

Section 2

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AINSE Council 2004

Member Organisations and Representation

2 Council Meetings held in 2004

Organisation	Membership Commenced	Councillor	Meetings Attended
ANSTO CEO	1958	Dr Ian Smith	2
ANSTO, Environment		Professor Ann Henderson-Sellers	2
ANSTO, Materials		Dr George Collins	1
ANSTO, Nuclear Technology		Mr Jack Dillich	0
ANSTO, Radiopharmaceuticals		Dr Stuart Carr	0
ANSTO, Bragg Institute		Dr Robert Robinson	2
The University of Queensland	1958	Dr Paul Meredith	2
The University of New England	1958	Dr Peter Grave	2
The University of Sydney	1958	Associate Professor Brendan Kennedy	2
The University of New South Wales	1958	Professor Hans Coster, President	2
The Australian National University	1958	Professor John White, Vice President	1
The University of Melbourne	1958	Professor Jim Camakaris	2
University of Tasmania	1958	Professor Allan Canty	1
The University of Adelaide	1958	Dr Gerald Laurence	2
The University of Western Australia	1958	Dr Jasmine Henry	1
Monash University	1961	Dr Trevor Hicks	1
The University of Newcastle	1965	A/Professor Bruce King	2
Flinders University of SA	1966	Professor Peter Teubner	2
La Trobe University	1966	Dr John Webb	1
Macquarie University	1966	Professor James Piper	0
James Cook University	1970	Professor Richard Keene	2
University of Wollongong	1975	Professor Allan Chivas	2
Griffith University	1975	Professor Greg Hope	2
Murdoch University	1985-1997 rejoined 1998	Professor Stephen Thurgate	2
University of Technology, Sydney	1988	E/Professor Evan Leitch	1
RMIT University	1988	Professor Peter Johnston	2
Curtin University of Technology	1989	Professor Brian O'Connor	2
Central Queensland University	1991	Dr David Druskovich	2
University of South Australia	1991	A/Professor Namita Choudhury	1
Swinburne University of Technology	1991	Dr Anthony Bartel	2
Queensland University of Technology	1992	Dr Riaz Akber	1
University of Western Sydney	1993	Dr Robyn Crumby	1
Victoria University	1994	Professor Albert McGill	0
Southern Cross University	1994	A/Professor Bill Boyd	2
The University of Auckland	1995	A/Professor Jim Metson	1

Charles Sturt University	1995	Dr Michael Antolovich	2
Charles Darwin University	1995	A/Professor David Parry	1
Edith Cowan University	1996	Professor Patrick Garnett	0
University of Canberra	1996	Professor Andrew Cheetham	1
The University of Southern Queensland	1996	Professor Malcolm McKay	0
Deakin University	1997	Professor Pip Hamilton	0
University of Ballarat	1997	Mr Stafford McKnight	0
Australian Catholic University	2001	Dr Neil Saintilan	1
Institute of Geological and Nuclear Science	2004	Dr Frank Bruhn	1
Secretary to AINSE Council (non-voting)		Dr Dennis Mather, AINSE	2
AINSE		Mr Benjamin Thompson, AINSE	1

Alternate representatives and other attendees

Monash University	1961	Professor Rob Norris	1
La Trobe University	1966	Dr Paul Pigram	1
Macquarie University	1966	Dr Scott Butcher	1
The University of Southern Queensland	1996	Dr Joachim Ribbe	1
University of Technology, Sydney	1988	Professor Greg Skilbeck	1
University of Western Sydney	1993	Professor Bill Price	1
Edith Cowan University	1995	Dr Stephen Hinckley	2
The University of Auckland	1995	Professor Philippa Black	1
ANSTO	1958	Dr Ron Cameron	1

Executive Committee

Four Executive Committee Meetings held in 2004

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

AINSE Staff

Scientific Secretary Dr Dennis Mather

Secretariat

Mr Benjamin Thompson
Miss Claire Wilkinson from 14 April until 24 September
Miss Kylie Miles from 8 November
Mrs Nerissa Phillips (part-time)
Mrs Sandy O'Connor (part-time)

Specialist Committees for 2004

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

(a) indicates 'alternate'

		Meetings Attended
Archaeology and Geosciences Committee		
Professor Allan Chivas, Convenor	University of Wollongong	2
A/Prof Bill Boyd	Southern Cross University	2
Dr Glenn Summerhayes	The Australian National University	1
Dr David Garnett	Charles Darwin University (ex Becquerel Laboratories)	1
Dr David Fink	ANSTO Environment	1
Dr Henk Hejnis	ANSTO Environment	1
Biomedical Science and Biotechnology Committee		
A/Prof James Camakaris, Convenor	University of Melbourne	2
Dr Rey Casse	University of Adelaide, Queen Elizabeth Hospital	1
Professor Hans Coster	The University of New South Wales	1
Dr George Larcos	The University of Sydney	1
Dr Roger Martin	University of Melbourne, Trescowthick Research Laboratory	2
Dr Stuart Carr	ANSTO Radiopharmaceuticals	0
Environmental Sciences Committee		
Prof Andrew McMinn, Convenor	The Australian National University	2
Dr D C (Bear) McPhail	University of Tasmania	1
Dr Joachim Ribbe	University of Southern Queensland	2
Prof Don Bradshaw	University of Western Australia	1
Dr Geraldine Jacobsen	ANSTO Environment	2
Dr Andrew Smith	ANSTO Environment	2
Materials - Structures and Dynamics Committee		
Dr Craig Buckley, Convenor	Curtin University of Technology	2
Dr Ian Gentle	The University of Queensland	2
Prof Stewart Campbell	ADFA, University of New South Wales	2
Dr Trevor Hicks	Monash University	1
Dr Wim Klooster	ANSTO Bragg Institute	1
Dr Michael James	ANSTO Bragg Institute	2
Materials - Materials – Properties and Engineering Committee		
Prof Peter Johnston, Convenor	RMIT University	2
Prof Anatoly Rozenfeld	University of Wollongong	2
Dr Andrew Whittaker	University of Queensland	2
Dr David Cohen	ANSTO Environment	2
Dr Kathryn Prince	ANSTO Environment	1
Dr Dan Perera	ANSTO Materials & Engineering Science	1
Dr Zhaoming Zhang (a)	ANSTO Materials & Engineering Science	1

Conference Planning Committees

Workshop on Polarisation Analysis and Inelastic Cold-Neutron Scattering at Australia's Replacement Research Reactor

27th – 28th January 2004, AINSE, Lucas Heights

Dr Michel Ain ANSTO

Dr Shane Kennedy ANSTO

Dr Robert Robinson ANSTO

Dr Dennis Mather AINSE

Mr Benjamin Thompson AINSE

4th AINSE Symposium on Neutron Scattering

13th – 15th December 2004, AINSE, Lucas Heights

Dr Andrew Nelson ANSTO

A/Prof Ian Gentle University of Queensland

A/Prof Erich Kisi University of Newcastle

Dr Chris Ling University Of Sydney

Prof Brian O'Connor Curtin University of Technology

Dr Robert Robinson ANSTO

Dr Jamie Schulz ANSTO

Dr Dennis Mather AINSE

Mr Benjamin Thompson AINSE

International Conference on Neutron Scattering 2005

27 November to 2 December 2005 Sydney Convention Centre

A/Prof Brendan Kennedy University of Sydney

Dr Robert Robinson ANSTO

Prof Stewart Campbell ADFA@The University of New South Wales

Dr Walter Kalceff University of Technology, Sydney

A/Prof Evan Gray Griffith University

Dr Dennis Mather AINSE

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**Escott
Aston**
CHARTERED ACCOUNTANTS

**Australian Institute of Nuclear Science and Engineering Inc
Independent Audit Report to the Members
For the Year Ended 31 December 2004**

SCOPE

We have audited the financial statements being a special purpose financial report comprising the Balance Sheet, Income and Expenditure Statement and Notes to and forming part of the accounts of the Institute for the year ended 31 December 2004. The Executive Committee is responsible for the financial statements and have determined that the accounting policies used and described in Note 1 to the financial statements are appropriate to meet the requirements of the Associations Incorporation Act (NSW) 1984 and the requirements of the members. We have conducted an independent audit of these financial statements in order to express an opinion on them to the members. No opinion is expressed as to whether the accounting policies used, and described in Note 1, are appropriate to the needs of the members.

The financial statements have been prepared for the purpose of fulfilling the Executive Committee's accountability under the Institute's constitution and the requirements of the Associations Incorporation Act (NSW) 1984. We disclaim any assumption of responsibility for any reliance on this report or on the financial statements to which it relates to any person other than the members, or for any purpose other than that for which it was prepared.

Our audit has been conducted in accordance with Australian Auditing Standards. Our procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial statements and the evaluation of significant accounting estimates. These procedures have been undertaken to form an opinion whether, in all material respect, the financial statements are presented fairly in accordance with the accounting policies described in Note 1 to the financial statements so as to present a view which is consistent with our understanding of the Institute's financial position and performance as represented by the results of its operations. The accounting policies of the Institute do not require the application of all Australian Accounting Standards and other mandatory professional reporting requirements in Australia.

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

AUDIT OPINION

In our opinion, the financial report of the Australian Institute of Nuclear Science and Engineering Incorporated presents a true and fair view of the financial position as at 31 December 2004 and the results of its operations and its cash flows for the year then ended in accordance with the accounting policies described in Note 1 to the financial statements.

Escott Aston
Chartered Accountants

Phillip R Escott FCA – Partner

Signed at Sydney the 16th day of March 2005

Phillip R. Escott F.C.A.

David G. Aston C.A.

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

**Australian Institute of Nuclear Science and Engineering
Executive Committees Report**

The Executive Committee of the Australian Institute of Nuclear Science and Engineering Incorporated submits the financial accounts of the Institute for the financial year ended 31 December 2004.

Committee Members

Professor Hans Coster	President
Professor John White	Vice – President
Professor Brian O'Connor	
Dr Robert Robinson	
Professor Ann Henderson-Sellers	
Dr Ian Smith	
Dr Dennis Mather	AINSE

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 deficit for the year amounted to \$39,011.

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



Dr Dennis Mather
Public Officer & Scientific Secretary

Dated this *Sixteenth* day of *March* 2005.

Australian Institute of Nuclear Science and Engineering Inc
Statement by Members of the Executive Committee
For the Year Ended 31 December 2004

The Executive Committee have determined that the Australian Institute of Nuclear Science and Engineering Incorporated (the Institute) is not a reporting entity.

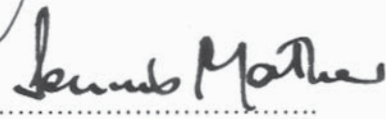
The Executive Committee have determined that this special purpose financial report should be prepared in accordance with the accounting policies outlined in Note 1 to the financial statements.

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 Institute as at 31 December 2004 and its performance for that year ended on that date.
2. At the date of this statement, there are reasonable grounds to believe that the Institute will be able to pay its debts as and when they fall due.

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


.....
President


.....
Public Officer and Scientific Secretary

Dated this 16th day of March 2005

Balance Sheet

as at 31st December 2004

Schedule 1

	Notes	31-Dec-04 \$	31-Dec-03 \$
Current Assets			
Cash	2	327,481	165,704
Receivables	3	50,295	72,989
Investments	4	2,101,485	2,372,695
Other	5	24,801	27,199
Total Current Assets		<u>2,504,061</u>	<u>2,638,587</u>
Non-Current Assets			
Plant and Equipment	6	2,996,694	2,723,550
Total Non-Current Assets		<u>2,996,694</u>	<u>2,723,550</u>
Total Assets		5,500,755	5,362,136
Current Liabilities			
Creditors	7	674,632	506,351
External Grants Received in Advance	8/9	1,013,755	1,013,755
Other Payments Received in Advance	8/9	1,073,000	1,073,000
Provisions for Employee Entitlements	10	41,660	29,260
Total Current Liabilities		<u>2,803,046</u>	<u>2,622,366</u>
Non-Current Liabilities			
Provisions for Employee Entitlements	10	3,876	6,926
Total Non-Current Liabilities		<u>3,876</u>	<u>6,926</u>
Total Liabilities		2,806,922	2,629,292
NET ASSETS		<u><u>2,693,833</u></u>	<u><u>2,732,845</u></u>
Equity			
Awards Reserve	16	2,198,644	2,520,936
Long Term Projects Reserve	16	500,000	500,000
Accumulated results of operations		(4,810)	(288,092)
TOTAL EQUITY		<u><u>2,693,834</u></u>	<u><u>2,732,844</u></u>

Income and Expenditure Statement

for the period ended 31 December 2004

Schedule 2

	Notes	31-Dec-04 \$	31-Dec-03 \$
Operating Revenue			
Payments from members		2,233,698	2,139,288
External Grants	13	391,250	470,688
Interest Received		165,261	136,920
Profit on sale of assets		-	-
Other	15	<u>16,601</u>	<u>934,682</u>
Total Operating Revenue		<u>2,806,810</u>	<u>3,681,578</u>
Operating Expenses			
Wages & Salaries		178,609	197,579
Superannuation		22,442	31,693
AINSE Awards			
Students	11	480,630	440,434
Research Awards	11	1,447,293	1,256,888
Conference Subsidies		38,279	74,436
External Grants	13	442,997	413,690
Other Expenses	14	<u>235,570</u>	<u>1,197,937</u>
Total Operating Expenses		2,845,820	3,612,657
Surplus/(Deficit) for the year		(39,010)	68,921
Accumulated funds brought forward		<u>(288,092)</u>	<u>(357,013)</u>
Accumulated Deficit		<u>(327,102)</u>	<u>(288,092)</u>
Add(Less): transfer from Reserves			
Grants Reserve	16	(322,292)	
Accumulated results of operations at end of financial year		<u>(4,810)</u>	<u>(288,092)</u>

Statement of Cash Flows

for period ended 31 December 2004

Schedule 3

	Notes	31-Dec-04 \$ Inflows/(Outflows)	31-Dec-03 \$ Inflows/(Outflows)
CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES			
Inflows:			
Receipts from members		2,272,993	2,973,940
Receipts from grants		391,250	217,164
Interest received		167,659	133,146
		<u>2,831,902</u>	<u>3,324,250</u>
Outflows:			
Grant expenditures		(2,409,199)	(2,185,448)
Payments to suppliers and employees		(243,949)	(1,735,829)
		<u>(2,653,148)</u>	<u>(3,921,276)</u>
Net cash flows provided by (used in) operating activities	17	<u>178,754</u>	<u>(597,026)</u>
CASH FLOWS PROVIDED BY (USED IN) INVESTING ACTIVITIES			
Outflows:			
Plant and equipment		(288,187)	(23,907)
Net cash flows provided by (used in) investing activities		<u>(288,187)</u>	<u>(23,907)</u>
Net increase in cash held		(109,433)	(620,933)
Cash at beginning of reporting period as at 31/12/03		<u>2,538,399</u>	<u>3,159,332</u>
Cash at end of reporting period		<u><u>2,428,966</u></u>	<u><u>2,538,399</u></u>

For the purposes of the Statement of Cashflows, the cash balance as at 31 December 2004 comprises Cash-Operating, Money Market and Other Deposits. A reconciliation of cash at the end of the reporting period to the Balance Sheet is set out as follows:

Balance Sheet	Cash	327,481	165,704
	Investment	2,101,485	2,372,696
Cash Flow Statement		<u>2,428,966</u>	<u>2,538,399</u>

Notes to and Forming Part of the Accounts Schedule 4

Note 1 – Statement of accounting policies

This is not a general purpose financial report. It is a special purpose report prepared for the members of the Institute to enable compliance with the requirements of the Associations Incorporations Act, 1984, and the Constitution and Objects of the Institute. The Institute is of a type identified in Statements of Accounting Concepts 1 as a non-reporting entity. No regard has been paid to other Accounting Standards in the preparation of these accounts other than AAS5 Materiality and AAS8 Events Occurring After Reporting Date.

The accounts have been prepared from historical cost records, except where stated otherwise. The accrual and going concern bases of accounting have been adopted.

- (a) **Depreciation**
Depreciation is calculated on a straight line basis so as to write off the net cost of each depreciable non-current asset over its expected useful life.
- (b) **Employee benefits**
The amounts expected to be paid to employees for their pro-rata entitlement to long service and annual leave are accrued annually at current pay rates having regard to experience of employees' departures and period of services.
- (c) **Grants**
All grant monies received have been treated as a Balance Sheet item under the heading of "Grants Received in Advance". As money is expended on the grants the equivalent amount of expenditure is drawn down from the Balance Sheet to Grants Income in the Income and Expenditure Statement.
- (d) **Income tax**
The Institute is exempt from income tax.
- (e) **Adoption of Australian Equivalents to International Financial Reporting Standards**
Australia is currently preparing for the introduction of International Financial Reporting Standards (IFRS) effective for financial years commencing 1 January 2005. This requires the production of accounting data for future comparative purposes at the beginning of the next financial year.

The Institute's management are assessing the significance of these changes and preparing for their implementation.

