterization of tungsten oxide films | Conference Proceedings SPIE 6037 60371L Brisbane December 2005 |
| 03/123 | Price G J; Tyler M J; Cooke, B N; Webb G | Pleistocene frogs from the Darling Downs, southeastern Queensland, Australia, and their palaeoenvironmental significance | Alcheringa 29 171-182 2005 |
| 03/123 | Price G J; Sobbe I H; Webb G | Palaeoecology and environmental change during the Late Pleistocene on the Darling Downs, southeastern Queensland, Australia | Memoirs of the Queensland Museum 51 171-201 2005 |
| 03/123 | Price G J; Webb G | Fossil bandicoots (Marsupialia, Peramelidae) and environmental change during the Pleistocene on the Darling Downs, southeastern Queensland, Australia | J Systematic Palaeontol 2 347-356 2005 |
| 05/180 | Hu A; Zhou H; Bell J M; Evans P | Nanostripes in superconducting $REBa_2Cu_3O_{7-d}$ superconductors: robust vortex pinning sites | SPIE 6037, 60371H Brisbane December 2005 |

RMIT University

| | | | |
|--------------------|--|--|---|
| 03/082 & 04/088 | Alves A; Johnston P N; Reichart P; Jamieson DN; Siegele R | Ion beam lithography in PMMA using single ions ^ | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 3 November 2005 Wellington NZ 0 9758434 0 0 |
| 99/087 | Johnston P N; Franich R D; Bubb I F; Bouanani M; Cohen D D; <i>et al</i> | The effect of large angle plural scattering on heavy ion elastic recoil detection analysis | Nucl Instr Meth B 161 314-8 2000 |
| 00/075P | Stannard W; (Johnston P N) | Ion beam studies of high dielectric constant films | Ph D Thesis 2000 |
| 01/079P | Franich R; (Johnston P N) | Monte Carlo simulation of heavy ion recoil data to study plural scattering, multiple scattering and energy loss straggling | Ph D Thesis 2003 |
| 01/078 | Pitiporn Thanomngam P; (Johnston P N) | Compton scattering from inner-shell electrons of heavy elements | Ph D Thesis 2003 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|---------------------|---|---|---|
| 03/064 | Thanomngam P; Johnston P N | Monte-Carlo simulation of bremsstrahlung interference due to k-shell photoelectrons in Compton scattering experiments | Radiation Physics and Chemistry 71 637-641 2004 |
| 03/064 | Thanomngam P; Johnston P N | Compton Scattering from the K-Shell electrons of Ta and Pb | Radiation Physics and Chemistry 71 681-682 2004 |
| 05/155P | Sood D K; Venkatachalam D K; Bhargava S K | Synthesis and analysis of gold nanoclusters on silicon substrates by ion beams ^ | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 244-247 November 2005 Wellington NZ 0 9758434 0 0 |
| 03/108 | Sood D K; Sabri Y M; Bhargava S K; Andrienko I; Wlodarski W | Studies of gold nanoparticles for use in a mercury sensor based on a quartz crystal microbalance (QCM) system using ion beam analysis ^ | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 89-92 November 2005 Wellington NZ 0 9758434 0 0 |
| 99/089 | Shamsili S; (Sood D K) | Modification of high temperature corrosion behaviour of interconnects in solid oxide fuel cells by implantation of reactive elements | Ph D Thesis 2000 |
| 01/130 | Wang Y; (Sood D K) | Preparation, characterization and patterning of samarium-cobalt magnetic thin films for micro-machine applications | Ph D Thesis 2003 |
| 01/130 | Mollica S; (Sood D K) | High temperature oxidation reduction of DC magnetron sputter deposited titanium diboride thin films doped with silicon and aluminium | Ph D Thesis 2003 |
| 01/131P | Nguyen T; (Sood D K) | Preparation, characterisation and cell testing of gadolinium doped cerium electrolyte thin films for solid oxide fuel cell applications | Ph D Thesis 2005 |
| 03/108 | Mathe V; (Sood D K) | Deposition, characterisation and patterning of TiN, TiNiPd shape memory alloy films | Ph D Thesis 2005 |
| 05/155P | Sood D K; Venkatachalam D K; Bhargava S K; Evans P E | Synthesis and analysis of gold nanoclusters on silicon substrates by ion beams ^ | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 244-247 November 2005 Wellington, NewZealand |
| 00/159P; 01/143P | Kavuri P P; (Ward L P) | Wear and corrosion behaviour of MEVVA ion implanted TiN and CrN coatings deposited on steel substrates | Ph D Thesis 2002 |
| 99/090P | Perry A J; Manory R R; Ward L P; Kavuri P P | A study of the effects of metal ion post-implantation on the near surface properties of TiN deposited by CVD | Surface Coatings Technology 133-134 203 – 207 November 2000 |

