

Dr OKSANA TRUSHKEVYCH

Senior Research Fellow, Physics Department, University of Warwick, UK

Summary

PhD, Engineering, University of Cambridge, UK, October 2006
Gates Cambridge Scholarship (2001 – 2004), ORS Award (2001 – 2004)
Research Associate, University of Cambridge, UK (2005 – 2011)
Junior Research Fellow, Wolfson College, Cambridge, UK (2006 – 2010)
Research Fellow/Senior Research Fellow, University of Warwick, UK (from 2011)
2 patents, over 30 peer reviewed publications, 232 citations, h-index 9, i10-index 8
Organiser of 2 international conferences

Employment

Research/Senior Research Fellow, Co-Investigator (Jan 2019 – currently), Ultrasonics Group, Physics Department, University of Warwick, UK. *Promoted to Senior Research Fellow 1 June 2019*
Maternity leave (May 2018 – Jan 2019)

Research Fellow (Oct 2017 – May 2018), Sonemat, , UK

Research Fellow, Co-Investigator (Oct 2011 – Sept 2017), Ultrasonics Group, Physics Department, University of Warwick, UK
Maternity leave (Jul 2015 – Mar 2016)

Maternity leave (Apr 2013 – Sept 2013)

Research Associate (Feb 2010 – Sep 2011) Nanomaterials Spectroscopy Group, Centre for Advanced Photonics and Electronics, Engineering Department, Cambridge University, UK

Visiting Research Fellow (Nov 2009 – Jan 2010) Liquid Crystal Materials Research Center, Physics Department, University of Colorado at Boulder, USA

Research Associate (May 2005 - Nov 2009), Photonics and Sensors Group, Centre for Advanced Photonics and Electronics, Engineering Department, Cambridge University, UK

Fellowships and awards (most recent)

Apr 2017 - Jul 2017 **Materials GRP Research Award** from the University of Warwick, Global Research Priorities – Materials

Sep 2014 - Jul 2015 **Energy GRP Research Award** from the University of Warwick, Global Research Priorities – Energy

Nov 2009 - Jan 2010 **International Exchange Fellowship** from the International Institute for Advanced Complex Matter (I2CAM) for a research visit to Boulder, CO, USA

Oct 2006 - Sept 2010 **Junior Research Fellowship**, Wolfson College, Cambridge University, UK

Most significant publications

O. **Trushkevych** and R. S. Edwards, "Differential coil EMAT for simultaneous detection of in-plane and out-of-plane components of surface acoustic waves," *IEEE Sensors Journal* **20**, 19, 11156-11162 (2020)

R.S. Edwards, J. Ward, L. Zhou and O. **Trushkevych**, "Polymer dispersed liquid crystals for ultrasound sensing", *Applied Physics Letters*, **116**, 4, 044104 (2020)

O. **Trushkevych**, and R.S. Edwards, "Characterisation of small defects using miniaturised EMAT system", *NDT & E International*, **107**, 102140 (2019)

O. **Trushkevych**, T.J.R. Eriksson, S.N. Ramadas, S. Dixon and R.S. Edwards, "Acousto-optics with polymer dispersed liquid crystals for ultrasound sensing", *Applied Physics Letters* **107**, 054102 (2015)

O. **Trushkevych**, P. Ackerman, W.A. Crossland, I.I. Smalyukh "Optically Generated Adaptive Localized Structures in Confined Chiral Liquid Crystals Doped with Fullerene", *APL*, **97**, 201906 (2010)

O. Trushkevych, H. Xu, T. Lu, J.A. Zeitler, R. Rungsawang, F. Gölden, N. Collings and W.A. Crossland, "Broad spectrum measurement of the birefringence of an isothiocyanate based liquid crystal", *Applied Optics* **49**, 28, 5212 -5216 (2010)

O. Trushkevych, F. Gölden, M. Pivnenko, H. Xu, N. Collings, W.A. Crossland, S. Müller and R. Jakoby "Dielectric anisotropy of nematic liquid crystals loaded with carbon nanotubes in a microwave range", *Electronics Letters*, **46**, 10, 693 - 695 (2010), highlight article in the issue

O. Trushkevych, N. Collings, T. Hasan, V. Scardaci, A.C. Ferrari, T.D. Wilkinson, W.A. Crossland, W.I. Milne, J. Geng, B.F.G. Johnson, and S.Macaulay, "Characterisation of carbon nanotube - thermotropic nematic liquid crystal composite materials", *Journal of Physics D: Applied Physics*, **41**, 125106 (2008)

Patents

International patent application PCT/GB2007/001784, publication number WO 2007/132230 A1 (US no. 60/800,532), **Method of operating an OASLM and holographic display system**

International Patent Application PCT/GB2017/052869, publication number WO 2018/189498, **Packaged and enhanced EMAT Ultrasonic NDT System**

Teaching, impact, outreach and engagement (most recent)

2021 – currently Associate fellow of Warwick Institute of Engagement

Sept 2019 British Science Festival, leading the "Immersed in Sound Waves" performance-based event. Interviewed by Radio BBC Coventry and Warwickshire.

Aug 2019 PGA in Interdisciplinary Teaching, University of Warwick

2017 – currently Module Leader of the "Science of Music", Institute of Advanced Teaching and Learning, University of Warwick; 2015 member of the team developing the module, 2016/2017 part of the teaching team

2011 – currently Supervising graduate and undergraduate research and summer research projects

2011 – currently outreach events: judge at Ogden Trust Primary Science Fair, demonstrating during School visits and at Warwick University Open Days; assisting at University of Warwick Christmas lectures, lecture for WISE chapter at Eatone College, Nuneaton

2009 - 2011 PhD Academic Advisor to Tianxin Lu, Photonics and Sensors Group, University of Cambridge

2008 – 2011 Educational Policy Committee member, co- creator of pilot mentoring scheme for PhD students; mentoring 3 Physics PhD students (2010-2011); Co-founder of the Wolfson College Science Society; co-organiser of an annual Science Day (cross-disciplinary student competition); co-organiser of Wolfson College Lunchtime seminars (informal cross-disciplinary series)

Professional activities and responsibilities

Member of the British Liquid Crystal Society (BLCS) (2001 - currently); the Institute of Physics (IOP) (2011–2014), the Institute of Electrical and Electronics Engineers (IEEE) (2011-2013), the International Institute for Complex Adaptive Matter (I2CAM) (2008–2011), the International Society for Optics and Photonics (SPIE) (2002-2007)

Reviewer: *JPhysD: Appl. Phys.*, *Materials Journal*, *Phase Transitions Journal*, *Phys.Rev E*, *Nanotechnology*, *2D Materials*, *NDT&E Journal*, *ASME Journal of NDE*, *Diagnostics and Prognostics of Eng. Systems*.

Early Career Supervisor of the EPSRC Platform Grant for the Photonics and Sensors Group, University of Cambridge (2007-2009)

Interviewing panel member for postdoctoral competition in Photonics and Sensors group (2007), for Wolfson JRF competition (2008) and for Cambridge Gates Scholarship: physical sciences panel (2009)

Organiser of the 2nd International workshop "Liquid Crystals for Photonics" LCP2008 ~130 participants; Guest co-editor of a special issue for *Molecular Crystals Liquid Crystals Journal* dedicated to the LCP2008

Main organiser of the International Conference for Students and Young Scientists EURECA 2001 ~100 participants