

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.

The Australian Institute of Nuclear Science and Engineering

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Executive Secretary

Dr Dennis Mather

AINSE Council 2008

Member Organisations and Representation

2 Council Meetings were held in 2008

Organisation	Membership Commenced	Councillor	Meetings Attended
ANSTO, Acting CEO	1958	Dr Ron Cameron	1
ANSTO, Chief of Research		Dr George Collins	1
ANSTO, Bragg Institute		Dr Robert Robinson	1
ANSTO, Institute for Environmental Research		Professor John Dodson	1
ANSTO, Institute for Materials Engineering		Professor Lyndon Edwards	2
ANSTO, Radiopharmaceutical Research Institute		Dr Ron Weiner	2
The University of Queensland	1958	Professor Anton Middelberg	1
The University of New England	1958	Dr Peter Flood	0
The University of Sydney	1958	Prof Brendan Kennedy	2
The University of New South Wales	1958	Professor Rob Burford	2
The Australian National University	1958	Professor John White	1
The University of Melbourne	1958	Professor Jim Camakaris	2
University of Tasmania	1958	Professor Allan Canty	2
The University of Adelaide	1958	Professor John Carver	2
The University of Western Australia	1958	Dr Jasmine Henry	1
Monash University	1961	Dr Rob Norris	2
The University of Newcastle	1965	Professor Bruce King	2
Flinders University of SA	1966	Dr Michael Brunger	1
La Trobe University	1966	Dr John Webb	1
Macquarie University	1966	Professor James Piper	0
James Cook University	1970	Professor Richard Keene	1
University of Wollongong	1975	Professor Allan Chivas, President	2
Griffith University	1975	A/Professor Greg Hope	1
Murdoch University	1985-1997 rejoined 1998	Professor James Reynoldson	0
University of Technology, Sydney	1988	Professor Greg Skilbeck	2
RMIT University	1988	Professor Peter Johnston	2
Curtin University of Technology	1989	Professor Craig Buckley	0
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	Dr Godwin Ayoko	2
University of Western Sydney	1993	Professor Andrew Cheetham	2
Victoria University	1994	Professor Michelle Towstoless	2
Southern Cross University	1994	A/Professor Bill Boyd	2
The University of Auckland	1995	Professor Jim Metson	1
Charles Sturt University	1995	Dr Paul Prenzler	0

Charles Darwin University	1995	A/Professor David Parry	1
Edith Cowan University	1996	D Steven Hinckley	2
University of Canberra	1996	Professor Bill Maher	0
The University of Southern Queensland	1996	Professor Graham Baker	2
Deakin University	1997	Professor David Stokes	0
University of Ballarat	1997	Professor Peter Gell	2
Australian Catholic University	2001	Dr Brian Bicknell	2
University of Canterbury	2005	A/Professor Greg Russell	1
GNS Science	2005	Dr Frank Bruhn	2
University of Otago	2007	Professor Gary Wilson	2
AINSE		Dr Dennis Mather (non-voting)	2

Alternate Representatives and other attendees

University of Canberra	1996	Professor Chris Lennard	2
University of Canterbury	2005	Professor James Shulmeister	1
Macquarie University	1966	Dr Paul Hesse	1
Griffith University	1975	A/Professor Debra Bernhardt	1
James Cook University	1970	A/Professor Michael Ridd	1
The University of Western Australia	1958	Professor Brian Stone	1
Curtin University of Technology	1989	E/Professor Brian O'Connor	1

Executive Committee

Four Executive Committee Meetings were held in 2008

Councillor	Office/Position	Organisation	Meetings Attended
Professor Allan Chivas	President	The University of Wollongong	4
A/Professor Bruce King	Vice – President	University of Newcastle	4
Professor Peter Johnston		University of Melbourne	3
Dr Ian Smith		ANSTO	2
Dr George Collins		ANSTO	2
Dr Robert Robinson		ANSTO	4
Professor Lyndon Edwards		ANSTO	2
Professor John Dodson		ANSTO	2
Dr Dennis Mather		AINSE	4

Alternate Representative

Dr Ron Weiner		ANSTO	1
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AINSE Staff

Executive Secretary Dr Dennis Mather

Secretariat

Miss Rhiannon Still
Ms Gillian Blackburn
Mrs Sandy O'Connor (part-time)
Mrs Nerissa Phillips (part-time)
Mr John Studdert (part - time)

Specialist Committees for 2008

The Executive 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
Archaeology and Geosciences Committee		
Professor Patrick De Deckker, Convenor	The Australian National University	1
Dr David Garnett	Charles Darwin University	0
A/Professor James Schulmeister	University of Canterbury	2
Dr Sean Ulm	University of Queensland	2
Dr Quan Hua	ANSTO	2
Dr David Fink	ANSTO	1
Biomedical Science and Biotechnology Committee		
Dr Michael Hay, Convenor	University of Auckland	2
Dr Michael Davies	The University of Sydney	2
A/Professor Lawrence Gahan	University of Queensland	2
A/Professor Michael Kassiou	The University of Sydney	2
Dr Ron Weiner	ANSTO	2
Dr Andrew Katsifis	ANSTO	2
Environmental Sciences Committee		
Professor Greg Skilbeck, Convenor (C)	University of Technology Sydney	2
Dr Eric Bestland	Flinders University	2
Professor David Bowman	University of Tasmania	1
Dr Scott Nicol	Geoscience Australia	2
Dr Andrew Smith	ANSTO	2
Dr Suzanne Hollins	ANSTO	2
Materials - Structures and Dynamics Committee		
Dr Chris Ling, Convenor	University of Sydney/ANSTO	1
Professor Valerie Linton	University of Adelaide	2
Professor Anton Middelberg (C)	University of Queensland	2
Professor Jill Trehwella	University of Sydney/ANSTO	1
Professor John White (C)	Australian National University	1
Dr Michael James	ANSTO	2
Materials - Materials – Properties and Engineering Committee		
Dr Michael Brunger, Convenor	Flinders University	1
Dr Andrejs Atrens	University of Queensland	2
Dr Rachael Caruso	University of Melbourne	2
Dr David Cohen	ANSTO	1
Professor Lyndon Edwards	ANSTO	1
Dr Kathryn Prince	ANSTO	1

Conference Planning Committees

AANSS 2008: 7th AINSE/ANBUG Neutron Science Symposium

8 - 10 December 2008

Dr Daniel Riley	University of Melbourne
A/Prof Trevor Finlayson	University of Melbourne
Mr Mark Styles	University of Melbourne
Dr Chris Ling	University of Sydney
Dr Dennis Mather	AINSE
Ms Rhiannon Still	AINSE

ANSTO – 2nd AINSE Neutron School

21 - 26 July, AINSE/ANSTO, Lucas Heights

Dr Herma Buttner	Bragg, ANSTO
Dr Bill Hamilton	Bragg, ANSTO
Prof. Gordon Kearley	Bragg, ANSTO
Dr Andrew Studer	Bragg, ANSTO
Dr Mohana Yethiraj	Bragg, ANSTO
Ms Lauren Mackaway	Bragg, ANSTO
Dr John Hanna	Institute of Materials Engineering, ANSTO
Dr Victor Luca	Institute of Materials Engineering, ANSTO
Dr Annemieke Mulders	Curtin University
Dr Dennis Mather	AINSE
Ms Rhiannon Still	AINSE

4th Australian Aerosol Workshop

16th - 18th July 2008

Mr Michael Prior	Institute for Environmental Research, ANSTO
Mr Ed Stelcer	Institute for Environmental Research, ANSTO
Ms Rhiannon Still	AINSE

4th AINSE Quaternary Dating Workshop

26 - 27 March 2008

Dr David Fink	Institute for Environmental Research, ANSTO
Dr Henk Hejnis	Institute for Environmental Research, ANSTO
Ms Rhiannon Still	AINSE

Australian Rainfall Records, beyond the instrumental record

23rd January, AINSE, Lucas Heights

Dr Henk Hejnis	Institute for Environmental Research, ANSTO
Dr Ed Hodge	Institute for Environmental Research, ANSTO
Ms Rhiannon Still	AINSE

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**Escott
Aston**
CHARTERED ACCOUNTANT

**Australian Institute of Nuclear Science and Engineering Inc.
Independent Audit Report to the Members
For the Year 31 December 2008**

Report on the Financial Report

We have audited the accompanying financial report of the Institute which comprises the balance sheet as at 31 December 2008 and the income statement, statement of recognised income and expenditure and cash flow statement for the year ended on that date, a summary of significant accounting policies and other explanatory notes and the statement by members of the Executive Committee.

Executive Committee's Responsibility for the Financial Report

The committee of the Institute is responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Associations Incorporation Act, NSW 1984. This responsibility includes establishing and maintaining internal controls relevant to the preparation and fair presentation of the financial report that is free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We conducted our audit in accordance with Australian Auditing Standards. These Auditing Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the company's preparation and fair presentation of the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the committee, as well as evaluating the overall presentation of the financial report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

In conducting our audit, we have complied with the independence requirements of Australian professional ethical pronouncements.

Phillip R. Escott F.C.A.

David G. Aston C.A.

Liability limited by a scheme approved
under Professional Standards Legislation

**Australian Institute of Nuclear Science and Engineering Inc.
Independent Audit Report to the Members
For the Year 31 December 2008**

Auditor's Opinion

In our opinion, the financial report of The Australian Institute of Nuclear Science and Engineering Inc. is in accordance with the Associations Incorporation Act, NSW 1984, including:

- (a) giving a true and fair view of the Association's financial position as at 31 December 2008 and of their performance for the period ended on that date; and
- (b) complying with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Associations Incorporation Act, NSW 1984.

Escott Aston
Chartered Accountants
291 Belmore Road
Riverwood NSW 2210



David G Aston
Partner

Dated this 6th day of March 2009

Australian Institute of Nuclear Science and Engineering

ABN 42 975 449 183

Executive Committee's Report

The Executive Committee of the Australian Institute of Nuclear Science and Engineering Incorporated submits the financial accounts of the Institute for the financial year ended 31 December 2008.

Committee Members

Professor Allan Chivas, President
Professor Bruce King, Vice President
Professor Peter Johnston
Dr Ian Smith
Dr John Dodson
Dr Robert Robinson
Dr Dennis Mather, Scientific Secretary

Principal Activities

The Principal activities of the Institute during the financial year were

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

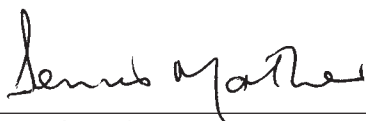
Significant Changes

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

Operating Result

The surplus for the year amounted to \$318,751.

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



Dr Dennis Mather
Public Officer & Executive Secretary
Dated this fifth day of March 2009

PMB 1 Menai NSW 2234

Australian Institute of Nuclear Science and Engineering

ABN 42 975 449 183

Statement by Members of the Executive Committee

Australian Institute of Nuclear Science and Engineering

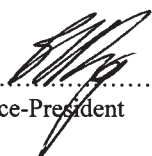
Statement by members of the Executive Committee


For the year ended 31 December 2008

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

1. Presents a true and fair view of the financial position of the Australian Institute of Nuclear Science and Engineering Incorporated as at 31 December 2008 and its performance for that year ended on that date in accordance with Australian Accounting Standards, mandatory professional reporting requirements and other authoritative pronouncements of the Australian Accounting Standards Board.
2. At the date of this statement, there are reasonable grounds to believe that the Institute will be able to pay its debts as and when they fall due.

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


.....
Vice-President


.....
Executive Secretary

Dated this fifth day of March 2009

Balance Sheet

as at 31 December 2008

	Notes	31-Dec-08 \$	31-Dec-07 \$
Current Assets			
Cash	2	208,158	101,945
Trade and other receivables	3	64,736	125,527
Investments	4	3,238,339	2,401,752
Other	5	11,971	14,402
Total current assets		<u>3,523,204</u>	<u>2,643,626</u>
Non-Current Assets			
Plant and equipment	6	40,690	17,667
Total Non-Current Assets		<u>40,690</u>	<u>17,667</u>
Total Assets		3,563,894	2,661,293
Current Liabilities			
Trade and other payables	7	1,161,933	555,408
Total Current Liabilities		<u>1,161,933</u>	<u>555,408</u>
Non-Current Liabilities			
Provisions for employee entitlements	8	3,526	26,201
Total Non-Current Liabilities		<u>3,526</u>	<u>26,201</u>
Total Liabilities		1,165,459	581,609
NET ASSETS		<u><u>2,398,435</u></u>	<u><u>2,079,684</u></u>
Equity			
Awards reserve	14	2,025,143	3,060,681
Long term projects reserve	14	500,000	500,000
Accumulated results of operations		(126,708)	(1,480,997)
TOTAL EQUITY		<u><u>2,398,435</u></u>	<u><u>2,079,684</u></u>

The accompanying notes form an integral part of these accounts.

Income and Expenditure Statement

as at 31 December 2008

	Notes	31-Dec-08 \$	31-Dec-07 \$
COST OF SERVICES			
Operating Revenue			
Payments from members		2,778,172	2,664,807
External grants	11	392,250	-
Interest received		245,340	177,825
Profit on sale of assets		2,727	-
Other	13	54,827	151,754
Total Operating Revenue		<u>3,473,316</u>	<u>2,994,386</u>
Operating Expenses			
Wages & salaries		282,031	233,196
Superannuation		39,838	26,695
AINSE Research Awards			
Students	9	442,871	324,487
Research Fellowship	9	439,262	360,441
Research Awards	9	1,179,514	1,387,034
Conference Subsidies		204,941	185,887
External Grants	11	400,000	-
Other Expenses	12	166,108	236,707
Total Operating Expenses		<u>3,154,565</u>	<u>2,754,447</u>
Surplus/(Deficit) for the year		318,751	239,939
Accumulated funds brought forward		(1,480,997)	(1,225,255)
Accumulated Surplus (Deficit)		<u>(1,162,246)</u>	<u>(985,316)</u>
Add (Less): transfer to Reserves			
Grants Reserve	14	1,035,538	(495,681)
Accumulated results of operations at end of financial year		<u>(126,708)</u>	<u>(1,480,997)</u>

The accompanying notes form an integral part of these accounts.

Statement of Cash Flows

as at 31 December 2008

		31-Dec-08 \$	31-Dec-07 \$
CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES	Notes	Inflows/(Outflows)	Inflows/(Outflows)
Receipts from members		2,893,789	2,798,516
Receipts from grants		392,250	-
Interest received		247,771	177,034
		<u>3,533,810</u>	<u>2,975,550</u>
Grant expenditures		(2,666,588)	(2,257,849)
Payments to suppliers and employees		104,455	(701,443)
		<u>(2,562,133)</u>	<u>(2,959,292)</u>
Net cash flows provided by (used in) operating activities	16	<u>971,677</u>	<u>16,258</u>
CASH FLOWS PROVIDED BY (USED IN) INVESTING ACTIVITIES			
Proceeds from sale of property, plant and equipment		14,773	-
Purchase of property, plant and equipment		(43,650)	-
Net cash flows provided by (used in) investing activities		<u>(28,877)</u>	<u>-</u>
Net increase (decrease) in cash held		942,800	16,258
Cash at beginning of reporting period		2,503,697	2,487,439
Cash at end of reporting period	2/4	<u>3,446,497</u>	<u>2,503,697</u>

Statement of Recognised Income and Expense

for the year ended 31 December 2008

	Retained Earnings	Long Term Projects Reserve	Awards Reserve	Total
	\$	\$	\$	\$
Balance at 1 January 2007	(1,225,255)	500,000	2,565,000	1,839,745
Profit / (Loss) attributable to entity	239,939	-	-	239,939
Transfers to and from reserves				-
Awards Reserve	(495,681)	-	495,681	-
Balance at 31 December 2007	<u>(1,480,997)</u>	<u>500,000</u>	<u>3,060,681</u>	<u>2,079,684</u>
Profit / (Loss) attributable to entity	318,751	-	-	318,751
Transfers to and from reserves	-	-	-	-
Awards Reserve	1,035,538	-	(1,035,538)	-
Balance at 31 December 2008	<u>(126,708)</u>	<u>500,000</u>	<u>2,025,143</u>	<u>2,398,435</u>

The accompanying notes form an integral part of these accounts.

Notes to the Financial Statements

for the year ended 31 December 2008

1. STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

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

Basis of Preparation

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

Australian Accounting Standards set out accounting policies that the AASB has concluded will result in a financial report containing relevant and reliable information about transactions, events and conditions to which they apply. Compliance with Australian Accounting Standards ensures that the financial statements and notes also comply with International Financial Reporting Standards. Material accounting policies adopted in the preparation of this financial report are presented below. They have been consistently applied unless otherwise stated.

The financial report has been prepared on an accruals basis and is based on historical costs, modified where applicable, by the measurement at fair value of selected non-current assets, financial assets and financial liabilities.

a) Income Tax

The Institute is exempt from income tax.

b) Property, Plant and Equipment

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

Plant and Equipment

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

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

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

Depreciation

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

Class of Fixed Asset	Depreciation Rate
Plant and Equipment	15 - 35%
Motor Vehicles	25%

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

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

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.

Notes to the Financial Statements

for the year ended 31 December 2008

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 Institute 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.

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.

k) Authorisation date

The financial report was authorised for issue on 6 March 2009.

Notes to the Financial Statements

for the year ended 31 December 2008

	31-Dec-08 \$	31-Dec-07 \$
2. CASH		
Operating Account	207,658	101,445
Petty Cash	500	500
	<u>208,158</u>	<u>101,945</u>
3. TRADE AND OTHER RECEIVABLES		
Current		
Trade Debtors	38,044	26,184
Other Receivables	26,692	99,343
	<u>64,736</u>	<u>125,527</u>

There are no balances within trade and other receivables which contain assets that are not impaired and past due. It is expected these balances will be received when due. Impaired assets are provided for in full where applicable.

4. INVESTMENTS

Cash Deposit Account	3,238,339	2,401,752
	<u>3,238,339</u>	<u>2,401,752</u>

5. OTHER CURRENT ASSETS

Current		
Interest Accrued	11,971	14,402
	<u>11,971</u>	<u>14,402</u>

6. PLANT AND EQUIPMENT

Plant & Equipment		
At Cost	48,430	75,081
Accumulated Depreciation	(38,438)	(75,081)
Total Plant and Equipment	<u>9,992</u>	<u>-</u>
Motor Vehicles		
At Cost	33,489	28,910
Accumulated Depreciation	(2,791)	(11,243)
Total Motor Vehicle	<u>30,698</u>	<u>17,667</u>

Movements in Carrying Amounts	Plant & Equipment	Motor Vehicles	Total
Balance at 1 January 2007	2,825	27,304	30,129
Depreciation Expense	(2,825)	(9,637)	(12,462)
Carrying Amount at End of Year	<u>-</u>	<u>17,667</u>	<u>17,667</u>
Balance at 1 January 2008	-	17,667	17,667
Additions	10,161	33,489	43,650
Disposals	(36,812)	(28,910)	(65,722)
Depreciation Expense	36,643	8,452	45,095
Carrying Amount at End of Year	<u>9,992</u>	<u>30,698</u>	<u>40,690</u>

Notes to the Financial Statements

for the year ended 31 December 2008

	31-Dec-08	31-Dec-07
	\$	\$
7. TRADE AND OTHER PAYABLES		
Unsecured Liabilities		
Trade Payables	-	35,112
Sundry Payables and Accrued Expenses	1,035,626	454,590
John Ferris Memorial Fund	-	5,362
Trust Funds	16,332	-
Short-Term Employee Benefits	110,655	60,344
	<u>1,162,613</u>	<u>555,408</u>
8. PROVISION FOR EMPLOYEE ENTITLEMENTS		
Long-Term Employee Benefits	3,526	26,201
	<u>3,526</u>	<u>26,201</u>
9. AINSE AWARDS		
AINSE AWARDS - Post Graduate Awards		
Lucas Heights Costs	173,746	99,181
University Travel and Equipment	24,769	22,629
Stipends	229,250	184,014
	<u>427,765</u>	<u>305,824</u>
AINSE AWARDS - Winter School	15,106	18,663
	<u>15,106</u>	<u>18,663</u>
AINSE AWARDS - Research Fellowship	439,262	360,441
	<u>439,262</u>	<u>360,441</u>
AINSE AWARDS - Awards		
Lucas Heights Costs	1,109,037	1,307,619
Minor Equipment and Materials	8,840	1,700
Travel and Accommodation	57,317	77,684
Other Costs	4,320	31
	<u>1,179,514</u>	<u>1,387,034</u>
10. SEGMENT REPORTING		

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

Notes to the Financial Statements

for the year ended 31 December 2008

	31-Dec-08	31-Dec-07
	\$	\$
11. EXTERNAL GRANTS		
ARC ISIS Grant		
Grant Revenue	-	-
Member Contributions	392,250	-
	<u>392,250</u>	<u>-</u>
Grant Expenditure		
External Payments	400,000	-
Total Expenditure	<u>400,000</u>	<u>-</u>
Reconciliation		
Total External Grants Revenue	392,250	-
less transferred to Grants Received In Advance (Balance Sheet)	-	-
External Grant Revenue (Income & Expenditure Statement)	<u>392,250</u>	<u>-</u>
Represented by:		
Total Grant Expenditure (Income & Expenditure Statement)	400,000	-
Amount to be met by AINSE	<u>(7,750)</u>	<u>-</u>
External Grants Expenditure	<u>392,250</u>	<u>-</u>
12. OTHER EXPENDITURE		
Conference Management	<u>2,405</u>	<u>67,909</u>
Publications and Promotions	<u>44,377</u>	<u>10,383</u>
Meetings and Committees	<u>49,787</u>	<u>81,702</u>
AINSE Secretariat		
Audit Fees	9,730	7,590
Bank Charges	1,323	2,071
Depreciation	8,582	12,462
Office Supplies	1,347	1,161
Postage and Telephone	2,016	2,197
Insurance	9,540	8,082
Entertaining	444	47
Office Equipment and Repairs	20	4,532
Administration and Staff Training	595	904
Travel and Accommodation	16,504	15,315
Vehicle Expenses	8,378	9,555
Staff Recruitment	-	8,864
FBT Expense & Payments	3,207	2,567
Credit Card Expense Clearing Account	3,578	-
Legal expenses	20,800	-
Staff expenses	(17,649)	-
Miscellaneous	1,124	1,366
Total AINSE Secretariat	<u>69,539</u>	<u>76,713</u>
Total Other Expenditure	<u>166,108</u>	<u>236,707</u>

Notes to the Financial Statements

for the year ended 31 December 2008

	31-Dec-08	31-Dec-07
	\$	\$
13. OTHER INCOME		
Sponsorships:		
ICNS	-	81,389
Conference Registrations	47,597	65,115
Other	6,550	5,250
	<u>54,147</u>	<u>151,754</u>
14. MOVEMENT IN RESERVES		
Awards Reserve		
Opening Balance at 1 January	3,060,681	2,565,000
Transfer from Accumulated Funds	(1,035,538)	495,681
Balance as at 31 December	<u>2,025,143</u>	<u>3,060,681</u>
The Awards Reserve was established to provide for the value of unexpended grants and scholarships at the end of each year.		
Long Term Projects Reserve		
Opening Balance at 1 January	500,000	500,000
Transfer from Accumulated Funds	-	-
Balance as at 31 December	<u>500,000</u>	<u>500,000</u>
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.		
15. AUDITORS REMUNERATION		
Remuneration of the auditor of the entity for:		
Auditing or reviewing the financial report	9,730	7,590
Acquittal of Grants	-	-
Other Services	-	-
	<u>9,730</u>	<u>7,590</u>
16. RECONCILIATION OF OPERATING RESULT WITH CASH FLOWS FROM ORDINARY ACTIVITIES		
Profit from Ordinary Activities	<u>318,751</u>	<u>239,939</u>
Changes in Assets & Liabilities		
(Increase)/Decrease in Trade Debtors	60,791	(18,045)
Increase/(Decrease) Trade Payables	606,525	(224,329)
(Increase)/Decrease Accrued Interest	2,431	(791)
Increase/(Decrease) Employee Entitlements	(22,675)	7,022
	<u>647,072</u>	<u>(236,143)</u>
Non-Cash Items		
Depreciation	8,581	12,462
Gain on sale of asset	(2,727)	-
	<u>5,854</u>	<u>12,462</u>
Net cash provided by (used in) operating activities	<u><u>971,677</u></u>	<u><u>16,258</u></u>

Notes to the Financial Statements

for the year ended 31 December 2008

Cash at the end of the financial year, as shown in the cash flow statement, is reconciled to the items in the balance sheet as follows

	31-Dec-08 \$	31-Dec-07 \$
Cash	208,158	101,945
Investments	<u>3,238,339</u>	<u>2,401,752</u>
	3,446,497	2,503,697

17. FINANCIAL INSTRUMENTS

Financial Risk Management

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

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

The Institute does not have any derivative instruments at 31 December 2008.