University of South Australia

| | | | |
|---------|---|--|--|
| 03/172 | Oaten M; Choudhury N R | Silsesquioxane-urethane hybrid for thin film applications | Macromolecules 38(15) 6392 2005 |
| 03/172 | Oaten M; Choudhury N R; Dutta N K; Knott R | Synthesis and characterisation of molecularly designed nanomaterials | International Conference on Nanomaterials: Synthesis, characterization and application 192 Nov Calcutta India 2004 |
| 01/041P | Thomas S; (Davey D) | An electrochemical study of aluminium and its interaction with natural organic matter during water treatment | PhD Thesis 2002 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|---|---|--|
| 01/041P | Thomas S D; Davey D E; Mulcahy D E; Chow C W K | Indirect amperometric detection of aluminium by flow injection analysis using DASA as ligand | Analytical Letters 38 133 December 2005 |
| 04/197 | Thompson S; Choudhury N R; Knott R; Dutta N K | Phase separated nanomaterials based on block copolymers: design, phase-structure control and characterization ^ | International Conference on Nanomaterials: Synthesis, Characterization and Application F1/3 4-6 Nov 2004 India |
| 04/197 | Dutta N K; Tran N D; Choudhury N R; Hill A J Elvin E; Knott R | SANS investigation of the self-organization behavior in synthetic resilin gels: a perfect rubber-like protein ^ | International Conference on Neutron Scattering, Sydney M196 Nov - Dec 2005 |
| 04/047 | Dutta N; Thompson S; Choudhury N R; Knott R | Environment-induced self-assembly in phase separated block copolymer systems ^ | International Conference on Neutron Scattering T271 Sydney Nov - Dec 2005 |
| 00/052 | Gerson A R; Lange A G; Prince K E; Smart R | Mechanism of copper activation of sphalerite | Appl Surf Sci 137 207-223 1998 |
| 01/053 | Weisener C; (Gerson A) | The reactivity of iron and zinc sulfide mineral surfaces: adsorption and dissolution mechanisms | Ph D Thesis 2002 |
| 01/162C | Gredelj S; (Kumar S) | Plasma nitriding of 2011 aluminium alloy | Ph D Thesis 2002 |
| PGR6/96 | O'Dea A | Quantum chemical and experimental studies of reaction at sulfide mineral surfaces | Ph D Thesis 2000 |
| 01/147 | Gong Z F; (Wedding B) | Quantitative surface analysis for mixed mineral samples | PhD Thesis 2004 |

Southern Cross University

| | | | |
|--------|---|---|---|
| 02/010 | Lam D D; Boyd W E | Holocene coastal stratigraphy and the sedimentary development of the Hai Phong area of the Bac Bo Plain (Red River Delta), Vietnam | Australian Geographer 34(2) 177-194 2003 |
| 02/009 | Jago C F; Boyd W E | How wet tropical rainforest copes with repeated volcanic destruction | Quat Res 64 399-406 2005 |
| PGRA | Boyd W E; Lentfer C J; Parr J F | Interactions between human activity, volcanic eruptions and vegetation during the Holocene at Garua and Numundo West New Britain, PNG | Quaternary Research 64 384-398 2005 |
| PGRA | Parr J F | Carbon sequestration in plantstones | In C Jones (ed) Managing the Carbon Cycle: Forum, Armidale 2005 |
| PGRA | Parr J F; Sullivan L A | Soil carbon sequestration in phytoliths | Soil Biology and Biochemistry. 37(1) 117-124 2005 |
| PGRA | Parr J F | Morphometric and visual fossil phytolith identification using a regionally specific digital database | Phytolitharian 16(2) 2-10 2004 |
| PGRA | Torrence R; Neall V E; Doelman T; Rhodes E; McKee C; Parr J; <i>et al</i> | Pleistocene colonisation of the Bismarck Archipelago: new evidence from West New Britain | Archaeology in Oceania 39(3) 101-130 2004 |
| PGRA | Krull E S; Skjemstad J O; Graetz D; Parr J F <i>et al</i> | ¹³ C-depleted charcoal from C3 and C4 grasses and the role of occluded carbon in phytoliths | Organic Geochemistry 34 1337-1352 2003 |
| PGRA | Parr J F | A pre-lapita landscape at Numundo, West New Britain, Papua New Guinea as indicated by fossil phytoliths | 17th Congress of Indo-Pacific Prehistory Association, 201 Academia Sinica, Taipei, Taiwan, R O C September 2002 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|------------------------------------|--|--------------------------------|
| PGRA | Parr J F; Lentfer C J; Boyd W E | A comparative analysis of wet and dry ashing techniques for the extraction of phytoliths from plant material | J Archaeol Sci 28 875-886 2001 |
| 04/208 | Boyd W E; Lentfer C J; Parr J F | Interactions between human activity, volcanic eruptions and vegetation during the Holocene at Garua and Numundo, West New Britain, PNG | Quat Res 64 384-398 2005 |
| 03/110P | Bush R; (Sullivan L) | Micromorphology and mineralogy of iron sulfides in acid sulfate soils from NSW, eastern Australia | Ph D Thesis 2000 |

Swinburne University of Technology

| | | | |
|---------------------|--|---|---|
| 98/050 | Bartel A; (Bakshi E) | High frequency neutron-beam modulation | Ph D Thesis 2001 |
| 05/045 | Doyle E D; Wong Y; Ripley M | Measurement of residual stress in martensitic stainless steel as a function of heat treatment | Proc 2nd Internat Conf on Heat Treatment and Surface Engineering in Automotive Applications IFHTSE 68 July 2005 Riva Del Garda, Italy |
| 02/038P | Doyle E D; Wong Y C; Ripley M I | Neutron diffraction studies of advanced tool steels ^ | International Conference on Neutron Scattering T250 Nov - Dec 2005 Sydney |
| 05/192 | Durandet Y; Bendeich P; Ripley M; Liu Q; Brandt M | Residual stresses in Al7075 alloy laser clad with Al-12Si alloy powder ^ | International Conference on Neutron Scattering T245 Nov - Dec 2005 Sydney |
| 02/044P; 03/044P | Dowling A; (Ghantasala M) | Novel strategies for surface micro-machining TiN thin films deposited by filtered arc | Ph D Thesis 2005 |
| 99/094P | Krezel Z A; (McManus K) | Noise barriers formed from recycled concrete products | Ph D Thesis 2001 |

