

## 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 the end of 2008 all universities in Australasia, 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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### Executive Secretary

Dr Dennis Mather

# AINSE Council 2006

## Member Organisations and Representation

2 Council Meetings were held in 2006

Organisation	Membership Commenced	Councillor	Meetings Attended
ANSTO CEO	1958	Dr Ian Smith	1
ANSTO, Chief of Research		Dr George Collins	2
ANSTO, Bragg Institute		Dr Robert Robinson	1
ANSTO, Institute for Environmental Research		Dr Peter Holden	1
The University of Queensland	1958	Dr Paul Meredith	1
The University of New England	1958	Dr Peter Grave	1
The University of Sydney	1958	A/Professor Brendan Kennedy	2
The University of New South Wales	1958	Professor Rob Burford	2
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	0
The University of Adelaide	1958	A/Professor Gerald Laurence	2
The University of Western Australia	1958	Dr Jasmine Henry	2
Monash University	1961	Professor Rob Norris	1
The University of Newcastle	1965	A/Professor Bruce King	1
Flinders University of SA	1966	Dr Michael Brunger	2
La Trobe University	1966	Dr John Webb	0
Macquarie University	1966	Professor James Piper	0
James Cook University	1970	Professor Richard Keene	2
University of Wollongong	1975	Professor Allan Chivas	2
Griffith University	1975	Professor Greg Hope	2
Murdoch University	1985-1997 rejoined 1998	A/Professor Danielle Meyrick	1
University of Technology, Sydney	1988	Professor Greg Skilbeck	1
RMIT University	1988	Professor Peter Johnston	2
Curtin University of Technology	1989	Professor Brian O'Connor, Vice President	2
Central Queensland University	1991	Dr David Druskovich	2
University of South Australia	1991	Dr Namita Choudhury	2
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	2
The University of Auckland	1995	Professor Jim Metson	1
Charles Sturt University	1995	A/Professor Michael Antolovich	2
Charles Darwin University	1995	A/Professor David Parry	2
Edith Cowan University	1996	Professor Patrick Garnett	0

University of Canberra	1996	Professor Andrew Cheetham	1
The University of Southern Queensland	1996	Professor Graham Baker	2
Deakin University	1997	Professor David Stokes	1
University of Ballarat	1997	Mr Stafford McKnight	2
Australian Catholic University	2001	Dr Brian Bicknell	1
GNS Science	2004	Dr Frank Bruhn	2
University of Canterbury	2004	Dr Stephen Durbin	1
University of Otago	2007	Professor Glenn Summerhayes	1
Secretary to AINSE Council (non-voting)		Dr Dennis Mather, AINSE	1

#### Alternate Representatives and other attendees

Edith Cowan University	1996	Dr Stephen Hinckley	2
Macquarie University	1966	A/Professor Damian Gore	2
University of Western Sydney	1993	Professor Shelley Burgin	1
Murdoch University	1985-1997 rejoined 1998	Dr Igor Bray	1
Australian Catholic University	2001	Dr Pre de Silva	1

## Executive Committee

### Four Executive Committee Meetings held in 2006

Councillor	Office/Position	Organisation	Meetings Attended
Professor John White	President	The Australian National University	4
E/Professor Brian O'Connor	Vice – President	Curtin University of Technology	4
Professor Allan Chivas		University of Wollongong	2
Dr Ian Smith		ANSTO	4
Dr Robert Robinson		ANSTO	3
Dr George Collins		ANSTO	4
Dr Peter Holden		ANSTO	1
Dr Dennis Mather		AINSE	4
Mr Ben Thompson		AINSE	1

## AINSE Staff

Scientific Secretary     Dr Dennis Mather

### Secretariat

Miss Rhiannon Still

Mrs Sandy O'Connor (part-time)

Mrs Nerissa Phillips (part-time)     on leave July 05 - June 06

Mr Ben Thompson     until 29 September

Ms Elisabeth Meijer (part-time)     from 7 November

# Specialist Committees for 2006

The Scientific Secretary, AINSE, is an ex-officio (non-voting) member of all Committees. Committees meet in May and in October.  
(a) indicates 'alternate' (c) indicates councillor

		Meetings Attended
<b>Archaeology and Geosciences Committee</b>		
Professor Glenn Summerhayes, Convenor May (c)	University of Otago	1
Professor Patrick De Deckker, Convenor October	The Australian National University	2
Dr David Garnett	Charles Darwin University	2
A/Professor James Schulmeister	University of Canterbury	2
Dr Peter Grave (c)	University of New England	1
Dr Quan Hua	ANSTO	2
Dr David Fink	ANSTO	2
<b>Biomedical Science and Biotechnology Committee</b>		
Professor James Camakaris, Convenor (c)	University of Melbourne	2
Dr Rey Casse	University of Adelaide, Queen Elizabeth Hospital	0
Dr Michael Hay	University of Auckland	2
A/Professor Lawrence Gahan	University of Queensland	1
A/Professor Christopher Rowe	University of Melbourne	1
Dr Andrew Katsifis	ANSTO	2
Dr Nabil Morcos	ANSTO	1
<b>Environmental Sciences Committee</b>		
Dr Bear McPhail, Convenor	The Australian National University	2
Dr Joachim Ribbe	University of Southern Queensland	2
Professor David Bowman	Charles Darwin University	2
Professor Greg Skillbeck (c)	University of Technology Sydney	2
Dr Andrew Smith	ANSTO	2
Dr Suzanne Hollins	ANSTO	2
<b>Materials - Structures and Dynamics Committee</b>		
Dr Chris Ling, Convenor	University of Sydney/ANSTO	2
A/Professor Craig Buckley	Curtin University of Technology	2
Professor Stewart Campbell	ADFA, University of New South Wales	2
Dr Michael James	Bragg Institute, ANSTO	2
Professor Jill Trehwella	University of Sydney	1
Professor Valerie Linton	University of Adelaide	1
<b>Materials - Materials – Properties and Engineering Committee</b>		
Professor Peter Johnston, Convenor (c)	RMIT University	2
Professor Robert Gilbert	University of Sydney	1
Dr Michael Brunger	Flinders University	2
Dr Rainer Siegele	ANSTO	1
Dr Ken Short (a)	ANSTO	1
Dr Kathryn Prince	ANSTO	2
Dr Zhaoming Zhang	ANSTO	1

# Conference Planning Committees

## Radiation 2006 (Incorporating the 21st AINSE Radiation Chemistry and the 18th Radiation Biology Conference)

20 - 21 April, The University of Sydney

A/Professor Roger Martin	University of Melbourne
A/Professor Robert Anderson	University of Auckland
Professor Clive Baldock	University of Sydney
Professor Jim Camakaris	University of Melbourne
Dr Paul Mulvaney	University of Melbourne
Dr Pam Sykes	Flinders University
A/Professor Andrew Whittaker	University of Queensland
Dr Dennis Mather	AINSE

## ITER Forum Workshop

11-13 October, Manly Australia

Dr Matthew Hole Chair	Australian National University
Professor John O'Connor	University of Newcastle
Dr Miriam Goodwin	ANSTO
Dr John Howard	Australian National University
Dr George Collins	ANSTO
Dr Boyd Blackwell	Australian National University
Professor Andrew Cheetham	University of Canberra
Professor Brian James	University of Sydney
Ross Calvert	Australian Institute of Energy
Lynne Hunter	European Commission to Australia & New Zealand
Dr Dennis Mather	AINSE

## 5th AINSE/ANBUG Neutron Scattering Symposium

11 - 13 December 2006, Sydney

Dr Chris Ling	University of Sydney
Dr Maxim Avdeev	ANSTO
E/Professor Stewart Campbell	UNSW@ADFA
A/Professor Brendan Kennedy	University of Sydney
Dr Tracey Hanley	ANSTO
A/Professor Trevor Finlayson	Monash University
Dr Dennis Mather	AINSE

## 26th Plasma Science Conference

3 - 8 December 2006, Brisbane

Dr Boyd Blackwell	Australian National University
Mr Horst Punzmann	Australian National University
Dr John Howard	Australian National University
Professor Robert Dewar	Australian National University
Dr Matthew Hole	Australian National University
Dr Dennis Mather	AINSE

## 21st Nuclear and Particle Physics Conference

3 - 8 December 2006, Brisbane

Dr David Hinde	Australian National University
Dr Martin Sevier	University of Melbourne
Prof Robert Elliman	Australian National University
Prof Bruce McKellar	University of Melbourne
Dr John Howard	Australian National University
Dr Dennis Mather	AINSE









# Balance Sheet

as at 31 December 2006

	Notes	31-Dec-06 \$	31-Dec-05 \$
<b>Current Assets</b>			
Cash	2	57,742	29,454
Receivables	3	107,482	76,395
Investments	4	2,429,697	2,344,728
Other	5	13,611	26,431
<b>Total Current Assets</b>		<u>2,608,532</u>	<u>2,477,008</u>
<b>Non-Current Assets</b>			
Plant and Equipment	6	30,129	2,994,853
<b>Total Non-Current Assets</b>		<u>30,129</u>	<u>2,994,853</u>
<b>Total Assets</b>		2,638,661	5,471,861
<b>Current Liabilities</b>			
Creditors	7	727,573	476,086
External Grants Received in Advance	8	-	1,013,754
Other Payments Received in Advance	9	-	1,080,724
Provisions for Employee Entitlements	10	52,164	66,134
<b>Total Current Liabilities</b>		<u>779,737</u>	<u>2,636,698</u>
<b>Non-Current Liabilities</b>			
Provisions for Employee Entitlements	10	19,179	3,095
<b>Total Non-Current Liabilities</b>		<u>19,179</u>	<u>3,095</u>
<b>Total Liabilities</b>		798,916	2,639,793
<b>NET ASSETS</b>		<u><u>1,839,745</u></u>	<u><u>2,832,068</u></u>
<b>Equity</b>			
Awards Reserve	16	2,565,000	2,366,000
Long Term Projects Reserve	16	500,000	500,000
Accumulated results of operations		(1,225,255)	(33,932)
<b>TOTAL EQUITY</b>		<u><u>1,839,745</u></u>	<u><u>2,832,068</u></u>

# Income and Expenditure Statement

for the period ended 31 December 2006

	Notes	31-Dec-06 \$	31-Dec-05 \$
<b>COST OF SERVICES</b>			
<b>Operating Revenue</b>			
Payments from members		2,483,275	2,366,993
External Grants	13	2,479,004	391,250
Interest Received		171,882	169,843
Profit on sale of assets		3,209	2,131
Other	15	135,039	85,445
<b>Total Operating Revenue</b>		<u>5,272,409</u>	<u>3,015,662</u>
<b>Operating Expenses</b>			
Wages & Salaries		194,955	185,677
Superannuation		24,005	23,428
AINSE Awards			
Students	11	462,229	515,464
Research Awards	11	1,757,163	1,464,493
Conference Subsidies		110,987	81,647
External Grants	13	3,368,252	400,000
Other Expenses	14	347,141	206,719
<b>Total Operating Expenses</b>		<u>6,264,732</u>	<u>2,877,428</u>
<b>Surplus/(Deficit) for the year</b>		(992,323)	138,234
Accumulated funds brought forward		(33,932)	(4,810)
<b>Accumulated Surplus (Deficit)</b>		<u>(1,026,255)</u>	<u>133,424</u>
Add(Less): transfer from Reserves			
Grants Reserve	16	199,000	167,356
<b>Accumulated results of operations at end of financial year</b>		<u>(1,225,255)</u>	<u>(33,932)</u>

# Statement of Cash Flows

for period ended 31 December 2006

	31-Dec-06 \$	31-Dec-05 \$
Notes	Inflows/(Outflows)	Inflows/(Outflows)
<b>CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES</b>		
Receipts from members	1,506,503	2,436,193
Receipts from grants	1,465,251	391,250
Interest received	184,702	168,213
	<u>3,156,456</u>	<u>2,995,656</u>
Grant expenditures	(5,698,631)	(2,461,604)
Payments to suppliers and employees	(298,454)	(577,992)
	<u>(5,997,085)</u>	<u>(3,039,596)</u>
Net cash flows provided by (used in) operating activities	18 <u>(2,840,629)</u>	<u>(43,940)</u>
<b>CASH FLOWS PROVIDED BY (USED IN) INVESTING ACTIVITIES</b>		
Proceeds from sale of property, plant and equipment	2,982,797	16,364
Purchase of property, plant and equipment	(28,910)	(27,208)
	<u>2,953,887</u>	<u>(10,845)</u>
Net cash flows provided by (used in) investing activities	<u>2,953,887</u>	<u>(10,845)</u>
<b>Net increase (decrease) in cash held</b>	113,258	(54,785)
Cash at beginning of reporting period as at 31/12/05	2,374,181	2,428,966
Cash at end of reporting period	2/4 <u>2,487,439</u>	<u>2,374,181</u>

# Statement of Changes in Equity

as at 31 December 2006

	Retained Earnings \$	Long Term Projects \$	Awards Reserve \$	Total \$
Balance at 1 January 2005	(4,810)	500,000	2,198,644	2,693,834
Profit attributable to entity	138,234	-	-	138,234
Transfers to and from reserves	-			
Awards Reserve	(167,356)	-	167,356	-
Transfers from retained profits	-	-	-	
Balance at 31 December 2005	<u>(33,932)</u>	<u>500,000</u>	<u>2,366,000</u>	<u>2,832,068</u>
Profit / (Loss) attributable to entity	(992,323)	-	-	(992,323)
Transfers to and from reserves	-			
Awards Reserve	-	-	-	-
Transfers from retained profits	(199,000)	-	199,000	-
Balance at 31 December 2006	<u><u>(1,225,255)</u></u>	<u><u>500,000</u></u>	<u><u>2,565,000</u></u>	<u><u>1,839,745</u></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

#### *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 measure reliable. 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 depreciation 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. Receivables 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-06 \$	31-Dec-05 \$
<b>2. CASH</b>		
Operating Account	57,242	28,954
Petty Cash	500	500
	<u>57,742</u>	<u>29,454</u>
<b>3. RECEIVABLES</b>		
<b>Current</b>		
Trade Debtors	6,802	8,003
Other Receivables	100,680	68,392
	<u>107,482</u>	<u>76,395</u>
<b>4. INVESTMENTS</b>		
Cash Deposit Account	2,429,697	344,728
Term Deposit Account	-	2,000,000
	<u>2,429,697</u>	<u>2,344,728</u>
<b>5. OTHER CURRENT ASSETS</b>		
<b>Current</b>		
Interest Accrued	13,611	26,431
	<u>13,611</u>	<u>26,431</u>
<b>6. PLANT AND EQUIPMENT</b>		
<b>Plant &amp; Equipment</b>		
At Cost	75,081	95,476
Accumulated Depreciation	(72,256)	(88,525)
Total Plant and Equipment	<u>2,825</u>	<u>6,951</u>
<b>Plant &amp; Equipment - STAR Accelerator</b>		
At Cost	-	2,968,252
Accumulated Depreciation	-	-
Total Plant and Equipment	<u>-</u>	<u>2,968,252</u>
<b>Motor Vehicles</b>		
At Cost	28,910	27,208
Accumulated Depreciation	(1,606)	(7,558)
Total Plant and Equipment	<u>27,304</u>	<u>19,650</u>

	Plant & Equipment	STAR Accelerator	Motor Vehicles	Total
<b>Movements in Carrying Amounts</b>				
Balance at Beginning of Year	6,951	2,968,252	19,650	2,994,853
Additions	-	-	28,910	28,910
Disposals	(20,395)	(2,968,252)	(27,208)	(3,015,855)
Depreciation Expense	16,269	-	5,952	22,221
Carrying Amount at End of Year	<u>2,825</u>	<u>-</u>	<u>27,304</u>	<u>30,129</u>

Plant & Equipment in 2006 excludes the STAR accelerator which was transferred to ANSTO on 29 November 2006 as approved by the Minister of Education Science and Training on 9 November 2006.

## Notes to the Financial Statements

	31-Dec-06 \$	31-Dec-05 \$
<b>7. CREDITORS</b>		
Unsecured Liabilities		
Trade Payables	722	4,240
Sundry Payables and Accrued Expenses	726,851	471,846
	<u>727,573</u>	<u>476,086</u>
<b>8. EXTERNAL GRANTS RECEIVED IN ADVANCE</b>		
ARC Grant - STAR	-	1,013,754
	<u>-</u>	<u>1,013,754</u>
<b>9. OTHER PAYMENTS RECEIVED IN ADVANCE</b>		
Member STAR Contribution	-	1,073,000
Memberships in Advance	-	7,724
	<u>-</u>	<u>1,080,724</u>
<b>10. PROVISIONS FOR EMPLOYEE ENTITLEMENTS</b>		
	<b>Employee Entitlements</b>	<b>Total</b>
Opening Balance at 1 January	69,229	45,535
Additional Provisions Raised	2,114	23,694
Amounts Used		
Balance at 31 December	<u>71,343</u>	<u>69,229</u>
	<b>31-Dec-06 \$</b>	<b>31-Dec-05 \$</b>
<b>Analysis of Provisions</b>		
Current	52,164	66,134
Non-Current	19,179	3,095
	<u>71,343</u>	<u>69,229</u>
<b>11. AINSE AWARDS</b>		
<b>AINSE AWARDS - Post Graduate Awards</b>		
Lucas Heights Costs	164,338	191,681
University Travel and Equipment	24,590	50,337
Stipends	231,815	260,125
AINSE Winter School	15,619	13,321
Fellowship	25,867	
	<u>462,229</u>	<u>515,464</u>
<b>AINSE AWARDS - Awards</b>		
Lucas Heights Costs	1,643,426	1,369,131
Minor Equipment and Materials	7,155	3,959
Travel and Accommodation	103,326	91,403
Other Costs	3,256	-
	<u>1,757,163</u>	<u>1,464,493</u>
<b>12. SEGMENT REPORTING</b>		

The Institute operates in the research sector providing funds for research to members within Australia and New Zealand.

## Notes to the Financial Statements

	31-Dec-06 \$	31-Dec-05 \$
<b>13. EXTERNAL GRANTS</b>		
<b>AINSE ARC ISIS Grant</b>		
Grant Revenue	240,000	240,000
Member Contributions	<u>152,250</u>	<u>151,250</u>
	392,250	391,250
Grant Expenditure		
External Payments	<u>400,000</u>	<u>400,000</u>
Total Expenditure	<u>400,000</u>	<u>400,000</u>
<b>Grants - ARC Tandem</b>		
Operating Revenue		
Grant Revenue	1,013,754	-
Member Contributions	<u>1,073,000</u>	<u>-</u>
	<u>2,086,754</u>	<u>-</u>
Operating Expenses		
STAR Accelerator	2,968,252	-
Operating Deficit relating to STAR Accelerator	(881,498)	-
<b>Reconciliation</b>		
Total External Grants Revenue	2,479,004	391,250
less transferred to Grants Received In Advance (Balance Sheet)	-	
	<u>2,479,004</u>	<u>391,250</u>
External Grant Revenue (Income & Expenditure Statement)	<u>2,479,004</u>	<u>391,250</u>
Represented by:		
<b>Total Grant Expenditure (Income &amp; Expenditure Statement)</b>	3,368,252	400,000
Amount to be met by AINSE	<u>(889,248)</u>	<u>(8,750)</u>
External Grants Expenditure	<u>2,479,004</u>	<u>391,250</u>

## Notes to the Financial Statements

	31-Dec-06 \$	31-Dec-05 \$
<b>14. OTHER EXPENDITURE</b>		
Conference Management	106,368	24,889
Publications and Promotions	53,966	18,837
Meetings and Committees	105,536	62,320
AINSE Secretariat		
Audit Fees	10,610	9,020
Bank Charges	1,751	1,711
Depreciation	14,046	14,817
Advertising and Printing	150	120
Office Supplies	1,256	1,959
Postage and Telephone	1,816	1,973
Insurance	11,149	10,106
Entertaining	515	458
Books and Software	734	2,461
Office Equipment and Repairs	2,993	1,237
Administration and Staff Training	1,061	22,939
Travel and Accommodation	15,590	15,019
Vehicle Expenses	12,685	11,007
Publications and Promotions	1,579	862
Staff Recruitment	-	-
FBT Expense & Payments	3,640	4,111
Credit Card Expense Clearing Account	-	-
Miscellaneous	1,696	2,873
Total AINSE Secretariat	81,271	100,673
Total Other Expenditure	347,141	206,719
<b>15. OTHER INCOME</b>		
Sponsorships:		
NTA Conference	-	18,616
ITER Workshop	60,580	-
ICNS	20,000	45,000
Conference Registrations	50,069	11,858
Other	4,390	9,971
	135,039	85,445
<b>16. MOVEMENT IN RESERVES</b>		
Awards Reserve		
Opening Balance	2,366,000	2,198,644
Transfer to Accumulated Funds	199,000	167,356
Balance as at 31 December 2006	2,565,000	2,366,000
Long Term Projects Reserve	500,000	500,000
Transfer from Accumulated Funds	-	-
Balance as at 31 December 2006	500,000	500,000

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.

# Notes to the Financial Statements

	31-Dec-06	31-Dec-05
	\$	\$
<b>17. AUDITORS REMUNERATION</b>		
Remuneration of the auditor of the entity for:		
Auditing or reviewing the financial report	7,350	7,000
Acquittal of Grants	450	420
Other Services	2,810	1,600
	<u>10,610</u>	<u>9,020</u>
<b>18. RECONCILIATION OF OPERATING RESULT WITH CASHFLOWS FROM ORDINARY ACTIVITIES</b>		
Profit from Ordinary Activities	(992,323)	138,234
Changes in Assets & Liabilities		
(Increase)/Decrease in Trade Debtors	(31,087)	(26,100)
Increase/(Decrease) Trade Payables	251,487	(198,546)
(Increase)/Decrease Accrued Interest	12,820	(1,630)
Increase/(Decrease) Employee Entitlements	2,114	23,693
Increase/(Decrease) Other Current Liabilities	(1,080,724)	7,724
Increase/(Decrease) Grants Received in Advance	(1,013,753)	-
	<u>(1,859,143)</u>	<u>(194,859)</u>
Non-Cash Items		
Depreciation	14,046	14,816
Gain on sale of asset	(3,209)	(2,131)
	<u>10,837</u>	<u>12,685</u>
<b>Net cash provided by (used in) operating activities</b>	<u>(2,840,629)</u>	<u>(43,940)</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 Institute's operations.

The Institute does not have any derivative instruments at 31 December 2006.

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)

Financial Assets	Weighted Average Effective Interest Rate		Floating Interest Rate		Within 1 year		Fixed Interest Rate Maturing 1 to 5 years			Non-interest bearing			Total			
	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005		
	%	%	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		
Cash and cash equivalents	7.94%	5.25%	2,486,939	373,682	-	-	-	-	-	-	-	-	500	500	2,487,439	374,182
Receivables			-	-	-	-	-	-	-	-	-	-	107,482	76,395	107,482	76,395
Investments	7.95%	6.08%	-	2,000,000	-	-	-	-	-	-	-	-	-	-	-	2,000,000
Total Financial Assets			2,486,939	2,373,682	-	-	-	-	107,982	76,895	2,594,921	2,450,577				

### 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:

Financial assets	2006		2005	
	Carrying amount	Net Fair Value	Carrying amount	Net Fair Value
Cash	\$ 2,487,439	\$ 2,487,439	\$ 374,182	\$ 374,182
Receivables	107,482	107,482	76,395	76,395
Investments	-	-	2,000,000	2,000,000
	<u>2,594,921</u>	<u>2,594,921</u>	<u>2,450,577</u>	<u>2,450,577</u>
<b>Financial liabilities</b>				
Trade and other payables	727,573	727,573	476,086	476,086
	<u>727,573</u>	<u>727,573</u>	<u>476,086</u>	<u>476,086</u>

Fair values are materially in line with carrying values.

## Notes to the Financial Statements

		31-Dec-06 \$	31-Dec-05 \$
<b>20. COMMITMENTS</b>			
ISIS		7,750	8,750
Awards, Fellowships and Studentships Awarded in 2006 for payment in 2007	Note A	2,565,000	2,366,000
		<u>2,572,750</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 2006 are used for grants and studentships during 2007.

