CURRICULUM VITAE

of Kevin Dermot O'Grady

A GENERAL

Full name: Department: Date of appointment to the University Present position Previous Posts	Kevin Dermot O'Grady Physics April 2000 Prof of Experimental Physics/Founding Director Institute for Materials Research
1972-75	Dept. of Health and Social Security
1975-81	BSc, PhD UCNW Bangor
1981-82	Research Assistant to Drs J Popplewell and S W Charles, UCNW, Bangor
1982-84	Temporary Lecturer in Dept. of Physics, UCNW, Bangor
1984-85	Lecturer in Physics, Loughborough University of Technology
1985-92	Lecturer in Physics, University College of North Wales, Bangor
1992-94	Senior Lecturer in Physics, School of Electronic Engineering and Computer Systems, University of Wales, Bangor
1994 to 1996	Reader in Physics, School of Electronic Engineering and Computer Systems, University of Wales, Bangor.
1996 to 2000	Professor of Physics (Personal Chair) School of Electronic Engineering and Computer Systems, University of Wales, Bangor.
2000 to date	Professor of Experimental Physics University of York
2005 to 2007	Founding Director York-JEOL Centre
Qualifications	BSc, PhD, F.Inst.P, FIEEE

CURRENT POSITION AND RESPONSIBILITIES

Since April 2000 I have been Professor of Experimental Physics in the Department of Physics at the University of York. In this capacity I lead the Magnetics Materials Research Group. The group currently comprises a Reader and a Lecturer with 10 research students and a post doctoral fellow.

My research is concerned with the study of thin film and particulate magnetic materials. These types of materials have wide application in information storage and are of nanometric dimensions. Accordingly most of my research is carried out in close cooperation with industry and we have current research support from Seagate Technology (2 projects), Western Digital Incorporated (Freemont, California) and JEOL UK Ltd. We have a new project in collaboration with Seagate Media Research of Fremont CA with a value of \$280,000. Throughout my career I have always undertaken my research in collaboration with industry and have supervised over forty grants and contracts, mainly associated with partial support for postgraduate students. I was the associate editor of J.Phys.D:Appl.Phys. from 1995 to 2012.

The York magnetism group is prominent within the UK. From 1998-2001 I was the Coordinator of the EPSRC Advanced Magnetism Programme. During this period a new funding mechanism to allow for collaboration with industry was developed. This mechanism is known as The Seagate Plan and in the first 3 years resulted in a cash injection to more than 20 UK universities. The Seagate Plan remains in operation to this day.

My group maintains a strong profile within the European Union and we have participated in four STREP type projects over the years. From 2001 to 2005 my group coordinated the Research Training Network "NEXBIAS" which was cited by the EU as one of 5 projects exhibiting best practice out of a total of 180 such networks.

My work is also well respected internationally and I during 2007/8 I was the Past President of the IEEE Magnetics Society having been President in 2005 and 2006. Whilst President I was elected to the Finance Committee and appointed as the Chair of the IEEE Transnational Committee thereby participating in the management of the largest professional organisation in the world. Whilst President-elect of the Magnetics Society I re-drafted the Society constitution and subsequently as President implemented a restructuring of the Society to improve representation of our international membership, which is no longer US dominated, and also to provide improved representation for younger people and those from minorities. The Distinguished Lecturer and Chapter Programmes were reorganised resulting in an increase in Chapters from 17 to 35.

As part of my work with the IEEE Magnetics Society I was heavily involved in the organisation of the Intermag and Magnetism and Magnetic Materials conferences. These are the major conferences in the field. I was Programme Co-Chair for Intermag in 1996, 2002, 2008 and a member of numerous programme committees. In 2010 I was the General Chair of the Joint MMM-Intermag Conference held in Washington DC which was attended by almost 2000 participants. I am a member of numerous small conferences held in Europe and Asia. In 2011 I was elevated to a Fellow of IEEE, a distinction held by less than 3% of the membership.

The nature of my research is associated with fundamental science that underpins the technology of magnetic information storage. As such whilst it is not the direct intention of the research, inevitably intellectual property can be developed. In my career I am responsible for 2 patents, filed some years

ago, and more recently I filed 2 further patents which are now owned by the Bank of England. Details of these patents may not be revealed as they are covered by a Ministry of Defence D-Notice. A further patent has been filed recently.

In 2001 I undertook a project as an Expert Witness representing Sony Electronics Ltd of the United States and Dowa Electronic Materials Ltd of Japan in a major patent dispute heard in the District Federal Court in Wilmington, Delaware. In this instance I was the sole technical expert for both corporations in a case valued at \$237M, that was successfully defended.

From 2004-2006 I was asked by the Vice Chancellor of the University of York to take responsibility for the development of a centre for electron microscopy which was being developed using SRIF funds. This project grew rapidly and attracted sponsorship from JEOL Ltd, the largest manufactures of electron microscopes in the world, and consequently from our Regional Development Agency, Yorkshire Forward, to the tune of £2.5M. The University provided matching funding for equipment and a new building was also modified to meet the specialised needs of an electron microscopy centre. The University has now established the York-JEOL Nanocentre which is a world leading facility for electron microscopy and has resulted in the development of a new research area within both the Departments of Physics and Chemistry. The funding package assembled for the establishment of the York-JEOL Centre was highly novel and is now being replicated by a number of other universities in association with their Regional Development Agencies.

In 2003-4 I served as a member of the DTI Basic Technologies Strategic Advisory group and was responsible in part for the development of the DTI LINK programme in information storage and displays. Through this programme I secured funding in collaboration with a small company called Plasma Quest for a major project with a value of about £1M for the development of sputter deposition tools. Plasma Quest Ltd is a small company which was spun out from Edwards High Vacuum Ltd and I was instrumental in its founding and original organisation in collaboration with Prof M J Thwaites. In 1991 I set up my own private company, Liquids Research Ltd, which has traded successfully for the last 20 years. This company manufactures magnetic liquids for engineering and other applications. We employ 7 people.

Within the academic environment I have served on numerous university committees associated with safety, staffing etc and most recently have collaborated with the International Office here at York in establishing cooperation agreements with a number of universities, most notably Tohoku University in Japan to which I have strong research links. I am a highly experienced teacher having taught almost every discipline in Physics at first year level and also having taught Electronic Engineering for 12 years whilst based at the University of Wales in Bangor. I have also taught commercial aspects of engineering, in particularly delivering lecture courses on small business development and management.

RESEARCH

In my group it is the tradition that almost all work involves post-graduate students and involves collaboration with other universities and often industry who supply materials for study. Industrial scientists are routinely co-authored. My work involves detailed studies of magnetisation processes. The titles of work will indicate that the majority of the work was designed and driven by me but generally all measurements were made by others, mainly students. This is always the case when my name appears as the final author.

Prior to 2000 my work focussed on fine particles, particles for tape media and thin film disk media. Many of the techniques developed are now standard application software on most magnetic

instrumentation such as vibrating sample magnetometers. From 2000 I began a programme of work on a complex phenomenon known as exchange bias. Exchange bias was discovered in 1956 but up to 2006 there was no accepted explanation of the effect. Remarkably the phenomenon is used in all disc drive read heads with development undertaken by trial and error.

By 2009 we had developed a comprehensive theory verified by experiment, which explained this effect in sputtered thin films which are those used in devices. The work was rapidly adopted by industry such that from 2010 all read heads in the world were designed using what is now known as the York Model of Exchange Bias. We continue to receive research support from the major companies, Seagate Technology (N. Ireland) and Western Digital Corp (Fremont CA) and undertake contract work on their behalf. The work led to my being elected an IEEE Distinguished Lecturer in 2010 delivering a set piece lecture on 56 occasions in the year.

B1 Publications, compositions, patents, exhibitions and commissions

- (i) Books and Reports
- (1) Authored books: None
- (2) Edited books: None
- (3) Reports in the public domain published through the University of York: None
- (4) Reports in the public domain published through the University of York on behalf of a funder: None
- (5) Other reports in the public domain: 2 reports for Federal District Court, Wilmington, DE, USA
- (6) Patents
- A Magnetic Fluid Seal,
 K O'Grady, J Popplewell and S W Charles
 UK Pat GB 2145169A (1985)
- Apparatus and Method for Cooling K O'Grady UK Pat. App. GB 9510650.6 (1995)
- 3. A Technique for Document Validation*
 K O'Grady
 UK Pat GB0519818.7 (US Patent Pending)
- A Method for Verification of Objects*
 K O'Grady, G J Tomka and S Eaton
 UK Pat GB0519819.7 (US Patent Pending)

^{*} Note that these patents are covered by an MOD-D notice and cannot be viewed. Confirmation of titles is available.

- (ii) Chapters in books (including other short works, such as contributions to collections of essays published in book form)
- 1. Remanence Curves of Fine Particle Systems I. Experimental Studies, (Invited), *K O'Grady and R W Chantrell in "Magnetic Properties of Fine Particles" J L Dormann and D Fiorani, North Holland Delta Series (1992) p93-102
- 2. Remanence Curves of Fine Particle Systems II Theoretical Studies (Invited) < R W Chantrell and K O'Grady in "Magnetic Properties of Fine Particles" J L Dormann and D Fiorani, North Holland Delta Series (1992) p103-115
- 3. The Peak in TRM of a Fine Particle System, =M el Hilo, K O'Grady and R W Chantrell in "Magnetic Properties of Fine Particles" J L Dormann and D Fiorani, North Holland Delta Series (1992) p145-150
- 4. The Magnetic Properties of Fine Particles
 =R W Chantrell and K O'Grady
 Nato ASI Summer School, Erice, Italy (1993) in High Density Digital Recording
 KHJ Buschow, GJ Long and F Grandjean
 NATO ASI Series E Vol 229, p101-136
- 5. Activation Volumes and Magnetization Reversal in Fine Particles (Invited) = A Lyberatos, R W Chantrell and K O'Grady Synthesis, Properties, Applications in Nanophase Materials GC Hadjipanayis and R W Siegel NATO ASI Serves E Applied Sciences, V260, p653-662 (1993)
- Magnetorheological Fluids for Automotive Applications
 *K O'Grady
 Presented at the Oxford-Kobe Materials Workshop on Automotive Materials,
 Kobe, Japan. Sept 2002
- 7. Properties of Particulate Recording Media,in 'High Density Digital Recording', =R.W. Chantrell and K. O'Grady, K.H.J Buschow, G. J. Long and F. Grandjean, NATO ASI Series, Series E, Vol 229 p101-136 Kluwer Acad. Pub. (1993)

(iii) Articles in journals

- (1) Refereed contributions:
- The Low Temperature Magnetisation of a System of Fine Cobalt Particles,
 *K. O'Grady, R.W. Chantrell, J. Popplewell and S.W. Charles,
 IEEE Trans. Magn. vol. MAG-16, No 5 (1980) p.1077-1079
- Time Dependent Magnetisation of a System of Fine Cobalt Particles,
 *K. O'Grady, R.W. Chantrell, J. Popplewell and S.W. Charles,
 IEEE Trans. Magn. vol. MAG-17, No 6 (1981) p.2943-2945

