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PROFESSOR JOHN CANNING

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[iPL website](http://www.iplaustralia.com/)(http://www.iplaustralia.com/)

Biographical details

- PhD, University of Sydney, 1996
- ARC Postdoctoral Fellow, School of Chemistry, University of Sydney, 1996
- ARC QEII Fellow, Optical Fibre Technology Centre, University of Sydney, 1998
- Co-Founder (1999) Redfern Optical Components Pty Ltd, 1999
- Co-Founder (1999) and Consultant (2003), Redfern Integrated Optics 1999
- Consultant, Australian Photonics Propriety Ltd (APPL), 2001
- Consultant Redfern Photonics, 2003
- Øtto Mønsted Fond Visiting Professor, Danish Technical University, Copenhagen, Denmark, 2004
- Principal Research Fellow, Australian Photonics Cooperative Research Centre, Australian Technology Park, 2006
- Co-Founder, CTO and CEO – Centaurus Technologies Pty Ltd, 2004-2006
- Villum Kann Rasmussen Visiting Professor, interdisciplinary Nanoscience Centre (iNANO), Aarhus University, Aarhus, Denmark 2007
- ARC Professorial Fellow, School of Chemistry, University of Sydney, 2007
- Head of interdisciplinary Photonics Laboratories (iPL), 2007
- Fellow of SPIE, 2011
- ARC Professorial Future Fellow, School of Chemistry, 2012-2015
- Conjoint Professor, School of Electrical Engineering and Telecommunications, UNSW, 2012
- CAPES Brazil Science Without Borders, Professor, Federal University of Technology, 2014
- Honorary Professor, 2016

Research interests

- Photonics, optics and technologies in telecommunications, sensing and diagnostics
- Self-assembled photonics; supramolecular photonics; molecular self-assembly
- Fibre, grating and waveguide lasers
- Integrated optical fibre, grating and waveguide technologies

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Current research students

Project title	Research student

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Awards and honours

- J.G. Russell Award, Australian Academy of Sciences, 1998
- Co-Founder, Redfern Integrated Optics (RIO), 1998
- Australian Technology Award in the category "Excellence in the Development of technology from the Government Sector" ; Finalist in the category "Excellence in the Development of Communications Technology" for the APCRC Integrated Planar Optical Chip Technology Development, 1999
- Co-Founder, Redfern Optical Components (ROC), 1999
- Co-Founder and Director, Centaurus Technologies Pty Ltd 2004
- Supervisor of top students in photonics at Sydney including Cicero Martelli, winner of LEOS (IEEE Photonics Society) Graduate Student Fellowship 2007, with most publications of any student
- Fellow of SPIE, 2012
- Outstanding Reviewer Award, Optical Society of America, 2012
- Science Without Borders Professor, Brazil, 2014
- Program 111 Professor, China, 2014

Other grants

1. Brazil Science Without Borders C. Martelli, J. Canning – *“Advanced Optical Sensing”*.
2. University of Sydney Major Equipment Grant, D. D'Alessandro, J. Canning, M. Choucair, S. Neville, C. Kepert, A. Masters, T. Mashmeyer, P. Southon – *“Multisorption instrument”*.
3. Asian Office of Aerospace Research & Development Tokyo, Japan (AOFSR).
4. China, Program 111 - "Optical fibre sensing and communications", (18 international leaders, 14 domestic partners covering China, UK, USA, Australia, Sweiss, USA, Russia and Spain), Lead: University of Electronic Science and Technology of China (UESTC).

PhD and master's project opportunities

- [Metal Ion Sensors for Medicinal and Environmental Applications](http://www.usyd.edu.au/research/opportunities/opportunities/1550) (<http://www.usyd.edu.au/research/opportunities/opportunities/1550>)
- [Self-assembled photonics](http://www.usyd.edu.au/research/opportunities/opportunities/1169) (<http://www.usyd.edu.au/research/opportunities/opportunities/1169>)
- [Glass smithing on the micro and nano scales](http://www.usyd.edu.au/research/opportunities/opportunities/1552) (<http://www.usyd.edu.au/research/opportunities/opportunities/1552>)

Selected grants

2014

- *Glass micro and nano smithing of devices and sensors for extreme environments*; Canning J, Lancry M; Australian Research Council (ARC)/Discovery Projects (DP).

2012

- *Optical Fibre Nanophotonics for Sensing*; Canning J; Australian Research Council (ARC)/Future Fellowships (FT).

2011

- *Regeneration in Glass*; Canning J; DVC Research/Bridging Support Grant.

2010

- *e-FLAG: Exchanges around Femtosecond Laser Applications in Glasses*; Poumellec B, Canning J, Schmidt T, Aslund M, Cook K, Kazansky P, Nolte S, Withford M; European Commission (Belgium)/Seventh Framework Network of Excellence Programme.
- *Advanced Facility for Next Generation Sustainable Energy, Biomedical & Nano-Imaging Optical Fibre Technologies*; Peng G, Canning J, Reimers J, Atai J, Khoury T, Michie A, Aslund M, Cook K, Crossley M; Australian Research Council (ARC)/Linkage Infrastructure, Equipment and Facilities (LIEF).