Notes to the Financial Statements

Schedule 5

	31-Dec-04 \$	31-Dec-03 \$
2. CASH		
Operating Account	326,981	165,204
Petty Cash	500	500
	<u>327,481</u>	<u>165,704</u>
Commitments for Expenditure		
Tandem	-	500,000
ISIS	8,750	8,750
Trade Creditors	674,632	506,351
EA/IRMS	-	84,999
Awards and Studentships Awarded in 2004 for payment in 2005	Note A <u>2,198,644</u>	<u>2,122,000</u>
	<u>2,882,026</u>	<u>3,222,100</u>
<p>Note A: Invoices for membership fees are raised in January and payment is subsequently received over the first three quarters. Grant reserve was established in line with advice from the auditors. Accordingly, funds received from membership fees in 2004 are used for grants and studentships during 2005. AINSE commits \$400,000 pa to studentships</p>		
3. RECEIVABLES		
Trade Debtors	9,235	32,907
Other Receivables	41,059	40,082
	<u>50,295</u>	<u>72,989</u>
4. INVESTMENTS		
Cash Deposit Account	101,485	343,032
Term Deposit Account	2,000,000	2,029,663
	<u>2,101,485</u>	<u>2,372,695</u>
5. OTHER CURRENT ASSETS		
Prepayments	(0)	(0)
Interest Accrued	24,801	27,199
	<u>24,801</u>	<u>27,199</u>
6. PLANT AND EQUIPMENT		
Plant & Equipment		
Costs	95,476	95,476
Additions/(Disposals)	-	-
Accumulated Depreciation	83,638	78,084
Closing Written Down Value	<u>11,838</u>	<u>17,392</u>
Plant & Equipment Accruals		
Asset Under Construction	<u>2,968,252</u>	<u>2,680,065</u>
Motor Vehicles		
Costs	28,465	28,465
Additions/(Disposals)	-	-
Accumulated Depreciation	11,861	2,372
Closing Written Down Value	<u>16,605</u>	<u>26,093</u>
Total	<u><u>2,996,694</u></u>	<u><u>2,723,550</u></u>

Notes to the Financial Statements

Schedule 6

	31-Dec-04 \$	31-Dec-03 \$
7. CREDITORS		
AINSE - Trade Creditors	1,121	2,421
Other Creditors	-	3,226
Accrued Charges - Other	673,511	500,705
	<u>674,632</u>	<u>506,351</u>
8. EXTERNAL GRANTS RECEIVED IN ADVANCE		
AINSE Grant ARC Tandem	1,013,754	1,013,754
	<u>1,013,755</u>	<u>1,013,755</u>
9. OTHER PAYMENTS RECEIVED IN ADVANCE		
Member Tandem Contribution	1,073,000	1,073,000
	<u>1,073,000</u>	<u>1,073,000</u>
10. PROVISIONS FOR EMPLOYEE ENTITLEMENTS		
Current		
Accrued Salary & Wages	1,292	-
Recreation Leave	29,558	20,569
Long Service Leave	10,809	8,692
	<u>41,660</u>	<u>29,260</u>
Non-Current		
Long Service Leave	3,876	6,926
	<u>45,535</u>	<u>36,186</u>
11. AINSE AWARDS		
AINSE AWARDS - Post Graduate Awards		
Lucas Heights Costs	186,865	162,428
University Travel and Equipment	32,891	34,973
Stipends	238,771	237,110
AINSE Winter School	22,103	5,924
	<u>480,630</u>	<u>440,434</u>
AINSE AWARDS - Awards		
Lucas Heights Costs	1,356,975	1,167,172
Minor Equipment and Materials	-	3,157
Travel and Accommodation	81,677	74,548
Other Costs	8,640	12,011
	<u>1,447,293</u>	<u>1,256,888</u>
12. 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

Schedule 7

	31-Dec-04	31-Dec-03
	\$	\$
13. EXTERNAL GRANTS		
<u>AINSE ARC ISIS Grant</u>		
Grant Revenue	235,000	245,509
Member Contributions	156,250	135,000
	<u>391,250</u>	<u>380,509</u>
Grant Expenditure		
External Payments	400,000	405,675
Total Expenditure	<u>400,000</u>	<u>405,675</u>
<u>Grants - ARC Tandem</u>		
Grant Revenue	-	90,013
Grant Expenditure		
External Payments		
Equipment and Materials	42,997	8,015
Contract Labour/Consultancies		
Others		
Total Expenditure	<u>42,997</u>	<u>8,015</u>
<u>Reconciliation</u>		
Total External Grants Revenue	391,250	470,688
less transferred to Grants Received In Advance (Balance Sheet)	-	-
External Grant Revenue (Income & Expenditure Statement)	<u>391,250</u>	<u>470,688</u>
Represented by:		
Total Grant Expenditure (Income & Expenditure Statement)	442,997	413,690
Amount to be met by AINSE	(51,747)	(25,000)
External Grants Expenditure	<u>391,250</u>	<u>388,690</u>

Notes to the Financial Statements

Schedule 8

	31-Dec-04	31-Dec-03
	\$	\$
14. OTHER EXPENDITURE		
Conference Management	76,565	782,402
Publications and Promotions	12,918	12,295
Meetings and Committees	65,192	76,109
EA/IRMS	-	239,802
AINSE Secretariat		
Audit Fees and Bank Charges	11,346	7,184
Depreciation	15,042	14,842
Advertising and Printing	-	3,608
Office Supplies	2,367	406
Postage and Telephone	2,621	2,329
Insurance	6,046	7,125
Entertaining	488	2,190
Books and Software	1,700	527
Office Equipment and Repair	925	10,094
Administration and Staff Training	2,148	1,672
Travel and Accommodation	17,461	12,296
Vehicle Expenses	13,260	8,144
Staff Recruitment	33	9,441
Loss on disposal of assets	-	2,805
FBT Expense & Payments	4,834	3,514
Miscellaneous	2,624	1,152
Total AINSE Secretariat	<u>80,895</u>	<u>87,329</u>
Total Other Expenditure	<u>235,570</u>	<u>1,197,937</u>
15. OTHER INCOME		
Sponsorships:		
Inter Congress Radiation Research 2004	-	277,002
NTA Conference	424	7,400
Quaternary Science	-	2,600
SANS Symposium	5,455	5,600
Conference Registrations	5,257	636,604
Other	5,465	5,476
	<u>16,601</u>	<u>934,682</u>
16. MOVEMENT IN RESERVES		
Awards Reserve		
Opening Balance	2,520,936	
Transfer to Accumulated Funds	<u>(322,292)</u>	-
Balance as at 31 December 2004	<u>2,198,644</u>	
Long Term Projects Reserve	500,000	
Transfer from accumulated funds	-	-
Balance as at 31 December 2004	<u>500,000</u>	

Notes to the Financial Statements

Schedule 9

	31-Dec-04 \$	31-Dec-03 \$
17. RECONCILIATION OF OPERATING RESULT WITH CASHFLOWS FROM OPERATIONS		
Surplus/(Deficit) for the year	<u>(39,010)</u>	<u>68,921</u>
Movements in Balance Sheet		
(Increase)/Decrease in Receivables	22,694	13,343
Increase/(Decrease) Creditors	168,280	(450,242)
(Increase)/Decrease Accrued Interest	2,398	(3,774)
(Increase)/Decrease Prepayments	0	(711,567)
Increase/(Decrease) Employee Entitlements	9,349	(18,649)
Increase/(Decrease) Other Current Liabilities	-	(113,373)
Increase/(Decrease) Grants Received in Advance	-	(253,523)
	<u>202,722</u>	<u>(1,537,785)</u>
Non-Cash Items		
Depreciation	15,042	14,842
Gain on sale of asset	-	-
	<u>15,042</u>	<u>14,842</u>
Net cash provided by (used in) operating activities	<u><u>178,754</u></u>	<u><u>(1,454,022)</u></u>

Amendment to Comparative Figures

The comparative figures used in the Statement of Cash Flows for the year have been amended so as to transfer the deposit on the Tandem Accelerator of \$856,996 which was paid in the 2001 year, from Cash Flows used in Operating Activities to CASH Flows used in Investing Activities.

AINSE Postgraduate Research Awards

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

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

22 new AINSE postgraduate research projects were supported by a Post-Graduate Research Award in 2004. Through its Post-Graduate Research Award scheme, AINSE has now helped train 198 students in aspects of nuclear science and associated techniques of analysis. Many more students have been assisted with their research by gaining access to Lucas Heights facilities through AINSE Awards made to their supervisors. The Council believes that one of the most valuable roles fulfilled by AINSE is the provision of these AINSE Post-Graduate Research Awards.

Projects supported during 2004

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

Fate of metal pollutants released from the Rum Jungle uranium/copper mine into the Finniss River, NT Australia

Jennifer Brazier Science and Primary Industries, Charles Darwin University. Commenced 01/07/02

High temperature fatigue behaviour and life prediction of advanced engineering materials

Mark Callaghan Chemistry Materials and Forensic Science, University of Technology, Sydney. Commenced 01/07/04

Plasma surface modification of polymers for biomedical applications

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

Negative thermal expansion in molecular framework materials

Karena Chapman Chemistry, The University of Sydney. Commenced 01/07/03

Calixarenes as potential ionophores for ion-selective electrodes

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

The palaeoecological basis of prehistoric settlements, agricultural development and climate change in the South Caucasus during the Holocene

Simon Connor Anthropology, Geography & Environmental studies, The University of Melbourne. Commenced 01/07/02

Relaxation and microstructural studies in triglycine sulphate ferroelectrics

John Daniels Physics and Materials Engineering, Monash University. Commenced 01/07/04

Trace-element mapping of tropical carbonates using the high-energy heavy-ion microprobe

Karen Durand Geography, The University of Newcastle. Commenced 01/07/03

Gold processing using thiosulfate lixiviants

Adam Fischmann Chemistry, Monash University. Commenced 01/07/03

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

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

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

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

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

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

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

Removal of arsenic and other heavy metals associated with mine wastewater by dissimilatory sulfate and metal reduction
Tony Jong Science and Primary Industries, Charles Darwin University. Commenced 31/03/01

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

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

Spatial and temporal uptake of trace metals in heart urchin tests: use as an indicator of environmental contamination and relationship to organism growth and structural deformity
Alison Lane Institute of Antarctic & Southern Ocean Studies, University of Tasmania. Commenced 30/12/03

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

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

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

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

A palaeoecological reconstruction of the lower Snowy River, East Gippsland: environmental response to climate change, land use and river regulation
Angus MacGregor Geographical & Environmental 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

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

Hydrogen in metallic and metal-like systems

Keith McLennan School of Science, Griffith University. Commenced 17/01/00

The surface chemistry of DNA recognition interfaces

Freya Mearns Chemical Sciences, The University of New South Wales. Commenced 01/07/02

Elucidation of the biophysical behaviour of Quadramet (samarium-EDTMP) as a therapeutic radiopharmaceutical

Danielle Meyrick Science and Engineering, Murdoch University. Commenced 1/1/01

Investigation of cathode materials for lithium secondary batteries

Manickam Minakshi Chemistry, Murdoch University. Commenced 01/06/04

New proxies for the climate debate: AMS dates and stable carbon isotopes of peat deposits from NE Queensland

Joanne Muller Earth Sciences, James Cook University. Commenced 01/07/03

Benthic diatoms as biological indicators of acid mine drainage in tropical areas of the Northern Territory

Louise Mutton Geographical & Environmental Studies, University of Adelaide. Commenced 01/07/04

Removal of trace contaminants using membrane technology

Long Nghiem Environmental Engineering, University of Wollongong. Commenced 01/07/03

Mathematical modelling of drying of colloidal nanoparticle sols

Glen Oberman Mathematical Sciences, Queensland University of Technology. Commenced 01/07/04

Transition alumina structure determination from first principle calculations

Gianluca Paglia Applied Physics, Curtin University of Technology. Commenced 31/03/01

Evaluating residual stress measurements using neutron diffraction for welds in steel structures and pressure vessels and relating this to the design and fitness-for-purpose assessments

Anna Paradowska Mechanical Engineering, Monash University. Commenced 01/07/04

Impact of climate change on late Holocene penguin populations of the Vestfold Hills, Antarctica, using high resolution lake sediment cores

Rachael Parkinson Institute of Antarctic & Southern Ocean Studies, University of Tasmania. Commenced 01/07/04

Residual stress measurement in highly constrained welds

Susan Pearce Mechanical Engineering, University of Adelaide. Commenced 01/07/04

Protein behaviour at interfaces

Adam Perriman Chemistry, Australian National University. Commenced 01/07/03

Groundwater remediation utilising a permeable reactive barrier in acid sulphate soils of the lower Shoalhaven River catchment

Mark Peterson Civil Mining and Environmental Engineering, University of Wollongong. Commenced 01/07/04

Elemental structure of fine particulates from the Asian continent under differing meteorological conditions

Fiona Rae Geography and Environmental Science, The University of Newcastle. Commenced 01/03/01

Floodplain wetland evolution and dynamics in the Macquarie Marshes, NSW

Timothy Ralph Physical Geography, Macquarie University. Commenced 01/07/02

Immobilising sol gel technology for biomineralisation and biocatalysis

Lisa Rodgers Biotechnology & Biomolecular Sciences, The University of New South Wales. Commenced 01/07/02

Interfacial bonding in alkali-activated aluminosilicate polymers

Matthew Rowles Applied Physics, Curtin University of Technology. Commenced 01/07/02

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

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

Processing of TiO₂ based semiconducting ceramics

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

Hydrogen adsorption in intercalated graphite: comparison between experiment and simulation

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

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

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

Experimental charge density studies of hydrogen bonding

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

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

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

Microdosimetry and nanodosimetry in proton therapy

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

Summary of AINSE Awards

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

The disciplines involved during 2004 included the following disciplines

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

chemistry applied, biochemistry, chemical technology, polymer science

engineering chemical, electrical, mechanical, microelectronics

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

environmental & earth sciences environmental biology, environmental geology, geochemistry, geography, information, coastal management, marine science

medicine medical and health physics, nuclear, positron emission tomography

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

Awards for 2004 are shown on the following pages in order of university, department and surname to highlight the diversity of institutions and disciplines within which projects occur. This includes arrangements for general research students' access to Lucas Heights facilities but does not include access arrangements for AINSE postgraduate scholars, see page 18. Awards marked with an asterisk (*) have industry linkages. The total amount of the awards for each university is also shown. Nearly all of these projects involved close cooperation between university people and ANSTO staff and required substantial use of the reactor, accelerators and other facilities at the Lucas Heights Research Establishment.

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

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

During 2004 168 projects were awarded to a value of \$1,447,293 involving thirty-two of the thirty-eight university members. The following table shows the distribution of awards by university and by specialist areas.

Specialist Areas *

University *	A	B	E	M	N	Grand Total
ADE	2		5		2	9
AKL	2	2		1		5
ANU	7	1	1		6	15
BAL			1			1
CQU			2			2
CUR				3	8	11
ECU				1		1
FLI	2	1		3	1	7
GRI				2		2
IGN				1		1
JAM	1		1			2
LAT	1		2			3
MAC		1	1	1		3
MEL	3	4	1			8
MON	6		2	1	8	17
NCT	3		3	2	3	11
NSW	1	1		3	3	8
NTU			1			1
QLD	1		1	2		4
QUT				2	1	3
RMI				4		4
SCU			2		1	3
SWI				1		1
SYD	5	2		2	5	14
TAS			1			1
UNE	3		1			4
USA				1	3	4
USQ			1			1
UTS	4				1	5
UWA		1	5	1		7
UWS			1			1
WOL	5	1	1	2		9
Grand Total	46	14	33	33	42	168

* see abbreviations on page 71

Australian National University

Archaeology and Natural History

04/182	Professor Atholl Anderson ¹⁴ C dating the onset and extent of human landscape modification from buried coastal back-swamp deposits, Rapa island, Austral Archipelago, French Polynesia	\$2,328
04/069	Dr Simon Haberle Late Holocene fire regimes in the central highlands of Tasmania: part II	\$10,870
04/117	Dr Susan O'Connor Direct dating of shell artefacts from East Timor	\$2,816
04/137	Dr Robin Sim Holocene palaeoenvironmental change and human occupation on Vanderlin Island, southwest Gulf of Carpentaria	\$2,910
04/187	Dr Glenn Summerhayes Sourcing of prehistoric obsidian and ochre from the Tanga Islands, New Ireland Province, Papua New Guinea	\$12,975

Neurosciences Research Unit

04/171P	A/Professor David Willenborg Evaluation of radiolabelled peripheral benzodiazepine receptor (PBR) ligands in a murine model of neurodegeneration	\$12,930
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Research School of Chemistry

04/061	Dr Darren Goossens Structure and magnetic order in $\text{Ln}_{1-x}\text{Sr}_x\text{CoO}_3$ (Ln = Y, Ho) using neutron powder diffraction	\$15,570
04/200	Dr Darren Goossens Study of the structural phase transition in d-benzil using neutron powder diffraction	\$16,080
04/167P	Professor John White Protein structure at oil-water interfaces	\$34,060
04/213	Professor John White Structure of titanium oxide films at solid surfaces	\$13,150
04/214	Professor John White The aggregation behaviour of protein/sugar complexes	\$36,280
04/173	Dr Ray Withers The crystal structure determination of some photocatalytic 1:1 and 1:2 B-site substituted complex perovskites	\$18,480

Research School of Earth Sciences

04/046 *	Dr William Dunlap ⁴⁰ Ar/ ³⁹ Ar dating of minerals and rocks: determining ages of cooling, crystallisation or recrystallisation	\$14,688
04/003	Dr Derek Fabel Constraining neotectonic movement using cosmogenic burial dating	\$4,483
04/128	Dr Eddie Rhodes Improved sediment U-series disequilibrium determination for luminescence dating of archaeological and geological contexts	\$6,000

Australian National University Total \$203,620

Central Queensland University

Arts Health and Science

04/114	Professor David Midmore Use of PIXE for localisation of arsenic within tissues of arsenic hyperaccumulating plants	\$17,435
04/161	A/Professor Kerry Walsh Use of PIXE for spatial distribution of copper and cobalt in the Cu-/Co-hyperaccumulating plant <i>Haumaniastrum katangense</i> and <i>Vigna dolomitica</i>	\$14,606
Central Queensland University Total		\$32,041

Charles Darwin University

Key Centre for Tropical Wildlife Management

04/068 ★	Mr Tony Griffiths Dating tree rings in <i>Bombax ceiba</i> and <i>Brachychiton diversifolius</i> using dendrochronology and the radiocarbon bomb pulse	\$9,068
Charles Darwin University Total		\$9,068

Curtin University of Technology

Applied Physics

04/188	A/Professor It-Meng Low Depth-profiling of nano-structured titanium silicon carbide-titanium carbide system using SIMS	\$4,133
04/181	A/Professor It-Meng Low Mechanical performance of clay-cellulose fibre-reinforced polymeric nanocomposites	\$4,280
04/206	A/Professor It-Meng Low Effects of oxygen partial pressure on the thermal stability of Al_2TiO_5	\$12,130
04/207	A/Professor It-Meng Low Transformation kinetics of kaolin and self-reinforced alumina composites	\$17,710
04/157P	Dr Arie van Riessen Mimicking biomineralisation of calcium carbonate polymorphs	\$24,960

Applied Chemistry

04/184	Dr Stuart Bailey A neutron reflectometry study of ordered corrosion inhibitor films under shear	\$8,615
04/192	Dr Stuart Bailey A neutron reflectometry study of ordered corrosion inhibitor films under shear	\$11,050
04/041	A/Professor Roland De Marco A SIMS study of the fouling of the cadmium chalcogenide glass electrochemical sensor in seawater media	\$9,384
04/040	A/Professor Roland De Marco A SANS study of the nanostructure of the mercury chalcogenide glass electrochemical sensor	\$10,325

Chemical Engineering/Centre for Fuels and Energy

04/191 ★	Professor Dong-ke Zhang Dynamic neutron diffraction study of bismuth molybdate catalysts for partial oxidation of propylene to acrolein: β - $Bi_2Mo_2O_9$ and catalyst 141100	\$14,485
04/177	Professor Dong-ke Zhang <i>In-situ</i> ND and XRD investigation of the role of bismuth-molybdates lattice oxygen in the reaction mechanisms of propylene oxidation to acrolein	\$9,447
Curtin University of Technology Total		\$126,519

Edith Cowan University

Engineering & Mathematics

04/082	Dr Stephen Hinckley IBIC investigation of ion implanted silicon wafers	\$13,341
Edith Cowan University Total		\$13,341

Flinders University

Chemistry, Physics and Earth Sciences

04/186	Dr Erick Bestland Comparison of ¹⁴ C age determinations of soil organic matter and OSL burial ages: implications for soil process and soil dating	\$4,224
04/097 *	Dr Corinne Le Gal La Salle Investigation of the use of carbon-14 and tritium to estimate groundwater residence time and stress in a multilayered confined aquifer	\$8,730
04/109P	Professor Janis Matisons Inorganic-organic hybrid materials by sol-gel processes: interactions of proteins with silica and alumina precursors	\$14,348
04/135P *	Dr Joseph Shapter AFM imaging and nanoindenting of bone	\$2,470
04/146	Professor Robin Storer Resistive magnetohydrodynamics of the H1-Heliac	\$1,720
04/158	Dr Nicholas Voelcker Investigation of the mechanical properties of porous silicon based biomaterials	\$7,106

Flinders Medical Centre, Haematology and Genetic Pathology

04/149P	Dr Pamela Sykes Effect of low dose-rate radiation on somatic intrachromosomal recombination	\$21,000
Flinders University Total		\$59,598

Griffith University

Science

04/076P	Professor Peter Healy Solid state NMR and NQR of copper(I) complexes with phosphorus and nitrogen ligands	\$9,032
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Microelectronic Engineering

04/071P	Dr Jisheng Han An investigation of C-MOS based on 4H-SiC by Al and N implantation	\$7,494
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Griffith University Total		\$16,526
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Institute of Geological & Nuclear Sciences

04/105	Dr Andreas Markwitz Non-Rutherford RBS of GaN and InN films using 3.5 MeV 4He ions	\$7,748
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Institute of Geological & Nuclear Sciences Total		\$7,748
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James Cook University

