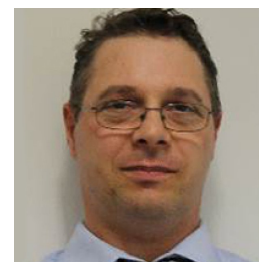


Melvin Vopson
Senior Lecturer in Applied Physics
School of Earth and Environmental Sciences
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Phone: 02392842246



PROFESSIONAL EXPERIENCE

Senior Lecturer in Applied Physics, The University of Portsmouth, UK 2012 - present
Scientific research and lecturing applied physics units and associated research laboratories

- Head of the Applied Physics Teaching and Research Laboratory
- Research and development of novel optical materials characterization techniques
- Design and preparation of advanced multiferroic materials for novel applications
- Theoretical and experimental studies of relaxation processes in ferroic systems

Higher Research Scientist, National Physical Laboratory, UK 2006 - 2012

Metrology focused research on multi-functional advanced materials

- Developed novel metrologies for characterization of multiferroic & spintronic materials
- Studied materials and devices for energy harvesting using piezo-actuators and photovoltaics
- Innovated novel nano-structures, sensors and devices based on thin films

Senior R&D Scientist, Seagate Technology, Northern Ireland 2005 - 2006

Design, root cause and failure analysis of advanced sensors for magnetic recording devices

- R&D engineer in charge of magneto-electric testing of sensors at wafer level
- Designed and processed changes of Seagate advanced sensors for magnetic recording heads

Postdoctoral fellow, University of York, York 2003 - 2005

Nano thin films sputtering with controlled texture and grain size

- Elaborated methods for fabrication of thin films with grain size control and new properties
- Invented a method of sputtering soft high moment CoFe thin films without seed layers
- Demonstrated the exchange bias tuning in sputtered ferromagnetic (FM)/anti-(FM) structures

Postdoctoral fellow, University of York, York 2002 - 2003

Giant magneto-resistance (GMR) studies using the optical magneto-refractive effect (MRE)

- First experimental demonstration of the MRE effect in GMR spin valve
- Proposed a new MRE instrument design, published in Review of Scientific Instruments

PhD student, University of Central Lancashire, Preston 1999 - 2002

Thesis: Anisotropy and Texture Studies in Magnetic Media

- Developed advanced investigation techniques of materials for magnetic recording applications
- Developed a fully automated bi-axial vector Vibrating Sample Magnetometer (VSM)
- Investigated magnetic texture and inter-particle interactions in magnetic thin films and tapes

Research Assistant, National Institute for Materials Science, Bucharest 1998 - 1999

Magnetic and Mossbauer studies of spin frustration phenomena in organometallic clusters

- Used nuclear gamma spectr. to investigate spin relaxation in organometallic clusters
- Developed a theoretical model to explain the spin frustration in tri-nuclear clusters

EDUCATION

• **Ph.D.** Physics / Solid State Magnetism, University of Central Lancashire (2002)

• **M.Sc.** (first class) Micro-technologies and Integrated Opto-electronics, University of Bucharest (1999)

• **B.Sc.** (HONS – first class) Physics / Solid State Physics, University of Bucharest (1998)

TEACHING EXPERIENCE

• Fellow of the Higher Education Academy – APEX module completed 2012 - 2013

• University of Portsmouth, Unit coordinator of Physics Laboratories, Level 4

• University of Portsmouth, Unit coordinator of Physics Laboratories, Level 5

• University of Portsmouth, Unit coordinator of "Introduction to multiferroic materials and their Applications", Level 6

• University of York, Tutor of Solid State Physics and Mechanics (2004)

• University of York, Tutor of Mechanics / Theoretical mechanics (2005)

• University of Central Lancashire, IT tutor / demonstrator (2002)

• Supervision & co-supervision of six PhD students, two MSc students and one postdoc fellow