- Curie-Weiss Behaviour in Ferrofluids,
 *K. O'Grady, A. Bradbury, S.W. Charles, S. Menear, J. Popplewell, S.W. Charles and R.W. Chantrell
 J.Magn.Magn.Mater. 31-34 (1983), p.958-960
- 4. Initial Susceptibility of Ferrofluids, *K. O'Grady, J. Popplewell and S.W. Charles, J.Magn.Magn.Mater. 39 (1983), p.56-58
- Particle Size Analysis in Ferrofluids,
 *K. O'Grady and A. Bradbury,
 J.Magn.Magn.Mater. 39 (1983), p.91-94
- 6. The Effect of Field Induced Texture on the Properties of a Fine Particle System, *K. O'Grady, A. Bradbury, J. Popplewell, S.W. Charles and R.W. Chantrell, J.Magn.Magn.Mater. 49 (1985) p.106-116
- 7. Long Term Stability Measurements on Magnetic Fluids, <P.R. Bissell, R.W. Chantrell, G.W.D. Spratt, P.A. Bates and K. O'Grady, IEEE Trans. Magn. MAG-20, 5 (1984), p.1738-1740
- 8. High Precision Torque Hysteresis Measurements on Fine Particle Systems, D.M. Paige, <S.R. Hoon, B.K. Tanner and K. O'Grady, IEEE Trans. Magn. MAG-20, 5, (1984) p.1852-1854
- 9. Magnetic Size Determination for Interacting Fine Particle Systems, =A Bradbury, S. Menear, K. O'Grady and R.W. Chantrell, IEEE Trans. Magn. MAG-20, 5 (1984), p.1846-1848
- 10. Mixed Anisotropies in Small Ferromagnetic Particles, *K. O'Grady, R.W. Chantrell and E.P. Wohlfarth, IEEE Trans. Magn. MAG-20, 5, (1984), p.1849-1851
- The Magnetic and Physical Properties of Ferrofluids (Invited Review),
 *K. O'Grady
 IEEE Coll. on Electro Active Fluids Digest 14 London England (1985) p.11.
- 12. The Isothermal Remanent Magnetisation of Fine Magnetic Particles, =R.W. Chantrell, K. O'Grady, A. Bradbury, S.W. Charles and J. Popplewell, J. Phys. D (Appl. Phys.) 18 (1985) p.2505-2517
- 13. Magnetic and Mossbauer Studies on Finely Dispersed Iron Particles, <N. Ayoub, M.A. Kobeissi, R.W. Chantrell, K. O'Grady and J. Popplewell, J. Phys. F: Met. Phys. 15, (1985), p.2229-2235
- 14. Diffraction Effects in Magnetic Fluid Composites, =J. Popplewell, P.C. Davies, J.P. Llewellyn and K. O'Grady, J. Phys.D (1985) L661-664

- 15. The Magnetic Properties of a Ferrofluid with Dipolar Interactions, =A Bradbury, S. Menear, R.W. Chantrell and K. O'Grady, J. de Physique, 9, (46) (1985) p.283-286
- The Temperature Variation of the Coefficient of Magnetic Viscosity,
 *K. O'Grady and R.W. Chantrell,
 J.Magn.Magn.Mater. 54-57 (1986) p.755-756
- 17. Microwave Properties of Ferrofluid Composites = P.C. Davies J.Popplewell J.P. Llewellyn and K O'Grady J. Magn.Magn.Mater. 54-57 (1986) p.761-762
- 18. Magnetic Filtration of Ferrofluids
 *K O'Grady H.R Stewardson R.W. Chantrell D. Fletcher D. Unwin and M.R. Parker
 IEEE Trans Magn MAG-22 (5) (1986) p.1134-1136
- 19. The Isothermal Remanent Magnetisation of Particulate Media =R.W. Chantrell K O'Grady A Bradbury S.W. Charles and N.P. Hopkins IEEE Trans Magn MAG23 (1) (1987) p.204-206
- Preparation and Characterisation of Barium Hexaferrite Powders Produced by Decomposition of Organo-Metallic Complexes
 R. Chandrasekhar S.W Charles K O'Grady S. Morup and J. van Wonterghem Adv. Ceram. Mats. 2 (1) (1987) p.65-68
- 21. Cobalt Ferrite Ferrofluids and Their Application to Magnetic Ink-Jet Printing =R. Chandrasekhar, S.W. Charles and K. O'Grady, J. Imaging Tech. 13 (2) (1987) p.55-59
- 22. The Effect of Particle Interactions on the Initial Susceptibility of Ferrofluids, *M. Holmes, K. O'Grady, R.W. Chantrell and A. Bradbury, IEEE Trans. Magn. 24 (2) (1988) p.1659-1661
- Measurements of Persistent and Critical Currents in High-Tc Superconductors Using a Vibrating Sample Magnetometer,
 *G. Ferguson, K. O'Grady, J. Popplewell, T.E. Wood, N. Kerley, A. Briggs and I.A. Denton.

J. Phys. D. Appl. Phys. 21 (1988) p.1306-1307

- Magnetic Measurements of Critical Currents in High-Tc Superconductors,
 *G. Ferguson, K. O'Grady, A. Briggs and I.A. Denton,
 Cryogenics 28 (1988) p.688-690.
- Susceptibility Peaks in a Fine Particle System,
 *M. el Hilo, K. O'Grady, J. Popplewell, R.W. Chantrell and N. Ayoub,
 J. de Physique C8 (12) (1988) p.1835-1836

Measurement of Magnetic Texture in Co-P Thin Films,*P.E. Kelly and K. O'Grady,J. de Physique C8 (12) (1988) p.1833-1834

Particle Interaction Effects in Ferrofluids,
*N.Y. Ayoub, B. Abu-Aisheh, N. Laham, M. Debabneh, J. Popplewell and K. O'Grady,
J. de Physique C8 (12) (1988) p.1841-1842

Magnetic Viscosity Effects in Digital Recording Media,
*S. Uren, K. O'Grady and R.W. Chantrell,
J. de Physique C8 (12) (1988) p.1927-1928

The Isothermal Remanence of a Fine Particle System,
*M. Walker, R.W. Chantrell, K. O'Grady and S.W. Charles,
J. de Physique C8 (12) 1988 p.1819-1820

Time Dependence and Rate Dependence of the Coercivity of Particulate Recording Media
*R.W. Chantrell, G.N. Coverdale and K. O'Grady,
J. Phys. D. 21 (1988) p.1469-1473

Remanence Curves of Cobalt Ferrite Powders Obtained by Fractionation of a Suspension through a Silical Gel Column.
<SW Charles, R Chandrasekhar, K O'Grady and M Walker J. Appl. Phys. 64, (1988)

32. Magnetic Viscosity and Switching Field Distribution of Recording Media, *S. Uren, M. Walker, K. O'Grady and R.W. Chantrell, IEEE Trans. Magn. 24(2) (1988) p.1808-1810

33. Texture and Angular Dependence of Magnetic Viscosity in Digital Recording Media, *S. Uren, K. O'Grady, R.W. Chantrell and J. Popplewell, IEEE Trans. Magn. 25(5) (1989) p.3656-3658

34. Switching Mechanisms in Co-P Thin Films
*P.E. Kelly, K. O'Grady, P.I. Mayo and R.W. Chantrell,
IEEE Trans. Magn 25(5) (1989) p.3881-3883

35. Magnetisation Mechanisms and Magnetic Viscosity in NdFeB Alloys, *G.B. Ferguson, K. O'Grady, J. Popplewell and R.W. Chantrell, IEEE Trans. Magn-25 (5) (1989) p.3449-3451

36. Susceptibility Peaks in a Non-interacting Fine Particle System, <N.Y. Ayoub, R.Y. Abdelal, R.W. Chantrell, J. Popplewell and K. O'Grady, J.Magn.Magn.Mater. 79 (1989) p.81-87

37. Calculation of Fluctuation Field of a Fine Particle Magnetic System, <G.N. Coverdale, R.W. Chantrell and K. O'Grady, J.Magn.Magn.Mater. 83 (1990) p.442-446

Time Dependence and Rate Dependence of the Coercivicity of Recording Media, (Invited Review)
<R.W. Chantrell, G.N. Coverdale and K. O'Grady,
BNF 7th Int. conf. "Materials Revolution Through the 90s" V1. No. 14 (1989) p.1-6

39. Determination of Easy Axis Distribution in Recording Media, *M. el Hilo, P.E. Kelly, K. O'Grady, J. Popplewell and R. W. Chantrell, IEEE Trans. Magn. 26(1) (1990) p.210-212.

40. Effects of Anisotropy Field Distributions on Magnetic Viscosity in Particulate Recording Media,
*M. el Hilo, S. Uren, K. O'Grady, J. Popplewell and R.W. Chantrell, IEEE Trans. Magn. 26 (1) (1990) p.244-246.

41. A Study of Curie-Weiss Behaviour in Ferrofluids, *M. Holmes, K. O'Grady and J. Popplewell, J.Magn.Magn.Mater. 85 (1990) p.47-50

42. The Activation Volumes of Reversal in Ultrafine Particles, *A-M de Witte and K. O'Grady, IEEE Trans. Magn. 26(5) (1990) p.1810-1812

43. Components of Magnetisation of a Fine Particle System, *M. el Hilo and K. O'Grady, IEEE Trans. Magn. 26(5) (1990) p.1807-1809

Magnetic Characterisation of Recording Media (Invited Review),
 *K. O'Grady,
 IEEE Trans. Magn. 26(5) (1990) p1870-1875

45. Structural and Magnetic Properties of Laser Annealed Magneto-Optic Thin Films, <P.W. Haycock, R.H. Noyou, T. Thomson, G.J. Herdman, E.W. Williams and K. O'Grady, IEEE Trans. Magn. 26(5) (1990) p.1921-1923.

Magnetic Viscosity, Susceptibility and Fluctuation Fields in Sintered NdFeB,
 G. J. Tomka, P.R. Bissell, K. O'Grady and R.W. Chantrell,
 IEEE Trans. Magn. 26(5) (1990) p.2655-2657

47. Activation Volume of Reversal in Ultrafine Particles and Recording Media, *A-M de Witte, K. O'Grady, G.N. Coverdale and R.W. Chantrell, J.Magn.Magn.Mater. 88 (1990) p.183-193

48. X ray and Neutron Scattering Studies of Laser Annealed TbFeCo Thin Films, <P.W. Haycock, W.G. Stirling, R.D. Gould, C.C. Tang, D.L. Jones, G.J. Herdman, E.W. Williams and K. O'Grady, Thin Solid Films 193/194 (1990) p.1038-1045.