The University of Sydney

| | | | |
|-------------------|---|--|--|
| 01/003 | Barbetti M; Hua Q; Zoppi U; Fink D; Zhao Y; Thomson B; Cook E | Radiocarbon calibration in the Younger Dryas chronozone, 12,800-11,500 years ago: AMS measurements on huon pine tree rings from Tasmania ^ | 18th International Radiocarbon Conference, in Conference Abstracts and Programme 137 September 2003 Wellington, New Zealand |
| 01/003 | Hua Q; (Barbetti M) | Radiocarbon and the inter-hemispheric carbon cycle for the last millennium | Ph D Thesis 2005 |
| 01/003; 03/165 | Hua Q; Barbetti M; Zoppi U; Fink D; Cook E | Variations in atmospheric ¹⁴ C during the Younger Dryas recorded in Tasmanian huon pine tree rings | National Meeting on Reconstructing Past Climates for Future Prediction The Australian Academy of Science and The Australian Greenhouse Office 43 June 2005 |
| 01/038 | Soodphakdee D; (Behnia M) | Simulation of heat transfer in heat exchangers | Ph D Thesis 2002 |
| PGRA | Schulz J; Nelson A; Blom A; Warr G | Neutron reflectivity and atomic force microscopy studies on the effect of pH and solubilize upon the structure of adsorbed cationic surfactant films on quartz ^ | International Conference on Neutron Scattering M142 November - December 2005 |
| 97/021R | Bourke S; Lawson E <i>et al</i> | The chronology of the late Neolithic and early Chalcolithic periods in the North Jordan Valley: new ¹⁴ C Determinations from Pella in Jordan | In Higham C Bronk-Ramsey & C Owen (eds) Radiocarbon and Archaeology. Proc 4th Symposium 119-125 2004 Oxford |
| 97/020R | Bourke S | Teleilat Ghassul: foreign relations in the late Chalcolithic Period | In Levy & E van dem Brink (eds) Egyptian-Canaanite Interaction from the Fourth through Third Millennium BCE 154-164 2002 London |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|---|--|--|---|
| 97/021R; 01/196; 02/199 | Bourke S; Lovell J L | Ghassul, chronology and cultural sequencing | Paléorient 30(1) 179-182 2004 |
| 97/021R; 01/196; | Lovell J L; Bourke S | The Late Neolithic and Chalcolithic Periods in the southern Levant: New data from Teleilat Ghassul, Jordan | Oxford Archaeopress BAR Int Ser 974 |
| PGRA | Browne C | Impacts of urbanisation and metal pollution on freshwater turtles | PhD Thesis 2004 University of Sydney |
| PGRA | Chapman K W; Chupas P J; Kennedy B; Knight K S; Kepert C | The dynamic structure of negative thermal expansion material $Zn(CN)_2$: a combined atomic pair distribution function and bragg analysis [^] | International Conference on Neutron Scattering OM33 Nov - Dec 2005 Sydney |
| PGRA | Chapman K W; Hagen M; Kepert C; Manuel P | Low energy phonons in the NTE compounds $Zn(CN)_2$ and $ZnPt(CN)_6$ [^] | International Conference on Neutron Scattering OT52 Nov - Dec 2005 Sydney |
| PGRA | Chapman K W | Cyanide-bridged molecular framework materials: negative thermal expansion and host-guest properties | PhD Thesis 2005 |
| PGRA | Contos A | Biominalisation in caves | Ph D Thesis 2001 |
| 99/107; 00/040P; 02/037; 03179 | Williams A-M; (Donlon D) | Lead in 19th-Century Australian children's teeth | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 302 November 2005 Wellington NZ 0 9758434 0 0 |
| 02/037, 03/179 | Williams A-M; (Donlon D) | Trace elements in nineteenth century Australian children's teeth in relation to diet, health and the environment | PhD Thesis 2005 |
| PGRA | Ellis L | Modifying the properties of antitumour agents by targeting them to DNA | Ph D Thesis 2001 |
| PGRA | Fischer M | Quaternary environmental change | Ph D Thesis 2001 |
| 01/050 | Hudson B | The origins of Bagan: the archaeology of Upper Burma to AD 1300 | PhD Thesis 2002 |
| 01/190S; 02/043 | Gale S J; Haworth R J | Catchment-wide soil loss from pre-agricultural times to the present: transport and supply-limitation of erosion | Geomorphology 68(3-4) 314-333 2005 |
| 94/010 | Scherrer N C; Fischer M J; Gale S J; Drysdale R N; Heijnis H | Secular variations in palaeomagnetism during the Middle Quaternary in northern Australia | In Musselbrook Reserve Scientific Study Report. Royal Geographical Society of Queensland 213-229 1998 Brisbane |
| 00/053 | Smulders W; (Gilbert R) | Macromolecular architecture in aqueous dispersions | Ph D Thesis 2002 |
| 01/054 | van Birkel K; (Gilbert R) | Entry and the kinetics of emulsion polymerization | Ph D Thesis 2004 |
| 02/093 | Prescott S W; Ballard M J; Rizzardo E; Gilbert R G | RAFT techniques in emulsion polymerization: rate of polymerization and radical phase transfer events | Polymer Preprints American Chemical Society Division of Polymer Chemistry 43 146-7 2002 Washington |
| 03/045 | Prescott S W; Ballard M J; Gilbert R G | Average termination rate coefficients in emulsion polymerization: effect of compartmentalization on free-radical lifetimes | J Polym Sci A Polymer Chem Ed 43 1076-89 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|---------------------|---|---|--|
