

Performance Indicators

Key Result Area	Performance Measure	Target	Outcome
Research findings and competitiveness			
	Quality of publications	Impact factor > 3 for top 40 publications	>4.4 for top 40 publications; > 3.4 for all publications
	Number of publications	70	82
	Number of patents filed	3	2
	Invitations to address and participate in international conferences	15	> 30
	Invitations to visit leading international laboratories and seminars	10 (if seminars at labs)	>> 10
	Number and nature of commentaries about the Centre's achievements	5	12 (as measured by media monitoring service)
	Cash income from Non-ARC grants/ research contracts which contribute to Centre operations	15% of ARC grant 2008 – 20% in 2010	13%
	In-kind income from Non-ARC grants/ research contracts which contribute to Centre operations	10% of ARC grant – 20% in 2010 (person years plus access to collaborator equipment)	> 15% in 2010
Research training and professional education			
	Number of postgraduates recruited	10	12
	Number of postgraduate completions	5	4
	Number of Honours students	8	5
	Number of professional courses	2	2: Annual Workshop, I-CAMP summer school
	Participation in professional courses	3	Attendance at short courses at CLEO, OFC, ECOC
	Number and level of undergraduate and high school courses in the priority area(s)	5	10
	Undergraduate "summer schools" in photonics	1 pa	None in 2010
International, national and regional links and networks			
	Number of papers published with international co-authors/reports for international bodies	10 pa	>40
	Number of papers published with cross-node authorship	15 pa	16
	Number of international visitors	15 pa	11 academic visitors 17 visiting students
	Number of collaborative national and international workshops and exchanges with those from outside the Centre	Host 1 national pa and 1 international pa	2: CUDOS Annual Workshop
	Research projects and engagements with international laboratories	2 during 2008 - 2010	2: SOFI (EU project) commenced 2010; SPLASH (EU project) concluded 2010

End-user links			
	Number and nature of commercialisation activities	1	2
	Number of government, industry and business briefings	2	3: Silanna, Finisar, Monitoring Division
	Number of Centre associates trained/ing in technology transfer and commercialisation	20 during 2008 - 2010	2 students enrolled in intensive MBA-style courses in 2010
	Number and nature of Public Awareness programs	5 p.a. visits by school groups, public lectures, radio interviews, appearances in the media	2 school group visits, 3 public lectures, media appearances
Organisational support			
	Annual cash contributions from Collaborating Organisations	As per agreement	In accord with agreement
	Annual in-kind contributions from Collaborating Organisations	As per agreement	In accord with agreement
	Number of new Organisations recruited to or involved in the Centre	3 for 2008	N/A
	Level and quality of infrastructure provided to the Centre	\$200k p.a. of infrastructure investment	RIBG re-investment in Centre > 200k p.a.
	Annual cash contributions from other organisations	State government grant at 10% of ARC grant	Contribution at 10% level agreed and received
	Annual in-kind contributions from other organisations	Equipment, staff equivalent to \$100k p.a.	Project contributions from collaborators > \$100k equivalent p.a.
Governance			
	Breadth and experience of the members of the Advisory Board	Members drawn from senior roles in academia, government and industry	
	Frequency and effectiveness of Advisory Board meetings	2 p.a. with minutes and actions	1 in 2010.
	Quality of the Centre strategic plan	Minimal deviations from plan as presented in Annual Report	Centre has completed 8 years of operation in broad compliance with original plan
	Effectiveness of arrangements to manage Centre nodes	3 executive meetings p.a.	3 meetings in 2010
	The adequacy of the Centre's Key Performance Measures	Determined in conjunction with the Advisory Board	Board provided advice on KPIs in 2008
National benefit			
	Measures of expansion of Australia's capability in the priority area(s)	1 tenured faculty staff increase p.a. in photonics across CUDOS; 2 new p/g courses introduced 2008 – 2010 catering for how many students?	10 students enrolled in Master Photonics and Optical Sciences program at U. Sydney in 2010
	Case studies of economic, social, cultural or environmental benefits	1 case study to be conducted by 2010	None in 2010