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

for the year ended 31 December 2008

17. FINANCIAL INSTRUMENTS (cont'd)

	Weighted Average		Floating		Fixed Interest Rate Maturing							
	Effective Interest Rate		Interest Rate		Within 1 year		1 to 5 years		Non-interest bearing		Total	
	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2007	
Financial Assets												
Cash and cash equivalents	6.35%	6.01%	3,445,997	2,503,197	-	-	-	-	-	500	3,446,497	2,503,697
Receivables			-	-	-	-	-	-	-	64,736	64,736	125,527
Total Financial Assets			<u>3,445,997</u>	<u>2,503,197</u>	-	-	-	-	-	<u>126,027</u>	<u>3,511,233</u>	<u>2,629,224</u>
Financial Liabilities												
Trade and other payables			1,162,613	555,408	-	-	-	-	-	-	1,162,613	555,408
Total Financial Liabilities			<u>1,162,613</u>	<u>555,408</u>	-	-	-	-	-	-	<u>1,162,613</u>	<u>555,408</u>

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:

	2008		2007	
	Carrying amount	Net Fair Value	Carrying amount	Net Fair Value
Financial assets				
Cash	3,446,497	3,446,497	2,503,697	2,503,697
Receivables	64,736	64,736	125,527	125,527
Investments	-	-	-	-
	<u>3,511,233</u>	<u>3,511,233</u>	<u>2,629,224</u>	<u>2,629,224</u>
Financial liabilities				
Trade and other payables	1,161,933	1,161,933	555,408	555,408
	<u>1,161,933</u>	<u>1,161,933</u>	<u>555,408</u>	<u>555,408</u>

Fair values are materially in line with carrying values.

Notes to the Financial Statements

for the year ended 31 December 2008

18. COMMITMENTS

		31-Dec-08 \$	31-Dec-07 \$
ISIS		7,750	-
High throughput neutron spectrometer		30,000	-
Awards, Fellowships and Studentships Awarded in 2008 for payment in 2009	Note A	2,025,143	3,060,681
		<u>2,062,893</u>	<u>3,060,681</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 2008 are used for grants and studentships during 2009. AINSE commits \$500,000 pa to studentships

19. 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

20. KEY MANAGEMENT PERSONNEL COMPENSATION

	Short-term Benefit \$	Post Employment Benefit \$	Total \$
2008 total compensation	<u>123,583</u>	<u>15,011</u>	<u>138,594</u>
2007 total compensation	<u>116,004</u>	<u>5,216</u>	<u>121,220</u>

21. EVENTS AFTER THE BALANCE SHEET DATE

The NSW Department of Fair Trading in late 2007 advised that The Australian Institute of Nuclear Science and Engineering Inc (AINSE Inc) no longer complied with the guidelines for an association incorporated in NSW and that the AINSE Inc should transfer its incorporation to a Company limited by guarantee.

Following advice from AINSE Inc's solicitors during 2008, a new Company limited by guarantee was registered with ASIC under the name AINSE Ltd, on 12 September 2008. The company commenced trading on 1 January 2009.

It is proposed that AINSE Inc cease trading on 31 March 2009, and that the net assets will be transferred to the new entity as at that date.

AINSE Inc has also arranged for the set up of a trust known as The AINSE Trust Fund, whose objects are to support scholarships and fellowships in areas of research which are of interest to AINSE Ltd. Eligible donations to the AINSE Trust Fund will be tax deductible to the donor.

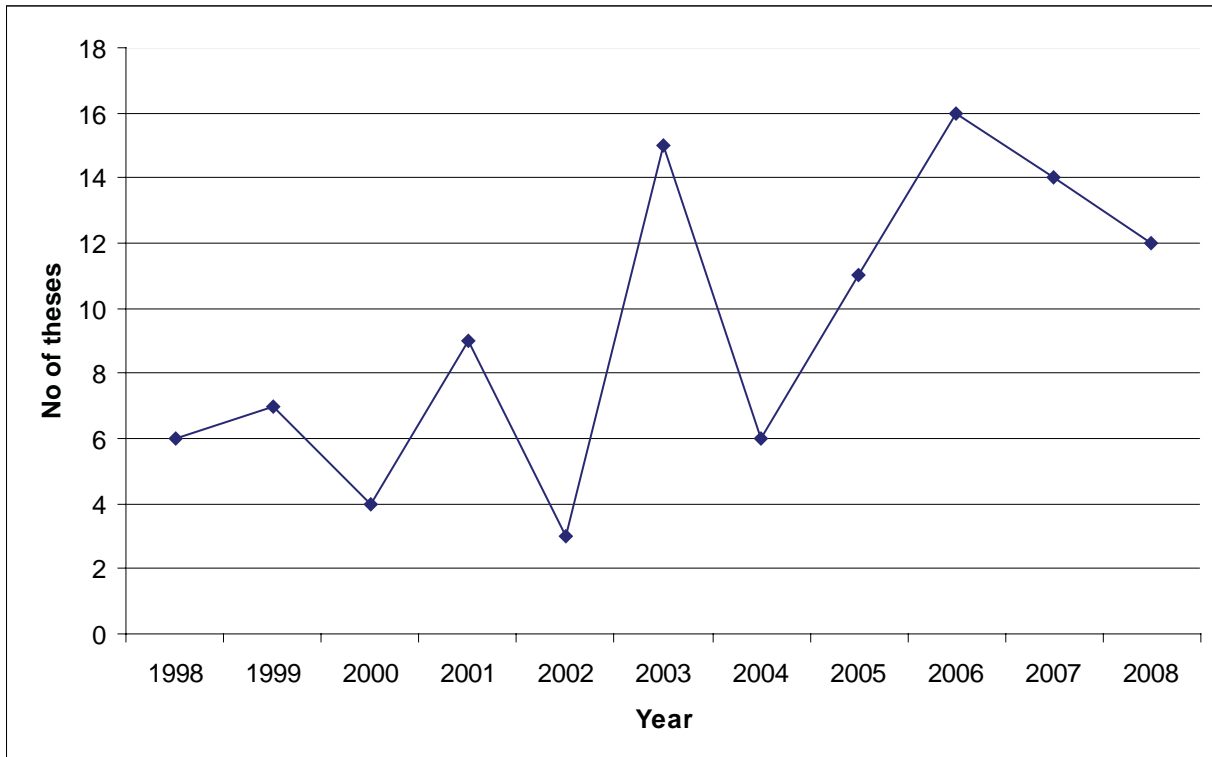
AINSE Postgraduate Research Awards

An AINSE Postgraduate Research Award (PGRA) is a top-up scholarship. To be eligible for one of these awards, an applicant must hold an Australian Postgraduate Award (APA) or equivalent scholarship. The PGRA may be held until the expiry of the APA.

In addition to providing a student with a stipend of \$7,500 pa for up to three years, the award provides for access to ANSTO's world-class facilities and expertise by making a nominal payment of \$5,500 pa to ANSTO in recognition of the use of facilities and the contribution of the ANSTO co-supervisor. An allowance for travel expenses for two visits to Lucas Heights and a total of one month's accommodation per annum is also awarded.

Fifteen new AINSE postgraduate research projects were supported by a Post-Graduate Research Award in 2008, and 13 were finalised with the receipt of a thesis, bringing the total number of current scholars to 64. Through its Post-Graduate Research Award scheme, AINSE has now helped train 277 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 13 theses were received from scholars who had completed their studies and another four had 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 2008

On the following pages, scholars marked with an asterix* are continuing without stipend.

New constraints on the environmental thresholds of the GBR: evidence from the drowned fossil reefs
Elizabeth Abbey Earth and Environmental Sciences, James Cook University. Commenced 1/07/08

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

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

Investigations on the fabrication plasma polymerized organic thin films
Kateryna Bazaka Engineering, James Cook University. Commenced 1/07/08

¹⁴C analyses of organic and inorganic fractions in cave calcareous tufa: implication for $\delta^{13}\text{C}$ significance in speleothems
Romina Belli Environmental Science, University of Newcastle. Commenced 1/07/08

Design and synthesis of advanced broadband optical coatings
Nemo Bilus Abaffy Applied Physics, RMIT University. Commenced 1/07/08

Fate of metal pollutants released from the Rum Jungle uranium/copper mine into the Finniss River, NT Australia
Jenny Brazier Science and Primary Industries, Charles Darwin University. Commenced 17/6/02

Reaction mechanisms of lithium-based hydrogen storage materials
E Alan Burt Nanoscale Science and Technology Centre, Griffith University. Commenced 1/7/07

Modification of coal microstructure upon uptake of carbon dioxide in geological-storage-like conditions
Tara Busbridge Nanoscale Science and Technology Centre, Griffith University. Commenced 1/7/07

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 31/03/03

Electrochemically "switchable" silicon based organic surfaces: dynamic substrates to study the adhesion of mammalian cells
Simone Ciampi School of Chemistry, University of New South Wales. Commenced 1/7/07

Structure and properties of porous discrete supramolecular materials
Martin Duriska Chemistry, Monash University. Commenced 1/7/07

Guest effects on spin crossover in nanoporous molecular frameworks
Elizabeth Fellows Chemistry, The University of Sydney. Commenced 1/07/08

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

PIXE elemental mapping of malarial diseased cerebral tissue
Mark Hackett Chemistry, The University of Sydney. Commenced 01/07/08

Groundwater resources and salinity associated with granite hills in the Upper Wimmera Basin, western Victoria
Sarah Hagerty Environmental Science, La Trobe University. Commenced 1/7/07

Increase in photocatalytic activity of TiO₂ through substitutional and interstitial cation doping
Dorian Hanaor Materials Science and Engineering, University of New South Wales. Commenced 1/07/08

Macromolecular orientation induced by injection moulding 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

Radiocarbon contamination in lacustrine sediments: understanding the process and developing a reliable dating strategy
Jamie Howarth Geography, University of Otago. Commenced 1/07/08

Investigation of the structural basis for regulation of the phosphorelay governing sporulation in Bacillus subtilis
David Jacques Molecular and Microbial Biosciences, The University of Sydney. Commenced 1/7/07

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

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

Nutrient cycling in a tropical macrotidal environment
*Megan Langeveld Mathematical and Physical Sciences, Charles Darwin University. Commenced 30/05/98

X-ray and neutron scattering of multiferroic materials
Shane Lawrence Applied Physics, Curtin University of Technology. Commenced 1/7/07

Use of cosmogenic nuclides to constrain the glacial history of the Lambert-Amery Basin, East Antarctica
*Katherine Lilly Earth Science, The 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

Tailored nanoparticles for nanotoxicological studies
Anthony Musumeci Australian Institute of Bioengineering & Nanotechnology, The University of Queensland. Commenced 1/7/07

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

Application of ⁶⁷Ga-labelling to the studies of metabolism of gallium compounds
Annie Nguyen Chemistry, The University of Sydney. Commenced 01/07/08

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

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

¹⁰Be in Antarctic ice cores: quantifying climate effects for improved reconstructions of solar activity

Joel Pedro IASOS, University of Tasmania. Commenced 1/7/07

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

Selective sequestering of heavy metal and actinide ions by biopolymer powders derived from silk fibres

Rangam Rajkhowa Centre for Material and Fibre Innovation, Deakin University. Commenced 01/07/08

The reconstruction of an ~850 proxy rainfall record from a Christmas Island (Indian Ocean) stalagmite

Dale Redwood Geology, The University of Newcastle. Commenced 1/7/07

Nanoscale multilayer materials

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

Structural studies of ionic conductive defect perovskites

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

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

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

Geometrically frustrated magnetism in bismuth platinum-group oxides

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

Hydrogen adsorption in intercalated graphite: comparison between experiment and simulation

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

Morphological and photophysical investigation of organic semiconducting films for opto-electronic applications

Arthur Smith Molecular and Microbial Sciences, The University of Queensland. Commenced 01/07/08

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

Structural characterisation of bismuth oxide-based, highly conductive solid electrolytes

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

Microdosimetry and nanodosimetry in proton therapy

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

Antiobesity pharmacotherapy: radiolabelling study of modified growth hormone peptides for the treatment of obesity

Bianca van Lierop Chemistry, Monash University. Commenced 01/07/08

The role of water uptake in novel all solid-state polymeric ion sensors

Jean-Pierre Veder Nanochemistry Research Institute, Curtin University of Technology. Commenced 01/07/08

Negative thermal expansion in metal-organic frameworks

Yue Wu Chemistry, The University of Sydney. Commenced 01/07/08

Disposal of unfolded proteins by members of the LDL receptor superfamily

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

Design and construction of a flow-through cell for in situ neutron diffraction study of hydrothermal mineral replacement reactions

Fang Xia Chemical Engineering, University of Adelaide. Commenced 01/07/08

Silicon microdosimetry for measuring the radiobiological effectiveness of a radiation field

Amy Ziebell Centre for Medical Radiation Physics, University of Wollongong. Commenced 1/7/07

AINSE Research Fellows

The Australian Institute of Nuclear Science and Engineering (AINSE) in conjunction with the Australian Nuclear Science & Technology Organisation (ANSTO) has established a Fellowship Scheme to add impetus to member Universities' growing stature in nuclear science and engineering and in related fields. The first two Fellowships were awarded in 2006 for a 3-year appointment in the first instance with the intention of an extension to five years where subsequent continuing appointment at the university is foreseen. It is AINSE's intention to continue to appoint two more research fellows each year.

AINSE highlighted three research directions in calling for applications for Research Fellowships this year.

1. neutron scattering;
2. radiopharmaceuticals; and
3. high resolution climate records using nuclear techniques

Applications were also considered, as in past years, where the research aligns with the broad spectrum of research foci supported by AINSE. While the three highlighted directions are being promoted in calling for Research Fellowship applications, applicants could also propose research programs which fall outside these topics as long as they required the use of ANSTO facilities and were aligned with the joint research interests of ANSTO and the AINSE member university.

Year commenced/Fellow/University
Project title

2006 Darren Goossens The Australian National University
Study of the nature and role of nanoscale order in complex materials

2006 Daniel Riley The University of Melbourne
Use of ultra-fast in-situ diffraction in the development of advanced materials

2007 Duncan McGillivray The University of Auckland
Probing the mechanisms of biomembrane interactions

2007 Moeava Tehei University of Wollongong
Study of relationships between function, structure and dynamics of biological molecules by neutron scattering

2008 Lizhong He The University of Queensland
The physical states of pharmaceutical proteins and self-assembled proteins

2008 Helen McGregor University of Wollongong
El Niño in context: reading the coral record of past climate extremes

Summary of AINSE Research Awards

The primary purpose of the AINSE Research Award program 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. AINSE Research 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. For neutron scattering projects conducted at ANSTO's Bragg Institute facility charges do not generally apply, however, projects of novice users allow for a facility charge.

The disciplines involved during 2008 included the following

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

chemistry applied, biochemistry, chemical technology, polymer science

engineering chemical, electrical, mechanical, microelectronics

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

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

Research Awards for 2008 are shown on the following pages in order by university, faculty 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 pages 24-27. 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 the progress reports on our home page, <http://www.ainse.edu.au>

During 2008 136 projects were supported. They had a total value of \$1,625,298 involving thirty-three of the thirty-nine university members. The table on the following page shows the distribution of research awards by university and by specialist areas.

Specialist Areas

UNI	A	B	E	M	N	G	Total
ADE	4	2					6
AKL		1		1	1		3
ANU	3		3	1		1	8
CAN	1						1
CQU			2				2
CSU		1	1				2
CUR				3	3	1	7
DEA					1		1
ECU				1			1
FLI	1				1		2
GRI				1			1
GNS				2			2
JAM	1		2				3
MAC	1		3				4
MEL		2	2	2	2	1	9
MON	2		1	2	1		6
MUR				1			1
NCT			3		1		4
NSW	3		3	5	1	1	13
OTA	1						1
QLD	5		3	1			9
QUT			2				2
RMI				7			7
SCU	1		5		1		7
SWI		1					1
SYD	4	2	3	1		2	12
TAS	2		3				5
UNE	1						1
USA					2		2
UTS				1			1
UWA				1			1
UWS				1	1		2
WOL	3			4		2	9
Total	33	7	38	34	16	8	136

Legend

A	Archaeology and Geosciences
B	Biomedical Science and Biotechnology
E	Environmental Science
M	Materials - Properties and Engineering
N	Materials – Structures and Dynamics
G	Bragg Institute - Neutron Scattering

The legend for the university abbreviations can be found on page 76.

University of Adelaide

Australian School of Petroleum

08/077	Dr Kathryn Amos Fine-grained sediment deposition in an ephemeral river: assembling a chronology for scour-pool mud deposits on a convex bar	\$2,115
08/113	Dr Carmen Krapf Using x-ray diffraction to establish a new classification scheme for mud-rich facies successions in dryland systems	\$2,492

Geography and Environmental Studies

08/023	Dr Jenny Fluin Investigation of biological fossils in Lake Alexandrina to assess changes in flow regimes (marine incursions versus river inflow) over time	\$16,859
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Humanities & Social Sciences

08/070	Professor Martin Williams Late Quaternary alluvial history of the Nile basin	\$9,240
08/125	Professor Martin Williams Establishing a high-resolution climatic record for the Australian arid zone for the past 30,000 years	\$8,208

Physics

08/055	Professor John Prescott Low level uranium, thorium and trace element determinations for luminescence dating	\$3,565
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University of Adelaide Total \$42,479

The University of Auckland

Medical & Health Sciences

08/030	Dr Michael Hay Reduction potentials of novel benzotriazine 1,4-dioxides with anti- <i>Mycobacterium tuberculosis</i> activity	\$4,500
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Science

08/066	Dr Geoff Waterhouse TEM characterisation of novel supported gold catalysts for low temperature CO oxidation and the water-gas shift (WGS) reaction	\$12,572
08/151	Dr Duncan McGillivray Membrane activity of engineered switchable peptide films	\$9,895

University of Auckland Total \$26,967

Australian National University

Archaeology and Natural History

08/101	Dr Nick Porch Comparative AMS ¹⁴ C dating of insect and plant macrofossils from Pacific Island contexts	\$6,488
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Chemistry

08/377	Mr Ross Whitfield <i>In situ</i> study of sintering of metal injection moulded components	\$22,610
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Research School of Earth Sciences

08/053	Dr Bradley Opdyke Using ¹⁰ Be as a stratigraphic tool for pelagic sediments in the Late Quaternary	\$20,028
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08/016	Professor Patrick De Deckker Fingerprinting of aeolian dust in the Canberra region	\$16,000
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Research School of Pacific and Asian Studies

08/028	Dr Simon Haberle Ecosystem collapse in a Ramsar Wetland (Lake Kutubu, PNG): decoupling the role of natural processes versus human influence	\$8,718
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08/105	Dr Janelle Stevenson Exploring environmental change and early agriculture in northern Luzon, the Philippines	\$8,088
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Research School of Physical Sciences and Engineering

08/132P	Professor Robert Elliman Hydrogen diffusion and trapping in Ge and GeSi alloys for wafer cleaving	\$13,160
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The Fenner School of Environment & Society

07/062	Dr Richard Greene Characterisation of the properties of continental sources of dust	\$14,400
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Australian National University Total		\$109,492
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University of Canterbury

Gateway Antarctica

08/106	Professor Bryan Storey History of the Darwin Hatherton glacial system, Antarctica	\$12,648
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University of Canterbury Total		\$12,648
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Central Queensland University

Biosystems & Resources

08/108	Dr Vicky Vicente-Beckett Using NAA k_p -method to assess sediment quality in Causeway Lake (Central Queensland)	\$9,880
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Plant Sciences

08/002	Dr Surya Bhattarai Study on bubble dynamics of aerated irrigation water produced with Mazzei venturi and oxysolver twin vortex air injectors for oxygenation	\$5,680
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Central Queensland University Total		\$15,560
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Charles Sturt University

Rural Management

08/102P	Professor Geoff Gurr Rearing parasitic wasps on irradiated Queensland fruit fly eggs and larvae	\$5,913
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Science

08/130	Dr Paul Prenzler Modelling colour development during aging of red wine: effects of co-pigmentation	\$8,789
Charles Sturt University Total		\$14,702

Curtin University of Technology

Applied Chemistry

08/017	Professor Roland De Marco A SIMS study of electrodeposited conductive polymer solid-contact polymer membrane ion sensors - an approach for the fabrication of robust sensors	\$13,525
08/018	Professor Roland De Marco Tuning electrochemical devices using quantum confinement effects	\$4,225

Applied Physics

08/008	Professor Craig Buckley Fabrication and microstructures of carbon aerogel derived from sol-gel polymerisation and ambient pressure drying	\$2,432
08/148	Professor Craig Buckley Characterisation of peak broadening in acacia wood by wide angle x-ray scattering	\$17,345
08/329	A/Professor It-Meng Low Thermal stability of ternary carbides in vacuum	\$30,322
08/041	A/Professor It-Meng Low Compositional, structural and spectroscopic studies on oxidised and vacuum-annealed ternary carbides	\$20,824
08/145	A/Professor It-Meng Low Phase and thermal stability of MAX phases	\$19,265
Curtin University Total		\$107,938