| 03/087 | van Berkel K Y; Russell G T; Gilbert R G | Molecular weight distributions and chain-stopping events in the free-radical polymerization of methyl methacrylate | Macromolecules 38 3214-24 April 2005 |
| 03/045 | Prescott S W; Ballard M J; Rizzardo E; Gilbert R G | Radical loss in RAFT-mediated emulsion polymerizations | Macromolecules 38 4901-12 May 2005 |
| 05/064 | Thickett S C; Gilbert R G | Mid-chain transfer to polymer in poly(butyl acrylate): direct evidence of retardative effects | Macromolecules 38 9894-6 2005 |
| 04/058P | Seabrook S A; Pascal P; Tonge M P; Gilbert R G | Termination rate coefficients for acrylamide in the aqueous phase at low conversion | Polymer 46 9562-73 2005 |
| 01/180S | Hall B; (Hibbs D) | Flavonoids and GABA receptors | Ph D Thesis 2005 |
| 00/078P | Kennedy B J; Kubota Y; Kato K | Negative thermal expansion and phase transition behaviour in Ag ₂ O | Solid State Communications 136 177-180 2005 |
| 03/068 | Chan S W Y; Ryan C G; Kennedy B J; Walker D M | Spatial distribution of lead in enamel and coronal dentine of Wistar rats <i>M. Arora</i> | Biological Trace Element Research 105 159-170 2005 |
| 03/158 & 04/093P | Wallwork K W; Kennedy B J; Zhou Q; Lee Y; Vogt T | Pressure and temperature dependent structural studies of Ba ₂ BiTaO ₆ | J Solid State Chem 178 207-211 2004 |
| 04/093P | Macquart R B; Kennedy B J | Synthesis and structural studies of the A-site substituted bismuth double perovskites, Ba _{2-x} Sr _x LuBiO ₆ | Chem Mater 17 1905-1909 2005 |
| 04/093P | Zhou Q; Kennedy B J; Wallwork K S; Elcombe M M; Lee Y; Vogt T | Temperature and pressure dependent structural studies of the ordered double perovskites Sr ₂ TbRu _{1-x} IrxO ₆ | J Solid State Chem 178 2282-2291 2005 |
| 04/093P | Kennedy B; Zhou Q; Cheah M | Structures and phase transitions in ordered double perovskites [^] | International Conference on Neutron Scattering T1 Sydney Nov - Dec 2005 |
| 99/097 | Wong T; (Kennedy B J) | Crystal structures in the SrTiO ₃ -SrZrO ₃ system | Grad Dip Sci Thesis 2000 |
| 03/158 | Thorogood G J; Luca V; Kennedy B J | Structure of the hydrated pyrochlore NaW ₂ O ₆ ·2H ₂ O | International Conference on Neutron Scattering T23 Nov - Dec 2005 Sydney |
| 03/158 | Qingdi Zhou Q; Kennedy B J; Elcombe M M | Neutron powder diffraction studies of Ca _{2-x} Sr _x CoWO ₆ double perovskites [^] | International Conference on Neutron Scattering T3 Sydney Nov - Dec 2005 |
| 04/093P | Zhou Q; Kennedy B J; Ting V; Withers R L | Thermal expansion and cation disorder in Bi ₂ InNbO ₇ | J Solid State Chem 178 1575-1579 2005 |
| 03/069 | Arora M; Chan S W Y; Kennedy B J <i>et al</i> | Spatial distribution of lead in the roots of human primary teeth | J Trace Elements Medicine and Biology 18 135-139 2004 |
| 98/102 | Prodjosantoso A K; (Kennedy B J) | Influence of strontium substitution in components of Portland cement | Ph D Thesis 2001 |
| 03/158 | Zhou Q; Kennedy B J | High temperature structural studies of Ba ₂ BiTaO ₆ | Solid State Sciences 7 287-291 2005 |
| 00/085P | Lenzen M; Collins R E; Prince K | Method of measuring depth profile of hydrogen in soda-lime glass | J Non-Crystalline Solids 351 317-322 2005 |
| PGRA | Petrie C | Regional economy in the late 1st and early 2nd millennia AD: Akra, NWFP Pakistan | PhD Thesis 2002 |
| 99/102 | Sun D; (Ruys) | Metal-ceramic functionally graded materials | M Eng Thesis 2002 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|-------------------|---|---|--|
| PGRA | Saines P J; Elcombe M; Kennedy B | Structural studies of oxygen deficient lanthanide containing double perovskites [^] | International Conference on Neutron Scattering 186 December 2005 |
| PGR3/97 | Taylor S | The source of contaminated sediment in Port Jackson, Australia | Ph D Thesis 2000 |
| 03/116P | Torrence R; Neall V; Doelman T; Rhodes E D; <i>et al</i> | Pleistocene colonisation of the Bismarch Archipelago: new evidence from West New Britain | Archaeol Oceania 39 101-130 2004 |
| 02/136 | Torrence R, Bonetti A; Guglielmetti A; <i>et al</i> | Importance of source availability and accessibility: a case study from Papua New Guinea | Mediterranean Archaeology and Archaeometry 4 53-65 2004 |
| 04/156 | Doelman T; Kononenko N; Popov A; Summerhayes G; Torrence R <i>et al</i> | Acquisition and movement of volcanic glass in the Primorye region of Far Eastern Russia | Russia and the Pacific. Humane Problems of the Asian-Pacific Region Countries 4(46) 112-124 2004 |
| PGRA | Hibbs D E, Howard S; Huke J; Waller M | A new orbital-based-method for the analysis of experimental molecular charge densities: an application to (Z)-N-methyl-C-phenylnitron | Phys Chem Chem Phys 7(8) 1772-1778 2005 |
| 03/161; 04/212 | Blom A | Structure and physical properties of surfactant and mixed surfactant films at the solid-liquid interface | PhD Thesis 2005 |
| 95/142 | White P; Petchey F; Phelan M; | New DR values for the southwest Pacific Ocean [^] | Radiocarbon 46 1005-1014 2005 |
| PGRA | Williams N J | The environmental reconstruction of the last glacial cycle at redhead lagoon in coastal, Eastern Australia | Ph D Thesis 2005 |