Earth Sciences

04/024P	Professor Bob Carter Beryllium isotopes from sites DSDP 594 and ODP 1123 - the cosmogenic connection	\$18,455
04/175	Dr Raphael Wust The diatomites of Long Pocket, Qld: a unique, high-resolution paleoclimate record of the dry tropics	\$10,203
James Cook University Total		\$28,658

La Trobe University

Archaeology

04/123	Dr Elizabeth Pemberton Analysis of the clays of cooking fabric vessels from Ancient Corinth	\$1,320
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Earth Sciences

04/165	Dr John Webb Understanding groundwater salinity in the Upper Wimmera catchment, western Victoria, using isotopic techniques	\$6,086
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Life Sciences

04/155	Dr Judy Tisdall Peat accumulation and depletion in the Australian Alps: are dried peats a remnant of the under layer of moss bed bog peats?	\$7,052
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La Trobe University Total		\$14,458
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Macquarie University

Physical Geography

04/062P	Dr Damian Gore Did the east-west boundary flanks of the upper Lambert Glacier, East Antarctica, deglacialate synchronously?	\$13,752
04/219	Dr Damian Gore Searching for native chromium hyperaccumulators, part 2: eastern New England Fold Belt	\$1,575

Physics

04/021	Dr Kenneth Butcher Compositional and impurity analysis of nitride films produced by the Macquarie University low temperature nitride growth facility	\$9,024
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Macquarie University Total		\$24,351
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Monash University

Geography & Environmental Science

04/038	Dr Bruno David Spatiotemporal trends in satellite island use around Badu Island, western Torres Strait	\$5,632
04/005	Professor Peter Kershaw The temporal and spatial dynamics of tall open forest	\$6,764
04/094	Professor Peter Kershaw Dating a multiproxy record of environmental and human history from the Mt Eccles lava flow, southwestern Victoria	\$7,936
04/112	Dr Ian McNiven Mask Cave pottery dating project	\$4,224

Geosciences

04/008 *	Dr Frank Bierlein Reconstruction of the evolution of the Tasmanides in NE Australia: constraints from basalt geochemistry and ore deposits	\$4,150
04/215	Dr Frank Bierlein Controls on mineral endowment of the Menzies-Boorara Shear Zone, Yilgarn Craton, Western Australia	\$1,050
04/169	Dr Andy Wilde PIXE/PIGE analysis of bulk inclusion fluids in zoned quartz crystals	\$9,997
04/025	A/Professor Ian Cartwright Patterns of recharge and timescales of salinity development, Northern Victoria	\$7,010

Physics & Materials Engineering

04/026	A/Professor John Cashion Structure, bonding and magnetic properties of sorbed metal species and novel materials	\$2,128
04/049	A/Professor Trevor Finlayson <i>In-situ</i> microstructural studies of yttria-stabilised zirconia ceramics under tensile loading	\$10,620
04/050 *	A/Professor Trevor Finlayson Development of non-destructive internal stress measuring techniques	\$10,170
04/051	A/Professor Trevor Finlayson Dynamic structural studies in association with the ferroelectric phase transition in tri-glycine sulphate (TGS)	\$26,240
04/198 *	A/Professor Trevor Finlayson Neutron residual stress measurements for welds in steel structures and pressure vessels	\$790
04/199	A/Professor Trevor Finlayson Relaxation and microstructural studies in triglycine sulphate ferroelectrics	\$790
04/080	Dr Trevor Hicks Neutron spectroscopy of heavy fermion systems near quantum critical points	\$3,920
04/201	Dr Trevor Hicks Neutron spectroscopy of heavy fermion systems near quantum critical points	\$66,720
04/138P	Dr George Simon Manipulation and purification of carbon nanotube structures at high temperatures for incorporation into polymeric matrices	\$2,503
Monash University Total		\$170,644

Queensland University of Technology

Mechanical, Manufacturing and Medical Engineering

04/121	Dr Thierry Paulmier Fundamental study of the mechanism of film deposition by plasma electrolytic processing	\$5,260
04/152 *	Dr Tuquabo Tesfamichael Development of nano-structured titania electrodes for dye-sensitized solar cells using evaporation techniques	\$7,402

Physical/Chemical Sciences

04/170P	Dr Geoffrey Will Microwave modification of titania nanoparticles	\$11,985
Queensland University of Technology Total		\$24,647

RMIT University

Applied Sciences

04/088	Professor Peter Johnston Heavy ion beam nanolithography	\$16,241
04/103P	Professor David Mainwaring Irradiation induced conductivity in polymeric thin films	\$26,872

Civil and Chemical Engineering

04/180P *	Dr Liam Ward Characterisation and evaluation of nano-crystalline coatings for use in harsh industrial environments	\$11,470
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Electrical & Computer Systems Engineering

04/143	Professor Dinesh Sood SPM study of nano-clusters produced by ion implantation in silicon	\$4,122
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RMIT University Total \$58,705

Southern Cross University

Environmental Science and Management

04/119 *	Dr Jeffrey Parr Quantification of the plant phytolith organic carbon (PhytOC) contribution to soil total carbon	\$12,690
04/208 *	Dr Jeffrey Parr Quality assessment of raw and fused silica from alternative sources	\$8,800
04/150	Dr Kathryn Taffs Environmental change on the coastal peat plains of Byron Bay, northern NSW	\$9,150

Southern Cross University Total \$30,640

Swinburne University of Technology

Engineering & Science

04/043P	Professor Derry Doyle Nitriding of martensitic stainless steels	\$11,198
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Swinburne University of Technology Total \$11,198

The University of Auckland

Auckland Cancer Society – Cancer Research

04/075 *	Dr Michael Hay Reduction potentials of novel indenotriazine 1,4-dioxides: a new class of bioreductive cytotoxin	\$4,320
04/120	Dr Adam Patterson Determination of K-value of novel hypoxia-activated diffusible cytotoxins	\$2,160

Chemistry

04/220	A/Professor Hicham Idriss The design and characterisation of novel gold/uranium oxide supported catalyst active for CO hydrogenation and coupling reactions	\$11,370
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Geology

04/001	Dr Paul Augustinus Why do the shapes of glacial valleys vary?	\$11,338
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04/183	Dr Paul Augustinus Surface exposure and burial dating of suites of glaciofluvial terraces, Central Otago, New Zealand	\$15,032
The University of Auckland Total		\$44,220

The University of Melbourne

Classics & Archaeology

04/086	Dr Heather Jackson East and west? Comparative analysis of pottery clays from Hellenistic Syria and Athens	\$1,750
04/132P	A/Professor Antonio Sagona Beyond the land of the Golden Fleece: the Mtskheta Archaeological Project	\$7,040

Earth Science

04/059 *	Professor Andrew Gleadow The application of fission track analysis to fundamental problems in the Earth Sciences	\$11,200
04/164	Dr Tamie Weaver Developing time frames for groundwater salinisation in contrasting dryland salinity areas, Ovens Catchment, Victoria	\$4,206

Genetics

04/022P	A/Professor James Camakaris Use of radiocopper to study the genetic basis of copper homeostasis, and Alzheimer's Disease	\$9,000
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Nuclear Medicine and PET Centre

04/081P	Professor Rod Hicks The development of radiofluorinated prosthetic groups for the radiolabelling of macromolecules, peptides and proteins	\$10,880
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Trescowthick Research Laboratory

04/107P *	A/Professor Roger Martin Pulse radiolysis studies with DNA-binding radioprotectors	\$3,585
04/106P	A/Professor Roger Martin DNA strand break efficacy of a new ¹²⁵ I-labelled minor groove-binding bisbenzimidazole	\$3,000

The University of Melbourne Total		\$50,661
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The University of New England

Human and Environment Studies

04/010 *	Dr Graeme Blair Interactions between silicon and phosphorus in flooded and non-flooded soils determined by ³⁰ Si and ³² P	\$1880
04/064	Dr Peter Grave Evaluating radiocarbon age determination of ancient mortars and plasters: a case study from Pompeii	\$4,224
04/063	Dr Peter Grave Age determination of late Pleistocene ceramics from the Russian Far East	\$9,152
04/065	Dr Peter Grave INAA characterisation of Iron Age ceramics from Anatolia	\$11,000

Rural Science and Agriculture

04/099 *	Dr Peter Lockwood Floodplain soil dating to determine the history of heavy metal contaminant deposition	\$2,180
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The University of New England Total		\$28,436
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The University of New South Wales

Advanced Silicon Photovoltaics and Photonics

04/032P	Dr Gavin Conibeer SIMS investigation of rare earth metals incorporated into Si/SiO ₂ superlattices and Si quantum dot superlattices	\$14,407
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Biophysics

04/193	Dr Mary Beilby Cell wall polymer arrangement in aligned charophyte cells by small angle neutron scattering	\$12,150
04/035P	Professor Hans Coster Neutron and x-ray reflectometry studies of covalently bonded multi-layer organic films on silicon	\$11,405

Diabetes Transplant Unit

04/218 *	Professor Bernard Tuch Monitoring the mass of insulin-producing cells of the pancreas	\$5,940
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Geology

04/031 *	Dr David Cohen Effects of hydroxylamine on the dissolution of secondary Fe and Pb minerals in weathered materials	\$9,297
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Pathology

04/179P	Dr Hala Zreiqat Divalent cations enhance bone formation at the skeletal tissue/ prosthetic materials interface	\$11,774
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ADFA

04/085	Dr Wayne Hutchison Rare earth magnetism studies using nuclear hyperfine probe techniques	\$1,280
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Photovoltaic Engineering

04/027P	Dr Kylie Catchpole Accuracy of Deep Level Transient Spectroscopy (DLTS)	\$2,040
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The University of New South Wales Total		\$68,293
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The University of Newcastle

Chemistry

04/019	Dr Robert Burns Anomalous structural trends in alkali metal phosphopolyoxotungstate compounds of the type M ₃ [PW ₁₂ O ₄₀], where M = Na ⁺ , K ⁺ , Rb ⁺ and Cs ⁺	\$10,910
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04/018	Dr Robert Burns Multinuclear magnetic resonance studies of the cation environments in compounds of the type M ₃ [PM ₁₂ O ₄₀], where M = Mo and W	\$3,680
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04/110	Dr Adam McCluskey Radiocarbon dating of heroin samples as a tool to verify the conversion to alternative crops	\$5,820
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Civil, Surveying and Environmental Engineering

04/147	Dr Heber Sugo The influence of exposure environment on brick-to-mortar bond strength - a preliminary study using impedance spectroscopy	\$4,374
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Environmental and Life Sciences

04/045	Dr Russell Drysdale The uranium geochemistry of carbonate rocks of the Monte Corchia region of the Alpi Apuane, Italy	\$5,050
04/004	Dr Greg Hancock Determination of soil development rates using cosmogenic isotopes	\$4,773
04/102 *	Dr Geoff MacFarlane Pearl aquaculture: potential for heavy metal remediation of coastal ecosystems	\$6,566
04/006	Dr Stuart Pearson Dating contaminants and significant species in stick-nest rat middens in arid Australia	\$6,818

Geosciences

04/060	Dr Ian Goodwin Coastline re-alignment and climate change on the mid-north coast of NSW during the late Holocene	\$6,336
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Mechanical Engineering

04/053P	Dr Jenny Forrester Crystal structure determination of PZN-PT single crystals using transmission electron microscopy	\$8,588
04/210	Dr Daniel Riley High resolution neutron diffraction of mechanically activated powders	\$12,460

The University of Newcastle Total \$75,375

The University of Queensland

Advanced Centre for Queensland University Isotope Research Excellence

04/178 *	Dr Jian-xin Zhao Calibration of Holocene C-14 reservoir ages based on U-series-dated corals in the South China Sea	\$8,260
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Chemistry

04/054P	A/Professor Lawrence Gahan Complexation studies of encapsulating ligands for potential in medical, industrial and environmental applications	\$11,310
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Geographical Sciences and Planning

04/111	Dr Hamish McGowan Assessing the role of Australian dust in regional biogeochemical cycles: ²¹⁰ Pb a tracer of Australian dust incursions into New Zealand	\$5,088
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Physics

04/113P	Dr Paul Meredith "Soft electronic" devices from ion implanted polymers	\$11,935
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The University of Queensland Total \$36,593

The University of Southern Queensland

Biological and Physical Sciences

04/129	Dr Joachim Ribbe The distribution of radiocarbon in the South East Pacific Ocean	\$11,840
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The University of Southern Queensland Total \$11,840

The University of Sydney

Archaeology

04/002	Dr Stephen Bourke Dating the first city-state in the Jordan Valley: Pella in the early Bronze Age	\$6,818
04/012P	Dr Stephen Bourke Dating the bronze/iron age transition in the Southern Levant: Pella in the late bronze and iron ages	\$7,040
04/048	Dr Judith Field Late Pleistocene archaeology and fauna in North West Queensland	\$6,984
04/156	Dr Robin Torrence Characterisation of obsidian artefacts from the Russian Far East	\$11,875
04/168	Dr Peter White Raw material procurement strategies and social relations in prehistoric Papua New Guinea	\$11,875

Chemistry

04/058P *	Professor Robert Gilbert Polymerisation of polymer colloids	\$1,450
04/072	A/Professor Margaret Harding Cellular uptake and distribution of antitumour metallocenes	\$6,500
04/093P	A/Professor Brendan Kennedy Structure of Bi double perovskites	\$19,800
04/202	A/Professor Brendan Kennedy Structure of complex aluminates and gallates	\$19,825
04/134	Dr Siegbert Schmid Ceramic materials with modulated structures	\$23,100
04/212	A/Professor Gregory Warr Structure of polymerised surfactant films on quartz	\$15,990

Molecular and Microbial Biosciences

04/203	Professor Philip Kuchel The effect of confinement on the nanoscale structure of haemoglobin solutions by small angle neutron scattering	\$12,150
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Pharmacology

04/090P	Dr Michael Kassiou Comparison of structurally diverse SPECT radioligands for the peripheral benzodiazepine receptor	\$10,000
04/089P	Dr Michael Kassiou Development and evaluation of a SPECT radioligand for imaging the sigma receptor	\$8,000

The University of Sydney Total \$161,407

The University of Western Australia

Forensic Science

04/052	Dr Shari Forbes Bomb pulse (¹⁴ C) dating of anthropological skeletal remains of forensic interest	\$11,685
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Electrical, Electronic and Computer Engineering

04/078P	Dr Jasmine Henry SIMS Characterisation of sputtered hydrogenated amorphous silicon films as used in optical position sensitive detectors	\$13,922
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Environmental Engineering, Centre for Water Research

04/127★ **Dr David Reynolds**
Integration of surface water and groundwater processes in coastal catchments \$12,064

Neurology, Sir Charles Gairdner Hospital

04/108P **Professor Frank Mastaglia**
β-CIT study of drug induced Parkinsonism (DIP) \$25,000

Plant Biology

04/185 **Dr Gary Kendrick**
Radiocarbon dating of rhodoliths collected from Esperance Bay, Western Australia \$9,150

Zoology

04/015 **Professor Don Bradshaw**
Isotopic measurement of field metabolic rates in free-ranging honey possums \$14,125

04/016 **Professor Don Bradshaw**
Measurement of protein turnover in free-ranging honey possums \$12,075

The University of Western Australia Total \$98,021

University of Adelaide

Anatomical Sciences

04/190 **Dr Soren Blau**
Scientific dating of archaeological burials in western Uzbekistan \$5,436

Geographical and Environmental Studies

04/056 **Dr Peter Gell**
A fine-resolution reconstruction of climatic fluctuations over the last 2000 years \$7,040

04/055 **Dr Peter Gell**
A fine resolution study of ²¹⁰Pb and ¹³⁷Cs fallout in Western Victoria \$7,500

04/189 **Professor Nicholas Harvey**
The recent evolution of the Younghusband Peninsula, South Australia. \$7,614

Geology and Geophysics

04/017 **Dr Joel Brugger**
An integrated study of fluid-rock interaction in the primitive crust (Pilbara Craton, Western Australia) \$10,204

Mawson Graduate Centre for Environmental Studies

04/172 **Professor Martin Williams**
AMS radiocarbon dating of Holocene organic-rich sediments in the Coorong Lakes, South Australia \$17,600

Mechanical Engineering

04/204★ **Professor Valerie Linton**
Investigation of the time dependent relaxation of residual stresses in aluminium alloy friction stir welds \$21,956

Physics

04/125★ **Professor John Prescott**
Low level uranium and thorium determinations for luminescence dating \$2,157

The South Australian Museum

04/126★ **A/Professor Allan Pring**
In situ neutron diffraction studies of mineral transformations under hydrothermal conditions \$8,540

University of Adelaide Total \$88,047

University of Ballarat

Science & Engineering

04/216	Dr Kim Dowling Children living with current and historical gold mining: a risk study to determine exposure potential from arsenic in soil	\$4,350
University of Ballarat Total		\$4,350

University of South Australia

Ian Wark Research Institute

04/047	Dr Naba Kumar Dutta Self-assembly behaviour of amphiphilic block-copolymers	\$13,220
04/197	Dr Naba Kumar Dutta Self-organisation and aggregation of resilin protein in aqueous dispersions	\$13,870
04/104P	Professor Peter Majewski Removal of uranium and plutonium cations from water via a biomimetic approach	\$7,930
04/211	Dr Rossen Sedev Structure of PEO-PPO-PEO block copolymers adsorbed at the polymer/water interface	\$12,890
University of South Australia Total		\$47,910

University of Tasmania

Institute of Antarctic and Southern Ocean Studies

04/057	Dr John Gibson Determining the timing of major faunal events in Antarctic freshwater lakes	\$8,448
University of Tasmania Total		\$8,448

University of Technology Sydney

Chemistry, Materials and Forensic Science

04/154	Dr Paul Thomas Elemental analysis of layers in banded opals	\$9,024
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Environmental Sciences

04/023	Dr Graziella Caprarelli Magmatic evolution and tectonic setting of bitter ground volcanics, NSW	\$3,705
04/139P	Professor Greg Skilbeck Palaeo-El Niño activity on the Peru margin over the past 20,000 yr BP	\$9,856
04/140P	Professor Greg Skilbeck High-resolution Holocene climate studies in temperate eastern Australian estuaries	\$7,040

Nanoscale Technology

04/033	Professor Michael Cortie Investigation of residual stress distribution in mollusc shells	\$6,600
University of Technology Sydney Total		\$36,225

University of Western Sydney

Engineering and Industrial Design

04/070	Dr Paul Hackney A study of heavy metals in cores collected from Lake Burragorang, Blue Mountains, Sydney	\$3,870
University of Western Sydney Total		\$3,870

University of Wollongong

Chemistry

04/091P	Dr Paul Keller Development of radiolabelled EGF and VEGF receptor tyrosine kinase inhibitors as antitumour agents	\$10,080
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Engineering Physics

04/131P	Professor Anatoly Rozenfeld Development of new generation of radiation detectors for synchrotron microbeam radiation therapy	\$14,676
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Geosciences

04/029	Professor Allan Chivas Dating a possible mid-Holocene warm period in Sydney Harbour	\$6,984
04/030	Professor Allan Chivas Biogeochemistry of calcrete	\$6,000
04/217	Professor Allan Chivas Biogeochemistry of Western Australian calcrete	\$9,600
04/077P *	Assoc Prof Paul Hearty New approaches to old dating problems: exposure ages of Plio-Pleistocene marine and peri-continental sediments, Shark Bay WA	\$18,045
04/115	Professor Colin Murray-Wallace The marine reservoir effect in southern Australia	\$12,860
04/174 *	A/Professor Colin Woodroffe In search of El Niño and Indian ocean dipole events in corals from Cocos (Keeling) Islands	\$10,738

Physics

04/098	Dr Michael Lerch Development of radiation detectors for neutron and gamma fields	\$13,282
University of Wollongong Total		\$102,265

Summary of experiments at ISIS

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

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

In 2004 there were 22 successful proposals allocated a total of 54 days.