Deakin University

Centre for Material and Fibre innovation

08/027	A/Professor Qipeng Guo Synthesis and characterisation of epoxy based nanostructured thermosetting multiphase materials	\$2,900
Deakin University Total		\$2,900

Edith Cowan University

Natural Sciences

08/064	Dr Magdalena Wajrak Investigation of the chemical profile of the gold electrode in ASV detection of arsenic	\$10,936
Edith Cowan University Total		\$10,936

Flinders University

Chemistry, Physics and Earth Sciences

08/103	Dr Jamie Quinton Chemical Fingerprinting of Australian Aboriginal Ochres	\$9,000
08/001	Dr Gunther Andersson The chemical potential of surfactants in solutions with polar liquids as solutes	\$8,400
Flinders University Total		\$17,400

Griffith University

Engineering

08/099	Dr Jisheng Han SIMS analysis on PN junction of 3C-SiC	\$13,260
Griffith University Total		\$13,260

GNS Science

08/043	Dr Andreas Markwitz High resolution oxygen depth profiling of thin insulating and optoelectronics films using 7.6MeV ⁴ He ⁺ ions	\$10,490
08/036	Dr John Kennedy High resolution transmission electron microscopy of surface-near Fe nanocluster bands	\$8,861
GNS Science Total		\$19,351

James Cook University

Earth and Environmental Sciences

08/067	Dr Jody Webster Canyon dynamics along the margin of the Great Barrier Reef during the late Pleistocene to Holocene	\$8,110
08/072	Dr Raphael Wust Quantification of soil carbon loss during the 1997/8 and 2002 peatland fires in the Mega-Rice Project area, Indonesia	\$5,392
08/073	Dr Raphael Wust Constraining sediment accumulation and heavy metal distribution during the Holocene in NE Queensland and offshore PNG	\$8,200
James Cook University Total		\$21,702

Macquarie University

CISAB

08/062	Dr Phillip Taylor Effects of irradiation on longevity of Queensland fruit flies (Q-flies)	\$7,320
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Physical Geography

08/127P	A/Professor Damian Gore Chemical fixation of heavy metal contaminants and the stability of new minerals in freezing ground	\$8,490
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08/100	Dr Paul Hesse Sedimentation patterns in the northern Macquarie Marshes, NSW, and wetland sensitivity to change	\$12,079
08/069	Dr Duanne White Late Quaternary history and dynamics of the Antarctic ice sheet: do our records reflect regional or local variations?	\$15,471
Macquarie University Total		\$43,360

The University of Melbourne

Engineering

08/150	Dr Michael Stewardson Historical changes in floodplain sedimentation in SE Australia: using radionuclides to validate a new approach	\$9,600
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Medicine

08/052	Dr Damian Myers Partial volume correction in PET imaging of the rat brain: towards an accurate quantification	\$17,540
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Science

08/011	Professor James Camakaris Utilisation of copper-64 in investigations of involvement of copper in Alzheimer's disease	\$14,000
08/083P	Dr Rachel Caruso The incorporation of noble metal nanoparticles in porous titanium dioxide materials for photocatalytic applications	\$46,743
08/035	Dr Brett Johnson Dopant-enhanced hydrogen diffusion during solid phase epitaxial re-crystallisation of surface amorphous silicon layers	\$19,920
08/047	Dr Terry Mulhern Structural investigations of the mitochondrial protein import receptor complex	\$18,960
08/079	Dr Yaodong Wang Use of microPIXE for cellular localisation and discrimination of cobalt and nickel in Co/Ni hyperaccumulating <i>Haumaniastrum robertii</i> , <i>Crotalaria cobalticola</i> and <i>Alyssum murale</i>	\$20,640
08/625	Mr Peter Wichta Single crystal neutron diffraction studies of zinc and cadmium cyanide	\$21,600
08/076	Dr Meifang Zhou Modification of TiO ₂ mesoporous structures in highly concentrated surfactant systems	\$11,530

The University of Melbourne Total		\$180,533
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Monash University

Arts

08/089	Dr Bruno David Archaeology of Mua Island, Torres Strait	\$6,488
08/104	Professor Peter Kershaw Resolving chronological problems with the key late Quaternary palaeoenvironmental record of Lake Wangoom, southeastern Australia	\$4,718

Engineering

08/059	Dr Raman Singh SIMS characterisation of thermal oxide films developed over nanocrystalline Fe-Cr alloys	\$16,950
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Pharmacy and Pharmaceutical Sciences

08/007	Dr Ben Boyd A SAXS investigation towards self assembling liquid crystalline smart coatings	\$12,820
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Science

08/082	Dr Ian Cartwright Hydrogeology and sustainable groundwater use in the Gippsland basin	\$16,245
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08/013	A/Professor John Cashion Preparation, properties and potential uses of ferromagnetic gold nanoparticles	\$3,000
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Monash University Total		\$60,221
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Murdoch University

Extractive Metallurgy

08/048	Dr Manickam Minakshi Depth resolving measurements of intercalated lithium in a cathode material using HERD, PIXE and SIMS analysis	\$22,572
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Murdoch University Total		\$22,572
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University of Newcastle

Science and Information Technology

08/128	Dr Rob Atkin Structure of adsorbed surfactant layers at ionic liquid–air interfaces	\$1,770
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08/091	Dr Russell Drysdale Influence of multi-decadal scale climate changes on hydrological variability in the Hawkesbury-Nepean River Catchment	\$12,725
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08/146	Dr Russell Drysdale ¹⁴ C variability in a Holocene stalagmite from Flores, Indonesia: a role of solar forcing on $\delta^{18}\text{O}$?	\$8,384
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08/046	Dr Janece McDonald Application of ¹⁴ C bomb pulse as a chronostratigraphic marker to calibrate geochemical time-series with the instrumental climate record in active speleothems, Wombeyan Caves, NSW	\$16,780
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University of Newcastle Total		\$39,659
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University of New England

Human and Environment Studies

08/097	Dr Peter Grave Dating Chalcolithic Camlibel, an early metal working site in Central Turkey	\$3,580
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University of New England Total		\$3,580
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The University of New South Wales

ADFA

08/563	E/Professor Stewart Campbell Commissioning cryofurnace cold and hot stages: magnetic phase diagram based on Mn_2Ge_2	\$6,112
08/060	Dr Glen Stewart A Mössbauer investigation of the hexagonal and orthorhombic phases of $TmMnO_3$	\$4,000

Engineering

08/084	Dr Sammy Chan Determination of hydrogen storage capacity of porous silicon thin films using secondary ion mass spectroscopy	\$6,250
08/015	Dr Richard Collins The effect of pH on isotopically exchangeable Al concentrations in acid sulfate soils using ^{26}Al and AMS	\$4,422
08/022	A/Professor Michael Ferry Thermomechanical properties of multifunctional titanium alloys	\$5,250
08/106P	Dr Sean Li Enhancement of spin polarisation with optimising the stoichiometric atomic ratio of europium and cobalt in $Zn_{1-x}(Eu_xCo_y)O$ epitaxial	\$12,550
08/117	Dr Sean Li Separation of superconductivity and magnetism of $YBa_2Cu_3O_{7-x}$ through preparing its aperiodic moiety network with proton irradiation	\$12,400

Medicine

08/031	Dr Andrew Herries Late Quaternary palaeohydrology in central southern Africa recorded by tufa formation on the Ghaap Escarpment, South Africa	\$12,165
08/032	Dr Andrew Herries Dating early evidence for the Later Stone Age in southern Africa	\$5,677

Science

08/080	Dr Leonie Barner Characterisation of biosensors via radiolabeling technology	\$3,000
08/005	Dr Gail Box Chemical composition and optical properties of urban aerosols in the greater Sydney region	\$14,400
08/006	A/Professor Michael Box Chemical composition and optical properties of Australian desert dust and biomass burning aerosol	\$19,200
08/025	Dr Ian Graham PIXE trace element analysis of gem corundums from different geological settings: a key to corundum genesis	\$6,200

University of New South Wales Total \$111,626

Otago University

Humanities

08/107P	Professor Glenn Summerhayes The signature of colonisation chert use and obsidian exchange between the colonising communities of the South Papuan Coast	\$10,780
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University of Otago Total \$10,780

University of Queensland

Aboriginal and Torres Strait Islander Studies

08/063	Dr Sean Ulm Marine carbon reservoir variability in Torres Strait Stage II	\$8,950
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Science

08/110	Professor John Pandolfi Benthic foraminifera assemblages of Moreton Bay: spatial/temporal distribution and long-term, natural vs anthropogenic habitat degradation	\$9,510
08/094	Dr Massimo Gasparon Human impact on estuarine environments, an example from Moreton Bay, southeast Queensland	\$10,910
08/044	Dr Samuel Marx Reconstruction of palaeodust transport pathways for eastern Australia using aeolian dust archives	\$4,866
08/124	Dr Samuel Marx Long distance transport of heavy metals pollutants and their incorporation into the New Zealand environment	\$3,170
08/049	Dr Patrick Moss Holocene environments of the sclerophyll woodlands of the Atherton Tableland, Queensland	\$4,055
08/050	Dr Patrick Moss Late Quaternary chronology of northeastern Queensland marine sediments based on AMS ¹⁴ C dating	\$5,677
08/096P	Professor Robert Gilbert Radial density function of starch for structural characterisation of foods	\$6,820

Social Sciences

08/068	Dr Marshall Weisler Dating a late prehistoric Hawaiian community on south-central Moloka'i using marine shell and a new delta R	\$4,866
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University of Queensland Total		\$58,824
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Queensland University of Technology

Science and Technology

08/078	Dr Godwin Ayoko Chemical composition and source identification of fine aerosols in South East Queensland Phase 2	\$16,590
08/129	Dr Lidia Morawska Analysis of elemental composition of particle emissions from aircraft and airport related activities	\$7,790

Queensland University of Technology Total		\$24,380
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RMIT University

Applied Sciences

08/042	Professor David Mainwaring Irradiation induced electrical conductivity in polymeric thin films	\$26,340
08/045	A/Professor Dougal McCulloch Design and synthesis of advanced broadband gradient optical coatings using atomic layer deposition	\$2,304
08/054	Dr Jim Partridge Characterisation of tin oxide films and nanowires	\$6,790

08/104P	Professor Dinesh Sood SIMS study of Hg-Au agglomeration process at nanoscale for development of novel sensors for Hg vapour in environment	\$6,880
Civil and Chemical Engineering		
08/065	Dr Liam Ward MEVVA ion implantation of high speed, bearing and hot working die steels for improved wear and corrosion resistance	\$14,168
Electrical & Computer Engineering		
08/033	Dr Anthony Holland Composition analysis and electrical properties of silicide-semiconductor interfaces	\$15,680
08/124P	Dr Anthony Holland Deposition and characterisation of piezoelectric thin films	\$8,844
RMIT University Total		\$81,006

Southern Cross University

Environmental Science and Management

08/009	Dr Edward Burton Iron mineralisation pathways associated with oxidation of nanoparticulate mackinawite	\$10,385
08/010	Dr Edward Burton Properties of iron-precipitate accumulations in saline waterways of the Hunter Valley, Australia	\$4,424
08/081	Professor Bill Boyd Late Pleistocene and Early Holocene environments of Liang Bua, Flores, Indonesia	\$6,488
08/087	Dr Malcolm Clark The nature and reversibility of U, Th & Ra binding to modified bauxite refinery residues	\$28,150
08/131	Dr Annabelle Keene Chronology and pedogenesis of correlated river terrace sequences to define floodplain development	\$6,074
08/061	Professor Leigh Sullivan Bomb pulse dating of phytolith-occluded carbon for quantification of carbon sequestration in perennial vegetation	\$8,718
08/147	Dr Kathryn Taffs An investigation into the history of eutrophication in eastern Australian coastal systems using a palaeolimnological approach	\$6,488
Southern Cross University Total		\$70,727

University of South Australia

Ian Wark Research Institute

08/040	Dr Dusan Losic Metal ions-specific interfacial chemistry of monolayer functionalised nanotube membranes	\$11,960
08/149	Dr Surya Subianto SAXS characterisation of proton exchange membrane nanostructure modified by conductive and non conductive inclusions	\$6,065
University of South Australia Total		\$18,025

Swinburne University of Technology

Faculty of Engineering and Industrial Sciences

08/144	Dr Andrew Wood Up-regulation of the cell adhesion molecules (CAM) by low-power radiation in an <i>in vitro</i> rat blood brain barrier (BBB) model	\$15,730
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Swinburne University of Technology Total \$15,730

The University of Sydney

Agriculture, Food and Natural Resources

08/133	A/Professor Alexander McBratney Quantifying and modelling soil formation in the landscape	\$20,653
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08/058	Dr Balwant Singh Micro-PIXE localisation of arsenic in two hyperaccumulating ferns grown in contrasting soils contaminated with arsenic	\$15,575
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Arts

08/020	Dr Trudy Doelman The use and distribution of volcanic glass artefacts in Primorye, Far East Russia	\$11,760
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08/021	Dr Paul Donnelly Neutron activation analysis of the cultic ceramic assemblage from the Pella Fortress type Temple in Jordan (c 1800-800 BC)	\$9,000
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08/102	Dr Bob Hudson Periodising Sriksetra, Myanmar: the largest first millennium AD walled city in Southeast Asia	\$1,622
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08/034	Dr Peter Jia East meets West: an archaeological study of early contact between China and Eurasia	\$5,677
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Engineering

08/029	Dr Andrew Harris The localisation and speciation of metallic nanoparticles in live plants	\$15,650
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Science

08/373	Mr Sam Duyker Negative thermal expansion in metal cyanide coordination framework materials	\$45,220
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08/351	Mr Yue Wu Negative thermal expansion in $\text{Cu}_3(\text{benzenetricarboxylate})_2$	\$29,368
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08/038	Professor Peter Lay PIXE elemental mapping of malarial diseased cerebral tissue	\$31,000
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08/105P	Professor Peter Lay Application of ^{67}Ga -labelling to the studies of metabolism of gallium compounds	\$12,000
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08/003	Professor Marcela Bilek Composition standards for ternary alloys	\$31,000
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The University of Sydney Total \$228,525

University of Tasmania

Health Science

08/116	Dr Anne-Marie Williams Trace element stability in the postmortem environment	\$13,800
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Science, Engineering & Technology

08/004	Professor David Bowman Using ¹⁴ C and delta ¹³ C to investigate the age and dynamics of sedge moorland - forest mosaic landscapes in South Western Tasmania	\$13,952
08/092	Dr Joanna Ellison Reconstruction of Holocene sea levels using salt marsh foraminifera as finite indicators	\$5,677
08/095	Dr John Gibson Effects of pre- and post settlement on the health and stability of Little Swanport Estuary	\$6,744
08/037	Dr Kevin Kiernan Glacial geomorphology of the Frankland Range, southwest Tasmania	\$11,830

University of Tasmania Total		\$52,003
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University of Technology, Sydney

Science

08/074	Dr Wing Yeung Small punch testing of advanced metal matrix composites	\$20,700
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University of Technology, Sydney Total		\$20,700
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The University of Western Australia

Engineering, Computing and Mathematics

08/126	Dr Giacinta Parish The application of ion implantation doping to gallium nitride for high performance electronic devices	\$17,300
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The University of Western Australia Total		\$17,300
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University of Western Sydney

Health and Science

08/019	Dr Gary Dennis Behaviour of star polymers at the air-water interface	\$4,300
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08/057	Dr Leigh Sheppard Cation impurity diffusion in nonstoichiometric titanium dioxide	\$31,000
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University of Western Sydney Total		\$35,300
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University of Wollongong

Engineering

08/109	Professor Druce Dunne Welding effects on structural evolution and creep of advanced 9-12% chromium martensitic pressure vessel steels	\$12,142
08/346	Mr Mark Reid Kinetics at the delta-ferrite to gamma-austenite phase transition in steel	\$9,429
08/056	Professor Anatoly Rosenfeld Characterisation of innovative Si radiation detectors for high spatial resolution isotopic imaging	\$13,205
08/345	Ms Kun Yan Texture analysis at the new OPAL facility on titanium aluminades	\$13,566
08/075	Dr Yue Zhao Time of flight detection on superconducting MgB ₂ films prepared by HPCVD and RF sputtering methods	\$15,500

Science

08/014	Professor Allan Chivas The origin of organic matter in surface sediments on the SE Australian continental shelf from compound-specific $\delta^{14}\text{C}$ and $\delta^{13}\text{C}$ analysis	\$20,220
08/039	Dr Michael Lerch IBIC studies of detectors for synchrotron x-ray dosimetry	\$12,480
08/051	Professor Colin Murray-Wallace Late Pleistocene sea-level changes and the evolution of the Lacepede Shelf, Southern Australia	\$6,405
08/071	Professor Colin Woodroffe Dating of foraminifera to establish reef island deposition rates, Tarawa, central Pacific	\$12,165

University of Wollongong Total \$115,112

TOTAL AINSE Awards \$1,625,298

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. Normally the membership fee is paid with the assistance of the Australian Research Council's Linkage Infrastructure Equipment and Facilities Fund, and supplemented with contributions from universities, ANSTO and AINSE. Our application to the ARC for a five year LIEF grant was successful and we were awarded \$1,000,000 over five years in support of the membership fee to ISIS. This represents 50% of the membership fee.

Applications from Australian researchers for 2008 resulted in 82 days being awarded to 27 proposals from 10 groups. Instrument time was awarded on 12 different instruments.

Chief Investigator/Organisation/Project Title/Instrument	Days
Dr R Atkin University of Newcastle Investigations of the bulk nanostructure of some simple protic ionic liquids SANDALS	4
Dr R Atkin University of Newcastle Structure of adsorbed surfactant layers at ionic liquid/air interfaces SURF	3
Dr R Bircher ANSTO Effects of pressure on the exchange interactions in a family of Mn_6 single-molecule magnets IRIS	5
Professor D Craik University of Queensland Interaction of cyclic peptides with lipid membranes SURF	3
Professor R De Marco Curtin University of Technology Neutron reflectometry of biomolecular inspired modified electrode surfaces CRISP	2
Dr I R Gentle University of Queensland Determining analyte diffusion into explosives sensor films SURF	3
Dr D J Goossens Australian National University Untangling the disorder in the structure of DCDNB, 1,5-dichloro-2,3-dinitrobenzene SXD	3
Dr E M Gray Griffith University <i>In-situ</i> powder diffraction study of the reversibility of the $LiBD_4$ - MgD_2 system POLARIS	7
Dr E M Gray Griffith University Non-Born-Oppenheimer quantum dynamics and electronic excitations in neutron Compton scattering from H and D VESUVIO	6
Dr L He University of Queensland Structural study of polymer-protein conjugate by small angle neutron scattering LOQ	2
Professor G J Kearley ANSTO New mechanisms of negative thermal expansion in metal organic frameworks TOSCA	2

Chief Investigator/Organisation/Project Title/Instrument	Days
Professor B J Kennedy University of Sydney Identification of the 'missing phases' in the Aurivillius phases SrBi ₂ Nb ₂ O ₉ and Bi ₄ Ti ₃ O ₁₂ HRPD	3
Professor B J Kennedy University of Sydney Oxygen vacancy ordering in Ba ₂ NdSn _x Sb _{1-x} O _{6-d} POLARIS	4
Dr O Kirstein ANSTO Elastic anisotropy in MAX phases ENGIN_X	3
Dr Y Lauw CSIRO Minerals Structure of P ₁₄ TFSI ₂ N ionic liquid at solid-liquid interfaces SURF	2
Dr C D Ling University of Sydney Structure determination and high-temperature phase transition of Bi ₉ ReO ₁₇ HRPD	2
Dr C D Ling University of Sydney Intermediate-temperature oxide ion conduction pathways in partially ordered superstructures of fluorite-type bismuth oxide SXD	4
Dr C D Ling University of Sydney Single-crystal neutron diffraction studies of 3D incommensurate modulations in stabilised delta-Bi ₂ O ₃ -related systems SXD	2
Professor V Linton University of Adelaide Investigation of residual stresses in restrained manual metal arc T-butt welds ENGIN_X	4
Dr P Meredith University of Queensland Studying the hydration of melanins using muons EMU	3
Dr O Muransky ANSTO Investigation of the elasto-plastic and loading-unloading response of dual-phase Zr-2.5Nb alloy using neutron diffraction and EPSC model ENGIN_X	3
Dr V K Peterson ANSTO Negative thermal expansion in the metal organic framework Zn ₄ O(benzene-1,4-dicarboxylate) ₃ (MOF-5) TOSCA	2
Dr J L Wang UNSW @ ADFA Magnetic transitions and magnetovolume effects in Pr _{1-x} Y _x Mn ₂ Ge ₂ GEM	2
Professor J W White Australian National University Effect of co-surfactant on shear stability of emulsions LOQ	3
Professor J W White Australian National University Co-surfactancy of oil-soluble and water-soluble surfactants at the oil-water interface SURF	2
Professor J W White Australian National University Interaction of nanoparticles with single protein films SURF	2
Professor J W White Australian National University Single protein films - denaturation SURF	1

Publications relating to research at ISIS

Bordallo H N, Aldridge L P, Churchman G J, Gates W P, Telling M T F, Kiefer K, Fouquet P, Seydel T, Kimber S A J
Quasi-elastic neutron scattering studies on clay interlayer-space highlighting the effect of the cation in confined water dynamics
J Phys Chem C 112 (36) 13982 -13991 2008

Atkin R, Warr G G

The smallest amphiphiles: nanostructure in protic room temperature ionic liquids with short alkyl groups
J Phys Chem B 11 4164-4166 2008

Ochsenbein S T, Tuna F, Rancan M, Davies R G S, Muryn C A, Waldmann O, Bircher R, Sieber A, Carver G, Mutka H, Fernandez-Alonso F, Podlesnyak A, Engelhardt L P, Timco GA, Güdel H U, Winpenny R E P
Studies of finite molecular chains: synthesis, structural, magnetic and inelastic neutron scattering studies of hexa- and heptanuclear chromium horseshoes
Chem Eur J 14 5144 2008

Garcia Y, Campbell S J, Lord J S, Boland Y, Ksenofontov V, Gütllich P

Dynamics and supramolecular organisation of the 1D spin transition polymeric chain compound $[\text{Fe}(\text{NH}_2\text{trz})_3](\text{NO}_3)_2$ - muon spin relaxation
J Phys Chem B 111 11111-11119 2007

Garcia Y, Campbell S J, Lord J S, Gütllich P

Dynamics Muon spin relaxation studies of iron(II) spin crossover complexes
Inorg Chim Acta 104 103911 2008