AINSE commits \$400,000 pa to studentships

### 21. ASSOCIATION DETAILS

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

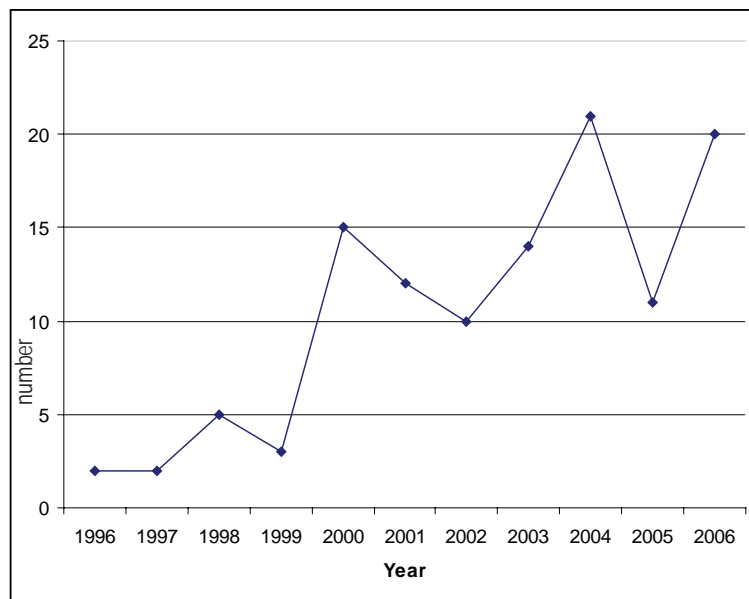
## AINSE Postgraduate Research Awards

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 supplement for up to 3 years, the Award gives access to ANSTO's world-class facilities and expertise. A stipend of \$7500 pa and \$5500 pa are provided towards the costs involved in using facilities at Lucas Heights; and an allowance for travel and accommodation costs is also awarded to enable students to work at Lucas Heights.

Twelve new AINSE postgraduate research projects were supported by a Post-Graduate Research Award in 2006 bringing the total of current scholars to 57. Through its Post-Graduate Research Award scheme, AINSE has now helped train 221 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.

During the year 10 theses were received from scholars who had completed their studies and another 10 submitted their theses and were awaiting results at 31 December.



Graph showing the number of PGRA scholars completing each year for the last decade.



## Postgraduate scholars, and their projects, who were supported during 2006

*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** Science and Primary Industries, Charles Darwin University. Commenced 01/07/03

*Selenium assimilation and distribution in marine organisms*

**Clare Atkinson** GeoQuest Research group, University of Wollongong. Commenced 01/07/06

*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

*Chemical bath deposition of metal-chalcogenide (semiconductor) and metal thin films*

**Fionnuala Buckley** Physical Chemistry, Griffith University. Commenced 01/07/06

*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

*Measurement of nanomagnetic and nanostructural properties of ferrofluids by small angle neutron and x-ray scattering*

**Matthew Carroll** Physics, The University of Western Australia. Commenced 01/07/06

*Controlling precipitation processes in the production of value-added zirconia*

**Geoffrey Carter** Applied Physics, Curtin University of Technology. Commenced 01/07/06

*Plasma surface modification of polymers for biomedical applications*

**Chanokporn Chaiwong** Applied and Plasma Physics, The University of Sydney. Commenced 01/07/04

*Calixarenes as potential ionophores for ion-selective electrodes*

**Ryan Chester** Applied Chemistry, Curtin University of Technology. Commenced 01/07/04

*Relaxation and microstructural studies in triglycine sulphate ferroelectrics*

**John Daniels** Physics, 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 lixiviants*

**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

*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  $\gamma$ -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

*Characterisation of reinforced hydroxyapatite ceramics and their applications to strengthening biocompatible implants*

**Catherine Kealley** Applied Physics, Curtin University of Technology. Commenced 01/07/03

Effect of sugars on bilayer to non-bilayer phase transitions in biological membranes during dehydration

**Ben Kent** Applied Physics, RMIT University. Commenced 01/07/06

*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
- 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
- Diamond-like carbon coating for biomedical applications*  
**Wen Jie Ma** Centre for Advanced Materials Technology, The University of Sydney. Commenced 01/07/06
- A palaeoecological reconstruction of the lower Snowy River, East Gippsland: environmental response to climate change, land use and river regulation*  
**Angus MacGregor** Geographical & Environmental Studies, 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
- Small-angle scattering analysis of structural rearrangements of Parkinson's disease-associated protein kinases*  
**Ryan Mills** Biochemistry and Molecular Biology, The University of Melbourne. Commenced 01/07/06
- Investigation of cathode materials for lithium secondary batteries*  
**Manickam Minakshi** Chemistry, Murdoch University. Commenced 01/06/04
- The surface chemistry of DNA recognition interfaces*  
**Freya Mearns** Chemical Sciences The University of New South Wales Commenced 01/07/02
- 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
- Scales of variability: El Niño, human impact and Greater Flamingo populations in internationally significant Galapagos wetlands*  
**Ashley Natt** Geographical and Environmental Studies, University of Adelaide. Commenced 01/07/06
- Structure-property relationships in thermoset nanocomposites*  
**Betime Nuhiji** Engineering and Technology, Deakin University. Commenced 01/07/06
- 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
- A nanostructural investigation of hydrogen storage in aluminium*  
**Mark Paskevicius** Applied Physics, Curtin University of Technology. Commenced 01/07/06
- Residual stress measurement in highly constrained welds*  
**Susan Pearce** Mechanical Engineering, University of Adelaide. Commenced 01/07/04
- Protein behaviour at interfaces*  
**Adam Perriman** 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
- 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
- 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 eutrication in southeast Australian coastal lagoon ecosystems: three case studies*

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

*Geometrically frustrated magnetism in bismuth platinum-group oxides*

**Neeraj Sharma** Chemistry, The University of Sydney. Commenced 01/07/06

*Processing of TiO<sub>2</sub> 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

*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

*Structural characterization of bismuth oxide-based, highly conductive solid electrolytes*

**Nathan Webster** Chemistry, The University of Western Australia. 01/07/06

*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 2006 included the following disciplines

**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, 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 2006 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 24. 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 2006 209 projects were awarded to a value of \$2,227,645 involving thirty-five of the thirty-nine university members. The table on the following page shows the distribution of awards by university and by specialist areas.

Specialist Areas \*

UNI *	A	B	E	M	N	Total
ACU			1			1
ADE	2		2			4
AKL	1	2		3	1	7
ANU	9				4	13
BAL			1			1
CAN	1					1
CBR	1					1
CQU			1	1		2
CUR				3	5	8
DEA			1			1
FLI		1		1	2	4
GRI				1	2	3
IGN				1		1
JAM	3		3			6
LAT			1			1
MAC			1	2		3
MON	4	1	1	1	4	11
MEL	1	2	2	1	6	12
MUR	1	1			2	4
NCT	2	1	2	1	1	7
NSW			3	10	6	19
OTA	1					1
QLD	6	2	2	1	1	12
QUT				1		1
RMI				7	4	11
SCU	4		3	1		8
SWI				1	2	3
SYD	5	3	1	5	13	27
TAS	3		1			4
UNE	1	1				2
USA					4	4
UTS			1	1	1	3
UWA	1		2	2	1	6
UWS			1		1	2
WOL	3	3	4	5		15
Total	49	17	34	49	60	209

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

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## University of Adelaide

### Humanities & Social Sciences

06/175P	<b>Dr John Tibby</b> New understandings of coastal lake development: a multiple indicator approach	\$15,061
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06/196	<b>Professor Martin Williams</b> Human responses to Holocene desiccation in the Sahara and Nile valley	\$8,110
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### Sciences

06/030P	<b>A/Professor David Chittleborough</b> Dating root channels in soils with strong texture contrast	\$3,834
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06/145	<b>Professor John Prescott</b> Low level uranium and thorium determinations for luminescence dating	\$2,448
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<b>University of Adelaide Total</b>		<b>\$29,453</b>
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## The University of Auckland

### Arts

06/002	<b>Dr Melinda Allen</b> Developing a radiocarbon chronology for the Northern Marquesas Islands of East Polynesia	\$9,090
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### Engineering

06/005P	<b>Dr Kean Aw</b> Development of hot plate curing for polysiloxane low-k dielectric	\$700
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06/006	<b>Dr Kean Aw</b> Study of Cu diffusion resistance in polysiloxane low-k dielectric thin film with plasma treatment	\$7,218
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### Medical and Health Sciences

06/046 *	<b>Professor William Denny</b> Reduction potentials and mechanism of reduction of the new anti-TB drug PA-824 and analogues	\$4,320
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06/076	<b>Dr Michael Hay</b> Kinetic studies on the activation of anticancer 1,2,4-benzotriazine 1,4-dioxide analogues of tirapazamine	\$4,320
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### Science

06/210	<b>Professor Graham Bowmaker</b> Calculation of nuclear magnetic resonance parameters for solid compounds	\$3,802
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06/127P	<b>Professor Jim Metson</b> Segregation effects in high strength casting alloys	\$12,342
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<b>The University of Auckland Total</b>		<b>\$41,792</b>
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## Australian Catholic University

### Arts and Sciences

06/157	<b>Dr Neil Saintilan</b> The use of isotopes to determine spatial variability in the diet of crabs in estuarine saltmarsh	\$7,000
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<b>Australian Catholic University Total</b>		<b>\$7,000</b>
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## Australian National University

### Archaeology and Natural History

06/026 *	<b>Dr Judith Cameron</b> The dating of the Dongson shroud	\$3,244
06/068	<b>Dr Richard Gillespie</b> Radiocarbon and stable isotopes in freshwater shell carbonate and protein fractions	\$6,678
06/080	<b>Professor Geoffrey Hope</b> Early humans at Kosipe, PNG	\$3,370
06/139	<b>Dr Susan O'Connor</b> Dating the dreaming in the Gregory River region, Northern Territory	\$7,348
06/140	<b>Dr Susan O'Connor</b> An AMS <sup>14</sup> C pollen-dated chronology of prehistoric human-environment interactions in seasonal tropical forests in NW Thailand	\$4,044
06/141	<b>Dr Susan O'Connor</b> Dating the origins of agriculture in East Timor by direct AMS dating of archaeobotanical remains from an archaeological cave site	\$6,488

### Earth & Marine Sciences

06/042	<b>Dr Patrick De Deckker</b> The dating of oceanographic changes in the Indian Ocean South of Sumatra over the last 30,000 years	\$8,110
06/057	<b>Dr Anne Felton</b> Age structure of shore and cliff-top platforms and their associated boulders: estimating the frequency of high energy erosional events	\$11,880

### Research School of Chemistry

06/227	<b>Dr Darren Goossens</b> Exploring the magnetic phase diagram of (Mn,Zn)PS <sub>3</sub>	\$13,220
06/228	<b>Dr Darren Goossens</b> Finding the ferromagnetic direction in BaPrO <sub>3</sub> using high-magnetic-field neutron powder diffraction	\$9,340
06/085	<b>Dr Andrew Jackson</b> Protein/polysaccharide conjugate adsorption at hydrophobic surfaces	\$16,115
06/250	<b>Dr Lasse Noren</b> The structure of the incommensurately modulated solid solution SnSb and the lithium-containing compounds Li <sub>z</sub> SnSb (z= 0, 0.1, 0.5 and 1) and Li <sub>[3-x]</sub> Mg <sub>x</sub> NbO <sub>[4-y]</sub> F <sub>y</sub> (x= 0 and 1; y = 0 and 1)	\$18,770

### Research School of Earth Sciences

06/056	<b>Dr William Dunlap</b> <sup>40</sup> Ar/ <sup>39</sup> Ar dating for tectonics and the environment	\$15,552
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Australian National University Total \$124,159

## University of Ballarat

### Science & Engineering

06/051	<b>Dr Kim Dowling</b> Child's play: investigating the impact of trace elements in soil in the goldfields region of Victoria	\$20,010
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University of Ballarat Total \$20,010

## University of Canberra

### Applied Physics

06/038	<b>Professor Dudley Creagh</b> The study of pigments, especially ochres, in Aboriginal artefacts held by National collecting institutions	\$11,457
<b>University of Canberra Total</b>		<b>\$11,457</b>

## University of Canterbury

### Geological Sciences

06/168	<b>Dr Kerry Swanson</b> ABCD - accounting for the origin and maintenance of deep-sea biodiversity	\$12,165
<b>University of Canterbury Total</b>		<b>\$12,165</b>

## Central Queensland University

### Biology

06/004P	<b>Dr Nanjappa Ashwath</b> The use of micro-PIXE to study cellular and sub-cellular distribution of cadmium in the Cd hyperaccumulating plant <i>Salsola kali</i>	\$10,877
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### Engineering and Physical Systems

06/126	<b>Dr Richard Metcalfe</b> Effect of physical character and cohesive forces on the bulk transport of fly ash	\$11,247
<b>Central Queensland University Total</b>		<b>\$22,124</b>

## Curtin University of Technology

### Applied Chemistry

06/043	<b>A/Professor Roland De Marco</b> A SIMS study of ionic transference at solid contacts in all-solid-state polymeric sensors	\$13,541
06/044	<b>A/Professor Roland De Marco</b> A neutron reflectometry study of water layers in all-solid-state polymeric ion sensors	\$17,370

### Applied Physics

06/105	<b>A/Professor Deyu Li</b> Proton sites in goethite and Al-substituted goethites	\$14,600
06/110	<b>A/Professor It-Meng Low</b> Effect of fluoride ions on the transformation kinetics and morphology in whisker-reinforced mullite	\$13,475
06/111	<b>A/Professor It-Meng Low</b> Depth-profiling of elemental composition in layer-graded alumina / aluminium-titanate composites	\$17,590
06/112	<b>A/Professor It-Meng Low</b> <i>In-situ</i> mullite-whisker reinforced alumina composites	\$12,698
06/247	<b>A/Professor It-Meng Low</b> Thermal stability of nanolayered ternary carbides (Ti <sub>3</sub> SiC <sub>2</sub> )	\$19,520

### Centre for Fuels and Energy

06/062	<b>Dr Sawsan Freij</b> A neutron diffraction study of the crystallization of metal-substituted aluminophosphate molecular sieves	\$7,925
<b>Curtin University of Technology Total</b>		<b>\$116,719</b>



## Deakin University

### Ecology and Environment

06/186	Dr Mark Warne History of natural environmental events in a pristine estuary: ostracod proxies and <sup>210</sup> Pb chronology from Wingan Inlet, Victoria	\$9,980
Deakin University Total		\$9,980

## Flinders University

### Chemistry, Physics and Earth Sciences

06/268	Dr Stephen Clarke SANS analysis of gold in PAMAM dendrimers	\$15,350
06/158P	Dr Joseph Shapter Quantitative measurement of the carbon and oxygen content of functionalised single walled nanotubes	\$6,788
06/254	Dr Joseph Shapter Membrane interactions with drugs and proteins	\$2,690

### Flinders Medical Centre

06/169	Dr Pamela Sykes Effect of low dose-rate radiation on somatic intrachromosomal recombination	\$24,100
Flinders University Total		\$48,928

## Griffith University

### Science

06/229	A/Professor Evan Gray Detecting vacancies by diffraction	\$8,845
06/230	A/Professor Evan Gray Lithium-magnesium-based hydrogen absorbers	\$13,065

### Engineering

06/073	Dr Jisheng Han SIMS analysis on epitaxy SiC layer on Si	\$10,172
Griffith University Total		\$32,082

## GNS Science

### NZ Ion Beam Analysis Group

06/117P	Dr Andreas Markwitz Elemental depth profiling of ion beam sputtered semiconductor oxide thin films deposited on sapphire and SiO <sub>2</sub> /Si <sub>3</sub> N <sub>4</sub> coated silicon by heavy ion ERD	\$7,298
GNS Science Total		\$7,298

## James Cook University

### Earth and Environmental Sciences

06/188	<b>Dr Jody Webster</b> Source, timing and frequency of turbidite deposits along the Great Barrier Reef margin	\$6,621.00
06/189P *	<b>Dr Jody Webster</b> Abrupt sea-level and climate change recorded in submerged fossil coral reefs around Hawaii during the last deglaciation	\$14,731.00
06/195	<b>Dr Patrick Williams</b> Investigating the potential of SIMS to examine carbon (delta13C) isotope compositions of fine grained graphitic rocks	\$10,257.00
06/200	<b>Dr Raphael Wust</b> Improving preparation methods for AMS dating of peat	\$11,617.00
06/201	<b>Dr Raphael Wust</b> Coastal evolution of the Beachmount area, Burdekin River Delta, Qld	\$2,433.00

### Marine Biology

06/100	<b>Dr Matthew Kosnik</b> Determining the causes of differential time-averaging in mid-shelf reef lagoon sediments	\$15,993.00
<b>James Cook University Total</b>		<b>\$61,652.00</b>

## La Trobe University

### Earth Sciences

06/260	<b>Dr John Webb</b> Origins of Salt in the Upper Loddon Catchment, Central Victoria.	\$9,690
<b>La Trobe University Total</b>		<b>\$9,690</b>

## Macquarie University

### Electronics

06/179	<b>A/Professor Graham Town</b> Rare earth doped nanoparticles for optical amplification at 1.55 $\mu$ m	\$8,628
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### Physical Geography

06/171	<b>Dr Mark Taylor</b> An assessment of the environmental hazard and associated health risk of mining-derived metallic riverine dusts in Mt Isa, Queensland	\$1750
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### Physics

06/041	<b>A/Professor Judith Dawes</b> Low-k dielectric potential of diatoms	\$3282
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<b>Macquarie University Total</b>		<b>\$13,660</b>
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## The University of Melbourne

### Arts

06/173P	<b>Dr Ian Thomas</b> Palaeoecology of western Tasmania	\$8,471
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### Earth Science

06/069 *	<b>Professor Andrew Gleadow</b> The application of fission track analysis to fundamental problems in the Earth Sciences	\$10,202
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### Engineering

06/055	<b>Professor William Ducker</b> Artificial peptides for antibiofouling and colloidal processing applications	\$11,430
06/220	<b>Professor William Ducker</b> Artificial peptides for antibiofouling and colloidal processing applications 2	\$11,300
06/153	<b>Dr Daniel Riley</b> <i>In-situ</i> neutron diffraction of MAX phases	\$13,440
06/154	<b>Dr Daniel Riley</b> Synthesis and structural systematics of MAX phase materials	\$19,600

### Peter MacCallum Cancer Institute

06/119	<b>A/Professor Roger Martin</b> Evaluation of the potential of iodine-124 for PET imaging and radioimmunotherapy of tumours	\$8,000
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### Science

06/008P	<b>Professor Alan Baker</b> Use of PIXE for spatial distribution and localisation of cobalt in the Co-hyperaccumulating plant <i>Crotalaria cobalticola</i> and the common Australian legume pasture <i>Trifolium subterraneum</i>	\$13,936
06/025	<b>Professor James Camakaris</b> Use of radiocopper to investigate normal copper homeostasis and role of copper in early development and Alzheimer's disease	\$14,000
06/027P	<b>Dr Rachel Caruso</b> The incorporation of gold nanoparticles in porous titanium dioxide materials for photocatalytic applications	\$14,006
06/132	<b>Dr Terry Mulhern</b> Small-angle scattering analysis of inhibited proto-oncogenic enzyme complexes	\$14,180
06/205	<b>Dr Meifang Zhou</b> Cation substitution in titanium-rich mixed oxides	\$12,850

<b>The University of Melbourne Total</b>		<b>\$151,415</b>
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## Monash University

### Arts

06/039	<b>Dr Bruno David</b> How old are Torres Strait's villages?	\$5,370
06/096P *	<b>Professor Peter Kershaw</b> High resolution palaeoecological records of environmental change in western Victoria through the last 30,000 years	\$5,392
06/125	<b>Dr Ian McNiven</b> Torres Strait prehistoric trade dating project	\$5,726
06/183	<b>Dr Sander van der Kaars</b> Environmental conditions in the Arafura Shelf region during the last 175 ka, as reflected in marine core MD98-2175	\$4,718

## Engineering

06/149	<b>Dr Raman Singh</b> Pitting and stress corrosion cracking of stainless steels and nickel alloys in chloride environments	\$4,734
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## Pharmacy

06/018	<b>Dr Ben Boyd</b> Structure of biological colloids for improved drug delivery	\$13,180
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## Science

06/028	<b>A/Professor John Cashion</b> Radiation therapy of liver tumours using injected microspheres	\$5,752
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06/058	<b>A/Professor Trevor Finlayson</b> Studies of phase transitions in $\text{Ca}_{1-x}\text{Sr}_x\text{TiO}_3$ perovskites	\$11,920
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06/059	<b>A/Professor Trevor Finlayson</b> Studies of stresses in association with welds in steel structures and pressure vessels	\$680
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06/223	<b>A/Professor Trevor Finlayson</b> Stresses in Si particles in an Al-7Si-xMg alloy during plastic straining	\$19,980
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06/152P	<b>A/Professor Jennifer Read</b> How tree age influences onset of flowering in the suicidal (monocarpic) rainforest tree, <i>Cerberiopsis candelabra</i>	\$4,866
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<b>Monash University Total</b>		<b>\$82,318</b>
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## Murdoch University

### Science & Engineering

06/037	<b>Dr Chris Creagh</b> DSIRMF analysis of Burrup desert varnish to investigate the presence of microbial activity	\$1,735
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06/037	<b>Dr Chris Creagh</b> DSIRMF analysis of Burrup desert varnish to investigate the presence of microbial activity	\$1,735
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06/128	<b>Dr Danielle Meyrick</b> Labelling DOTA-conjugated peptides with copper-64 and copper-67 for diagnosis and therapy of neuroendocrine tumours	\$19,245
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06/248	<b>Dr Manickam Minakshi</b> Investigation of manganese dioxide cathode in an aqueous lithium secondary cell	\$7,700
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06/267	<b>Dr Manickam Minakshi</b> Investigation of manganese dioxide cathode in an aqueous lithium secondary cell via neutron diffraction technique	\$5,290
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<b>Murdoch University Total</b>		<b>\$33,970</b>
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## The University of New England

### Arts, Humanities and Social Sciences

06/075	<b>Dr Robert Haworth</b> Determination of Holocene sedimentation rates and environmental indicators using AMS age/depth profiles from estuarine sediments	\$6,196
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### The Sciences

06/251	<b>Dr Sarah Pearson</b> Small-angle x-ray scattering in human breast tissue - extending wavelet analysis techniques	\$7,330
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<b>The University of New England Total</b>		<b>\$13,526</b>
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# The University of New South Wales

## UNSW@ADFA

06/003	<b>Dr Kathryn Amos</b> Assessing the ability of Australian floodplains to absorb impacts of intensive landuse and climate change	\$10,110
06/213	<b>E/Professor Stewart Campbell</b> Magnetic structure of the novel compound $\text{ErNi}_2\text{Mn}$	\$19,420
06/083	<b>Dr Wayne Hutchison</b> Field dependence of $\text{TbNiAl}_4$ magnetic structure	\$12,740
06/084	<b>Dr Wayne Hutchison</b> Hyperfine studies via neutron activations	\$1,651
06/165	<b>Dr Glen Stewart</b> Magnetic and crystal field interactions at the rare earth site in thulium chromium silicide	\$999
06/176P	<b>Dr Heiko Timmers</b> Measuring nitrogen-excess in indium nitride without theoretical modelling	\$10,797

## Biotechnology and Biomolecular Sciences

06/136	<b>Dr Brett Neilan</b> Living stromatolites as models of biogeochemical cycling in functionally complex systems	\$13,442
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## Centre of Excellence for Advanced Silicon Photovoltaics and Photonics

06/036	<b>Dr Gavin Conibeer</b> Si quantum dot in silicon dioxide and nitride matrixes: compositional analysis with variation in silicon density	\$11,687
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## Engineering

06/078P	<b>A/Professor Mark Hoffman</b> Effect of the pre-treatment conditions on the electrical cyclic loading behaviour of lead zirconate titanate (PZT) ceramic investigated by in situ stroboscopic neutron diffraction	\$23,800
06/079	<b>A/Professor Mark Hoffman</b> Role of hydrogen in friction and wear of amorphous carbon films	\$6,198
06/232	<b>A/Professor Mark Hoffman</b> Domain switchability and fatigue in lead zirconate titanate (PZT) ceramic	\$29,800
06/090	<b>Dr Jacob Jones</b> Mechanisms of the dynamic response in ferroelectric ceramics	\$21,915
06/235	<b>Dr Jacob Jones</b> Time-resolved relaxation behaviour in dynamically cycled relaxor ferroelectric single crystals	\$20,100
06/241	<b>Dr Sean Li</b> Fabrication of amorphous $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ with ion irradiation technique	\$6,198
06/243	<b>Dr Sean Li</b> The non-equilibrium doping of ZnO nanobelts with Eu and Co via focussed ion beam implantation	\$6,198
06/245	<b>Dr Sean Li</b> Development of rare earth doped ZnO diluted magnetic semiconductors for spin transistors	\$6,198
06/138P	<b>Dr Janusz Nowotny</b> Diffusion of niobium in titanium dioxide	\$18,624
06/194	<b>A/Professor Dianne Wiley</b> Direct observation and measurements of protein fouling layer in ultrafiltration membrane surface using ellipsometry technique	\$4,460