SKILLS & TRAINING

- Materials scientist specialized in solid state physics with interest in materials for energy
- Experienced in magnetic, multiferroic & piezoelectric materials and devices
- Experienced in nano-scale thin films, sensors and advanced transducers development
- Plasma sputtering of thin films and ceramic perovskites preparation
- Characterization of thin film coatings using: XRD, AFM, SEM and TEM
- Magnetic characterization of thin films using: MFM, AGFM, VSM /vector VSM and MOKE
- Measurement of spin-transport using contact and non-contact optical techniques
- Nuclear gamma ray spectroscopy / Mossbauer spectroscopy
- Low temperature and ultra high vacuum experiments
- Trained in: Interfacing, Instrumentation & LabView Programming; Laser Safety; Measurement Uncertainty Evaluation; Photolithography L-edit Design; MathCAD modelling

SCIENTIFIC ACTIVITIES AND ACHIEVEMENTS

- Research fellowships awarded by University of Central Lancashire (1999 - 2002)
- ORS research fellowships awarded by UK Government (2000 - 2002)
- PhD VIVA distinction for thesis submission in 2.5 years with a total of 5 articles published (2002)
- Author and co-author of 45 scientific articles published in international journals with a citations h-index of 11 and an average of over 7 citations per article (full publications list: <http://scholar.google.co.uk/citations?user=09NGMwCAAAAJ&hl=en>)
- Over 25 contributions to international conferences. Selected invited talks at MRS (2009), Diaspora (2010), IBWAP (2011), Oakland University (2009), University of Central Lancashire (2012), Intelligent Materials Kiel (2013), MISM Moscow (2014)
- Invited articles: Emerging Technologies and Opportunities Based on the Magneto-Electric Effect in Multiferroic Composites, Novel Materials and Devices for Spintronics Book Series, Mater. Res. Soc. Symp. Proc. Volume 1183, pg. 151-162 (2010); Polarization Dynamics and Non-Equilibrium Switching Processes in Ferroelectrics, IEEE TUFFC, vol. 58, no. 9, pp. 1867–1873, 2011
- Referee for: Journal of Physics: D Applied Physics, Journal of Physics C: Condensed Matter, Measurement Science & Technology, Applied Physics Letters, Journal of Applied Physics, Journal of Materials Science, Journal of Solids and Structures, Physics Letters A
- Member of editorial board of the “Journal of Condensed Matter Physics” and the “Physics and Technical Sciences” SCIKNOW Publishing Group
- Associate editor of the “Journal of Composites”, Hindawi Publishing Corporation
- Founder and editor of the Green Energy Harvesting science blog: <http://green-energy-harvesting.blogspot.co.uk/> , an international blog dedicated to communicating energy harvesting research
- Member of the Materials and Characterization Management Committee at the Institute of Physics (IOP)
- Fellow of the UK Higher Education Academy
- Chartered Physicist (CPhys), member of the Institute of Physics (MInstP) and member of the UK Magnetics Society
- SERC/NPL Silver Medal for outstanding contributions to science (2012)
- Head of the Applied Physics Research Laboratory at the University of Portsmouth
- Chairman of the Athena Swan SEES Committee at the University of Portsmouth
- Developed National and International collaborations with researchers in USA (Prof. Gopalan - Oakland Univ., Prof. Nian Sun - North Eastern Univ., Dr. Caruntu - Univ. of New Orleans, Dr. Valcu - Western Digital), Russia (Prof. Fetisov - Moscow State Univ.), Romania (Prof. Kuncser – Nat. Inst. of Materials Science), UK (Prof. O’Grady - Univ. of York, Dr. Hepburn - UCL, Prof. Cain – NPL, Dr. Axelsson – London South Bank Univ.)