De Marco R, Veder J-P, Clarke G, Nelson A, Prince K, Pretsch E, Bakker E

Is the water layer a key factor in determining the reliability of solid-contact polymeric ion-selective electrodes?
Proc Matrafured 08 International Conference on Electrochemical Sensors, October 5-10, Dobogoko, Hungary, p 18

Kisi E H, Forrester J S

The phase transition sequence in the relaxor ferroelectric PZN-8%PT
J Phys: Condens Matter 20 165208 2008

Fullagar W K, Holt S A, Gentle I R

Structure of SP-B/DPPC mixed films studied by neutron reflectometry
Biophys J 95 4829-4836 2008

Welberry T R, Goossens D J

The interpretation and analysis of diffuse scattering using Monte Carlo simulation methods
Acta Crystallogr A 64 23-32 2008

Welberry T R, Goossens D J

Different models for the polar nanodomain structure of PZN and other relaxor ferroelectrics
J Applied Crystallography 41 606-614 2008

McLennan K G, Gray E MacA, Dobson J F

Deuterium occupation of tetrahedral sites in palladium
Phys Rev B 78 014104 2008

He L-Z, Malcolm A S, Dimitrijević M, Onaizi S A, Shen H-H, Holt S A, Dexter A F, Thomas R K, Middelberg A P J

Neutron reflection study of structure of designed peptides and their interaction with surfactants at the air-water interface
7th AINSE/ANBUG Neutron Scattering Symposium 18 Sydney December 2008

Howard C J, Withers R L, Knight K S, Zhang Z

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J Physics: Condens Matter 20 135202 (11pp) 2008

Kisi E H, Howard C J

Applications of neutron powder diffraction
464 pages ISBN-13: 978-0-19-851594-4

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Structural investigation of oxygen non-stoichiometry and cation doping in misfit-layered thermoelectric $[\text{Ca}_2\text{CoO}_{3-x}][\text{CoO}_2]_d$, $d \approx 1.61$
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- Pearce S V, Linton V M, Oliver E C
Residual stress in a steel high strength, thick section T-butt weld
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- Pearce S V, Linton V M
Residual stresses in high strength, thick section steel welds
Materials Science Forum 571-572 387-392 2008
- Middelberg A P J, He L-Z, Dexter A F, Shen H, Holt S A, Thomas R K
The interfacial structure and Young's modulus of peptide films having switchable mechanical properties.
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- Muránsky O, Šittner P, Zrník J, Oliver E C
In situ neutron diffraction investigation of the collaborative deformation-transformation mechanism in TRIP-assisted steels at room and elevated temperatures
Acta Materialia 56 3367-3379 2008
- Muránsky O, Carr D C, Barnett M R, Oliver E C, Šittner P
Investigation of deformation mechanisms involved in the plasticity of AZ31 Mg alloys: *in situ* neutron diffraction and EPSC modelling
Materials Science and Engineering A 496 14-24 2008
- Muránsky O, Carr D C, Šittner P, Oliver E C, Dobroň P
In-situ neutron diffraction studies of the pseudoelastic-like behaviour of hydrostatically extruded Mg-Al-Zn alloy
Materials Science Forum 571-572 107-112 2008
- Perriman A W, Henderson M J, Evenhuis C R, McGillivray D J, White J W
Effect of the air-water interface on the structure of lysozyme in the presence of guanidinium chloride
J Phys Chem B 112(31) 9532-9539 2008
- Perriman A W, Henderson M J, Holt S A, White J W
Effect of the air-water interface on the stability of beta-lactoglobulin
J Phys Chem B 111(48), 13527-37 2007
- Perriman A W, McGillivray D J, White J W
Reactions of isolated mono-molecular protein films
Soft Matter 4 2192 – 2198 2008
- Faunce T A, White J W, Matthaei K
Integrated research into the nanoparticle-protein corona: a new focus for safe, sustainable and equitable development of nanomedicines
Nanomedicine 3(6) 859-866 2008
- Perriman A W, Apponyi M A, Buntine M A, Jackway R J, Rutland M W, White J W, Bowie J H
Surface movement in water of splendipherin, the aquatic male sex pheromone of the tree frog *Litoria splendida*
FEBS J 275(13), 3362-3374 2008

Publications

Notification of the following papers incorporating results from AINSE supported projects was received by AINSE in 2008. 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 2008.

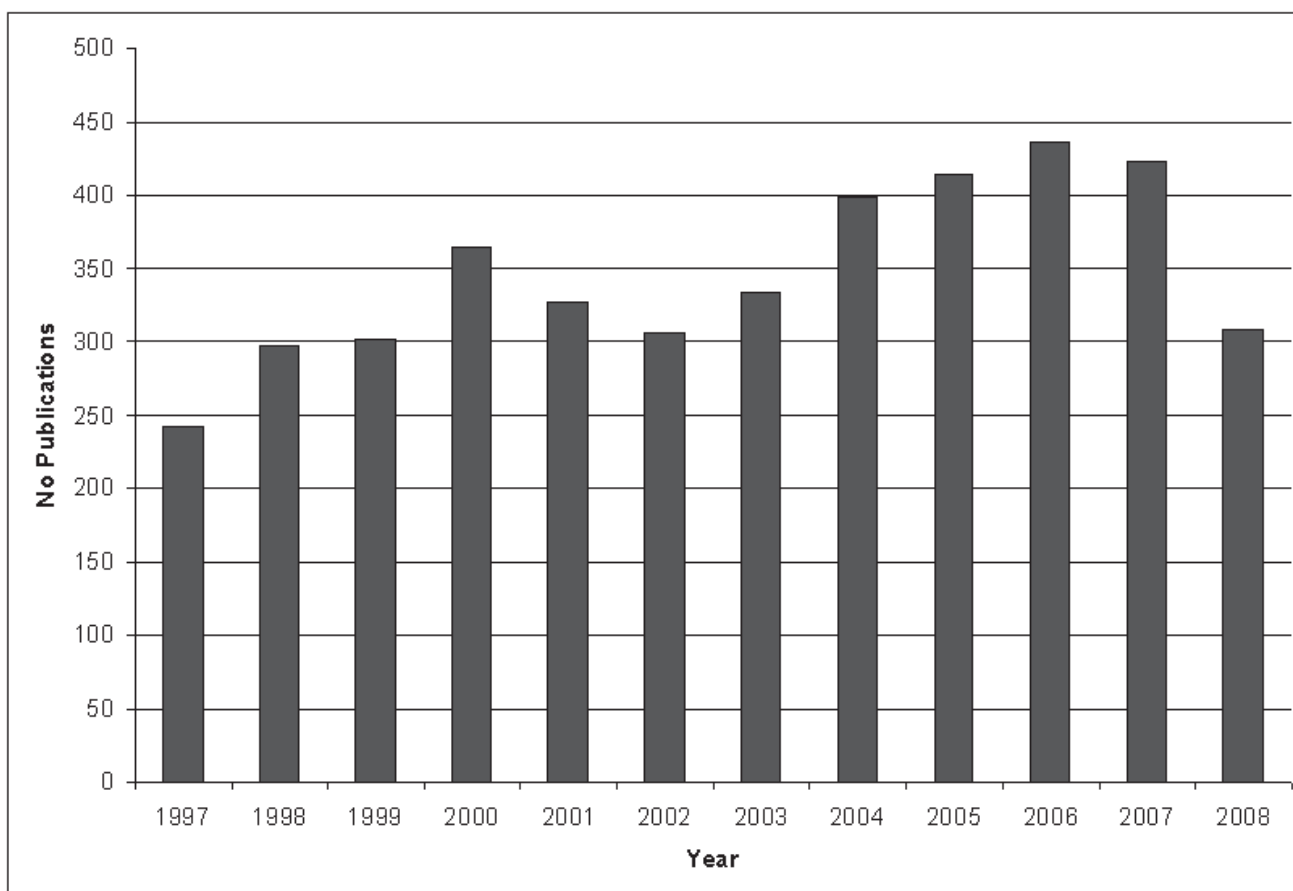
The publications are listed in university order under the name of the chief investigator, in bold. Where the chief investigator is not an author the name is in brackets. Publications arising from AINSE Postgraduate Research Awards (PGRA) are also listed.

The references are as supplied by the chief investigator in Progress Reports 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, city, 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
University of Adelaide			
07/048	Fluin J; Gell P; Haynes D; Tibby J	Paleolimnological evidence for the independent evolution of neighbouring terminal lakes, the Murray Darling Basin, Australia	Hydrobiologia 591 117-134 2007
07/048	Fluin J; Gell P; Hancock G	Ecological and water quality change in shallow wetlands of the lower River Murray, South Australian	4th AINSE Quaternary Dating Workshop 67 Sydney March 2008 978 0 9758434 4 3
07/048	Siddiqui H; Fluin J; Halverson G; Jacobsen G; Hancock G	Late Holocene palaeoenvironmental reconstructions from stable isotopes, Mundic and Tanyaka wetlands, South Australia	4th AINSE Quaternary Dating Workshop 92 Sydney March 2008 978 0 9758434 4 3
07/056P	Nicholson E D; Zawadzki A; Krull E; Smernik R; Gell P	Environmental change in the coastal wetlands near Adelaide, Australia	4th AINSE Quaternary Dating Workshop 84 Sydney March 2008 978 0 9758434 4 3
05/062	Gell P A	River Murray wetlands: past and future	In: Potter E; Mackinnon A; McKenzie S; McKay J (eds) Fresh Water: New Perspectives on Water in Australia 21-30 2007 Melbourne
03/042	Gell P; Jones R; MacGregor A	The sensitivity of wetlands and water resources to climate and catchment change, south-eastern Australia	PAGES News 15(1) 13-15 2007
PGRA	Mutton L	An assessment of the use of bacillariophyceae as biological monitors of heavy metal pollution in Australian tropical streams	PhD Thesis 2007
PGRA	Natt A; Haberle S; Jacobsen G; Tibby J	Galapagos wetland sediments: preliminary findings and future research	4th AINSE Quaternary Dating Workshop 82 Sydney March 2008 978 0 9758434 4 3
PGRA	Natt A; Haberle S; Tibby J; Heijnis H; Jacobsen G	Scales of variability: Late Holocene ENSO variability derived from internationally significant Galapagos wetlands	Australasian Quaternary Association Biennial Meeting 24 Victor Harbour December 2008
PGRA	Pearce S; Linton V M	Residual stresses in high strength, thick section steel welds	Meas Sci Tech 571-572 387-392 2008
PGRA	Pearce S V; Linton V M	Residual stress in a thick section high strength T-butt weld	Mater Sci Eng A 480(1-2) 411-418 2008
03/093; 05/136	(Prescott J R); Mee A	Origin, formation and environmental significance of sapropels in shallow Holocene coastal lakes of southeastern Australia	PhD Thesis 2008
94/072; 96/080	Prescott J R; Habermehl M A	Luminescence dating of spring mound deposits in the southwestern Great Artesian Basin, northern South Australia	Aust J Earth Sci 55 165-179 2008 0812-0099
03/115	Tibby J; Lane M; Gell P A	Local knowledge as a basis for environmental management: a cautionary tale from Lake Ainsworth, northern New South Wales	Environmental Conservation 34 334-341 2008
06/175P	Corkhill E; Tibby J	Unexpected post-settlement freshening and increases in charophytes in the coastal lake Bombah Broadwater, Myall Lakes, NSW	Australasian Quaternary Association Biennial Meeting 8 Victor Harbour December 2008
96/192R	Williams M A J; Adamson D; Cock B; McEvedy R	Late Quaternary environments in the White Nile region, Sudan	Global and Planetary Change 26 305-316 2000

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
99/001 07/160 96/192R	Williams M A J; Adamson D A	A biophysical model for the formation of late Pleistocene valley-fills in the arid Flinders Ranges of South Australia	South Australian Geographical Journal 107 1-14 2008
04/172	Williams M A J	Ambiguous response of desert rivers to climatic change: examples from Africa, Asia and Australia	3rd International Meeting on Global Continental Hydrology, GLOCOPH '98 112-113 1998
04/172	Byrne M; Yeates D K; Joseph L; Kearney M; Bowler J; Williams M A J <i>et al</i>	Birth of a biome: insights into the assembly and maintenance of the Australian arid zone biota	Molecular Ecology 17 4398-4417 2008
00/165; 06/196	Williams M A J	Late Quaternary environments in the Nile Basin	Farouk El-Baz Award for Desert Research. Geological Society of America Annual Conference, 429 Houston, Texas, October 2008
04/172	Williams M A J	Morphoclimatic maps at 18 ka, 9 ka, & 0 ka	In: J J Veevers. Atlas of Billion-Year Earth History of Australia and Neighbours in Gondwanaland 45-48 GEMOC Press Sydney 2001 0-646-40974-30
07160	(Williams M A J); Parham L J R	Late Pleistocene valley-fills in the northern Flinders ranges and their importance for understanding regional geomorphological evolution during the Last Glacial Maximum	BSc Honours Thesis 2008
07/160	Williams M A J	Some problems raised by the Late Pleistocene valley-fills in the semi-arid Flinders ranges, South Australia	13th Australia and New Zealand Geomorphology Group Conference, 93 Queenstown February 2008
96/192R	Talbot M R; Williams M A J; Adamson D A	Strontium isotopic evidence for Late Pleistocene re-establishment of an integrated Nile drainage network	Geology 28(4) 343-346 2000
00/165	Williams M A J; Nottage J	Impact of extreme rainfall in the central Sudan during 1999 as a partial analogue for reconstructing early Holocene prehistoric environments	Quatern Int 150 82-94 2006
99/001 07/160 96/192R	Williams M A J	Environmental significance of Late Pleistocene valley-fills in arid Australia and Africa	3rd Southern Deserts Conference, Molopo Lodge, Kalahari Desert, Southern Africa 48 September 2008
PGRA	Xia F; Zhou J; Brugger J; Ngothai Y; O'Neill B; Chen G; Pring A	Novel route to synthesize complex metal sulfides: hydrothermal coupled dissolution-precipitation replacement reactions	Chem Mater 20 2809-2817 2008
PGRA	Xia F; Pring A; Ngothai Y; O'Neill B; Brugger J; Chen G; Colby C	Hydrothermal synthesis of FeNi ₂ S ₄ , a thiospinel	35th Australasian Chemical Engineering Conference Chemeca 1306-1312 2007 Melbourne, Victoria 0858258447
PGRA	Xia F; Zhou J; Pring A; Ngothai Y; O'Neill B; Brugger J; Chen G; Colby	The role of pyrrhotite (Fe ₇ S ₈) and the sample texture in the hydrothermal transformation of pentlandite ((Fe,Ni) ₉ S ₈) to violarite ((Ni,Fe) ₃ S ₄)	Reaction Kinetics and Catalysis Letters 92 257-266 2007
PGRA	Xia F; Pring A; Ngothai Y; O'Neill B; Brugger J; Chen G; Colby C	The catalytic role of pyrrhotite in hydrothermal alteration of pentlandite to violarite	35th Australasian Chemical Engineering Conference Chemeca 1699-1705 2007 Melbourne, Vic. 2007 0858258447
PGRA	Xia F; Chen G; Pring A; Brugger J; Ngothai Y; O'Neill B; Colby C; Tenailleau C <i>et al</i>	Kinetics and mechanism of hydrothermal alteration from pentlandite to violarite	Acta Geologica Sinica 81 1378-1390 2007
PGRA	Brugger J; Xia F; Pring A	Mineral synthesis using the coupled dissolution-precipitation route	Geochim Cosmochim Acta 71 A118 2008

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
PGRA	Xia F; Pring A; Ngothai Y; O'Neill B; Brugger J; Chen G; Colby C	The mechanism of pentlandite oxidation in the temperature range 530-600	Chemeca 2007 35th Australasian Chemical Engineering Conference 1846-1854 2007
PGRA	Xia F; Pring A; Ngothai Y; O'Neill B; Brugger J; Chen G; Colby C	The kinetics of pentlandite oxidation in the temperature range 530-600	Chemeca 2007 35th Australasian Chemical Engineering Conference 1313-1320 2007

The University of Auckland

05/004; 07/130	Augustinus P C; Bleakley N; Deng Y-B; Shane P; Cochran U	Rapid change in early Holocene environments inferred from Lake Pupuke, Auckland City, New Zealand	J Quatern Sci 23(5) 435-447 2008
06/210	Bowmaker G A; Pakawatchai C; Skelton B W; Thanyasirikul Y; White A H	Structural and spectroscopic studies of $[M((x)tu)_4]^+$ systems (M = Cu, Ag; (x)tu = (substituted) thiourea)	Z Anorg Allg Chem 634 2583-2588 2008 0044-2313
06/210	Bowmaker G A; Hanna J V; Hart R D <i>et al</i>	The role of short-range diffusion in solvent-assisted mechanochemical synthesis of metal complexes	J Chem Soc Dalton Trans 5290-5292 2008
06/210	Hanna J V; Bowmaker G A; Hanley T L; Schurko W	Structure and polymorphism in copper(I) pseudohalides: complementarity of spectroscopic, diffraction and computational methods	6th AINSE/ANBUG Neutron Scattering Symposium 24 Lucas Heights December 2007 0 9758434 3 5
06/210	Bowmaker G A; Hanna J V; Hahn E <i>et al</i>	Structural and spectroscopic studies of some copper(I) halide t-butyl-isocyanide adducts	J Chem Soc Dalton Trans 1710-1720 2008
06/076	Hay M P; Hicks K O; Pchalek K; Lee H H; Blaser A; Pruijn F B <i>et al</i>	Tricyclic 1,2,4-triazine 1,4-dioxides as hypoxia selective cytotoxins	J Med Chem 51 6853-6865 2008
07/073	Scott M; Goeffroy M; Chiu W; Blackford M; Idriss H	Hydrogen production from ethanol over Rh-Pd/CeO ₂ catalysts	Topics in Catalysis 51 39-48 2008
07/073	Idriss H; Scott M	Heterogeneous catalysis for hydrogen production	In: Handbook of Green Chemistry - Green Catalysis; Anstis P; Crabtree R H (eds) Chapter 10 2008 3-527-31577-2
07/073	Scott M; Chui W; Blackford M G; Idriss H	Catalytic hydrogen production from ethanol over Rh-Pd/CeO ₂	J Am Chem Soc, Div Pet Chem 53(1) 37-39 2008
07/073	Idriss H; Scott M; Llorca J; Chan S C; Chiu W; Sheng P Y; Blackford M <i>et al</i>	A phenomenological study of the metal/oxide interface. The role of catalysis in hydrogen production from renewable sources	Chem Sus Chem 1 905-910 2008
PGRA	Lee J; Bhattacharyya D; Easteal A J; Metson J B	Properties of nano-ZnO/poly(vinyl alcohol) / poly(ethylene oxide) composite thin films	Current Appl Phys 8(1) 42-47 2008
FELL	McGillivray D	Proteins at the edge: biological membrane – protein interactions through neutron reflectometry	AINSE's 50th Anniversary Seminar 1 Sydney December 2008 9758434-7 5
FELL	McGillivray D J; Singh R; Melton L D; Zhang J; Worcester D L	Antioxidant - phospholipid interactions studied by neutron diffraction	7th AINSE/ANBUG Neutron Scattering Symposium 4 Lucas Heights December 2008 978 0 9758434 6 8
FELL	McGillivray D J	Neutron reflectometry to probe biological membranes	5th Polymer Electronics Research Centre Symposium, 23 Auckland November 2008
FELL	Lee O; Quek S Y; McGillivray D J	Cholesterol free liposomes	The Australasian Functional Foods Conference – Functional Foods and Edible Oils: The future, 43 Auckland November 2008
FELL	McGillivray D J; Thomas R K; Rennie A R; Penfold J	Ordered structures of di-chain cationic surfactants at interfaces	ILL Symposium: Surfaces and Interfaces in Soft Matter and Biology 35 Grenoble 2008

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
FELL	Valincius G; Heinrich F; Budvytyte R; Vanderah D J; McGillivray D J; Sokolov Y; Hall J E; Lösche M	Soluble amyloid beta oligomers affect dielectric membrane properties by bilayer insertion and domain formation: implications for cell toxicity	Biophys J 95 4845 2008
FELL	Vockenroth I K; Ohm C; Robertson J W F; McGillivray D J <i>et al</i>	Stable insulating tethered bilayer lipid membranes	Biointerphases 3 FA68 2008
FELL	McGillivray D J; Mata J P; White J J; Zank J	Nano and microstructure of the interfaces between air, oil and water	AINSE/ANSTO Neutron Scattering Symposium 17 Sydney December November 2008

Australian National University

04/182	Kennett D; Anderson A; Prebble M; Conte E; Southon J	Prehistoric human impacts on Rapa, French Polynesia	Antiquity 80(308) 340-354 2006
04/182	(Anderson A); Prebble M	Islands, floras and history: an environmental history of plant introduction and extinction on the Austral Islands (French Polynesia)	PhD Thesis 2006
05/008	Bellwood P; Dizon E	Austronesian cultural origins: out of Taiwan, via the Batanes Islands, and onwards to western Polynesia	In: Past Human Migrations in East Asia: Matching Archaeology, Linguistics and Genetics; Sanchez-Mazas A <i>et al</i> (eds) 23-39 2008 London 978-0-415-39923-4
05/008	(Bellwood P); Hung H-C	Migration and cultural interaction in southern coastal China, Taiwan and the northern Philippines, 3000 BC to AD 100: The early history of the Austronesian-speaking populations	PhD Thesis 2008
05/008	(Bellwood P); Swete Kelly M Cr	Prehistoric social interaction and the evidence of pottery in the Northern Philippines	PhD Thesis 2008
06/026	Bellwood P; Cameron J; Nguyen V; Bui V L	Ancient boats, boat timbers, and locked mortise and tenon joints from Bronze-Iron Age Northern Vietnam	International Journal of Maritime Archaeology 36 2-20 2007
06/042	Murgese D S; De Deckker P; Spooner M I; Young M	A 35,000 year record of changes in the eastern Indian Ocean offshore Sumatra	Palaeogeogr Palaeoclimatol 265 195-213 2008
06/042	(De Deckker P); Spooner M I	The dynamics of the Leeuwin Current during the middle and late Quaternary	PhD Thesis 2005
06/042	(De Deckker P); Murgese S D	Late Quaternary palaeoceanography of the eastern Indian Ocean based on benthic foraminifera	PhD Thesis 2004
04/046	Zhang Q; Teyssier C; Dunlap W J	Zhangbaling metamorphic belt: style and timing of collision between North and South China	GSA Bulletin 113 32 November 2001
04/046	(Dunlap W J); Forster M A; Lister G S	Do strain-rates in deep ductile shear zones reflect seismogenesis at surficial levels of the same movement zones?	AESC 89 102 July 2008 Perth
04/046	(Dunlap W J); Forster M A; Lister G S	Dating movement in shear zones: the example of the South Cyclades Shear Zone, Ios, Aegean Sea, Greece	IOP Conf Series: Earth and Environmental Science 2 2 012004 April 2008 Austin Texas
04/046	Kruckenber S C; Whitney D L; Teyssier C; Fanning C M; Dunlap W J	Paleocene-Eocene migmatite crystallization, extension, and exhumation in the hinterland of the northern Cordillera: Okanogan dome, Washington, USA	GSA Bulletin 120 912-929 2008
PGRA	Drew S; Flett I; Wilson J; Heijnis H; Skilbeck C G	The trophic history of Myall Lakes, New South Wales, Australia: interpretations using $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ of the sedimentary record	Hydrobiologia 608(1) 35-47 2008

