

George Harrington

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I carry out research on advanced functional oxide materials with applications for energy conversion devices such as fuel cells, electrolyses, and gas permeation membranes, as well as sensors and next generation memory. My research is broadly themed on crystal lattice defects in non-stoichiometric compounds and focused on understanding defect thermodynamics, migration and exchange kinetics, defect-defect interactions, and how these materials can be engineered to tailor desirable functional properties. In particular my work is primarily based on the growth and advanced characterisation of thin films in order to investigate the defect chemistry of oxide materials with a focus on interfaces and surfaces.

Academic Positions and Education

- January 2015 - present:** **Assistant Professor**
Next Generation Fuel Cell Research Centre, Kyushu University, Japan
Center for Co-Evolutional Social Systems, Kyushu University, Japan
International Institute for Carbon-Neutral Energy Research (WPI-I²CNER), Kyushu University, Japan
- January 2015 - present:** **Research Affiliate/Scholar**
Department of Materials Science and Engineering, Massachusetts Institute of Technology, USA
- Split position between KU and MIT working with Prof. K. Sasaki (KU), Prof. H. Tuller (MIT), and Prof. Bilge Yildiz (MIT)
- October 2011 - May 2015:** **PhD in Materials Science**
Imperial College London, UK
- Supervised by Prof. John Kilner, Prof. Stephen Skinner and Prof. David McComb
- Thesis Title: Oxygen Ion Transport and Dopant Segregation in Strained Oxide Thin Films
- October 2007 - July 2011** **MPhys and BSc (Hons) in Physics, 1st class**
University of Leeds, UK

Professional Activity

- Published 18 papers and 1 book chapter
- Member of the Editorial Board for the Journal of Electroceramics
- Guest Editor of an upcoming tutorial article series for the Journal of Electroceramics to launch in the spring of 2020
- Obtained >\$100k in grant funding as PI
- Reviewer for: Journal of Materials Chemistry A, ACS Nano, Nano Letters, Physical Chemistry Chemical Physics, Journal of Electroceramics, Journal of the American Ceramic Society, Solid State Ionics, Fuel Cells, Journal of Hydrogen Energy, Ionics
- International conference contributions: 7 invited talks, 22 contributed oral presentations, 9 poster presentations, organiser of 1 session