RELEVANT INVITED LECTURES

(only invited talks that offered financial support)

- Invitedtalk at Valahia University, Targoviste, Romania, 10 April 2017
Title: Non-contact magneto-transport measurements usingthe magneto-refractive effect
- Invitedtalk at The University of York, York, UK, 19 Dec. 2017
Title: Multiferroic solid state refrigerationtechnology
- Invitedtalk at JeremiahHorrocks Institute, Univ. of Central Lancashire, UK, Feb. 2016
Title: Solid state multicaloric effects incoupled magneto-electric solids
- Invitedtalk and session chairman at CIMTEC, Perugia, Italy, 5-9 June 2016
Title: Multiferroic technology for advancedmagnetic data storage
- Invitedtalk at ENM, San Sebastian, Spain, 1-4 Sept. 2015
Title: Multicaloric effect in bi-layermultiferroic composites
- Invitedtalk at MISM, Moscow 28 June - 3 July 2014
Title: Multiferroic materials and devices foradvanced application
- Invitedtalk and session chairman at Euro Intelligent Materials, Kiel, Germany, Sept.2013
Title: Multiferroic materials: a new twist tosolid state cooling
- Invitedlecture at NPL Celebrating Science, Oct. 2012
Title: Cool multiferroics for solid state cooling
(video lecture: http://www.youtube.com/watch?feature=player_detailpage&v=hvUTt3BLEqY)
- Invited talk at the 12th International Balkan Workshop on Applied Physics, July 6-8, 2011, Constanta
Title: The integral magento-refractive effect: a new way of probingmagneto-resistance

- Invited lecture at NPL Celebrating Science, Feb. 2011
Title: Emerging technologies based on multiferroic materials
(video lecture: http://www.youtube.com/watch?feature=player_detailpage&v=uFp1pL4Mz9Y)
- Invited talk at Diaspora, Bucharest, 21-24 September 2010
Title: The interplay between time and temperature effects in ordered ferroic materials
- Invited talk at the Materials Research Society, San Francisco, April 13 - 16, 2009
Title: Emerging Technologies and Opportunities Based on the Magneto-electric Effect in Multiferroics
- Invited lecture at Physics Department, Oakland University, Detroit, April 2009
Title: Recent advances in multiferroic materials

Research output

Development of flexible Ni₈₀Fe₂₀ magnetic nano-thin films

Dr Melvin Vopson, John Naylor, Treetep Saengow, Edith Grace Rogers, Serban Lepadatu & Yuri Fetisov, 15 Nov 2017, In: Physica B: Condensed Matter. 525, p. 12-15 4 p.

Research output: Contribution to journal › Article › peer-review

Nonlinear magnetoelectric effects in flexible composite ferromagnetic – piezopolymer structures

L. Y. Fetisov, I. A. Baraban, Yuri K. Fetisov, D. A. Burdin & Dr Melvin Vopson, 1 Nov 2017, In: Journal of Magnetism and Magnetic Materials. 441, p. 628-634 7 p.

Research output: Contribution to journal › Article › peer-review

Heat-assisted multiferroic solid-state memory

Serban Lepadatu & Dr Melvin Vopson, 25 Aug 2017, In: Materials. 10, 9, 10 p., 991.

Research output: Contribution to journal › Article › peer-review

Measurement techniques of the magneto-electric coupling in multiferroics

Dr Melvin Vopson, Yuri Fetisov, G. Caruntu & G. Srinivasan, 17 Aug 2017, In: Materials. 10, 8, 21 p., 963.

Research output: Contribution to journal › Article › peer-review

Non-equilibrium polarization dynamics in anti-ferroelectrics

Dr Melvin Vopson & Xiaoli Tan, 7 Jul 2017, In: Physical Review B. 96, 6 p., 014104.

Research output: Contribution to journal › Article › peer-review

Multicaloric effect: an outlook

Dr Melvin Vopson, 15 May 2017, In: Physica B: Condensed Matter. 513, p. 103-105 3 p., 513.

Research output: Contribution to journal › Short survey › peer-review

1D core-shell magnetoelectric nanocomposites by template-assisted liquid phase deposition

Amin Yourdkhani, Daniela Caruntu, Dr Melvin Vopson & Gabriel Caruntu, 21 Apr 2017, In: CrystEngComm. 19, 15, p. 2079-2088 10 p.

Research output: Contribution to journal › Article › peer-review

Polarization reversal and memory effect in anti-ferroelectric materials

Dr Melvin Vopson, Gabi Caruntu & Xiaoli Tan, Feb 2017, In: Scripta Materialia. 128, p. 61-64 4 p.