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
PGRA	Flett I; Haberle S	East of Easter: traces of human impact in the far eastern Pacific	In: Islands of Inquiry: Colonisation, Seafaring and the Archaeology of Maritime Landscapes. Clark G; Foss Leach F; O'Connor S (eds) 29 281-299 2008 Canberra 9781921313899
PGRA	Flett I; Heijnis H; Jacobsen G; Haberle S	Dating holocene sediments for palaeoenvironmental reconstruction in the Galapagos Islands	4th AINSE Quaternary Dating Workshop 56 Sydney March 2008 978 0 9758434 4 3
05/199	Goossens D J; Gutmann M J	Ordering and interactions in para-terphenyl: a neutron diffuse scattering study	7th AINSE/ANBUG Neutron Scattering Symposium 32 Lucas Heights December 2008 978 0 9758434 6 8
FELL	Hudspeth J; Goossens D J; Norén L; James M	Structure and properties of rare-earth calcium ferrates, $\text{Ln}_x\text{Ca}_x\text{FeO}_{3-d}$	Australian Institute of Physics Congress 189 Adelaide November 2008
FELL	Whitfield R E; Goossens D J; Studer A J	Study of phase formation in metal injection moulding through real time neutron diffraction	Australian Institute of Physics Congress 189 Adelaide November 2008
FELL	Goossens D J; Gutmann M J; Welberry T R; Adroja D T; Kathoh K; Aoki H; Rainford B D	Monte Carlo analysis of neutron diffuse scattering in CePdSb	Australian Institute of Physics Congress 189 Adelaide November 2008
FELL	Hudspeth J; Goossens D J; James M; Studer A	The magnetic structure of rare-earth calcium ferrates	AINSE/ANSTO Neutron Scattering Symposium, 35 Sydney December November 2008
FELL	Welberry T R; Goossens D J	The interpretation and analysis of diffuse scattering using Monte Carlo simulation methods	Acta Crystallogr A 64 23–32 2008
FELL	Goossens D J; Welberry T R; Heerdegen A P	Diffuse x-ray scattering from HMTA: analysis via a Monte Carlo simulation	Acta Crystallogr B 64 456-465 2008
FELL	Welberry T R; Goossens D J	Different models for the polar nanodomain structure of PZN and other relaxor ferroelectrics	J Applied Crystallography 41 606–614 2008
FELL	Beasley A G; Welberry T R; Goossens D J; Heerdegen A P	A room temperature x-ray diffuse scattering study of form II of the trimorphic molecular system p-(N-methylbenzylidene)-p-methylaniline	Acta Crystallogr B 64 633-643 2008
FELL	Hicks T J; Keller T; Wildes A; Aynajian P; Goossens D J	Magnetic dipole splitting of magnon bands in a 2-dimensional antiferromagnet	6th AINSE/ANBUG Neutron Scattering Symposium 25 Lucas Heights December 2007 0 9758434 3 5
FELL	Goossens D J	Recent progress in the structure and magnetism of materials group at ANU	AINSE's 50th Anniversary Seminar 9 Lucas Heights December 2008 9758434-7 5
07/062	Shiga Y; Greene R; Scott K; Stelcer E	Aeolian dust: its potential role as a carrier of terrestrial salt in Australia	4th Australian New Zealand Aerosol Seminar Aerosol Seminar 5 Lucas Heights July 2008
06/080	Donders T H; Haberle S G; Hope G S; Wagner F; Visscher H	Transition of the eastern Australian climate system from the post-glacial to the present day ENSO mode	Quatern Sci Rev 26(11-12) 1621-1637 2007
PGRA	Lilly K	Three million years of East Antarctic Ice Sheet history from in situ cosmogenic nuclides in the Lambert-Amery Basin	PhD Thesis 2008
01/100	McDougall I; Brown F H; Fleagle J G	Sapropels and the age of hominins Omo I and II, Kibish, Ethiopia	J Human Evolution 55 409-420 2008 0047-2484
02/081P	McDougall I; Brown F H	Geochronology of the pre-KBS Tuff sequence, Omo Group, Turkana Basin	J Geological Soc London 165 549-562 2008
96/052	Spell T L; McDougall I	Characterization and calibration of $^{40}\text{Ar}/^{39}\text{Ar}$ dating standards	Chem Geol 198 189-211 2003

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
06/250	Elcombe M; Kearley G; Norén L; Withers R	Disordered structures – a multi-pronged attack	6th AINSE/ANBUG Neutron Scattering Symposium 14 Lucas Heights December 2007 0 9758434 3 5
06/250	Elcombe M; Norén L	The structure of $\text{Li}_4\text{NbO}_4\text{F}$ a joint neutron x-ray refinement	SCANZ Conference - Crystal XXV 072 April 2007 Hunter Valley NSW
06/140	(O'Connor S) Marwick B	Human behavioural ecology and stone artefacts in northwest Thailand during the terminal Pleistocene and Holocene	In: Pautreau J-P (ed) Southeast Asian Prehistory. The 11th EurASEAA 37-39 2008 Paris
06/140	(O'Connor S) Marwick B	What attributes are important for the measurement of assemblage reduction intensity? Results from an experimental stone artefact assemblage with relevance to the Hoabinhian of mainland Southeast Asia	J Archaeol Sci 35 1189-1200 2008
06/140	(O'Connor S) Marwick B	Stone artefacts and human ecology at two rockshelters in Northwest Thailand	PhD Thesis 2008
04/137	Prebble M; Sim R; Finn J; Fink D	A Holocene pollen and diatom record from Vanderlin Island, Gulf of Carpentaria, lowland tropical Australia	Quatern Res 64(3) 357-371 2005 0033-5894
04/187	(Summerhayes G) Garling S	Post Lapita evolutions or revolution? Interaction and exchange in Island Melanesia: the view from the Tanga Islands	PhD Thesis 2004
PGRA; 04/214	Perriman A W; McGillivray D J; White J W	Reactions of isolated mono-molecular protein films	Soft Matter 4 2192-2198 2008
PGRA; 04/213	Perriman A W; Henderson M J; Evenhuis C R; McGillivray D J; White J W	The effect of the guanidinium chloride on the structure of lysozyme adsorbed at the air-water interface	Phys Chem B 112(31) 9532-9539 2008
PGRA	Perriman A W; Henderson M J; Holt S A; White J W	Effect of the air-water interface on the stability of beta-lactoglobulin	J Phys Chem B 111(48) 13527-37 2007
PGRA	Whitfield R E; Goossens D J; Studer A J	Study of the phase evolution in metal injection moulding through real time neutron diffraction on Wombat	7th AINSE/ANBUG Neutron Scattering Symposium 36 Lucas Heights December 2008 978 0 9758434 6 8

University of Ballarat

06/051	(Dowling K); Pearce D C	Geology, geography and cancer: is there a connection in the goldfields region of Victoria, Australia?	PhD Thesis 2008
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University of Canberra

06/038	(Creagh D); Kubik M E	The use of non-sampling spectroscopic techniques in conservation: improved methodologies for pigment identification	PhD Thesis 2007
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Charles Darwin University

04/068	(Griffiths A); Koenig J	Timber harvest management for the Aboriginal arts industry: socio-economic, cultural and ecological determinants of sustainability	PhD Thesis 2005
04/068	Griffiths A D; Schult H J; Gorman J	Wild harvest of <i>Cycas arnhemica</i> : impact on survival, recruitment and growth in Arnhem Land, northern Australia	Aust J Bot 53 1-9 2005

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/184	Clark A C	The production of yellow pigments from (+)-catechin and dihydroxyfumaric acid in a model wine system	European Food Research and Technology 226(4) 925-931 February 2008 1438-2377

Charles Sturt University

08/148	Jarrett K J; Buckley C E; Garvey C J	Direct measurement of the microfibril angle in Acacia wood	6th AINSE/ANBUG Neutron Scattering Symposium 31 Lucas Heights December 2007 0 9758434 3 5
08/148	Jarrett K J; Garvey C J; Buckley C E	Cellulosic materials in different lights	AINSE/ANSTO Neutron Scattering Symposium 6 Lucas Heights December 2008
PGRA	Mefford O T; Carroll M R J; Vadala M L; Goff J D; Mejia-Ariza R; Saunders M <i>et al</i>	Size analysis of PDMS-magnetite nanoparticle complexes: experiment and theory	Chem Mater 20 2184-2191 2008
PGRA	Mefford O T; Vadala M L; Carroll M R J; Caba B L; St Pierre T G; Woodward RC; Davis R M; Riffle J S	Stability of polydimethylsiloxane-magnetite nanoparticle dispersions against flocculation: interparticle interactions of polydisperse materials	Langmuir 24 5060-5069 2008
PGRA	Carter G; Rowles M; Ogden M I; Buckley C E	Aqueous processing of zirconyl chloride with yttrium chloride from solutions to ceramics	32nd International Conference & Exposition on Advanced Ceramics & Composites ICACC-S3-005-2008 February 2008 Daytona Beach
PGRA	Carter G A; Rowles M R; Hart R D; Ogden M I; Buckley C E	From zirconyl chloride to zirconia ceramics, a plant operation perspective	Materials Forum 32 82-89 2008
PGRA	Chester R	Calixarenes as potential ionophores for thallium ion-selective electrodes	PhD Thesis 2007
04/040	De Marco R; Martizano J	Response of a copper(II) and iron(III) ion-selective electrode bielectrode array in saline media	Talanta 75(5) 1234-1239 June 2008
03/147P	(De Marco R); John D	Mechanism of carbon dioxide corrosion and inhibition under high flow - a jet impingement study	PhD Thesis 2006
07/173	De Marco R; Ng A; Panduwinata D	Detecting biorecognition events at blocked interface polymeric membrane ion-selective electrodes using electrochemical impedance spectroscopy and atomic force microscopy	Electroanalysis 20 313-317 2008
07/038P	De Marco R; Veder J P; Clarke G; Nelson A; Prince K; Pretsch E; Bakker E	Evidence of a water layer in solid-contact polymeric ion sensors	Phys Chem Chem Phys 10 73-76 2008
PGRA	Lawrence S; Mulders A M; Stau U; Garcia-Fernandez M; Mazzoli C; Scagnoli V	Resonant x-ray scattering of multiferroic LuFe ₂ O ₄	6th AINSE/ANBUG Neutron Scattering Symposium 33 Lucas Heights December 2007 0 9758434 3 5
PGRA	García-Fernández M; Staub U; Bodenthin Y; Lawrence S M; Mulders A M; Buckley C E <i>et al</i>	A resonant soft x-ray powder diffraction study to determine the orbital ordering in A-site ordered SmBaMn ₂ O ₆	Phys Rev B 77(6) 060402(R) 2008
PGRA	García-Fernández M; Staub U; Lawrence S M; Mulders A M; Buckley C E <i>et al</i>	A resonant soft x-ray powder diffraction study to determine the orbital ordering in A-site ordered SmBaMn ₂ O ₆	6th AINSE/ANBUG Neutron Scattering Symposium 19 Lucas Heights December 2007 0 9758434 3 5

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PGRA	Princep A; Mulders A; Lawrence S; Macquart R	Characterization of the multiferroic phase of hexaferrite	6th AINSE/ANBUG Neutron Scattering Symposium 46 Lucas Heights December 2007 0 9758434 3 5
06/111	Pang W K; Low I-M; Prince K E; Atanacio A	Mapping of elemental composition in air-oxidized Ti_3SiC_2	J Aust Ceram Soc 44(2) 52-55 2008 0004-881X
04/207; 05/206	Low I-M; Oo Z	<i>In situ</i> diffraction study of self-recovery in aluminum titanate	J Am Ceram Soc 91(3) 1027–1029 2008
05/206; 06/247	Oo Z; Low I-M; Palmquist J-P; Pang W K; Avdeev M	Mapping of composition, phase transitions and properties in oxidized Ti_3SiC_2	Key Engineering Materials 368-372 986-988 2008
06/110; 06/112	Tezuka N; Low I-M; Davies I; Alecu I; Stead R; Avdeev M; Mehrtens E; Latella B	<i>In situ</i> neutron diffraction study on the effect of aluminium fluoride on phase transformation of mullite from alumina/clay	Materials Science and Technology 4 2224-2233 2007
05/205	Low I-M; Oo Z	Reformation of phase composition in decomposed aluminium titanate	Mater Chem Phys 111 9-12 2008
PGRA	Lowe J L; Rohl A L; Gale J D; Smith P G; Parkinson G M	Incorporation of impurity anions into DSP: insights into structure and stability from computer modeling	Molecular Simulations 32(1) 35-44 2006
PGRA	Lowe J L; Hart R D; Smith P G; Rohl A L; Parkinson G M	Morphology and crystallinity: insights into the mechanism of growth of DSP	7th International Alumina Quality Workshop 168-173 October 2005 Perth, Australia
PGRA	Lowe J L	DSP in the Bayer process: a fundamental study of ITS precipitation and role in impurity removal	PhD Thesis 2007
PGRA	Paskevicius M; Dhal B B; Buckley C E	Novel method of synthesis of Al-nanoparticle for hydrogen-storage	6th AINSE/ANBUG Neutron Scattering Symposium 45 Lucas Heights December 2007 0 9758434 3 5
PGRA	Tian H Y; Buckley C E; Mulè S; Paskevicius M; Dhal B B	Preparation, microstructure and hydrogen sorption properties of nanoporous carbon aerogels under ambient drying	Nanotechnology 19 475605 2008
PGRA	Paskevicius M; Dhal B B; Buckley C E	Hydrogen storage properties of aluminium and alane (AlH_3) nanoparticles	7th AINSE/ANBUG Neutron Scattering Symposium 11 Lucas Heights December 2008 978 0 9758434 6 8
PGRA	Rowle M; Hanna J V; Pike K J; Smith M E; O'Connor B H	^{36}Si , ^{27}Al , 1H and ^{23}Na MAS NMR study of the bonding character in aluminosilicate inorganic polymers	Appl Magn Reson 32 663-689 2007
PGRA	Sheppard D A; Jiang Z–T; Buckley C E	Investigations of hydrogen uptake in ball-milled $TiMgNi$	Int J Hydrogen Energy 32(12) 1928-1932 2007
PGRA	Sheppard D A; Paskevicius M; Buckley C E	Crystallite size determination of mechanochemically synthesised MgH_2	7th AINSE/ANBUG Neutron Scattering Symposium 52 Lucas Heights December 2008 978 0 9758434 6 8
PGRA	Sheppard D A; Buckley C E	Hydrogen adsorption on porous silica	International J Hydrogen Energy 33 1688-1692 2008
04/157P	Carter G A; van Riessen A	Neutron diffraction of zirconia-dispersed alumina with increasing stress and temperature	J Am Chem Soc 91(2) 559-562 2008
PGRA	Veder J-P; De Marco R; Clarke G; Nelson A; Pretsch E; Bakker E	Tuning electrochemical sensors using thin film confinement effects	Proc Matrafured 2008 – International Conference on Electrochemical Sensors 22 October 2008 Dobogoko, Hungary
PGRA	Veder J-P; De Marco R; Clarke G; Chester R; Nelson A; Prince K <i>et al</i>	Elimination of undesirable water layers in solid-contact polymeric ion-selective electrodes	Anal Chem 80 6731-6740 2008

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PGRA	Nuhiji B	Structure property relationships in thermosetting epoxy nanocomposites	AINSE's 50th Anniversary Seminar 16 Lucas Heights December 2008 9758434-7 5

Flinders University

05/010	Krull E S; Bestland E A; Skjemstad J O; Parr J F	Geochemistry ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$, ^{13}C -NMR) and residence time (^{14}C and OSL) of soil organic matter from red-brown earths of South Australia: implications for soil genesis	Geoderma 132 344-360 2006
03/072	Baird D; Le Gal La Salle C; Love A; Simmons C	Reconstructing natural groundwater flow and geochemical processes in a perturbed multi-layer aquifer system	IAH Selected Papers on Hydrogeology 10 225-238 2007 978-0-415-44355-5
06/254; 07/131	Nussio M R; Voelcker N H; Sykes M J; McInnes S J P; Gibson C T; Shapter J G <i>et al</i>	Lateral heterogeneities in supported bilayers from pure and mixed phosphatidylethanolamine demonstrating hydrogen bonding capacity	Biointerphases 3(4) 96-104 2008
03/105	Norman J; Shapter J G; Short K; Smith L J; Fazzalari N L	Micromechanical properties of human trabecular bone: a hierarchical investigation using nanoindentation	J Biomed Mater Res A 87(1) 196-202 2008
06/254; 07/131	Nussio M R; Voelcker N V; Sykes M J; Flavel B S; Miners J O; Shapter J G	High resolution chemical mapping of biomimetic membranes by force volume imaging	ICONN 121-124 Melbourne February 2008
06/254; 07/131	Nussio M R; Sykes M J; Miners J O; Shapter J G	Characterisation of chlorpromazine binding to lipid bilayer membranes	International Conference on Nanoscience and Nanotechnology 267-270 July 2006
07/151P	Hoffman L W; Voelcker N H; Knott R B; Clarke S R	Poly(amidoamine)(PAMAM) dendrimers and gold nanoparticles – a fresh look	6th AINSE/ANBUG Neutron Scattering Symposium 26 Lucas Heights December 2007 0 9758434 3 5

Griffith University

PGRA	Burt E A	<i>In situ</i> neutron powder diffraction study of hydrogen storage in the $\text{LiBH}_4 + \text{MgH}_2$ system	AINSE's 50th Anniversary Seminar 6 Lucas Heights December 2008 9758434-7 5
PGRA	Burt E A ; Gray E MacA	Reaction mechanisms in lithium based hydrogen storage materials	6th AINSE/ANBUG Neutron Scattering Symposium 8 Lucas Heights December 2007 0 9758434 3 5
PGRA	Busbridge T	<i>In situ</i> x-ray investigation of CO_2 densification in coal	AINSE's 50th Anniversary Seminar 3 Lucas Heights December 2008 9758434-7 5
07/065	Han J	SIMS investigation on the 3C-SiC on Si	International Conference on Electronic Materials (IUMRS-ICEM 2008) 1026 August 2008 Sydney, Australia
05/070	Wang L; Dimitrijevic S; Han J; Zou J	Deep void formation mechanism in Si(100) during its carbonization reaction with C_2H_2	Thin Solid Films 515 6824–6826 2007
06/073	Han J; Dimitrijevic S; Kong F; Tanner P; Atanacio A	Electrical characteristics of near-interface traps in 3C-SiC metal oxide semiconductors	IEEE Electron Device Letters(A) 29(9) 1021-1023 September 2008
04/076P	Healy P C; Loughrey B T; Bowmaker G A; Hanna J V	Structural, ^{197}Au Mössbauer and solid state ^{31}P CP/MAS NMR studies on bis(<i>cis</i> -bis-diphenylphosphino)ethylene gold(I) complexes $\text{Au}(\text{dppe})_2\text{X}$ for $\text{X} = \text{PF}_6, \text{I}$	J Chem Soc Dalton Trans 3723-3728 2008

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James Cook University			
03/056	Hearty P J; O'Leary M J	Carbonate eolianites, quartz sands, and Quaternary sea-level cycles, Western Australia: a chronostratigraphic approach	Quatern Geochron 3 26–55 2008
PGRA	Muller J; Kylander M; Wüst R A J; Weiss D; Martinez-Cortizas A; LeGrande A N Allegra N; Jennerjahn T; Behling H; Anderson W T; Jacobsen G	Possible evidence for wet Heinrich phases in tropical NE Australia: the Lynch's Crater deposit	Quatern Sci Rev 27 468-475 2008
PGRA	Muller J ; Kylander M; Martinez-Cortizas A; Wüst R A J; Weiss D; Black K; Coles B; Garcia-Sanchez R	The use of principle component analyses in characterising trace and major elemental distribution in a 55 kyr peat deposit in tropical Australia: implications to paleoclimate	Geochim Cosmochim Acta 72 449-463 2008
PGRA	Kylander M; Muller J ; Wüst R A J; Gallagher K; Garcia-Sanchez R; Coles B J; Weiss D J	Rare earth element and Pb isotope variations in a 52 kyr peat core from Lynch's Crater (NE Queensland, Australia): proxy development and application to paleoclimate in the Southern Hemisphere	Geochim Cosmochim Acta 71 942–960 2007
06/188	(Webster J); Ludman D	Source, timing and frequency of turbidite deposits in the submarine canyons of the northern great barrier reef	BSc Honours Thesis 2007
07/161	Rieley J O; Wüst R A J; Jauhiainen J; Page S E; Wösten J H M; Hooijer A; Siegert E <i>et al</i>	Tropical peatlands, carbon stores, carbon gas emissions and contribution to climate change processes	In: Peatlands and climate change. Strack M (ed) 148-181 2008
07/161	Charsky A; Gastaldo R A; Wüst R A J; Rieser U	Evidence for pulsed flooding periods from a series of terraces along the Burdekin River in northeast Queensland, Australia, during the Late Quaternary: implication for climate change	GSA Abstracts with Programs 40(6) 147 2008
07/161	Wüst R A J; Rieley J; Page S; Kaars S V D; Wei-Ming W; Jacobsen G; Smith A	Peatland evolution in Southeast Asia during the last 35,000 cal years: implications for evaluating their carbon storage potential	In: Rieley J O; Banks C J; Radjagukguk B (eds) Carbon-climate-human interaction on tropical peatland. Proceedings of The International Symposium and Workshop on Tropical Peatland 19 August 2007 Yogyakarta
05/178	Wüst R A J; Shemesh A; Ridd P; Stephenson J; Jacobsen G; Smith A	Low latitude moisture regime changes over the last 14,000 years recorded by diatomaceous sediments from dry tropical Australia	Quatern Int 167-168 456-457 2007
07/161	Beaman R J; Webster J M; Wüst R A J	New evidence for drowned shelf edge reefs in the Great Barrier Reef, Australia	Mar Geol 247(1-2) 17-34 2008
06/200	Wüst R A J; Jacobsen G; van der Gaast H; Smith A	Comparison of radiocarbon ages from different organic fractions in tropical peat cores: Insights from Kalimantan, Indonesia	Radiocarbon 50(3) 359-372 2008
06/100; 05/098	Kosnik M A; Kaufman D S; Hua Q	Identifying outliers and assessing the accuracy of amino acid racemization measurements for use in geochronology: I. Age calibration curves	Quatern Geochron 3(4) 308-327 2008