University of Tasmania

| | | | |
|--------------------|---|--|---|
| 04/057 & 05/063 | Bissett A; Gibson J A E; Jarman S N; <i>et al</i> | Isolation, amplification and identification of ancient copepod DNA from lake sediments | Limnology and Oceanography Methods 3 533-542 2005 |
| PGRA | Jordan T; Seen A | Comparison of emission profiles from woodheaters operating under various airflow conditions | 96th A&WMA Annual Conference and Exhibition Student section June 2003 San Diego |
| PGRA | Jordan T B | Investigation of the composition of woodsmoke and methods for apportioning woodsmoke to air pollution in Launceston | PhD Thesis 2005 |
| 96/068 | McMinn A; Heijnis H; Harle K; McOrist G | Late-Holocene climatic change recorded in sediment cores from Ellis Fjord, eastern Antarctica | Holocene 11(3) 291-300 2001 |
| 96/069 | McMinn A; Hallegraef G M; Thomson P; Jenkinson A V; Heijnis H | Cyst and radionucleotide evidence for the recent introduction of the toxic dinoflagellate <i>Gymnodinium catenatum</i> into Tasmanian waters | Mar Ecol Progr Ser 161 165-172 1997 |
| 96/R07 | Roberts D; Roberts J L; Gibson J A E; McMinn A; <i>et al</i> | Palaeohydrological modelling of Ace Lake, Vestfold Hills, Antarctica | Holocene 9(5) 515-520 1999 |
| 02/104 & 03/138 | van Moort J; Pwa A; McQueen K | Lefroy and Beaconsfield gold mines, Tamar region, Tasmania | In Butt C, Robertson I; Scott K; Cornelius M (eds) Regolith Expression of Australian Ore Systems 276-278 2005 |
| 02/110 | Hodgson D; Doran P; Roberts D; McMinn A | Paleolimnological studies from the Antarctic and sub Antarctic islands | In Pienitz R Douglas MSV & Smol JP (eds) Developments in Paleoenvironmental Research, Long-term Environmental Change in Arctic and Antarctic Lakes, Kluwer Academic Publishers: Dordrecht, The Netherlands 8 419-474 September 2004 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|--|--|--|--|
| PGRA | Saunders K M; McMinn A; Roberts D; Heijnis H; Hodgson D; | Recent human-induced salinity changes in Ramsar-listed Orielton Lagoon, southeast Tasmania, Australia | Australasian Quaternary Association Biannual meeting 36 December 2004 Tasmania |
| University of Technology Sydney | | | |
| PGRA | Callaghan M D; Yeung W Y; Ripley M I Carr D G | An analysis of deformation and fracture behaviour of zircaloy-4 alloy using small punch test | Materials Science Forum 475 1415-1420 2005 |
| PGRA | Callaghan M D; Yeung W Y; Ripley M I Carr D G | Measurement of fracture toughness of hydrided zircaloy-4 alloy | Materials Forum, 27 68-73 2004 |
| 01/028 | Sharp TR; (Caprarelli G) | Regional geology and volcanic history of the southeastern Tamworth Belt (NSW, Australia) by the study of Devonian to Carboniferous metasedimentary rocks and andesites | PhD Thesis 2002 |
| 04/033 | Cortie M B; McBean K E; Elcombe M M | Fracture mechanics of mollusc shells ^ | International Conference on Neutron Scattering T185 Sydney Nov- Dec 2005 |
| PGRA | Kealley C; Elcombe M; van Riessen A; Ben-Nissan B | Development of carbon nanotube reinforced hydroxyapatite bioceramics ^ | International Conference on Neutron Scattering M109 Sydney Nov - Dec 2005 |
| PGRA | Kealley C; van Riessen A; Hart R; Elcombe M; Ben-Nissan B | Development of nanotube reinforced hydroxyapatite ceramics | Proc Australian X-ray Analytical Association 2005 Schools Conference and Exhibition 73-4 2005 Perth, Australia |
| PGRA | Kealley C; van Riessen A; Hart R; Ben-Nissan B; <i>et al</i> | Development of nanotube reinforced hydroxyapatite ceramics | Proc IUMAS-3/EMAS Workshop 292 2005 Convitto Della Calza, Florence, Italy |
| PGRA & 05/226 | Lewis K; Kealley C; Elcombe M van Riessen A; <i>et al</i> | Neutron diffraction comparison of bone derived and synthetic hydroxyapatite | J Aust Ceram Soc 41(2) 52-55 1018-6689 2005 |
| PGRA | Peterson V; Hunter B; Ray A, Aldridge L P | Rietveld refinement of neutron, synchrotron and combined powder diffraction data of cement clinker | Applied Physics A: Materials Science & Processing 74 (Suppl Pt 2) S1409-S1411 2002 |
| PGRA | Peterson V K | Lattice parameter measurement using Le Bail versus structural (Rietveld) refinement: a caution for complex, low symmetry systems | Powder Diffraction 20 14-17 2005 |
| 04/140P | Watson M; Skilbeck G; Goodwin I | The Holocene-LGM sedimentary record of Peru-Chile (Humbolt) current variability on the Peru continental margin, and implications for El Nino activity over the past 20,000 YBP ^ | COGS 2003 6th Australian Marine Geoscience Conference, Heap A (ed), ANU 51 July 2003 Canberra |
| 02/122 | Marsaglia K M; Fukosawa H; Cornell W; Skilbeck C G; Meyers P; Prasad M | Eustatic signals in deep-marine sedimentary sequences recovered at ODP Site 978, Alboran Basin, western Mediterranean Sea | J Sedimentary Research 74 378-390 2004 |
| 04/140P & 02/169 | Skilbeck C G; Rolph T C; Hill N; Woods J; Wilkens R H | Holocene millennial/centennial-scale multi-proxy cyclicity in temperate Eastern Australian estuary sediments | J Quatern Sci 20 327-347 May 2005 |
| 04/139P; 05/151 | Meister P; Prokopenko M; Skilbeck C G; Watson M; McKenzie J A | Data report. Compilation of total organic and inorganic carbon data from Peru Margin and eastern equatorial Pacific drill sites (ODP Legs 112, 138, and 201) | Proc ODP Sci Results Jørgensen B.B; D'Hondt S L; Miller D J (eds) 201 pp 1-20 [Online]. http://www-odp.tamu.edu/publications/201_SR/105/105.htm 2005 |
| 02/169 | D'Hondt S; Jørgensen B; Miller D J; Skilbeck C G; <i>et al</i> | Distributions of metabolic activities in deep seafloor sediments | Science 306 (5705) 2216-2221 2004 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|--------------------|---|--|---|
| 04/139P; 05/151 | Skilbeck C G; Gagan M K; Rolph T C; Fink D | Multidecadal and century-scale variability in 20,000-year ENSO records from the south Pacific Rim | In Turney C <i>et al</i> (ed) Reconstructing past climates for future prediction: integrating high-resolution palaeo data for meaningful prediction in the Australian region 56 AAS Canberra 2005 |
| 97/195R; 99/124 | Woods J; (Skilbeck C G) | History of Myall Lakes from the last interglacial to present day (0-125 ka); facies, compositional and physical properties | BSc(hons) Thesis 2001 |
| 03/113P | Brown L; (Thomas P) | Characterisation of Australian opal | PhD Thesis 2005 |

