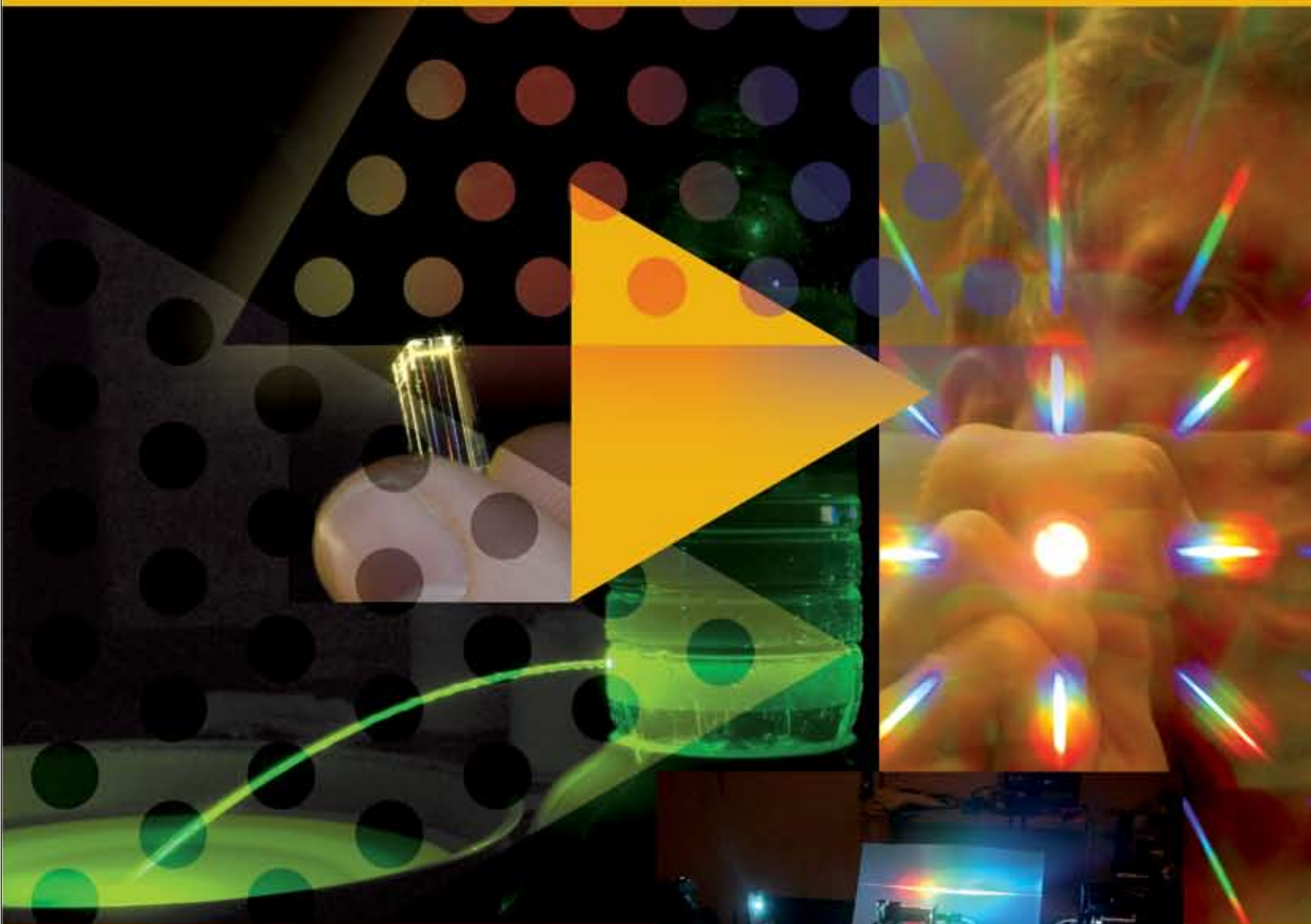




CUDOS

The Centre for Ultrahigh bandwidth Devices for Optical Systems (CUDOS)



A N N U A L R E P O R T

2006

Key Result Area and Performance Indicator	Target (Year 4)	Achievement (Year 4)
Research findings		
Quality of publications	Average Impact Factor >3 for top 55 publications	Average Impact factor: >4.1 for top 55 publications; >3.2 for all 86 publications
Number of publications	>55	81 refereed journal publications (plus 2 commentaries) 3 Books
Number of patents applications	3	3 provisional applications filed in 2006
Invitations to address international conferences	10	>30 (see table below)
Invitations to visit leading international laboratories	7	>10
Number and nature of commentaries about the Centre's achievements	2 in trade journals 3 in popular media, professional magazines	6 in trade journals (AOS News, Laser Focus) 5 in popular media (press release and interviews on optical regenerator) 2 in University alumni press
Research training and professional education		
Number of postgraduates recruited	10	7
Number of postgraduate completions	5	4
Number of Honours students	8	5
Number of professional courses	2	1 CLEO short course (Eggleton)
Participation in professional courses	3	
Number and level of undergraduate and high school courses in the priority area(s)	4 u/grad subjects 5 high school visits	6 u/grad subjects (> 70 lectures) 5 high school visits and 2 Science Teacher events
International, national and regional links and networks		
Number of international visitors	9	19 Visiting academics 3 international student visitors
Number of national and international workshops	Host 1	1 hosted ETOPIM 7 Conference (Sydney), R McPhedran (Chair)
Number of visits to overseas laboratories	10	>25
Examples of relevant Social Science & Humanities research supported by the Centre	1	
End-user links		
Number & nature of commercialisation activities	2	2 IP strategic plan finalized; Survey of technology funded by venture capital company as precursor to investment.
Number of government, industry and business briefings	2	2 Martijn de Sterke – Joint Strike Force briefing; Briefings with venture capital companies (Eggleton, Walsh)
Number of Centre associates trained/ing in technology transfer and commercialisation	50 over Centre lifetime	>50; All new students provided with training in log book maintenance and IP rules
Number and nature of Public Awareness programs	2	3 Public lectures (Eggleton – Engineers Australia and Science Teachers Association; Walsh – Technology Futures Conference)
Organisational support		
Annual cash contributions from Collaborating Organisations		1. All contributions made in accord with Collaborator agreement 2. Further cash support for laboratory refurbishment: \$250,000 (Sydney) 3. University support for students: \$150,000