		Days allocated
I R Gentle	Department of Chemistry University of Queensland <i>Neutron reflectivity study of cationic surfactants and porphyrins with anionic functionality at the air-water interface</i>	2
I R Gentle	Department of Chemistry University of Queensland <i>Conformational changes in synthetic SP-B at the air-water interface</i>	3
I R Gentle	Department of Chemistry University of Queensland <i>Growth of silicate films at the air-water interface from cationic/anionic mixed surfactant templates</i>	2
G A Hope	School of Chemistry Griffith University <i>Leaching of copper sulfide films</i>	2
G A Hope	School of Chemistry Griffith University <i>Chemical bath deposition of thin transition metal chalcogenide films</i>	2
G A Hope	School of Chemistry Griffith University <i>Dissolution of thin chalcogenide films</i>	2
C J Howard	Materials & Engineering Science ANSTO <i>High temperature phase transitions in $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ (NBT)</i>	2
C J Howard	ANSTO - Materials & Engineering <i>Influence of cation ordering in perovskites on octahedral tilting</i>	3
B J Kennedy	School of Chemistry University of Sydney <i>Phase transitions in the double perovskites Ba_2BiO_6 and $\text{Ba}_2\text{BiSbO}_6$ chemical vs charge ordering</i>	2
B J Kennedy	School of Chemistry University of Sydney <i>Structural studies of Sr_2YNbO_6 - an unusual tilt system</i>	1
C J Kepert	School of Chemistry University of Sydney <i>Influence of metal site variation on the isotropic negative expansion in a molecular framework</i>	2
C J Kepert	School of Chemistry University of Sydney <i>High temperature neutron total scattering from $\text{Zn}(\text{CN})_2$</i>	2
C J Kepert	School of Chemistry University of Sydney <i>Total neutron scattering from $\text{ZnPt}(\text{CN})_6$</i>	3
C J Kepert	School of Chemistry University of Sydney <i>Inelastic neutron scattering from $\text{ZnPt}(\text{CN})_6$</i>	7

E H Kisi	School of Engineering University of Newcastle	
	<i>Temperature induced phase transitions in the giant piezoelectric material PZN-PT in the region of the morphotropic phase boundary</i>	3
D Martin	Department of Chemical Engineering University of Queensland	
	<i>The impact of organosilicate dimensionality on the microdomain texture in segmented polyurethane nanocomposites</i>	1
A Pring	Minerals South Australian Museum	
	<i>Transformation of pentlandite-pyrrhotite to violarite</i>	4
G G Warr	School of Chemistry University of Sydney	
	<i>Adsorbed mesh phase at the solid/liquid interface</i>	2
J W White	Research School of Chemistry Australian National University	
	<i>Interfacial structure of block copolymers at the oil-water interface</i>	2
J W White	Research School of Chemistry Australian National University	
	<i>Interfacial structure of block copolymers at the air-water interface</i>	2
J W White	Research School of Chemistry Australian National University	
	<i>Kinetics of adsorption of lysozyme at the air-water interface: the role of protein charge in adsorption</i>	2
J W White	Research School of Chemistry Australian National University	
	<i>Cosurfactant stabilisation of high internal phase emulsions</i>	3

Publications

- Goossens D J; Robinson R A; Telling M T F
The antiferromagnetic structure of BaPrO₃
Physica B **352** 105–110 2004
- Blach T P; Gray E MacA
MuSR study of graphite intercalation compounds as potential hydrogen absorbers
Europhys Lett **65** 130-136 2004
- McLennan K G; Gray E MacA
Equation of state for deuterium gas to 1000 bar
Meas Sci Technol **15** 1-5 2004
- Bailey I F; Done R B; Dreyer J W; E MacA Gray
A high-temperature high-pressure gas-handling cell for neutron scattering experiments
Int J High Press Res **24** 309-315 2004
- Howard C J; Lumpkin G R; Smith R I; Zhang Z
Crystal structures and phase transition in the system SrTiO₃-La_{2/3}TiO₃
J Solid State Chem **177** 2733-2739 2004 [doi:10.1016/j.jssc.2004.04.018]
- Howard C J; Luca V; Knight K S
High temperature phase transitions in tungsten trioxide - the last word?
J Phys Condens Matter **14** 377 2002 [doi:10.1088/0953-8984/14/3/308]
- Low I M; Oo Z
X-ray and neutron diffraction studies on a functionally-graded Ti₃SiC₂-TiC system
Proc 28th Int Cocoa Beach Conference on Advanced Ceramics & Composites A & B
E Lara-Curzio & M Readey (eds) CESP, Vol. 25 183-188 2004
- Etschmann B; Pring A; Putnis A; Grguric B A; Studer A
A kinetic study of the exsolution of pentlandite (Ni,Fe)9S8 from the monosulfide solid solution (Fe,Ni)S
American Mineralogist **89** 39-50 2004
- Welberry T R
Diffuse scattering x-ray scattering and models of disorder
IUCr Monographs on Crystallography
Oxford University Press Oxford 279 pages

Vos M; Chatzidimitriou-Dreismann C A; Abdul-Redah T; Mayers J
Electron and neutron scattering from polymer films at high momentum transfer
Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms **227** (3) 233-250 2005

Chatzidimitriou-Dreismann C A; Abdul-Redah T; Krzystyniak M; Vos M
Attosecond effects in scattering of neutrons and electrons from protons
Decoherence, entanglement and information protection in complex quantum systems ed. V M Akulin, A Sarfati, G Kurizki, and S Pellegrin
NATO Science Series II: Mathematics, Physics and Chemistry 189 2005 Kluwer Academic Publishers

De Bruyn H; Gilbert R G; White J W; Schulz J C
Characterization of electrosterically stabilized polystyrene latex; implications for radical entry kinetics
Polymer **44** 4411-4420 2003

Henderson M J; King D; White J W
Time dependent changes in the formation of titania based films at the air-water interface
Langmuir **20** 2305-2308 2004

Reynolds P A; Henderson M J; White J W
A small angle neutron scattering study of the interface between solids and oil-continuous emulsions and oil based microemulsions
Colloids Surf A **232** 55-65 2004

Henderson M J; King D; White J W
Time dependent changes in the formation of titania based films at the air-water interface
Langmuir **20** 2305-2308 2004

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

Publications

Notification of the following papers incorporating results from AINSE supported projects was received by AINSE in 2004. 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 2004.

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

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

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

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

Project Number	Chief Investigator Co-authors	Title of Publication	Reference
Australian National University			
00/020	Bulbeck D	Divided in space, united in time: the Holocene prehistory of South Sulawesi	Modern Quaternary Research in Southeast Asia 18 129-166 2004 in S G Keates and J M Pasveer (eds), Quaternary Research in Indonesia A A Balkema Leiden 90 5809 674 2
00/020	Bulbeck D	The archaeology of major sites in Ussu/Cerekang	In <i>La Galigo: Memelusuri Jejak Warisan Sasstra Dunia</i> . Makassar Nurhayati Rahman, Anil Hukma, and Idwar Anwar (eds) Hasanuddin University Divisi Ilmu Sosial dan Humaniora Pusat Kegiatan Penelitian/Barru Kabupaten government 467-484 2003
97/057R; 98/139R	Olley J M; De Deckker P ; Roberts R G; Fifield L K; Yoshida H; Hancock G	Optical dating of deep-sea sediments using single grains of quartz: a comparison with radiocarbon	Sedimentary Geology 169 175-189 2004
03/028	Gingele F X; De Deckker P	Fingerprinting Australia's rivers with clay minerals and the application for the marine record of climate change	Aust J Earth Sci 51 339-348 2004
04/046	McLaren S; Dunlap J	The Cooper Basin argon laboratory: nature's test of the K-feldspar MDD model ^A	Dynamic Earth: Past, present and future, Geological Society of Australia 73 280 2004 0729-011X
04/046	(Dunlap W J) Fraser G	⁴⁰ Ar/ ³⁹ Ar ages from sericitic alteration in central Gawler gold prospects: timing constraints on gold mineralisation	Report Book 2004/18 2004 Conference Abstracts, Primary Industries and Resources South Australia
04/046	(Dunlap W J) Fraser G	Defining the "footprint" of tectonothermal events in the North Australian Craton: recent ⁴⁰ Ar/ ³⁹ Ar results from the Davenport Ranges and Barrow Creek regions ^A	Northern Territory Geological Survey - Annual Geoscience Exploration Seminar (AGES) 2004, Record of Abstracts, Northern Territory Geological - Survey 2004-001 2004
04/046	(Dunlap W J) Budd A R; Fraser G L	Geological relationships and ⁴⁰ Ar/ ³⁹ Ar age constraints on gold mineralisation at Tarcoola, central Gawler gold Province, South Australia	Aust J Earth Sci 51 685-699 2004 0812-0099
03/035	VanderHaeghe O; Teyssier C; McDougall I; Dunlap W J	Cooling and exhumation of the Shuswap metamorphic core complex constrained by ⁴⁰ Ar/ ³⁹ Ar thermochronology	Geological Society of America Bulletin, 115 200-216 2003
03/035	McDougall I; Feibel C S; (Dunlap W J)	Age control for the Miocene-Pliocene succession at Lothagam, a hominoid-bearing sequence in the northern Kenya Rift	In Lothagam <i>The Dawn of Humanity in Eastern Africa</i> Columbia University Press New York 43-64 2003
03/035	Spell T L; McDougall I; (Dunlap W J)	Characterization and calibration of ⁴⁰ Ar/ ³⁹ Ar dating standards	Chemical Geology 198 189-211 2003
04/046	Tomkins A G; Dunlap W J ; Mavrogenes J A	Geochronological constraints on the polymetamorphic evolution of the granulite-hosted challenger gold deposit, NW Gawler Craton	Aust J Earth Sci 51 1-14 2004
04/003	Hättestrand C; Götz S; Näslund J-O; Fabel D ; Stroeven A P	Drumlin formation time: evidence from northern and central Sweden	Geografiska Annaler 86 A 155-167 2004 04353676
96/049R	Gagan M K ; Ayliffe L K; Hopley D; <i>et al</i>	Temperature and surface-ocean water balance of the mid-Holocene tropical western Pacific	Science 279 1014-1018 1998
96/049R	Hendy E J; Gagan M K ; Alibert C; McCulloch M T; Lough J M; Isdale P J	Abrupt shift in tropical sea surface salinity at end of Little Ice Age	Science 295 1511-1514 2002

Project Number	Chief Investigator Co-authors	Title of Publication	Reference
96/049R	Abram N J; Gagan M K ; McCulloch MT; Chappell J; Hantoro W S	Coral reef death during the 1997 Indian Ocean dipole linked to Indonesian wildfires	Science 301 952-955 2003
96/049R	Correge T; Gagan M K ; Beck J W; Burr G S; Cabioch G; Le Cornec F	Interdecadal variation in the extent of South Pacific tropical waters during the Younger Dryas event	Nature 428 927-929 2004
98/138R	Golson J ; Denham T P; Haberle S G; Lentfer C	New evidence and interpretations for early agriculture in highland New Guinea	Antiquity 78 839-57 2004 0003 598X
04/061	Goossens D J ; Wilson K F K; James M	Magnetic properties of $Dy_{1-x}Sr_xCoO_{3-d}$ ($x= 0.67$ to 0.95)	28th Annual AIP Condensed Matter and Materials Meeting 2004 Februray http://www.aip.org.au/wagga2004/ Wagga Wagga
04/200	Goossens D J ; Wilson K F K; James M; Studer A; Wang X L	Structure and magnetism in $Y_{0.33}Sr_{0.67}CoO_{2.69}$	Physical Review B 70 134411 2004
01/074	Whinam J; Hope G S ; Adam P; Clarkson B <i>et al</i>	Sphagnum peatlands of Australasia: the resource, its utilisation and management	Wetlands ecology and management 11 37-49 2003
01/074	Hope G S	The mountain mires of southern New South Wales and the Australian Capital Territory: their history and future	Proc International Year of the Mountains Conference J Mackay and Associates (eds) 67-79 Jindabyne November 2002
01/074	Hope G S ; Sun X Liew P M; Kershaw A P; <i>et al</i>	History of vegetation and habitat change from the PEP II transect	Quaternary International 118-119 103-126 2004 eds - Dodson J R; Taylor D
01/074	Pickett E; Harrison S P; Hope G S ; Harle K; Dodson J R; Kershaw A P; <i>et al</i>	Pollen-based reconstructions of biome distributions for Australia, South East Asia and the Pacific (SEAPAC region) at 0, 6000 and 18,000 ^{14}C yr BP	J Biogeography 31 1381-1444 2004
01/100	Lus W Y; McDougall I ; Davies H L	Age of the metamorphic sole of the Papuan ultramafic belt ophiolite, Papua New Guinea	Tectonophysics 392 85-101 2004
98/140R	O'Connor S ; Chappell J	Colonisation and coastal subsistence in Australia and Papua New Guinea: different timing, different modes	<i>Pacific Archaeology: assessments and prospects</i> C Sand (ed) Proc International Conference for the 50th anniversary of the first Lapita excavation (July 1952) 15-32 Koné-Nouméa 2002
02/108P; 03/095P	Khalil A S; Ridgway M C ; Chadderton L T; Llewellyn D J <i>et al</i>	Formation of ion tracks in single crystal indium phosphide irradiated by swift heavy ions	28th Annual AIP Condensed Matter and Materials Meeting, 2004 http://www.aip.org.au/wagga2004/ Wagga Wagga Februray
98/002	Summerhayes G	The nature of prehistoric obsidian importation to Anir and the development of a 3,000 year old regional picture of obsidian exchange within the Bismarck Archipelago, Papua New Guinea	In <i>Archaeologist and Anthropologist in the Western Pacific: Essays in Honour of Jim Specht</i> 145-156 2004 Records of the Australian Museum Supplement Sydney 0-9750476-2-0
99/041	Jones R; Watchman A	Minimum age for a petroglyph on a boulder of significance in southern Kakadu National Park, Northern Territory, Australia	Rock Art Research 21 187-195 2004
04/173	Ting V; Liu Y; Withers R L ; Norén L	An electron diffraction and bond valence sum study of the space group symmetries and structures of the photocatalytic 1:2 B site ordered $A_3CoNb_2O_9$ perovskites ($A = Ca^{2+}, Sr^{2+}, Ba^{2+}$)	Journal of Solid State Chem 177 2295-2304 2004
04/173	Ting V; Liu Y; Norén L; Withers R L ; Goossens D J; <i>et al</i>	A structure, conductivity and dielectric properties investigation of $A_3CoNb_2O_9$ ($A = Ca^{2+}, Sr^{2+}, Ba^{2+}$) triple perovskites	Journal of Solid State Chem 177 4428-4442 2004

Project Number	Chief Investigator Co-authors	Title of Publication	Reference
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Central Queensland University

02/001P	Bhatia N P; Orlic I; Siegele R; Ashwath N ; Baker A J M; Walsh K B	Studies on spatial distribution of nickel in leaves and stems of the metal hyperaccumulator <i>Stackhousia tryonii</i> Bailey using micro-PIXE and EDXS techniques	Functional Plant Biology 31 1061-1074 2004
02/001	Bhatia N P; Orlic I; Siegele R; Ashwath N ; Baker A J M; Walsh K B	Application of micro-PIXE and energy dispersive x-ray microanalytical techniques for localization of nickel within fruits of the Ni-hyperaccumulator <i>Stackhousia tryonii</i> Bailey (Stackhousiaceae)*	4th International Conference on Serpentine Ecology 267-273 Havana, Cuba 2003
02/138	Vicente-Beckett V ; Siegele R; Morrison H	Assessing potential availability of sediment-bound contaminants using sequential chemical extraction and solid-state microanalysis	Interact 2004 67 Gold Coast July 2004
02/001; 03/119	(Ashwath N; Walsh K) Bhatia N P	Ecophysiology of nickel hyperaccumulation in <i>Stackhousia tryonii</i> Bailey	PhD Thesis 2003

Charles Darwin University

PGRA	Munksgaard N C; Antwertinger Y ; Parry D L	Laser ablation ICPMS linescans of <i>Faviidae</i> corallite walls: compositional variability parallel and perpendicular to the coral growth axis	J Environmental Chemistry 1 188-196 2004
01/010	Bowman D ; Cook G; Zoppi U	Holocene boundary dynamics of a northern Australia monsoon forrest fragment inferred from isotopic analysis of carbon (¹⁴ C and ¹³ C), and nitrogen (¹⁵ N) in soil organic matter	Austral Ecology 29 605-612 2004 1442-9985
02/007	Bowman D M J S ; Sharp B R; Zoppi U	Isotopic (¹³ C and ¹⁴ C) evidence supporting the transformative effect of cattle on north Australian vegetation	Journal of Biogeography 31 1373-1375 2004 0305-0270 Online ISSN: 1365-2699
PGRA	Jong T ; Parry D L	Heavy metal speciation in solid-phase materials from a bacterial sulfate reducing bioreactor using sequential extraction procedure combined with acid volatile sulfide analysis	J Env Monitoring 6 278-285 2004
PGRA	Jong T ; Parry D L	Adsorption of Pb(II), Cu(II), Cd(II), Zn(II), Ni(II), Fe(II) and As(V) on bacterially produced metal sulfides	J Colloid Int Sci 275 61-71 2004
PGRA	Jong T	Removal of heavy metals and arsenic by microbial sulfate reduction and the characterisation and stability of the immobilised solid-phase products	PhD Thesis 2004
01/198S	Munksgaard N C; Lim K; Parry D L	Rare earth elements as provenance indicators in north Australian estuarine and coastal sediments	Estuarine, Coastal and Shelf Science 57 399-409 2003
PGRA	Tsang J T	Mobilisation of heavy metals from metal sulfides in aquatic environments	PhD Thesis 2003
PGRA	Tsang J T ; Parry D L	Metal mobilisation from complex sulphide ore concentrate: effect of light and pH	Aust J Chem 57 971 - 978 2004