## Science

06/017P	<b>A/Professor Michael Box</b> Chemical analysis of Australian continental aerosols	\$4,750
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06/269	<b>Dr Brenton Ladd</b> Towards a physical description of habitat: on the relationship between functional traits and the abiotic environment in <i>Eucalyptus</i>	\$840
<b>The University of New South Wales Total</b>		<b>\$229,927</b>

## The University of Newcastle

### Health

06/029	<b>Professor Loris Chahl</b> Receptor changes in brain tissue of rats treated as neonates with capsaicin – testing a putative new animal model of schizophrenia	\$18,540
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### Science and Information Technology

06/054	<b>Dr Russell Drysdale</b> Use of the C-14 bomb pulse as a chronostratigraphic marker in speleothems from Wombeyan Caves, NSW	\$16,220
06/071	<b>Dr Ian Goodwin</b> The timing of the last readvance of the Law Dome ice margin, East Antarctica	\$4,866
06/226	<b>Dr Ian Goodwin</b> Coastline planform alignment and wave climate fluctuations on the mid-north coast of NSW during the Holocene	\$7,299
06/098	<b>A/Professor Bruce King</b> Friction between surfaces of alumina, titania and zirconia formed by atomic layer deposition	\$5,195
06/114	<b>Dr Geoff MacFarlane</b> The Akoya pearl oyster shell as an archival indicator of metal exposure: field-based validation studies	\$12,696
06/259	<b>Dr Erica Wanless</b> Determination of adsorbed polymer thin film thickness and water content	\$18,045
<b>The University of Newcastle Total</b>		<b>\$82,861</b>

## University of Otago

### Anthropology

06/215	<b>Dr Yanbin Deng</b> Refining the chronology of early Maori impacts on the vegetation of South Island, New Zealand: data from archaeological charcoal analysis	\$7,696
<b>University of Otago Total</b>		<b>\$7,696</b>

## The University of Queensland

### Aboriginal and Torres Strait Islander Studies

06/181	<b>Dr Sean Ulm</b> Marine carbon reservoir variability in Torres Strait	\$8,110
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### Biological and Chemical Sciences

06/224	<b>Dr Mark Forwood</b> Sterilization conditions for gamma irradiation of bone allografts to optimize mechanical and biological performance	\$4,500
06/063	<b>A/Professor Lawrence Gahan</b> Studies of encapsulating ligands with potential application in material science and biological systems	\$19,780

06/266	<b>Dr Susanne Schmidt</b> Soil carbon turnover in native subtropical tree plantations in Australia	\$8,158
06/204	<b>A/Professor Jian-xin Zhao</b> Bomb radiocarbon in corals from Nansha islands, South China Sea, AD 1953-1982	\$12,165

### Engineering, Physical Sciences and Architecture

06/077P	<b>Dr Lizhong He</b> Neutron reflectivity study of architecture of amphipathic peptide films at a solid-water interface	\$13,775
06/231	<b>Dr Lizhong He</b> Small angle x-ray scattering study of PEGylated proteins: effects of PEGylation on protein structure	\$11,160
06/121	<b>Dr Hamish McGowan</b> "Glacial Lake Victoria": a reassessment of the geomorphic evidence	\$14,414
06/129	<b>Dr Patrick Moss</b> Comparative ages of pollen and foraminifera in deep sea sediments	\$8,970
06/130	<b>Dr Anne Mueller</b> Towards a precise time series of palaeoclimate variability in Australia: climate modes of the Southern Hemisphere	\$9,420
06/249	<b>Dr Anne Mueller</b> Sedimentation patterns in back-arc basins: the example of the Santa Cruz Rise, northern New Hebrides	\$13,475

### Social and Behavioural Sciences

06/190	<b>Dr Marshall Weisler</b> Precisely dating the human colonisation of Pacific Atolls	\$4,866
<b>The University of Queensland Total</b>		\$128,793

## Queensland University of Technology

### Mechanical Engineering

06/172	<b>Dr Tuquabo Tesfamichael</b> Nitrogen ion implantation of tungsten oxide films for gas sensors	\$9,430
<b>Queensland University of Technology Total</b>		\$9,430

## RMIT University

### Applied Sciences

06/023	<b>Dr Gary Bryant</b> Small angle x-ray scattering study of tubulin dimers	\$6,140
06/024	<b>Dr Gary Bryant</b> Determination of the concentration of solutes in multilamellar membranes at low hydration using SANS	\$35,840
06/211	<b>Dr Gary Bryant</b> Solid-liquid coexistence under shear	\$8,665
06/086P	<b>Professor Peter Johnston</b> Heavy ion beam nanolithography	\$14,116
06/115P	<b>Professor David Mainwaring</b> Irradiation induced conductivity in polymeric thin films	\$13,936

## Civil, Environmental and Chemical Engineering

06/087P *	<b>A/Professor Margaret Jollands</b> Structural characterisation of rice hull ash for use in polypropylene composites using solid state NMR	\$12,768
06/184	<b>Dr Liam Ward</b> Determination of residual stress levels in welded duplex stainless steel gas pipelines using	\$21,653
06/185P	<b>Dr Liam Ward</b> The effect of surface roughness and heat treatment on the wear behaviour of MEVVA ion implanted Ni-Co-Cr-Al type coatings with Si and B	\$13,178

## Electrical and Computer Engineering

06/233	<b>Dr Anthony Holland</b> Composition analysis and electrical properties of silicide-semiconductor interfaces	\$9,801
06/234	<b>Dr Anthony Holland</b> Deposition and characterisation of piezoelectric thin films	\$10,683
06/164P	<b>Professor Dinesh Sood</b> RBS and SIMS study of Hg-Au amalgamation process at nanoscale for development of novel sensors for mercury vapour in environment	\$13,406

## University of South Australia

### Center for Molecular and Materials Sciences

06/207	<b>A/Professor Phillip Pendleton</b> Surface chemistry analyses of porous and non-porous carbon cloths via contrast-matching SANS techniques	\$13,755
06/252	<b>A/Professor Phillip Pendleton</b> Analyses of porous and non-porous activated carbon cloths via contrast-matching SANS techniques	\$13,955

### Ian Wark Research Institute

06/072P	<b>Professor Hans Griesser</b> Characterisation of microwave plasma deposited siloxane thin films by neutron and x-ray reflectivity techniques	\$1,200
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University of South Australia Total \$28,910

## Southern Cross University

### Environmental Science and Management

06/001P	<b>Dr Steve Abbott</b> Shell middens and stratigraphy of the Billinudgel area, NSW: insights into late mid- to late-Holocene cultural	\$8,648
06/019	<b>A/Professor Bill Boyd</b> Dating the Aboriginal campground at Murraba, Gold Coast	\$5,586
06/020	<b>A/Professor Bill Boyd</b> Dating the occupation of caves on Byrill Ridge and the Koonyum Range, Tweed Valley, NSW	\$5,586
06/021	<b>A/Professor Bill Boyd</b> Late Holocene floodplain environments, Tweed and Richmond Rivers, NSW	\$5,766



06/033	<b>Dr Malcolm Clark</b> The theoretical modelling of the shielding provided by bauxsol and bauxsol based concretes	\$720
06/092P ★	<b>Dr Annabelle Keene</b> Radiocarbon dating to determine the sedimentary depositional history of a confined, sand-bed stream	\$12,343
06/167P	<b>A/Professor Leigh Sullivan</b> Chronology of a Holocene sediment deposition and soil development in a coastal acid sulfate	\$11,544
06/170	<b>Dr Kathryn Taffs</b> The environmental history of three ICOLLs in northern NSW, Australia	\$9,480
<b>Southern Cross University Total</b>		<b>\$59,673</b>

## Swinburne University of Technology

### Engineering & Science

06/052P	<b>Professor Derry Doyle</b> Duplex surface engineering	\$3,193
06/053	<b>Professor Derry Doyle</b> Residual stress evaluation on AISI 420 martensitic stainless steels	\$25,880
06/218P	<b>Professor Derry Doyle</b> Residual stress evaluation on AISI 420 martensitic stainless steels	\$11,900
<b>Swinburne University of Technology Total</b>		<b>\$40,973</b>

## The University of Sydney

### Agriculture, Food and Natural Resources

06/214	<b>Professor Les Copeland</b> Studies of the internal structure of wheat starch granules	\$3,330
06/160	<b>Dr Balwant Singh</b> Use of nuclear microprobe (micro-PIXE) for localisation and spatial distribution of nickel and arsenic in two metal(loid) hyperaccumulating species	\$3,099

### Arts

06/081	<b>Dr Bob Hudson</b> Improving the periodisation of Upper Myanmar's proto-urban and early urban centres	\$8,110
06/109	<b>Dr Jaimie Lovell</b> Jebel Sartaba and olive cultivation in the Jordan Valley	\$1,622
06/144	<b>Professor Daniel Potts</b> An AMS chronology of prehistoric settlement at Tall-e Abu Chizan (Iran)	\$4,055
06/177	<b>Dr Robin Torrence</b> Volcanic glass and human colonisation of remote Oceania	\$4,750
06/178	<b>Dr Robin Torrence</b> Characterisation of obsidian sources from Papua New Guinea	\$9,500

### Engineering

06/074	<b>Dr Andrew Harris</b> The localisation and speciation of gold nanoparticles synthesised using <i>Medicago sativa</i> and <i>Brassica juncea</i>	\$18,669
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06/264	<b>Dr Hala Zreiqat</b> Effect of incorporating strontium into the surface of titanium alloy on bone cell behaviour	\$5,733
<b>Medicine</b>		
06/091	<b>A/Professor Michael Kassiou</b> Effects of chronic nicotine treatment on non-neuronal cells in the brain	\$20,710
06/094	<b>Mr Peter Kench</b> The development and evaluation of a novel multi-pinhole imaging technique for small animal SPECT	\$16,000
<b>Science</b>		
06/012	<b>Professor Marcela Bilek</b> Surface engineering of polymers	\$10,850
06/014P	<b>Professor Marcela Bilek</b> Surface engineering of polymers	\$7,125
06/015	<b>Dr Annabelle Blom</b> Self assembly of diblock copolymers	\$6,660
06/067	<b>Professor Robert Gilbert</b> Polymerisation of polymer colloids	\$2,200
06/265	<b>Dr Tomoyuki Honma</b> Atomic clustering processes in bulk metallic glasses by neutron scattering, XRD, TEM and atom probe tomography	\$21,018
06/095P	<b>A/Professor Brendan Kennedy</b> Structure of some rhodium oxides	\$20,400
06/236P	<b>Professor Cameron Kepert</b> Evidence for H <sub>2</sub> sorption by a nanoporous coordination polymer by <i>in-situ</i> single crystal neutron diffraction materials structures and dynamics	\$22,575
06/206	<b>Professor Philip Kuchel</b> Metabolic and membrane transport consequences of red cell distortion	\$4,750
06/107	<b>Dr Chris Ling</b> Oxygen nonstoichiometry in misfit-layered cobaltites	\$20,400
06/246P	<b>Dr Chris Ling</b> Structural and magnetic ordering in transition metal doped aurivillius phases	\$23,800
06/123	<b>Professor David McKenzie</b> Synthesis of metal oxide and MAX phase thin films	\$7,000
06/124P	<b>Professor David McKenzie</b> Synthesis of metal oxide and MAX phase thin films	\$6,198
06/253	<b>Dr Siegbert Schmid</b> Investigations of defect perovskites suitable for Li ion intercalation	\$11,900
06/257	<b>Professor Jill Trehwella</b> Structural studies of protein complexes aimed at fundamental advances in understanding life processes, including diseased states	\$13,320
06/261	<b>Professor Tony Weiss</b> Investigation of the formation of synthetic elastin surfaces using x-ray and neutron reflectometry	\$24,250
06/262	<b>Professor Tony Weiss</b> SAXS of mutant human tropoelastin	\$13,345
06/192	<b>Dr Catherine Whitby</b> Structure of nanoparticle adsorbed layers at the oil-water interface	\$11,875
<b>The University of Sydney Total</b>		<b>\$323,244</b>

## University of Tasmania

### Institute of Antarctic and Southern Ocean Studies

06/258	<b>Dr Thomas Trull</b> Climate modulation of the <sup>10</sup> Be solar activity proxy	\$17,220
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### Science, Engineering and Technology

06/097	<b>Dr Kevin Kiernan</b> Geomorphic impact of glaciation in the Denison Range, Tasmania	\$11,830
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06/148	<b>Professor Patrick Quilty</b> Deglacial chronology of Antarctic sea-ice changes from a high-resolution Australasian sector deep-sea core	\$6,740
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06/203	<b>Dr Khin Zaw</b> Trace element geochemistry of hydrothermal magnetites: PIXE/PIGE perspectives	\$3,799
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<b>University of Tasmania Total</b>		<b>\$39,589</b>
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## University of Technology Sydney

### Chemistry, Materials and Forensic Science

06/009	<b>A/Professor Besim Ben-Nissan</b> Physical and mechanical properties of nanoscale sol-gel derived coatings on titanium substrates	\$11,437
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06/010	<b>A/Professor Besim Ben-Nissan</b> Study of bone derived hydroxyapatite powders	\$8,500
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### Environmental Sciences

06/161	<b>Professor Greg Skilbeck</b> Determining compositional changes in estuarine detritus in Botany Bay since European colonization	\$10,154
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<b>University of Technology Sydney Total</b>		<b>\$30,091</b>
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## The University of Western Australia

### Electrical and Electronic Engineering

06/135P	<b>Dr Charles Musca</b> SIMS analysis of ICPRIE processed HgCdTe	\$13,541
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### Life and Physical Sciences

06/199	<b>Dr Robert Woodward</b> Small angle neutron and x-ray scattering of magnetic nanoparticles for biomedical applications	\$19,360
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06/263	<b>Dr Robert Woodward</b> Characterisation of nanoparticles produced using different production techniques	\$18,790
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### Natural & Agricultural Sciences

06/022	<b>Professor Don Bradshaw</b> Measurement of protein turnover in free-ranging honey possums	\$2,695
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06/066	<b>A/Professor Annette George</b> Holocene environmental history, Lake Thetis, Cervantes, Western Australia	\$4,866
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06/070	<b>Dr Nisse Goldberg</b> Radiocarbon dating of rhodoliths collected from Jurien Bay and Esperance Bay, Western Australia	\$6,488
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<b>The University of Western Australia Total</b>		<b>\$65,740</b>
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## University of Western Sydney

### Engineering and Industrial Design

06/216	<b>Dr Ken Doolan</b> Design, construction & testing of a rapid temperature change & control cell for SANS & SAXS	\$2,000
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### Science, Food and Horticulture

06/174	<b>Dr Richard Thomas</b> Carbon isotope fractionation in C4 photosynthesis	\$8,110
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University of Western Sydney Total		\$10,110
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## University of Wollongong

### Biological Sciences

06/045	<b>Dr Chao Deng</b> Phencyclidine induced apoptosis in the brain: implications for schizophrenia	\$13,110
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06/151	<b>Dr Marie Ranson</b> Halogenated isatins as novel antitumour agents and potential for use in targeted cancer therapy	\$24,560
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06/155	<b>Dr Sharon Robinson</b> Impact of climate change on the growth rate of Antarctic mosses	\$17,808
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### Chemistry

06/093	<b>Dr Paul Keller</b> New therapeutics for the prevention of premature birth	\$17,950
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### Engineering

06/060	<b>A/Professor Rodney Vickers</b> An optical spectroscopic method for determining the concentration of phosphorus introduced into silicon by neutron transmutation	\$2,000
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06/137P	<b>Dr Long Nghiem</b> Extraction of uranium and thorium using novel polymer inclusion membranes	\$5,595
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06/159P	<b>Dr Tania Silver</b> Progressive neutron irradiation investigation of SiC doped MgB <sub>2</sub> superconductor	\$4,000
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### Science

06/088P	<b>Dr Dianne Jolley</b> The use of radiotracer techniques to determine metal contaminant exposure pathways to organisms in marine ecosystems	\$13,066
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06/089	<b>Dr Dianne Jolley</b> Selenium in marine sediments: unravelling the relationship between concentration, binding phase and sediment age	\$6,732
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06/101	<b>Dr Michael Lerch</b> IBIC studies of detectors for synchrotron x-ray dosimetry	\$9,497
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06/240	<b>Dr Michael Lerch</b> Characterisation of silicon detectors for positron emission tomography	\$10,142
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06/134	<b>Professor Colin Murray-Wallace</b> Identification of remanié microfossils, and the timing of transgressive and regressive events on the Australian margin	\$6,488
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06/180	<b>Dr Chris Turney</b> The Last Glacial period in the wet tropics of Australia	\$13,480
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06/191	<b>A/Professor Ron West</b> Use of otolith micro-chemistry to investigate diadromy in fishes of south eastern Australia	\$9,297
06/198P	<b>A/Professor Colin Woodroffe</b> Component-specific dating and the evolution of reef islands in response to rising sea level	\$7,299
<b>University of Wollongong Total</b>		<b>\$161,024</b>

## 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, Griffith University, The University of Queensland, The University of Sydney, The University of New South Wales, The University of Newcastle, Monash, 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 2006 there were 22 successful proposals allocated a total of 54 days.

<b>Aldridge Dr L P</b>	The Australian Centre for Construction Innovation, University of NSW	4
Water dynamics in clay interlayer space - without cations		
<b>Gentle Dr I R</b>	Department of Chemistry, University of Queensland	2
Coulombic and hydrophobic interactions between porphyrins and phospholipids in monolayers at the air-water interface		
<b>Griffiths Dr J R</b>	Division of Manufacturing and Infrastructure Technology, CSIRO	3
Stresses in Si particles in an Al-7Si-xMg alloy during plastic straining		
<b>He Dr L</b>	Centre for Biomolecular Engineering, University of Queensland	2
Interaction between a rational designed peptide and sodium dodecyl sulfate at an air-water interface		
<b>James Dr M</b>	Bragg Institute, ANSTO	3
Structure and magnetism in perovskite cobaltates: $\text{Ln}_{0.2}\text{Sr}_{0.8}\text{CoO}_{3-d}$ (Ln= $\text{Y}^{3+}$ , $\text{Ho}^{3+}$ and $\text{Tm}^{3+}$ )		
<b>James Dr M</b>	Bragg Institute, ANSTO	2
Cation and oxygen vacancy ordering in rare earth perovskite cobaltates: $\text{Ln}_{0.2}\text{Sr}_{0.8}\text{CoO}_{3-d}$ (Ln = $\text{Y}^{3+}$ , $\text{Tm}^{3+}$ )		
<b>Kennedy Dr B J</b>	School of Chemistry, University of Sydney	2
Coupling of the Jahn-Teller and tilting transitions in Ce doped $\text{SrMnO}_3$		
<b>Kisi Dr E H</b>	Department of Mechanical Engineering, University of Newcastle	2
Structure of as-grown and poled PZN-PT single crystals		
<b>Ling Dr C D</b>	School of Chemistry, University of Sydney	2
Oxygen vacancy ordering in misfit layered cobaltites		
<b>Pearce Ms S V</b>	School of Mechanical Engineering, University of Adelaide	4
Residual stresses in full scale, highly restrained T-butt steel welds		
<b>Wacklin Dr H</b>	Institute for Environmental Research, ANSTO	3
Effect of fatty acid solubility on phospholipase $A_2$ activity		
<b>Zhang Dr Z</b>	Bragg Institute, ANSTO	3
Determination of oxygen vacancies in $(\text{Sr}_{1-x}\text{Ce}_x)\text{MnO}_{3-d}$ and $(\text{Sr}_{1-y}\text{Ce}_y)(\text{Mn}_{1-y}\text{Co}_y)\text{O}_{3-d}$		

## Publications relating to research at ISIS

Bordallo H N; **Aldridge L P**, Desmedt A

Water dynamics in hardened cement paste - from inelastic neutron scattering

Deutsche Tagung für Forschung mit Synchrotronstrahlung, Neutronen und Ionenstrahlen an Großgeräten 2006 Hamburg Germany

Poster 185 October 2006

Ksenofontov V; Garcia Y; **Campbell S J**; Boland Y; Lord J S; Gütlich P

Hysteresis in the spin transition regime of  $[\text{Fe}(\text{NH}_2\text{trz})_3](\text{NO}_3)_2$  as probed by ZF- $\mu$ SR

Physica B **374-374** 126-129 (2006)

**Finlayson T R**

Solving engineering problems with diffraction techniques

5th AINSE/ANBUG Neutron Scattering Symposium 28 Lucas Heights December 2006

Chatzidimitriou-Dreismann C A; **Gray E MacA**; Blach T P

Neutron Compton scattering from  $\text{PdH}_{0.2}$  and  $\text{PdH}_{0.35}$  (Extended abstract in German)

Z Anorganische u Allgemeine Chemie **632** 2156 2006

Zhang Z; **Howard C J**; Knight K S; Lumpkin G R

Structures of the cation-deficient perovskite  $\text{Nd}_{0.7}\text{Ti}_{0.9}\text{Al}_{0.1}\text{O}_3$  from high-resolution neutron powder diffraction in combination with group theoretical analysis

Acta Crystallographica B **62** 60-67 2006

Kennedy B J; **Howard C J**; Knight K S; Zhang Z; Zhou Q

Structures and phase transitions in the ordered double perovskites  $\text{Ba}_2\text{Bi}^{\text{III}}\text{Bi}^{\text{IV}}\text{O}_6$  and  $\text{Ba}_2\text{Bi}^{\text{III}}\text{Sb}^{\text{V}}\text{O}_6$

Acta Crystallographica B **62** 537-546 2006

Carpenter M A; **Howard C J**; Knight K S; Zhang Z

Structural relationships and a phase diagram for  $(\text{Ca},\text{Sr})\text{TiO}_3$  perovskites

J Physics: Condensed Matter **18** 10725-10749 2006

Forrester J S; **Kisi E H**; Knight K S; Howard C J

Rhombohedral to cubic phase transition in the relaxor ferroelectric PZN

J Physics: Condensed Matter **18** L233-L240 2006

**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

Forrester J S; **Kisi E H**; Knight K S

Phase transitions in PZN-4.5%PT in the range 4.2-450K

Physica B **385-6** 160-162 2006

**Kisi E H**; Forrester J S; Knight K S

$\text{PbZn}_{1/3}\text{Nb}_{2/3}\text{O}_3$  at 4.2K and 295K

Acta Crystallographica C **C62** i46-i48 2006

Finnigan B; Halley P; Jack K; McDowell A; Truss R; Casey P; Knott R; **Martin D J**

Effect of the average soft-segment length on the morphology and properties of segmented polyurethane nanocomposites

J Appl Polymer Science, **102**(1): 128-139, 2006

Finnigan B; Casey P; Cookson D; Halley P; Jack K; Truss R; **Martin D**

Impact of controlled particle size nanofillers on the mechanical properties of segmented polyurethane nanocomposites

Joint APS/ ASB Conference D3/1 Rotorua New Zealand February 2006

**Martin D**

Nanocomposite biomedical elastomers: the search for superior performance

Invited Lecture, The 2005 Sir Mark Oliphant Conference Series 33 Brisbane December 2005

**Martin D**; Finnigan B; Campbell K; Edwards G; Halley P; Truss R; Whittaker A; Jack K

A detailed investigation of the influence of organo-layered silicate aspect ratio on polyurethane nanocomposite structure and properties

15th Annual Conference of the Australian Society for Biomaterials, Victor Harbor, SA 2005

- Tenailleau C; **Pring A**; Etschmann B; Brugger J; Grguric B; Putnis  
A transformation of pentlandite to violarite under mild hydrothermal conditions  
American Mineralogist **91** 706-709 2006
- Tenailleau C; Etschmann B; Ibberson R M **Pring A**  
The ordering of Fe and Ni in synthetic pentlandite and violarite: a neutron powder diffraction study using <sup>60</sup>Ni  
American Mineralogist **91** 1442-1447 2006
- Pring A**  
The use of in situ neutron diffraction methods to determine the kinetics of mineral reactions in iron nickel sulfides  
Geochimica et Cosmochimica Acta **70** (18): A505-A505 Suppl. S Aug-Sep 2006
- Zank J; Reynolds P A; Jackson A J; Baranyai K J; Perriman A W; Barker J G; Kim M H; **White J W**  
Aggregation in a high internal phase emulsion observed by SANS and USANS  
Physica B **385-386** 776-779 2006
- Espeau P; **White J W**  
The phase transitions of n-alkanes in mesoscopic pores of graphite  
Carbon **43(9)** 1885-1890 2005
- Espeau P; **White J W**; Papoular R J  
The structure of n-alkane binary mixtures adsorbed on graphite  
Appl Surf Sci **252** 1350 – 1359 2005
- Graham L D; Glattauer V; Huson M G; Maxwell J M; Knott R B; **White J W**; Vaughan P R; Peng Y; Tyler M J; Werkmeister J A; Ramshaw J A  
Characterization of a protein-based adhesive elastomer secreted by the frog *Notaden bennetti*  
Biomacromolecules **6** 3300 – 12 2005
- Gibaud A; Henderson M J; Colas M; Dourdain S; Bardeau J-F; **White J W**  
Comparative study by X-ray reflectivity of mesoporous silica thin films templated by F127 and P123 surfactants  
AzoNano -Online J Nanotechnology **1** a0109 2005
- Henderson M J; Perriman A W; Robson-Marsden H; **White J W**  
Protein-poly(silicic)acid interactions at the air/solution interface  
J Phys Chem B **109** 20878-20886 2005
- Henderson M J; Gibaud A; Bardeau J-F; **White J W**  
An x-ray reflectivity study of evaporation-induced self-assembled titania-based films  
J Mater Chem **16(25)** 2478-2484 2006
- Jackson A; **White J**  
Small angle scattering from protein/sugar conjugates  
Physica B **385-386** 818 2006
- Perriman A W; **White J W**  
Kinetics of adsorption of lysozyme at the air-water interface and the role of protein charge  
Physica B **385-386** 716 2006
- Yang B; **White J W**  
Isotope effects on the phase behaviour of cetyltrimethylammonium bromide in H<sub>2</sub>O and D<sub>2</sub>O studied by time resolved x-ray diffraction  
Colloids and Surfaces A: Physicochemical and Engineering Aspects **277** (1-3) 171-176 2006
- Henderson M J; Rennie A R; Hawley A M; **White J W**  
Swelling of a mesostructured zirconium oxide film  
Physica B **385-386** 713-715 2006



## Publications

Notification of the following papers incorporating results from AINSE supported projects was received by AINSE in 2006. 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 2006.