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Selected publications



- <https://www.lap-publishing.com/catalog/details/store/gb/book/978-3-8383-3843-9/optical-fibre-sensing-and-interferometry?search=9783838338439>
Optical fibre sensing and interferometry: Including optical fibre voltage sensing using thermally poled silica fibres (<https://www.lap-publishing.com/catalog/details/store/gb/book/978-3-8383-3843-9/optical-fibre-sensing-and-interferometry?search=9783838338439>) (LAP - LAMBERT Academic Publishing, 2010)



- <http://www.vdmpublishinggroup.com/>
Bragg Grating Optical Add-drop Multiplexers: An Introduction into Bragg Grating Interference Devices (<http://www.vdmpublishinggroup.com/>) (VDM Verlag Dr Muller, 2008)

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Books	<ul style="list-style-type: none"> • Michie, A., Bassett, I., Canning, J., Haywood, J. (2010). <i>Optical fibre sensing and interferometry: Including optical fibre voltage sensing using thermally poled silica fibres</i>. Saarbrücken, Germany: LAP - LAMBERT Academic Publishing. • Aslund, M., de Sterke, C., Poladian, L., Canning, J. (2008). <i>Bragg Grating Optical Add-drop Multiplexers: An Introduction into Bragg Grating Interference Devices</i>. Germany: VDM Verlag Dr Muller.
Book Chapters	<ul style="list-style-type: none"> • Canning, J. (2015). Lab-in-a-Microfibre. In Andrea Cusano, Marco Consales, Alessio Crescitelli, Armando Ricciardi (Eds.), <i>Lab-on-Fiber Technology</i>, (pp. 209-232). Cham: Springer. [More Information] (http://dx.doi.org/10.1007/978-3-319-06998-2_10) • Canning, J., Bandyopadhyay, S. (2012). Laser seeding and thermal processing of glass with nanoscale resolution. In Nikolaos A. Vainos, University of Patras, Greece (Eds.), <i>Laser growth and processing of photonic devices</i>, (pp. 287-304). Cambridge, United Kingdom: Woodhead Publishing Limited. [More Information] (http://dx.doi.org/10.1016/B978-1-84569-936-9.50009-2) • Canning, J. (2012). Structured Optical Fiber. In Ronald G Driggers (Eds.), <i>Encyclopedia of Optical Engineering</i>, (pp. 1-12). New York: Taylor and Francis.
Journals	<p>Show 6 more</p> <ul style="list-style-type: none"> • Zhao, Q., Luo, Y., Wang, W., Canning, J., Peng, G. (2017). Enhanced broadband near-IR luminescence and gain spectra of bismuth/erbium co-doped fiber by 830 and 980 nm dual pumping. <i>AIP Advances</i>, 7(4), 045012-1-045012-8. [More Information] (http://dx.doi.org/10.1063/1.4981903) • Hossain, M., Canning, J., Yu, Z., Ast, S., Rutledge, P., Wong, J., Jamalipour, A., Crossley, M. (2017). Time-resolved and temperature tuneable measurements of fluorescent intensity using a smartphone

fluorimeter. *The Analyst*, 142(11), 1953-1961. [\[More Information\]](#)
(<http://dx.doi.org/10.1039/c7an00535k>)

- Kumar, J., Prakash, O., Mahakud, R., Agrawal, S., Dixit, S., Nakhe, S., Canning, J. (2017). Wavelength independent chemical sensing using etched thermally regenerated FBG. *Sensors and Actuators B: Chemical: international journal devoted to research and development of physical and chemical transducers*, 244, 54-60. [\[More Information\]](#)
(<http://dx.doi.org/10.1016/j.snb.2016.12.128>)

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Conferences

- Han, C., Canning, J., Cook, K., Hossain, M. (2017). Light-induced Au surface modification. *25th International Conference on Optical Fiber Sensors (OFS 2017)*, USA: SPIE - International Society for Optical Engineering. [\[More Information\]](#)(<http://dx.doi.org/10.1117/12.2265315>)
- Hossain, M., Canning, J., Cook, K., Ast, S., Jamalipour, A. (2017). Photo- and thermal degradation of olive oil measured using an optical fibre smartphone spectrofluorimeter. *25th International Conference on Optical Fiber Sensors (OFS 2017)*, USA: SPIE - International Society for Optical Engineering. [\[More Information\]](#)
(<http://dx.doi.org/10.1117/12.2265580>)
- Hossain, M., Canning, J., Cook, K., Jamalipour, A. (2016). Hand-held Optical Fiber Smartphone Spectrometer for Classification of Vegetable Oils. *OSA's Photonics and Fiber Technology Congress 2016*, Sydney: OSA (Optical Society America). [\[More Information\]](#)
(<http://dx.doi.org/10.1364/ACOFT.2016.AT3C.3>)

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Patents

- Canning, J., Sommer, K., Huntington, S. (2008). An Optical Fibre. *Patent No. 2002226190, 7379645*.
- Large, M., Van Eijkelenborg, M., Argyros, A., Zagari, J., Manos, S., Canning, J., Ryan, T., Lyytikainen, K. (2008). Constructing Preforms From Capillaries And Canes. *Patent No. 2002354971, 7359603*.
- Canning, J. (2006). *Patent No. 7016554*.

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