Charles Sturt University

02/100P	Antolovich M; Bedgood Jr D; Bishop A; Jardine D; Robards K; Prenzler P	LC-MS investigation of oxidation products of phenolic antioxidants	Journal of Agricultural and Food Chemistry 52 962-971 2004
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02/171	Connolly J; Singh M; Buckley C	Determination of the size and ordering of pores in mesoporous silica using small angle neutron scattering	Physica B 350 224-226 2004
PGRA	Pejčić B ; De Marco R	Characterization of an AgBr-Ag ₂ S-As ₂ S ₃ -HgI ₂ ion-selective electrode membrane: an x-ray photoelectron and impedance spectroscopy approach	Appl Surf Sci 228 378-400 2004
01/172; 02/034	De Marco R ; Pejčić B; Prince K; van Riessen A	A multi-technique surface study of the mercury(II) chalcogenide ion-selective electrode in saline media	Analyst 128 742-749 2003
01/173; 03/030	Pejčić B; De Marco R ; Buckley C E; Maitland C F; Knott R	A small angle neutron scattering and electrochemical impedance spectroscopy study of the nanostructure of the iron chalcogenide glass ion-selective electrode	Talanta 63 149 - 157 2004
PGRA	Pejčić B; De Marco R	Impedance measurements of a chalcogenide membrane iron(III) selective electrode in contact with aqueous electrolytes	Electrochim Acta 49 3525 - 3543 2004
PGRA	Kirby N M	Barium zirconate ceramics for melt processing of barium cuprate superconductors	PhD Thesis 2004
PGRA	Kirby N ; van Riessen A; Buckley C E; Wittorff V W	Oxalate-precursor processing for high quality BaZrO ₃	J Mat Sci 40 97 – 106 2005
03/176	Low I M ; Oo Z; O'Connor B H; Smith R I	Characterisation of factors controlling the thermal stability of Al ₂ TiO ₅ ceramics	Proc AUSTCERAM 2004 74-75 Melbourne December 2004
02/075	Oo Z; Low I M	Diffraction studies of functionally-graded Ti ₃ SiC ₂ -TiC system processed through a vacuum heat-treatment* ^A	Joint AXAA (WA) / WASEM Conference, 75-76 Sept 2003, El Caballo Golf Resort, Wooroloo 0-958639-3-6
02/075; 04/188	Low I M	Depth-profiling of phase composition in a novel Ti ₃ SiC ₂ -TiC system with graded interfaces	Materials Letters 58 927-932 2004
01/091	Singh M; Manurung P; Kuroda Y; Barsoum M; Low I M	Depth-profiling of phase compositions in graded materials using synchrotron radiation diffraction	Key Engineering Materials 224-226 505-510 2002
02/075	Low I M ; Oo Z	X-ray and neutron diffraction studies on a functionally-graded Ti ₃ SiC ₂ -TiC system	28th International Cocoa Beach Conference on Advanced Ceramics & Composites 183-188 2004
04/181	Vaiholo S; Vilaiphand W; Lopez A; Low I M	Indentation responses and damage in kaolin-cellulose fibre reinforced epoxy nanocomposites	Proceedings Composites Technologies for 2020 Fourth Asian-Australasian Conference on Composite Materials (ACCM-4), 482-487 Sydney University 2004 1 85573 831 7
04/181	McGrath M; Vaiholo S; Vilaiphand W; Lopez A; Low I M ; Latella B	Synthesis and properties of clay-ZrO ₂ -cellulose fibre-reinforced polymeric nano-hybrids	Conference Proceedings: Structural Integrity and Fracture 265-270 2004 (eds Atrens A, et al) Brisbane
00/90P; 99/030	Low I M ; Wren E	Characterisation of phase relations in air-oxidised Ti ₃ SiC ₂	J Aust Ceram Soc 39 103-108 1018-6689 2003
04/181	McGrath M; Vaiholo S; Vilaiphand W; Lopez A; Low I M ; Latella B	Fracture properties of clay-ZrO ₂ -cellulose fibre-reinforced epoxy nanocomposites	Joint AXAA (WA) / WASEM Conference 66-67 Sept 2004 Rottnest Island Perth 0-958639-4-4

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PGRA	Smith P; Rohl A; Penniford R; Parkinson G; Lowe J	Understanding growth of DSP in the presence of inorganic ions*	6th International Alumina Quality Workshop 191-194 2004
PGRA	Buckley C E; Maitland C F ; Scott D; Carter G; Connolly J	Comparison of specific surface area determined by small angle x-ray scattering (SAXS) and BET	J Aust Ceram Soc 40 7 - 11 2004
PGRA	Maitland C F ; Buckley C E; Boskovic S	Determining multiscale correlation functions from imaging and scattering data	Proceedings of the 2004 Joint AXAA (WA) & WASEM Conference Rottneest Lodge Rottneest Island Australia September 25 – 26 2004
95/111; 96/145; 97/143	Sitepu H; O'Connor B H ; Li D Y	Deriving the bulk modulus of a single-phase powder from the March preferred orientation parameter	Physica B 350 e577–e580 2004
PGRA	Paglia G ; Buckley C; Rohl A; Hart R; Winter K; Studer A; Hunter B; Hanna J V	Boehmite derived γ -alumina system. 1. Structural evolution with temperature, with the identification and structural determination of a new transitional phase, γ' -alumina	Chem Mater 16 220-236 2004
PGRA	Paglia G	Determination of the structure of γ -alumina using empirical and first principles calculations combined with supporting experiments	Ph D Thesis 2004
PGRA	Paglia G ; Buckley C; Udovic T J; Rohl A L; Jones F; Maitl C; Connolly J	Boehmite-derived γ -alumina system. 2. Consideration of hydrogen and surface effects	Chem Mater 16 1914-1923 2004
PGRA	Maitland C F; Buckley C E; Paglia G ; Connolly J	Determination of the specific surface of γ -Al ₂ O ₃ using small-angle x-ray scattering*	2nd Annual Conference of the Asia Pacific Nanotechnology Forum - APNF 113 – 120 Cairns November 2003 981-238-862-1
PGRA	Pejic B B ; De Marco R	Mechanistic studies of chalcogenide glass ion-selective electrodes	Research Trends Current Topics in Electrochemistry 10 37-50 2004
PGRA	Pejic B B	Mechanistic studies of several chalcogenide based potentiometric chemical sensors in marine water	PhD Thesis 2003
PGRA	O'Connor B; Rowles M	Zeolite formation in the synthesis of aluminosilicate inorganic polymers ^A	Proceedings of Austceram 2002 41-42 Low IM; Phillips DN (eds) Perth
PGRA	Rowles M ; O'Connor B	Chemical optimisation of the compressive strength of aluminosilicate geopolymers synthesised by sodium silicate activation of metakaolinite*	J Mater Chem 13 1161-1165 2003
PGRA	Rowles M ; O'Connor B	Zeolite formation in the synthesis of aluminosilicate inorganic polymers: combining the power of the PDF and synchrotron data ^A	Powder Diffraction 15 303-304 2004 International Centre for Diffraction Data – Spring Meeting, Newtown Square Philadelphia USA
PGRA	Rowles M	The structural nature of aluminosilicate inorganic polymers: a macro to nano scale study	Ph D Thesis 2004
PGRA; PGRA	Sheppard D A ; Maitland C F ; Buckley C E	Characterisation and hydrogen adsorption of MCM-41	Proceedings of the 2004 Joint AXAA (WA) & WASEM Conference Rottneest Lodge Rottneest Island Australia September 23 – 24 2004
03/132	Fansuri H; Zhang D K ; Elcombe M; Studer A; French D	Structure determination of α -Bi ₂ Mo ₃ O ₁₂ by joint refinements of its Cu and Co source x-ray and neutron diffractograms*	IX European Powder Diffraction Conference 90 Prague September 2004
03/132	Fansuri H; Zhang D K ; Elcombe M; Studer A	<i>In-situ</i> neutron diffraction study of α -Bi ₂ Mo ₃ O ₁₂ *	IX European Powder Diffraction Conference 194 Prague September 2004

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04/191; 04/177	Fansuri H; Zhang D K ; Elcombe M; Studer A	<i>In-situ</i> structural studies of bismuth molybdates catalysts for partial oxidation of propylene to acrolein using neutron diffraction*	VI Solid State Chemistry 80 Prague September 2004
03/132	Fansuri H; Zhang D K; French D; Elcombe M; Studer A	An x-ray and neutron diffraction study of the structure of α -Bi ₂ Mo ₃ O ₁₂ as a catalysts for partial oxidation of propylene to acrolein^	Proceedings of the CHEMECA 2004 90 Sydney, September 2004
03/132	(Zhang D) Fansuri H	Catalytic partial oxidation of propylene to acrolein: the catalysts, kinetics, and reaction mechanisms	PhD Thesis 2004

Edith Cowan University

02/061	Duncan PC; Hinkley S; Gluszaka E; Dytlewski N; Hinckley S	Investigation of growth phases of chemical bath deposited CdS thin films	Conference on Optoelectronic and Microelectronic Materials and Devices 197-200 Sydney December 2002 0-7803-6698-0
02/061	Reynolds A; Dytlewski N; Prince K; Short K; Hinckley S	A study of the growth dependant properties of undoped and <i>in-situ</i> doped chemically deposited CdS thin films	Conference on Optoelectronic and Microelectronic Materials and Devices 563-566 Sydney December 2002 0-7803-6698-0

Flinders University

04/186	Green G P; Bestland E A ; Walker G S	Distinguishing sources of base cations in irrigated and natural soils: evidence from strontium isotopes	Biogeochemistry 68 199-225 2004
04/186	Forbes M S; Wells R T; Bestland E	Preliminary radiocarbon dates on bulk soil organic matter from the Black Creek megafauna fossil site, Rocky River, Kangaroo Island, South Australia	Radiocarbon 46 437-444 2004
03/072	Baird D; Le Galle La Salle C ; Stone D	Using carbon-14 to estimate hidden recharge to carbonate aquifers	International Workshop on the Application of Isotope Techniques in Hydrological and Environmental Studies 25-26 Paris France September 2004
01/127	Losic D; Short K; Gooding J; Shapter J	Scanning probe microscopy characterisation of immobilized enzyme molecules on biosensor surface: visualisation of individual molecules	J Serb Chem Soc 69(2) 93-106 2004
03/105	Zhao L; Xu Z, Grove H; Milway V; Dawe L; Shapter J et al	Supramolecular Mn(II) and Mn(II)/Mn(III) grid complexes with [Mn ₃ (μ ₂ -O) ₁₂] core structures. Structural, magnetic, and redox properties and surface studies	Inorg Chem 43 3812 - 3824 2004
03/105	Losic D; Short K; Shapter J	Atomic force microscopy imaging of glucose oxidase using chemically modified tips	Aust J Chem 56 1039 - 1043 2003
02/125	Smith C	Country, kin and culture. Survival of an Aboriginal Community	Wakefield Press Adelaide 2004 ISBN 1 86264 575 8
02/130	McMillan B F; Dewar R J; Storer R G	A comparison of incompressible limits for resistive plasmas	Plasma Physics and Controlled Fusion, 46 1027-1038 2004 0741-3335
04/146	Storer R G ; Oertzen G von	Current drive for rotamak plasmas	Pramana-Journal of Physics 62 1083-1090 2004
03/141	Sykes P J	Non-linear dose response to low doses of x-radiation	Environmental and Molecular Mutagenesis 44(3) 231 2004
PGRA	Wallwork K S ; Pring A; Taylor M R; Hunter B A	The network of hydrogen bonding in kingite, as revealed by a neutron-diffraction investigation of its deuterated analogue, Al ₃ (PO ₄) ₂ F ₃ ·7D ₂ O	Canadian Mineralogist 42 135-142 2004 0003-004X

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Griffith University			
03/148	Blach T P; Gray E MacA	MuSR study of graphite intercalation compounds as potential hydrogen absorbers	Europhys Lett 65 130-136 2004
03/051	Han J S ; Cheong K Y; Dimitrijevi S; Laube M; Pensl G	A P-channel MOSFET on 4H-SiC	Material Science Forum 457-460 1401-1404 2003
02/052P	Cheong K; Dimitrijevi S; Han J	Effects of initial nitridation on the characteristics of SiC-SiO ₂ interface	Material Science Forum 433-436 583-586 2003
02/052P	Cheong K; Dimitrijevi S; Han J	Dependence of charge-retention time in H-SiC capacitors on interface defects and applied gate voltage*	Proceedings of Command 2002 519-522 Sydney December 2002
03/051	Kuan Y C; Dimitrijevi S; Han J	Investigation of electron-hole generation in 4H-SiC MOS capacitors	IEEE Transactions on Electron Devices 50 1433-1439 2003
PGRA	Gray E Mac A; McLennan K G	An equation of state for deuterium gas to 1000 bar	Measurement Science and Technology 15 211-215 2004

Institute of Geological and Nuclear Sciences

02/079	Kennedy V; Johnson P; Varoy C; Short K; Markwitz A	Microprobe analysis of light elements in nanoporous surfaces produced by helium ion implantation	Nucl Instrum Methods B 210 543 2003
02/078	Markwitz A ; Dytlewski N; Kennedy V J; Pelicon P; Vickridge I C;	Depth profiling of light elements in CVD and P0ECVD Si ₃ N ₄ films and anodically oxidised tantalum with heavy ion time-of-flight elastic recoil detection**	13th NTA and 7th Vacuum Society of Australia Conference 164-167 Lucas Heights November 2003 0 9577217 9 X
01/094	Markwitz A ; Kennedy V J; Durbin S M; Johnson P; Mücklich A; Dytlewski N	Depth profiling of light elements in PAMBE-grown GaN and helium-implanted titanium with heavy ion time-of-flight elastic recoil detections	Surface and Interface Analysis B 36 317 - 322 2004
02/079	Johnson P; Kennedy V; Varoy C; Dytlewski N; Short K; Markwitz A	Uptake of light elements of nanoporous layers formed by helium ion implantation	Nucl Instrum Methods B B206 1051 2003
02/078	Pun A; Zheng J P; Kennedy V J; Markwitz A ; Durbin S M	Analysis of heteroepitaxial germanium on gallium arsenide grown by pulsed laser deposition	Current Applied Physics 4 229 - 232 2004

James Cook University

03/005	(Baker T) Prendergast K	Porphyry-related hydrothermal systems in the Ertzberg district	PhD Thesis 2003
03/022; 03/005	Prince K; Prendergast K; Chapman L; Baker T	<i>In-situ</i> isotopic analysis of minerals by secondary ion mass spectrometry**	13th NTA and 7th Vacuum Society of Australia Conference 183-185 Lucas Heights November 2003 0 9577217 9 X
02/036	Dickens G ; Webb AD; Oliver NHS	From banded iron-formation to iron ore: geochemical and mineralogical constraints from across the Hamersley Province, Western Australia	Chemical Geology 197 215-251 2003

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03/056	Hearty P J ; Olson S L; Kaufman D S; Edwards R L; Cheng H	Stratigraphy and geochronology of pitfall accumulations in caves and fissures, Bermuda	Quaternary Science Reviews 23 1151-1171 2004
03/056	Hearty P J ; O'Leary M J; Kaufman D S; Page M; Bright J	Amino acid geochronology of individual foraminifer (<i>Pulleniatina obliquiloculata</i>) tests, north Queensland margin, Australia: a new approach to correlating and dating Quaternary tropical marine sediment cores	Paleoceanography 19 4022 2004 doi: 10.1029/2004PA001059 2004
03/056	Hearty P J ; O'Leary M J; Donald A; Allayialis D	Stratigraphy and geochronology of Quaternary carbonate and quartz dunes of Western Australia*^	Proceedings of the 17th Australian Geological Convention 18 Hobart February 2004
03/056	Donald A; Hearty P J ; O'Leary M J	Ocean-continent sediment flux in Shark Bay, Western Australia*^	Proceedings of the 17th Australian Geological Convention 12 Hobart February 2004
03/075	Ashley P M; Lottemoser B G	Physical dispersion of radioactive wastes into regolith at the Radium Hill uranium mine site, South Australia*^	Proceedings of the 17th Australian Geological Convention, Geological Society of Australia 3 Hobart 2004
PGRA	Muller J ; Wust R; Weiss D	Climate change in the southern hemisphere based on carbon isotopes and geochemical data^	32nd International Geological Conference 388 Florence August 2004
04/175	Page S E; Wüst R A J ; Weiss D; Rieley J O; <i>et al</i>	Late Pleistocene and holocene carbon accumulation in an equatorial peat bog	J Quaternary Science 19 625-635 2004
04/175	Wüst R A J ; Bustin R M	Late Pleistocene and holocene development of the interior peat-accumulating basin of tropical Tasek Bera, Peninsular Malaysia	Palaeogeography, Palaeoclimatology, Palaeoecology 211 241-270 2004

La Trobe University

01/ P008	Edwards P C	The dawn of farming on the dead sea plain	Australasian Science 251 20-22 2004
99/158S	Edwards P C ; Falconer S E; Fall P L; Berelov I;	Archaeology and environment of the dead sea plain: preliminary results of the second season of investigations	Annual of the Department of Antiquities of Jordan 46 51-92 2002
99/158S; 02/040	Edwards P C ; Meadows J; Metzger M C ; Sayej G J	Zahrat adh-Dhra' 2: a new pre-pottery Neolithic A site on the Dead Sea Plain in Jordan	Bulletin of the American Schools of Oriental Research 327 1-15 2002
99/153SP	Webb J; Frankel D	Population, households and ceramic consumption in a prehistoric Cypriot village	Journal of Field Archaeology 28 115-129 2001
99/153SP	Webb J M; Frankel D	Characterising the Philia facies. Material culture, chronology and the origin of the Bronze Age in Cyprus	American Journal of Archaeology 103 3-43 1999
00/162P	Webb J A ; Lithco S	Use of water chemistry to identify flow conduits in the porous Gambier Limestone, southeast Australia	Proceedings of 7th Conference on Limestone Hydrology Mudry J and Zwahlen F (eds), 333-336 Besancon September 2001
02/154; 03/124	Edwards M; Webb J	Hydrogeology and dryland salinity at Kamarooka, central Victoria	9th Murray-Darling Basin Groundwater Workshop 1-9 Bendigo February 2004
04/165	Paine M; Bennetts D A; Webb J A ; Morand V	Nature and extent of Pliocene strandlines in southwestern Victoria and their application to late Neogene tectonics	Aust J Earth Sci 51 407-422 2004
04/165	Bennetts DA; Webb J A	Processes affecting groundwater quality in a basalt aquifer system in southern Australia	Proceedings International Symposium on Water-Rock Interaction R B Wanty and R R Seal (eds) 11 347-351 Saratoga Springs USA Balkema, Rotterdam 2004

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Macquarie University

01/025	Butcher K S A ; Afifuddin; Tansley T L; Brack N; Pigram P J; Timmers H; <i>et al</i>	Gallium and oxygen accumulations on gallium nitride surfaces following argon ion milling in ultra-high vacuum conditions	Appl Surf Sci 230 18-23 2004 0169-4332
01/025	Ramelan A H; Butcher K S A ; Goldys E M; <i>et al</i>	High-resolution x-ray photoelectron spectroscopy of Al _x Ga _{1-x} Sb	Appl Surf Sci 229 263-267 2004 0169-4332
02/016	Yodo T; Kitayama Y; Miyaki K; Yona H; Harada Y; Prince K E; Butcher K S A	Visible emissions near 1.9–2.2 eV from hexagonal InN films grown by electron cyclotron resonance plasma-assisted molecular-beam epitaxy	Journal of Crystal Growth 269 145-154 2004 0022-0248
02/016	Wintrebert-Fouquet M; Butcher K S A ; Chen P P-T	InN grown by remote plasma-enhanced chemical vapor deposition	Journal of Crystal Growth 269 134-138 2004 0022-0248
02/016	Butcher K S A ; Wintrebert-Fouquet M; Chen P P-T; Tansley T L; <i>et al</i>	Nitrogen-rich indium nitride	J Appl Phys 95 6124-6128 2004 0021-8979
03/048	Mackintosh A; Gore D ; Fink D; White D; Pickard J; Fanning P	Late Quaternary fluctuations of the East Antarctic ice sheet in the Framnes Mountains [^]	XVI INQUA Congress 237 Reno Nevada USA July 2003
PGRA	Ralph T; Hesse P ; Brierley G; Heijnis H	Wandering wetlands: an investigation of geomorphic processes in the Macquarie Marshes, NSW	9th International Conference on River Research and Applications 75 Albury July 2003
01/068	(Hesse P) Keating D	Soil loss and soil processes at Fowlers Gap	MSc Thesis 2002
02/134	Carthew K; Drysdale R; Taylor M	Tufa sedimentary environments: are current models applicable to tropical tufa systems?	Sedimentary Geology 162 199-218 2003
02/134	Drysdale R; Carthew K; Taylor M	Larval caddis-fly nets and retreats: a unique biosedimentary paleocurrent indicator for fossil tufa deposits	Sedimentary Geology 161 207-215 2003
02/134	Drysdale R; Carthew K; Taylor M	The formation and significance of calcite rafts in tropical tufa-depositing rivers of the Barkly karst, northern Australia	Sedimentology 51 1089-1101 2004