Invited talks at major conferences

Author/ Presenter	Invited Talks in 2009
Ben Eggleton	<p>Plenary presentation at the SPIE-Europe meeting in Brussels, Belgium</p> <p>Invited paper at the SPIE Annual meeting in San Diego, USA</p> <p>Invited paper at the Ultrafast capacity Symposium in Copenhagen, Denmark</p> <p>Invited paper at the PECS meeting in Granada, Spain</p> <p>Plenary presentation at the International Conference on Optical Communications in Nanjing, China</p> <p>Plenary presentation at the Photonics India in Guwahati, India</p> <p>Invited paper at the Photonics Global conference in Singapore.</p> <p>Public Lecture at the Briscience Seminar Series, Brisbane</p>
Martijn de Sterke	<p>9th International Conference on Excitonic and Photonic Processes in Condensed and Nano Materials, EXCON'10, 11-16 July 2010 in Brisbane, Australia.</p>
David Moss	<p>"Slow-light enhanced nonlinear optics for ultrahigh speed signal processing in silicon 2D photonic crystal waveguides", Invited Talk, IEEE Photonics Society Annual Meeting, Denver, CO, November (2010).</p> <p>"Nonlinear optics in CMOS compatible integrated high index silica glass devices", Invited Talk, Optical Society of America Annual Meeting, Frontiers in Optics, Rochester, NY Oct. 24-28 (2010).</p>
Jochen Schröder	<p>J. Schröder, S. Coen, T. Sylvestre, B. J. Eggleton, invited paper, "Controlling passive mode-locked lasers with in-cavity pulse-shapers," Australian Conference on Optical Fibre Technology (ACOFT), Melbourne 2010.</p>
Mark Pelusi	<p>M.D. Pelusi, F. Luan, S. J. Madden, D.-Y. Choi, D.A.P. Bulla, B. Luther-Davies, B.J. Eggleton, "Chalcogenide glass chip based nonlinear signal processing", Integrated Photonics Research, Silicon and Nano Photonics (IPR), July 25-29, 2010, Monterey Plaza Hotel, Monterey, California, USA.</p> <p>M.D. Pelusi, T.D. Vo, F. Luan, S. J. Madden, D.-Y. Choi, D.A.P. Bulla, B. Luther-Davies, and B.J. Eggleton; , "Broadband signal characterization using chalcogenide glass planar waveguides", Asia-Pacific Microwave Photonics Conference 2010 (APMP2010), The Hong Kong Polytechnic University, Hong Kong, April 26 – 28, 2010.</p> <p>M. Pelusi, T. Vo and B. Eggleton, "Terahertz bandwidth waveform spectrum analysis", 2010 IEEE Topical Meeting on Microwave Photonics (MWP), 5-9 Oct. 2010, pp. 381 – 384, Montreal, QC.</p>
Christian Grillet	<p>C. Grillet, "Ultrafast Photonic Integrated Circuits," Keynote Speaker 1st International Conference on Photonics (ICP) 2010, July, Langkawi, MALAYSIA.</p> <p>C. Monat, B. Corcoran, M. Ebnali-Heidari, C. Grillet, et al, "Slow-light enhanced third order nonlinear effects in silicon photonic crystal waveguides," SPIE Photonics Europe, invited talk, Brussels, Belgium (April 2010).</p> <p>C. Monat, B. Corcoran, M. Ebnali-Heidari, C. Grillet, et al "Slow light enhanced nonlinear effects in silicon photonic crystal waveguides for optical signal processing" 15th Optoelectronics and communications conference: OECC2010, Invited talk, Sapporo, Japan (July 2010).</p> <p>C. Grillet, et al, "Chalcogenide glass photonic crystals: progress and prospects," SPIE Photonics West 2010, Invited paper, 7609-37, San Francisco, USA (2010).</p> <p>C. Karnutsch, S. Tomljenovic-Hanic, C. Monat, C. Grillet, P. Domachuk, R. McPhedran, B. J. Eggleton, L. O'Faolain, T. F. Krauss, S. Xiao, N. A. Mortensen, "Waveguide-based optofluidics," SPIE Photonics West 2010, Invited paper, 7606-40, San Francisco, USA (2010).</p>
Christelle Monat	<p>C. Monat, B. Corcoran, M. Ebnali-Heidari, C. Grillet, M. Pelusi, D. J. Moss, B. J. Eggleton, T. White, L. O'Faolain, T. F. Krauss, Invited paper, 'Slow-light-enhanced nonlinear effects in silicon photonic crystal waveguides for optical signal Processing' 15th Optoelectronics and Communications Conference: OECC2010, Sapporo 2010</p> <p>C. Monat, B. Corcoran, M. Ebnali-Heidari, C. Grillet, M. Pelusi, D. J. Moss, B. J. Eggleton, T. White, L. O'Faolain, T. F. Krauss, Invited paper, 'Slow light enhanced third order nonlinear effects in silicon photonic crystal waveguides' SPIE Photonics Europe, Brussels 2010</p>