Research output: Contribution to journal › Article › peer-review

4-state anti-ferroelectric random access memory

Dr Melvin Vopson & Xiaoli Tan, 3 Oct 2016, In: IEEE Electron Device Letters. 37, 12, p. 1551-1554 4 p.

Research output: Contribution to journal › Article › peer-review

The induced magnetic and electric fields' paradox leading to multicaloric effects in multiferroics

Dr Melvin Vopson, 1 Apr 2016, In: Solid State Communications. 231-232, p. 14-16 3 p., 231-232.

Research output: Contribution to journal › Article › peer-review

Multicaloric effect in bi-layer multiferroic composites

Dr Melvin Vopson, Dayu Zhou & G. Caruntu, 3 Nov 2015, In: Applied Physics Letters. 107, 18, 4 p., 182905.

Research output: Contribution to journal › Article › peer-review

Development of a method to identify in-plane anisotropy axes in soft magnetic materials using a standard vibrating sample magnetometer

Steven Bourn, Tim Mercer, Phil Bissell & Dr Melvin Vopson, Nov 2015, In: IEEE Transactions on Magnetics. 51, 11, 6000604.

Research output: Contribution to journal › Article › peer-review

Electric field and temperature scaling of polarization reversal in silicon doped hafnium oxide ferroelectric thin films

Dayu Zhou, Yan Guan, Dr Melvin Vopson, Jin Xu, Hailong Liang, Fei Cao, Xianlin Dong, Johannes Mueller, Tony Schenk & Uwe Schroeder, 15 Oct 2015, In: Acta Materialia. 99, p. 240-246 6 p.

Research output: Contribution to journal › Article › peer-review

Fundamentals of multiferroic materials and their possible applications

Dr Melvin Vopson, 1 Aug 2015, In: Critical Reviews in Solid State and Materials Sciences. 40, 4, p. 223-250 27 p.

Research output: Contribution to journal › Article › peer-review

Trapping electron-assisted magnetic recording enhancement via dielectric underlayer media

Suttipan Aksornniem, Rardchawadee Silapunt & Dr Melvin Vopson, 8 Oct 2014, In: IEEE Transactions on Magnetics. 50, 10, 3101005.

Research output: Contribution to journal › Article › peer-review

Solving the electrical control of magnetic coercive field paradox

Dr Melvin Vopson & S. Lepadatu, 22 Sep 2014, In: Applied Physics Letters. 105, 12, 122901.

Research output: Contribution to journal › Article › peer-review

Multiferroic composites for magnetic data storage beyond the super-paramagnetic limit

Dr Melvin Vopson, E. Zemaityte, M. Spreitzer & Dr Esmaeil Namvar, 21 Sep 2014, In: Journal of Applied Physics. 116, 11, 113910.

Research output: Contribution to journal › Article › peer-review

High frequency magnetization dynamics metrology using a pulsed field inductive microwave magnetometer

Dr Melvin Vopson, K. Lees, M. Hall, M. G. Cain, M. Stewart & Y. Tran, Jan 2014, In: Measurement Science and Technology. 25, 1, p. 015601 015601.

Research output: Contribution to journal › Article › peer-review

Theory of giant-caloric effects in multiferroic materials

Dr Melvin Vopson, 28 Aug 2013, In: Journal of Physics D: Applied Physics. 46, 34, 345304.

Research output: Contribution to journal › Article › peer-review

The total energy of exchange bias systems with biaxial anisotropy

Dr Melvin Vopson & Graham McMullin, Aug 2013, In: Solid State Communications. 167, p. 46-48 3 p.

Research output: Contribution to journal › Article › peer-review

Mossbauer spectroscopy

Victor Kuncser & Dr Melvin Vopson, Jun 2013, In: AWE International. 34

Research output: Contribution to journal › Article

The multicaloric effect in multiferroic materials

Dr Melvin Vopson, Dec 2012, In: Solid State Communications. 152, 23, p. 2067-2070 4 p.