Annual in-kind contributions from Collaborating Organisations		In-kind contributions in accord with schedules in Collaborator Agreement
Number of new Organisations recruited to or involved in the Centre	2 in all	3 (as of 2007) RMIT, NICTA, DSTO collaborating in 2007 and formally from 2008
Level and quality of infrastructure provided to the Centre		100 m ² new lab space built at Sydney in 2006 (\$250,000 direct costs); ~ \$100,000 new equipment via internal support at Macquarie + \$40,000 shared equipment
Governance		
Breadth and experience of the members of the Advisory Board	Each Board Member has several years' experience in relevant professional areas	Board covers spectrum of University, Federal Govt (Dr Sargent), State Govt (Mr Watkins), industry (Drs Poole, Ritchie, Rashleigh), academic research groups (Professors Tucker, Fleming)
Frequency and effectiveness of Advisory Board meetings	2	2 Meetings (April and September) Science Review Committee convened and met in July.
Quality of the Centre strategic plan	ARC, ARC Review Panel and Advisory Board accept the Centre's KPM indicators	Strategic Plan assessed in September 2006 as part of the CUDOS proposal for extension
Effectiveness of arrangements to manage Centre nodes	Centre participants and line managers at each node report satisfactory arrangements during ARC reviews. Node research is featured in Annual Report	Node Reports featured in 2005 report and in Chief Investigator reports in 2006
The adequacy of the Centre's Key Performance Measures	ARC, ARC Review panel and Advisory Board accept the Centre's KPM indicators.	Established at Centre commencement and reported on each year

Invited Conference Presentations 2006

Presenter	Conference(s)
LC Botten (3)	ETOPIM 7, Sydney, July 10-14; PIERS 2006, Tokyo, Japan, August 2-6; IEEE NUSOD '06 Numerical Simulation of Optoelectronic Devices, Singapore, September 11-14
M Gu (3)	Femtosecond Phenomena and Nonlinear Optics, Security and Defence 2006, Stockholm, Sweden, September 11-16; Photonics 2006, Hyderabad, India, December 13-16; Plenary Talk at 24th Physics Congress of Physics Society of the Philippines, Davao City, the Philippines, October 24-27
YS Kivshar (2)	Nonlinear Physics and Mathematics, Kiev, May 25-27; International Seminar on Progress and Excitement in AMO Physics, Tokyo, Japan, January 17-18
D Neshev (2)	School on Quantum Electronics, Bulgaria, September 14; International Conference on Micro to Nanophotonics, Romania, August 28-31
AA Sukhorukov (1)	XII Conference on Laser Optics, St. Petersburg, Russia, June 26-30
W Krolkowski (1)	ICOOPMA 2006, Darwin, Australia, July 17-21
B Luther-Davies (3)	Tutorial, Nonlinear Materials and Devices for Optical Communications Systems, CLEO 2006, Long Beach, CA; International Conference on Photonics in Switching, 2006, October 2006, Heraklion, Crete; SPIE conference on Smart Materials, Nano- & Micro-Smart Systems, December 2006 Adelaide
BJ Eggleton (6)	Indian Nanoscience Workshop, Bangalore, April 2006; Plenary presentation, 15th International laser physics workshop, Lausanne, Switzerland, July 24-28; Plenary presentation, SIAM Conference on Nonlinear Waves and Coherent Structures, University of Washington, Seattle, Washington, USA, September 9-12; CLEO/Europe-ECOC Focus Meeting on New Directions in Photonics and Optical Communications, France, September; LEOS Annual meeting, Montreal, Canada, October; Plenary presentation, Smart Materials, Nano-, and Micro-Smart Systems (SPIE) 2006, Adelaide, December
CM de Sterke (2)	LEOS 2006 Annual Meeting; Photonics West 2006
C Grillet (1)	ACOFT, Melbourne, July
P Domachuk (1)	IEEE LEOS summer topicals on Optofluidics (Quebec)
S Tomljenovic-Hanic (2)	Progress in Electromagnetics Research Symposium, PIERS-2006, Cambridge, Massachusetts, USA; 8th International Conference on Transparent Optical Networks, Nottingham, UK, 2006
B Jia (1)	1st International Workshop on Multiphoton Processes in Glass and Glassy Materials (Invited), Sydney, Australia, December 11-12.
DJ Moss (1)	Photonics West, San Jose, CA, January
C Monat (1)	SPIE Optics and Photonics – Optofluidics, San Diego, USA, August
I Garanovich (1)	XIII International School-Conference: Foundations & Advances in Nonlinear Science, Minsk, September