- Time Dependence in Magnetic Fine Particle Systems and Thin Films,
 =R.W. Chantrell, P.R. Bissell and K. O'Grady,
 Non Destructive Testing and Evaluation (Invited Review) Vol. 6 (1991) p1.-16
- Magnetic Measurements of Interaction Effects in CoNiCr and CoPtCr Thin Film Media,
 *P.I. Mayo, K. O'Grady, R.W. Chantrell, J.A. Cambridge, I.L. Sanders, T. Yogi and K. Howard,
 J.Magn.Magn.Mater. 95 (1991) p.109-117
- 51. The Peak in the TRM in a Fine Particle System, *M. el Hilo, K. O'Grady and J. Popplewell, J. Appl. Phys. 69(8) (1991) p.5133-5136
- 52. The Temperature Relationship of the Fluctuation Field and Coercivity in NdFeB Alloys, *G.B. Ferguson, K. O'Grady, J. Popplewell and R.W. Chantrell, J. Appl. Phys. 69(8) (1991) p.5495-5497
- A Magnetic Evaluation of Interaction and Noise Characteristics of CoNiCr Thin Films,
 *P.I. Mayo, K. O'Grady, P.E. Kelly, J.A. Cambridge, I.L. Sanders, T. Yogi and
 R.W. Chantrell,
 J. Appl. Phys. 69(8) (1991) p.4733-4735
- Magnetic Pigment Dispersions (A Tutorial Review), (Invited Review),
 *K. O'Grady, R.G. Gilson and P.C. Hobby,
 J.Magn.Magn.Mater. 95 (1991) p.341-355
- 55. Spin Glass Behaviour in a Fine Particle System, (Invited), *R.W. Chantrell, M. el Hilo and K. O'Grady, IEEE Trans. Magn. 27(4) (1991) p3570-3578
- 56. Interaction Effects and Activation Volumes in Ba Fe Recording Media,
 *M. el Hilo, K. O'Grady and R.W. Chantrell,
 IEEE Trans. Magn. 27 (6) (1991) p.4666-4668
- 57. Interaction Effects in Multi-layer Thin Film Media, *M. el Hilo, K. O'Grady, R.W. Chantrell, I.L. Sanders, M.M. Yang and J.K. Howard, IEEE Trans. Magn. 27 (6) (1991) p.5061-5063.
- 58. Magnetic Characterisation of Recording Media, (Invited Review), =R.W. Chantrell and K. O'Grady, J. Phys. D. (Appl. Phys) 25 (1992) p.1-23
- 59. The Origin of Non-linear ln(t) Behaviour in the Time Dependence of Magnetisation, =M. el Hilo, K. O'Grady and R.W. Chantrell, J.Magn.Magn.Mater. 109 (1992) p.164-168

- 60. Susceptibility Phenomena in a Fine Particle System I. Concentration Dependence of the Peak,
 - =M. el Hilo, K. O'Grady and R.W. Chantrell, J.Magn.Magn.Mater. 114 (1992) p.295-306.
- 61. Susceptibility Phenomena in a Fine Particle System II Field Dependence of the Peak, =M. el Hilo, K. O'Grady and R.W. Chantrell, J.Magn.Magn.Mater. 114 (1992) p.307-313
- 62. Fluctuation Fields of Recording Media Particles: The role of anisotropy dispersion, =M. el Hilo, K. O'Grady, H. Pfeiffer, R.W. Chantrell and R.J. Veitch, IEEE Trans. Magn. 28 (5) (1992) p.2689-2691.
- The Effects of Different Demagnetisation Processes on Interaction Effects in Thin Film Media,
 *M. el Hilo, K. O'Grady, P.I. Mayo, R.W. Chantrell, I.L. Sanders and J.K. Howard, IEEE Trans. Magn. 28 (5) (1992) p.3282-3285.
- 64. Magnetic Characterisation of Metal Particle Pigment Dispersions, *P.I. Mayo, K. O'Grady and P.C. Hobby, IEEE Trans. Magn. 28 (5) (1992) p.2374-2376.
- 65. Activation Volumes of Reversal in Tb Fe Co Thin Films, *T. Thomson, K. O'Grady, R.W. Chantrell and C.M. Perlov, IEEE Trans. Magn. 28 (5) (1992) p.2518-2520.
- Optical and Magnetic Measurements of Time Dependence Effects in Magneto-optic Thin Films,
 *T. Thomson, K. O'Grady, S. Brown, P.W. Haycock and E.W. Williams, IEEE Trans. Magn. 28 (5) (1992) p.2515-2517.
- 67. The Sweep-rate Dependence of Coercivity in Recording Media, *M. el Hilo, A-M de Witte, K. O'Grady and R.W. Chantrell, J.Magn.Magn.Mater. 117(1992) L307-310.
- 68. The Ordering Temperature in Fine Particle Systems, M. el Hilo, K. O'Grady and R.W. Chantrell, J.Magn.Magn.Mater. 117(1992) p.21-28.
- 69. The TRM Peak in a Fine Particle System, *M. el Hilo, K. O'Grady, H. Pfeiffer and R.W. Chantrell, J.Magn.Magn.Mater. 104-07 (1992) p.1580-1582.
- 70. Interaction Effects in Thin Film Media with Varying Out-of-Plane Orientation, *M. Alex, T. Yogi, I.L. Saunders and K. O'Grady, IEEE Trans. Magn. 28(5) (1992) p.3269-3271

- 71. Magnetic Characterisation of Thin Film Recording Media (Invited), *K. O'Grady, R.W. Chantrell and I.L. Sanders, IEEE Trans. Magn. 29 (1) (1993) p.286-291.
- 72. Time Dependent Magnetisation in Systems with Distributed Energy Barriers, *M. el Hilo, K. O'Grady, R.W. Chantrell and D.P.E. Dickson, J.Magn.Magn.Mater. 123 (1993) p.30-34
- 73. Demagnetised States and Activation Volumes in Thin Film Media, *M. el Hilo, K. O'Grady and R.W. Chantrell, J.Magn.Magn.Mater. 120 (1993) p.244-246.
- 74. Reptation Effects in Particulate Systems I. Theoretical Predictions,
 *M. el Hilo, K. O'Grady and R.W. Chantrell,
 J. Appl. Phys. 73 (10) (1993) p.6653-6655
- 75. Reptation Effects in Particulate Systems II Experimental Studies, *V.G. Lewis, P.I. Mayo and K. O'Grady, J. Appl. Phys. 73 (10) (1993) p.6656-6658
- 76. Alternating Gradient Force Magnetometry: Applications and Extension to Low Temperatures (Invited),
 *K. O'Grady, V.G. Lewis and P.E. Dickson,
 J. Appl. Phys. 73 (10) (1993) p.5608-5613
- 77. Determination of τ₀ for Fine Magnetic Particles,
 *D.P.E. Dickson, N.M.K. Reid, C.A. Hunt, H.D. Williams, M. el Hilo and K. O'Grady J.Magn.Magn.Mater.125 (1993) p.345-350
- 78. Sweep-rate Measurements of Coercivity in Particulate Recording Media, *A.M. de Witte, M. el Hilo, K. O'Grady and R.W. Chantrell, J.Magn.Magn.Mater. 120 (1993) p.184-186.
- 79. The Determination of Fluctuation Fields in Particulate Media, *A-M de Witte, K. O'Grady, R.W. Chantrell J.Magn.Magn.Mater. 120 (1993) p.187-189.
- 80. Superparamagnetism in Fine Particle Dispersions, *H.D. Williams, K. O'Grady, M. el Hilo and R.W. Chantrell, J.Magn.Magn.Mater. 122 (1993) p.129-133
- 81. Curie Weiss Behaviour in Ferrofluids: The Effects of Particle Size and Distribution, *H.D. Williams, K. O'Grady, S.W. Charles and K.A. Davies, J.Magn.Magn.Mater. 122 (1993) p.133-138

Magnetic Coupling and Anisotropy in Fe/Co and Fe/Cu Multilayers,
*O.F. Bakkaloglu, M.F. Thomas, R.J. Pollard, P.J. Grundy, V.G. Lewis and K. O'Grady,
J.Magn.Magn.Mater.125 (1993) p.209-220

The Magnetic Properties of Single Domain Particles with Cubic Anisotropy I Hysteresis Loops,
=M. Walker, P.I. Mayo, K. O'Grady, S.W. Charles and R.W. Chantrell,
J. Phys. C. Condens. Matter 5 (1993) p.2779-2792..

The Magnetic Properties of Single Domain Particles with Cubic Anisotropy II Remanence Curves,
=M. Walker, P.I. Mayo, K. O'Grady, S.W. Charles and R.W. Chantrell,
J. Phys. C. Condens. Matter 5 (1993) p.2793-2808..

85. An Experimental Study of the Magnetic Behaviour of Particulate Dispersions I. Chromium Dioxide,

=P.I. Mayo, K. O'Grady, P. Sallis, P.R. Bissell, R.G. Gilson, R.W. Chantrell, A.R. Balkenende, M. Th Reckveldt, W, Kraan and P.T. Por, J.Magn.Magn.Mater.128 (1993) p.191-203

Characterisation of the Dispersion Process Using Transverse Susceptibility Measurements,
P.M. Sollis, P.R. Bissell, P.I. Mayo, R.W. Chantrell, R.G. Gilson and K. O'Grady, J.Magn.Magn.Mater120 (1993) p.94-97.

87. Nucleation Fields in Exchange Spring Magnets, =V. Patel, M. el Hilo, K. O'Grady, R.W. Chantrell and E. Kneller, J. Phys. D.Appl Phys 26 (1993) p.1453-1458

88. Magnetic Characterisation of Metal Pigment Dispersions II, *P.I. Mayo and K. O'Grady, IEEE Trans. Magn. 29 (6) (1993) p.3640-3642

89. The Characterisation of Interaction Effects in Fine Particle Systems (Invited), =K. O'Grady, R.W. Chantrell and M. el Hilo, IEEE Trans Magn. 29 (6) (1993) p.2608-2615

90. Interactions in CoPtCr/SiO₂ Composite Thin Films,
*M. el Hilo, K. O'Grady, P. Baumgart, T.A. Nguyen and I.L. Sanders,
IEEE Trans. Magn. 29 (6) (1993) p.3724-3726

91. Time Dependence Effects and Reptation Measurements, =M. el Hilo, K. O'Grady and R.W. Chantrell, IEEE Trans. Magn. Vol 29 (6) (1993) p.3664-3666

92. Fluctuation Fields of Reversal in Oriented and Non-Oriented Barium Ferrite Media *V. Patel, M. el Hilo, and K. O'Grady IEEE Trans. Magn. 29 (6) (1993) p.3622- 3624