Research output: Contribution to journal › Article › peer-review

Multiferroic composite for combined detection of static and alternating magnetic fields

Dr Melvin Vopson, M. Cain, G. Sreenivasulu & G. Srinivasan, Jan 2012, In: Materials Letters. 66, 1, p. 282-284 3 p.

Research output: Contribution to journal › Article › peer-review

Nanostructured p-n junctions for kinetic-to-electrical energy conversion

J. Briscoe, M. Stewart, Dr Melvin Vopson, M. Cain, P. Weaver & S. Dunn, 2012, In: *Advanced Energy Materials*. 2, 10, p. 1261-1268 8 p.

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Nanostructured zinc oxide piezoelectric energy generators based on semiconductor p-n junctions

J. Briscoe, M. Stewart, Dr Melvin Vopson, M. Cain, P. Weaver & S. Dunn, 2012, In: *MRS Online Proceedings Library*. 1439

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Probing the local strain-mediated magnetoelectric coupling in multiferroic nanocomposites by magnetic field-assisted piezoresponse force microscopy

G. Caruntu, A. Yourdkhani, Dr Melvin Vopson & G. Srinivasan, 2012, In: *Nanoscale*. 4, 10, p. 3218-3227 10 p.

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Thermally activated polarization dynamics under the effects of lattice mismatch strain and external stress in ferroelectric film

Y. Zhang, X. Zhong, Dr Melvin Vopson, J. B. Wang & Y. Zhou, 2012, In: *Journal of Applied Physics*. 112, 1, p. 014112-014117 6 p.

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Polarization dynamics and non-equilibrium switching processes in ferroelectrics

Dr Melvin Vopson, P. Weaver, M. Cain, M. Reece & K. Chong, Sep 2011, In: *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*. 58, 9, p. 1867-1873 7 p.

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

The integral magneto-refractive effect: a method of probing magneto-resistance

Dr Melvin Vopson, M. Cain & V. Kuncser, Sep 2011, In: *Journal of Applied Physics*. 110, 5, p. 05603 1 p.

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Voltage control of the magnetic coercive field: multiferroic coupling or artifact?

Dr Melvin Vopson, M. Cain, P. Woolliams, P. Weaver, M. Stewart, C. David Wright & Y. Tran, Mar 2011, In: *Journal of Applied Physics*. 109, 6, p. 006101 1 p.

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Thermally activated switching kinetics in second-order phase transition ferroelectrics

Dr Melvin Vopson, J. Blackburn, M. Cain & P. Weaver, 1 Jul 2010, In: *Physical Review B*. 82, 2, p. 024109 1 p.

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Composite multiferroics as magnetic field detectors: how to optimise magneto-electric coupling

J. Blackburn, Dr Melvin Vopson & M. Cain, 2010, In: *Advances in Applied Ceramics*. 109, 3, p. 169-174 6 p.

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Polarization dynamics and non-equilibrium processes in ferroelectric switching

Dr Melvin Vopson, P. Weaver, M. Cain, M. Reece & K. Chong, 2010, *2010 IEEE International Symposium on the Applications of Ferroelectrics (ISAF)*. Piscataway: IEEE

Research output: [Chapter in Book/Report/Conference proceeding](#) › [Chapter \(peer-reviewed\)](#) › [peer-review](#)

Emerging technologies and opportunities based on the magneto-electric effect in multiferroic composites

Dr Melvin Vopson, J. Blackburn & M. Cain, 2009, In: *MRS Online Proceedings Library*. 1161

Research output: [Contribution to journal](#) › [Article](#) › [peer-review](#)

Infrared metrology for spintronic materials and devices

Dr Melvin Vopson, T. Stanton, O. Thomas, M. Cain & S. Thompson, 2009, In: *Measurement Science and Technology*. 20, 4, p. 045109 1 p.