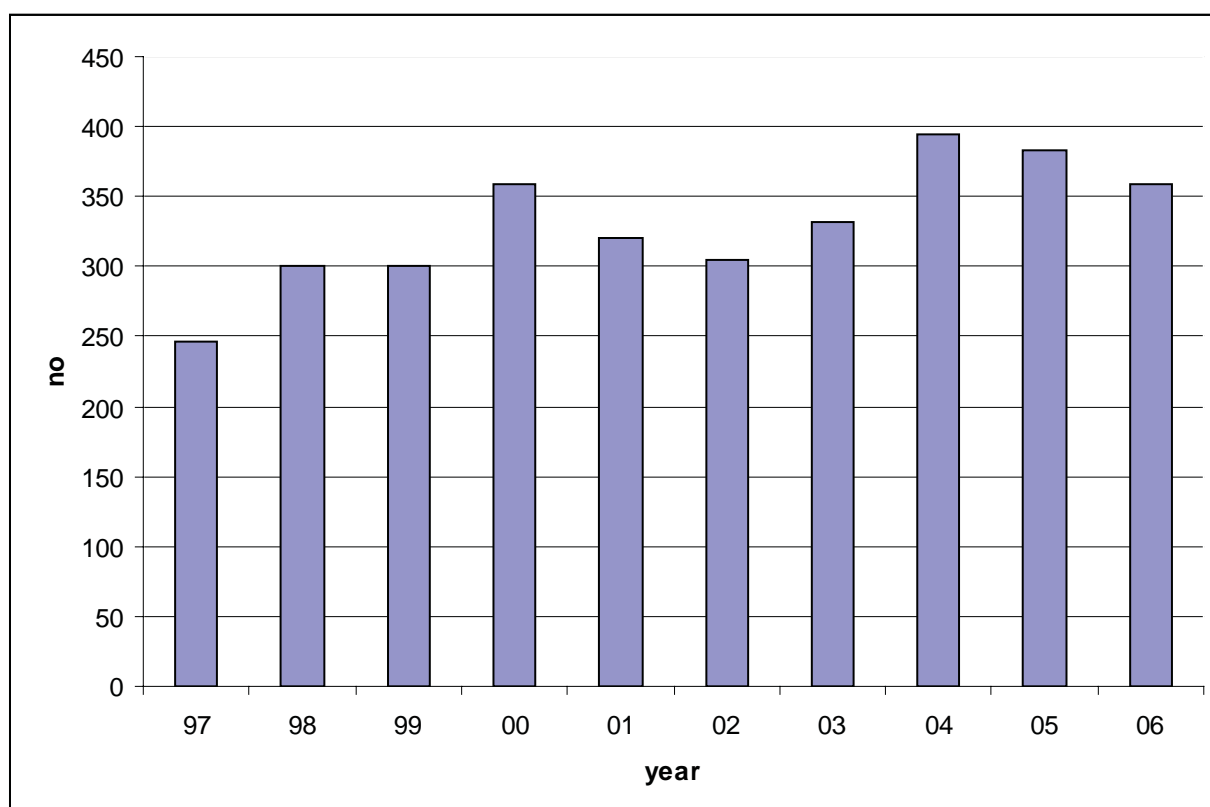
The publications are listed in university order under the name of the chief investigator, in bold. Where the chief investigator is not an author the name is in brackets. Publications arising from AINSE Postgraduate Research Awards (PGRA) are also listed.

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.

The graph below shows the total number of publications by year of publication



Project Number	Chief Investigator Coauthors	Title of Publication	Reference
03/042; 05/062	<b>Gell P</b> ; Fluin J; Tibby J; Haynes D; Khanum S; Walsh B; Hancock G; Harrison J <i>et al</i>	Changing fluxes of sediments and salts as recorded in lower River Murray wetlands, Australia	In: Sediment Dynamics and the Hydromorphology of Fluvial Systems (Rowan, J S; Duck; R W Werritty A eds) Int Ass Hydrol Sci Publ <b>306</b> 416-424 2006
04/189	<b>Harvey N</b> , Bourman R; James K	Evolution of the Younghusband Peninsula, South Australia: new evidence from the northern tip	South Australian Geographical Journal <b>105</b> 37-50 2006
04/204	<b>Linton V M</b> ; Renc S; Brown I H	Investigation of properties of friction stir welds in age hardenable 7xxx aluminium alloys	7th International Conference on Trends in Welding Research 401-406 May 2005 Pine Mountain Georgia USA
PGRA	<b>Pearce S</b> ; Linton V M P; Sloan G	Residual stress in thick sectioned highly restrained steel welds	7th International Conference on Trends in Welding Research 559-564 May 2005
PGRA	<b>Pearce S V</b> ; Linton, V M	Neutron diffraction measurement of residual stress in high strength, highly restrained, thick sectioned steel welds	Physica B <b>385-386</b> 590 2006
98/108P	Sheard M J; Lintern M J; <b>Prescott J R</b> ; Huntley D J	Great Victoria Desert, new dates for South Australia's oldest desert dune system	MESA Journal <b>42</b> 15-26 2006
83/085, 04/125, 06/145	Robertson G B; <b>Prescott J R</b>	Luminescence dating at the archaeological and human burial site at Roonka, South Australia	Quaternary Science Reviews <b>25</b> 2586-2593 2006
03/093	( <b>Prescott J R</b> ); Gell P; Bulpin S; Wallbrink P; Bickford S; Hancock G	Tareena Billabong – a palaeolimnological history of an everchanging wetland, Chowilla Floodplain, lower Murray-Darling Basin	Marine and Freshwater Research <b>56</b> 441-456 2005
05/209	<b>Pring A</b> ; Tenailleau C; Etschmann B; Brugger J; Grguric B	The transformation of pentlandite to violarite under mild hydrothermal conditions: a dissolution-precipitation reaction	In: Ten years of CRC LEME (Roach I C ed) Regolith: 252-255 2005 ISBN 0-9756895
05/209	O'Neill B; Tenailleau V C; Nogthai T; Studer A; Brugger J; <b>Pring A</b>	A flow-through hydrothermal cell for <i>in-situ</i> neutron diffraction studies of phase transformations	Physica B <b>385-386</b> 942-945 2006
05/209	Tenailleau C; <b>Pring A</b> ; Etschmann B; Brugger J; Grguric B; Putnis A	The transformation of pentlandite to violarite under mild hydrothermal conditions	American Mineralogist <b>91</b> 706-709 2006
05/209; 04/126	Wang H P ; <b>Pring A</b> ; Nogthai Y ; O'Neill B	The kinetics of the alpha -> beta transition in synthetic nickel monosulfide	American Mineralogist <b>91</b> 171-181 2006
05/162P	Natt A; <b>Tibby J</b> ; Harrison J; Zawadzki A	A palaeolimnological approach to understanding sediment and nutrient loads, Warren Reservoir, South Australia	10th International Paleolimnology Symposium 57 June 2006 Duluth-Minnesota
04/149P; 06/169	Hooker A M; Zeng G; Domel R; Burch W; <b>Sykes P J</b>	Comparison of low dose X- and gamma-radiation exposure on chromosomal inversions in the pKZ1 assay	Radiation 2006 AINSE Conference 9 April Sydney
06/175P	<b>Tibby J</b> ; Gell P; Fluin J; Haynes D; Flett I	Defining the reference condition and trajectory of Ramsar wetlands using sediment diatom histories	Society of Wetlands Scientists 116 July 2006
03/115	<b>Tibby J</b> ; Leavitt P; Sayer C; Hejnis H	Assessing human impact on eastern Australian coastal lakes: a paleo-perspective	PAGES 2nd Open Science Meeting Paleoclimate, Environmental Sustainability and our Future 65 August 2005
06/175P	<b>Tibby J</b>	Change and variability in eastern Australian coastal lakes: understanding long-term change	Research for Coastal Management Symposium 59 May 2006 Melbourne, Sydney

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
03/004	Hagg J; <b>Augustinus P C</b>	Scientific data report from the Onepoto Crater drilling (NZMaar) Project: December 2000/July 2001	Department of Geography Working Paper <b>18</b> 89 2003 1-877320-01-3
05/004; 03/004	Pepper A C; Shulmeister J; Nobes; D C; <b>Augustinus P</b>	ENSO signals during the Last Glacial Maximum, The Antarctic Cold Reversal and the early Holocene from New Zealand	Geophysical Research Letters <b>31</b> (15) L15206 2004 10.1029/2004GL020236
05/004; 03/004	Horrocks M; <b>Augustinus P C</b> ; Shane P; Andersson S	Holocene environments recorded in a New Zealand maar crater: Lake Pupuke.	New Zealand Journal of Geology and Geophysics <b>48</b> 85-94 2005
05/004; 03/004	Alloway B V; Lowe D J; Barrell D J A; Newnham R M; Almond P C; <b>Augustinus P C</b> ; Bertler N A N; <i>et al</i>	Towards a climate event stratigraphy for New Zealand over the past 30,000 years (NZ-INTIMATE project)	Journal of Quaternary Science <b>22</b> 9-35 2006
05/004; 03/004	<b>Augustinus P</b> ; Reid M; Andersson S; Deng Y; Horrocks M	Biological and geochemical record of anthropogenic impacts in recent sediments from Lake Pupuke, Auckland City, North Island, New Zealand	Journal of Paleolimnology <b>35</b> 789-805 2006
96/096R	Ainley D G; Hobson K A; Crosta X; Rau G H; <b>Augustinus P C et al</b>	A 10,000 year record of isotopic variability in snow petrel mumiyo: evidence for the progression of climate change during the Holocene	Marine Ecology Progress Series <b>307</b> 1-10 2006
05/005	<b>Aw K C</b> ; Salim N T; Gao W; Li Z	Characterization of spin-on-glass very-low-k polymethylsiloxane with copper metallization	Thin Solid Films <b>504</b> 243 – 247 2006
05/005	<b>Aw K C</b> ; Salim N T; Gao W; Prince K	Study of copper diffusion in low K thin films using SIMS	Intern J Modern Physics B <b>20</b> (25-27) 4165- 4170 2006
06/006	( <b>Aw K C</b> ); Salim N T; Gao W; Li Z W; Prince, K	Comparative study of copper diffusion in plasma treated low-k dielectric thin film using XPS and SIMS	4th International Conference on Advanced Materials & Processing (ICAMP-4) 031 December 2006 Hamilton, New Zealand
06/005P	Doux C; <b>Aw K C</b> ; Niewoudt M; Gao W	Analysis of HSG-7000 silsesquioxane-based low-K dielectric hot plate curing using raman spectroscopy	Microelectronic Engineering <b>83</b> (2) 387-391 2006
03/011; 06/210	<b>Bowmaker G A</b> ; Harris R K; Hanna J V	Solid-state copper and silver NMR spectroscopy of copper(I) and silver (I) coordination compounds	Proceedings of NZIC 1 106 2006
06/210	<b>Bowmaker G A</b> ; Jones L	A theoretical solid-state NMR investigation of some bis(pyridine)silver(I) nitrate compounds	BSc (Hons) Thesis
04/075	<b>Hay M P</b> ; Hicks K O; Siim B G; Pruijn F B; Lee H H; Yang S; Pchalek K; Blaser A; Wilson W R; Denny W A	The development of the hypoxia-selective cytotoxin SN 30000: a tricyclic triazine 1,4-dioxide with improved <i>in vivo</i> activity compared to tirapazamine	18th AACR-NCI-EORTC Symposium on Molecular Targets and Cancer Therapeutics 258 November 2006 Prague, Czech Republic
04/075	<b>Hay M P</b> ; Blaser A; Denny W A; Hicks K O; Lee H H; Pchalek K; <i>et al</i>	Tricyclic 1,2,4-triazine oxides and compositions therefrom for therapeutic use in cancer treatments	PCT Int. Appl. WO2006104406A1
04/075	Blaser A; <b>Hay M P</b> ; Hicks K O; Lee H H; Pchalek K; Pruijn F B; Siim B G; Wilson W R; Denny, W A	The synthesis and evaluation of novel tricyclic triazine dioxides as hypoxia-selective cytotoxins	New Zealand Institute of Chemistry: Back to Basics: From small molecules to materials and surfaces. Rotorua, NZ, December 2006, Proc. NZIC 2006, (M Lein ed) <b>II</b> 10-11 ISBN-10 0-473-11854-9
05/077P	Chiu W W; Sheng P Y; Yee A; <b>Idriss H</b>	Hydrogen production from ethanol over bimetallic Rh-M/CeO <sub>2</sub> (M = Pd or Pt) catalysts	NZIC Editor: (M Lein ed) <b>I</b> 134-137 2006 ISBN-10 0-473-11854-8

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/077P	Scott M; Chiu W W; Yee A; Sheng P Y; <b>Idriss H</b>	Hydrogen production from ethanol over bimetallic Rh-M/CeO <sub>2</sub> (M = Pd or Pt) catalysts	53rd American Vacuum Society, Annual Meeting SS1-MoA3 1 November 2006 San Francisco
05/077P	Morrison S J; Sheng P Y; Yee A; Bowmaker G A; <b>Idriss H</b>	Hydrogen production from ethanol over bimetallic Rh-M/CeO <sub>2</sub> (M = Pd or Pt)	Prepr Pap-Am Chem Soc Div Pet Chem <b>51</b> (1) 26-27 2006
05/077P	Morrison S J; Sheng P Y; Yee A; Bowmaker G A; <b>Idriss H</b>	Hydrogen production from ethanol over bimetallic Rh-M/CeO <sub>2</sub> (M = Pd or Pt)	231st American Chemical Society Meeting, Atlanta GA, USA, and 1st International Symposium on Hydrogen from Renewable Sources and Refinery Applications 12-PETR March 2006
05/077P	Yang Y Z; Chang C-H; <b>Idriss H</b>	Photo-catalytic production of hydrogen from ethanol over M/TiO <sub>2</sub> catalysts (M= Pd, Pt, or Rh)	Appl Catal B <b>67</b> 217-222 2006
PGRA	Xiong G; <b>Lee J</b> ; Ucer K B; Metson J; Bhattacharyya D; Evans Williams R T	Donor-acceptor pair luminescence of nitrogen-doped ZnO single crystal by ion-implantation	J Appl Phys <b>97</b> (4) 043528-1 - 043528-4 2005 0021-8979
PGRA	<b>Lee J</b>	Microstructure and properties of zinc oxide nanocrystalline thin films and composites	PhD Thesis 2006
PGRA & 05/121P	Mendoza-Galván C T C; <b>Lee J</b> ; <b>Metson J</b> ; Evans P J; Bhattacharyya D; Pal U	Effect of metal-ion doping on the optical properties of nanocrystalline ZnO thin films	J Appl Phys <b>99</b> (1) 014306-1 - 014306-6 2006
03/082	Budde F; Ruck B J; Koo A; Granville S; Trodahl H J; Bittar A; Williams G V; Ariza M J; <b>Metson J</b>	Stabilization of amorphous GaN by oxygen	J Appl Phys <b>98</b> (6) 063514-1 - 063514-4 2005

## Australian National University

05/008	<b>Bellwood P</b> ; Dizon Eal	The Batanes Project and the "Out of Taiwan" hypothesis for Austronesian dispersal	J Austronesian Studies <b>1</b> (1) 1-33 2005
05/008	Iizuka Y; <b>Bellwood P</b> ; Hsiao-Chun H; Dizon E	A non-destructive mineralogical study of nephritic artifacts from Itbayat Island, Batanes, northern Philippines	J Austronesian Studies <b>1</b> 83-108 2005 Taitung, Taiwan
05/008	Hsiao-chun H; Iizuka Y; <b>Bellwood P</b>	Taiwan jade in the context of Southeast Asian archaeology	In Uncovering Southeast Asia's Past (E Bacus, I Glover and V Pigott eds) London: British Museum 203-15 2006
00/020	<b>Bulbeck D</b>	Darwinian evolutionary insights into pottery as an ethnic marker	XV Congress of the International Union for Prehistoric and Protohistoric Sciences 663-64 2006 Lisbon
97/057R	van der Kaars S; <b>De Deckker P</b> ; Gingele F	A 100 000-year record of annual and seasonal rainfall and temperature for northwestern Australia based on a pollen record obtained offshore	J Quaternary Science <b>21</b> (8) 879-889 2006
05/036	Gingele F; <b>De Deckker P</b> ; Norman M X	Late Pleistocene and holocene climate of SE Australia reconstructed from dust and river loads deposited offshore the River Murray Mouth	Earth and Planetary Science Letters <b>255</b> 257-272 2007
05/036	Gingele F X; <b>De Deckker P</b>	High-resolution record of sea-surface temperature changes for the Holocene offshore Kangaroo Island	Palaeogeogr Palaeoclimat Palaeoecol <b>220</b> 361-373 2005
05/047	( <b>Dunlap W J</b> ); Forster M A; Lister G S; Compagnoni R; Giles D; Betts P; Hills Q	Geology of the UHP region at Lago di Cignana, Aosta Valley, NW	32nd International Geological Conference 49/22 2004 Florence, Italy

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/047	<b>(Dunlap W J)</b> ; Forster M A; Lister G S; Compagnoni R	The role and significance of the Matterhorn detachment in the exhumation of the UHP rocks at Lago di Cignana, Valtourneche Italy	32nd International Geological Conference 49/10 2004 Florence, Italy
05/047	<b>Dunlap W J</b> ; Harrison T M; Lister G S; Forster M A; Compagnoni R; Beltrando M	First results of K-feldspar multidomain analysis of the cooling path during exhumation of the Gran Paradiso Massif, Italy	32nd International Geological Conference 49/12 2004 Florence, Italy
05/047	<b>(Dunlap W J)</b> ; McDougall I; Brown F H	Precise <sup>40</sup> Ar/ <sup>39</sup> Ar geochronology for the upper Koobi Fora Formation, Turkana Basin, northern Kenya	Journal of the Geological Society <b>163</b> 205-220 2006
05/047	<b>(Dunlap W J)</b> ; McDougall I; Watkins R T	Geochronology of the Nabwal Hills: a record of earliest magmatism in the northern Kenyan Rift Valley	Geological Magazine <b>143</b> 25-39 2006
05/047	<b>(Dunlap W J)</b> ; Celerier J	Duplexing above the Main Central Thrust, Garwahl Himalaya	PhD Thesis 2006
05/047	<b>(Dunlap W J)</b> ; Wood D	Metamorphic events in the Anakie Inlier	PhD Thesis 2006
05/047	<b>(Dunlap W J)</b> ; Aikman A	Structural doming near Lhasa, southcentral Tibet	PhD Thesis 2006
PGRA	<b>Flett I</b> ; Haberle S; Anderson A; Heijnis H; Rhodes E	Archaeology and palaeoecology in the Galápagos Islands: multidisciplinary analytical techniques	Australasian Archaeometry Conference 2005 42 2005 Canberra
PGRA	<b>Flett I</b>	Creating a training set for palaeoecological analysis of testate amoeba from the Galapagos Islands	International Symposium on Testate Amoeba 26 2006 Antwerp Belgium
PGRA	<b>Flett I</b>	A new record of climate fluctuations in the Eastern equatorial Pacific from peat humification and testate amoebae analysis in the Galapagos Islands, Ecuador	Quaternary Research Association International Postgraduate Conference 41 2006 Edinburgh Scotland
05/065	<b>Gillespie R</b> ; Brook B W; Baynes A	Short overlap of humans and megafauna in Pleistocene Australia	Alcheringa Special Issue 1 163-186 2006
05/199	<b>Goossens D J</b> ; Heerdegen A P; Welberry T R; Gutmann M J	Monte Carlo analysis of neutron diffuse scattering data	Physica B <b>385-386</b> 1352 2006
04/061	James M; Morales L; Wallwork K S; Avdeev M; Withers R L; <b>Goossens D J</b>	Structure and magnetism in rare earth strontium-doped cobaltates"	Physica B <b>385-386</b> 199-201 2006.
02/051	Tibby J; Dimitriadis S; Heijnis H; <b>Haberle S</b>	The impact of European occupation on terrestrial and aquatic ecosystem dynamics in an Australian tropical rain forest	J Ecology <b>94</b> 987-1002 2006
05/075	<b>Hope G S</b>	Histories of wetlands in the Australian Capital Territory and the bog recovery program	NPA ACT Symposium (K McCue, S Lenz and S Freidrich eds) Caring for Namadgi Science and People 129-144 May 2006 Canberra 0-9802854-0-2
06/250	<b>Norén L</b> ; Withers R L; Schmid S; Brink F J; Ting V	Old friends in a new light, "SnSb" revisited	J Solid State Chemistry <b>179</b> (2) 404-412 2006
06/250	<b>Norén L</b> ; Christensen J; Lidin S; Schmid S; Withers R L	The Sn <sub>1-x</sub> Sb <sub>1+x</sub> x~0.5 solid solution: a relationship between α and β	30th Annual Condensed Matter and Materials Meeting WP43 2006 1 - 920791 - 09 - 4
06/250	<b>(Noren L)</b> ; Ting V P	Structural studies of the photocatalytic A <sub>2</sub> InNbO <sub>6</sub> and A <sub>3</sub> CoNb <sub>2</sub> O <sub>9</sub> (A = Ba, Sr and Ca) compounds	PhD Thesis 2006
05/176	Liu Y; <b>Withers R L</b> ; Ting V; FitzGerald J D; Noren L	Stacking fault disorder and its diffraction consequences in Ba <sub>3</sub> MNb <sub>2</sub> O <sub>9</sub> (M = Co and Mn) 1:2 triple perovskites	Physica B <b>385-386</b> 564 2006

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/176	Ting V; Liu Y; Withers R L; Noren L; James M; Gerald J D F	A structure and phase analysis investigation of the "1:1" ordered A <sub>2</sub> InNbO <sub>6</sub> perovskites (A = Ca <sup>2+</sup> , Sr <sup>2+</sup> , Ba <sup>2+</sup> )	J Solid State Chem <b>179</b> 551-562 2006
05/176	Ting V; Liu Y; Withers R L	A temperature-dependent structural investigation of electrical transitions in A <sub>3</sub> CoNb <sub>2</sub> O <sub>9</sub> perovskites (A = Ca <sup>2+</sup> , Sr <sup>2+</sup> , Ba <sup>2+</sup> )	Physica B <b>385–386</b> 558–560 2006