- 93. Magnetisation Reversal in Metallic Thin Films (Invited) < R W Chantrell, K O'Grady, A Hart and D.A. Parke Trans. Mag. Res. Soc. Japan V.15B (1994)p.865-870
- 94. Microstructure and Hysteresis in Co/Pt Multilayers =D.M. Donnet V.G. Lewis J.N. Chapman K O'Grady and H.W. van Kesteren. J Phys D. Appl. Phys. 26 (1993) p.1741-1745
- 95. Simulations of the Remanent Behaviour of Longitudinal Thin Films <C Dean R.W. Chantrell A Hart D.A. Parker and K O'Grady IEEE Trans. Magn. 29 (6) (1993) p.3727-3729
- 96. Interaction Phenomena in Polymer Bonded Permanent Magnet Powders <G.J. Tomka, P.R. Bissell, R.W. Chantrell and K. O'Grady IEEE Trans. Magn. 29 (6) (1993) p.2869-2874
- 97. Giant Magnetoresistance of Cobalt-Silver Metastable Alloys prepared by Sputtering and Mechanical Alloying <S.M. Thompson, J.F. Gregg, C.R. Staddon, D. Daniel, S.L. Dawson, K. Ounadjela, J. Hammann. C. Fermon, G. Saux, K. O'Grady, S.J. Grieves, J.M.D. Coey and A. Fagan. Phil. Mag. B. 68 (6) (1993) p.923-937
- 98. Measurement of Inter-Particle Interactions in a Single Magnetic Ink Aggregate =S.M. Westwood, V.G. Lewis, K.O'Grady and B.K. Tanner. J. Magn. Magn. Mater. 125 (1993) L247-250
- 99. Magnetic Properties of Barium Hexaferrite Powders, =M. el Hilo, H. Pfeiffer, K. O'Grady, W. Schöppel, E. Sinn, P. Gornert, M. Rosler, D.P.E. Dickson and R.W. Chantrell. J.Magn.Magn.Mater. 129 (1994) p.339-347
- 100. Giant Magnetoresistance in Ag_{1-x}Ni_{x-v}Fe_v Heterogeneous Alloy Films =M.L. Watson V.G. Lewis and K. O'Grady J. Appl. Phys. 75 (10) (1994) p.6927-6929
- 101. Giant Magnetoresistance and Induced Exchange Anisotropy in Mechanically Alloyed $Co_{30}Ag_{70}$ < K. Ounadjela, J.M.D. Coey, A. Fagan, C.R. Staddon, D. Daniel, J. F. Gregg

S.M. Thompson, A. Herr, R. Poinsot, K. O'Grady and S. Greaves

J. Appl. Phys. 75 (10) (1994) p.6921-6923

Reversal Mechanisms in Tb/Fe Multilayers 102. *K. O'Grady, T. Thomson, S.J. Greaves and G. Bayreuther J. Appl. Phys. 75 (10) (1994) p.6849-6851

103. Effect of Magnetic Interactions and Multiple Magnetic Phases on the Giant Magnetoresistance of Heterogeneous Cobalt-Silver Thin Films
<J.F. Gregg, S.M. Thompson, S.J. Dawson, K Ounadjela, C.R. Staddon, J HammanC. Fermon G. Saux, K.O'Grady.</p>
Phys. Rev. B.49 (2) (1994) II p.1064-1072

104. Interaction Effects and Magnetic Ordering in GMR Alloys
*S J Greaves, M el Hilo and K O'Grady
J Appl. Phys. 76 (10) (1994) p.6802-6804

105. Time Dependence Effects In Disordered Systems *K O'Grady, M el Hilo and R W Chantrell J. Appl. Phys. 76 (10) (1994) p.6368-6370

106. The Effect of Interactions On GMR In Granular Solids =M el Hilo, K O'Grady and R W Chantrell J. Appl. Phys. 76 (10) (1994) p.6811-6813

107. Models of Slow Relaxation in Particulate and Thin Film Materials (Invited) <R W Chantrell, A Lyberatos, M el Hilo and K O'Grady J. Appl. Phys. 76 (10) (1994) p.6407-6412

108. Fluctuation Fields in Polymer Bonded Permanent Magnets <G J Tomka, P R Bissell, R W Chantrell and K O'Grady J.Magn.Magn.Mater. 140-144 (1995) p.1097-1098

109. Reversal Mechanisms in Sintered NdFeB <G J Tomka, P R Bissell, K O'Grady and R W Chantrell J. Phys. D. Appl. Phys. 27 (1994) p.1601-1604

Minor Hysteresis Loop Effects in Magnetic Materials*K O'Grady and SJ Greaves,J.Magn.Magn.Mater. 138 (1994) L233-L236

111. Magnetic Characterisation of Granular Alloy Thin Films (Invited)
*K O'Grady and M L Watson
J. Mag. Soc. Japan 18, S1 (1994) p.379-384

112. Thermoremanent phenomena in disordered systems =M El-Hilo, K O'Grady and R W Chantrell J.Magn.Magn.Mater 140-144 (1995) p.359-360

113. Time Dependence Effects and Reversal Mechanisms in γ-Fe₂O₃ particles =M P Morales, M el Hilo and K O'Grady J.Magn.Magn.Mater. 140-144 (1995) p.2211-2212

114. Switching Mechanisms in Layered CoCrPt Thin Films =GJ Sinclair, GA Jones, PJ Grundy and K O'Grady J. Appl. Phys. 77 (6) (1995) p.2425-2428

115. Magnetisation Reversal in CoCrPr Thin Film Trilayers =GJ Sinclair, GA Jones, PJ Grundy and K O'Grady J. Phys. D: Appl. Phys. 28, (1995) p.1785-1790

116. The Observation of Multi-Axial Anisotropy in Ultra-Fine Cobalt Ferrite Particles =KJ Davies, S Wells, RV Upadhyay, SW Charles, K O'Grady, M el Hilo T Meaz and S Morup

J. Magn.Magn.Mater. 149 (1995) p.14-18

117. Texture and Interaction Effects in Barium Ferrite Media *M P Morales, K O'Grady and PI Mayo IEEE Trans. Magn. 31 (6) (1995) p.2904-2906

118. Anomalous Effects in Minor Hysteresis Loops *K O'Grady and S J Greaves IEEE Trans. Magn. 31 (6) (1995) p.2794-2796

119. Time Dependence of GMR in Granular Alloys
*S J Greaves, K O'Grady, M L Watson and R W Chantrell
IEEE Trans. Magn. 31 (1995) (6) p.3961-3963

120. Calculation of FMR in Interacting Fine Particle Systems
<A H Thomas, R W Chantrell, M el Hilo, P W Haycock and K O'Grady
J.Magn.Magn.Mater. 151 (1995) p.54-58

121. Frequency Dependent Susceptibility Measurements of Environmental Materials =J A Dearing, R J L Dann, K Hay, J A Lees, P J Loveland, B A Maher, K O'Grady Geophysics J. Int. 124 (1996) p.228-240

122. Effects of Dispersion on Interactive and Orientation in Barium Ferrite Tapes *M P Morales and K O Grady J.Magn.Magn.Mater. 155 (1996) p.95-97

Determination of Pigment Dispersion Microstrucuture by Magnetic Measurements
 *S J Greaves and K O'Grady
 J.Magn.Magn.Mater. 155 (1996) p.120-122

124. Determination of Out of Plane Orientation in Barium Ferrite Media Using Mossbauer Spectroscopy
=M P Morales, K O'Grady, S Betteridge and D P E Dickson

J.Magn.Magn.Mater. 155 (1996) p129-131

Magnetic Coupling in CoPtCr/Cr Trilayer Films
 *P Dova, K O'Grady, G J Sinclair, P J Grundy and G A Jones J.Magn.Magn.Mater. 155 (1996) p.176-178

126. An Analysis of Magnetic Viscosity in M-O Films -I Experimental *G N Philips, K O'Grady and R W Chantrell J.Magn.Magn.Mater. 155 (1996) p.364-366

127. An Analysis of Magnetic Viscosity M-O Films II Simulation <J Earl, R W Chantrell, A Lyberatos and K O'Grady J.Magn.Magn.Mater 155 (1996) p.367-369

128. Time Dependence and Mechanisms of Magnetisation Reversal in Tb-Fe-Co Films
=S D Brown, R Street, R W Chantrell, P W Haycock and K O'Grady J. Appl. Phys. 79(5) (1996) p.2594-2600

129. Thickness Dependence of Giant Magnetoresistance of AgNiFe Heterogenous Alloy Films

Sylvagins, M L Watson, P A Gago-Sandoval and K O'Grady

<J Wiggins, M L Watson, P A Gago-Sandoval and K O'Grady J. Appl. Phys. 79(8) (1996) p.5590-5592

130. High Speed Switching in Particulate Magnetic Recording Media (Invited)
*C P Hancock, K O'Grady and M El-Hilo
J. Phys. D. (29) (1996) p.2343-2351

131. Exchange Anisotropy Effects in NiFe layers and NiFe/Cr Multilayers *K O'Grady, S J Greaves and S M Thompson J.Magn.Magn.Mater. 156 (1996) p.253-254

132. A Neutron Depolarisation Study of the Magnetic Correlations in a Particulate Dispersion During Milling
=P T Por, W H Kraan, P I Mayo, M Th Rekveldt and K O'Grady
J.Magn.Magn.Mater.162 (1996) p.139-146

133. Interactions and Reversal Processes in CoCrTa/CoCrTaPt Thin Films *M P Morales, K O'Grady, Zhang, W R Brandt and G C Rauch IEEE Trans. Magn. 32 (5)(1996) p.3593-3595

134. Domain Structure and Magnetisation Processes in Magneto-Optic Co/Pt Thin Films *G N Phillips, K O'Grady, Q Meng and J C Lodder IEEE Trans. Magn.32(5) (1996) p3593-3595

135. Characterisation of Magnetic Pigment Dispersions Using Pulsed Magnetic Fields *C P Hancock, S J Greaves, K O'Grady, R G Williams and A R Owens IEEE Trans Magn. 32(5) (1996) p.4037-4039

136. Pulse and Low Temperature Magnetometry of γ-Fe₂O₃ Dispersions
 *S J Greaves, C P Hancock K O'Grady, A M Lane
 IEEE Trans. Magn. 32(5) (1996) p.4040-4042

137. Interaction Effects on Barium Ferrite Dispersions Using Low Temperature Magnetometry
*S J Greaves K O'Grady and A M Lane IEEE Trans. Magn. 32 (5) (1996) p.4046-4048

138. Temperature Dependence of Activation Volumes in Tb-Fe-Co Magneto-Optic Thin Films

*T Thomson and K O'Grady IEEE Trans. Magn. 32(6) (1996) p.286-289

139. Modelling of Interaction Effects in Fine Particle Systems <R W Chantrell, G N Coverdale, M El Hilo and K O'Grady J.Magn.Magn.Mater. 157/8 (1996), p.250-255

The Effect of the Microstructure on the Magnetic Interactions in CoFe-AgCu Granular Films: From Demagnetizing to Magnetizing Interactions.
=X. Batlle, V.Franco, A Labarta, M L Watson and K O'Grady Applied Phys Letts. 70(1) (1997) p.132-134

141. Interaction and Dimensional effects in Micromagnetic Models =M El-Hilo., K O'Grady and R W Chantrell. J Appl. Phys. 81(8) (1997) p.5582-5584

Magnetisation Reversal in Bicrystal Media
*P. Dova, K. O'Grady, M.P. Morales and M.F. Doerner.
J. Appl. Phys. 81(8) (1997) p.3949-3951