Research output: Contribution to journal › Article › peer-review

Verified finite element simulation of multiferroic structures: Solutions for conducting and insulating systems

J. Blackburn, Dr Melvin Vopson & M. Cain, Oct 2008, In: Journal of Applied Physics. 104, 7, p. 074104 1 p.

Research output: Contribution to journal › Article › peer-review

A portable instrument for non-contact giant magnetoresistance measurements utilizing the magnetorefractive effect and infrared fibres

T. Stanton, Dr Melvin Vopson & S. Thompson, 2008, In: Measurement Science and Technology. 19, 12, p. 125701 1 p.

Research output: Contribution to journal › Article › peer-review

A solid state nano-generator: concept, design and theoretical estimations

Dr Melvin Vopson, M. Cain, V. Kuncser & J. Blackburn, 2008, *Functionalized nanoscale materials, devices and systems*.

Vaseashta, A. & Mihailescu, I. (eds.). Dordrecht, The Netherlands: Springer, p. 431-436 6 p. (NATO science for peace and security series B: physics and biophysics).

Research output: Chapter in Book/Report/Conference proceeding › Chapter (peer-reviewed) › peer-review

Experimental determination of the magnetoelectric coupling coefficient via piezoelectric measurements

Dr Melvin Vopson, M. Stewart, T. Hegarty, A. Muniz-Piniella, N. McCartney, M. Cain & G. Srinivasan, 2008, In:

Measurement Science and Technology. 19, 4, p. 045106 1 p.

Research output: Contribution to journal › Article › peer-review

Multiferroic magnetic recording read head technology for 1 Tbit/in.2 and beyond

Dr Melvin Vopson, J. Blackburn, A. Muniz-Piniella & M. Cain, 2008, In: Journal of Applied Physics. 103, 7, p. 07F506

Research output: Contribution to journal › Article › peer-review

Tuning the magneto-electric effect of multiferroic composites via crystallographic texture

Dr Melvin Vopson, M. Stewart, T. Fry, M. Cain & G. Srinivasan, 2008, In: IEEE Transactions on Magnetics. 44, 11, p. 3017-3020 4 p.

Research output: Contribution to journal › Article › peer-review

A new magnetic recording read head technology based on the magneto-electric effect

Dr Melvin Vopson, J. Blackburn & M. Cain, 2007, In: Journal of Physics D: Applied Physics. 40, 17, p. 5027-5033 7 p.

Research output: Contribution to journal › Article › peer-review

A portable technique for the contactless measurement of magnetoresistance using infrared fiber optics

T. Stanton, T. Deakin, Dr Melvin Vopson, V. Artyushenko & S. Thompson, 2007, In: IEEE Transactions on Magnetics. 43, 6, p. 2767-2769 3 p.

Research output: Contribution to journal › Article › peer-review

Modelling the magnetorefractive effect in giant magnetoresistive granular and layered materials

R. Mennicke, D. Bozec, V. Kravets, Dr Melvin Vopson, J. Matthew & S. Thompson, Aug 2006, In: Journal of Magnetism and Magnetic Materials. 303, 1, p. 92-110 19 p.

Research output: Contribution to journal › Article › peer-review

Erratum to "The 'in-plane' angular spin distribution in layered systems as obtained by 57Fe Mössbauer spectroscopy" [Nucl. Instr. and Meth. B 196 (2002) 135]

V. Kuncser, W. Keune & Dr Melvin Vopson, Apr 2006, In: Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms. 245, 2, p. 539-542 4 p.

Research output: Contribution to journal › Article › peer-review

The role of interfaces in CoFe/IrMn exchange biased systems

G. Vallejo-Fernandez, Dr Melvin Vopson, L. Fernandez-Outon & K. O'Grady, 2006, In: IEEE Transactions on Magnetics. 42, 10, p. 3008-3010 3 p.

Research output: Contribution to journal › Article › peer-review

Grain size effects in metallic thin films prepared using a new sputtering technology

Dr Melvin Vopson, M. Thwaites, G. Fernandez, S. Lepadatu & K. O'Grady, Oct 2005, In: Journal of Optoelectronics and Advanced materials. 7, 5, p. 2713-2720 8 p.