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06/100; 05/098	Kosnik M A; Kaufman D S; Hua Q; Wust R	Bioturbation, taphonomic bias, and time-averaging in tropical molluscan death assemblages: differential shell half lives in Great Barrier Reef sediment	11th International Coral Reef Symposium 2 July 2008 Ft Lauderdale, Florida
06/100; 05/098	Kosnik M A; Kaufman D S	Identifying outliers and assessing the accuracy of amino acid racemization measurements for use in geochronology: II. Data screening	Quatern Geochron 3(4) 328-341 2008
PGRA	Lewis S; Wust R; Webster J M; Shields G A	Mid-late Holocene sea-level variability in eastern Australia	Terra Nova 20(1) 74-81 2008

La Trobe University

PGRA	Raiber M; Webb J A; Jacobsen G E; Chisari R; Williams A A	Geological controls on the spatial variability of groundwater recharge and salinity in a regional-scale basalt aquifer in western Victoria	Water Down Under Conference 1279-1283 April 2008
PGRA	Raiber M; Webb J A	Tectonic control of tertiary deposition in the Streatham deep lead system in western Victoria	Aust J Earth Sci 55(4) 493-508 2008
PGRA	Raiber M	Using age dating to study groundwater dynamics in the basalt plains of western Victoria	AINSE's 50th Anniversary Seminar 12 Lucas Heights December 2008 9758434-7 5

Macquarie University

05/023	Jong Wah J W; Ferris J M; Wintrebert-Fouquet M; Butcher K S A	Dielectric properties and photoluminescence of diatomaceous silicas	AIP 16th Biennial Congress 177 Canberra 2005
05/023	(Butcher K S A); Jong Wah J W	Dielectric properties and photoluminescence of diatoms for applications in electronic devices	MSc Thesis August 2006
06/041	Jong Wah J W; Butcher K S; Wintrebert-Fouquet M; Dawes J M; Ferris J M	Optical and electronic properties of diatoms	Optical Society of America, Frontiers in Optics JsuA43 September 2007 ISBN 1-55752-846-2
PGRA	Garcia A; Kobayashi T; Bleakley N; Ralph T; Hesse P; Ingleton T	Palaeolimnological study of the Macquarie Marshes, Australia: evidence of channel movement during the Holocene based on algae (charophytes, diatoms), macrophytes and invertebrates	Quatern Int 167-168 S1 131-132 2007
PGRA	Ralph T J	Channel breakdown and floodplain wetland morphodynamics in the Macquarie Marshes, south-eastern Australia	PhD Thesis 2008
PGRA	Ralph T J; Hesse P P; Yonge D	Holocene channel breakdown and floodplain wetlands: the geomorphology and sedimentology of the Macquarie Marshes, south-eastern Australia	Quatern Int 167-168 S1 336 2007
PGRA	Ralph T J; Hesse P; Harrison J; Rhodes E J	Fallout radionuclides, single-grain OSL and AMS ¹⁴ C dating indicate reworking and deposition of recent sediments in the Southern Macquarie Marshes, Australia	4th AINSE Quaternary Dating Workshop 88 Sydney March 2008 978 0 9758434 4 3
05/159	Shah P; Strezov V; Prince K; Nelson P F	Speciation of As, Cr, Se and Hg under coal fired power station conditions	Fuel 87 1859-1869 2008
07/146	Collins S R; Weldon C; Banos C; Taylor P W	Effects of irradiation dose rate on quality and sterility of Queensland fruit flies, <i>Bactrocera tryoni</i> (Froggatt)	J Appl Ent 132(5) 398-405 2008 1439-0418

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The University of Melbourne			
07/004	Wang Y D; Siegele R; Smith J A C; Baker A J M	Cellular localization and discrimination of cobalt and nickel in <i>Haumaniastrum robertii</i> , <i>Crotalaria cobalticola</i> and <i>Alyssum murale</i> using microPIXE spectrometry	Sixth International Conference on Serpentine Ecology 55 June 2008 College of the Atlantic, Bar Harbour, Maine, USA
06/008P	Siegele R; Kachenko A G; Bhatia N P; Wang Y D; Ionescu M; Singh B; Baker A J M; Cohen D D	Localisation of trace metals in metal-accumulating plants using μ -PIXE	X-Ray Spectrometry 37 133-136 2008
07/004	Wang Y D; Siegele R; Ryan C; Smith J A C; Baker A J M	Use of micro-PIXE to determine the spatial distribution and localization of copper in the cuprophytes <i>Haumaniastrum robertii</i> and <i>Elsholtzia splendens</i>	Proceedings of the 5th International Phytotechnologies Conference 57-60 2008 Nanjing, China
07/024	Southon A; Farlow A; Norgate M; Burke R; Camakaris J	Malvolio is a copper transporter in <i>Drosophila melanogaster</i>	J Experimental Biology 211 709-716 2008
07/024	Hardman B; Michalczyk A; Greenough M; Camakaris J; Mercer J F; Ackland M L	Distinct functional roles for the Menkes and Wilson copper translocating P-type ATPases in human placental cells	Cell Physiol Biochem 20 1073-1084 2007
07/024	Crouch P J; Harding S M; White A R; Camakaris J; Bush A I; Masters C L	Mechanisms of A beta mediated neurodegeneration in Alzheimer's disease	Int J Biochem Cell Biol 40(2) 181-98 2008
07/024	Camakaris J; Burke R; Allan K; Harding S; Bush A; Bellingham S	Investigations on the role of copper in human neurodegenerative diseases using model systems	Cell Biol Toxicol 24(1) S118 2008
07/026	Wang X D; Mitchell D R G; Prince K; Atanacio A J; Caruso R A	Gold nanoparticle incorporation into porous titania networks using an agarose gel templating technique for photocatalytic applications	Chem Mater 20 3917-3926 2008
07/025P	Mitchell D R G; Wang X D; Caruso R A	Plasmon imaging: an efficient TEM-based method for locating noble metal particles dispersed on oxide catalysts at very low densities	Micron 39 344-347 March 2007
08/012	Caruso R A; Drisko G L; Sklavakis P M; Luca V	Metal oxide-polyelectrolyte hybrid materials for the adsorption of lead	Australian Colloids and Interface Science Student Conference 40 Victoria February 2008
PGRA	Connor S E; Kvavadze E V	Modelling late Quaternary changes in plant distribution, vegetation and climate using pollen data from Georgia, Caucasus	J Biogeography 36 529-545 2008
PGRA	Power M J; Marlon J; Ortiz N ; Bartlein P J ; Harrison S P ; Mayle F E; Ballouche A ; Bradshaw R H W; Carcaillet C; Cordova C; Mooney S; Connor S E <i>et al</i>	Changes in fire regimes since the Last Glacial Maximum: an assessment based on a global synthesis and analysis of charcoal data	Climate Dynamics 30 887-907 2008
05/061P	(Gee M); McLean S	Interactions between the surface-adsorbed pH-tunable di-block copolymer poly(2-vinylpyridine)-poly(ethylene oxide)	PhD Thesis 2008
07/106	(Martin R F); Anderson R F; Shinde S S; Maroz A J	Cytosine-gated hole creation and transfer in DNA in aqueous solution	J Am Chem Soc 128 15966-15967 2006

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06/119	Martin R F; Lobachevsky P N; White J; Leung M; Skene C; White J	Plasmid breakage by ¹²⁵ I-labelled DNA ligands: effect of DNA-iodine atom distance on breakage efficiency	Intl J of Radiation Biology 84(12) 991-1000 2008
PGRA	Mills R D; Hanley T; Knott R B; Cheng H-C; Culvenor J; Mulhern T D	Structural analysis of enzymatic domains from the Parkinson's disease-causative protein LRRK2 by solution scattering methods	7th AINSE/ ANBUG Neutron Scattering Symposium 24 Lucas Heights December 2008 978 0 9758434 6 8
PGRA	Mills R D	Domain organisation in solution of the monomeric form of the Tom70 mitochondrial import receptor	AINSE's 50th Anniversary Seminar 8 Lucas Heights December 2008 9758434-7 5
PGRA	Mills R D; Sim C H; Mok S S; Mulhern T D; Culvenor J G; Cheng H-C	Biochemical aspects of the neuroprotective mechanism of PTEN-induced kinase-1 (PINK1)	J Neurochemistry 105 18-33 2008 0022-3042
07/125P	Provis J L; Walls P A; van Deventer J S J	Geopolymerisation kinetics. 3. Effects of Cs and Sr	Chem Eng Sci 63 4480-4489 2008
FELL	Riley D	Application of crystalline precursors to the design of novel materials	AINSE's 50th Anniversary Seminar 15 Lucas Heights December 2008 9758434-7 5
FELL	Riley D P; Kisi E H; Hansen T C	Self-propagating high-temperature synthesis of Ti ₃ SiC ₂ : II kinetics of ultra-high-speed reactions from <i>in situ</i> neutron diffraction	J Am Ceram Soc 91 3207-3210 2008
04/132P	(Sagona A); Morris R C	Change and continuity: the Bronze Age/Iron Age transition in Anatolia	MA Thesis 2007
06/173P	Fletcher M S; Thomas I	Modern pollen-vegetation relationships in western Tasmania, Australia	Rev Palaeobot Palynol 146(1-4) 146-168 2007
08/079	(Wang Y D); Piccinin R	The cyanide induced uptake of gold by plants	PhD Thesis 2008
08/079	(Wang Y D); Lomonte C	Fate and remediation of mercury in biosolids	PhD Thesis 2008

Monash University

07/174	Cartwright I; Weaver T R; Simmons C T; Fifield L K; Lawrence C R; Chisari R	Origins of fresh groundwater lenses in the Murray Basin	IAH Western Pacific Conference H34A-06 July 2008 Cairns
07/174	Cartwright I; Weaver T R; Simmons C T; Fifield L K; Lawrence C R; Chisari R; Varley S	Origins of fresh groundwater lenses in the Murray Basin and implications for sustainable use	36th Congress of IAH S23 090 2 October 2008 Toyama City, Japan
07/028	Cashion J D; Garitaonandia J S; Insausti M; Goikolea E	Au-S bonding in thiol-capped ferromagnetic Au nanoparticles	32nd A&NZ Condensed Matter and Materials Meeting P3 February 2008 Wagga Wagga
05/218	Cashion J D; Garitaonandia J S; Goikolea E; Suzuki K	¹⁹⁷ Au Mössbauer study of ferromagnetic gold nanoparticles	30th A&NZ Condensed Matter Physics Meeting WP6 February 2006
05/218	Garitaonandia J S; Insausti M; Goikolea E; Suzuki M; Cashion J D; Kawamura N; Ohsawa H; de Muro I G; Suzuki K; Plazaola F; Rojo T	Chemically induced permanent magnetism in Au, Ag and Cu nanoparticles: localization of the magnetism by element selective techniques	Nano Lett 8 661-667 2008

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05/035	David B; Orr M; Zoppi U	Archaeological excavations at Bulbul, site Mua 116	In: B David; L Manas & M Quinnell (eds) Gelam's Homeland: Cultural and Natural History on the Island of Mua, Torres Strait. Memoirs of the Queensland Museum Cultural Heritage Series 4(2) 575-80 2008 Brisbane 1440-4788
03/135	(David B); Rowe C	Holocene vegetation change on Moa	In: B David; L Manas & M Quinnell (eds) Gelam's Homeland: Cultural and Natural History on the Island of Mua, Torres Strait 4(2) 593 – 604 2008 Brisbane 1440-4788
02/031/032; 02/033; 03/135; 05/035; 06/039	Manas L; David B; Quinnell M	Introduction to Gelam's Homeland	In: B David; L Manas & M Quinnell (eds) Gelam's Homeland: Cultural and Natural History on the Island of Mua, Torres Strait. Memoirs of the Queensland Museum Cultural Heritage Series 4(2) 125-29 2008 Brisbane
02/032; 03/135	David B; McNiven I J; Weisler M	Archaeological excavations at Gerain and Urakaraltam	In: B David; L Manas & M Quinnell (eds) Gelam's Homeland: Cultural and Natural History on the Island of Mua, Torres Strait. Memoirs of the Queensland Museum Cultural Heritage Series 4(2) 525-52 2008 Brisbane
06/039; 06/181	Ash J; David B; (Ulm S)	Mua 22: archaeology at the old village site of Totalai, Mua (Torres Strait)	In: B David; L Manas & M Quinnell (eds) Gelam's Homeland: Cultural and Natural History on the Island of Mua, Torres Strait. Memoirs of the Queensland Museum Cultural Heritage Series 4(2) 451-72 2008 Brisbane
03/135	David B	The archaeology of defence on Mua	In: B David; L Manas & M Quinnell (eds) Gelam's Homeland: Cultural and Natural History on the Island of Mua, Torres Strait. Memoirs of the Queensland Museum Cultural Heritage Series 4(2) 493-502 2008 Brisbane
05/035	(David B); Orr M	Landscape history at Bulbul, Gelam's Homeland	In: B David; L Manas & M Quinnell (eds) Gelam's Homeland: Cultural and Natural History on the Island of Mua, Torres Strait. Memoirs of the Queensland Museum Cultural Heritage Series 4(2) 581-92 2008 Brisbane
PGRA; 06/090	Daniels J E; Finlayson T R; Davis M; Damjanovic D; Studer A J; ; Hoffman M; Jones J L	Neutron diffraction study of the polarization reversal mechanism in [111]c-oriented $\text{Pb}(\text{Zn}_{1/3}\text{Nb}_{2/3})\text{O}_{3-x}\text{PbTiO}_3$	J Appl Phys 101(10) 104108.1-104108.7 2007 0021-8979
PGRA	Duriska M B; Batten S R; Kepert C J; Iremonger S S	Hydrogen storage in a discrete nanoball	6th AINSE/ANBUG Neutron Scattering Symposium 13 Lucas Heights December 2007 0 9758434 3 5
PGRA	Duriska M	Introducing multiple functions into discrete supramolecules and coordination polymers	PhD Thesis 2008
06/223	Finlayson T R; Griffiths J R; Davidson C J; Fitzpatrick M E; Oliver E C; Wang Q G	Development of internal strains in a model metal-matrix composite, Al-Si-Mg, during loading	7th AINSE/ANBUG Neutron Scattering Symposium 31 Lucas Heights December 2008
04/201	Harker S J; Hicks T J; Kennedy S J; Yu D H	High luminosity time of flight with polarisation analysis: CeCu_6	Physica B: Phys Condens Matt 397 25-28 2006
PGRA	Healy J; Edward G H; Knott R B	Residual orientation in micro-injection molded parts	J App Crystallography XIII International Conference on Small Angle Scattering SAS2006 40 S393-S396 April 2007

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07/085	Lewis T; MacKenzie M; Kershaw P; Builth H; Porch N; Roach A; Hartney L	Using plant macrofossils in conjunction with pollen to better understand human-environment interactions in an archaeologically significant region of southwest Victoria	Terra Nostra 12th International Palynological Congress and 8th International Organisation of Palaeobotany Conference 2008/2 164 2008 Berlin 0946-8978
07/085	Builth H; Kershaw A P; White C; Roach A; Hartney L; McKenzie M; Lewis T; Jacobsen G	Environmental and cultural change on the Mt Eccles lava flow landscapes of south-west Victoria, Australia	Holocene 18(3) 421-432 2008 0959-6836
01/084	Kershaw A P; McKenzie M; Rule S	Late Pleistocene variability in Australian palynological records	High Resolution Pollen records and Reconstruction of vegetation CHANGES during Dansgaard-Oeschger events, QUEST-DESIRE Workshop, 30-31 Bordeaux 1 University, France 2008
02/161	(Kershaw P); Leahy P J	The palaeolimnology and current status of Yarra River billabongs	PhD Thesis 2007
05/119	McNiven I J; Crouch J; Weisler M; Kemp N; Clayton <i>et al</i>	Tigershark Rockshelter (Baidamau Mudh): seascape and settlement reconfigurations on the sacred islet of Pulu, western Zenadh Kes (Torres Strait)	Aust Archaeol 66 15-32 2008
05/119	(McNiven I J); Brady L M	Painting patterns: Torres Strait region rock-art, NE Australia	PhD Thesis 2006
PGRA	Price J W H; Paradowska A M; Joshi S; Finlayson T <i>et al</i>	Comparison of experimental and theoretical residual stresses in welds: the issue of gauge volume	Int J Mechanical Sciences 50(3) 513-521 2008 0020-7403
PGRA	Paradowska A M; Price J W H; Ibrahim R; Finlayson T R <i>et al</i>	The effect of restraint and post-weld heat treatment on residual stress distribution in bead-on-plate weld	J Neutron Research 15 231-241 2007 1023-8166
PGRA	Paradowska A M; Price J W H; Finlayson T R; Lienert U; Ibrahim R	Residual stresses measurements of welded components using synchrotron and neutron diffraction	Welding in the World 5th Asian Pacific IIW International Congress 51 475-484 2007 Sydney 0043-2288
PGRA	Paradowska A M; Price J W H; Blevins R Finlayson T R; <i>et al</i>	Comparison of neutron diffraction residual stress measurements of steel welded repairs with current fitness-for-purpose assessments	2008 ASME Pressure Vessels and Piping Conference 1-10 Chicago, Illinois, USA July 2008
PGRA	Paradowska A M; Price J W H; Finlayson T R; Lienert U; Ibrahim R	Investigation of residual stress distribution in ferritic steel weld measured by neutron and synchrotron diffraction	8th International Conference on Residual Stresses 186 Denver, Colorado, USA August 2008
PGRA	Paradowska A M; Price J W H; Ibrahim R; Finlayson T	Neutron diffraction evaluation of residual stress for several weld arrangements and comparison with fitness-for-purpose assessments	J Pressure Vessel Technology 130(1) 1-7 2008 0094-9930
PGRA	Rule K C; McIntyre G J; Kennedy S J; Hicks T J	Single-crystal and powder neutron diffraction experiments on FePS ₃ : Search for the magnetic structure	Phys Rev B 76 134402 2007
07/133	Singh R K; Gupta R K; Atanacio A J; Prince K; Koch C C	Role of micro/nanocrystalline structure in oxidation of Fe-Cr alloys	Corrosion and Prevention 1-7 Wellington, New Zealand November 2008 1442-0139
PGRA	Tawfik D; Mutton P J; Kirstein O; Chiu W K	A comparative study between FEA, trepanning and neutron strain diffraction on residual stresses in flash-butt welded rails	J Neutron Research 15 199-205 2007
PGRA	Tawfik D; Mutton P J; Chiu W K	Experimental and numerical investigations: alleviating tensile residual stresses in flash-butt welds by localised rapid post-weld heat treatment	J Material Processing Technology 196 279-291 2008 0924-0136

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
Murdoch University			
08/048	Minakshi M; Thurgate S	Surface analysis on discharged MnO ₂ cathode using XPS and SIMS techniques	Surf Interface Anal 41(1) 56-60 2008
08/048	Minakshi M; Mitchell D R G	The influence of bismuth oxide doping on the rechargeability of aqueous cells using MnO ₂ cathode and LiOH electrolyte	Electrochim Acta 53 6323 2008 0013-4686
08/048	Minakshi M; Mitchell D R G; Prince K	Incorporation of TiB ₂ additive into MnO ₂ cathode and its influence on rechargeability in an aqueous battery system	Solid State Ionics 179(9-10) 355 2008 0167-2738
08/048	Minakshi M	Examining manganese dioxide electrode in KOH electrolyte using TEM technique	J Electroanalytical Chemistry 616(1-2) 99 2008 0022-0728
06/267	Minakshi M	The book of battery material and its lithium insertion mechanism	Vdm Verlag Dr Muller Aktiengesellschaft & Co Kg 2008 Germany 9783639031119
08/048	Minakshi M; Singh P; Carter M; Prince K	The Zn-MnO ₂ battery: the influence of aqueous LiOH and KOH electrolytes on the intercalation mechanism	Electrochem Solid State Lett 11(8) A145 2008 1099-0062

The University of Newcastle

06/029	Zavitsanou K; Wang H Q; Dalton V; Newson P; Chahl L	Receptor changes in brain tissue of rats treated as neonates with capsaicin - testing a potential animal model of aspects of schizophrenia	Proceedings Australian Neuroscience Society 18 118 January 2008 Hobart
06/054	McDonald J; Drysdale R; Hodge E; Hua Q; Hellstrom J; Fischer M; Greig A; Woodhead J	The last 1,000 years: A record of SE Australian rainfall derived from speleothem chemistry	Australasian Quaternary Association Biennial Meeting 18 Victor Harbour December 2008
04/006	(Pearson S); Gayler L	A palaeoenvironmental history of the Paroo and Warrego regions, Australia: a multi-proxy, multi-site approach	PhD Thesis 2008

The University of New South Wales

06/003	Amos K J; Croke J; Timmers H; Thompson C T	Investigating floodplain deposition in a large semi-arid Australian river using caesium-137	Geophysical Research Abstracts 9 05770 2007
05/012	(Boecking T); Kilian K A	Chemical and biological modification of porous silicon photonic crystals	PhD Thesis 2007
06/213	Wang J L; Campbell S J; Dou S X; Avdeev M Studer A J	Structural and magnetic properties of novel RNi ₂ Mn compounds	6th AINSE/ANBUG Neutron Scattering Symposium 56 Lucas Heights December 2007 0 9758434 3 5
05/187	Wang J L; Campbell S J; Dou S X; Avdeev M Studer A J; ; Hofmann M; Hoelzel M	Magnetic phase transitions and structures of Pr _{1-x} Y _x Mn ₂ Ge ₂ compounds	6th AINSE/ANBUG Neutron Scattering Symposium 57 Lucas Heights December 2007 0 9758434 3 5
05/025	Wang J L.; Campbell S J; Studer A J; Avdeev M; Hofmann M; Hoelzel M; Dou S X	Magnetic structures and phase transitions in PrMn _{2-x} Fe _x Ge ₂	Journal of Applied Physics 104 103911-1 to 103911-12 2008