143. Techniques for Analysing Dispersion Microstructure *S.J. Greaves, C.P. Hancock, K. O'Grady and Lane A.M. J.Mag.Soc.Jap. 21 (4-2) (1997)

144. Magnetic Measurements of Interaction Effects in CoNiW Films with Columnar Structure.

=V.G. Shadrow, K. O;Grady and A.V. Boltushkin Phys. Stat. Sol.(a)156,(1996)

145. From Demagnetizing to Magnetizing Interactions in CoFe-AgCu Granular Films. =V Franco, X Batlle, A Labarta, M L Watson and K O'Grady J Appl Phys. 81(8) (1997) p.4593-4595

146. A Mossbauer Investigation of Advanced Magnetic Recording Media <S A Walton, D P E Dickson, K O'Grady and P I Mayo Hyperfine Interactions 112(1-4)1998 p.81-84

147. Coupling and Crystallographic Effects in Thin Film Cobalt Alloy Recording Media *P Dova, K O'Grady, M F Doerner and M Mirzamaani IEEE Trans. Magn. 33(5)(1997) p.2953-2955

148. Magnetisation Reversal in Spin-valve Structures.
*A.M. Goodman, K O'Grady, N.S Walmsley and M. R Parker.
IEEE Trans. Magn. 33(5)(1997) p.2902-2904

149. A Study of Magnetisation Reversal Mechanisms in Co/Pt Multilayers *G N Phillips, Q Meng, K O'Grady and J C Lodder J.Mag. Soc. Jap. 20-5 (1996) p.275-278

150. Formation of y-Fe₂O₃ Isolated Nanoparticles in a Silica Matrex <F. del Monte, M.P Morales, D. Levy, A. Fernandez. M. Ocana, A.Roig E. Molins, K. O'Grady and C.J Serna The ACS Journal of Surfaces and Colloids. 13(14)(1997) p.3627-3634

151. Magnetisation Reversal Mechanisms and Time-Dependent Processes in Tb-Fe-Co Alloy Films

*T. Thomson and K. O'Grady J. Phys.D 30 (1997) p.1566-1576

152. Magnetisation Reversal Mechanisms and Time-Dependent Processes in Thin Film Tb/Fe Multilayer Films

*T. Thomson, K. O'Grady and G. Bayreuther J. Phys. D: Appl. Phys. 30 (1997) p.1577-1587

153. Magnetic Properties of NdFeB Thin Film on Platinum Underlayers <D.J.Mapps, R. Chandrasekhar, K.O'Grady, J. Cambridge, A. Petford-Long and R.Doole IEEE Trans Magn. 33(5)(1997) p.3007-3009

154. Time Dependent Effects in Materials with Two-stage Reversal Processes = J. Rose, J N Chapman, G N Phillips, H Laidler and K O'Grady J.Magn.Magn.Mater. 177-181(1998) p.223-224

Simple Voltage Generator For Producing Well-Defined Nanosecond Pulses of Amplitudes in Excess of 1kV
 C.P Hancock, A.R Owens and K.O'Grady
 IEEE Proc.Sci.Meas.Technol., 144 (5)(1997)

156. Whither Magnetic Recording (Invited) *K. O'Grady, R. L White and P. J. Grundy J.Magn.Magn.Mater. 177 (1998) p.886-891

157. A Model of Interaction Effects in Granular Magnetic Solids =M.El-Hilo, R.W. Chantrell and K.O'Grady J.Appl.Phys. 1998 (84) (9) p.5114-5122

158. Highly Homogeneous Nanoparticulate Fe Films prepared by Laser Ablation <J.M.Gonzalez, M.I. Montero, L. Vasqueq, J.A.Martin Gago, D. Givord, C. de Julian and K.O'Grady.

IEEE Trans.Magn. 34 (4) (1998) p.1108-1110

159. The Effect of fcc Grains on the Magnetic and Recording Properties of Thin Film Media *K.O'Grady, N.S.Walmsley, C.Woods and R.W. Chantrell. IEEE Trans.Magn. 34 (4) (1998) p.1579-1581

160. Effects of Ultra High Vacuum on Crystallographic Recording and Magnetic Properties of Thin Film Media.

*C.Gao, S.Wu, J.P-Chen, R.Malmhall, C.Habermeier, R.Sinclair, H.Laidler and K.O'Grady.

IEEE Trans.Magn. 34 (4) (1998) p.1576-1578

Magnetic Microstructures from Magnetic Force Microscopy and Monte Carlo Simulation in CoFe-AgCu Granular Films
 <X.Batlle, V.Franco, A.Valentia, A. Labarta, M. Watson and K.O'Grady. IEEE Trans.Magn. 34 (4) (1998) p.912-914

Mechanical Orientation of Advanced Metal Particle Dispersions
 *L.S.Prichard, P.I. Mayo and K. O'Grady.
 IEEE Trans.Magn. 34 (4) (1998) p.1684-1686

163. Determination of Critical Volumes in Recording Media (Invited) *K.O'Grady, P.Dova and H. Laidler Proc.Mat.Res.Soc. 517(1998) p.231-242

- 165. Determination of Grain Size Distributions in Thin Film Recording Media *G.R. Jones, M.Jackson and K. O'Grady J.Magn.Magn.Mater. 193 (1999) p.75-78
- 166. Demagnetising Field Reduction in Keepered Media *H. Laidler, K. O'Grady, T.M. Coughlin and J.H. Judy J.Magn.Magn.Mater. 193 (1999) p.262-264
- 167. High Speed Switching in Metal Particle Recording Media
 *L. S. Prichard and K. O'Grady
 J.Magn.Magn.Mater. 193 (1999) p.220-223
- Origin of Switching Field Distribution in MP Pigments
 *M.P.Morales, C.J. Serna, K. O'Grady, L.S. Pritchard, J.A.Hutchings, G.H. Milford and D.P.E. Dickson
 J.Magn.Magn.Mater. 193(1999) p.314-317
- 169. Determination of Switching Field Distribution and Easy Axis Distribution in Advanced Metal Particle Tape
 *M.Jackson, L.S. Prichard, K. O'Grady and P.I. Mayo

J.Magn.Magn.Mater. 193 (1-3) (1999) p.342-344

170. Simulations of the Effects of fcc Grains on the Remanence of Thin Film Media =N.S. Walmsley, RW.Chantrell, and K. O'Grady J.Magn.Magn.Mater. 193 (1999) p.420-422

171. Competing Sweep-rate Dependent Effects in the Hard Loop of Spin-valve Multilayers *A.M. Goodman, K.O'Grady, M.R.Parker and S.Burkett J.Magn.Magn.Mater. 193 (1999) p.504-50

172. Effects of Stacking Faults on Magnetic Viscosity in Thin Film Magnetic Recording Media
*P.Dova, H.Laidler, K.O'Grady. M.F.Toney and M.F.Doerner

J.Appl.Phys. 85 (5) (1999) p.2775-2781

173. The Limits of Magnetic Recording: Media Considerations (invited). *K.O'Grady and H. Laidler
J.Magn.Magn.Mater 200 (1999) p.616-633

174. Magnetisation Reversal Processes in Exchange-Biased Spin-Valve Structures A.M. Goodman, K.O'Grady, H. Laidler N. Owen, X. Portier, A.K. Petford-Long and F.Cebollada.

IEEE Trans. Magn. Vol.37 No.1 (2001) p.565-570

175. Correlation of Micromagnetic Properties with Recording Performance Measurements in Advanced Metal Particle Tape
*M. Jackson, K.O'Grady and G. Sinclair.
J.Appl.Phys 85(8) (1999) p5540-5542.

176. Hysteresis phenomena in the hard loop of spin-valve structures *A.M.Goodman, K.O'Grady, M.R.Parker and S.Burkett J.Magn.Magn.Mater. 198-199 (1999) p12-14.

177. Magnetic Viscosity of Granular Fe Films Prepared by Laser Ablation <J.M. Gonzalez, M.I. Montero, L. Vasquez, J.A. Martin, D. Givord, C. de Julian and K.O'Grady
J.Magn.Magn.Mater. 196-197 (1999) p.96-98.

Studies on the Effect of Cobalt and Titanium substitution in NdFeB Thin Films for Magnetic Recording Media
<R. Chandrasekhar, D.J. Mapps, K. O'Grady, J. Cambridge, A. Petford-Long and R. Doole
J.Magn.Magn.Mater. 196-197 (1999) p.104-106.

179. Grain size and blocking distributions in fine particle iron oxide nanoparticles *M. BlancoMantecon and K. O'Grady J.Magn.Magn.Mater. 203 (1999) p.50-53.

- 180. Hysteresis and interactions in nanoparticulate Fe films <J.M. Gonzalez, M.I. Montero, L. Vazquez, J.M.M. Gago, D. Givord, C. deJulian and K. O'Grady
 Mater.Sci.Forum, 302 (1999) p.96-100.
- 181. Orientation and Switching Properties of Advanced Metal Particle Recording Media *L.S. Prichard and K. O'Grady IEEE Trans. Magn. Vol.35 No.5 (1999) p.2784-2786
- 182. Microstructure and Magnetic Domain Structure of Co/NiFe/MnNi Systems =X. Portier, A.K. Petford-Long, S.Mao, A.M. Goodman, H. Laidler and K. O'Grady IEEE Trans. Magn. 35 (5) (1999) p.3091-3093
- 183. Determination of Anisotropy Field Distributions in Recording Media *G.R. Jones, L.S. Prichard, J.A. Hutchings, H. Laidler and K. O'Grady J.Appl. Phys 87 (9) (2000) p.5711-5713
- 184. Magnetic Viscosity Effects on the Pinned Layer Loop of Spin-valve Materials *A.M. Goodman, H. Laidler, K. O'Grady, N.W. Owen and A.K. Petford-Long J.Appl. Phys.87 (9) (2000) p.6409-6411
- Magnetisation Reversal Processes in Exchange-biased Systems
 *X. Portier, A. de Morais, A.K. Petford-Long, A.M. Goodman, N.W. Owen, H. Laidler and K. O'Grady
 J.Appl. Phys. 87 (9) (2000) p.6412-6414
- 186. Remanence Breakdown in Granular Alloys at Magnetic Percolation =X. Batlle, V. Franco, A. Labarta and K. O'Grady J.Appl.Phys. 88 (3) (2000) p.1576–1582
- 187. The Nature of Magnetic Interactions in CoFe-Ag(Cu) Granular Thin Films =V.Franco, X.Battle, A.Labarta and K.O'Grady J.Phys.D 33 (2000) p.609-613
- Magnetisation Processes in Exchange Biased Systems
 *T Hughes, H Laidler, N W Owen, A K Petford-Long and K O'Grady
 J.Magn.Magn.Mater. 226-230 (2001) p.1798-1799
- 189. Thermal Activation of Reversal in Spin-valve Systems *T Hughes, H Laidler and K O'Grady J. Appl. Phys 89 (10) (2001) p5585-5591
- 190. Magnetisation Reversal in Pinned Layer of PtMnCr/NiFe Exchange Biased Bilayers *T Hughes, H Laidler, K O'Grady, A K Petford-Long, S Mao, E Linville and M Kief J. Appl. Phys 89 (11) (2001) p6591-6593