Research output: Contribution to journal › Article › peer-review

Growth rate effects in soft CoFe films

Dr Melvin Vopson, K. O'Grady, M. Georgieva, P. Grundy & M. Thwaites, Oct 2005, In: IEEE Transactions on Magnetics. 41, 10, p. 3253-3255 3 p.

Research output: Contribution to journal › Article › peer-review

Deposition of polycrystalline thin films with controlled grain size

Dr Melvin Vopson, G. Vallejo-Fernandez, M. Thwaites, J. Anguita, P. Grundy & K. O'Grady, 2005, In: Journal of Physics D: Applied Physics. 38, 3, p. 490 1 p.

Research output: Contribution to journal › Article › peer-review

Exchange bias control in CoFe/IrMn via grain size control

G. Vellejo-Fernandez, Dr Melvin Vopson, S. Manzoor & K. O'Grady, 2005, *Digests of the IEEE international magnetism conference 2005: INTERMAG Asia 2005*. Piscataway: IEEE, p. 2031-2032 2 p. (IEEE conference publications).

Research output: Chapter in Book/Report/Conference proceeding › Chapter (peer-reviewed) › peer-review

Grain-size effects in exchange-biased FeMn/NiFe bilayers

Dr Melvin Vopson, K. O'Grady, M. Georgieva, P. Grundy & M. Thwaites, 2005, In: Journal of Applied Physics. 97, 10, p. K118

Research output: Contribution to journal › Article › peer-review

Preparation of high moment CoFe films with controlled grain size and coercivity

Dr Melvin Vopson, M. Georgieva, P. Grundy, G. Fernandez, S. Manzoor, M. Thwaites & K. O'Grady, 2005, In: Journal of Applied Physics. 97, 10, p. 10N303

Research output: Contribution to journal › Article › peer-review

A new experimental design for noncontact giant magnetoresistance measurements using the magnetorefractive effect

Dr Melvin Vopson, J. Matthew & S. Thompson, Oct 2004, In: Review of Scientific Instruments. 75, 10, p. 3127-3130 4 p.

Research output: Contribution to journal › Article › peer-review

Contactless magnetoresistance studies of CoCu multilayers using the infrared magnetorefractive effect

Dr Melvin Vopson, D. Bozec, J. Matthew, S. Thompson, C. Marrows & M. Perez, 2004, In: Physical Review B. 70, 21, p. 214423 1 p.

Research output: Contribution to journal › Article › peer-review

Novel sputtering technology for grain-size control

Dr Melvin Vopson, M. Thwaites, S. Rand, P. Grundy & K. O'Grady, 2004, In: IEEE Transactions on Magnetics. 40, 4 pt 2, p. 2443-2445 3 p.

Research output: Contribution to journal › Article › peer-review

Easy axis distribution in modern nanoparticle storage media: a new methodological approach

V. Kuncser, W. Keune, Dr Melvin Vopson, P. Bissell, B. Sahoo & G. Filoti, Mar 2003, In: Journal of Optoelectronics and Advanced materials. 5, 1, p. 217-226 10 p.

Research output: Contribution to journal › Article › peer-review

Noncontact GMR measurements of synthetic spin valves using IR reflection spectroscopy

Dr Melvin Vopson, J. Matthew, K. McNeill & S. Thompson, 2003, In: IEEE Transactions on Magnetics. 39, 5 pt 2, p. 2830-2832 3 p.

Research output: Contribution to journal › Article › peer-review

A magnetic evaluation of recording tape thickness

P. Bissell, Dr Melvin Vopson, R. Cookson & M. Sharrock, Apr 2002, In: Journal of Magnetism and Magnetic Materials. 242-5, 1, p. 331-334 4 p.

Research output: Contribution to journal › Article › peer-review

Anisotropy field measurements using an extended rotational remanence technique

Dr Melvin Vopson, R. Cookson & P. Bissell, Feb 2002, In: Physica Status Solidi (A) Applications and Materials Science. 189, 3, p. 759-762 4 p.

Research output: Contribution to journal › Article › peer-review

Interaction effects on the anisotropy field in sputtered Co-Cr-Ta thin films and metal particle tapes

Dr Melvin Vopson & P. Bissell, 2002, In: Journal of Physics D: Applied Physics. 35, 12, p. 1296-1300 5 p.