Monash University

04/008	Vos I M A; Bierlein F P ; Murphy B; Barlow M	The mineral potential of major fault systems: case studies from northeastern Queensland, Australia* [^]	Barnicoat A C; Korsch R J (eds), <i>Predictive Mineral Discovery Cooperative Research Centre</i> June 2004 Conference Geoscience Australia 209-212 Record 2004/09, 1448-2177
03/018	Cartwright I ; Weaver T; Reid M; Cheng X; Stone D	Towards a better understanding of dryland salinity in northern Victoria [^]	CD ROM 2003 Murray Darling Basin Conference in 2004 Bendigo
03/018	(Cartwright I) Mercuri P	Constraining timescales and recharge processes for the development of dryland salinity in northeast Victoria	BEnvSci Honours Thesis 2004
02/021	Murad E; Cashion J D	Mössbauer spectroscopy of environmental materials and their industrial utilization	Kluwer Academic Publishers 2004
03/019	Cashion J	pH dependence of the Au-CN species adsorbed onto activated carbon	Hyp Int 155 71-5 2004

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PGRA	Daniels J E ; Studer A J; Finlayson T R; Hagen M E	Time-resolved studies of neutron diffraction intensities in association with phase transitions ^A	4th AINSE Symposium on Neutron Scattering 29 Lucas Heights December 2004
03/135	David B ; McNiven I; Mura; Badulgal; Crouch J; Brady L	The Argan stone arrangement complex, Badu Island: initial results from Torres Strait	Australian Archaeology 58 1-6
03/135	David B ; McNiven I; Bowie W; Nomoa M; Ahmat P; Crouch J	Archaeology of Torres Strait turtle-shell masks: the Badu cache	Australian Aboriginal Studies 1 18-25 2004
98/151R	David B	Rock-art and the experienced landscape: the emergence of late Holocene symbolism in north-east Australia	In <i>The Figured Landscapes of Rock-Art: Looking at Pictures in Place</i> C Chippindale and G Nash (eds), 153-181 Cambridge University Press Cambridge 2004 0521 818796
00/035	David B	Landscapes, rock-art and the dreaming: an archaeology of preunderstanding	Leicester University Press London 2002
02/204	Ersez T; Schulz J C; Finlayson T R	Neutron scattering studies of La _{1-x} Sr _x MnO ₃ colossal magnetoresistive perovskites	Materials Forum 27 80 - 87 2004
02/204	Finlayson T R ; Wu X; Ersez T; Schulz J C	Studies of magnetic structure of La _{1-x} Sr _x MnO ₃ colossal magnetoresistive perovskites	28th Annual AIP Condensed Matter and Materials Meeting, WP3 2004 http://www.aip.org.au/wagga2004/ Wagga Wagga Februray
03/150; 04/051	Daniels J; Piltz R; Hagan M; Finlayson T	Neutron diffraction studies of the ferroelectric/paraelectric transition in triglycine sulphate ^A	4th AINSE Symposium on Neutron Scattering 28 Lucas Heights December 2004
02/175	Hicks T ; Goossens D; Harker S; Mulders A; Kennedy S J	Spin-resolved neutron spectroscopy from the heavy fermion compound CeCu ₆	Physica B 345 86-88 2004
02/178	de Châtel P; Chadwick J; Mulders A; Hicks T	Non-magnetic defect in the two-dimensional Heisenberg antiferromagnet with honeycomb lattice	Physica B 344 117-128 2004
01/084	McKenzie G M; Kershaw A P	A high resolution pollen record of the last glacial-interglacial cycle from the southeastern highlands of Victoria	Southern Connections Conference 41-42 2004
99/151S	Kershaw A P ; Tibby J; Penny D; Yezdani H; Walkley R Cook E	Latest Pleistocene and Holocene vegetation and environmental history of the Western Plains of Victoria	Proceedings of the Royal Society of Victoria 116 141-163 0035-9211 2004
98/034	Kershaw A P ; D'Costa D M; Tibby J; Wagstaff B E; Heijnis H	The last million years around Lake Keilambete, western Victoria	Proceedings of the Royal Society of Victoria 116 95-106 0035-9211 2004
97/095R	McKenzie G M; Kershaw A P	A fossil pollen record from Aire Crossing, the Otway region of Victoria, Australia	Review of Palaeobotany and Palynology 132 281-290 2004
02/161	McLeod A; Kershaw A P	Spatial and temporal vegetation variation and soil processes interpreted from soil charcoal, south-eastern highlands	8th Australasian Environmental Isotope Conference 67-69 2004
02/072	Turney C S M; Kershaw A P ; Clemens S; Branch N; Moss P T; Fifield L K	Millennial and orbital variations in El Niño/southern oscillation and high latitude climate in the last glacial period	Nature 428 306-310 2004
99/058	Anshari G; Kershaw A P ; van der Kaars S; Jacobsen G	Environmental change and peatland forest dynamics in the Lake Sentarum area, West Kalimantan, Indonesia	J Quaternary Science 19 637-655 2004 0267-8179
01/084	Kershaw A P ; McKenzie M; Turney C; Clemens S; Brown J <i>et al</i>	Abrupt events within the last glacial period: records from tropical and temperate Australia ^A	Polen (antes An Asoc Palinol Leng Esp) 14 217-218 2004 1135-8408

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00/079	Johnston R; Kershaw A P ; Turney C; Bryant C; Tibby J; Jacobsen G	A high resolution, multiproxy record of the last glacial maximum to Holocene transition from the volcanic lake sediments of Tower Hill, southeastern Australia [^]	Polen (antes An Asoc Palinol Leng Esp) 14 217-218 2004 1135-8408
00/079, 02/072	Kershaw A P ; van der Kaars S; Sniderman K M; Wagstaff B E; Moss P T	Aridity and salinity in the Australian landscape: a Quaternary palynological perspective [^]	LIMPACS – Salinity, Climate and Salinisation Conference 24 Mildura September 2004
02/161	Tibby J; Gell P; Bulpin S; Fluin J; Kershaw A P ; Leahy P; MacGregor A; Heijnis, H	Dating recent changes to salt lakes – achievements, problems and possibilities [^]	LIMPACS – Salinity, Climate and Salinisation Conference 44 Mildura September 2004
02/161	Harle K; Heijnis H; Chisari R; Kershaw A P ; Zoppi U; Jacobsen G	A chronology for the long pollen record from Lake Wangoom, western Victoria (Australia) as derived from uranium/thorium disequilibrium dating	J Quaternary Science 17 707-720 2002
04/005	(Kershaw A P) McLeod A	The role of fire in the development and maintenance of temporal and spatial variability in tall open forest vegetation, Central Highlands, Victoria	PhD Thesis 2004
02/085	McNiven I J ; Hitchcock G	Torres Strait Islander marine subsistence specialisation and terrestrial animal translocation	Memoirs of the Queensland Museum 3 105-162 2004
02/085	David B; McNiven I ; Mitchell R; Orr M; Haberle S; Brady L Crouch J	Badu 15 and the Papuan-Austronesian settlement of Torres Strait	Archaeol Oceania 39 65-78 2004
PGRA 04/050	Paradowska A ; Price J W H; Ibrahim R; Curfs C; Finlayson T	Residual stresses of weldments in low carbon steels from neutron diffraction measurements [^]	CD 4th International Conference on Advances in Materials Technology for Power Generation from Fossil Fuel, Helton Head Is Sth Carolina USA October 2004
04/050;	Paradowska A; Price J W H; Ibrahim R, Curfs C; Finlayson T	Residual stresses of weldments in low carbon steels from neutron diffraction measurements [^]	Engineering Applications of Neutrons and Synchrotron Radiation, The FaME38 User Workshop 30 Grenoble, France September 2004
PGRA; 04/050; 04/198	Paradowska A ; Price J W H; Ibrahim R, Finlayson T , Curfs C	Residual stresses of welds in low carbon steels from neutron diffraction measurements at the Australian Stress Scanner [^]	4th AINSE Symposium on Neutron Scattering 10 Lucas Heights December 2004
04/050	Paradowska A; Price J W H; Ibrahim R; Aloraier A; Finlayson T ; Curfs C	Neutron beam measurements of residual stress in a single weld bead in a low carbon steel*	International Conference and Exhibition on Failure Analysis & Maintenance Technologies CD Brisbane April 2004
99/057	Fink D; Prentice M; Peterson J	The last glacial maximum and deglaciation events based on Be-10 and Al-26 exposure ages from the Mt Trikora Region, Irian Jaya, Indonesia [^]	XVI INQUA Congress 231 Reno Nevada USA July 2003
01/214; 02/186	Whelan A N; Elaridi J; Harte M; Smith S V; Jackson W R; Robinson A J	Tandem metathesis-hydrogenation route to dicarba-analogues of cystine-containing cyclic peptides	Tetrahedron Letters 45 9545-9547 2004
PGRA	Murani A; Hicks T; Robinson D	Comparison of theory and experiment for the magneto-compositional correlation in a ferromagnetic Fe-V crystal	J Mag Mag Mat 272-276 755-757 2004
PGRA	Rule K	Magnetic ordering in the two dimensional antiferromagnet, FePS ₃	PhD Thesis 2004

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Murdoch University

PGRA	Meyrick D P ; Webb J M; Carr S W	Analysis and adsorption of Sm-EDTMP to hydroxyapatite: An in vitro model for uptake of the radiopharmaceutical in bone tissue [^]	15th International Symposium on Pharmaceutical and Biomedical Analysis 394 Florence Italy May 2004
PGRA	Meyrick D P ; Webb J M; Rose A; Morandea L; Turner J H	Biodistribution and bone uptake of two newly synthesised Sm-153 labeled bisphosphonates	15th International Symposium on Pharmaceutical and Biomedical Analysis LMP 01 Florence Italy May 2004

Queensland University of Technology

03/008P	Tesfamichael T; Will G; Kelly I; Bell J	Analysis of nitrogen implanted fluorine doped tin oxide films	Nucl Instr Meth Phys Res B 217 97-103 2004
02/013	Brooke B ; Hocknull S A	Comparative maxillary and dentary morphology of the Australian dragons (<i>Agamidae</i> : <i>Squamata</i>): a framework for fossil identification	Memoirs of the Queensland Museum 125-145 2002 ISSN 0079-8835
02/013	Brooke B ; Price G J	<i>Perameles sobbei</i> sp. nov. (<i>Marsupialia</i> , <i>Peramelidae</i>), a Pleistocene bandicoot from the Darling Downs, south-eastern Queensland	Memoirs of the Queensland Museum 193-197 2002 ISSN 0079-8835
02/013	Brooke B ; Price G J	A taxonomic assessment of <i>Diprotodon</i> (<i>Diprotodontoidea</i> , <i>Marsupialia</i>) and an interpretation of sexual dimorphism within the genus	Geological Society of Australia, Abstracts 71 131 2002 ISSN 0729-011X

RMIT University

01/187	Bennett A; Daivis P ; Knott A; Shanks	Concentration dependence of static and dynamic characteristic lengths for several polymer-solvent pairs	Polymer 45 8531 - 8540 2004 0032-3861
02/067P	Franich R; Johnston P	The paths of plurally scattered ion in HIERDA	17th International Conference on the Use of Accelerators in Research & Industry 385-388 Texas USA November 2002
02/067P	Johnston P N ; Bubb I F; Franich R D; Cohen D D; Dytlewski N <i>et al</i>	Scattering of ions beyond the single scattering critical angle in HIERDA*	17th International Conference on the Use of Accelerators in Research & Industry 460-463 Texas USA November 2002
04/088	Johnston P N ; Bozkurt M; Jamieson D; Reichart P; Alves A; Davis T	Characterization of nanomachined structures by ion beam analysis	1st International Workshop on Proton Beam Writing 155 Singapore September 2004
04/088	Jamieson D; Reichart P; Hearne S; Yang C; Pakes C; Johnston P ; Alves A; Moore D; van Dijk L	Ion beam lithography with counted ions and nanostencils	1st International Workshop on Proton Beam Writing 168 Singapore September 2004
02/067P	Franich R D; Johnston P N ; Bubb I F	Efficient Monte Carlo simulation of heavy ion elastic recoil detection analysis spectra	Nuclear Instruments and Methods B 219-220 87-94 2004
03/064	Thanomngam P; Johnston P N	Compton scattering from the K-shell electrons of Ta and Pb	Radiation Physics and Chemistry 71 681-682 2004
04/103P	Mora-Huertas N E; Murugaraj P; Mainwaring D E	Temperature-dependent transport properties in the semiconducting regime of nanoparticle carbon-polyimide composite films	Physica E: Low-dimensional Systems and Nanostructures 24 119-123 2004

Project Number	Chief Investigator Co-authors	Title of Publication	Reference
01/098	(McCulloch D) Peterson T	Effect of microstructure on the dissolution of carbonaceous solids: an experimental & computational investigation	PhD Thesis 2004
01/130	Wang Y; Sood D K ; Ghan-tasala MK; Dytlewski N	Characterisation of sputtered smco thin films using RBS and HIERDA techniques	Vacuum 75 17-23 2004
03/108	Mathe V K; Sood D K ; Hayes J P	Laser patterning of thin films of TiNiPd deposited on silicon substrates	SPIE, The International Society for Optical Engineering, 36-46 USA, 5276 Perth 2003
00/142P	Sood D K	Reduction of high temperature oxidation in titanium diboride thin films by silicon doping	International Conference on Metallurgical Coatings Thin Film 2000 San Diego April 2000
02/127P	Mollica S; Evans P; Noorman J; Dytlewski N; Latham K; Sood D K et al	Effect of aluminium ion implantation on the oxidation resistance of DC magnetron sputtered TiB ₂ thin films	Surface and Coatings Technology 177-178 185-197 2004 0257-8972
04/143	Virwani KR; Malshe AP; Sood D K ; Elliman RG	Modification of mechanical properties of silicon nano-cantilevers by self ion implantation	Appl Phys Lett 84 3148-3150 2004
01/143P	Purushotham P P; Ward, L ; Brack N; Pigram P; Evans P; Noorman J; Manory R R	Wear behaviour of CrN coatings MEVVA ion implanted with Zr	Wear 257 901 – 908 2004

Southern Cross University

01/012	Boyd B	As fantastic as the Atlantis: reading a prehistoric floodscape	In <i>Flood: Writing Across the Current</i> Thom P (ed) 65-97 Southern Cross University Lismore 2004
98/048	Boyd W E ; Webb J; Specht J	Holocene shoreline change and the archaeology of the Kandrian coast of West New Britain, Papua New Guinea	In <i>Australian Coastal Archaeology: Current Research and Future Directions</i> Hall J & M, Niven I J (eds) 283-289 ANH Pubs Canberra 1999
02/010	Doan D; Boyd B	Holocene elevated sea levels on the north coast of Vietnam	Australian Geographical Studies 42 77-88 2004
01/014	Lentfer C; Torrence R; Boyd B	Phytolith research relating to the archaeology of West New Britain, Papua New Guinea	In <i>Phytoliths: Applications in Earth Sciences and Human History</i> Meunier J D & Colin F (eds) 213-224 Balkema, Lisse 2001
PGRA	Parr J	A study of palaeo-landscapes in the Numundo region of west New Britain, Papua New Guinea, as indicated by fossil phytolith analysis	PhD Thesis 2004
03/137	Reichelt-Brushett A J ; McOrist G	Trace metals in the living and nonliving components of scleractinian corals	Marine Pollution Bulletin 46 1573-1582 2003
03/111	(Taffs K) Logan B	Paelaeo-environmental reconstruction of a wetland in west Byron Bay, and the establishment of pre-European settlement environmental conditions	Honours Thesis 2003

Swinburne University of Technology

02/038P	Elkatatny I M; Morsi Y; Blic-blau A S; Das S; Doyle E D	Numerical analysis and experimental validation of high pressure gas quenching	International Journal of Thermal Sciences 42 417-423 2003
03/044P	Dowling A J; Ghantasala M K et al	Selective wet-etching of filtered arc deposited TiN films on Cr sacrificial layers	SPIE Conference on Microelectronics, MEMS, and Nanotechnology 5276 213-220 Perth 2004
01/179	McManus K ; Krezel A; McLennan K	Traffic noise reduction using an absorbent and reflective concrete barrier	Beneficial Use of Recycled Materials in Transport Applications 1 887-894 Air and Waste Management Association Washington USA November 2003

Project Number	Chief Investigator Co-authors	Title of Publication	Reference
04/056	Barr C; Gell P ; Tibby J; Williams M	A fine resolution reconstruction of climatic fluctuation over the last 2000 years in south-eastern Australia [^]	LIMPACS – Salinity, Climate and Salinisation Conference 10 Mildura September 2004
PGRA	Pearce S ; Linton V	Neutron diffraction measurement in thick section steel [^]	4th AINSE Symposium on Neutron Scattering 21 Lucas Heights December 2004
04/204	Renc S; Linton V M ; Blevins R	Neutron diffraction for residual stress measurements of aluminium friction stir welds [^]	4th AINSE Symposium on Neutron Scattering 32 Lucas Heights December 2004
PGRA	MacGregor A J ; Gell P A; Tibby J; Heijnis H	Establishing environmental baselines for Snowy River floodplain wetlands	43rd Annual Congress of the Australian Society for Limnology 108 Adelaide November 2004
PGRA	MacGregor A J ; Gell P A; Tibby J; Heijnis H	Deciphering anthropogenic salinisation trends at Lake Curlip, East Gippsland, Victoria	LIMPACS – Salinity, Climate and Salinisation Conference 30 Mildura September 2004
PGRA	MacGregor A J ; Gell P A; Tibby J; Heijnis H	A diatom-based palaeolimnological reconstruction of water quality from the Snowy River floodplain, Australia	29th Congress of the International Association of Theoretical and Applied Limnology 132 Lahti, Finland August 2004
PGRA	MacGregor A J ; Gell P; Tibby J	Palaeolimnological baselines as a tool for informing wetland rehabilitation and restoration: case studies from southeastern Australia	7th INTECOL International Wetlands Conference 190 Utrecht, The Netherlands July 2004
02/087	Lombi E; Hamon R E; McGrath S P; McLaughlin M J	Lability of Cd, Cu and Zn in polluted soils treated with lime, Beringite and red mud and identification of a non-labile colloidal fraction of metals using isotopic techniques	Environ Sci Technol 37 979-984 2003
03/093	Prescott J R	Environmental dosimetry for luminescence dating ^{^*}	13th NTA and 7th Vacuum Society of Australia Conference 13-15 Lucas Heights November 2003 0 9577217 9 X
97/084; 99/002; 00/191; 01/144	Prescott J R ; Robertson G B; Shoemaker C; Shoemaker E M; Wynn J	Luminescence dating of the Wabar meteorite craters, Saudi Arabia	J Geophysical Research 109 E01008 2004 doi: 10 1029/2003JE002136 0148-0227
04/126	O'Neill B; Tenailleau C; Ngothai Y; Pring A	Design and construction of a flow-through hydrothermal cell for in situ neutron diffraction [^]	4th AINSE Symposium on Neutron Scattering 15 Lucas Heights December 2004
01/115; 02/102; 04/126	Etschmann B; Pring A ; Putnis A; Grguric B A; Studer A	A kinetic study of the exsolution of pentlandite (Ni,Fe) ₉ S ₈ from the monosulfide solid solution (Fe,Ni)S	American Mineralogist 89 39-50 2004 0003-004X
04/1226	Wai Yin Hui; Tenailleau C; Pring A ; Brugger J	Experimental study of the transformation of pentlandite/pyrrhotite to violarite	Regolith 2004, CRC LEME 146-50 2004 0-9756895-0-9
03/155	Tibby J	Diatoms as indicators of sedimentary processes in Burrinjuck Reservoir, New South Wales, Australia	Quaternary International 83-85 245-256 2001
03/155	Tibby J	Explaining lake and catchment change using sediment derived and written histories: an Australian perspective	The Science of the Total Environment 310 61-71 2003
96/192R; 99/001	Prescott J R; Chappell J; Adamson D A; Williams M	A re-appraisal of late Quaternary environments in the Flinders Ranges, South Australia [^]	16th Australian Geological Convention 30 Adelaide July 2002
00/165	Williams M	Quaternary geology of the White Nile basin [^]	20th Conference on African Geology Orleans, 423 France June 2004

