



## **Professor Andrew Briggs, University of Oxford**

Andrew Briggs is Professor of Nanomaterials at Oxford University. He studied for his Ph.D. with Professor David Tabor in the Physics and Chemistry of Solids group at the Cavendish Laboratory. He came to the Department of Materials at Oxford in 1980 to develop applications of acoustic microscopy with Professor Sir Peter Hirsch. He was awarded a Royal Society Research Fellowship in the Physical Sciences, and within two years was appointed to a University Lectureship. With the invention of scanning tunnelling microscopy he studied surfaces at ever higher resolution, using elevated temperatures to image oxides and semiconductor quantum dots during growth. Following a sabbatical at Hewlett-Packard Laboratories, he became interested in the properties of carbon nanomaterials for quantum computing, and these now constitute the focus of the research in his laboratory. He has led several interdisciplinary projects, with major industrial sponsorship from companies such as BNFL, Toppan, Hitachi, and Hewlett-Packard. He has over 575 publications, the majority in internationally refereed journals, with over 9,000 citations. From 2002 – 2009 he held an EPSRC Professorial Research Fellowship, and was Director of the Quantum Information Processing Interdisciplinary Research Collaboration. Members of his laboratory have shown that electron and nuclear spins in endohedral fullerene molecules and other materials can be manipulated with exquisite precision, that the memory time for quantum information in spins can be at least a second, and that information can be stored in collective spin states. This paves the way for using such materials as components for solid state quantum technologies.

Andrew Briggs is a Professorial Fellow of St Anne's College, an Emeritus Fellow of Wolfson College, an Honorary Fellow of the Royal Microscopical Society, and a Fellow of the Institute of Physics. He has a degree in Theology from Cambridge University. From 1992-2002 he was Professeur invité at Ecole polytechnique fédérale de Lausanne, and in 2002 he was Visiting Professor at the University of New South Wales; he is Guest Professor at the State Key Laboratory for Nanotechnology in Wuhan, China. He is a member of the EPSRC Peer Review College. He is a Liveryman of the Worshipful Company of Clothworkers. He holds a Private Pilots Licence. He serves on the Board of Management of the Ian Ramsey Centre and the Board of Electors to the Wilde Lectureship. He is on the Editorial Board of Science & Christian Belief, the Fellowships Committee of The Royal Commission for the Exhibition of 1851, and the Engineering Review Panel of the Newton International Fellowships. In 1986 he was awarded the Holliday Prize of the Institute of Metals, and in 1999 was a winner of the Metrology for World Class Manufacturing Award. In 2007 he won a prize in the Oxfordshire Science Writing

Competition for an article entitled Molecules are Real. He is on the International Board of Advisors of the John Templeton Foundation. Since 2010 he has been responsible for the preparation and reviewing of proposals to the Templeton World Charity Foundation.