Research output: Contribution to journal › Article › peer-review

The "in-plane" angular spin distribution in layered systems as obtained by ⁵⁷Fe Mössbauer spectroscopy

V. Kuncser, W. Keune, Dr Melvin Vopson & P. Bissell, 2002, In: Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms. 196, 1-2, p. 135-147 13 p.

Research output: Contribution to journal › Article › peer-review

Magnetic coating thickness influence on the texture in metal particle systems

Dr Melvin Vopson, P. Bissell & R. Cookson, Feb 2000, In: Physica Status Solidi (A) Applications and Materials Science. 189, 3, p. 799-803 5 p.

Research output: Contribution to journal › Article › peer-review

Fundings

Anti ferroelectric materials for non volatile memory applications

Dr Melvin Vopson

Engineering and Physical Sciences Research Council: £11,686.00

2/07/18 → 31/12/18

Activities

Knowledge Empowerment Foundation (Publisher)

Dr Melvin Vopson (Editorial board member)

20 Jul 2020 → 20 Jul 2027

Applied Sciences (Switzerland) (Journal)

Dr Melvin Vopson (Guest editor)

16 Sep 2019 → 31 Jul 2020

Joint European Magnetic Symposia (JEMS)

Michal Belusky (Presented paper) & Dr Melvin Vopson (Presented paper)

26 Aug 2019 → 30 Aug 2019

15th International Ceramics Congress & 9th Forum on New Materials (Event)

Dr Melvin Vopson (Chair)

1 Apr 2019 → 23 Jun 2020

Towards Sustainable Materials for Energy Applications workshop

Dr Melvin Vopson (Presented paper)

26 Mar 2019

Ferroelectric and Antiferroelectric Oxides for Memories

Dr Melvin Vopson (Speaker)

8 Nov 2018

Iowa State University

Dr Melvin Vopson (Visiting researcher)
5 Nov 2018 → 15 Nov 2018

National Institute for Materials Physics

Dr Melvin Vopson (Visiting researcher)
23 Jul 2018 → 30 Jul 2018

The multicaloric effect in multiferroics: recent developments and future directions

Dr Melvin Vopson (Speaker)
15 Jul 2018 → 19 Jul 2018

Western Digital

Dr Melvin Vopson (Visiting researcher)
11 Jul 2018 → 18 Jul 2018

Diamond Light Source

Dr Melvin Vopson (Visiting researcher)
3 Jul 2018 → 6 Jul 2018

Valahia University of Targoviste

Dr Melvin Vopson (Visiting researcher)
10 Apr 2017 → 14 Apr 2017

Elsevier (Publisher)

Dr Melvin Vopson (Guest editor)
12 Jan 2017 → 20 Feb 2017

Materials (Journal)

Dr Melvin Vopson (Guest editor)
23 Dec 2016 → 30 Sep 2017

Future technologies based on multiferroic materials

Dr Melvin Vopson (Speaker)
19 Dec 2016

Applied Materials Society

Dr Melvin Vopson (Organiser)
1 Nov 2016

CIMTEC Congress 2016

Dr Melvin Vopson (Invited speaker)
4 Jun 2016

ENM Spain 2015

Dr Melvin Vopson (Invited speaker)
1 Sep 2015

Moscow International Symposium on Magnetism

Dr Melvin Vopson (Invited speaker)
29 Jun 2014

Euro Intelligent Materials, Kiel 2013

Dr Melvin Vopson (Chair)

25 Sep 2013

Prizes

Chartered Physicist (CPhys) of the Institute of Physics

Dr Melvin Vopson (Recipient), Sep 2011

Prize: Fellowship awarded competitively

Fellow of the Higher Education Academy

Dr Melvin Vopson (Recipient), 25 Oct 2013

Prize: Fellowship awarded competitively

SERCO-NPL Silver Medal

Dr Melvin Vopson (Recipient), May 2012

Prize: Prize (including medals and awards)