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04/172	Mee A; McKirdy D M; Krull E S; Williams M	Geochemical analysis of organic-rich lacustrine sediments as a tool for reconstructing Holocene environmental conditions along the Coorong coastal plain, southeastern Australia	Proceedings of the Cooperative Research Centre for Landscape, Environment and Mineral Exploration (CRC LEME) Regional Regolith Symposia 2004, 247-251 edited by I C Roach Canberra November 2004 0-9756895-0-9
99/001; 96/192R	Chor C; Nitschke N; Williams M	Ice, wind and water: late Quaternary valley-fills and aeolian dust deposits in arid South Australia	Proceedings of the Cooperative Research Centre for Landscape, Environment and Mineral Exploration (CRC LEME) Regional Symposia, Advances in Regolith, 70-73. I C Roach (ed) Adelaide November 2003
99/001; 96/192R	Mee A C; McKirdy D M; Krull E S; Williams M A J	Lacustrine organic matter as a proxy for mid-latitude Holocene environmental change in south-eastern Australia – work in progress [^]	Australian Organic Geochemistry Conference & International Humic Substances Society Joint Meeting Blue Mountains February 2004
00/165	Williams M	Geomorphic evolution of the Nile basin [^]	11th Australia and New Zealand Geomorphology Group Conference 78 Mount Buffalo February 2004
00/165	Williams M	Was pottery tempered with sponge from the White Nile coeval with a wetter phase in NE Africa and the Near East some 2 000 years ago? [^]	LIMPACS International Conference on Salinity, Climate and Salinisation 47 Mildura October 2004

The University of Auckland

04/001	(Augustinus P) Sharp E	Applications of cosmogenic nuclide exposure dating to geomorphological problems in the South Island, New Zealand	MSc Thesis 2004
03/052	Anderson R F; Harris T A; Hay M P ; Denny W A	Enhanced conversion of DNA radical damage to double strand breaks by tirapazamine linked to a DNA binder	Chem Res Toxicol 16 1477-1483 2003
03/052	Hay M P ; Pruijn F B; Liyanage H D S; Gamage S A; Kovacs M S; Wilson W R; Denny W A; Brown J M	DNA-targeted 1,2,4-benzotriazine 1,4-dioxides as hypoxia-selective analogues of tirapazamine	J Med Chem 46 475-488 2003
PGRA	Lee J ; Li Z; Hodgson M; Metson J B; Asadov A; Gao W	Structural, electrical and transparent properties of ZnO thin films prepared by magnetron sputtering	Current Applied Physics 4 398-402 2004
03/082	Metson J B ; Bittar A; Ruck B J; Trodahl H J	Structural characterisation of amorphous GaN films [^] *	13th NTA and 7th Vacuum Society of Australia Conference 39-42 Lucas Heights November 2003 0 9577217 9 X
03/151	Ashida T; Metson J B ; Hyland M M	New approaches to phase analysis of smelter grade aluminas [*]	Light Metals 2004. The Metals Minerals and Materials Society, 93-97 A Tabereaux (ed) 2004
99/013	Metson J B ; Prince K	SIMS depth profiling of TiOxNy films	Surface and Interface Analysis 28 159 – 162 1999
03/151	Baek S H; Mihec D F; Metson J B	Deposition of diamond films by combustion assisted CVD on Ti and Ti-6Al-4V	Advanced Materials CVD 8 1-6 2002
99/017; 00/106P	Mercier O R; Buckley R G; Bittar A; Trodahl H J; Haines E M; Metson J B ; Tomoika Y	Annealing effects on the optical conductivity of single crystal La _{1-x} Ca _x MnO ₃ (x= 0.1, 0.265)	Phys Rev B 64 035106-1 – 7 2001

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00/107	Regan E; Groutso T; Metson J B ; Steiner, R; Ammundsen B; Hassell D; Pickering, P	Surface and bulk composition of lithium manganese oxides	Surface and Interface Analysis 27 1064- 1068 1999
99/017; 00/106P	Metson J B ; Gustafsson M J	Complementary techniques to high energy ion beam analysis	Modern Physics Letters B 15 1402-1410 2001
00/107	Amundsen B; DeDilvestro J; Groutso T; Hassel D; Metson J B ; Regan E; Steiner R <i>et al</i>	Solid state synthesis and properties of doped LiMnO ₂ cathode material	New Materials for Batteries and Fuel Cells 575 49-58 2000 MRS Proceedings Series Doughty D H; Brack H P; Naoi K; Nazar L F, (eds)
02/097P	Patterson A	Dinitrobenzamide mustard prodrugs - hypoxic cytotoxins and dual substrates for <i>E.coli</i> nitroreductase ^{A*}	12th International Congress of Radiation Research 229 Brisbane August 2003 0957721773
02/144	Fink D; Williams P	Timing of the Last Glacial Maximum in Fiordland, New Zealand – but was it the largest advance? ^A	XVI INQUA Congress Reno 74 Nevada USA July 2003

University of Ballarat

03/033	Harvey G; Dowling K ; Waldron H; Garnett;D	Soil and vegetable analysis from the Victorian goldfields: characterization of a potential backyard hazard ^{A*}	13th NTA and 7th Vacuum Society of Australia Conference 89 Lucas Heights November 2003 0 9577217 9 X
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University of Canberra

03/138	McQueen K ; Siegele R; Van Moort J; Cohen D D	Fluid inclusions in quartz ^{A*}	13th NTA and 7th Vacuum Society of Australia Conference 204 Lucas Heights November 2003 0 9577217 9 X
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The University of Melbourne

00/024P	Bellingham S; Lahiri D K; Maloney B; La Fontaine S; Multhaup G; Camakaris J ;	Copper depletion down-regulates expression of the Alzheimer's disease amyloid- β precursor protein gene	J Biol Chem 279 20378 - 20386 2004
02/017P	Pase L, Voskoboinik I, Greenough M, Camakaris J	Copper stimulates trafficking of a distinct pool of the Menkes copper ATPase (ATP7A) to the plasma membrane and diverts it into a rapid recycling pool.	Biochem J 378(3) 1031-7 2004
01/026	Southon A; Burke R; Norgate M; Batterham P; Camakaris J	Copper homeostasis in <i>Drosophila melanogaster</i> S2 cells	Biochem J 383 303-309 2004
03/015	Bellingham S A; Ciccotosto G D; Needham B E; Fodero L R; White A R; Masters C L; Cappai R; Camakaris J	Gene knockout of amyloid precursor protein and amyloid precursor-like protein-2 increases cellular copper levels in primary mouse cortical neurons and embryonic fibroblasts	J Neurochem 1(2) 423-8 2004
PGRA	Connor S E ; Thomas I; Kvavadze E V <i>et al</i>	A survey of modern pollen and vegetation along an altitudinal transect in southern Georgia, Caucasus region	Palaeobotany and Palynology 129 229-250 2004
PGRA	Connor S E	Preliminary palynological investigations in the Caucasus ^A	Australasian Quaternary Association Biennial Conference 13 Westport New Zealand Feb 2003

Project Number	Chief Investigator Co-authors	Title of Publication	Reference
PGRA	Connor S	Postcard from Tbilisi	Quaternary Australasia 21 24-25 2003
03/152	(Gee M) McLean S C	Polymeric micelle adsorption as a potential targeted drug delivery method	PhD Thesis 2004
03/046	(Gleadow A J W) Lisker F; Brown R; Fabel D	Denudational and thermal history along a transect across the Lambert Graben northern Prince Charles Mountains, Antarctica, derived from fission track thermochronology	Tectonics 22(5) 10-1 – 10-14 2003
03/046	Kohn B P; Belton D X; Brown R W; Gleadow A J W et al	Critical comment on: "experimental evidence for the pressure dependence of fission track annealing in apatite"	Earth and Planetary Science Letters 215 299-306 2003
03/046	Kohn B P; O'Sullivan P B; Gleadow A J W ; Brown R W; Gallagher K; Foster D A	Fission track thermotectonic imaging and denudation history of Tasmania: Reply to Discussion by D.E. Leaman	Aust J Earth Sci 50 646-650 2003
03/046	(Gleadow A J W) Weber K; Raab MJ	Tectonomorphological development of Namibia	Zbl Geol Paläont Teil I 117-129 2003
03/046	Weber U D; Hill K C; Brown R W; Gallagher K; Kohn B P; Gleadow A J W ; Foster D A	Sediment supply to the Gippsland Basin from thermal history analysis: constraints on Emperor - Golden Beach reservoir composition	APPEA Journal 44 397-415 2004 1326-4966
03/046	(Gleadow A J W) Belton D X; Brown R W; Kohn B P; Fink D; Farley K A	Quantitative resolution of the debate over antiquity of central Australian landscapes and implications for the tectonic and geomorphic stability of cratonic interiors	Earth and Planetary Science Letters 219 21-34 2004
03/046	Norvick M S; Russell I A; Webster U D; McPherson J G; Kohn B P; Gleadow A J W	New insights into the Triassic plate tectonics and palaeogeography of the northern edge of the Australian plate: implications for sediment source, drainage evolution and petroleum systems	APPEA Journal 43 827 2003 1326-4966
03/046	Kohn B P; Gleadow A J W ; Fletcher J M; Raza A; Brown R W; Foster D A	Constraints on timing and magnitude of continental rifting in the Gulf Extensional Province, Baja California Peninsula, Mexico, from low temperature thermochronology [^]	Geological Society of America Cordilleran Section Meeting, Puerto Vallarta, Jalisco, Mexico, Abstracts with Programs, 9 2003
03/046	Gleadow A J W ; Kohn B P; Fletcher J M; Brown R W; Raza A	Low-temperature thermochronology of fundamental structures in the Gulf Extensional Province, Baja California, Mexico [^]	Geochimica et Cosmochimica Acta (Special Supplement) 13th Annual V M Goldschmidt Conference Kurashiki Japan Sept A122 2003
03/046	Kohn B P; Gleadow A J W ; Lorencak M; Belton D X	Combined low temperature thermochronology in slowly-cooled terranes: challenges and strategies [^]	Geochimica et Cosmochimica Acta (Special Supplement) 13th Annual V M Goldschmidt Conference Kurashiki Japan Sept A226 2003
02/046P	(Gleadow A J W) van der Beek P; Summerfield M; Braun J; Brown R; Flemming A	Modelling post-break-up landscape development and denudation history across the eastern margin (Drakensberg Escarpment) of southern Africa	J Geophysical Research 107 11-1 to 11-18 2002
03/046	Kohn, B P; Gleadow A J W ; Brown R W; Gallagher K; O'Sullivan P B; Foster D A	Shaping the Australian crust over the last 300 million years: Insights from fission track thermotectonic and denudation studies of key terranes	Aust J Earth Sci 49 697-717 2002
03/046	Gleadow A ; Kohn B; Brown R; O'Sullivan P; Raza	Fission track thermotectonic imaging of the Australian continent	Tectonophysics 349 5-21 2002
03/046	Gleadow A ; Brown R	Fission-track thermochronology, and the long-term denudational response to tectonics	In M J Summerfield <i>Geomorphology and Global Tectonics</i> Wiley, New York 57-75 Wiley, New York 2000

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03/046	Kohn B P; Gleadow A J W ; Carter T J; Lorencak M; Belton D X; Foster D A	Integrated low temperature thermochronology: a tale of two terranes ^A	SGTSG Field Meeting, Kalbarri, September 2003, Geological Society of Australia Abstracts 72 34 ISSN 1 86308 107 0
03/046	Lennox P G; Trzebski R; Kohn B P	Validating south-side up movement of blocks within the Molong Zone, Eastern Lachlan Fold Belt	SGTSG Field Meeting, Kalbarri, September 2003, Geological Society of Australia Abstracts 72 75 ISSN 1 86308 107 0
03/046	Kohn B P; Fletcher J M; Gleadow A J W; Calmus T; Nourse J A	New low-temperature thermochronology reveals contrasting modes of continental extension across the Sonoran rifted margin	Eos, Transactions Fall Meeting AGU 84 (46) F1388 2003 0096-394
01/055; 02/046P	(Gleadow A J W) Lorencak M	Low temperature thermochronology of the Canadian and Fennoscandian Shields: integration of apatite fission track and (U-Th)/He methods	Ph D Thesis 2003
01/055; 02/046P	(Gleadow A J W) Weber U	Thermotectonic evolution of the northern Precambrian Shield area of Western Australia	Ph D Thesis 2002
04/086	Jackson H	Jebel Khalid on the Euphrates I	In <i>The Cemetery Pottery</i> 101-124 G W Clarke <i>et al</i> 2002
PGRA	Karagiannis T	Targeting ¹²⁵ I-labelled ligands to the DNA of tumour cells	PhD Thesis 2001
PGRA	Karagiannis T C ; El-Osta A	Epigenetic changes active widespread signals in response to double-strand breaks	Cancer & Biology Therapy 3 :7 e41-e47 July 2004
PGRA	Karagiannis T C ; El-Osta A	DNA damage repair and transcription: double-strand breaks: signaling pathways and repair mechanisms	Cellular and Molecular Life Sciences 61 2137-2147 2004
PGRA	Karagiannis T C ; El-Osta A	Mechanism of RNA interface, <i>in vivo</i> and potential clinical applications	Cancer & Biology Therapy 3 :11 e116-e112 2004 November
01/163C; 01/175S; 02/168; 03/077	Lobachevsky P N; Martin R F	Plasmid DNA breakage by decay of DNA-associated Auger emitters: experiments with ¹²³ I/ ¹²⁵ I-IodoHoechst 33258	International Journal of Radiation Biology 80 915-920 2004
01/163C; 01/175S; 02/168; 03/077	Lobachevsky P N; Martin R F	An improved approach to the analysis of plasmid DNA breakage by decay of DNA-associated Auger emitters	International Journal of Radiation Biology 80 861-866 2004
04/106P	Lobachevsky P N; Karagiannis T C; Martin R F	Plasmid DNA breakage by decay of DNA-associated Auger emitters: approaches to analysis of experimental data	Radiation Research 162 84-95 2004
01/124	Kiguradze T; Sagona A	On the origins of the Kura-Araxes cultural complex	In <i>Archaeology in the Borderlands</i> Rubinson K and Smith A (eds) 38-94 Investigations in Caucasia and Beyond, Los Angeles: Cotsen Institute of Archaeology UCLA Los Angeles 2003
01/213	Sagona A	Social boundaries and ritual landscapes: the late prehistory of trans-Caucasus' a view from the highlands	Studies in honour of Charles Burney Peeters 485-549 Press Louvain 2004
02/115	Sagona A	History of Archaeology in Turkey	Encyclopedia of Archaeology: History and Discoveries 3 1275-1285 2001
00/134P; 03/101	Sagona C; Sagona A	Archaeology at the North-East Anatolian Frontier	Vol 1 An Historical Geography and a Survey of the Bayburt Province Peeters Press Louvain 90-429 1390-8 2004

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03/114	McNiven I; Thomas I ; Zoppi U	Fraser Island Archeological Project: background, aims and preliminary result of excavations at Waddy Point 1 rockshelter	Queensland Archeological Research 4 12-24 2002
03/114	(Thomas I) Keele S		Honours Thesis 2004

The University of Newcastle

01/139S	Silviani E; Burns R	Synthesis and characterization of soluble alkali metal, alkaline earth metal and related keggin-type $[\text{PMo}_{12}\text{O}_{40}]^{3-}$ salts for heterogeneous catalysis reactions	Journal of Molecular Catalysis A: Chemical 219 327-342 2004 1381-1169
00/030; 00/031; 02/028	Colhoun E ; Fink D; Augustinus P; Brown R Rhodes E	Antipodal terrestrial deglacial events from Ireland and Tasmania [^]	XVI INQUA Congress 221 Reno Nevada USA July 2003
01/046	McDonald J; Drysdale R ; Hill D	The 2002-2003 El Niño recorded in Australia cave dip waters: implication for reconstructing rainfall histories using stalagmites	Geophysical Research Letters 31 L22202 2004
01/086	Forrester J S ; Kisi E H	Ferroelastic switching in a soft lead zirconate titanate	J European Ceramic Society 24 595-602 2004
98/149R	Goodwin I ; Grossman E	Middle to late Holocene coastal evolution along the south coast of Upolu Is, Samoa and implications for relative sea-level changes	Mar Geol 202 1 -16 2003
02/073	Kennedy S; Studer A; Kisi E	Tetragonal to monoclinic transformation in Mg-PSZ studied by <i>in-situ</i> neutron diffraction	J Amer Ceram Soc 87 465-72 2004
01/086	Riley D P; Wu E H; McCallum A; Kisi E	Self-propagating high-temperature synthesis of Ti_3SiC_2 from 3Ti+SiC+C reactants	J Mater Sci Letters 22 1101-1104 2003 0002-7820
03/079P	Zoppi U; Skopec J; McCluskey A ; Fink D <i>et al</i>	Radiocarbon dating – a new tool in the fight against illicit drugs ^{*^}	13th NTA and 7th VSA Conference 53-55 Lucas Heights November 2003 0 9577217 9 X
PGRA	Drysdale R; McDonald J ; Hill D; Cartwright I	Geochemistry of cave dripwaters and modern calcite from Cliefden and Wombeyan Caves, NSW, Australia	Climate Changes: the Karst Record 111 Montpellier France 106-107 May 2003
PGRA	McDonald J ; Drysdale R	Palaeoclimate research in Koorunga and Wollondilly Caves	Occasional Paper 13 75-84 2004 <i>Caves and Karst of Wombeyan</i> Sydney Speleological Society Sydney 0 646 44063 2
00/122	Pearson S ; Gayler L; Hartig K; Timms B	Ecosystem health in the Paroo: an arid frontier?	Proc Airs Waters Places Transdisciplinary Conference on Ecosystem Health in Australia 252-264 University of Newcastle 2003

The University of New England

04/065	Grave P	Elemental characterisation of Tepe Yahya Iron Age Ceramics. In <i>The Archaeology of Resistance and Integration. The Iron Age Settlement at Tepe Yahya, Southeastern Iran</i>	American School of Prehistoric Research Bulletin C C Lamberg-Karlovski (ed) 62-80 Peabody Museum Harvard University Cambridge Mass 2004
00/063P	Haworth R J	The shaping of Sydney by its urban geology	Quaternary International 88-90 245-271 2003
01/200	Haworth R J ; Baker R G V; Flood P G	A 6000 year old dugong from Botany Bay: inferences about changes in Sydney's climate, sea levels, and waterways	Australian Geographical Studies 42 (1) 46-59 2004