## University of Canberra

PGRA	<b>Abbondante S F</b> ; Hill D; Thomson S J; Maher W A; Creagh D; Kyd J M	Extraction of radiologically contaminated DNA evidence	18th International Symposium of the Australian and New Zealand Forensic Science Society 161 2006
06/083	<b>Creagh D C</b> ; Kubik M E; Sterns M	On the feasibility of establishing the provenance of Australian Aboriginal artefacts using synchrotron radiation x-ray diffraction and proton induced x-ray emission	10th Symposium of the International Society of Radiation Physics F-7 September 2006 Coimbra, Portugal

## University of Canterbury

05/221	<b>Kral M V</b> ; Nakashima P K N; Mitchell D R	An electron microscope study of Al-Fe-Si intermetallics in eutectic Al-Si alloys	Metallurgical and Materials Transactions <b>37A</b> 1987-1997 2006
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## Central Queensland University

01/140	<b>Vicente-Beckett V</b> ; Morrison H; Siegle R	Potential availability of sediment-bound metals using the BCR sequential chemical extraction scheme	8th International Conference on the Biogeochemistry of Trace Elements 437 April 2005 Adelaide
01/140	<b>Vicente-Beckett V</b> ; Morrison H	An investigation into the metal associations in estuarine sediments of Central Queensland	Interact 2004 Conference Handbook 66 July 2004 Gold Coast
05/030P	Metcalfe R; <b>Connor J</b> ; Druskovich D; Blackford M; Short K	The influence of fly ash morphology and phase distribution on collection in an electrostatic precipitator	17th National Australian Institute of Physics Congress 536 December 2006 Brisbane

## Curtin University of Technology

PGRA	<b>Carter G</b> ; Buckley C E; Ogden M	Solid oxide fuel cells: a SAXS study of the effects of solution concentration on particle size	17th National Congress AIP 120 December 2006 Brisbane
PGRA	<b>Chester R</b> ; De Marco R; Ogden M; Mocerino M; Lobler R; Skelton B; White A	<i>Calixarenes</i> as potential ionophores for thallium detection	Interact 2006 Air Water and Earth 237 September Perth
PGRA	<b>Chester R</b> ; De Marco R; Mocerino M; Ogden M; Skelton B; White A	Isopropyl functionalised <i>calix[4]arenes</i> – sublime ionophores for ISEs	XXIX International Symposium of Macrocyclic Chemistry 4-8 July 2004 Cairns
PGRA	De Marco R; Bailey S; Jiang Z-T; Morton J; <b>Chester R</b>	An <i>in situ</i> chronoamperometry/synchrotron radiation grazing incidence x-ray diffraction study of the electrochemical oxidation of pyrite in chloride media	Electrochemistry Communications <b>8</b> 1661-1664 2006
04/041; 03/029	<b>De Marco R</b> ; Jiang Z T; Becker T; Clarke G; Murgatroyd G; Prince K	Response mechanisms and new approaches with solid-state ion-selective electrodes: a powerful multi-technique materials characterization approach	Electroanalysis <b>18</b> 1273-1281 2006

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
06/043; 06/044	(De Marco R); Martizano J	Multi-channel analyser for the monitoring of trace metals in marine waters	PhD Thesis 2004
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	Physica B <b>385-386</b> 924 2006
PGRA	Kirby N M; Chen-Tan N W; Buckley C E	Copper-doped BaZrO <sub>3</sub> crucibles for YBCO single crystal growth	J The European Ceramic Society <b>27</b> 2039 – 2044 2007
PGRA	Kirby N M; Chen-Tang A; van Riessen A; Buckley C E	Solid-state processing of BaZrO <sub>3</sub> for melt processing of high temperature superconductors	Superconductor Science and Technology <b>18</b> 648 - 657 2005
94/139	Li D; O'Connor B; van Riessen A; Mackinnon C; Low I M	Structural determination of high Tc superconductor (Bi, Pb) <sub>2</sub> Sr <sub>2</sub> Ca <sub>2</sub> Cu <sub>3</sub> O <sub>x</sub> (2223) phase with powder diffraction data	Supercond Sci Technol <b>18</b> 373–380 2005
03/176	Low I M; Oo Z; O Connor B H	Characterisation of factors controlling the thermal stability of aluminium titanate	AUSTCERAM 74 Nov - Dec 2004 Melbourne
96/142; 96/143; 97/141	Skala R D; Manurung P; Low I M	Microstructural design, characterisation and indentation responses of layer-graded alumina / aluminium-titanate composites	Composites B <b>37</b> 466-480 February 2006
04/207	Tezuka N; Low I M; Davies I J; Prior M; Studer A	Dynamic neutron diffraction study of the phase transformations in clays and clay-reinforced alumina composites	Physica B <b>385–386</b> 555–557 2006
99/030, 00/90P, 01/091, 02/075, 05/106P	Oo Z; Low I M; O'Connor B H	Dynamic neutron diffraction study of the thermal stability of Ti <sub>3</sub> SiC <sub>2</sub> in air and argon	Physica B <b>385–386</b> 499-501 2006
04/207	Low I M; Oo Z; O'Connor B H	Effect of atmospheres on the thermal stability of aluminium titanate	Physica B <b>385-386</b> 502 2006
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	Physica B <b>385-386</b> 555 2006
PGRA	Paglia G; Buckley C E; Rohl A L	Comment on "Examination of spinel and nonspinel structural models for $\gamma$ -Al <sub>2</sub> O <sub>3</sub> by DFT and Rietveld refinement simulations"	J Phys Chem B <b>110</b> 20721 - 20723 2006
PGRA	Paskevicius M; Buckley C E	Determination of the distribution of hydrogen bubbles from ultra and small-angle neutron scattering data using a size dependent contrast	17th National Australian Institute of Physics Congress 66 December 2006 Brisbane
PGRA	Paskevicius M; Buckley C E	Bubble size distributions obtained from small angle scattering	Joint AXAA (WA) and WASEM Conference 50 September 2006 Margaret River
PGRA	Paskevicius M; Buckley C E	Analysis of polydisperse bubbles in the aluminium–hydrogen system using a size-dependent contrast	J Appl Cryst <b>39</b> 676-682 2006
PGRA	De Marco R; Jiang Z T; Pejcic B; van Riessen A	<i>In situ</i> synchrotron radiation grazing incidence x-ray diffraction - a powerful technique for the characterization of solid-state ion-selective electrode surfaces	Electrochimica Acta <b>51</b> 4886-4891 2006
PGRA	De Marco R; Jiang Z T; Martizano J; Lowe A; Pejcic B; van Riessen A	<i>In situ</i> electrochemical impedance spectroscopy/ synchrotron radiation grazing incidence x-ray diffraction - a powerful new technique for the characterization of electrochemical surfaces and interfaces	Electrochimica Acta <b>51</b> 5920-5925 2006



Project Number	Chief Investigator Coauthors	Title of Publication	Reference
PGRA	<b>Maitland C</b> ; Buckley C E; <b>Sheppard D</b> ; Boskovic S	Determining information about the pore structure of MCM-41 and MCF from the correlation function	SAS 2006 XIII International Conference on Small Angle Scattering 294 July 2006 Kyoto Japan
PGRA	Jenke M; <b>Sheppard D A</b> ; Buckley C E; Jiang Z-T; Mawson A	Hydrogen uptake in ball-milled TiMgNi	International Conference on Nanoscience and Nanotechnology (ICONN 2006) 157 - 158 July 2006 Brisbane
PGRA	<b>Sheppard D A</b> ; Jenke M; Buckley C E; Jiang Z-T	Investigations of hydrogen uptake in ball milled TiMgNi	17th National Australian Institute of Physics Congress 150 Dec 2006 Brisbane
PGRA	<b>Sheppard D A</b> ; Buckley C E; Jenke M; Mawson A	Comparison of hydrogen uptake in various stoichiometries of ball milled TiMgNi	International Symposium on Metal-Hydrogen Systems: Fundamentals and Applications 94 October 2006 Lahaina Maui Hawaii
PGRA	<b>Sheppard D A</b> ; Maitland C F; Buckley C E	Characterisation and hydrogen adsorption of MCM-41	Joint AXAA(WA) and WASEM Conference 55 September 2004 Rottneest Island WA
04/191	<b>Zhang D-K</b> ; Fansuri H;	Catalytic partial oxidation of propylene to acrolein: the catalyst structure, reaction mechanisms and kinetics	PhD Thesis 2005

## Flinders University

05/010	Forbes M S; <b>Bestland E A</b> ; Krull E S; Skjemstad J O; Kohn M J	The Genesis, Age and Palaeoenvironments of the Black Creek Swamp Megafaunal Fossil Deposit, Kangaroo Island	9th Australasian Environmental Isotope Conference and 2nd Australasian Hydrogeology Research Conference 153-154 2006
05/066	<b>GINIC-Markovic M</b> ; Matisonis J; Cervini R; Simon G	Effect of encapsulated MWNTs on the mechanical properties of their nanocomposites	Pacificchem 780 December 2005
05/066	<b>(GINIC-Markovic M)</b> ; Yui on Yue	Effect of encapsulated multi-walled carbon nanotubes on the mechanical properties of MWCNT/polymer composites	BSc (Hons) Thesis 2005
94/099	<b>Pate F D</b>	Hunter-gatherer social complexity at Roonka, South Australia	In Social Archaeology of Australian Indigenous Societies (B David, B Barker, I J McNiven eds) 226-241 2006 Aboriginal Studies Press Canberra
97/186	<b>Pate F D</b> ; McDowell M; Wells R T; Smith A M	Additional AMS radiocarbon dates for Wet Cave and the timing of megafaunal extinctions in the Naracoorte region of South Australia	Alcheringa: An Australasian J Palaeontology Special 1 277-279 2006
05/138	Keough S J; Hanley T L; Wedding A B; <b>Quinton J S</b>	Grazing incidence x-ray studies of lumogen UV-conversion coatings for ultra-violet sensing	ARC Network for Advanced Materials (ARNAM) Annual Workshop 62 June 2006
04/146	<b>Storer R G</b> ; McMillan B F	SPECTOR3D : a resistive magnetohydrodynamic stability code for stellarators	J Plasma Physics 72 829-832 2006

## Griffith University

05/072P	Hanna J V; Boyd S E; <b>Healy P C</b> ; Bowmaker G A; Skelton B W; White A H	Structural and solid state <sup>31</sup> P NMR studies of the four-coordinate copper(I) complexes [Cu(PPh <sub>3</sub> ) <sub>3x</sub> ] and [Cu(PPh <sub>3</sub> ) <sub>3</sub> (CH <sub>3</sub> CN)] <sub>x</sub>	J Chem Soc Dalton Transactions 2547 – 2556 2005
04/071P	<b>(Han J)</b> ; Cheong K Y	Silicon carbide as the nonvolatile-dynamic-memory material	PhD Thesis 2004



Project Number	Chief Investigator Coauthors	Title of Publication	Reference
03/017; 04/024P	<b>Carter R M</b> ; Fulthorpe C S; Lu H	Canterbury drifts at ocean drilling program site 1119: climatic modulation of southwest Pacific intermediate water flows since 3.9 Ma	Geology <b>32</b> 1005-1008 2004
03/017; 04/024P	<b>Carter R M</b> ; Gammon P R; Millwood L	Canterbury Bight, southwest Pacific Ocean I. Time-scale and paleoceanography of the Subtropical Convergence (STC) since 0.38 Ma	Marine Geology <b>205</b> 29-58 2004
03/017; 04/024P	<b>Carter R M</b>	A New Zealand climatic template back to c. 3.9 Ma: ODP Site 1119, Canterbury Bight, south-west Pacific Ocean, and its relationship to onland successions	Journal of the Royal Society of New Zealand <b>35</b> 9-42 2005
03/017; 04/024P	Holland M E; Schultheiss P J; <b>Carter R M</b> ; Roberts J A; Francis T J G	IODPs untapped wealth: multi-parameter logging of legacy core	Scientific Drilling <b>1</b> 50-51 2005
03/017; 04/024P	<b>Carter R M</b> ; Gammon P	New Zealand maritime glaciation: millennial-scale southern climate change since 3.9 Ma	Science <b>304</b> 1659-1662 2004
01/042P	Page M C; <b>Dickens G R</b>	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 <b>219</b> 27-45 2005
03/075	<b>Lottermoser B G</b> ; Ashley P M	Physical dispersion of radioactive mine waste at the rehabilitated Radium Hill uranium mine site, South Australia	Aust J Earth Sciences <b>53</b> 485 – 499 2006
PGRA	Wüst R; Kylander M; Garcia-Sanchez R; <b>Muller J</b> ; 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 2005 Beijing, China
PGRA	<b>Muller J</b> ; Wüst R; Weiss D	Climate change in the southern hemisphere based on carbon isotopes and geochemical data	32nd Int Geol Congr 1 (79-9) 388 2004
PGRA	<b>Muller J</b> ; Kylander M; Wüst R A J; Weiss D	Geochemical climate proxies 1: trace elements in a 13m record from Lynch's Crater, N-Queensland, Australia	DEKLIM /PAGES Conference 172-173 March 2005
PGRA	Kylander M; <b>Muller J</b> ; Garcia-Sanchez R; Wüst R A J; Weiss D	Geochemical climate proxies 2: rare earth elements and Pb isotopes in a 13m terrestrial record from Lynch's Crater, North Queensland, Australia	DEKLIM Conference 159 2005 Mainz Germany
PGRA	<b>Muller J</b> ; Wüst R; Weiss D; Hu Y	Geochemical evidence of environmental change at Lynch's Crater, Queensland, Australia	Global and Planetary Changes <b>53</b> 269–277 June 2006
PGRA	Wüst R A J; <b>Muller J</b> ; 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 2005 Mainz Germany
PGRA	<b>Muller J</b> ; Kylander M; Wüst R; Weiss D; Martinez-Cortizas A; LeGrande A <i>et al</i>	Past migrations of the Intertropical convergence zone in tropical NE Australia during Heinrich events	American Geophysical Union, Fall session 13A-1574 2006
PGRA	<b>Muller J</b> ; Wüst R A J	Weathering intensity related to climate change over the last 50 ka: evidence from Lynch's Crater, NE-QLD, Australia	Geochimica et Cosmochimica Acta <b>70</b> (18) A435 August-September 2006
PGRA	( <b>Muller J</b> ); Kylander M	Global perspectives on natural and anthropogenic controls on atmospheric lead and dust cycling using peat bog archives	PhD Thesis Imperial College London 2006

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
<b>La Trobe University</b>			
PGRA	<b>Raiber M</b> ; Webb J A	A multi-scale isotopic tracer study to delineate aquifer interactions and their impact on groundwater salinisation in the eastern Hopkins Catchment	20th Victorian Universities Earth and Environmental Sciences Conference (Bear <i>et al</i> /eds) 40 October 2006
PGRA	<b>Raiber M</b> ; Webb J A	Geological evolution and tectonic controls of the Tertiary Streatham Basin, western Victoria, Australia	Australian Earth Sciences Convention 104 July 2006 Melbourne
PGRA	<b>Raiber M</b> ; Webb J A	Application of environmental isotopes to understand groundwater flow mechanisms in the basalt plains of Western Victoria, Australia	9th Australasian Environmental Isotope Conference 137-138 December 2006 Adelaide
03/096	Gard F; <b>Riley J</b>	Observation of oxygen contamination at the ZnSe/GaAs interface using SIMS	Appl Surf Sci <b>252</b> 4003-4008 2006
03/096	Gard F; <b>Riley J</b>	SIMS studies of Cl-doped ZnSe epilayers grown by MBE	Surf Rev Lett <b>13</b> 215-220 2006
01/185S	( <b>Webb J</b> ); Bennetts D	Hydrology, hydrogeology and hydrogeochemistry of groundwater flow systems within the Hamilton basalt plains, Western Victoria, and their role in dryland salinisation	PhD Thesis 2006
01/185S	Bennetts D; <b>Webb J A</b> ; Stone D J M; Hill D M	Understanding the salinisation process for groundwater in an area of south-eastern Australia, using hydrochemical and isotopic evidence	J Hydrology <b>323</b> 178-92 2006
06/260	<b>Webb J</b>	The effect of groundwater input on stream salinity of the Upper Loddon catchment, central Victoria	Joint Congress of the 9th Australasian Environmental Isotope Conference & 2nd Australasian Hydrogeology Research Conference 207 2006

## Macquarie University

01/025	Chen P P-T; <b>Butcher K S A</b> ; Goldys E M; Tansley T L; Prince K E	High energy Urbach characteristic observed for gallium nitride amorphous oxide	Thin Solid Films <b>496</b> 342-345 2006
05/022	<b>Butcher K S A</b> ; Hirshy H; Perks R M; Wintrebert-Fouquet M; Chen P P-T	Stoichiometry effects and the Moss-Burstein effect for InN	Physica Status Solidi A <b>203</b> 66-74 2006
03/001	<b>Humphreys G S</b> ; Wilkinson M T; Chappell J; Fink D; Fifield K	What is inherited? Evidence from an inceptisol/ regosol with OSL dated 0-150 ka quartz sand.	18th World Congress of Soil Science, IUSS 112 2006
03/001	Wilkinson M T; <b>Humphreys G S</b> ; Fink D; Chappell J; Fifield K	Soil production rates inferred from cosmogenic radionuclides, and last glacial maximum erosion rates in upland SE Australia	Australian & New Zealand Geomorphology Group Occasional Paper No 4 45 New Zealand 1175-8457 45 2006
06/179	Johnson D I; Gadd G E; <b>Town G E</b>	Total differential optical properties of polymer nanocomposite materials	Proceedings, International Conference On Nanoscience and Nanotechnology 233-235 July 2006 Brisbane

## The University of Melbourne

PGRA	<b>Belton D X</b>	The low-temperature thermochronology of eratic terranes	PhD Thesis 2006
05/024	D'Amico F; Skarmoutsou E; Sanfilippo S; <b>Camakaris J</b>	Menkes protein localization in rat parotid acinar cells	Acta Histochem <b>107</b> 373-378 2005

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
06/027P	<b>(Caruso R)</b> ; Wang X; Zhou M; Prince K; Mitchell D	Porous gold/titania nanocomposites synthesised by a templating technique	5th International Conference on Inorganic Materials IM306 September 2006
05/067	Brown R W; Raab M J; Belton D X; Gallagher K; Kohn B P; <b>Gleadow A J W</b>	A change of tactics on tectonics and landscape evolution?	STOMP – Structure, Tectonics and Ore Mineralisation Processes, Abstracts, (Invited presentation) 19 August 2005 Townsville, 0 86443 747 1
05/067	Spiegel C; Kohn B; Belton D X; Raza A; <b>Gleadow A</b>	A long-term natural annealing and diffusion experiment: field testing in the deep ocean environment	European Geophysical Union, Geophysical Research Abstracts 7 7912 2005 Vienna 1607-7692
05/067	Raab M J; Brown R W; Gallagher K; Weber K; <b>Gleadow A J W</b>	Denudational and thermal history of the early Cretaceous Brandberg and Okenyenya igneous complexes on Namibia's Atlantic Passive Margin	Tectonics 24 TC3006 2005 doi.1029/2004TC001688 14
05/067	<b>(Gleadow A)</b> ; Kohn B P; Weissbrod T; Farley K A	Fission track and (U-Th)/He dating of detrital and authigenic apatite in Cambrian strata, southern Israel: evidence for timing of Dead Sea transform movement	GAC-MAC-CSPG-CSSS Joint Meeting 30 104 May 2005 Invited presentation
04/059	<b>(Gleadow A)</b> ; Osadetz K G; Kohn B P; Feinstein S; Price R	Foreland belt thermal history using apatite fission track thermochronology: implications for Lewis Thrust and Flathead Fault in the Southern Canadian Cordilleran petroleum province	In: Deformation, Fluid Flow and Reservoir Appraisal in Foreland Fold and Thrust Belts. (Swennen R, Roure F, and Granath J eds) Chapter 2 - AAPG Hedberg Series, no. 1 21-48 2006
05/067	Weber U D; Kohn B P; <b>Gleadow A J W</b> ; Nelson D R	Low temperature Phanerozoic history of the northern Yilgarn Craton, Western Australia	Tectonophysics 400 127-151 2005
05/067	<b>(Gleadow A)</b> ; Grove M; Fletcher J M; Kimbrough D; Lovera O M; Kohn B P;	Neogene tectonic evolution of the Magdalena Shelf	Geological Society of America Abstracts 274 October 2005 Salt Lake City
05/067	Belton D X; Raab M J; Brown R W; Gallagher K; <b>Gleadow A J W</b>	Reactivation of cryptic structures in basement terranes (I): Cretaceous tectonics on the Zimbabwe Craton STOMP – structure	Tectonics and Ore Mineralisation Processes 10 2005 Townsville 0 86443 747 1
05/067	Raab M J; Belton D X; Brown R W; Gallagher K; Stevenson J; Weber K; <b>Gleadow A J W</b>	Reactivation of cryptic structures in basement terranes (II): Cretaceous tectonics in Central Namibia	STOMP – Structure, Tectonics and Ore Mineralisation Processes 107 August 2005 Townsville 0 86443 747 1
05/067	Belton D X; Kohn B P; <b>Gleadow A J W</b>	TASC (Track Age Spectrum Calculator): cooling onset ages and event timing in natural samples from raw fission track length data	In Reviews in Mineralogy and Geochemistry (Reiners P W and Ehlers T A eds), Low Temperature Thermochronology: Techniques, Interpretations, and Applications 58 610-615 2005
05/067	<b>Gleadow A J W</b> ; Raza A; Kohn B; Spencer S A	The potential of monazite for fission-track dating	15th International Goldschmidt Conference A21 May 2005
05/067	<b>(Gleadow A)</b> ; Everitt R; Kohn B P; Lorencak M; Osadetz K	Thermal history of Precambrian shield in Ontario from apatite fission track thermochronology	GAC-MAC-CSPG-CSSS Joint Meeting 30 55 May 2005 Halifax, Canada
05/067	Kohn B P; <b>Gleadow A J W</b> ; Brown R W; Gallagher K; Lorencak M; Noble W P	Visualising thermotectonic and denudation histories using apatite fission track thermochronology	In: Reviews in Mineralogy and Geochemistry (Reiners, P W. and Ehlers, T A eds.), Low Temperature Thermochronology: Techniques Interpretations, and Applications 58 527-565 2005
06/069	Carter T J; Kohn B P; Foster D A; <b>Gleadow A J W</b> ; Woodhead J D	Late-stage evolution of the Chemehuevi and Sacramento detachment faults from apatite (U-Th)/He thermochronometry – evidence for mid-Miocene accelerated slip	Geological Society of America Bulletin 118 689-709 2006