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/187	Wang J L; Campbell S J; Studer A J; Avdeev M	Magnetic phases in $\text{Pr}_{0.8}\text{Lu}_{0.2}\text{Mn}_2\text{Ge}_2$ – insight from Wombat	7th AINSE/ANBUG Neutron Scattering Symposium 51 Lucas Heights, Sydney December 2008
07/029	Ren Z; Chan S	Mechanical properties of aluminium composites reinforced by nanometric particulates	ARC Centre of Excellence for Design in Light Metals, Annual Workshop PS2-17 December 2007
07/029	Kang Y C; Chan S L I; Neely A; Moricca S; Farghalli M	Effect of nano-scale particles on the creep behavior of 2014 Al	Mat Sci Eng A Aust JSF Advanced Technology & Innovation Conference 394(1-2) 103-111 2005 0921-5093
07/029	Yuan F F; Chan S; Moricca S; Eddowes T	Properties of titanium matrix composites reinforced with titanium boride	ARC Centre of Excellence for Design in Light Metals, Annual Workshop PS2-24 December 2007
07/029	(Chan S); Yuan F F	Properties of titanium matrix composites reinforced with titanium boride	PhD Thesis 2007
PGRA	James M; Darwish T; Ciampi S; Gooding J J; Wong E L S; Chilcott T C; Coster H G L	Investigations of molecular self-assembly using reflectometry	6th AINSE/ANBUG Neutron Scattering Symposium 30 Lucas Heights December 2007 0 9758434 3 5
PGRA	Ciampi S; Le Saux G; Harper J B; Gooding J J	Optimization of click chemistry of ferrocene derivatives on acetylene-functionalized silicon(100) surfaces	Electroanalysis 20(14) 1513-1519 2008
PGRA	Ciampi S; Böcking T; Kilian K A; James M; Harper J B; Gooding J J	Functionalization of acetylene-terminated monolayers on Si(100) surfaces: a click chemistry approach	Langmuir 23(18) 9320-9329 2007
PGRA	Ciampi S; Böcking T; Kilian K A; Harper J B; Gooding J J	Click chemistry in mesoporous materials: Functionalization of porous silicon rugate filters	Langmuir 24(11) 5888-5892 2008
03/040	Foster L J R; Schwahn D; Pipich V; Russell R; Holden P J	SANS investigations of bioplastic films fabricated from polyhydroxyalkanoates and their bioPEGylated natural-synthetic hybrids	6th AINSE/ANBUG Neutron Scattering Symposium 18 Lucas Heights December 2007 0 9758434 3 5
03/040	Foster L J R; Schwahn D; Pipich V; Holden P J; Garvey C	Application of small angle neutron scattering to characterise microbial polyhydroxyalkanoates and their bioPEGylated natural-synthetic hybrids	6th AINSE/ANBUG Neutron Scattering Symposium 17 Lucas Heights December 2007 0 9758434 3 5
07/061	Sutherland F L; Graham I T; Zaw K	Gem corundum sources, West Pacific margins, links to former spreading rifts	19th Australian Geological Convention 236 July 2008 Perth
07/061	Sutherland F L; Zaw K; Giuliani G; Fallick A E; Graham I T	Applied mineralogy in characterizing origins of natural sapphire and ruby	9th International Conference on Applied Mineralogy 561-565 August 2008 Brisbane 978 1 920806 86 6
06/083	Hutchison W D; Chaplin D H; Nishimura K	Low temperature nuclear orientation observations of severe neutron activation damage in $(^{160}\text{Tb})\text{TbNiAl}_4$	Hyperfine Interactions 177 39-43 2008
05/076P	Hutchison W D; Nishimura K	Wide ranging studies of magnetism in RNiAl_4 compounds	Proceedings of 2007 Japan-China-Australia Cooperative Symposium on Materials Science and Nanotechnology 1-7 2007 University of Toyama 978-4-9903248-1-0
01/177	(Jankowski J); Smith J V S	Inorganic hydrogeochemistry, hydrogeology and geology of the Stuarts Point aquifer system: a process analysis of the natural occurrences of enriched As(III) and As(V) in an Australian coastal groundwater system	PhD Thesis 2005
06/235	Cottrell M A; Studer A; Jones J L	<i>In situ</i> electric-field-induced neutron scattering studies of ferroelectrics	6th AINSE/ANBUG Neutron Scattering Symposium 11 Lucas Heights December 2007 0 9758434 3 5

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/083	Daniels J E; Finlayson T R; Jones J L; Studer A J	Microstructural response of ceramic lead zirconate titanate to electric fields	6th AINSE/ANBUG Neutron Scattering Symposium 12 Lucas Heights December 2007 0 9758434 3 5
07/139	(Stewart G); Saensunon B	Crystal field interaction at the Tm site in $TmCr_2Si_2$	32nd Annual Condensed Matter and Materials Meeting 70 Wagga Wagga February 2008 978-0-646-49085-4
08/904	Wang J L; Campell S J; Hofmann M; Radaelli P G; Kockelmann W A	$Pr_{(1-x)}Y_xMn_2Ge_2$ - magnetic structures and magnetovolume effects	7th AINSE/ANBUG Neutron Scattering Symposium 8 Lucas Heights December 2008 978 0 9758434 6 8

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PGRA	Lilly K	Pleistocene changes in East Antarctic ice sheet thickness as observed with cosmogenic nuclide measurements	AINSE's 50th Anniversary Seminar 13 Lucas Heights December 2008 9758434-7 5
00/146	Summerhayes G	Sourcing techniques in landscape Archaeology	In: David B; and Thomas J (eds) Handbook of Landscape Archaeology. Walnut Creek CA, Left Coast Press 530-535 2008
00/146P	Specht J R; Summerhayes G R	The Archaeology of Boduna Island, in Archaeological studies of the Middle and Late Holocene, Papua New Guinea	Technical Reports of the Australian Museum 20 51-103 2007
00/146P	Summerhayes G R; Allen J	Lapita writ small	In: S Bedford; C Sand and S Connaughton (eds) Oceanic Explorations: Lapita and Western Pacific Settlement 97-122 2007 Canberra ANU E-Press

The University of Queensland

06/224	(Forwood M); Nguyen H	Sterilisation conditions for gamma irradiation of bone allografts to optimise mechanical and biological performance	PhD Thesis 2008
06/224	Nguyen H; Morgan D A F; Sly L; Benkovich M; Cull S; Forwood M R	Validation of 15 KGy as a radiation sterilisation dose for bone allografts manufactured at the Queensland Bone Bank: application of the VDmax 15 method	Cell and Tissue Banking 9(2) 139-47 2008
FELL	He L	Neutron reflection study of stimuli-response peptides at the air-water interface	AINSE's 50th Anniversary Seminar 18 Lucas Heights December 2008 9758434-7 5
06/231	Wang H; He L; Lensch M; Gabius H-J; Fee C J; Middelberg A P J	Single-site cys-substituting mutation of human lectin galectin-2: modulating solubility in recombinant production, reducing long-term aggregation, and enabling site-specific monoPEGylation	Biomacromolecules 9(11) 3223-3230 2008
PGRA	Johnston-Hall G; Monteiro M J	Bimolecular termination in semi-dilute polymer solutions	Polymer Preprints 49(2) 34-35 2008
PGRA	Johnston-Hall G; Barner-Kowollik C; Monteiro M	Criteria for accurate measurement of bimolecular radical termination rate coefficients via the RAFT-CLD-T method	Macromolecular Theory and Simulation 17 460 2008 Weinheim Germany 1022-1344
PGRA	Johnston-Hall G; Monteiro M	Bimolecular radical termination: new perspectives and insights	J Polym Sci A Polymer Chem 46 3155 2008 Hoboken NJ 0887-624X
PGRA	Johnston-Hall G; Monteiro M	Diffusion controlled termination of linear polystyrene radical in linear, 4-arm and 6-arm star polymer matrices in dilute, semi-dilute, and concentrated solution conditions	Macromolecules 41 727 2008 Washington, DC 0024-9297

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07/115	Moss P T; Petherick L M; McGowan H A	Late Quaternary environments of North Stradbroke Island, south-eastern Queensland, Australia	4th AINSE Quaternary Dating Workshop 79 Lucas Heights March 2008 978 9758434 4 3
07/115	(Moss P T); Petherick L M	A 25,000-year record of aeolian sedimentation from eastern Australian : a proxy for climate variability	MPhil Thesis 2006
07/115	Petherick L M; McGowan H A; Moss P T	Climate variability during the Last Glacial Maximum in eastern Australia: evidence of two stadials?	J Quatern Sci 23(8) 787-802 2008 0267-8179
07/115	Petherick L M; McGowan H A; Moss P T; Kamber B S	Late Quaternary aridity and dust transport pathways in eastern Australia	Quaternary Australasia 25 12-11 2008
07/115	Petherick L; Moss P; McGowan H	Late Quaternary palaeoenvironments of southeastern Australia: high resolution reconstruction using multiple proxies on lake sediment	Australasian Quaternary Association Biennial Meeting 27 Victor Harbour South Australia December 2008
08/049	Moss P T; Cosgrove R; Haberle S G; Kershaw A P	Holocene landscape change in the wet tropics of Australia	12th International Palynological Congress and 8th International Organisation of Palaeobotany Conference 199 Bonn September 2008
PGRA	Musumeci A W; Xu A P; Smith S V; Martin D J	Stability and interactions of radiolabelled clay nanoparticles with algae	Nanotox 12 Zurich September 2008
PGRA	Musumeci A W; Broadhurst G M; Smith S V; Rajh T; Xu G <i>et al</i>	Synthesis and characterisation of tailored nanoparticles for toxicological investigations	RACI Student Polymer Symposium South 18 Brisbane October 2008
PGRA	Musumeci A W; Broadhurst G M; Smith S V; Minchin R F; Xu G; Martin D J	Tailored nanoparticles for nanotoxicological investigations	8th World Biomaterials Congress 78 Amsterdam June 2008
PGRA	Musumeci A W; Smith S V; Xu G; Martin D J	Synthesis and characterisation of clay nanoparticles for nanotoxicological investigations	International Conference on Nanoscience and Nanotechnology 20-21 February 2008 Melbourne
08/110	Narayan Y R; Lybolt M; Pandolfi J	Historical to recent foraminifera assemblages of Moreton Bay, Queensland, Australia: a tool for investigating paleoenvironments, natural vs anthropogenic degradation and foraminiferal responses to changes in the coral communities	4th AINSE Quaternary Dating Workshop 81 Sydney March 2008 978 0 9758434 4 3
08/110	Lybolt M; Zhao J-X; Neil D; Feng Y-X; Yu K-F; Pandolfi J	U-series dating of coral death assemblages in Moreton Bay reveals millennial-scale episodes of reef degradation and accretion	4th AINSE Quaternary Dating Workshop 75 Sydney March 2008 978 0 9758434 4 3
06/266	(Schmidt S); Richards A E	Carbon sequestration in subtropical native tree plantations	PhD Thesis 2007
06/181	(Ulm S); David B	Archaeological surveys at Bulbul and Gerain	In: B David; L Manas & M Quinnell (eds) Gelam's Homeland: Cultural and Natural History on the Island of Mua, Torres Strait. Memoirs of the Queensland Museum Cultural Heritage Series 4(2) 559-74 2008 Brisbane
06/181	(Ulm S); McNiven I J; Bedingfield A C	Past and present marine mammal hunting rates and abundances: Dugong (<i>Dugong dugon</i>) evidence from Dabangai Bone Mound, Torres Strait	J Archaeol Sci 35 505-515 2008
08/068	Khaweerat S; Weisler M I; Zhao J-X; Feng Y-X	Defining the late-prehistoric Hawaiian cultural sequence by high-precision ²³ Th dating of corals	4th AINSE Quaternary Dating Workshop 72 Sydney March 2008 978 0 9758434 4 3
08/068	Weisler M I; Hua Q; Zhao J-X	Calibration of the late Holocene ¹⁴ C marine reservoir ages in Hawaii using U-series dated coral: spatial and temporal variation in ΔR	Australian Archaeological Association Annual Conference – Programme and Abstracts 74 December 2008 Brisbane

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08/068	Khaweerat S; Weisler M I; Zhao J-X; Feng Y-X	Human caused stratigraphic mixing of a coastal Hawaiian midden during prehistory: Implications for interpreting cultural deposits	Australian Archaeological Association Annual Conference – Programme and Abstracts 69-70 Brisbane December 2008
04/178	Nguyen A D; Yu K F; Zhao J X; Gasparon M	U-Th dating of Holocene sea level highstands using fringing coral reefs along the Vietnamese coast	4th AINSE Quaternary Dating Workshop 83 Sydney March 2008 978 0 9758434 4 3

Queensland University of Technology

07/003	Ayoko G A; Friend A J; Stelcer E	Source identification and source apportionment of air pollutants	4th Australia and New Zealand Aerosol Seminar 12-13 Sydney July 2008
07/003	Ayoko G A; Friend A J; Stelcer E; Cohen D	Source identification and source apportionment of fine particles in south east Queensland	16th RACI Research and Development Topics Conference 31 Sydney December 2008
PGRA	Oberman G J; Farrell T W; Turner I W; Sizgek E	Drying of a liquid droplet suspended in a binary atmosphere	ANZIAM J 46(E) C1155-C1169 2005

RMIT University

PGRA	Biluš Abaffy N; Partridge J G; McCulloch D G	Antireflective trilayer films fabricated using a filtered cathodic vacuum arc	Proc SPIE 704508 2008 0277-786X
PGRA	Biluš Abaffy N; Evans P; Triani G; McCulloch D	Multilayer alumina and titania optical coatings prepared by atomic layer deposition	Proc SPIE 704109 2008 0277-786X
PGRA	Biluš Abaffy N; Partridge J G; du Plessis J; McCulloch D G	Optically absorbing trilayer films fabricated using a filtered cathodic vacuum arc	Phys Stat Sol A 205(6) 1439–1442 2008
PGRA	Biluš Abaffy N; Field M; Partridge J G; Du Plessis J; McCulloch D G	Deposition of high quality metal oxide thin films using a filtered cathodic vacuum arc	15th Australian Conference on Nuclear and Complementary Techniques of Analysis 124 Melbourne November 2007 0 9758434 2 7
05/021	(Bryant G); Lenné T	The effects of solutes on the phase behaviour of phospholipid membranes	PhD Thesis 2008
06/024; PGRA	Kent B; Garvey C J; Bryant G	The role of sugars as protectants against dehydration and freezing damage in biological membranes	A-O week of the Australian Synchrotron 48 December 2008
05/021; 06/024	Lenné T; Garvey C J; Koster K L; Bryant G	The effects of solutes on the gel-fluid transition of phospholipid bilayers	32nd Annual Meeting of the Australian Society for Biophysics (ASB) 22 Canberra September 2008
05/021; 06/024; PGRA	Kent B; Lenné T; Garvey C J; Koster K L; Bryant G	Quantitative study of the effects of sugars on membrane damage during dehydration	18th National Congress of the AIP 147 November 2008
06/024; PGRA	Kent B; Garvey C J; Bryant G	The effects of sugars on the dehydration and freezing tolerance of biological membranes	32nd Annual Meeting of the Australian Society for Biophysics S13.1 Canberra October 2008
07/070P	Sriram S; Bhaskaran M; Mitchell D R G; Short K T; Holland A S; Mitchell A	Investigation of composition irregularities and inter-diffusion in strontium-doped lead zirconate titanate thin films on gold-coated silicon substrates	E-MRS Fall Meeting J51 2007
07/070P	Bhaskaran M; Sriram S; Mitchell D R G; Short K T; Holland A S; Mitchell A	Investigation of nickel silicide to silicon interface using transmission electron microscopy	E-MRS Fall Meeting J48 2007
06/234; 07/070P	Bhaskaran M; Sriram S; Mitchell D R G; Short K T; Holland A S	Effect of multi-layered bottom electrodes on the orientation of strontium-doped lead zirconate titanate thin films	Thin Solid Films 516 8101-8105 2008

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
07/071P	Bhaskaran M; Sriram S; Perova T S; Melnikov V; Thorogood G J; Short K T; Holland A S	<i>In situ</i> micro-Raman analysis and x-ray diffraction of nickel silicide thin films on silicon	E-MRS Fall Meeting J47 2007
06/233; 07/071P	Sriram S; Bhaskaran M; Holland A S; Short K T; Latella B	Measurement of high piezoelectric response of strontium-doped lead zirconate titanate thin films using a nanoindenter	J Appl Phys 101 104910 2007
06/233; 07/071P	Sriram S; Bhaskaran M; Mitchell D R G; Holland A S	Investigation of surface crystallites on C54 titanium silicide thin films using transmission electron microscopy	Semicond Sci Tech 23 035021 2008
05/080P; 06/086P; 07/074	Alves A; Johnston P N; Reichart P; Jamieson D N; Siegele R	Characterization of ion tracks in PMMA for single ion lithography	Nucl Instr Meth Phys Res B 260 431-436 2007
07/071P	Bhaskaran M; Sriram S; Holland A S; Evans P E	Characterisation of nickel silicide thin films by spectroscopy and microscopy techniques	E-MRS Fall Meeting J49 2007
06/087P	Khalil R; Chryss A G; Jollands M; Bhattacharya S	Effect of coupling agents on the crystallinity and viscoelastic properties of composites of rice hull ash-filled polypropylene	J Materials Science 42(24) 10219-10227 2007 0022-2461
06/087P	(Jollands M); Khalil R	Impact of the surface chemistry of rice hull ash on the properties of its composites with polypropylene	PhD Thesis 2008
PGRA	Kent B; Garvey C J; Cookson D; Haramus V; Bryant G	The effects of sugars on desiccation tolerance in model biological membrane systems	6th AINSE/ANBUG Neutron Scattering Symposium 32 Lucas Heights December 2007 0 9758434 3 5
PGRA	Kent B; Garvey C J; Bryant G	The protective role of sugars during membrane dehydration	7th AINSE/ANBUG Neutron Scattering Symposium 22 Lucas Heights December 2008 978 0 9758434 6 8
PGRA	Kent B	Towards a molecular mechanism for the protective effects of sugars on membrane damage during dehydration	AINSE's 50th Anniversary Seminar 7 Lucas Heights December 2008 9758434-7 5
05/155P	Sekhar P K; Sood D K; Bhansali S;	Growth of silica nanowires catalysed by Pd ion implantation into Si(100)	Mat Res Soc Symp Proc In: Nanoparticles and Nanostructures in Sensors and Catalysis. Zhong C-J; Kotov N A; Daniell W; Zamborini F (eds) P 900E 0900-003-2005 Boston, USA
06/184	Gideon B; Ward L P; Short K	Characterisation of the weld regions within duplex stainless steels using magnetic force microscopy	J Minerals and Materials Characterisation and Engineering 7(2) 115-126 2008
00/159	Purushotham K P; Ward L P; Brack N; Pigram P J; Evans P; Noorman H <i>et al</i>	The effect of MEVVA ion implantation of Zr on the corrosion behaviour of PVD TiN coatings	Corrosion Sci 50(1) 8-14 2008
06/184	Gideon B; Ward L; Biddle G	Duplex stainless steel welds and their susceptibility to intergranular corrosion	J Minerals and Materials Characterisation and Engineering 7(3) 247-263 2008
06/184	Gideon B; Ward L; Carr D G; Muransky O	Duplex stainless steel welds: residual stress determination, magnetic force microscopy and susceptibility to intergranular corrosion	6th European Stainless Steels Conference F-2P 629 – 636 Helsinki June 2008, Finland
06/184	Gideon B; Ward L; Carr D G	Residual stress determination of duplex stainless steel welds and their susceptibility to intergranular corrosion	Duplex 2007 International Conference and Expo 49 Grado June 2007, Italy
06/184	Gideon B; Ward L P; Biddle G	Intergranular corrosion and residual stress determination of duplex stainless steel pipeline girth welds	Corrosion and Prevention Conference (CAP08) 1-10 Wellington, New Zealand November 2008

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08/009	Burton E D; Bush R T; Sullivan L A; Mitchell D R G	Schwertmannite transformation to goethite via the Fe(II) pathway: reaction rates and implications for iron-sulfide formation	Geochim Cosmochim Acta 72 4551 – 4564 2008
08/009	Burton E D; Bush R T; Sullivan L A; Hocking R K; Mitchell D R G	Unravelling the oxidative geochemistry of monosulfidic black ooze	Proceedings of the Joint Conference of the 6th International Acid Sulfate Soil Conference and the Acid Rock Drainage Symposium 28-32 Guangzhou September 2008
06/092P	Cheetham M D; Keene A F; Bush R T; Erskine W D	River terrace sequences in the Widden Valley: relationships and processes	13th Australian and New Zealand Geomorphology Group Conference 21 Queenstown, Tasmania February 2008
06/092	Cheetham M D; Keene A F; Erskine W D; Bush R T; Jacobsen G	Connecting the disconnected: longitudinal correlation of river terrace remnants	Sediment Dynamics in Changing Environments 325 123-129 2008
05/087	Cheetham M; Keene A; Bush R; Erskine W	Join the dates: a chronological assessment of river terrace remnants in cross-section	4th AINSE Quaternary Dating Workshop 63 Sydney March 2008 978 0 9758434 4 3
PGRA	McGrath R J; Boyd W E; Bush R T	The paleohydrological context of the Iron Age floodplain sites of the Mun River valley, north-east Thailand	Geoarchaeology 23 151-172 2008
PGRA	Boyd W E; Parr J F	Geochemical analysis of fragments of burnt and impressed clay (daub) from the archaeological layers at Noen-U-Loke, and the determination of its probable origin	In: Higham C F W; Kijngam A; Talbot S (eds) The Origins of the Civilisation of Angkor Volume 2: The Excavation of Noen U-Loke and Non Muang Khao 331-340 Bangkok 2007
PGRA	Parr J F; Kerr G; Arthur J; Taffs K H	Impact of fire on peatlands in northeastern NSW, Australia: implications for the interpretation of microfossil assemblages and fire histories	In: Matices Interdisciplinarios en Estudios Fitolíticos y de Otros Microfósiles Eds: Korstanje M A; Babot M del P BAR International Series S1870 47-53 2007
03/111	Taffs K H; Farago L; Heijins H; Jacobsen G	A diatom based Holocene record of human impact from a coastal environment, eastern Australia	J Paleolimnology 39(1) 71-82 2008

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02/165	Hua Q; Barbetti M; D'Arrigo R; Smith AM	Regional atmospheric circulation: insights from bomb radiocarbon in Indonesian tree rings	19th International Radiocarbon Conference A257 April 2006 Oxford, UK
02/165	Barbetti M; Hua Q	Imprints of atmospheric circulation in tree rings	4th AINSE Quaternary Dating Workshop 60 Sydney March 2008 978 0 9758434 4 3
07/012P	Rosen J; Persson P O A; Ionescu M; Pigott J; McKenzie D R; Bilek M M M	Influence of gas entry point on plasma chemistry, ion energy and deposited alumina thin films in filtered cathodic arc	Plasma Chemistry and Plasma Processing 27(5) 599-608 2007
07/012P	Persson P O A; Rosen J; McKenzie D R; Bilek M M M; Høglund C	A solid phase reaction between TiC _x thin films and Al ₂ O ₃ substrates	J Appl Phys 103(6) 066102-3 2008
07/012P	Rosen J; Persson P O A; Ionescu M; Kondyurin A; McKenzie D R; Bilek M M M	Oxygen incorporation in Ti ₂ AlC thin films	Appl Phys Lett 92(6) 064102 2008
07/013	Matthai C; Birch G F; Jenkinson A; Heijnis H	Physical resuspension and vertical mixing of sediments on a high energy continental margin (Sydney Australia)	J Environmental Radioactivity 52(1) 67-89 2001 0265-931X