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PGRA	Gibbs G V; Whitten A E ; Spackman M A; Stimpfl M; Downs R T; Carducci M D	An exploration of theoretical and experimental electron density distributions and SiO bonded interactions for the silica polymorph coesite	J Phys Chem B 107 12996-13006 2003
PGRA	Whitten A E ; Dittrich B; Spackman M A Turner P; Brown T C	Charge density analysis of two polymorphs of antimony(III) oxide	Dalton Trans 1 23-29 2004
PGRA	Whitten A E ; Spackman M A; Klooster V T; Piltz R O	Estimating atomic displacement parameters for hydrogen atoms from multi-temperature x-ray diffraction data [^]	4th AINSE Symposium on Neutron Scattering 31 Lucas Heights December 2004

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PGRA	Boecking T ; James M; Coster H G L; Chilcott T C; Barrow K D	Structural characterization of organic multilayers on silicon(111) formed by immobilization of molecular films on functionalized Si-C linked monolayers	Langmuir 20 9227-9235 2004
PGRA	Boecking T	Organic and biofunctional layers on silicon	PhD Thesis 2004
01/027P	Hofmann M; Ehrhardt H; Feyerherm R; Campbell S	The magnetic behaviour of nanostructured zinc ferrite	J Mater Sci 39(16-17) 5057-5065 2004
99/075	Kennedy S J; Kamiyama T; Oikawa K; Campbell S J ; Hofmann M	Mixed magnetic phases in $La_{1-x}Y_xMn_2Si_2$ – high resolution diffraction	Appl Phys A74 S880-S882 2002
02/018	Hofmann M; Campbell S J ; Edge A J V	Valence and magnetic transitions in $YbMn_2Si_{2-x}Ge_x$	Appl Phys A74 S713-S715 2002
99/075	Zhang H; Campbell S J	Molecular mean field study of rare-earth intermetallic compounds $R_3Co_{29}Si_4B_{10}$	J Appl Phys 93 9177-9181 2003
98/076	Wu E; Campbell S J ; Kaczmarek W A; Hofmann M; Kennedy S J	Nanostructured $(Co_xFe_{1-x/2}O_4)$ spinel – mechanochemical synthesis	Zeitschrift für Metallkunde 94 1127-1133 2003
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88/39; 89/98	Cohen D R ; Waite T D	Interacton of aqueous Au species with goethite, smectite and kaolinite	Geochemistry:Exploration, Environment, Analysis 4 279 - 287 2004
03/027P	Cho E C; Cho Y H; Trupke T; Corkish R; Conibeer G ; Green M A	Silicon nanostructures for all-silicon tandem solar cells	Proceedings 19th European Solar Energy and Exhibition Conference 235-238 Paris June 2004
03/027P	Jiang C-W; Cho E C; Conibeer G ; Green M A	Silicon quantum dots: application for energy selective contacts to hot carrier cells	19th European Solar Energy and Exhibition Conference 80-83 Paris June 2004
03/027P	(Conibeer G) Cho E C	Optical transitions in SiO_2 /crystalline Si/ SiO_2 quantum wells and nanocrystalline silicon (nc-Si)/ SiO_2 superlattice fabrication	PhD Thesis 2003
03/027P	(Conibeer G) Widenborg P	Polycrystalline silicon thin-films on glass formed by the aluminium- induced crystallisation bilayer process	PhD Thesis 2003
01/076; 02/064	Hutchison W D ; Goossens D J; Nishimura K; Mori K; Isikawa Y; Studer A J	Magnetic structure of $TbNiAl_4$ [^]	4th AINSE Symposium on Neutron Scattering 41 Lucas Heights December 2004

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00/113	Ford S; Munroe P ; Young D	Carbonitridation of Fe-Ni-Cr alloys	John Stringer Symposium on High Temperature Corrosion 77-84 ASM International, Materials Park, OH 2003
PGRA	Rodgers L E ; Holden P J; Knott R B; Finnie K S; Bartlett J R; Foster L J R	Investigating the relationship between enzymes and sol-gel matrices: a small angle neutron scattering study ^{^*}	4th AINSE Symposium on Neutron Scattering 45 Lucas Heights December 2004
PGRA	Rodgers L E ; Holden P J; Knott R B; Finnie K S; Bartlett J R <i>Foster L J R</i>	Investigating the structural evolution of sol-gel matrices for immobilisation of enzymes [^]	The University of New South Wales School of Biotechnology and Biomolecular Sciences Symposium abstract 2-5 Bondi November 2004
PGRA	Bak T; Burg T; Kang S J; Nowotny J; Rekas M; Sheppard L ; Sorrell C C; <i>et al</i>	Charge transport in polycrystalline titanium dioxide	J Phys Chem Solids 64 1089-1095 2003
03/154	Stewart G A ; Edge A V J; Studer A; Elcombe M; Horvat J; Lewis R	Magnetic and crystal field properties of thulium calcium manganite	Australia & New Zealand Institutes of Physics 28th Annual Condensed Matter and Materials Meeting WP23 Wagga Wagga February 2004 1037-1214
03/109	Jiminez E; Gubbens PCM; Sakarya S; Stewart G A ; Dalmas de Reotier P; Yaouanc A; <i>et al</i>	Interplay between Tm ³⁺ and Cr ⁶⁺ magnetic sublattices of TmCrO ₄	J Magn Magn Mater 272-276 568-570 2004 0304-8853
01/174S; 03/154	Stewart G A ; Edge A V J; Studer A; Elcombe M; Horvat J; Lewis R	Weak magnetic order in thulium calcium manganite [^]	4th AINSE Symposium on Neutron Scattering 47 Lucas Heights December 2004
PGRA	Tan T Y T	Photocatalytic reduction of selenate and selenite: water/wastewater treatment and the formation of nano-selenium compounds	PhD Thesis 2003
03/133P; 04/179P	Zreiqat H ; Knabe C; Shakibaei M; Radlanski R J; Evans P J	Zinc/magnesium incorporation into titanium implants triggers signal transduction and bone formation in primary human osteoblast	7th World Biomaterials Congress 611 Sydney May 2004

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PGRA	Ribbe J	Ventilation processes in a southern ocean model	PhD Thesis 1997
04/129	Ribbe J	The southern supplier	Nature 427 23-24 2004
99/147S	Ribbe J	Intermediate water mass production controlled by Southern Hemisphere winds	Geophysical Research Letters 28(3) 535-538 2001

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01/006	Bernhardt P V ; Bozoglian F; Macpherson B P; Martineza M	Tuning the metal-to-metal charge transfer energy of cyanobridged nuclear complexes	Dalton Trans 2582 – 2587 2004
04/054P	Sharrad C A; Cavigliasso G E; Stranger R; Gahan L R	Embracing ligands. Synthesis, characterisation and the correlation between 59-cobalt NMR and ligand field parameters of cobalt(III) complexes with a new class of nitrogen-thioether multidentate ligand	Dalton Trans 767-777 2004
04/054P	(Gahan LR) ; Bell C	Polymer systems for the extraction of heavy metals	B Sc Honours Thesis 2004

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00/067	Hill D J H ; Thurecht K J; Whittaker A K	New structure formation on γ -irradiation of poly(chlorotrifluoroethylene)	Radiat Phys Chem 67 729-736 2003
01/071	Fox P A; Hill D J T ; Lang A P; Pomery P J	Radical formation on γ -radiolysis of poly[(methacrylic acid)-co-(acrylonitrile)]	Polym Int 52 1719-1724 2003
00/067	Dargaville T R; George G A; Hill D J T ; Whittaker A K	High energy radiation grafting of fluoropolymers	Prog Polym Sci 28 1355-1376 2003
02/059P	Dargaville T R; George G A; Hill D J T ; Whittaker A K	Crosslinking of PFA by electron beam irradiation	Macromolecules 36 7138-7142 2003
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03/081	Tavener E; Meredith P ; Wood B; Curry M; Geidd R	Electrical and structural properties of ion implanted and ion beam mixed polymers*	International Congress on Synthetic Metals 116-117 Wollongong July 2004
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00/005; 02/165	Hua Q; Barbetti M ; Zoppi U; Fink D; Watanasak M; Jacobsen G E	Radiocarbon in tropical tree rings during the Little Ice Age	Nuclear Instruments and Methods in Physics Research B223-224 489-494 2004
02/165; 03/006	Hua Q; Barbetti M	Review of tropospheric bomb radiocarbon data for carbon cycle modelling and age calibration purposes	Radiocarbon 46 1273-1298 2004
00/004	Hua Q; Barbetti M; Zoppi U	Radiocarbon in annual tree rings from Thailand during the pre-bomb period, AD 1938-1954	Radiocarbon 46 925-932 2004
98/162R; 02/165	Hua Q; Barbetti M; Zoppi U; Chapman D M; Thomson B	Bomb radiocarbon in tree-rings from northern New South Wales, Australia: implications for dendrochronology, atmospheric transport and air-sea exchange of CO ₂	Radiocarbon 45 431-447 2003
03/010	Bilek M ; Nancarrow N; Wilksch P; McCulloch D	Investigation of the relationship between colour and structure of TiN thin films	ACOLS'03: Australasian Conference on Optics, Lasers and Spectroscopy 132 Melbourne 2003
03/010	Bittar A; Bosi S G; Mills D R; Richardson A; Bilek M ; Prince K E; Russell R A/	SIMS analysis of degradation of multilayer selective surfaces at high temperatures in air*^	13th NTA and 7th VSA Conference 112-114 Lucas Heights November 2003 0 9577217 9 X
01/176	Hatje V; Payne TE; Hill D M; McOrist G; Birch G F ; Szymczak R	Kinetics of trace element uptake and release by particles in estuarine waters: effects of pH, salinity, and particle loading	Environment International 29 619-629 Sydney 2003
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01/196	Bourke S ; Sparks R <i>et al</i>	Preliminary report on the University of Sydney's eighteenth and nineteenth seasons of excavation at Pella (Tabaqat Fahl) in 1996/97	Annual of the Department of Antiquities Jordan 335-388 2003

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PGRA	Browne C	Impacts of urbanisation and metal pollution on freshwater turtles	PhD Thesis 2004
03/177	Buljan A V ; Delikatny E V; Brana J H; Garvey C; Hambly B D	Do microtubules architecture obey fullerene principles?	27th Annual Conference of the Australian Society for Biophysics ASB P9 Adelaide 2003
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PGRA	Holmes A; Tujula N; Holley M; James J; Rogers P; Gillings M; Contos A	Phylogenetic structure of unusual aquatic microbial formations in Nullarbor caves, Australia	Environmental Microbiology 3 256-264 2001
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03/039	Zoppi U; Barbetti M; Fletcher R ; Hua Q; Chhem R K; Pottier C; Watanasak M	The contribution of ¹⁴ C AMS dating to the Greater Angkor archaeological project	Nuclear Instruments and Methods in Physics Research B 223-224 681-685 2004
01/190S	Gale S J ; Haworth R J;	Beyond the Limits of Location: human environmental disturbance prior to official European contact in early colonial Australia	Archaeology in Oceania 37 123-136 2002
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03/045	Prescott S W; Gilbert R	Chain-length dependence in controlled/living radical polymerisations: physical manifestation and Monte Carlo simulation of reversible transfer agents	Macromolecules 36 9608-9621 2003
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02/185P	(Gilbert R) Chiou H	Structure-property relationship of rice starch	PhD Thesis 2004
00/053, 01/054, 02/045	van Berkel K Y; Russell G T; Gilbert R G	Entry in emulsion polymerisation: the old and the new*	Macromolecules 36 3921-31 International Symposium on Polymers in Dispersed Media France April 2004

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04/058P	Gilbert R G ; Fellows C M	Emulsion polymerization	McGraw-Hill Yearbook of Science & Technology 93-96 2004
01/077	Feng PX; Andruczyk D; Takiyama K; James B	Preliminary investigation of supersonic metastable helium beam [^]	12th Gaseous Electronics Meeting poster 12 February 2002
03/158	Kennedy B J ; Li L; Lee Y; Vogt T	Pressure induced valence and structural phase transition in Ba ₂ PrRu _{0.8} Ir _{0.2} O ₆	J Phys Condens Matter 16 3295-3301 2004
02/071	Hunter B A; Kennedy B J ; Vogt T	Anomalous magnetostriction in a simple trivalent manganese perovskite	Phys Rev B 69 020410 2004
03/158	Li L; Kennedy B J	Valence and structural transitions in the mixed Ru-Ir perovskites Ba ₂ PrRu _{1-x} Ir _x O ₆	J Solid State Chem 177 3290- 3300 2004
02/071	Kennedy B J ; Zhou Q; Kennedy B J	High temperature powder synchrotron diffraction studies of synthetic cryolite Na ₃ AlF ₆	J Solid State Chemistry 177 654-659 2004
01/083; 02/170; 03/069	(Kennedy B J) Macquart R	Structural studies of ferroelectric oxides	Ph D Thesis 2003
04/202	(Kennedy B J) Saines P	Studies of lanthanide doped alkaline earth aluminates and gallates	BSc Hons Thesis 2004
03/159	Garvey C J; Knott R B; Drabarek E; Kuchel P W	Shear-induced alignment of self-associated hemoglobin in human erythrocytes: small angle neutron scattering studies	Eur Biophys J 33 589-595 2004
02/160	Larcos G ; Shaffi M; Latt M; <i>et al</i>	Pre- and postsynaptic dopamine receptor assessment in Parkinsonism*	34th Annual Scientific Meeting of Australian and New Zealand Society of Nuclear Medicine 74 April 2004
00/053	van Berkel K Y; Russell G T; Gilbert R G	Nanoscale surface processes in emulsion polymerization	Macromolecular Symposia 3rd IUPAC Symposium on Free Radical Processes: Kinetics and Mechanisms 182 Ciocco Italy June 2001
01/054	Prescott S W; Ballard M J; Rizzardo E; Gilbert R G	Techniques in emulsion polymerization: living character, RAFT agent transport and rate of polymerization	25th Australasian Polymer Symposium A10/3 Armidale February 2002
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01/054	Prescott S W; Ballard M J; Rizzardo E; Gilbert R G	RAFT in emulsion polymerization: what makes it different?	Aust J Chem 55 415 2002
01/054	Prescott S W; Ballard M J; Rizzardo E; Gilbert R G	Successful use of RAFT techniques in seeded emulsion polymerization: living character, RAFT agent transport and rate of polymerization	Macromolecules 35 5417 2002
03/045	(Gilbert R G) ; Prescott S W	Raft in emulsion polymerization: a two part fugue in theory and experiment	PhD Thesis 2004
03/045	(Gilbert R G) ; Hidi P; Sangster D F	Formation reaction mechanisms in emulsion polymerisation	26th Australian Polymer Symposium A10/4 Noosa July 2003 0-9580282-1-X
03/091P; 03/039	Fletcher RJ; Barbetti M; Evans D; Than H; Sorithy I; Chan K; Penny D ; Pottier D; <i>et al</i>	Redefining Angkor: structure and environment in the largest, low density urban complex of the pre-industrial world	Udaya 4 107-121 2003 1683-7274

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03/116P	Rath P; Torrence R	Producing value: stemmed tools from Garua Island, Papua New Guinea	Australian Archaeology 57 119-127 2003
02/135	Torrence R	Pre-Lapita valuables in Island Melanesia	Records of the Australian Museum 29 163-172 2004
02/136P	Araho N; Torrence R ; White J P	Valuable and useful: mid-Holocene stemmed obsidian artefacts from West New Britain, Papua New Guinea	Prehistoric Society 68 61-81 2002
01/142P; 02/139P	(Vonwiller S) Indusegaram S	Development of radiopharmaceuticals for the diagnosis and treatment of metastatic melanoma tumours	PhD Thesis 2003
01/151; 03/116P	(White P) Torrence R	Now you see it, now you don't. Changing obsidian source use in the Willaumez Peninsula, Papua New Guinea	In <i>Explaining Social Change</i> J Cherry, C Scarre and S Shennan (eds) 115 - 125 McDonald Institute for Archaeological Research, University of Cambridge 2004

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04/047	Dutta N K; Thompson S; Choudhury N R; Knott R	Phase separated nanomaterials based on block copolymers: design, phase-structure control and characterization	International Conference on Nanomaterials: Synthesis, characterization and application 243 Calcutta India November 2004
04/197	Dutta N K; Thompson S; Choudhury N R; Knott R	Supramolecular assemblies in microphase separated complex block copolymer systems, F1/3 ^	Australian Polymer Symposium D3/1 November 2004 Adelaide

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PGRA	Jordan T B ; Seen A J; Jacobsen G E	Apportioning woodheater emissions to ambient air pollution in Launceston, Tasmania*	INTERACT Conference Proceedings 184 Gold Coast July 2004
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01/101	McMinn A ; Hallegraef H; Heijnis H	Changes in the hydrology of the Hawkesbury River over the last 320 years	Alcheringa 28 505-514 2004
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02/151P	Tuttle C T T; Seabrook S A; Wise L E; Katsifis A; Knott R B; Yates B F	Molecular modelling and design of radiolabelled complexes for melanoma diagnosis	Aust J Chem 57 87-96 2004 ISSN 0004-9425

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01/028	Och D J; Caprarelli G ; Leitch E C	Geochemical investigation of igneous rocks in the Palaeozoic Port Macquarie complex, NSW, Australia [^]	17th Australian Geological Conference 73 178 Hobart February 2004
PGRA	Peterson V K	Effect of zeolite addition on Cs ⁺ and Sr ²⁺ diffusivity through cement paste cured at different temperatures	Honours Thesis 1999
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04/139P	Goodwin I D; (Skilbeck G)	Unravelling climate influences on late Holocene sea-level and coastal evolution	In <i>Global Change in the Holocene</i> Mackay A, Battarbee R, Birks J and Oldfield F 406-421 Edward Arnold, London 2003
99/124	(Skilbeck C G) Flett I	The history of Algal blooms in Myall Lakes	BSc Hons Thesis 2003
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04/185	Goldberg N A; Kendrick G A	Effects of island groups, depth, and exposure to ocean waves on subtidal macroalgal assemblages in the Recherche Archipelago, Western Australia	Journal of Phycology 40 631-641 2004
02/092	Sewell R; Dell J; Faraone L; Prince K; Musca C	Minority carrier behaviour HgCdTe heterostructures	Conference on Microelectronic Materials and Devices 02EX601 161-164 Sydney December 2002

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PGRA	Golab A ; Carr P	Changes in geochemistry and mineralogy of thermally altered coal, upper Hunter Valley, Australia	International Journal of Coal Geology 57(3-4) 197-210 2004
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University Codes

CODE	UNIVERSITY
ACU	Australian Catholic University
ADE	The University of Adelaide
AKL	The University of Auckland
ANS	ANSTO
ANU	The Australian National University
BAL	University of Ballarat
CBR	University of Canberra
CQU	Central Queensland University
CSU	Charles Sturt University
CUR	Curtin University of Technology
DEA	Deakin University
ECU	Edith Cowan University
FLI	Flinders University
GRI	Griffith University
JAM	James Cook University
LAT	La Trobe University
MAC	Macquarie University
MEL	The University of Melbourne
MON	Monash University
GNS	Institute of Geological & Nuclear Science

CODE	UNIVERSITY
MUR	Murdoch University
NCT	The University of Newcastle
NSW	The University of New South Wales
NTU	Charles Darwin University
QLD	The University of Queensland
QUT	Queensland University of Technology
RMI	RMIT University
SCU	Southern Cross University
USQ	University of Southern Queensland
SWI	Swinburne University of Technology
SYD	The University of Sydney
TAS	University of Tasmania
UNE	The University of New England
USA	University of South Australia
UTS	University of Technology Sydney
UWA	The University of Western Australia
UWS	University of Western Sydney
VIC	Victoria University of Technology
WOL	University of Wollongong

Specialist Committees

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