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
06/069	Hu S; Kohn B P; Raza A; Wang J; <b>Gleadow A J W</b>	Cretaceous and Cenozoic cooling history of the ultrahigh-pressure rocks across the Tongbai-Dabie orogen, central China, from apatite fission track thermochronology	Tectonophysics <b>420</b> 409-429 2006
06/069	Hu S; Raza A; Min K; Kohn B P; Reiners P W; Ketcham R A; Wang J; <b>Gleadow A J W</b>	Late Mesozoic and Cenozoic thermotectonic evolution along transect from the North China craton through the Qinling orogen into the Yangtze craton, Central China	Tectonics <b>25</b> 15 doi:10.1029/2006TC001985 2006
06/069	<b>Gleadow A J W</b> ; Kohn B P; Brown R W; Gallagher K L	Thermochronology and landscape evolution in the Basin Hinterland - Understanding Sediment Supply into Deep-Basin Environments	American Association of Petroleum Geologists Conference 44 November 2006 Perth
06/069	<b>Gleadow A J W</b> ; Gleadow S; Belton D; Kohn B P; Krochmal M; Brown R	Fully-automated counting for fission track dating and thermochronology	16th Goldschmidt Conference, Melbourne, Geochimica et Cosmochimica Acta <b>70</b> (18) Supplement 1 A205 August-September 2006 ISSN: 0016-7037
06/069	Luft F F; Raab M J; Kohn B P; <b>Gleadow A J W</b>	Post break-up tectonic reactivation and denudational evolution in the Kaoko Belt, Namibia: a thermochronological study	20th Vic Univ Earth and Environmental Sciences Conf Monash University 83 October 2006 Geol Soc Aust ISSN 07 29 011X
06/069	Raab M J; Brown R W; <b>Gleadow A</b>	The interplay of tectonics, erosion and topography across the Drakensberg Escarpment, South Africa: A fission track study	16th Goldschmidt Conference, Melbourne, Geochimica et Cosmochimica Acta <b>70</b> (18) Supplement 1 A514 August-September 2006 ISSN: 0016-7037
06/069	<b>Gleadow A J W</b> ; Spikings R A; Foster D A; Kohn B P	Low temperature (<110°C) thermal history of the Mt. Isa and Murphy Imliers, northeast Australia: evidence from apatite fission track thermochronology	Australian Journal of Earth Sciences <b>53</b> 151-165 2006
06/069	Spiegel C; Kohn B P; Belton D X; <b>Gleadow A J W</b>	Tectonomorphic evolution of the Kenya rift flanks: Implications for Late Cenozoic environmental change in East Africa?	European Geophysical Union April 2006 Geophysical Research Abstracts <b>8</b> 09233 Vienna ISSN 1029-7006
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06/069	Spiegel C; Kohn B P; Donelick R; Belton D X; Raza A; <b>Gleadow A J W</b>	The effect of long-term low-temperature exposure on apatite fission track stability and helium diffusion: constraints from deep-sea drill cores	European Geophysical Union Vienna April 2006 Geophysical Research Abstracts <b>7</b> 07912 ISSN 1029-7006
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06/069	Kohn B; <b>Gleadow A</b> ; Kohlmann F; Belton D; Osadetz K; Brown R	Low temperature thermochronology on cratons: rechecking the rules of the game European	Conference on Thermochronology Bremen, 85-87 July 2006 ISBN 3-932537-46-7
06/069	Kohn B P; <b>Gleadow A J W</b> ; Raza A; Kohlmann F; Brown R W	Re-evaluating low temperature apatite thermochronology in slowly cooled terranes	16th Goldschmidt Conference Melbourne Geochimica et Cosmochimica Acta <b>70</b> (18) Supplement 1 A328 August-September 2006 ISSN: 0016-7037
06/069	Weber U D; Kohn B P; <b>Gleadow A J W</b> ; Nelson D R	Low temperature Phanerozoic history of the northern Yilgarn Craton, Western Australia	Reply to Comment by Guedes <i>et al</i> Tectonophysics <b>419</b> 107-109 2006
06/069	Raab M J; Brown R W; <b>Gleadow A</b>	New sub-surface insights into the structural evolution of the Drakensberg Escarpment, South Africa: A fission track study	European Conference on Thermochronology Bremen 117-118 July 2006 ISBN 3-932537-46-7
06/069	Belton D X; <b>Gleadow A J W</b> ; Kohn B P	A universal annealing model: the chlorine-compensated solution	European Conference on Thermochronology Bremen 11-12 July 2006 ISBN 3-932537-46-7

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
06/069	<b>(Gleadow A J W)</b> ; Feinstein S; Kohn B; Osadetz K; Everitt R; O'Sullivan P	Evidence for linked geodynamic evolution of the Phanerozoic Canadian Shield and an intracratonic basin from thermochronological analysis	European Geophysical Union Vienna April 2006 Geophysical Research Abstracts <b>8</b> 07210 ISSN 1029-7066 2006
06/069	<b>(Gleadow A J W)</b> ; Brown R W; Raab M J; Gallagher K	Erosion rates across Africa	European Geophysical Union, Vienna April 2006 Geophysical Research Abstracts <b>8</b> 11084 ISSN 1029-7066
06/069	<b>Gleadow A</b> ; Gleadow S; Belton D; Kohn B; Brown R	Coincidence Mapping™ – a breakthrough strategy for the automatic counting of fission tracks in natural minerals	European Conference on Thermochronology Bremen 65-67 July 2006 ISBN 3-932537-46-7
06/069	Spencer S A S; Kohn B P; <b>Gleadow A J W</b> ; Raza A; Hu S	Fission track analysis and the problematic (U-Th)/He thermochronology of the Shandong Province, NE China – a rifted cratonic margin	16th Goldschmidt Conference, Melbourne, Geochimica et Cosmochimica Acta <b>70</b> (18) Supplement 1 A606 August-September 2006 ISSN: 0016-7037
06/069	Spiegel C S; Kohn B; Donelick R; Belton D; Raza A; <b>Gleadow A</b>	The effect of long-term low-temperature exposure on fission track stability and helium diffusion in apatite	16th Goldschmidt Conference, Melbourne Geochimica et Cosmochimica Acta <b>70</b> (18) Supplement 1 A607 August-September 2006 ISSN 0016-7037
06/069	<b>(Gleadow A)</b> ; Ullrich A; Glasmacher U A; Miletich R; Kohn B P	High pressure effects on fission-track formation in apatite	European Geophysical Union Vienna April 2006 Geophysical Research Abstracts <b>8</b> 07514 ISSN 1029-7006
06/069	<b>(Gleadow A)</b> ; Gray D R; Kohn B P; Gregory R T; Raza A	Cenozoic exhumation history of the Oman margin of Arabia based on low-T thermochronology	16th Goldschmidt Conference Melbourne Geochimica et Cosmochimica Acta <b>70</b> (18) Supplement 1 A213 August-September 2006 ISSN: 0016-7037
06/069	Kohlmann F; <b>Gleadow A J W</b> ; Kohn B P; Pakes C I; Alves A	Atomic force microscopy of fission tracks in fluorapatite and mica: a tool for nanoscale investigations	16th Goldschmidt Conference Melbourne Geochimica et Cosmochimica Acta <b>70</b> (18) Supplement 1 A327 August-September 2006 ISSN: 0016-7037
06/069	Luft F F; Raab M J; Brown R W; Kohn B P; <b>Gleadow A J W</b>	Tectono-thermal history of the Kaoko Belt, Namibia: an integrated low temperature thermochronology study	16th Goldschmidt Conference Melbourne Geochimica et Cosmochimica Acta <b>70</b> (18) Supplement 1 A374 August-September 2006 ISSN: 0016-7037
06/069	<b>Gleadow A J W</b> ; Kohn B P; Fletcher J; Raza A	Continental extension tectonics in the Gulf Extensional Province, northern Baja California, Mexico: evidence from low-temperature thermochronology	Australia Earth Sciences Convention 125 July 2006 Melbourne 0-646-46246-6
06/069	Kohlmann F; <b>Gleadow A J W</b> ; Kohn B P; Pakes C I	Atomic force microscopy study of fission tracks in apatite and muscovite	20th Vic Univ Earth and Environmental Sciences Conf Monash University Geol Soc Aust Abstracts <b>83</b> 30 October 2006 ISSN 07 29 011X
04/086	Garnett D; <b>Jackson H</b> ; Waldron H; Clayton E	Chemical analysis of the figurine clays of Jebel Khali, using PIXE/PIGME and neutron activation analysis	In: Jebel Khali on the Euphrates <b>2</b> . The Terracotta Figurines 245-255 2006 978-0-958-265-2-9
04/106; 05/113	Lobachevsky P N; <b>Martin R F</b>	DNA breakage by decay of auger electron emitters: experiments with <sup>123</sup> I-iodoHoechst 33258 and plasmid DNA	Radiation Research <b>164</b> (6), 766-73 2005
06/132	<b>(Mulhern T)</b> ; Chong Y P	C-terminal Src kinase-homologous kinase (CHK) – a potential tumour suppressor inhibiting oncogenic Src-family kinase activity	PhD Thesis 2006

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05/007	(Batten S); van der Werff P	Synthesis, structure and magnetism in cation templated, dicyanamidometallate coordination polymers	PhD Thesis 2006
04/008	(Bierlein F); Vos I M A	Multi-disciplinary investigations of the tectono-metallogenic evolution of the Tasman Fold Belt System in northeastern Queensland, Australia	PhD thesis 2006
04/215	Vos I; Bierlein F P; Webb J	Geochemistry of early Palaeozoic basalts in the Hodgkinson Province: a key to tectono-magmatic evolution of the Tasman Fold Belt System in northeastern Queensland, Australia	International J Earth Sciences <b>95</b> 569-585 2006 Springer Verlag, Heidelberg 1437-3254
05/185	Dong Y-D; Larson I; Hanley T; Boyd B J	Bulk and dispersed aqueous phase behavior of phytantriol: effect of vitamin E acetate and F127 polymer on liquid crystal nanostructure	Langmuir <b>22</b> 9512-9518 2006
05/185	Yao-Da Dong C; Larson I; Hanley T; Boyd B	Liquid crystal dispersions for agricultural application – phase behaviour studies using phytantriol	25th Australian Colloid & Surface Science Student Conference 39 February 2006 Beechworth
01/035	Cook W D; Chen F; Ooi S K; Moorhoff C; Knott R	Effect of curing order on the curing kinetics and morphology of bisGMA/DGEBA interpenetrating polymer networks	Polymer International <b>55</b> 1027-1039 2005
PGRA	Cook E	Late Quaternary environments and climate history at lakes Bolac and Turangmorohe, Western Victoria, Australia	PhD Thesis 2006
00/033P	Dean K M; Cook W D; Lin M Y	Small angle neutron scattering and dynamic mechanical thermal analysis of dimethacrylate/epoxy IPNs	Euro Polym J <b>42</b> 2872-2887 2006
PGRA	Daniels J E; Elcombe M M; Finlayson T R; Vance E R	Neutron diffraction study of polycrystalline $\text{Ca}_{1-x}\text{Sr}_x\text{TiO}_3$ mixed perovskite materials	Physica B <b>385-386</b> 88 2006
PGRA	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 highvoltage electric fields	Physica B <b>385-386</b> 97 2006
PGRA	Daniels J E; Finlayson T R; Studer A J Hagen M E	Time-resolved neutron ddiffraction studies: the ferroelectric ttransition in tttriglycine sulphate	30th Annual A&NZIP Condensed Matter and Materials Meeting WP49 Wagga 2006
PGRA	Daniels J E; Finlayson T R; Studer A J; Hagen M E	Time rresolved sstudies near the ferroeloectric transition in triglycine ssulphate during the application of hhighvoltage fields	Ferroelectrics <b>339</b> 175-82 2006
PGRA	Daniels J E; Finlayson T R; Studer A J Jones J L	Time-resolved studies of ferroelectric materials during application of electric fields	5th AINSE/ANBUG Neutron Scattering Symposium 41 Lucas Heights December 2006
PGRA	Daniels J E; Finlayson T R; Studer A J. Jones J L	Time-resolved studies of ferroelectric materials using neutron stroposcopic techniques during the application of electric fields	17th National Congress of the Australian Institute of Physics WC0325 Brisbane December 2006 ISBN 0-9598064-7-4
05/035	(David B); Brady L	Painting patterns: Torres Strait Region Rock-Art, NE Australia	PhD Thesis 2005
06/059	Finlayson T R	Solving engineering problems with diffraction techniques	5th AINSE/ANBUG Neutron Scattering Symposium 28 Lucas Heights December 2006
PGRA	Healy J; Edward G H; Knott R B	Residual orientation in injection micro-molded parts	Physica B <b>385-386</b> 620-622 2006



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05/093	Builth H; <b>Kershaw A P</b> ; Lewis T; White C; Roach A; Hartney L; Jacobsen G.	Human and environmental relationships on Budj Bim landscape	Western Victoria, Australia. Australian Archaeological Association Conference 31-32 December 2006 Beechworth
05/093	<b>Kershaw A P</b> ; White C; Roach A; Hartney L; Lewis T; Builth H.	Development of the 'natural' components Budj Bim volcanic landscape, SW Victoria, Australia	Holocene Landscape Development Session, Environmental Evolution Commission, International Geographical Union Conference, 159 July 2006
05/093	( <b>Kershaw A P</b> ); Lewis T M	A Holocene multi-proxy palaeoecological record from Lake Surprise, Mt Eccles, south-western Victoria	BA (Hons) Thesis 2005
05/093	( <b>Kershaw A P</b> ); Hartney L	A late Quaternary vegetation history from the archaeologically significant Mt Eccles Lava Flow, southwest Victoria	BA (Hons) Thesis 2005
01/084	( <b>Kershaw A P</b> ); Porch N	A method for reconstructing the quaternary climates of Australia using fossil beetles	PhD Thesis 2006
5093	( <b>Kershaw A P</b> ); Roach A	A palaeoecological study covering the past 30,000 years of Tyrendarra Swamp, Western Plains, Victoria	BA (Hons) Thesis 2005
99/151S	Bleakley N; McMinn A; <b>Kershaw A P</b>	AMS dating of fine resolution records, Taynaya Bay, Vestfold Hills, Antarctica	In: Holocene Paleoeology of Taynaya Bay, Vestfold Hills, East Antarctica 2006
04/094	Tibby J; <b>Kershaw A P</b> ; Builth H; Philibert A; White C	Environmental change and variability in southwestern Victoria: changing constraints and opportunities for occupation and land use	In: The Social Archaeology of Australian Indigenous Societies, Aboriginal Studies Press, (David B; McNiven I and Bryson B eds) Canberra 354-369 2006 ISBN 085575 499 0
05/093	( <b>Kershaw A P</b> ); Porch N A	Method for reconstructing the Quaternary climates of Australia using fossil beetles	PhD Thesis 2006
04/112; 05/119	<b>McNiven I J</b> ; Dickinson W R; David B; Wiesler M, Von Gnielinski F; Carter M; Zoppi U	Mask Cave: Red-slipped pottery and the Australian-Papuan settlement of Zenadh Kes (Torres Strait)	Archaeology in Oceania <b>41</b> 49-81 2006
PGRA	<b>Paradowska A M</b> ; Price J W H; Ibrahim R; Finlayson T R; <i>et al</i>	Application of synchrotron and neutron diffraction to residual stress measurements of steel weldments	5th AINSE/ANBUG Neutron Scattering Symposium AANSS2006 59 December 2006 Lucas Heights
PGRA	<b>Paradowska A</b> ; 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	Physica B <b>385-386</b> 904-907 2006
PGRA	<b>Paradowska A</b> ; Price J W H; Ibrahim R; Finlayson T; Blevins R; Ripley M	Measurements of residual stress in multi-bead-on-plates	30th Annual Australian and New Zealand Institutes of Physics Condensed Matter and Materials Meeting WP50 July 2006 Wagga Wagga
PGRA	<b>Paradowska A M</b> ; Price J W H; Ibrahim R; Finlayson T; Blevins R; Ripley M	Assessment of residual stress in single and multi bead-on-plate weldments measured by neutron diffraction	Materials Forum <b>30</b> 54-62 2006
PGRA	Price J W H; <b>Paradowska A M</b> ; Ibrahim R; Finlayson T	Residual stress evaluation in welds and implication for design for pressure vessel applications	J Pressure Vessel Technology <b>128</b> 638-643 2006

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PGRA	<b>Paradowska A;</b> Price J W H; Ibrahim R; Finlayson T; Blevins R; Ripley M	Neutron diffraction evaluation of residual for several weld arrangements and comparison with fitness-for-purpose assessments	ASME PVP 2006 and International Conference on Pressure Vessels Technology ICPVT-11 93691 July Vancouver
PGRA	<b>Paradowska A;</b> Price J W H; Ibrahim R; Finlayson T; Ripley M; Blevins R	Residual stress evaluation in multi- bead steel weldments using neutron diffraction	Welding Research Abroad 51(12) 40-51 2005
PGRA	<b>Paradowska A;</b> Price J W H; Ibrahim R; Finlayson T; Ripley M; <i>et al</i>	Residual stress evaluation in multi- bead steel weldments using neutron diffraction	Welding in the World 49(9) 388-399 2005
PGRA	Price J W H; <b>Paradowska A M;</b> Joshi S; Finlayson T	Residual stress measurements by neutron diffraction and theoretical estimation in a single-weld-bead,	Inter J of Pressure Vessels and Piping 83 381-387 2006
PGRA	<b>Paradowska A;</b> Finlayson T R; Price J W H; Ibrahim R; Lienert U; Harland C	Studies of residual stress distributions in single bead on plate using high energy synchrotron and neutron scattering	17th National Congress of the Australian Institute of Physics WC0507 Brisbane December 2006 ISBN 0-9598064-7-4
PGRA	<b>Paradowska A M;</b> Price J W H; Ibrahim R; Finlayson T; Blevins R; <i>et al</i>	Residual stress measurements by neutron diffraction in multi-bead welding	Physica B 385-386 890-893 2006
PGRA	<b>Paradowska A;</b> Price J W H; Finlayson T R; Lienert U; Harland C; <i>et al</i>	Studies of residual stress distributions in steel weldments using high energy synchrotron radiation and neutron sources	17th National Congress of Australian Institute of Physics 642 December 2006 Brisbane
PGRA	<b>Robinson D J;</b> Stewart J R; Hicks T J	Magnetic fluctuations in paramagnetic Mn <sub>0.81</sub> Ni <sub>0.19</sub>	Physica B 385-386 381 2006
PGRA	<b>Robinson D J</b>	Atomic and magnetic correlations in transition metal alloys	PhD Thesis 2005
PGRA	<b>Tawfik D;</b> Mutton P J; Chiu W K	Residual stress behaviour due to localised, rapid post-weld heat treatment in flash butt welded rails	Conference on Railway Engineering CORE 341-350 2006 Melbourne, Australia
PGRA	<b>Tawfik D</b>	Residual stress behaviour in normal cooled and rapid post-weld heat treated rail flash-butt welds	PhD Thesis 2006
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## Murdoch University

PGRA	<b>Minakshi M;</b> Singh P; Carter M	Behavior of $\gamma$ -MnO <sub>2</sub> containing TiB <sub>2</sub> as a cathode in aqueous lithium hydroxide electrolyte battery	26th Electronics Division Meeting 30 October 2006 Tokyo Institute of Technology, Japan
PGRA	<b>Minakshi M;</b> Singh P; Issa T B; Thurgate S	Electrochemical behavior of anatase TiO <sub>2</sub> in aqueous lithium hydroxide electrolyte	J Appl Electrochem 36(5) 599-602 2006
PGRA	<b>Minakshi M;</b> Singh P; Issa T B; Thurgate S; Prince K	Electrochemical behavior of LiFePO <sub>4</sub> in aqueous lithium hydroxide electrolyte	Key Engineering Materials 320 271-274 2006
PGRA	<b>Minakshi M;</b> Singh P; Thurgate S; Prince K	Electrochemical behavior of phospho-olivine LiMnPO <sub>4</sub> in aqueous battery system	Electrochem Solid State Lett 9(10) A 471 2006
PGRA	<b>Minakshi M</b>	Electrochemistry of cathode materials in aqueous lithium hydroxide electrolyte	PhD Thesis 2006



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PGRA	<b>Minakshi M</b> ; Singh P; Issa T B; Thurgate S; Prince K; Mitchell D	Electrochemical lithium insertion into a manganese dioxide electrode in aqueous solutions	10th Asian Conference on Solid State Ionics, World Scientific Publishing Co Pte Ltd 392-399 2006 Singapore
PGRA	<b>Minakshi M</b> ; Singh P; Issa T B; Thurgate S; De Marco R	Lithium insertion into manganese dioxide electrode in MnO <sub>2</sub> /Zn aqueous battery – Part III. Electrochemical behavior of γ-MnO <sub>2</sub> in aqueous lithium hydroxide electrolyte	J Power Sources <b>153</b> 165-169 2006 Elsevier Netherlands 0378-7753
PGRA	<b>Minakshi M</b> ; Singh P; Issa T B; Thurgate S; Prince K; Mitchell D R G	Manganese dioxide surface under the electron beam irradiation of x-ray photoelectron spectroscopy	Radiation 2006 AINSE Conference 57 April 2006 Sydney
PGRA	<b>Minakshi M</b> ; Singh P; Thurgate S; Prince K	Redox behavior and surface characterization of LiFePO <sub>4</sub> in lithium hydroxide electrolyte	J Power Sources <b>158</b> (1) 646-649 2006 Elsevier Netherlands 0378-7753
PGRA	<b>Minakshi M</b> ; Singh P; Mitchell D R G; Thurgate S	TEM characterization of MnO <sub>2</sub> cathode in an aqueous lithium secondary battery	17th National Australian Institute of Physics Congress 433 December 2006 Brisbane

## The University of Newcastle

01/060	<b>Goodwin I</b>	Review of long-term coastal behaviour, climate change and coastline hazard definition for Belongil-Byron Bay	The University of Newcastle Research Associates (TUNRA) Report 45 2006
01/059; 01/188	<b>Goodwin I D</b> ; Stables M A; Olley J	Wave climate, sand budget and shoreline alignment evolution of the Iluka-Woody Bay sand barrier, Northern NSW, Australia since 3,000 years BC	Mar Geol <b>226</b> 127-144 2006
03/070P	Wu E; <b>Kisi E H</b>	Synthesis of Ti <sub>3</sub> AlC <sub>2</sub> from Ti/Al <sub>4</sub> C <sub>3</sub> /C studied by <i>in-situ</i> neutron diffraction	J Am Ceram Soc <b>89</b> 710-713 February 2006
04/102	<b>MacFarlane G R</b> ; Markich S J; Linz K; Gifford S; <i>et al</i>	The Akoya pearl oyster shell as an archival indicator of lead exposure	Environmental Pollution <b>143</b> 166-173 2006 0269-7491
05/109	<b>(MacFarlane G R)</b> ; Gifford S	Pearl aquaculture as a bioremediation tool	PhD Thesis 2006
PGRA	<b>McDonald J</b>	Climate controls on trace element variability in cave drip waters and calcite: a modern study from two karst systems in SE Australia	PhD Thesis 2005
PGRA	<b>McDonald J</b> ; Drysdale R; Hill D; Chisari R; Wong H	The influence of bedrock depth on the hydrochemistry of cave drip waters from a karst system in southeastern Australia	In: Archives of Climate Change in Karst. Karst Waters Institute Special Publication (Onac B <i>et al</i> eds) <b>10</b> 16-19

## The University of New England

05/020	<b>(Brown T)</b> ; Kendell S	Oxidation and oxidative dehydrogenation of isobutane over Keggin-type phosphomolybdates	B Sc Hons Thesis 2005
01/062P	<b>(Grave P)</b> ; Maccheroni M	East Asian commodity production and exchange, 1500-1700 AD	PhD Thesis 2006
PGRA	<b>James R</b>	Environmental boundaries in the central Sydney Basin during the mid-to-late Holocene	PhD Thesis 2006
PGRA	<b>Whitten A E</b> ; Spackman M A	Anisotropic displacement parameters for H atoms using an ONIOM approach	Acta Crystallogr <b>B62</b> 875-888 2006
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PGRA	<b>Whitten A E</b>	Electrical and optical properties of molecules in crystals	PhD Thesis 2005

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PGRA	<b>Whitten A E</b> ; Turner P; Klooster W T; Piltz R O; Spackman MA	Reassessment of large dipole moment enhancements in crystals: a detailed experimental and theoretical charge density analysis of 2-methyl-4-nitroaniline	J Phys Chem A <b>110</b> 8763-8776 2006