The University of Western Australia

| | | | |
|--------------------|--|--|--|
| 04/015 & 04/016 | Ionescu M; Bradshaw D; Siegele R; Cohen D; Hawas O; Stelcer E, Button D; Garton D | Oxygen concentrations by nuclear reaction analysis on the new STAR accelerator | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 76 November 2005 Wellington NZ 0 9758434 0 0 |
| 00/015 | Ladyman M; (Bradshaw D) | An ecophysiological comparison between two disjunct populations of the western tiger snake, <i>Notechis scutatus</i> : the influence of available water on phenotype | Ph D Thesis 2005 |
| 00/015 | Aubret F; (Bradshaw D) | A comparison of two populations of tiger snakes, <i>Notechis scutatus occidentalis</i> : the influence of phenotypic plasticity on various life history traits | Ph D Thesis 2005 |
| 01/167C | Dodson J R; Ono Y; Taylor D; Wang P | Climate, human and natural systems of the PEP II transect | Quatern Internat 118-119 3-13 2004 |
| 03/086 | Sewell R; (Musca C) | Molecular beam epitaxy (MBE) grown HgCdTe based heterointerfaces | PhD Thesis 2005 |
| 04/127 | Marimuthu S; Reynolds D A; <i>et al</i> Le Gal La Salle C | A field study of hydraulic, geochemical and stable isotope relationships in a coastal wetlands system | Hydrology 315 93 – 116 2005 |
| 04/127 | Marimuthu S; (Reynolds D A) | Interaction between surface water and groundwater in a coastal wetlands system | PhD Thesis 2005 |
| 01/024 | Bovell E; (St Pierre T) | The 3-dimensional distribution of iron oxide deposits in iron overloaded mammalian tissues | PhD Thesis 2003 |
| PGRA | Tsen G | Molecular beam epitaxy growth of mercury cadmium telluride | Postgraduate Electrical Engineering & Computing Synposium 115-118 2004 |
| PGRA | Tsen G | Arsenic doped mercury cadmium telluride grown by molecular beam epitaxy | Postgraduate Electrical Engineering & Computing Synposium 79-84 2005 |

University of Western Sydney

| | | | |
|---------|--|---|--|
| 03/032P | Doolan K R; Evans P J; Short K T | Modification of surface and barrier properties of polyethylene terephthalate and polycarbonate plastics by ion implantation | 16th Biennial Congress of the Australian Institute of Physics 205 2005 |
| 03/175 | Yadav N N; Maheswaran S; Shutthandan V <i>et al</i> | Quantification of trace metals in adsorbents | 16th Biennial Congress of the Australian Institute of Physics 223 2005 |
| 99/133P | Hennessy I; (Ng L T) | Charge-transfer complexes radiation grafting processes | BSc Hons Thesis 2000 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|--------------------|----------------------------------|---|-------------------------|
| 98/122; 99/133P | Shah N; (Ng L T) | Radiation curing and grafting of polymers | M Chem Tech Thesis 2000 |
| 99/133P | Zilic E; (Ng L T) | Effect of solvents on radiation grafting of charge-transfer complexes | Ph D Thesis 2003 |
| 01/113P | Osman F; Evans P <i>et al</i> | Laser interaction and related plasma phenomena | Am J Appl Sci 2 1 2005 |
| 02/192 | Emseis P; (Williams P) | Non-classical bonding in chiral metal complexes | PhD Thesis 2003 |