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97/020; 97/021R; 01/196; 02/199; 04/002	Bourke S	The Chalcolithic Period	In: Jordan: An Archaeological Reader R Adams (ed) 109-160 Equinox, London 2008
04/002; 04/012P	Bourke S; Lovell J; Seaton P; Sparks R; Mairs L; Meadows J	Preliminary report on a fourth season of excavation by the University of Sydney at Teleilat Ghassul, Jordan 1999	Annual of the Department of Antiquities Jordan 5 35-80 2007
06/214	(Copeland L); Salman H	Structural and functional properties of wheat starches	PhD Thesis 2008
06/214	(Copeland L); Blazek J	Role of amylose in structure-function relationships in starches from Australian wheat varieties	PhD Thesis 2008
06/214	Blazek J; Copeland L	Pasting and swelling properties of wheat flour and starch in relation to amylose content	Carbohydrate Polymers 71 380-387 2008
06/047	Doelman T; Torrence R; Popov V; Ionescu M; Kluyev N; ; Sleptsov I <i>et al</i>	Source selectivity: an assessment of volcanic glass sources in the southern Primorye Region, Far East Russia	Geoarchaeology 23 243-273 2008
03/179	Donlon D; Williams A-M M; Siegele R	Zinc profiles in archaeological and modern teeth	XI International Conference on PIXE and its Analytical Applications 146 May 2007 Puebla, Mexico
03/139	(Field J); Slack M	Between the desert and the Gulf: prehistory of Lawn Hill and Riversleigh	PhD Thesis 2008
05/064; 06/067	(Gilbert R); Thickett S	The kinetics of electrosterically stabilized emulsion polymerization systems	PhD Thesis 2008
PGRA	Jacques D A; Langley D B; Jeffries C M; Cunningham K A; Burkholder W F; Guss J M; <i>et al</i>	Histidine kinase regulation by a cyclophilin-like inhibitor	J Mol Biol 384(2) 422-435 2008
PGRA	Jacques D A; Langley D B; Whitten A E; Trewella J	Proteins that regulate spore formation in <i>Bacillus subtilis</i> : structural insights through small-angle scattering	6th AINSE/ANBUG Neutron Scattering Symposium 28 Lucas Heights December 2007 0 9758434 3 5
PGRA	Jacques D; Langley D B; Jeffries C M; Cunningham K A; Burkholder W F; Guss J M; <i>et al</i>	Probing bacterial signalling with small-angle scattering	6th AINSE/ANBUG Neutron Scattering Symposium 23 Lucas Heights December 2007 0 9758434 3 5
PGRA	Jacques D A	Probing bacterial signalling with small-angle scattering	AINSE's 50th Anniversary Seminar 5 Lucas Heights December 2008 9758434-7 5
03/066P	(Kassiou M); Quinlivan M	Functions of the cholinergic system in the morbidities associated with Alzheimer's disease and the further evaluation of tools for the molecular imaging of this system	PhD Thesis 2008
05/090	Thorogood G J; Saines P J; Kennedy B J; Withers R L; Elcombe M M	Diffuse scattering in the cesium pyrochlore $\text{CsTi}_{0.5}\text{W}_{1.5}\text{O}_6$	Mat Res Bull 43(4) 787-795 April 2008 0025-5408
07/094	Lim S H N; Abendroth B; Bilek M M M; Mckenzie D R	Temperature dependent conduction studies of cathodic arc deposited ZnO thin films	2nd International Symposium on Transparent Conductive Oxides O124 October 2008 Hersonissos, Crete, Greece

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
06/107	Ling C; Aivazian K; Schmid S E; Jensen P	Structural investigation of oxygen non-stoichiometry and cation doping in misfit-layered thermoelectric $[\text{Ca}_2\text{CoO}_{3-x}][\text{CoO}_{2d}]$, $d \approx 1.61$	J Solid State Chem 180 1446–1455 2007
06/246P; PGRA	Sharma N; Kennedy B J; Elcombe M; Liu Y; Ling C D	Coexistence of ferroelectricity and magnetism in transition-metal-doped $n = 3$ Aurivillius phases	J Phys Condens Matter 20 025215 2008
PGRA	Ma W J; Ruys A J; Mason R S; Martin P J; Bendavid A; Liu Z; Ionescu M; Zreiqat H	DLC coatings: effects of physical and chemical properties on biological response	Biomaterials 28(9) 1620-1628 2007 0142 9612
06/144	(Potts D); Connan J; Zumberge J; Imbus K; Moghaddam A	The bituminous mixtures of Tall-e Abu Chizan: a Vth millennium BC settlement in southwestern Iran	Organic Geochemistry 39(12) 1772-1789 2008
06/144	(Potts D); Moghaddam A	Later Village Period settlement development in the Karun River Basin, Upper Khuzestan Plains, Greater Susiana	PhD Thesis 2008
PGRA	Saines P J; Kennedy B J; Johannessen B; Poulton S	Phase and valence transitions in $\text{Ba}_2\text{LnSn}_x\text{Nb}_{1-x}\text{O}_{6-\delta}$	J Solid State Chem 181(11) 2994-3004 2008 0022-4596
PGRA	Saines P J; Kennedy B J	Phase segregation in mixed Nb-Sb double perovskites $\text{Ba}_2\text{LnNb}_{1-x}\text{Sb}_x\text{O}_6$	J Solid State Chem 181(2) 298-305 2008 0022-4596
PGRA	Larsson A K; Withers R L; Perez-Mato J M; FitzGerald J D; Saines P J; Kennedy B J <i>et al</i>	On the microstructure and symmetry of apparently hexagonal BaAl_2O_4	J Solid State Chem 181 1816-1823 2008
PGRA	Thorgood G J; Elcombe M M; Saines P J; Kennedy B J; Withers R L	Structural and electronic phase transitions in $\text{Sr}_{1-x}\text{Ce}_x\text{MnO}_3$ perovskites	J Solid State Chem 181 2639 2008
PGRA	Saines P J; Kennedy B J; Elcombe M M; Harris H H; Jang L-Y; Zhang Z	Diffuse scattering in the cesium pyrochlore $\text{CsTi}_{0.5}\text{W}_{1.5}\text{O}_6$	Mat Res Bull 43 787-795 2008
PGRA	Saines P	Structural studies of lanthanide double perovskites	PhD Thesis 2008
PGRA	Kennedy B J; Saines P J; Zhou Q; Zhang Z; Matsuda M; Miyake M	Phase and valence transitions in $\text{Ba}_2\text{LnSn}_x\text{Sb}_{1-x}\text{O}_{6-\delta}$ ($\text{Ln} = \text{Pr}$ and Tb)	J Solid State Chem 181(11) 2941-2952 2008 0022-4596
PGRA	Zhou Q; Saines P J; Sharma N; Ting J; Kennedy B J; Zhang Z; Withers R L; Wallwork K S	Crystal structures and phase transitions in a-site deficient perovskites $\text{Ln}_{1/3}\text{TaO}_3$	Chem Mater 20(21) 6666-6676 2008 0897-4756
PGRA	Saines P J; Spencer J; Kennedy B J; Avdeev M	Insight into the stability of tetragonal and rhombohedral phases in double perovskites	6th AINSE/ANBUG Neutron Scattering Symposium 50 Lucas Heights December 2007 0 9758434 3 5
PGRA	Sharma N; Macquart R; Christensen M; Ling C D	Preliminary structural refinements of $\delta\text{-Bi}_2\text{O}_3$ -related phases	6th AINSE/ANBUG Neutron Scattering Symposium 51 Lucas Heights December 2007 0 9758434 3 5
06/160	(Singh B); Kachenko A	Ecophysiology and phytoremediation potential of heavy metal(loid) accumulating plants	PhD Thesis 2008
05/150	Kachenko A; Singh B; Bhatia N; Siegele R	Quantitative elemental localisation in leaves and stems of the nickel hyperaccumulating shrub <i>Hybanthus floribundus</i> subsp. <i>floribundus</i> using micro-PIXE spectroscopy	Nucl Inst Meth in Phys Res B 266 667-676 2008

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
06/160	Kachenko A G; Siegele R; Bhatia N P; Singh B; Ionescu M	Evaluation of specimen preparation techniques for micro-PIXE localisation of elements in hyperaccumulating plants	Nucl Instr Meth in Phys Res B 266 1598-1604 2008
06/257	Whitten A E; Jeffries C M; Harris S P; Trewhella J	Cardiac myosin-binding protein C decorates F-actin: implications for cardiac function	Proc Natl Acad Sci USA 105 18360-18365 2008
06/257	Jeffries C M; Whitten A E; Harris S P; Trewhella J	Small-angle scattering reveals the N-terminal domain organisation of cardiac myosin binding protein C	J Mol Biol 377 1186-1199 2008
PGRA	Waller M P; Robertazzi A; Platts J A; Hibb D E; Williams P A	Hybrid density functional theory for Pi stacking interactions: application to benzenes, pyridines, and DNA bases	J Computational Chemistry 27(4) 491-504 2006
PGRA	Waller M P; Howard S T; Platts J A; Piltz R O; Willcock D J; Hibbs D E	Novel properties from experimental charge densities: an application to the zwitterionic neurotransmitter taurine	Chemistry 12(29) 7603-7614 2006 0947-6539
PGRA	Overgaard J; Waller M P; Piltz R; Platts J A; Emseis P; Leverett P; Williams P A <i>et al</i>	Experimental and theoretical charge density distribution in two ternary cobalt(III) complexes of aromatic amino acids	J Physical Chemistry 111(40) 10123-10133 2007
04/168; 05/174P	White J P; Jacobsen H; Kewibu V; Doelman T	Obsidian traffic in the Southeast Papuan Islands	J Island and Coastal Archaeology 1(1) 101-108 2006
07/157	(White P) Torrence R; Swadling P	Social networks and the spread of Lapita	Antiquity 82 600-616 2008
PGRA	Wu Y; Kobayashi A; Halder G J; Peterson V K; Chapman K W; Lock N; Southon P D; Kepert C J	Negative thermal expansion in the metal-organic framework material Cu ₃ (1,3,5-benzenetricarboxylate)	Angewandte Chemie International Edition 47 8929-8932 2008

University of Tasmania

03/007; 05/063	(Barmuta L; Gibson J A E); Newman L	The biogeography and palaeoecology of Antarctic freshwater lake fauna	PhD Thesis 2008
08/004	Bowman D	Is global environmental change the end game for prehistoric vegetation legacies? The parallel cases of fire-maintained vegetation mosaics in southwest Tasmania and central Australia	Australasian Plant Conservation 16(3) 6-8 2008
07/014	Hua Q; Bowman D; Pearson S; Allen K	Validation of tree-ring ages of recent Australian <i>Callitris</i> by means of bomb radiocarbon	11th International Conference on Accelerator Mass Spectrometry 90 Rome September 2008
04/057, 05/063	Gibson J A E; Quilty P G; Swadling K M; Newman L; Paterson K S	<i>Paratrochammina minutissima</i> n. sp. in brackish, marine-derived lakes of the Vestfold Hills, East Antarctica	J Foraminiferal Research 38(4) 292-297 2008
PGRA	Lane A	Ecotoxicological studies of the effects of heavy metals and hydrocarbons on Antarctic and temperate echinoderms	PhD Thesis 2005
PGRA	Pedro J B; Smith A M; Simon K J; Curran M A J; Fink D; van Ommen T; Morgan V <i>et al</i>	High resolution ice core records of cosmogenic ¹⁰ Be from Antarctica and Greenland for examination of past solar variability	4th AINSE Quaternary Dating Workshop 87 Sydney March 2008 978 0 9758434 4 3
PGRA	Smith A M; Simon K; Pedro J; Fink D; Curran M; van Ommen T	¹⁰ Be studies in snow and ice from the Arctic and Antarctic at monthly and annual resolution spanning the last 70 years	11th International Conference on Accelerator Mass Spectrometry 6 Rome, Italy, September 2008

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
PGRA	Saunders K M; Hodgson D A; Harrison J; McMinn A	Palaeoecological tools for improving the management of coastal ecosystems: a case study from Lake King (Gippsland Lakes) Australia	J Paleolimnology 40 33-47 2008
PGRA	Saunders K	Palaeolimnology as a management tool	PhD Thesis 2008

University of Technology Sydney

06/009	Roest R; Atanacio A J; Latella B A; Wuhrer R; Ben-Nissan B	An investigation of sol gel coated zirconia thin films on anodised titanium substrate by secondary ion mass spectrometry and scanning electron microscopy	Materials Forum 31 160-163 2007
PGRA	Callaghan M	A study of the high temperature fatigue behaviour and life prediction of 2.25Cr-1Mo alloy steel through the development of standard-sized and miniature specimen testing techniques	PhD Thesis 2008
PGRA	Callaghan M	A study of the high temperature fatigue behaviour and life prediction of 2.25Cr-1Mo alloy steel	AINSE's 50th Anniversary Seminar 2 Sydney December 2008 9758434-7 5
07/041	Dowd A	Optical and structural characterisation of vanadium dioxide thin films and nanoparticles for novel optical applications	International Conference on Electronic Materials 49 Sydney August 2008
07/041	Dowd A	Temperature dependence of infrared optical properties of vanadium dioxide	AIP 18th National Congress 121 Adelaide December 2008
PGRA	Kealley K	Determination of the structure of a gold-based shape memory alloy	AINSE's 50th Anniversary Seminar 17 Sydney December 2008 9758434-7 5

The University of Western Australia

06/070	Goldberg N A; Heine J N	Age estimates of <i>Sporolithon durum</i> (Corallinales, Rhodophyta) from Rottneest Island, Western Australia, based on radiocarbon-dating methods	J Royal Society Western Australia 91 27-30 2008
07/129P	Sewell R H; Dell J M; Faraone L	Real-time mass spectroscopy of reflected fluxes during molecular beam epitaxy growth of HgCdTe	J Vac Sci Technol B 26(3) 1068-1073 2008
PGRA	Tsen G K O; Becker C R; Musca C A; Dell J M; Antoszewski J; Faraone L	Arsenic delta-doped HgTe/HgCdTe superlattices grown by molecular beam epitaxy	Appl Phys Lett 92 082107 2008
PGRA	Tsen G K O; Atanacio A; Prince K; Sewell R H; Musca C A; Dell J M; Faraone L	Incorporation and activation of arsenic in MBE grown HgCdTe	Semicond Sci Technol 23 015014 2008
PGRA	Webster N A S; Ling C D; Raston C L; Lincoln F J	The structural and conductivity evolution of fluorite-type Bi ₂ O ₃ -Er ₂ O ₃ -PbO solid electrolytes during long-term annealing	Solid State Ionics 179 697-705 2008
PGRA	Webster N; Ling C; Raston C L; Lincoln F J	The structures and conductivities of new fluorite-type Bi ₂ O ₃ -Er ₂ O ₃ -PbO ceramics	Solid State Ionics 178 1451-1457 2007
PGRA	Webster N	New fluorite-type Bi ₂ O ₃ -based solid electrolytes: characterisation, conductivity and crystallography	PhD Thesis 2007

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/042; 06/216	Pullen S A; Gilbert E P; Olsen S R; Lang E A; Doolan K R	An <i>in situ</i> rapid heat-quench cell for small-angle neutron scattering	Meas Sci Tech 19 065707-065714 2008
06/216	Pullen S A; Doolan K R; Gilbert E P; Olsen S	Sample environment for temperature changes >100K/min for <i>in-situ</i> small-angle neutron scattering	6th AINSE/ANBUG Neutron Scattering Symposium 47 Lucas Heights December 2007 0 9758434 3 5

University of Wollongong

PGRA	Homes T	The development of radiolabelled peripheral benzodiazepine receptor ligands for imaging cancer and neurodegenerative disorders	PhD Thesis 2007
07/091	Safavi-Naeini M; Lerch M F; Petasecca M; Pignatelli G U; Reinhard M; Rosenfeld A B	Evaluation of pixellated, back-sided planar photodetectors for high-resolution imaging instrumentation	Nucl Inst and Meth 589(2) 259-267 May 2008
FELL	McGregor H	El Niño in context: reading the coral record of past climate extremes	AINSE's 50th Anniversary Seminar 10 Sydney December 2008 9758434-7 5
07/116	(Nghiem L); Pettigrew L	Removal of heavy metals and radionuclides from mining impacted water	BSc Honours Thesis Nov 2007
07/116	Pettigrew L; Nghiem L D; Muttucumar S	Removal of heavy metals from mining impacted water by a novel electrocoagulation-ultrafiltration hybrid process	ERE 2007 210-217 Dec 2007 Cairns
05/129	Pan A V; Pysarenko S; Wexler D; Rubanov S; Dou S X	Multilayering and Ag-doping for properties and performance enhancement in YBa ₂ Cu ₃ O ₇ films	IEEE Trans Appl Supercond 17 3585-3588 2007 1051-8223
05/129	Pan A V; Pysarenko S; Wexler D; Rubanov S; Ionescu M; Dou S X	Multilayered deposition and its role in the enhancement of YBa ₂ Cu ₃ O ₇ film performance	Physica C 460-462 1379-1380 2007
06/151	(Ranson M); Vine K L	An investigation into the cytotoxic properties of isatin-derived compounds: potential for use in targeted cancer therapy	PhD Thesis 2007
06/151	(Ranson M); Croucher D	Defining the mechanism and functional consequences of PAI-2-mediated uPA/uPAR endocytosis	PhD Thesis 2007
06/155	(Robinson S); Clarke L J	Resilience of the Antarctic moss <i>Ceratodon purpureus</i> to the effects of elevated UV-B radiation and climate change	PhD Thesis 2008
06/155	Clarke L J; Robinson S A; Hua Q; Fink D	The influence of climate change on the growth rate of east antarctic mosses since the 1960s	COMBIO Conference Canberra 124 St Marys SA September 2008 1328-4924
06/155	Clarke L J; Robinson S A; Hua Q; Fink D	The influence of climate change on the growth rate of east antarctic mosses since the 1960s	Scientific Committee on Antarctic Research, Open Science Conference S1.7/O15 July 2008 St Petersburg
06/155	Clarke L J; Robinson S A; Hua Q; Fink D	The influence of climate change on the growth rate of east antarctic mosses since the 1960s	Climate Change Monitoring Symposium 12 Sydney December 2008
08/056	Ziebell A L; Lim W H; Reinhard M I; Cornelius I; Siegele R; Rosenfeld A B <i>et al</i>	Cylindrical silicon-on-insulator microdosimeter: charge collection characteristics	Nuclear Science Symposium Conference Record NSS 07 IEEE 3 2307-2310 2007 978-1-4244-0922-8

Project Number	Chief Investigator Coauthors	Title of Publication	Reference
05/145P; PGRA	(Schaefer A); Nghiem L	Removal of trace organic contaminant by nanofiltration and reverse osmosis membranes	PhD Thesis 2005
PGRA	Sloss C R; Murray-Wallace C V; Jones B G	Holocene sea-level change and the geomorphological evolution of barrier estuaries on the southeast coast of Australia	4th AINSE Quaternary Dating Workshop 93 Sydney March 2008 978 0 9758434 4 3
FELL	Tehei M	Neutron scattering reveals adaptation to extreme environments	AINSE's 50th Anniversary Seminar 4 Sydney December 2008 9758434-7 5
FELL	Jasnin M; Tehei M; Moulin M; Haertlein M	Down to intracellular water dynamics by using isotopic labelling and neutron scattering	In Giuseppe ZACCAI Publication. Biomolecular Dynamics and Protein-Water Interaction Neutron Scattering workshop. 20 Munich-Feldafing, Germany, September 2008
FELL	Trapp M; Gutberlet T; Juranyi F; Tehei M; Unruh J; Peters J	Elastic incoherent neutron and quasi-elastic scattering studies of aligned DMPC multilayers at different hydrations	Deutsche Neutronenstreutagung, 111 September 2008. TU München-FRMII-Garching, Germany
FELL	Jasnin M; Moulin M; Haertlein M; Zaccai G; Tehei M	Down to atomic-scale intracellular water dynamics	EMBO Rep 9 543-547 2008
FELL	Jasnin M; Moulin M; Haertlein M; Zaccai G; Tehei M	<i>In vivo</i> measurement of internal and global macromolecular motions in <i>Escherichia coli</i>	Biophys J 95 857-864 2008
FELL	Meinhold L; Clement D; Tehei M; Daniel R; Finney J L; Smith J C	Protein dynamics and stability: the distribution of atomic fluctuations in thermophilic and mesophilic dihydrofolate reductase derived using elastic incoherent neutron scattering	Biophys J 94 4812-4818 2008
FELL	Jasnin M; Tehei M; Moulin M; Haertlein M; Zaccai G	Solvent isotope effect on macromolecular dynamics in <i>E coli</i>	Eur Biophys J 37 613-617 2008
FELL	Teixeira S C M; Tehei M <i>et al</i>	New sources and instrumentation for neutrons in biology	Chemical Physics 345 133-151 2008
FELL	Peters J; Tehei M	Molecular biophysics: understanding living processes	Neutrons and Health ESS Scandinavia Report 6-7 2008
07/163P	Ionescu M; Zhao Y; Siegele R; Cohen D D; Stelcer E; Prior M	Heavy ion ToF analysis of oxygen incorporation in MgB ₂ thin films	J Nucl Instr Meth Phys Res B 266(8) 1701-1704 2008
PGRA	Ziebell A L; Lim W H; Reinhard M I; Cornelius I; Prokopovich D A; Siegele R <i>et al</i>	Cylindrical silicon-on-insulator microdosimeter: charge collection characteristics	IEEE Transactions on Nuclear Science 55 6 2008
PGRA	Ziebell A	Characterisation of a 2nd generation silicon-on-insulator microdosimeter	AINSE's 50th Anniversary Seminar 14 Sydney December 2008 9758434-7 5
PGRA	Lai N S; Lim W H; Ziebell A L; Reinhard M I; Rosenfeld A B; Dzurak A S	Development and fabrication of cylindrical silicon-on-insulator microdosimeter arrays	IEEE Nuclear Science Symposium and Medical Imaging Conference N02-267 October 2008

University Codes

CODE	UNIVERSITY	CODE	UNIVERSITY
ACU	Australian Catholic University	MEL	The University of Melbourne
ADE	The University of Adelaide	MON	Monash University
AKL	The University of Auckland	MUR	Murdoch University
ANS	ANSTO	NCT	The University of Newcastle
ANU	The Australian National University	NSW	The University of New South Wales
BAL	University of Ballarat	OTA	University of Otago
CAN	University of Canterbury	QLD	The University of Queensland
CBR	University of Canberra	QUT	Queensland University of Technology
CDU	Charles Darwin University	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
		WOL	University of Wollongong

Specialist Areas

A	Archaeology and Geosciences
B	Biomedical Science and Biotechnology
E	Environmental Science
G	Bragg Institute - Neutron Scattering
M	Materials – Properties and Engineering
N	Materials – Structures and Dynamics
T	Nuclear Technology