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03/178	<b>(Box G)</b> ; Hallal T	Seasonal variations in size-resolved properties of aerosols in the Sydney region	13th National Australian Meteorological and Oceanographic Society (AMOS) Conference 21-32 February 2006 Melbourne
05/012	<b>Böcking T</b> ; Kilian K A; Hanley T; Ilyas S; Gaus K; Gal M; Gooding J J	Formation of tetra(ethylene oxide) terminated Si-C linked monolayers and their derivatization with glycine: an example of a generic strategy for the immobilization of biomolecules on silicon	Langmuir <b>21</b> 10522-10529 2005
01/201	<b>Burford R P</b> ; Markotsis M G; Knott R B	Real-time SANS study of interpenetrating polymer network (IPN) formation	Physica B <b>385-386</b> 766 2006
99/075 00/075	Heng Zhang H; Hofmann M; Kennedy B J; <b>Campbell S J</b>	Magnetic structure of Nd <sub>3</sub> Co <sub>29</sub> Si <sub>4</sub> B <sub>10</sub>	J Appl Phys <b>97</b> 10M502-1 - 10M502-3 2005
99/075 00/075	Zhang H; Hofmann M; Kennedy B J; <b>Campbell S J</b>	A neutron scattering study of rare-earth intermetallic compound La <sub>3</sub> Co <sub>29</sub> Si <sub>4</sub> B <sub>10</sub>	J Appl Phys <b>98</b> 063906-1 - 063906-3 2005
05/025	Wang J L; <b>Campbell S J</b> ; Cadogan J M; Tegus O; Studer A J; Hofmann M	Magnetic properties of PrMn <sub>2-x</sub> Fe <sub>x</sub> Ge <sub>2</sub> - <sup>57</sup> Fe Mössbauer spectroscopy	J Phys: Condens Matt <b>18</b> 189-204 2006
05/187	Wang J L; Studer A J; <b>Campbell S J</b> ; <i>et al</i>	Magnetic properties of PrMn <sub>1.2</sub> Fe <sub>0.8</sub> Ge <sub>2</sub>	Physica B <b>385-386</b> 326 2006
05/029P	<b>(Conibeer G)</b> ; Jiang C W	Theoretical and experimental study of energy selective contacts for hot carrier solar cells and extension to tandem cells	PhD Thesis 2005
04/032P	<b>Conibeer G</b> ; Green M; Corkish R; Cho Y; <i>et al</i>	Silicon nanostructures for third generation photovoltaic solar cells	Thin Solid Films <b>511-512</b> 654-662 2006
05/029P	Fangsuwannarak T; Pink E; Huang Y; Cho Y H; <b>Conibeer G</b> ; <i>et al</i>	Conductivity of self-organized silicon quantum dots embedded in silicon dioxide	SPIE 2005 International Symposium on Microelectronics, MEMS and Nanotechnology 6037, 60370T December 2005 Brisbane
03/040	<b>Foster L J R</b> ; Knott R; Sanguanchaipaiwong V; Holden P J	Polyhydroxyalkanoate based natural- synthetic hybrid polymer films: a small angle neutron scattering study	Physica B <b>385-386</b> 770 2006
06/078P	Jones J L; Daniels J E; Studer A J; <b>Hoffman M</b>	Direct measurement of the domain switching contribution to the dynamic piezoelectric response in ferroelectric ceramics	App Phys Lett <b>89</b> Art. No. 092901 2006
03/153	<b>Hutchison W D</b> ; Goossens D J; Nishimura K; Mori K; Isikawa Y; Studer A J	Magnetic structure of TbNiAl <sub>4</sub>	J Mag Mag Mat <b>301</b> 352-358 2006
06/083	<b>Hutchison W D</b> ; Goossens D J; Saensunon B; Stewart G A; Avdeev M; Nishimura K	Magnetic order studies of RNiAl <sub>4</sub>	5th AINSE/ANBUG Symposium on Neutron Scattering, Lucas Heights 19 December 2006
05/083	<b>Jones J L</b> ; Hoffman M; Daniels J E; Studer A J	Ferroelastic contribution to the piezoelectric response in lead zirconate titanate by <i>in situ</i> stroboscopic neutron diffraction	Physica B: <b>385-386</b> 100-2 2006
05/083	Daniels J E; <b>Jones J L</b> ; Finlayson T R	Characterization of domain structures from diffraction profiles in tetragonal ferroelastic ceramics	J Physics D: Appl Phys <b>39</b> 5294-5299 2006

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98/069R	Robbie A; <b>Martin H A</b>	The history of the vegetation from the last glacial maximum at Mountain Lagoon, Blue Mountains, New South Wales	
05/129P	( <b>McLean R</b> ); Nanson R A	Stream channel adjustment in upland swamps, Barrington Tops, New South Wales, Australia	PhD Thesis 2006
PGRA	<b>Mearns F J</b>	A study of hybridisation of DNA immobilised on gold: strategies for DNA biosensing	PhD Thesis 2006
PGRA; 01/058	<b>Mearns F J</b> ; Wong E L S; Short K; Hibbert D B; <b>Gooding J J</b>	DNA biosensor concepts based on a change in the DNA persistence length upon hybridisation	Electroanalysis <b>18</b> 1971-1981 2006
03/083	<b>Mooney S</b> ; Maltby E	Two proxy records revealing the late Holocene fire history at a site on the central coast of New South Wales, Australia	Austral Ecology <b>31</b> 682-695 2006
PGRA	<b>Rodgers L</b>	The molecular characterisation of sol-gel biocatalysts	PhD Thesis 2006
PGRA	<b>Rodgers L E</b> ; Holden P J; Knott R B; Foster L J R; Bartlett J R	Structural evolution and stability of sol-gel biocatalysts	Physica B <b>385-386</b> 508 2006
PGRA	Hossain F; Murch G E; <b>Sheppard L</b> ; Nowotny J	The effect of defect disorder on the electronic structure of rutile TiO <sub>2-x</sub>	Defect Diffusion Forum <b>251-252</b> 1-12 2006
PGRA	<b>Sheppard L</b> ; Barnes M; Kumar S; Gerson AR; <i>et al</i>	Effect of Nb on the structure of TiO <sub>2</sub> thin films	Thin Solid Films <b>510</b> 119-124 2006
PGRA	Nowotny J; Bak T; Nowotny M K; <b>Sheppard L R</b>	Chemical diffusion in metal oxides. Example of TiO <sub>2</sub>	Ionics <b>12</b> 227-243 2006
PGRA	Nowotny J; Sorrell C C; Bak T; <b>Sheppard L R</b>	Defect disorder, transport and photo-electrochemical properties of titanium dioxide	In Materials for Energy Conversion Devices (Nowotny J, Sorrell C, Sugihara S eds) Woodhead Publishing Ltd 84-116 2005 Cambridge

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05/060P	( <b>Gahan L R</b> ); Bell C	Polymeric systems for the extraction of heavy metals	BSc Honours Thesis December 2004
05/060P	Bell C A; Smith S V; Whittaker M R; Whittaker A K; <b>Gahan L R</b> ; Monteiro M J	Surface functionalized polymer nanoparticles for selective sequestering of heavy metals	Advanced Materials <b>18</b> 582-586 2006
PGRA	( <b>Hall G</b> ); Monteiro M	Accessing mechanisms and kinetics of radical-radical termination reactions through living RAFT polymerization of methyl methacrylate	Book of School of Molecular and Microbial Sciences Research Postgraduate Symposium, University of Queensland 17 December 2006
PGRA	( <b>Hall G</b> ); Monteiro M, Barner L, Stenzel M, Barner-Kowollik C, Davis T P	End group effects and model description of the gel effect in polymers prepared by reversible addition-fragmentation chain transfer (RAFT) radical polymerization	RACI Queensland Polymer Group Symposium 63 December 2005 Brisbane
PGRA	<b>Johnston-Hall G</b> ; Monteiro M; Stenzel M; Davis T P; Barner-Kowollik C	Accessing chain length dependent termination rate coefficients of methyl methacrylate (MMA) via the RAFT process	Macromolecular Chemistry and Physics <b>206</b> 2047-2056 August 2005
PGRA	<b>Johnston-Hall G</b> ; Monteiro M J	Design strategies for tailored molecular weight distributions using difunctional RAFT agents	ACS Symposium Series on Controlled/Living Free Radical Polymerization <b>944</b> 421-437 2006

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
04/111	(McGowan H); Marx S K	A Holocene record of trans-Tasman dust transport: quantifying dust emissions from eastern Australian using geochemical proxies	PhD Thesis 2006
04/111	Marx S K; McGowan H A; Kamber B S	Dust as a proxy for climate change: a record of Australian dust deposition in New Zealand during the Holocene	Geological Society of New Zealand 50th Anniversary Conference 52 November 2005 Kaikoura, New Zealand
04/111	Marx S K; 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 <sup>210</sup> Pb as a monitor	Geophysical Research Abstracts, European Geosciences Union, General Assembly 7 00541 April 2005
05/179	Hodge E; Zhao J X; Feng Y X; Wu J; Fink D; Hua Q	Coupled U-series and radiocarbon dating of a Chinese stalagmite from 15 to 33 ka: testing calibration applicability and dead carbon correction variability	Geochimica et Cosmochimica Acta 70 A255 2006
04/178	Hodge E J; Yu K F; Zhao J-X; Hua Q; Barbetti M	Holocene <sup>14</sup> C marine reservoir ages in the South China Sea based on U-series dated corals	19th International <sup>14</sup> C Conference 313 April 2006 Oxford, UK
05/179	Fink D; Hodge; E J; Hua Q; Zhao J-X; Feng Y-X; Wu J; Jacobsen G	Preliminary results of uranium-series and radiocarbon in a South China speleothem from 15- 33 ka: testing calibration applicability and dead carbon correction variability	19th International <sup>14</sup> C Conference 102 April 2006 Oxford, UK

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03/084	Doering C; Akber R; Heijnis H	Vertical distributions of <sup>210</sup> Pb excess, <sup>7</sup> Be and <sup>137</sup> Cs in selected grass covered soils in southeast Queensland, Australia	J Environmental Radioactivity 87 135-147 2006
PGRA	Goh R; Motta N, Bell J M, Waclawik E R	Effects of substrate curvature on the adsorption of poly(3-hexylthiophene) on single-walled carbon nanotubes	Appl Phys Lett 88 053101 2006
PGRA	Goh R; Waclawik E; Motta N; Bell J	Microscopic and spectroscopic study of self-ordering in poly(3-hexylthiophene)/carbon nanotubes nanocomposites	J Nanoscience and Nanotechnology 6(12) 3929-3933 December 2006
06/172	Tesfamichael T; Bell J	Characterization of co-evaporated metal oxide thin film	Asian Pacific Conference on Surface Science and Engineering, 79 December, 2006, Lam Woo International Conference Centre Hong Kong Baptist University, Hong Kong
03/123; 99/084R	Webb G E; Jell J S	Growth rate of Holocene reefal microbialites – implications for use as environmental proxies, Heron Reef southern Great Barrier Reef	Australian Earth Science Convention Melbourne 117 2006
03/125	(Webb G); Price G J	Pleistocene palaeoecology of the eastern Darling Downs	PhD Thesis 2006
04/170P	Wilson G J; Matijasevich A S; Mitchell D R G; Schulz J C; Will G D	Modification of TiO <sub>2</sub> for enhanced surface properties: finite ostwald ripening by a microwave hydrothermal process	Langmuir 22(5) 2016-2027 2006
05/180	Zhou H; Martens W; Tesfamichael T; Will G, Hu A; Bell J M	Microstructures and photocatalytic properties of nitrogen-implanted titania nanostructured films	SPIE International Symposium on Microelectronics, MEMS and Nanotechnology 6037OF December 2005 Brisbane
05/180	Hu A; Zhou H; Bell J M; Evans P	Nanostripes in superconducting REBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-d</sub> superconductors: robust vortex pinning sites	SPIE 60371H Dec 2005 Brisbane

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
<b>RMIT University</b>			
05/021	Lenné T; <b>Bryant G</b> ; Garvey C J; Keiderling U; Koster K L	Location of sugars in multilamellar membranes at low hydration	Physica B <b>385-386</b> 862-864 2006
05/021; 06/024	<b>Bryant G</b> ; Lenné T; Koster K L; Garvey, C J	Sugar distribution between and around membranes during dehydration	Cryobiology <b>53</b> 404 2006
PGRA; 05/021; 06/024	<b>Kent B</b> ; Lenné T; <b>Bryant G</b> ; Garvey C J;	Determination of microphase sugar concentrations in model biological membrane systems by SANS contrast variation	5th AINSE/ANBUG Neutron Scattering Symposium December 60 2006 Lucas Heights
PGRA; 05/021; 06/024	Kent B; Lenné T; <b>Bryant G</b> ; Garvey C J; Cookson D	Desiccation tolerance in biological tissue – effects of solutes on membrane phase transitions	ASRP/Australian Synchrotron Users' Workshop 31-32 2006
PGRA; 05/021; 06/024	Lenné T; Kent B; Garvey C J; <b>Bryant G</b>	Sugar distribution around membranes during dehydration and freezing	30th Annual Conference of the Australian Society for Biophysics 63 2006
06/234	Sriram S; Bhaskaran M; <b>Holland A S</b>	Surface morphology and stress analysis of piezoelectric strontium-doped lead zirconate titanate thin films	SPIE Int Soc Opt Eng 6415 64150J 2006
06/233	Bhaskaran M; Sriram S; <b>Holland A S</b> ; du Plessis J	Nickel silicide and titanium silicide formation: a comparison	SPIE Int Soc Opt Eng 6414 64141B 2006
05/080P; 06/086P	Alves A; <b>Johnston P N</b> ; Reichart M; Jamieson D N; Siegele R	Ion beam lithography using single ions	Nucl Instr Meth Physics Research <b>B249</b> 730-733 2006
01/079P	<b>Johnston P N</b> ; Franich R D; Bubb I F; El Bouanani M; Cohen D D; Dytlewski N; Siegele R	Monte-Carlo simulation of heavy ion elastic recoil detection analysis data to include the effects of large angle plural scattering	11th Nuclear Techniques of Analysis 197 November 1999 Lucas Heights
01/079P	Franich R D; <b>Johnston P N</b> ; Bubb I F; Franich R	The paths of plurally scattered ions in heavy ion elastic recoil detection analysis	17th International Conference on the Use of Accelerators in Research and Industry, American Institute of Physics Conference AIP Press (J L Duggan, I L Morgan eds) 385-388 November 2002 Denton, Texas
05110P; 06115P	Murugaraj P; <b>Mainwaring D E</b> ; Jakobov T; Mora-Huertas N E; Khelil N A; Siegele R	Electron transport in semiconducting nanoparticle and nanocluster carbon – polymer composites	Solid State Communications <b>137</b> 422 2006
05/155P	<b>Sood D K</b> ; Sekhar P K; Bhansali S	Ion implantation based selective synthesis of silica nanowires on silicon wafers	Appl Phys Lett <b>88</b> Art. No. 143110 December 2005
04/180P	<b>Ward L</b> ; Hinton B; Biddle G; Gerrard D	Characterisation and evaluation of the corrosion behaviour of modified HVOF sprayed WC based coatings deposited on AISI 1020 mild steel substrates	Proc Corrosion and Prevention Conference 1-8 Hobart Nov 2006
06/184	Gideon B; <b>Ward L P</b> ; Biddle G	Metallurgical characterisation of duplex stainless steel and their susceptibility to intergranular corrosion	European Corrosion Federation 190-191 2006 Maastricht, Netherlands

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03/172	Mistry M; Dutta N K; Tran N D; Roy Choudhury N; Knott R	SANS investigation of hybrid membranes for electrolyte application	5th AANSS, AINSE/ANBUG Neutron Scattering Symposium 16 December 2006 Lucas Heights, Australia
02/164	Dutta N K; Tran N D; Roy Choudhury N; Hill A J; Elvin C; Knott R	SANS investigation of the self-organization behaviour of synthetic resilin gels: a perfect rubber-like protein	5th AANSS, AINSE/ANBUG Neutron Scattering Symposium 43 December 2006 Lucas Heights, Australia
03/172	<b>Roy Choudhury N</b>	Recent advances in hybrids for barrier application	International Composite Conference, ACUN 313 July 2006
03/172	Mistry M; Dutta N K; Roy Choudhury N; Holdcroft S	Organic-inorganic hybrid for high temperature proton exchange membrane application	Fuel Cells Science & Technology P-1A.2 Sept 2006 Turin, Italy
04/197	Tran N D; <b>Dutta N K</b> ; Choudhury N R; Hill A J; Elvin C; Kim M; Knott R	Novel biomimetic elastomer resilin: a biopolymer with unusual viscoelastic characteristics	28th Australasian Polymer Symposium & Australasian Society for Biomaterials 16th Annual Conference G3/5 February 2006 Rotorua, New Zealand
05/193	<b>Dutta N K</b>	The role of interface in meso-structured elastomers	International Composite Conference, ACUN -5 346 July 2006
03/036	Oaten M; Roy Choudhury N; <b>Dutta N</b> ; Knott R	Multifunctional hybrids for thin film application	28th Australasian Polymer Symposium & Australasian Society for Biomaterials 16th Annual Conference D4/2 February 2006 Rotorua, New Zealand
04/047	<b>Dutta N</b> ; Thompson S; Choudhury N R; Knott R	Environment-induced self-assembly in phase separated block copolymer systems	Physica B <b>385-386</b> 773 2006
06/072P	( <b>Griesser H</b> ); Thirunavukkarasu P M	Nanomechanics of plasma	MSc Thesis 2006
05/133	<b>Pendleton P</b> ; Chen L	Small angle neutron scattering study of activated carbon cloth and ammonium persulfate modified activated carbon cloth: effect of oxygen content	Physica B <b>385-386</b> 644-646 2006

## Southern Cross University

PGRA	<b>Habberfield-Short J</b>	Interactions and relationships between human behaviour and environmental process	PhD Thesis 2006
05/087	Erskine W; Chalmers A; <b>Keene A</b> ; Bush R	Role of stock-proof fencing in assisting regeneration of <i>Casuarina cunninghamiana</i> in the Hunter Valley, NSW	9th International Riversymposium: Managing rivers with climate change and expanding populations 42 September 2006 Brisbane
PGRA; 04/119	<b>Parr J F</b> ; Sullivan L A	Carbon sequestration in plantstones	Managing the Carbon Cycle: Forum (C Jones ed) 23-28 2005 Armidale
PGRA	<b>Parr J F</b>	Effect of fire on phytolith coloration	Geoarchaeology 21(2) 171-185 2006
04/119	<b>Parr J F</b> ; Sullivan L A	The potential of soil to securely sequester carbon: expanding the horizon	Managing the Carbon Cycle: Forum (C Jones ed) 17-22 2005 Armidale

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Project Number	Chief Investigator Coauthors	Title of Publication	Reference
00/002	<b>Barker B</b>	The temporality of aboriginal cultural material on a deflated dune system at Abbot Point, Central Queensland Coast	Australian Archaeology <b>62</b> 44-47 June 2006 Brisbane

## Swinburne University of Technology

05/045	<b>Doyle E D</b> ; Wong Y C; Ripley M I	Residual stress evaluation in martensitic stainless steel as a function of gas quenching pressure using thermal neutrons	Physics B, Condensed Matter <b>385-386</b> 897 - 899 2006 Sydney
05/048	<b>Durandet Y</b> ; Deam R; Bendeich P; Ripley M; Brandt M; Liu Q; Baburamani P	Residual stresses in Al7075 alloy plate laser clad with Al-12Si alloy powder	2nd Pacific International Conference on Applications of Lasers and Optics (PICALO) LIA Pub No 401 2 110-115 April 2006 Melbourne, Australia ISBN 0-912035-84-6

## University of Sydney

02/165	Hua, Q., <b>Barbetti M</b> ; D'Arrigo R; Smith A M	Regional atmospheric circulation: Insights from bomb radiocarbon in Indonesian tree rings	19th International Radiocarbon Conference 342 April 2006 Oxford, UK
01/003; 03/165	Hua Q; <b>Barbetti M</b> ; Zoppi U; Fink D	Radiocarbon during the Younger Dryas from Tasmanian Huon pine	Goldschmidt Conference A269 August 2006
01/003; 03/165	Hua Q; <b>Barbetti M</b> ; Zoppi U; Fink D	Variations in atmospheric <sup>14</sup> C during the Younger Dryas from Huon pine tree rings in Tasmania	19th International Radiocarbon Conference, 81-82 April 2006 Oxford, UK
PGRA	<b>Bevitt J</b>	Functionalised nanoporous molecular materials	PhD Thesis 2006
98/097P; 04/002; 04/012	( <b>Bourke S</b> ); Donnelly P	Chocolate-on-white ware: the definition, production, chronology and culture of a south Levantine ceramic of the middle to Late Bronze Age (c1575-1400 BCE)	PhD Thesis 2006
PGRA	Kumagai H; <b>Chapman K W</b> ; Keper C J; Kurmoo M	Binary metal(II)-pyromellitate coordination polymers, M <sub>2</sub> (pm) (M=Co, Fe, Mn): synthesis, structures and magnetic properties	Polyhedron <b>22</b> 1921-1927 2003
PGRA	<b>Chapman K W</b> ; Chupas P J; Keper C J	Compositional dependence of negative thermal expansion in the prussian blue analogues MIIPtIV(CN) <sub>6</sub> (M = Mn-Zn, Cd)	J Am Chem Soc <b>128</b> 7009-7014 2006
PGRA	<b>Chapman K W</b>	Cyanide-bridge molecular framework materials	PhD Thesis 2005
PGRA	Pretsch T; <b>Chapman K W</b> ; Halder G J; Keper C J	Dehydration of the nanoporous coordination framework ErIII[CoIII(CN) <sub>6</sub> ] <sub>4</sub> ·4(H <sub>2</sub> O): single crystal to single crystal transformation and negative thermal expansion in ErIII[CoIII(CN) <sub>6</sub> ]	Chem Commun 1857-1859 2006
PGRA	<b>Chapman K W</b> ; Chupas P J; Keper C J	Direct observation of a transverse vibrational mechanism for negative thermal expansion in Zn(CN) <sub>2</sub> : an atomic pair distribution function analysis	J Am Chem Soc <b>127</b> 15630-15636 2005
PGRA	Goodwin A L; <b>Chapman K W</b> ; Keper C J	Guest-dependent negative thermal expansion in nanoporous prussian blue analogues MIIPtIV(CN) <sub>6</sub> ·x(H <sub>2</sub> O) (0 ≤ x ≤ 2; M = Zn, Cd)	J Am Chem Soc <b>127</b> 17980-17981 2005
PGRA	<b>Chapman K W</b> ; Hagen M; Keper C J; Manuel P	Low energy phonons in the NTE compounds Zn(CN) <sub>2</sub> and ZnPt(CN) <sub>6</sub>	Physica B <b>385-386</b> 60-62 2006
PGRA	Kurmoo M; Kumagai H; <b>Chapman K W</b> ; Keper C J	Reversible antiferromagnetic-ferromagnetic transformation upon dehydration-hydration in the porous metal-organic framework, [Co <sub>3</sub> (OH) <sub>2</sub> (C <sub>4</sub> O <sub>4</sub> ) <sub>2</sub> ] <sub>2</sub> ·3H <sub>2</sub> O	Chem Commun 3012-3014 2006



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PGRA	<b>Chapman K W</b> ; Southon P D; Weeks C L, Kepert C J	Reversible hydrogen gas uptake in nanoporous prussian blue analogues	Chem Commun 3322-3324 2006
PGRA	<b>Chapman K W</b> ; Chupas P J; Kepert C J	Selective recovery of dynamic guest structure in a nanoporous prussian blue through <i>in-situ</i> x-ray diffraction: a differential pair distribution function analysis	J Am Chem Soc <b>127</b> 11232-11233 2005
03/139; 04/048	Slack M; Fullagar R; Border A; Diamond J; <b>Field J</b>	Late Holocene occupation at Bunnengalla 1, Musselbrook Creek, northwest Queensland Australia	Archaeology <b>60</b> 54-57 2005
03/139; 04/048	Slack M; Fullagar R; <b>Field J</b> ; Border A	New Pleistocene dates for backed artefact technology in Australia	Archaeology in Oceania <b>39</b> 131-137 2004
03/139	( <b>Field J</b> ); Slack M	Aboriginal connections to landscape in north-west Queensland	PhD Thesis 2006
01/190S	( <b>Gale S</b> ); Cook D E	Human impact on the Australian environment over the last two millennia	PhD Thesis 2006
02/043	<b>Gale S J</b> ; Cook D E	The <sup>210</sup> Pb chronology of deposition in Tocal Homestead Lagoon, eastern Australia	Quaternary Newsletter <b>110</b> 40-43 2006
98/153R	Williams N J; Harle K J; <b>Gale S J</b> ; Hejnis H	The vegetation history of the last glacial-interglacial cycle in eastern New South Wales, Australia	J Quaternary Science <b>21</b> 735-750 2006
05/064	( <b>Gilbert R G</b> ); Thickett S	Emulsion polymerisation involving electrosteric stabilisers: using gamma radiation to probe radical kinetics	18th AINSE Radiation Chemistry Conference 34 February 2006 Sydney
05/064	Thickett S C; <b>Gilbert R G</b>	Rate controlling events for radical exit in electrosterically stabilized emulsion polymerisation systems	Macromolecules <b>39</b> 2081-2091 2006
05/064	Thickett S; Bruyn H de; Hosseini E; <b>Gilbert R G</b>	Steric stabilizers in emulsion polymerizations: free-radical processes	SML Conference on Free Radical Polymerization L35 September 2006 Il Ciocco, Italy
05/064	Thickett S C; <b>Gilbert R G</b>	Mechanism of radical entry in electrosterically stabilized emulsion polymerization systems	Macromolecules <b>39</b> 6495-6504 2006
02/049P	( <b>Green R</b> ); Smadar Gabrieli R	Silent witnesses: The evidence of domestic wares of the 13th-19th centuries in Paphos, Cyprus for local economy and social organisation	PhD Thesis 2006
04/072	( <b>Harding M</b> ); Campbell K S	Cellular studies of the antitumour agent molybdocene dichloride	BSc Honours Thesis 2004
04/072	Campbell K S; Dillon C T; <b>Harding M M</b> ; Smith S V	Radiotracer studies of the antitumor metallocene molybdocene dichloride with biomolecules	Polyhedron <b>26</b> 456-459 2006
06/094	<b>Kench P L</b> ; Quinlivan M O J; Gregoire M C; Berghofer P; Katsifis A; Meikle S R	Performance characteristics of a dual detector small animal SPECT-CT camera	36th Annual Scientific Meeting (ASM) of the Australian and New Zealand Society of Nuclear Medicine (ANZSNM) 229 April 2006
03/158	Zhou Q; <b>Kennedy B J</b> ; Elcombe M M	Neutron powder diffraction studies of Ca <sub>2-x</sub> Sr <sub>x</sub> CoWO <sub>6</sub> double perovskites	Physica B <b>385-386</b> 190 2006
05/091	( <b>Kennedy B J</b> ); Cheah M C L	Structural studies of A-site substitutions in double perovskites	BSc (Hons) Thesis 2006
03/158	Cheah M C L; <b>Kennedy B J</b>	Synthesis and structures of chromium double perovskites A <sub>2</sub> CrTaO <sub>6</sub> (A = Sr, Ca)	Physica B <b>385-386</b> 84 2006
05/091	Cheah M C L; Saines P J; <b>Kennedy B J</b>	The Jahn Teller distortion and cation ordering in the perovskite Sr <sub>2</sub> MnSbO <sub>6</sub>	J Solid State Chem <b>179</b> 1775-1781 2006
06/107	( <b>Ling C</b> ); Aivazian K	Oxygen non-stoichiometry and cation-doping in thermoelectric misfit-layered cobaltates	BSc Hons Thesis 2006