Mick Withford	<p>G. D. Marshall, M. Ams, D. J. Little, P. Dekker, C. T. Miese, S. Gross, A. Fuerbach, C. Neil, A. Lehmann, N. Jovanovic, J. Lawrence and M. J. Withford, "Recent developments in active and passive glass photonics fabricated using ultrafast laser direct-write methods", paper 4A-2, 35th Australian Conference on Optical Fibre Technology, Melbourne, Australia, 2010.</p> <p>G. D. Marshall, A. Jesacher, M. Ams, P. Dekker, D. Little, C. Miese, A. Fuerbach, M. J. Booth, T. Wilson and M. J. Withford, "Femtosecond Laser > Written Bragg Gratings", in Proceedings of Bragg Gratings, Poling and Photosensitivity (BGPP), Optical Society of America, Karlsruhe, Germany, 2010.</p> <p>M. Ams, P. Dekker, G. D. Marshall, D. J. Little and M. J. Withford, "Directly written DFB waveguide lasers using femtosecond laser pulses," Paper 56 in the International High-Power Laser Ablation Conference (HPLA), Santa Fe, USA, 2010.</p> <p>A. Fuerbach, S. Gross, C. Miese, G. Marshall, M. Ams, P. Dekker and M. Withford, "Direct writing of Photonic Devices using femtosecond laser pulses", in 12th International Conference on Transparent Optical Networks (ICTON), Munich, Germany, 2010.</p>
Dragomir Neshev	<p>2nd International workshop on nonlinear optics and novel phenomena, "Multi-colour nonlinear beam manipulation in coupled optical waveguides," Tianjin, China (30 June- 1 July 2010).</p> <p>Nonlinear waves - Theory and applications, "Multi-colour nonlinear beam manipulation in coupled optical waveguides," Beijing, China (26-29 June 2010).</p>
Arnan Mitchell	<p>Asia Pacific Microwave Photonics APMP 2010, Hong Kong April 2010 "High-speed analogue signal processing using nonlinear optics", Arnan Mitchell; RMIT University, Australia</p> <p>The 5th Asia Pacific Conference on Transducers and Micro-Nano Technology APCOT 2010, Perth July 2010 "Low cost nano-imprinted, laminated and opto-fluidic structures for sensing applications", Arnan Mitchell, RMIT University</p> <p>International Conference on Electromagnetics in Advanced Applications ICEAA 2010, Sydney, Sep 2010 "Microwave Photonic Instantaneous RF Frequency Measurement Systems Employing Optical Mixing" L Bui, N. Sarkhosh, H. Emami, A. Mitchell</p>
Andrey Sukhorukov	<p>A. A. Sukhorukov, "Slow light in coupled periodic photonic structures," International Workshop on Complexity in Periodically Structured Systems, 30 August – 3 September 2010, Dresden, Germany.</p> <p>A. A. Sukhorukov, "Coupled cavities and band-edge slow-light in periodic waveguides," Advances in Slow and Fast Light - SPIE Photonics West, 22-28 January 2010, San Francisco, USA.</p>
Min Gu	<p>M. Gu, "Fabrication of functional 3D photonic crystals," (Invited talk on the International Conference for Photonic Localization and Band Gaps (ICPBG), Guangzhou, China, Jan. 4-6, 2010).</p> <p>M. Gu "Multi-focal and multi-photon microscopy for fast parallel laser writing," (Invited talk on the 2010 International Conference on Confocal Microscopy, Shanghai, China, March 28-31, 2010).</p>
Yuri Kivshar	<p>Light control with nonlinear photonic crystals" at International workshop "Photonic localization and band gaps (ICPBG'10)", Guangzhou (China)</p> <p>Nonlinear and tunable metamaterials"; Keynote talk, META'10, 2nd International Conference on Metamaterials, Photonic Crystals and Plasmonics, Cairo, Egypt</p> <p>Guiding light for future technologies", (OSA Fellow Visiting Program) presented at Pontificia Universidad Catolica de Chile and Universidad de Chile, Santiago (Chile)</p> <p>"Bistability of localized States in Nonlinear Random Media", and "Nonlinear and Tunable Metamaterials" at PIERS 2010 Progress In Electromagnetics Research Symposium, Xi'an (China)</p> <p>Nonlinear metamaterials" at 4th International Workshop on Electromagnetic Metamaterials, Sandia and Los Alamos National Laboratories, Albuquerque, New Mexico</p> <p>" Nonlinear physics and localization in periodic structures" at International workshop "Complexity in Periodically Structured Systems"</p> <p>Max Planck Institute for the Physics of Complex Systems, Dresden</p> <p>Tunable Nonlinear Metamaterials and Plasmon Nanofocusing" at CAOL'2010 and LFNM'2010, Sevastopol, Ukraine</p> <p>Nonlinear tunable metamaterials and plasmonic nanofocusing" at "PHOTONICS – 2010 10th International Conference on Fiber Optics and Photonics, Guwahati (India)</p>