- Thermal Activation of Exchange Biased Bilayers (Invited)
 *T Hughes, K O'Grady, H Laidler and R W Chantrell
 J.Magn.Magn.Mater 235 (2001) p329-336
- Magnetic behaviour and percolation in mechanically alloyed Fe-SiO₂ granular solids
 =M Alonso-Sañudo, J J Blackwell, K O'Grady, J M González, F Cebollada and M P Morales
 J Magn.Magn.Mater. 221 (2000) p.207-214
- 193. The Oxidation and Magnetic Properties of MP Recording Media Particles *J A Hutchings and K O'Grady IEEE Trans. Magn. 36 (5) (2000) p.2435-2437
- Magnetization reversal at elevated temperatures in Co/Pt multilayer thin films
 *G N Phillips, K O'Grady and J C Lodder
 J.Phys.D 34 (2001) p.2960-2971
- 195. Magnetisation Reversal Processes in Exchange-Biased Spin-Valve Structures A M Goodman, K O'Grady, Member IEEE, H Laidler, Member IEEE, N W Oxen, X Portier, A K Petford-Long, Member IEEE and F Cebollada IEEE Tarns. Magn. 37(1) (2001) p565-570
- Thermally Activated Reversal of the Antiferromagnet in Exchange Biased IrMn/CoFe Bilayers
 *T Hughes, W J Antel jr, H Laidler, K O'Grady and M Kief J.Magn.Magn.Mater 242-245 (2002) p.1070-1072
- Magnetisation Reversal of the Ferromagnetic Layer in IrMn/Co Fe Bilayers
 *Y G Wang, A K Petford-Long, T Hughes, H Laidler, K O'Grady and M Kief J.Magn.Magn.Mater 242-245 (2002) p.1073-1076
- Measurement of the energy barrier distribution in the antiferromagnetic layer of exchange biased materials
 *K O'Grady, Lee Holloway and W J Antel Jr IEEE Trans. Magn. 38 (5) (2002) p.2741-2743
- Magnetic Characterisation of Perpendicular Recording Media (invited)
 *J Wu, L Holloway, H Laidler, K O'Grady, S Khirzroev, D Litvinov, J K Howard and R W Gustafson
 IEEE Trans. Magn. 38 (4) (2002) p.1682-1686
- Cluster Demagnetising Effects in Particulate Media
 *J J Blackwell, K O'Grady, C Verdes and R W Chantrell
 J. Appl. Phys 91 (10) (2002) p.8748-8750
- 201. Magnetisation Reversal in AFC Media *Jing Wu, J Dutson and K O'Grady IEEE Trans. Magn. 38 (5) (2002) p.1943-1945

202. An investigation of time dependent domain wall pinning effects in Tb/Fe multilayer thin films

*G N Phillips, K O'Grady and M El-Hilo J.Magn.Magn.Mater 248 (2002) p.418-422

- 203. Thermally Activated Reversal in Exchange-Coupled Structures = Y G Wang, A K Petford-Long, H Laidler, K O'Grady and M T Kief IEEE Trans. Magn. 38 (5) (2002) p.2773-2775
- 204. Interactions and Hysteresis Behaviour of Fe/SiO Nanocomposites *J J Blackwell, M P Morales, K O'Grady, J M Gonzalez, F Cebollada and M Alonso-Sanudo J.Magn.Magn.Mater 242-245 (2002) p.1103-1105
- 205. Fluctuation Fields and Reversal Mechanisms in Granular Magnetic Systems = M El-Hilo, K O'Grady and R W Chantrell J.Magn.Magn.Mater 248 (2002) p.360-373
- Crystallographic defects in CoCrPt thin film media: effect on interactions and magnetic viscosity
 H Laidler, L Holloway and K O'Grady
 J.Phys.D 35 (2002) p.512-519
- 207. Effect of Ti seed layer of the magnetization reversal process of Co/NiFe/Al-oxide/NiFe junction films
 =A C C Yu, A K Petford-Long, K O'Grady and T Miyazaki
 J. Appl. Phys 91(8) (2002) p.5234-5239
- 208. Structural and magnetic transformation of monodispersed iron oxide particles in a reducing atmosphere
 - <L C Varanda, M Jafelicci Jr, P Tartaj, K O'Grady, T Gonzalez-Carreno, M P Morales, T Munoz and C J Serna
 - J. Appl. Phys 92 (4) (2002) p.2079-2085
- 209. Determination of Activation Volumes in Thin Film Media
 *W J Antel Jr, H Laidler, K O'Grady, C Verdes and R W Chantrell
 J. Appl. Phys 91 (10) (2002) p.7080-7082
- 210. Determination of Activation Volumes of Reversal in Perpendicular Media *J D Dutson, K O'Grady, Bin Lu, Yukiko Kubota and C L Platt IEEE Trans. Magn. 39 (5) (2003) p.2344-2346
- 211. Contrast Agents for MRI Based Iron Oxide nanoparticles prepared by laser pyrolysis =M P Morales, O Bomati-Miguel, R Perez de Alejo, J Ruis-Cabello, S Veintemillas-Verdaguer and K O'Grady

 J.Magn.Magn.Mater. 266 (2003) p.102-109

212. The Characterisation of Magnetic Pigment Dispersions using Pulsed Magnetic Fields (Invited)

*J J Blackwell, K O'Grady, N K Nelson and M P Sharrock

J.Magn.Magn.Mater. 266 (2003) p.119-130

213. Thermal phenomena in IrMn exchange biased systems

*L E Fernandez-Outon, K O'Grady and M J Carey

J. Appl. Phys 95 (11) (2004) p.6852-6854

214. Novel Sputtering Technology for Grain-Size Control

*Marian Vopsaroiu, M J Thwaites, S Rand, P J Grundy and K O'Grady

IEEE Trans. Magn. 40 (4) (2004) p.2443-2445

215. Time Dependence in Perpendicular Media with a Soft Underlayer

*James D Dutson, Jing Wu, Kevin O'Grady, Nigel C Woolsey, Yukiko Kubota and Chris L Platt

IEEE Trans. Magn. 40 (4) (2004) p.2504-2506

216. Magnetic Viscosity Effects on the Determination of the Switching Field Distribution in

CoNiCr Thin Films

*B A Jones, M el Hilo and K O'Grady

J.Magn.Magn.Mater. 272 Sup 1 (2004) p.517-519

217. Deposition of Polycrystalline Thin Films with Controlled Grain Size

*M Vopsaroiu, G Vallejo Fernandez, M J Thwaites, J Anguita, P J Grundy and

K O'Grady

J.Phys.D 38 (2005) p.490-496

218. Magnetic Measurements of Self-Organisation

*B A Jones, J A Searle and K O'Grady

J.Magn.Magn.Mater. 290-291 (2005) p.131-133

219. Magnetic Viscosity in Advanced Metal Particle Pigments

*S J F Chadwick, J J Blackwell, J D Dutson and K O'Grady

J.Magn.Magn.Mater. 290-291 (2005) p.134-137

220. Texture Effects in Particulate Media

*M A Gonzalez Fernandez, G Blocksidge, C Bunce, K O'Grady, M el-Hilo and

M P Sharrock

J.Magn.Magn.Mater. 290-291 (2005) p.498-501

221. Structure and Magnetic Properties of NiZn Ferrite Nanoparticles

*A E Virden and K O'Grady

J.Magn.Magn.Mater. 290-291 (2005) p.868-870

- 222. Texture and Viscosity Effects in Particulate Recording Media *M A Gonzalez-Fernandez, G Blocksidge, K O'Grady, M el-Hilo, M P Sharrock and D Seftick
 J. Appl. Phys. 97, (10) (2005) p.702
- 223. Grain-size Effects in Exchange Biased FeMn/NiFe Bilayers
 *Sadia Manzoor, M Vopsaroiu, G Vallejo-Fernandez and K O'Grady
 J. Appl. Phys. 97, (10) (2005) p.118
- Preparation of High Moment CoFe Films with Controlled Grain Size and Coercivity
 *M Vopsaroiu, M Gergieva, P J Grundy, G Vallejo Fernandez, S Manzoor, M J
 Thwaites and K O'Grady
 J. Appl. Phys 97, (10) (2005) p.303
- 225. Magnetically Induced Self-Organisation*B A Jones and K O'GradyJ. Appl. Phys 97, (10) (2005) p.312
- Thermal Instabilities in exchange biased materials
 *L E Fernandez-Outon, G Vallejo-Fernandez, Sadia Manzoor and K O'Grady In press. J.Magn.Magn.Mater.
- 227. Grain Size Effects in Metallic Thin Films Prepared using a new Sputtering Technology *M Vopsaroiu, M J Thwaites, G V Fernandez, S Lepadatu and K O'Grady Journal of Optoelectronics and Advance Materials. 7, 5, (2005) p.2713-2720
- 228. Growth Rate Effects in Soft CoFe Films
 *M Vopsaroiu, K O'Grady, M T Georgieva, P J Grundy and M J Thwaites
 IEEE Trans. Magn. 41 (10) (2005) p.3253-3255
- Interaction and size effects in magnetic nanoparticles
 *M Blanco-Mantecon and K O'Grady
 J.Magn.Magn.Mater. 296 (2006) p.124-133
- 230. Activation Volumes in CoPtCr-SiO₂ Perpendicular Recording Media *Y Inaba, T Shimatsu, H Muraoka, J D Dutson and K O'Grady IEEE Trans. Magn. 41 (10) (2005) p.3130-3132
- Angular Dependence of Coercivity and Exchange Bias in IrMn/CoFe Bilayers
 *L E Fernandez-Outon and K O'Grady
 J.Magn.Magn.Mater. 290-291 (2005) p.536-539
- 232. Exchange-coupling effects in perpendicular composite materials K D Schuermann, J D Dutson, S Z Wu, S D Harkness, B Valcu, H.-J Richter, R W Chantrell and K O'Grady J. Appl. Phys 99, (8) (2006) 08Q904

233. Magnetic properties of FePt nanoparticles annealed with NaCl B A Jones and K O'Grady IEEE Trans. Magn. 42 (10) (2006) p.3066-3068

234. Thermal Instability in Exchange Bias Materials
L E Fernandez-Outon, G Vallejo-Fernandez, Sadia Manzoor and K O'Grady
Presented at ROMSC '06 in press Journal of Optoelectronics and Advanced Materials

235. The Role of Interfaces in CoFe/IrMn Exchange Biased Systems G Vallego-Fernandez, M Vopsaroiu, LE Fernandez-Outon and K O'Grady IEEE Trans. Magn. 42 (10) (2006) p.3008-3010