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03/091	<b>Penny D</b> ; Pottier C; Fletcher R J; Barbetti M F; Fink D; Hua Q	Vegetation and land-use at Angkor, Cambodia: a dated pollen sequence from the Bakong temple moat	Antiquity <b>80</b> (309) 599-614 2006
05/135	<b>(Potts D)</b> ; Petrie C A; Chaverdi A A; Seyedin M	From Anshan to Dilmun and Magan: the spatial and temporal distribution of Kaftari and Kaftari-related ceramic vessels	Iran <b>43</b> 49-86 2005
05/135	<b>Potts D T</b>	The Mamasani Archaeological Project Stage 1: a report on the first two seasons of the ICAR-University of Sydney Expedition to the Mamasani District, Fars Province, Iran.	ICAR and the University of Sydney (Potts D T; Roustaei K eds) 2006 Tehran and Sydney
PGRA	<b>Saines P J</b> ; Elcombe M M; Kennedy B J	A structural study of lanthanide containing double perovskites	30th Australian Institute of Physics Condensed Matter and Materials meeting F8 2006 Wagga
PGRA	<b>Saines P J</b> ; Elcombe M M; Kennedy B J	A structural study of lanthanide containing oxygen deficient double perovskites	Australian Research Network for Advanced Materials 40 2006
PGRA	<b>Saines P J</b> ; Kennedy B J	Electronic transitions and oxygen vacancies in $Ba_2LnSn_xSb_{1-x}O_{6-d}$	1st Asian and Oceania forum for Synchrotron Research B5 2006
PGRA	<b>Saines P J</b> ; Kennedy B J	Electronic transitions and oxygen vacancies in $Ba_2LnSn_xSb_{1-x}O_{6-d}$	Kyoto Conference on Solid State Chemistry IIa, 8 2006
PGRA	<b>Saines P J</b> ; Kennedy B J	Valence transitions and oxygen vacancy ordering in $Ba_2LnSn_xSb_{1-x}O_{6-d}$	7th Conference of the Asian Crystallography Association 3 2006
PGRA	<b>Saines P J</b> ; Elcombe M M; Kennedy B J	Structural studies of oxygen deficient lanthanide containing double perovskites	Physica B <b>385-386</b> 187 2006
PGRA	<b>Sharma N</b> ; Ling C D	A new 3-D incommensurate structure in the Bi-Re-O system	Joint Conference of the Asian Crystallographic Association / Crystallographic Society of Japan P21-090 2006 Tsukuba
PGRA	<b>Sharma N</b> ; Wrighter G E; Chen P Y; Ling C D	Ruthenium(IV), iridium(IV) and manganese(IV) incorporation into three-layer aurivillius phases	Kyoto Conference on Solid State Chemistry PS-II-a-14 2006 Kyoto
PGRA	<b>Sharma N</b> ; Wrighter G E; Chen P Y; Ling C D	Ruthenium(IV), iridium(IV) and manganese(IV) incorporation into three-layer aurivillius phases	1st Asia and Oceania Forum on Synchrotron Radiation and Research B4 2006 Tsukuba
05/150	Kachenko A; <b>Singh B</b> ; Bhatia N; Siegele R	Localisation and quantification of nickel in leaf and stem tissues of <i>Hybanthus floribundus</i> subsp <i>floribundus</i> using micro-PIXE	V International Conference on Serpentine Ecology 33-34 May 2006 Siena, Italy
06/257	<b>(Trehwella J)</b> ; Jacques D A	Investigation of the structural basis for the inhibition of histidine kinase A by Sda in <i>Bacillus subtilis</i>	BSc Hons Thesis 2006
01/138P	O'Connor F; Cheung W H; <b>Valix M</b>	Reduction roasting of limonite ores: effect of dehydroxylation	International J Mineral Processing <b>80(2-4)</b> 88-99 2006
PGRA	Starke-Peterkovic T; Turner N; Vitha F; <b>Waller M P</b> ; Hibbs D E; Clarke R J	Cholesterol effect on the dipole potential of lipid membranes	Biophysical J <b>90</b> 4060-4070 2006
PGRA	<b>Waller M P</b>	Experimental and theoretical studies of the electron distribution in weak molecular interactions	PhD Thesis 2006
PGRA	<b>Waller M P</b> ; Robertazzi A; Hibbs D E; Williams P A; Platts J A	Use of DFT for prediction of p-stacking interactions: applications to benzenes, pyridines, and DNA bases	J Comp Chem <b>27(4)</b> 491-504 2006
05/215	<b>(Warr G)</b> ; Kleydish J	Near-surface structure of cationic surfactants	BSc (Hons) Thesis 2005
05/216	<b>(Warr G)</b> ; Bobillier S	Surfactant self-assembly in some ionic liquids	BLibStud (Hons) 2005
05/174P	<b>White P J</b> ; Jacobsen H; Kewibu V; Doelman T	Obsidian traffic in the southeast Papuan Islands	J Island and Coastal Archaeology <b>1</b> 101-108 2006

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<b>University of Tasmania</b>			
04/057; 05/063	Cromer L; <b>Gibson J A E</b> ; Swadling K M	The palaeoecology and biogeography of the Antarctic freshwater fauna	2nd SCAR Open Science Conference 0419/422 July 2006 Hobart
05/063	<b>Gibson J A E</b>	Limnology of epiglacial lakes of the Framnes Mountains, Antarctica: insights into a widespread but poorly studied lake type	2nd SCAR Open Science Conference 0249/422 July 2006 Hobart
04/057, 05/063	<b>Gibson J A E</b> ; Cromer L; Agius J; McInnes S J; Marley N	Tardigrade eggs and exuvia in lake sediments: Insights into Holocene dynamics and origins of the Antarctic fauna	10th International Tardigrade Conference 60 June 2006 Catania, Italy
PGRA	<b>Jordan T B</b> ; Seen A J	Effect of airflow setting on the organic composition of woodheater emissions	Environ Sci Technol 39 3601-3610 2005
PGRA	<b>Jordan T B</b> ; Seen A J; Jacobsen G E	Levoglucosan as an atmospheric tracer for woodsmoke	Atmos Environ 40 5316-5321 2006
PGRA	<b>Jordan T B</b> ; Seen A J; Jacobsen G E; Gras J L	Radiocarbon determination of woodsmoke contribution to air particulate matter in Launceston, Tasmania	Atmos Environ 40 2575-2582 2006
02/088	( <b>Michael K</b> ); Pedro J; van Ommen T; Curran M; Morgan V; Smith A; <i>et al</i>	Evidence for climate modulation of the 10-Be solar activity proxy	J Geophysical Research 111 D21105 2006
PGRA	<b>Parkinson R L</b> ; McMinn A; Gibson J A	Reconstruction of late Holocene penguin populations in the Vestfold Hills, East Antarctica	10th International Paleolimnology Symposium 140 June 2006 Duluth USA
PGRA	<b>Saunders K M</b> ; McMinn A	Assessing human impacts on southeast Australian coastal lagoons: application of a diatom-nutrient transfer function	10th International Palaeolimnology Symposium 163 June 2006 Duluth USA

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05/226	Lewis K; Boonyang U; Evans L; Sirinpaisam S; <b>Ben-Nissan B</b>	A comparative study of Thai and Australian crocodile bone for use as a potential biomaterial	Key Engineering Materials 309-311 15-18 (1-2) 2006
PGRA	<b>Callaghan M D</b> ; Humphries S R; Law M; Bendeich M; Yeung W Y	A study of high temperature fatigue properties of 2.25Cr-1Mo steel using non-contact extensometry	International Conference on the Strength of Materials (ICSMA14) 351 2006 Xian, China
PGRA	Humphries S R; <b>Callaghan M D</b> ; Latella B A; Snowden K U; Yeung W Y	Advanced high temperature testing of ferritic pressure vessel steel	Materials Forum - Advanced Materials Processing 30 16-22 2006 Australia
04/033	<b>Cortie M B</b> ; McBean K E; Elcombe M M	Fracture mechanics of mollusc shells	Physica B 385-386 545 2006
PGRA	<b>Kealley C</b> ; Ben-Nissan B; van Riessen A; Elcombe M	Development of carbon nanotube reinforced hydroxyapatite bioceramics	Key Engineering Materials 309-311 597-600 2006
PGRA	<b>Kealley C</b> ; Elcombe M; van Riessen A; Ben-Nissan B	Development of carbon nanotube reinforced hydroxyapatite bioceramics	Physica B 385-386 496 2006
PGRA	<b>Kealley C</b> ; Elcombe M; van Riessen A; Ben-Nissan B	Neutron characterisation of hydroxyapatite bioceramics	Key Engineering Materials 309-311 61-64 2006 1013-9826
PGRA	<b>Kealley C</b>	Synthesis and characterisation of carbon nanotube reinforced hydroxyapatite ceramics for biomedical applications	PhD Thesis 2006

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
PGRA	<b>Peterson V K</b> ; Ray A S; Hunter B A	A comparative study of Rietveld phase analysis of cement clinker using neutron, laboratory x-ray, and synchrotron data	Powder Diffraction <b>21</b> 12-18 2006
05/151	Fink D; <b>Skilbeck C G</b> ; Gagan M K; Rolph T C	A 25,000 year inter-annual record of the Peru-Chile current and implications for ENSO variation during deglaciation	19th International Radiocarbon Conference 174 April 2006 Oxford
05/151	Fink D; <b>Skilbeck C G</b> ; Gagan M K	A 25,000 yr interannual record of the Peru-Chile current from the Peru continental margin and the implications for ENSO variation during deglaciation and high-stand	18th Australian Geological Congress. In Denham D (ed) Australian Earth Sciences Convention Abstracts 117 July 2006 0-646-46246-6
05/151	<b>Skilbeck C G</b> ; Fink D	Radiocarbon dating and sedimentation rates for Holocene-Late Pleistocene sediments, eastern equatorial Pacific and Peru continental margin	ODP Scientific Results Volume <a href="http://www-odp.tamu.edu/publications/201_SR/108/108.htm">http://www-odp.tamu.edu/publications/201_SR/108/108.htm</a> 201 42005 2006
04139P; 05/151	<b>Skilbeck C G</b> ; 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: Reconstructing Past Climates for Future Prediction: Integrating High-Resolution Palaeo Data for Meaningful Prediction in the Australian Region (Turney C <i>et al</i> eds) Australian Academy of Sciences 56 2005
04/140P	Rolph T R; r Shröder-Adams C; <b>Skilbeck C G</b> ; Boyd R Wadsworth J A	The evolution of a holocene barrier estuary revealed through multivariate analysis of sediment properties; Tuggerah Lake, NSW, Australia	AAPG International Conference 106508 November 2006 Perth
06/161	Allen K M ; ( <b>Skilbeck C G</b> )	Determining compositional changes in estuarine detritus in Botany Bay since European colonization	BSc (Hons) Thesis 2006
03/113P; 04/154	<b>Thomas P</b> ; Brown L D; Ray A; Prince K	A SIMS study of the transition elemental distribution between bands in banded Australian sedimentary opal from the Lightning Ridge locality	N Jb Miner Abh <b>182</b> (2) 193-199 2006
02/169; 04/139P; 05/151	<b>Skilbeck C G</b> ; Fink D	Radiocarbon dating and sedimentation rates for Holocene-Late Pleistocene sediments, eastern equatorial Pacific and Peru continental margin	In: (Jørgensen B B; D'Hondt S L; Miller D J eds), Proc ODP Sci Results 201 <a href="http://www-odp.tamu.edu/publications/201_SR/108/108.htm">http://www-odp.tamu.edu/publications/201_SR/108/108.htm</a> . pp. 1-15

## The University of Western Australia

04/015; 04/016	( <b>Bradshaw S D</b> ); Stead-Richardson E	Reproduction and stress in endangered marsupials: noninvasive faecal steroid monitoring	PhD Thesis 2005
04/016	( <b>Bradshaw S D</b> ); Oates J	The reproductive endocrinology of the Honey possum, <i>Tarsipes rostratus</i> and the Pygmy possum <i>Cercartetus concinnus</i>	PhD Thesis 2005
04/016	Ladyman M T; <b>Bradshaw S D</b> ; Bradshaw F J	Physiological and hormonal control of thermal depression in the Tiger snake, <i>Notechis scutatus</i>	J Comp Physiol B <b>176</b> 547-557 2006
03/057	<b>Henry J</b> ; Livingstone J	Aging effects of Schottky barrier position sensitive detectors	IEEE Sensors Journal <b>6</b> 1557-1563 December 2006 New York
04/185	( <b>Kendrick G</b> ); Goldberg N	Age estimates and description of rhodoliths from Esperance Bay, Western Australia	J Marine Biological Association of the United Kingdom <b>86</b> 1291-1296 2006
PGRA	<b>Webster N</b> ; Raston C L; Lincoln F J	A structural investigation of highly conductive bismuth oxide-based solid electrolytes using x-ray, neutron and electron diffraction	Joint AXAA (WA) and WASM Conference F2 September 2006 Margaret River
PGRA	<b>Webster A S</b> ; Raston C L; Lincoln F J; Ling C D; Elcombe M M	A structural characterization of Bi <sub>2</sub> O <sub>3</sub> -based solid electrolytes using neutron diffraction	5th AINSE/ANBUG Neutron Scattering Symposium December 2006 Lucas Heights

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/217	(Woodward R); Herris J	The use of magnetometry techniques to characterise the size distribution of magnetic nanoparticles	BSc Hons Thesis 2005

## University of Wollongong

PGRA	Atkinson C A; Jolley D F; Smith S V	Selenium dynamics and mechanisms of uptake in the marine organism <i>Anadara trapezia</i>	Royal Australian Chemical Institute Research and Development Conference 2005 8 2005 Mornington Peninsula
PGRA	Atkinson C A; Jolley D F; Smith S V	The use of <sup>75</sup> Se to determine selenium assimilation pathways the marine organism <i>Anadara trapezia</i>	Royal Australian Chemical Institute Research and Development Conference 64 2006 Wollongong
06/045	(Deng C); Eftimovska J	Phencyclidine induced apoptosis in the brain: implications for schizophrenia	Honours Thesis 2006
04/077P	Hearty P; O'Leary M; Donald A; Lachlan T	The enigma of 3400 years BP coastal oolites in tropical northwest Western Australia ... why then, why there?	Sediment Geol <b>186</b> 171–185 November 2005
PGRA	Homes T P; Keller PA; Katsifis A; Mattner F	Synthesis and evaluation of N,N-dialkyl-2-phenylindol-3-ylglyoxylamides for the study of peripheral benzodiazepine binding sites	4th France – Australia Symposium on Nuclear Medicine 2006
PGRA	Homes T P; Mattner F; Keller P A; Katsifis A	Synthesis and <i>in vitro</i> binding of N,N-dialkyl-2-phenylindol-3-ylglyoxylamides for the peripheral benzodiazepine binding sites	Bioorganic and Medicinal Chemistry <b>14</b> 3938-3946 June 2006
05/082	Levy J A; Stauber J, Jolley D F	Uptake and toxicity of copper in marine microalgae: do biotic factors influence algal sensitivity to copper?	Australian Society of Ecotoxicology (ASE) Annual Conference 52 September 2005
06/088P; PGRA	Atkinson C A; Jolley D F; Smith S V	Production and use of Se-75 in monitoring selenium uptake in the marine organism <i>Anadara trapezia</i>	Radiation 2006 Conference 29 April Sydney
05/082	(Jolley D); Apte S C; Andersen L E; Andrewartha J R; <i>et al</i>	Contaminant pathways in Port Curtis	Final Report 143 2006
06/088P; PGRA	Atkinson C A; Jolley D F; Smith S V	The use of <sup>75</sup> Se to determine selenium assimilation pathways the marine organism <i>Anadara trapezia</i>	Interact 226 2006 Perth
05/084P	(Jones B); Armstrong N	Holocene sedimentation and heavy metal contamination in the industrialised Tamar River estuary, Tasmania	B Marine Science Honours Thesis 2006
04/098	Rosenfeld A B; Cutajar D; Lerch M; Takacs G; Yudelev M; Zaider M	Miniature detectors for <i>in vivo</i> dosimetry	Rad Prot Dosim <b>120</b> 48-55 2006
04/098	Pisacane V L; Ziegler J F; Nelson M E; Caylor M; Rosenfeld A B; Lerch M <i>et al</i>	MIDN: A spacecraft microdosimetry mission	Rad Prot Dosim <b>120</b> , N1-4 421-426 2006
05/102	Li A H; Liu H K; Ionescu M; Wang X L; Dou S X	Improvement of critical current density and thermally-assisted individual vortex de-pinning in pulse-laser-deposited YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> thin films on SrTiO <sub>3</sub> (100) substrate with surface modification by Ag nanodots	J Appl Phys <b>97</b> 10B107 2005
05/102	Li A H; Ionescu M; Liu H K; Silver T; Wang X L; Dou S X	Microstructure and enhancement of critical current density in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> thin films grown by pulsed laser deposition on various single crystal substrates modified by Ag nanodots	IEEE Transactions on Applied Superconductivity <b>15</b> (2) 3046 2005

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/102P	(Liu H); Li A H	A study of the fabrication and characterisation of high temperature superconductor YBCO thin films	PhD Thesis 2006
05/102P	(Liu H); Zhao Y	Fabrication and characterization of PLD MgB <sub>2</sub> thin films	PhD Thesis 2006
05/102P	(Liu H); Zhao Y; Dou S X; Ionescu M; Munroe P	Significant improvement of activation energy in MgB <sub>2</sub> /Mg <sub>2</sub> Si multilayer films	Applied Physics Letter <b>88</b> 12502-1 2006
03/085	Cann J H; Murray-Wallace C V; Riggs N J; Belperio A P	Successive foraminiferal faunas and inferred palaeoenvironments associated with the postglacial (Holocene) marine transgression, Gulf St Vincent, South Australia	The Holocene <b>16</b> 224-234 2006
PGRA	Nghiem D L; Schäfer A	Critical risk points of nanofiltration and reverse osmosis processes in water recycling applications	Desalination <b>187</b> 303-312 2006 Wollongong, Australia
06/137P	St John A; Soldenhoff K; Kolev S; Nghiem L D	Extraction of uranium and thorium using novel polymer inclusion membranes	14th Annual Royal Australian Chemical Institute Research and Development Topics Conference 52 December 2006 Wollongong,
PGRA	Nghiem L D; Schäfer A I	Fouling mechanisms of submerged ultrafiltration membranes in greywater recycling	Desalination <b>179</b> 215-223 2005
06/137P	Nghiem L D; Schäfer A I; Elimelech M	Pharmaceutical retention mechanisms by nanofiltration membranes	Environmental Science & Technology <b>39</b> (19) 7698-7705 October 2005
PGRA	Nghiem L D; Schäfer A I; Elimelech M	Role of electrostatic interactions in the retention of pharmaceutically active contaminants by a loose nanofiltration membrane	J Membrane Science <b>286</b> (1-2) 52-59 2006
05/129P	Pan A V; Pysarenko S V; Roussel M; Dou S X; Ionescu M	The role of multilayering in the significant improvement of structural and superconducting properties in high-T <sub>c</sub> films	30th Annual Australian and New Zealand Institutes of Physics Condensed Matter and Materials Meeting ISBN 1-920791-09-4
05/129P	Roussel M; Pan A V; Pysarenko S; Dou S X	Microstructure and surface roughness influence on magnetic flux penetration behavior in mono and multilayer YBCO thin films	30th Annual Australian and New Zealand Institutes of Physics Condensed Matter and Materials Meeting TP3 July 2006 Wagga
05/129P	Pysarenko S; Pan A V; Dou S X	Influence of thickness and deposition rate on superconducting properties of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> films	30th Annual Australian and New Zealand Institutes of Physics Condensed Matter and Materials Meeting TP10 July 2006 Wagga
05/129P	Pan A V; Pysarenko S; Dou S X	Drastic improvement of surface structure and current-carrying ability in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> films by introducing multilayered structure	Appl Phys Lett <b>88</b> 232506 2006
05/129P	Pysarenko S; Pan A V; Dou S X	Influence of multilayering and doping on thickness dependence of superconducting properties in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> films	Australian Institute of Physics Conference WC0558 December 2006 Brisbane
05/129P	(Pan A); Roussel M	Magneto-optical imaging of various superconductors	PhD Thesis 2006
05/142P	Clarke L J; Robinson S A; Hua Q; Fink D	Watching moss grow: radiocarbon reveals growth rate of Antarctic mosses	19th International Radiocarbon Conference 254 April 2006 Oxford
05/142P	Clarke L J; Robinson S A; Hua Q; Fink D	Watching moss grow: radiocarbon reveals growth rate of Antarctic mosses	SCAR XXIX Scientific Committee on Antarctic Research 511 July 2006 Hobart
PGRA	Sloss C R; Murray-Wallace C V; Jones B G	Aminostratigraphy of two Holocene wave-dominated barrier estuaries in southeastern Australia	J Coastal Research <b>22</b> 113-136 2006
PGRA	Sloss C R; Jones B G; McClellan C E	Mid- to late Holocene sedimentation in a coastal lagoon: Burrill Lake, NSW, Australia	J Sedimentary Geology <b>187</b> 229-249 2006
PGRA	Schulte R; Bashkirov V; Shchemelinin S; Breskin A; Chechik R; Wroe A <i>et al</i>	Mapping the sensitive volume of an ion-counting nanodosimeter	J Instrum <b>1</b> 04004 April 2006

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
PGRA	Rosenfeld A; <b>Wroe A</b> ; Carolan M; Cornelius I	Method of Monte Carlo verification in hadron therapy with non-tissue equivalent detectors	Rad Prot Dos <b>116</b> (1-4) 487-490 September 2006
PGRA	<b>Wroe A J</b> ; Cornelius I M; Rosenfeld A B; Pisacane V L; Ziegler J F; Nelson M E <i>et al</i>	Microdosimetry simulations of solar protons within a spacecraft	IEEE Trans Nucl Sci <b>52</b> (6) 2591 - 2596 2005
PGRA	<b>Wroe A J</b> ; Schulte R; Bashkirov V; Rosenfeld A B; Keeney B; Spraldin P <i>et al</i>	Nanodosimetric cluster size distributions of therapeutic proton beams	IEEE Trans Nucl Sci <b>53</b> (2) 532 - 538 2006
PGRA	Reinhard M I; Cornelius I; Prokopovich D A; <b>Wroe A</b> ; Rosenfeld A B; <i>et al</i>	Response of a SOI microdosimeter to a <sup>238</sup> Pu-Be neutron source	IEEE Nuclear Science Symposium Conference Record <b>1</b> (23-29) 68 2005
PGRA	<b>Wroe A J</b> ; Cornelius I M; Rosenfeld A B	Role of inelastic reactions in absorbed dose distribution from proton therapeutic beam in different medium	Med Phys <b>32</b> 37-41 2005
PGRA	<b>Wroe A J</b> ; Rosenfeld A B; Cornelius I M; Prokopovich D; Reinhard M; Schulte R; Bashkirov V	Silicon microdosimetry in heterogeneous materials: simulation and experiment	IEEE Trans Nucl Sci <b>53</b> 3738-3744 2006

## 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
ANU	The Australian National University	OTA	University of Otago
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
CQU	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

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