

Curriculum Vitae for Judith Driscoll
Website: <http://www.dmg.msm.cam.ac.uk/profiles/jld35>



Education/ Qualifications

3/91: PhD in Materials Science, University of Cambridge

Professional History

6/91-1/95: IBM Postdoctoral Fellow at Stanford University and IBM Almaden Research Center

2/95-10/99: Governor's Lecturer, Dept. of Materials, Imperial College

10/99-1/03: Reader in Materials Chemistry, Dept. of Materials, Imperial College

1/03-9/03: Staff Member, Los Alamos National Laboratory

9/03-present : Long Term Visiting Staff Member at Los Alamos

10/03-10/08 : Reader in Materials Science, University of Cambridge

10/08-: Professor of Materials Science, University of Cambridge

4/05-: Fellow of Trinity College

Memberships of Professional Organisations

Institute of Materials, Materials Research Society, Institute of Physics, American Physics Society.

Fellowships

2002: Fellow of Institute of Physics

2011: Fellow of American Physical Society

2015: Fellow of the Materials Research Society, U.S.A.

Selected External Reviewing

- Reviewer for >30 journals, including Nature Publishing Group journals.
- Reviewer for EPSRC, American Chemical Society, Marsden Fund, Royal Society of New Zealand, U.S. Dept. of Energy, NSF. Refereeing and panel member for most research councils and schemes in Europe including Finland Georgia, Luxembourg, Belgium, Poland, Norway, Holland, Ireland, Spain, ERC Junior, several FP7 calls including Marie Curie, FET, ERC, MRA-NET, PEOPLE, NMP Large.
- Referee for successful presidential candidate of top US University, and for top Materials Research Society prize recipients. Committee Chair for numerous international prize committees.

Example Advisory Boards and Committees

Nominations Committee of Materials Research Society (2008 -), Editorial Board of Advanced Functional Materials (2009-2013), Editorial Board Applied Physics Letters and Journal of Applied Physics (2010 - 2013), Editorial Board of International Materials Reviews (2011 - 2013), Materials Research Society Publications sub-committee (2011-present), US Basic Energy Sciences Center for Integrated Nanoscience and Technology User Exec. Committee (2013-). External Advisory Board for Applied Materials, Inc. (2014-), Aalto University, Finland (2015-), Winton Advisory Committee (2015-),

Editorship

Since 2013, Founding Editor-in-Chief, APL Materials, American Institute of Physics. First full journal impact factor will be >4.

Supervision of Graduate Students and Post-Doctoral Fellows and Teaching

Over the past 20 years, supervised more than 40 PhD students, and 40 postdoctoral researchers and taught across the whole breadth of Materials science, from small group teaching to large lectures of >200.

Publication Information

- *h* index is 45. Total no. of publications is >350, No. of papers in last 5 years is >100.
- 3 papers cited more than 600 times. 15 papers cited more than 100 times.
- Total no. of cites without self citation is >9000. Citations per article >26.
- m-index (*h*-index/no. of years past PhD) is > 2.

Five Example (several licensed) Granted Patents in last 10 years (as main inventor)

- Enhanced Pinning in YBCO Films with BaZrO₃ Nanoparticles, US Patent 20060025310, published **2006**,
- Control of Strain through thickness in epitaxial films via Vertical Nanocomposite Heteroepitaxy. US patent application US20120058323 A1, published **2012**.
- Preparation of Epitaxially Strained Single Phase Multiferroic (ferroelectric and ferromagnetic) thin films, US patent US20120177902 A1, published **2012**.
- Memristor Comprising Film with Comb-like Structure of Nanocolumns of Metal Oxide Embedded in a Metal Oxide Matrix U.S. patent application S-133,065, published **2013**.
- Electrolyte Membrane, US patent application US14/731879, published **2015**.

Invited/plenary talks

Invited (with funding) to deliver around **10** talks/plenaries per year.

Organisation of International Conferences

I have been on the program committees of around two large meetings (>1000 people) each year for the last 20 years. Recent examples include 2014 ASC, August 2014 (~2000 participants), 2015 EUCAS, Grenoble, September 2015 (~1500 participants), 2010-2014, MS&T meetings (Electronic Materials sessions, ~2000 participants total). I have also organised many smaller (~100-200 people) meetings, e.g. co-organiser (and fund raiser) for 50th Anniversary of the Discovery of Josephson Effect (June 2011), and Royal Society Discussion meeting on Oxide Interfaces, September 2011.

Recent International Prizes

2015: Joule Prize, Institute of Physics, U.K.

2015: Armourers and Brasiers Prize, Royal Academy of Engineering.

Leadership in Industrial Innovation

- Invented new processes for making superconducting tapes. Consulted with several companies to assist them to understand and improve their processes.
- Invented the method for pinning in high temperature superconductors which is used many companies.
- Assisting several start-ups in the UK to commercialise oxide technologies (e.g. for energy storage devices and for oxide thin film transistors)

Dissemination, Outreach and Wider Community Service

- Active in public engagement activities in the form of EU policy journals, participation in summer/winter schools.
- Hosted the department's activities (ongoing for 8 years) at the annual Cambridge Science Festival (our events getting publicised in the media, e.g. <http://www.cambridge-news.co.uk/Home/Slideshow-Instant-ice-cream-rockets-and-things-that-go-boom-19032012.htm>), entertaining over 500 participants per year.
- Around 4 visits/talks/ demos are made to local schools each year.
- Active (~ half a day per week) in assistance/promotion of women in science through talks at schools, and by active counselling, promotion and advising of women at all levels in the University and abroad.
- Governor (in charge of science and on Education cttee.), St. Mary's Girls Senior School, Cambridge, 2010-