236. Annealing effect of thermal stability and microstructure in IrMn/Co₆₀Fe₂₀B₂₀ Bilayers G Vallejo-Fernandez, T Dimopoulos, M Ruehrig and K O'Grady J.Magn.Magn.Mat. 310 (2007) e786 – e788

237. Competing interaction effects in recording media S J F Chadwick, M A Gonzalez-Fernandez and K O'Grady J.Magn.Magn.Mater. 316 (2007) 203–205

238. Physical and Magnetic Properties of highly anisotropic cobalt ferrite nanoparticles A E Virden, S Wells and K O'Grady J.Magn.Magn.Mater. 316 (2007) e768–e771

239. Structural and magnetic properties of uniform magnetite nanoparticles prepared by high temperature decomposition of organic precursors A G Roca, M P Morales, K O'Grady and C J Serna Nanotechnology 17 (2006) p 2783-2788

240. Magnetisation reversal in media with perpendicular anisotropy (Invited)
J D Dutson, D Litvinov, M R J Gibbs, Y Inaba, H Muraoka and K O'Grady
Presented at APDSC. In Press IEEE TransMag

The Temperature Dependence of Magnetisation in Ferrofluids
 A E Virden and K O'Grady
 J. Appl. Phys 99, (8) (2006) 08S106

242. Bulk and Interfacial Effects in Exchange Bias Systems
J D Dutson, C Huerrich, G Vallejo-Fernandez, L E Fernandez-Outon, G Yi. S Mao, R
W Chantrell and K O'Grady
J. Appl. Phys (2007), Vol 40, p.1293 - 1299

243. A Model of the Magnetic Properties of Coupled Ferromagnetic/Antiferromagnetic Bilayers
D Choo, R W Chantrell, R Lamberton, A Johnston and K O'Grady

J. Appl. Phys (2007), Vol 101, 09E521_

- 244. Magnetic and Recording Properties of (CoCrPt)_{1-x} (SiO₂)_x Media J D Dutson, M Hashimoto, Y Inaba, S J Greaves, H Muraoka and K O'Grady IEEE TransMag, Vol 43, No 2, Part 2 (Feb 2007), p.814 818
- 245. Measurement of the Anisotropy Constant of Antiferromagnets in Metallic Polycrystalline Exchange Biased Systems
 *G Vallejo-Fernandez, L E Fernandez-Outon and K O'Grady
- Thermal Activation of Bulk and Interfacial Order in Exchange Biased Systems
 *G Vallejo-Fernandez, L E Fernandez-Outon and K O'Grady
 J. Appl. Phys. (2008) Vol 103, 07C101
- Magnetic Characterization of Exchange-Coupled Composite Media
 *T Deakin and K O'Grady
 J. Appl. Phys. (2008) Vol 103, 07F503
- 248. A Model of the Temperature Dependence of Exchange Bias in Coupled Ferromagnetic/Antiferromagnetic Bilayers
 <B Craig, R Lamberton, A Johnston, U Nowak, R W Chantrell and K O'Grady J. Appl. Phys. (2008) Vol 103, 07C102
- Interfacial Spin Effects on H_{ex} in Metallic Polycrystalline Exchange Biased Systems
 *L E Fernandez-Outon, G Vallejo-Fernandez and K O'Grady
 J. Appl. Phys. (2008) Vol 103, 07C106
- 250. Influence of Seed Layer on Magnetic Properties of Laminated Co₆₅Fe₃₅ Films =S Ladak, L E Fernandez-Outon and K O'Grady J. Appl. Phys. (2008) Vol 103, 07B514
- Development of Metal Particle (MP) Technology for Flexible Recording Media
 *S J F Chadwick, A E Virden, V Haehnel, K Matsumoto, T Yoshida, T Sawano, T Goto, K Ikari and K O'Grady
 J. Phys. D: Appl. Phys. (2008) Vol 41, 134018
- Antiferromagnetic Grain Volume Effects in Metallic Polycrystalline Exchange Bias Systems
 *G Vallejo-Fernandez, L E Fernandez-Outon and K O'Grady
 J. Phys. D: Appl. Phys. (2008) Vol 41, 112001 (5pp)
- Anisotropy Dispersion in (CoCrPt)_{1-χ}(SiO₂)_χ Perpendicular Recording Media
 *A Carter, L E Fernandez-Outon, Y Inaba, S J Greaves, H Muraoka and K O'Grady J. Magn.Magn.Mater. 320 (2008) p.2269-2272
- 254. Control of the Setting Process in CoFe/IrMn Exchange Bias Systems *G Vallejo-Fernandez, N P Aley, L E Fernandez-Outon and K O'Grady J. Appl. Phys. (2008) Vol 104, 033906 (5 pages)

255. Rotation of the pinning direction in the exchange bias training effect in polycrystalline NiFe/FeMn bilayers
X Qiu, D Yang, X Zhou, R Chantrell, K O'Grady, J Du, X Bai, 1 Sun, U Nowak Phys Rev Lett, 101, 14, Art No 147207

256. Interfacial Spin Order in Exchange Biased Systems
*L E Fernandez-Outon, G Vallejo-Fernandez, Sadia Manzoor, B Hillebrands and K O'Grady
J. Appl. Phys. (2008) Vol 104, (7 pages)

- 257. Magnetisation Reversal in ECC Media Experiment and Modelling *T Deakin, F Garcia-Sanchez, S Z Wu, O Chubykalo-Fesenko and K O'Grady IEEE TransMag Vol 45(2) (Feb 2009) p856-861
- 258. Texture Effects in IrMn/CoFe Exchange Bias Systems
 =N P Aley, G Vallejo-Fernandez, R Kroeger, B Lafferty, J Agnew, Y Lu and K
 O'Grady
 IEEE TransMag, Vol 44 (11) (Nov 2008), p.2820 2823
- 259. Large Exchange Bias IrMn/CoFe for Magnetic Tunnel Junctions *L E Fernandez-Outon, K O'Grady, M Zhou and M Pakala IEEE TransMag, Vol 44 (11) (Nov 2008), p.2824 2827
- 260. Magnetic Properties of Nanocrystalline Co Thin Films Grown on Glass =Borja Presa, Ralph Matarranz, M C Contreras, J F Calleja, L E Fernandez-Outon and K O'Grady IEEE TransMag, Vol 44 (11) (Nov 2008), p.2788 – 2791
- 261. Remanence and Coercivity Measurements of Perpendicular ECC Media *T Deakin, C Bunce, S Z Wu and K O'Grady IEEE TransMag, Vol 44 (11) (Nov 2008), p.3515 3518
- Effect of the Ferromagnetic Layer Thickness on the Blocking Temperature in Exchange Bias Systems
 *G Vallejo-Fernandez, B Kaeswurm, L E Fernandez-Outon and K O'Grady IEEE TransMag, Vol 44 (11) (Nov 2008), p.2835 2838
- Magnetic and Structural Properties of Laminated Co₆₅Fe₃₅ Films
 *S Ladak, L E Fernandez-Outon, A Smith, T Harrison, H Patel, T Kwan, R W Chantrell and K O'Grady
 J. Magn.Magn.Mater. 321 (2009) p.996-1000
- Tuning of Anisotropy in IrMn/CoFe Exchange Bias Systems
 * N.P. Aley, R. Kroeger, B. Lafferty, J. Agnew, Y. Lu and K. O'Grady
 IEEE TransMag, Vol 45 (10) (2009), p.3869 3872
- Effect of Cu Impurities on K_{AF} in IrMn_{1-x}Cu_x/CoFe Exchange Bias Systems
 *N.P. Aley, C. Bonet, B. Lafferty and K. O'Grady
 IEEE TransMag, Vol 45 (10) (2009), p.3858 3861

- 266. Bulk and Interfacial Effects in Co-Cr₂O₃ Nanocomposites * S Manzoor, M Farooq Nasir, Huey Hoon Hng and K O'Grady Jour. Appl. Phys. **11**, 113906 (2010)
- 267. Grain Size Distributions in Polycrystalline Films* T Deakin, N P Aley and K O'GradyNot published
- 268. A new paradigm for exchange bias in polycrystalline thin films * K. O'Grady, L.E.Fernandez-Outon and G.Vallejo-Fernandez J. Magn. Magn. Mater. 322 (2010) p883 899
- 269. Measurement of the antiferromagnet Activity in Exchange Bias Systems * G. Vallejo-Fernandez, T. Deakin, K O'Grady, S. Oh, Q. Leng and M. Pakala J. Phys. D: Appl. Phys. (2010) Vol 107, 09D709
- 270. Measurement of the Attempt Frequency in Antiferromagnets G. Vallejo-Fernandez, N. P. Aley, J. N. Chapman and K. O'Grady Appl. Phys. Lett. **97**, 222505 (2010)
- Texture and Magnetic Properties of Exchange Bias Systems
 N. P. Aley, M. Bowes, R. Kröger, and K. O'Grady
 J. Appl. Phys. (2010) Vol 107, 09D722
- 272. Interfacial and Bulk order in Polycrystalline Exchange Bias Systems
 * B. Kaeswurm and K. O'Grady
 J. Appl. Phys. (2010) Vol 107, 09D727
- Defect and Impurity Effects in Exchange Bias Systems
 B. Kaeswurm, G. Vallejo-Fernandez and K. O'Grady
 In Press JAP
- Compositional dependence of antiferromagnetic anisotropy in IrMn/CoFe exchange bias systems
 N.P. Aley and K. O'Grady
 J. Appl. Phys. (2011) Vol 109, 07D719
- 275. Sample fabrication effects in exchange bias systems. R Hussain, B Kaeswurm and K O'Grady J. Appl. Phys. (2011) Vol 109, 07E533
- Optimization of exchange-biased Heusler alloys. H Endo, A Hirohata, T Nakayama and K O'Grady J Phys D: Appl Phys. 44, (2011) 145003
- 277. Enhancement of Exchange Bias in the Co₂FeSi/IrMn System N P Aley, S Takayama, A Hirohata, K O'Grady IEEE Trans Mag. Vol 47, No 10 (2011)

