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Professor Rex Harris

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About

Professional Development:

- Fellow, The Royal Academy of Engineering
- Fellow, The Institute of Materials
- Senior Member, IEEE
- Member of the IoP Magnetism Group
- Member of a Technology Foresight Panel
- Member of EPSRC College
- Past President of the UK Magnetics Society and Ewing Lecturer
- Past Chairman of International Workshop on Rare Earth Magnets
- Visiting Professor, IFW Dresden
- Visiting Professor, Josef Stefan Institute, Slovenia

Qualifications

- DSc, Birmingham, 1987
- PhD, Birmingham, 1964
- BSc, Birmingham, 1960

Research

Research Interests:

- The alloy chemistry of rare earths with a particular interest in cerium
- Processing, properties and applications of permanent magnets based on rare earth- transition metal alloys
- The nature of the interactions of hydrogen with materials
- The use of hydrogen in materials processing and as an energy vector

Publications

Recent Publications

MA Riley, AJ Williams, JD Speight, AD Walmsley, IR Harris. 1999. Investigation into the failure of dental magnets, Int. Journal of Prosthodontics, 12(3), 249.

AS Pratt, DB Willey, IR Harris. 1999. High performance metal hydride alloys for rechargeable battery technology, Platinum Metals Rev., 43(2), 50-58.

N. Martinez, AJ Williams, IR Harris. 1999. A Study of the constituent phases and magnetic properties of hydrogen-treated Sr hexaferrite during calcination, J. of Materials Science, 34, 2401-2406.

M. Kubis, O. Gutfliesch, K-H Muller, IR. Harris, L. Schultz. 1999. Microstructure and HDDR-processing of as-cast Sm10.5Fe88.5Zr1.0, J. Mag. and Magnetic Materials, 196-197, 297-298.

B Cockayne, MJ Crosbie, NA Smith and IR Harris, 1997. Precipitate identification in Ti-doped YA103 single crystals, Journal of Crystal Growth, 173, 456-459, ISSN: 0022-0248

O Gutfleisch, A Kirchner, W Gunberger, D Hinz, R Schafer, L Schultz, IR Harris and K-H Muller. 1998. Backward extruded NdFeB HDDR ring magnets, Journal of Magnetism and Magnetic Materials, 183, 359-364. ISSN: 0304-8853

JA Horton, L Heatherly, DJ Branagan, CH Sellars, OM Ragg and IR Harris. 1997. Consolidation, magnetic and mechanical properties of gas atomized and HDDR Nd2Fe14B powders. IEE Transactions on Magnetics, 33(4), 3835-3837. ISSN: 0018-9464

RE Smallman, IR Harris and MA Duggan. 1997. Microstructure and materials processing. Journal of Materials Processing Technology, 63, 18-29. ISSN: 0924-0136

A Kianvash and IR Harris. 1998. The influence of free iron on the hydrogen decrepitation capacity of some Nd(Pr)-Fe-B alloys, Journal of Alloys and Compounds, 279, 245-251. ISSN: 0925-8388

M Kubis, K-H Muller, L Schutz, O Gutfleisch and IR Harris. 1998. Hydrogenation and disproportionation of Sm2Fe17-xGax at high hydrogen pressures, Journal of Applied Physics, 83(11), 6905- ISSN: 0021-8979

RS Mottram and IR Harris. 1998. Production of sintered NdFeB magnets by a powder blending technique. (In L. Schultz, K-H Muller, Eds., 15th International Workshop on Rare-Earth Magnets and Their Applications), Dresden, 30 August - 1 September, 1, 473-479. ISBN: 3883556

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