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Age : 47
gender : M
Nationality : FR

Employment history

2001-now senior scientist at the Neel Institute (CNRS Grenoble, France)
1996-2000 beamline scientist at the ESRF high resolution powder diffraction beamline BM16 (now ID31, Grenoble, France)
1990-1995 associate scientist at the Interdisciplinary Research Center with Ions and Lasers (CIRIL, CNRS Caen, France)
1988-1989 post-doctoral at the Synchrotron Radiation Source (SRS Daresbury, UK).

Education

1985-1987 PhD in radiation physics, University of Paris "Electron Spin Resonance study of high-energy ion induced defects in silica"
1985 Master in hard condensed matter physics and crystallography, University of Paris

Publications and citation report (© ISI web of knowledge)

89 articles
Number of citations = 814 (average is 9.1 citations/article)
Average citation per year = 35.4
h-index = 15

Some achievements

- Member of the Organizing Committee of the annual European School HERCULES
- Member of the Scientific Advisory Committee of the SR2A conference (Grenoble 2005, Berlin 2006, Barcelona 2008).
- past-member of the CNRS Scientific Advisory Board (2004-2008)
- chair of the "Crystallography in Art and Cultural Heritage" (CrysAC) at the International Union of Crystallography (IUCr)
- Organisation of HSC5 (Marie Curie training course): European HERCULES Specialized Course on "Synchrotron Radiation and Neutrons for Cultural Heritage Studies", 2007.

- Co-editor of: "Structure and Imperfections in Amorphous and Crystalline Silicon Dioxide", eds. R.A.B. Devine, J-P. Duraud, E. Dooryh e (J. Wiley & Sons Ltd, Chichester, 2000); Applied Physics A83 (2006) on "Synchrotron Radiation in Art and Archaeology"; Phase Transitions 81 (2008) on "Cultural heritage materials: structural and spectroscopic evidence for ancient technologies".
- supervision of 4 PhD students and >20 graduate trainees
- teaching

On-going research

In the late 90s, E. Dooryhee started a pioneering work on archaeological objects using synchrotron X-ray techniques, through a collaborative project with the C2RMF Research Facility at Le Louvre. Since then, there is an increased interest in the study of objects that are part of our cultural heritage, in search for the secrets that lie within them (origin, history, manufacturing processes, authenticity), using synchrotron 2D/3D X-ray imaging, powder XRD, XAS, IR and X-ray tomography.

Part of E. Dooryhee's current research is also concerned with the study of strain and diffusion gradients in epitaxial thin films and superlattices of functional oxides (high-K, ferroelectrics, relaxors). PbTiO₃ is a prototypical ferroelectric perovskite of great interest for applications such as non volatile memories, pyroelectric detectors and piezoelectric devices. By integrating PbTiO₃ into an artificially modulated structure, one can introduce lattice strains which can modify the tetragonal distortion c/a of the material and thus enhance its dielectric and ferroelectric properties

Another of his projects focuses on the structural and physical properties of organic molecular guests, associated with mineral host matrices: diffusion and trapping of the organic species, conformation and orientation of the molecule, order parameter. This description (XRD, QNS, UV-vis, IR, Raman, molecular modelling) aims at understanding and functionalizing photo-active and chromophore hybrid materials: pigments, optical memories, sensors.