

**Research Affiliate**

Department of Materials Science and Engineering & Department of Nuclear Science and Engineering  
Massachusetts Institute of Technology, Cambridge, MA

**Assistant Professor**

Next Generation Fuel Cell Research Centre & Department of Mechanical Engineering  
Kyushu University, Japan

Ph.D., Materials Science and Engineering (2015)  
Imperial College London, UK

M.Phys., Physics (2011)  
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George's interests are broadly related to the interplay of extended defects such as interfaces, dislocations and surfaces on the functional properties of ionically conducting oxides. A particular focus is on the effects of lattice strain on the transport properties and degradation of electrolyte materials for application in solid oxide fuel cells, sensors and memristive devices. Primarily his work involves the fabrication of epitaxial thin films by pulsed laser deposition, and advanced structural characterisation by x-ray diffraction, high resolution transmission electron microscopy and ion beam techniques such as secondary ion mass spectroscopy and low energy ion scattering. In addition, electrochemical characterisation typically involves methods such as impedance spectroscopy and oxygen tracer diffusion experiments.