University of Wollongong

| | | | |
|---------|---|---|--|
| 01/015P | Wang C; (Bradhurst D) | High energy batteries for electric vehicles | Ph D Thesis 2004 |
| 98/128 | Inamdar; (Bremner J) | Labelled dopamine D4 receptor ligands and dopamine transporter ligands for PET and SPECT | Ph D Thesis 2000 |
| 98/155R | Reeves J; (Chivas A) | The use of ostracoda in the palaeoenvironmental reconstruction of the Gulf of Carpentaria, Australia, from the last interglacial to present | Ph D Thesis 2004 |
| 98/155R | Holt S; (Chivas A) | Palaeoenvironments of the Gulf of Carpentaria from the last glacial maximum to the present, as determined by foraminiferal assemblages | Ph D Thesis 2005 |
| 01/031 | Ackerman B; (Chivas A) | Regolith geochemical exploration in the Girilambone District of New South Wales | Ph D Thesis 2005 |
| 98/155R | Couapel M; (Chivas A) | The Gulf of Carpentaria palaeoenvironments: OSL dating and nanofossil evidence | Ph D Thesis 2005 |
| PGR5/00 | Cornelius I | Towards silicon microdosimetry based verification of Monte Carlo calculations in hadron therapy 2003 | Ph D Thesis 2003 |
| 99/135 | Uprety E; (Ionescu M) | The properties of vortex dynamics in Bi-2212 single crystals | Ph D Thesis 2001 |
| 02/065 | Ionescu M; Winton B; Silver T; Dou S X; Ramer R | Cryogenic magnetic field sensor based on the magnetoresistive effect in bulk Bi2212+USr ₂ CaO ₆ | Appl Phys Lett 84 5335-5337 2004 |
| 00/073 | Ionescu M; Winton B; Silver T; Dou S X; Ramer R | Large magneto-resistive effect in bulk Bi2212 with small additions of USr ₂ CaO ₆ | J Appl Phys D 37 1727 2004 |
| 05/084 | Armstrong N; (Jones B G) | Holocene sedimentation and heavy metal contamination in the industrialised Tamar River estuary, Tasmania | B Marine Sci Hon Thesis 2005 |
| 02/069P | Jones B G; Woodroffe C D; Panayotou K <i>et al</i> | Patterns and rates of estuarine infill in Southern New South Wales | Geological Society of Australian Abstracts 73 22 February 2004 |
| 02/069P | Switzer A D; Pucillo K; Haredy R A; Jones B G; Bryant E A | Sea level, storm, or tsunami: enigmatic sand sheet deposits in a sheltered coastal embayment from southeastern New South Wales, Australia | J Coastal Research 21 655-663 2005 |
| 02/069P | Sloss C R; Jones B G; Murray-Wallace C V; McClennen C E | Holocene sea level fluctuations and the sedimentary evolution of a barrier estuary: Lake Illawarra, New South Wales, Australia | J Coastal Research 21 943-959, 974-975 2005 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|----------------|---|---|--|
| 04/098 | Yudelev M; Alyousef K; Brandon J; Lerch M L F <i>et al</i> | Application of semiconductors for dosimetry of fast neutron therapy beam | Rad Prot Dos 110(1-4) 573-578 2004 |
| 00/088P | Fu X K (Liu H K) | Fabrication and characterisation of Bi-2223 current lead | Ph D Thesis 2002 |
| PGR2/99 | Marinaro D | A study into the effects of fission-fragment damage on activation energies in Ag/Bi2223 tapes | Ph D Thesis 2001 |
| 01/107 | Clarke S J; (Murray-Wallace C) | Biogeochemical analyses of casuarinus, megapode and aepyornis eggshells for palaeoenvironmental reconstructions | PhD Thesis 2003 |
| PGRA | Nghiem L; Schäfer A | Critical risk points of nanofiltration and reverse osmosis processes in water recycling applications | Desalination 187 303-312 April 2005 |
| PGRA | Nghiem L D; Schäfer A I | Fouling autopsy of hollow-fibre MF membranes in wastewater reclamation | Desalination 188 113 - 121 April 2005 |
| PGRA | Nghiem L; Schäfer A; Elimelech M | Pharmaceutical retention mechanisms by nanofiltration membranes | Environmental Science Technology 39 7698 - 7705 August 2005 |
| PGRA | Nghiem L | Removal of emerging trace organic contaminants by nanofiltration and reverse osmosis | Ph D Thesis June 2005 |
| PGRA | Nghiem L D; Schäfer A I; Elimelech M | Nanofiltration of hormone mimicking trace organic contaminants | Separation Science & Technology 40 2633-2649 2005 |
| 98/132 | Zheng D; (Nightingale S) | Degradation of steel making refractories | Ph D Thesis 2000 |
| 03/099 | Cornelius I; Rosenfeld A | Monte Carlo verification in fast neutron therapy | IEEE Trans on Nucl Sci 51-N3 873-877 2004 |
| 03/099 | Rosenfeld A; Siegbahn E A; Brauer-Krish E; <i>et al</i> | Edge on Face-to-Face (EOFF) MOSFET for synchrotron microbeam dosimetry: MC modeling | IEEE Trans on Nucl Sci 52 2562-2569, 2005 |
| 99/142 | Bradley P; (Rosenfeld A B) | Silicon microdosimetry for radiation therapy | PhD Thesis 2001 |
| 02/157S | Nghiem L; Schäfer A | Adsorption and transport of trace contaminant estrone in NF/RO membranes | Environmental Engineering Science 19(6) 441-451 2002 |
| PGRA | Sloss C R; Jones B G Murray-Wallace C V <i>et al</i> | The chronostratigraphy of a Holocene barrier estuary: Lake Illawarra, NSW | Geological Society of Australia Abstracts 73 41 2004 |
| PGRA | Sloss C R; Murray-Wallace C V; Jones B G | Dating Holocene estuarine successions using aspartic acid racemisation | Proc Third Quaternary Dating Workshop, AINSE 73-76 2003 |
| PGRA | Sloss C R; Jones B G | Evolution of a barrier estuary following the last glacial maximum: Lake Illawarra, NSW, Australia ^ | International Geology Correlation Program 464 Annual Conference Abstracts 57-59 2003 |
| PGRA | Sloss C R; Jones B G; Murray-Wallace C V; McClennen C E | Holocene sea level change and the evolution of a barrier estuary: a case study, Lake Illawarra, NSW, Australia | J Coastal Research 21 974-975 2005 |
| PGRA | Sloss C R | Holocene sea-level change and the aminostratigraphy of wave-dominated barrier estuaries on the southeast coast of Australia | Ph D Thesis 2005 |
| PGRA | Sloss C R; Murray-Wallace C V; Jones B G | Dating Holocene estuarine successions using aspartic acid racemisation | Final Conference Project IGCP437, GI2S Coast, Research Publication 4 223-225 Puglia 2003 |

| Project Number | Chief Investigator Co-authors | Title of Publication | Reference |
|-------------------------|--|---|--|
| PGRA | Sloss C R; Murray-Wallace C V; Jones B G | Dating Holocene estuarine successions using aspartic acid racemisation | Quatern Australasia 21 28-30 2003 |
| PGRA | Sloss C R; Jones B G; Murray-Wallace C V; Chenhall B E | Recent sedimentation and geomorphological changes, Lake Illawarra, NSW, Australia | Wetlands (Australia) 21 73-83 2004 |
| PGRA & 02/069P | Sloss C R; Murray-Wallace C V; Jones B G | Aminostratigraphy of two Holocene wave-dominated barrier estuaries in southeastern Australia | J Coastal Research 22(1) 113-136 2006 West Palm Beach, Florida |
| 02/141 | Zhao Y; Ionescu M; Horvat J; Dou S X; Wang X | Comparative study of <i>in-situ</i> and <i>ex-situ</i> MgB ₂ films prepared by pulsed laser deposition, | Supercond Sci Technol 17 482 2004 |
| PGRA | Ward I; Nanson G; Head L; Fullagar R; Price D; Fink D | Late Quaternary landscape evolution in the Keep River Region, northwestern Australia | Quatern Sci Res 24 1906-1922 2005 |
| PGRA | Ward I | Hidden in the sands of time: geoarchaeology of sandstone landscapes in the Keep River Region, Northern Territory, Australia | Ph D Thesis 2003 |
| 03/128P | Simms A; Woodroffe C; Jones B G; Heijnis H; Harrison J; Brooke B | Validating an erosion model using the environmental radionuclide ²¹⁰ Pb in the Lake Wollumboola Catchment, Southeastern NSW, Australia | 14th Nuclear and Complementary Techniques of Analysis Conference & 9th Vacuum Society of Australia Congress 239 November 2005 Wellington NZ 0 9758434 0 0 |
| 02/150P; 01/207; 04/174 | Hua Q; Woodroffe C D; Smithers S G; Barbetti M; <i>et al</i> | Radiocarbon in corals from the Cocos (Keeling) Islands and implications for Indian Ocean circulation | Geophysical Research Letters 32 L21602 2005 |
| 98/126; 02/149 | Panayotou K; (Woodroffe C D) | Geomorphology of the Minnamurra River Estuary south-eastern Australia: evolution and management of a barrier estuary | PhD Thesis 2004 |
| 02/150P | Hua Q; Barbetti M; Smithers S; Woodroffe C <i>et al</i> | Radiocarbon in corals from the Cocos (Keeling) Islands and implications for Indian Ocean circulation | Radiocarbon Dating Conference 46 603-610 2004 |
| PGRA | Schulte R W; Bashkirov V; Loss Klock M C; Wroe A <i>et al</i> | Density resolution of proton computed tomography: results of a Monte Carlo simulation study | Med Phys J 32 1035-46 2005 |
| PGRA | Wroe A J; Cornelius I M; Rosenfeld A B | The role of non-elastic reactions in absorbed dose distributions from therapeutic proton beams in different medium | Med Phys J 32 37-41 2005 |
| PGRA | Schulte R W; Loss Klock M C; Evseev I E; de Assis J T; Yevseyva O; Wroe A <i>et al</i> | Computed tomography with a low-intensity proton flux: results of a Monte Carlo study | International Symposium on Optical Science and Technology, SPIE 49th Annual Meeting, 5541 153 - 164 August 2004 Wellington, WA |
| PGRA | Yerbury J J; Stewart E M; Wyatt A R; Wilson M R | Quality control of protein folding in extracellular space | EMBO Reports 6(12) 1131-1136 December 2005 |

University Codes

| CODE | UNIVERSITY | CODE | UNIVERSITY |
|------|---------------------------------|------|-------------------------------------|
| ACU | Australian Catholic University | MUR | Murdoch University |
| ADE | The University of Adelaide | NCT | The University of Newcastle |
| AKL | The University of Auckland | NSW | The University of New South Wales |
| ANS | ANSTO | NTU | Charles Darwin University |
| BAL | University of Ballarat | QLD | The University of Queensland |
| CAN | University of Canterbury | QUT | Queensland University of Technology |
| CBR | University of Canberra | RMI | RMIT University |
| CGU | Central Queensland University | SCU | Southern Cross University |
| CSU | Charles Sturt University | USQ | University of Southern Queensland |
| CUR | Curtin University of Technology | SWI | Swinburne University of Technology |
| DEA | Deakin University | SYD | The University of Sydney |
| ECU | Edith Cowan University | TAS | University of Tasmania |
| FLI | Flinders University | UNE | The University of New England |
| GNS | GNS Science | USA | University of South Australia |
| GRI | Griffith University | UTS | University of Technology Sydney |
| JAM | James Cook University | UWA | The University of Western Australia |
| LAT | La Trobe University | UWS | University of Western Sydney |
| MAC | Macquarie University | VIC | Victoria University of Technology |
| MEL | The University of Melbourne | WOL | University of Wollongong |
| MON | Monash University | | |

Specialist Committees

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|---|--|
| A | Archaeology and Geosciences |
| B | Biomedical Science and Biotechnology |
| E | Environmental Science |
| M | Materials – Properties and Engineering |
| N | Materials – Structures and Dynamics |