278. An analysis of minor hysteresis loops of nanoparticles for hyperthermia. A G Roca, G Vallejo-Fernandez, K O'Grady IEEE Trans Mag, Vol 47, No 10, 2878-2881 (2011) 279 The Origin of Athermal Training in Polycrystalline Metallic Exchange Bias Thin Films B Kaeswurm and K O'Grady Appl. Phys. Lett., Vol 99, 22 (2011) 280 Activation Volumes in Co₂FeSi Thin Films J Sagar, L R Fleet, A Hirohata and K O'Grady IEEE Trans Mag Vol 47, No 10 (2011) 281 Effect of Nonmagnetic Dilutions on the Blocking Temperature of Exchange Biased **Systems** G Vallejo-Fernandez and K O'Grady IEEE Trans Mag Vol 47, No 10 (2011) 282 Laver-by-laver Crystallization of Co₂FeSi Heusler Alloy Thin Films L R Fleet, G Cheglakov, K Yoshida, V K Lazarov, K O'Grady, T Nakayama and A Hirohata J Phys D: Applied Phys 45 (2011) 032001 283 Effect of grain size on exchange-biased Heusler alloys H Endo, A Hirohata, J Sagar, L R Fleet, T Nakayama and K O'Grady J Phys D: Appl Phys. 44, (2011) 345003 284 Magnetic orientation in advanced recording media J Chureemart, P Chureemart, R Evans, R W Chantrell and K O'Grady J Phys D: Appl Phys 44 (2011) 455002 285 The effect of interfaces on magnetic activation volumes in single crystal Co2FeSi Heusler alloy thin films J Sagar, H Sukegawa, L Lari, V Lazarov, S Mitani, K O'Grady & A Hirohata Appl Phys Lett 101, (2012) p102410 286 Effect of seed layers on polycrystalline Co2FeSi thin films J Sagar, C N T Yu, C Pelter, J Wood, L Lari, A Hirohata & K O'Grady IEEE Trans Magn, 48, (2012) 4006 287 Effect of interface structure on exchange biased Heusler alloy films H Endo, A Hirohata, J Sagar, L R Fleet, T Nakayama & K O'Grady IEEE Trans Magn 48 (2012) 2896 288 Characterisation of Interface Spin Clusters in Exchange Bias systems N C Cramp, R Carpenter & K O'Grady

IEEE Trans Magn, 48 (2012) 2881

- 289 Effect of Frequency & Field Amplitude in Magnetic Hyperthermia A G Roca, B Weise, J Timmis, G Vallejo-Fernandez & K O'Grady IEEE Trans Magn, 48 (2012) 4054
- Effect of Mn Interface Doping in Polycrystalline Exchange Bias Thin Films R Carpenter, N C Cramp & K O'Grady IEEE Trans Magn, 48 (2012) 4351
- 291 Media Design and Orientation in Perpendicular Media J Chureemart, P Chureemart, J Pressesky, T Nolan and K O'Grady IEEE Trans Magn 49 (7) (2013)
- 292. The effect of SiO₂ content on activation volumes in exchange coupled composite media J Chureemart, L Lari, T P Nolan, K O'Grady J. Appl. Phys. **114**, 083907 (2013)
- Mechanisms of hyperthermia in magnetic nanoparticles G Vallejo-Fernandez, O Whear, A G Roca, S Hussain, J Timmis, V Patel and K O'Grady J Phys D: Appl Phys **46** (2013) 312001 (6pp)
- Effect of the distribution of anisotropy constants on hysteresis losses for magnetic hyperthermia applications
 G Vallejo-Fernandez, K O'Grady
 Appl. Phys. Lett. **103**, 142417 (2013)
- Interfacial Spin Cluster Effects in Exchange Bias Systems R Carpenter, G Vallejo-Fernandez and K O'Grady JAP 115, 17D715 (2014)
- 296 Effect of Grain Cutting in Exchange Biased Nano Structures R Carpenter, A Vick, A Hirohata, G Vallejo-Fernandez and K O'Grady JAP 115, 17B905 (2014)
- 297 Coercivity and Interfacial Spin Clusters in Exchange Bias Systems R Carpenter, N C Cramp, G Vallejo-Fernandez and K O'Grady J Magn Soc Jpn, **38**, 61-65 (2014)
- Domain Wall Pinning for Racetrack Memory Using Exchange Bias I Polenciuc, A J Vick, D A Allwood, T J Hayward, G Vallejo-Fernandez, K O'Grady and A Hirohata. Appl. Phys. Lett. 105, 162406 (2014)
- A comparative measurement technique of nanoparticle heating for magnetic hyperthermia applications.

 A Drayton, J Zehner, J Timmis, V Patel, G Vallejo-Fernandez and K O'Grady J. Phys. D. Appl. Phys. **50** (2017) 495003 (6pp)

300 HAMR Media Based on Exchange Bias

K Elphick, G Vallejo-Fernandez, T J Klemmer, J-U Thiele and K O'Grady

Appl. Phys. Lett. 109, 052402 (2016)

HAMR Media Based on Exchange Bias US Patent Application No: 14/938,139

Publication No: 2016/0247531 Publication Date: 25th August 2016

Measurement of the Distribution of Anisotropy Constants in Magnetic Nanoparticles for Hyperthermia Applications

A A McGhie, C Marquina, K O'Grady and G Vallejo-Fernandez

J. Phys.D. Appl. Phys. **50** (2017) 455003 (6pp)

Development of antiferromagnetic Heusler alloys for the replacement of iridium as a critically raw material.

A Hirohata, T Huminiuc, J Sinclair, H Wu, M Samiepour, G Vallejo-Fernandez, K O'Grady, J Balluf, M Meinert, G Reiss, E Simon, S Khmelevskyi, L Szunyogh, R Y Diaz, U Nowak, T Tsuchiya, T Sugiyama, T Kubota, K Takanashi, N Inami, K Ono. J. Phys. D. Appl. Phys. **50** (2017) 443001 (14pp)

- 2) Non-refereed contributions
- 1. On the Origins of CAMST

K O'Grady

CAMST Newsletter Read/Write 12 (1992)

2. UK's First AGFM

K O'Grady

SERC Magnetic Materials Initiative Newsletter 'Newsline' V2 (1995)

3. Brite-Euram Bid on Dispersions

K O'Grady

CAMST Newsletter Read/Write 12 (1992)

4. Review of 'A Guide to Magnetic Particle Inspection'

by D Lovejoy, published Chapman and Hall

K O'Grady

CAMST Newsletter Read/Write 20 (1994)

5. Report on Intermag/MMM Session

K O'Grady

IEEE Magnetic Society Newsletter 32 (2) (1994)

6. Ultrafine Magnetic Measurements

K O'Grady

Advances Wales 7 (1994) p5 (WDA Newsletter)

7. Magnetic Materials Research Group

K O'Grady

Advances Wales 8 (1995) (WDA Newsletter)

8. Report of the Particulate Media Area

K O'Grady

CAMST Newsletter Read/Write vol 22 (1995)

9. IMT Thematic Network on Thin Film Media

K O'Grady

CAMST Newsletter Read/Write vol 24 (1996)

10. Modelling of Interaction Effects in Fine Particle Systems (Abstract)

RW Chantrell, GN Coverdale, M el Hilo and K O'Grady

J. Appl. Phys. 79(8) (1996)

11. Field Induced Aggregation in Ferrofluids

K. O'Grady and H.D. Williams

Proceedings of ISHMFA'97 (Sendai, Japan)

12. The Development of a Transverse Reversible ac Susceptometer

G.R. Jones and K.O'Grady

PREP 1999 (IOP London)

13. Recent Activities in the EPSRC Advanced Magnetics Programme.

'Magnews' The international newsletter of UK MAGSOC.

Summer 1998, Autumn 1998, Winter 1998, Spring 1999.

14. EPSRC Advanced Magnetics Programme.

IOP Magnetism Group Newsletter

May 1998, December 1998, April 1999.

15. Crystallographic Effects in Thin Film Media

H Laidler and K O'Grady

Datatech: State of the Art Technology for the Data Storage Professional, ICG Publishing Ltd 1998.

From 2000 I have not kept records of these short reports

(iv) Papers published in refereed conference proceedings

1. Magnetic Reversal and Interaction Effects in BaFe Media, *P.I. Mayo, M. el Hilo, K. O'Grady and R.W. Chantrell, Proc. 1st Int Conf on BaFe, Kalamata 1992.

2. Remanence Enhancement in Isotropic Granular Solids
=M el Hilo, K O'Grady and R W Chantrell

Proc. 8th Int Symp on Magnetic Anisotropy and Coercivity in RE-TM Alloys. Birmingham (1994) p447-454

3. Grain Boundary Segregation in Thin Film Media

*K.O'Grady and H.Laidler

Proc Int. Conf on Grain Boundary Effects B'ham Sept.1999

4. Selected papers from the 2002 International Magnetics Conference (Intermag 2002) RAI Conference Center, Amsterdam, The Netherlands. Apr 28-May 2, 2002 – Foreword C Lodder, R Indeck, J Chapman, K O'Grady, J De Boeck and D Weller. IEEE Trans.Mag. (Sept 2002) 38, 5, p.1858

5. Biomedical Application of Magnetic Nanoparticles

K O'Grady,

J. Phys. D: Appl. Phys., (July 2008), 36. 13

6. Preface: Proceedings of the 11th Joint MMM-Intermag Conference, 18-22 January 2012,

Washington DC, USA

K O'Grady

J. Appl. Phys. (1st May 2010), 107, 9

6. Eleventh Joint MMM-Intermag Conference 2010, Conference Chair's Foreword

K O'Grady.

IEEE Trans.Mag (June 2010) 46,6, p1285

(v) Editorial duties

1998-2001 Member of Editorial Board. J Phys D: Applied Physics

IOP Publishing Ltd, Bristol, UK

2001-2012 Associate Editor. J Phys D: Applied Physics

IOP Publishing Ltd, Bristol, UK

Nature of duties: Chair of sub-board A: Magnetism, Superconductors and Photonics

Adjudication of disputed works Commissioning Review Articles

Writing Editorials Policy decisions

(vi) All other works

Invited Talks from 2006

- 1) February 2006, International Workshop on Magnetic Fluids, Dresden.
 - Ferrofluids with High Anisotropy Particles
- 2) March 2006, Institute of Physics Plasma Group, London.
 - Controlled Grain Size Deposition in Magnetic Thin Films
- 3) June 2006, MmdE 2006 & ROMSC, Romania.
 - Thermal Instability in Exchange Biased Materials
- 4) June 2006, Seagate Pittsburgh.
 - Thermal Instability in Exchange Biased Materials
- 5) June 2006, RSC Short Course, Sheffield.
 - Fine Particle Magnetism
- 6) July 2006, Institute of Materials, Sheffield.
 - The York-JEOL Centre
- 7) August 2006, Asia Pacific Data Storage Conference, Taiwan.
 - Magnetic and Recording Properties of CoCrPt/SiO₂ Media
- 8) August 2006, ICMFS Sendai, Japan.
 - Bulk and Interface Effects in Exchange Bias Systems
- 9) October 2006, CSIC Madrid.
 - Thermal Instabilities in Exchange Biased Materials
- 10) November 2006, Seagate Technology Londonderry.
 - Thermal Instabilities in Exchange Biased Materials
- 11) November 2006, Carnegie Mellon University.
 - Exchange Bias in Granular Systems
- 12) November 2006, Seagate Research.
 - Exchange Bias in Granular Systems
- 13) November 2006, NPL, Teddington.
 - Characterisation of Advanced Magnetic Materials
- 14) November 2006, University of Minnesota.
 - Exchange Bias in Granular Systems
- 15) March 2007, APS Denver.

- The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 16) March 2007, Seagate Research Normandale.
 - Exchange Bias in Granular Systems
- 17) March 2007, Hitachi GST San Jose.
 - The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 18) March 2007, Western Digital Inc Fremont, California.
 - The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 19) March 2007, Fudan University, Shangai, China.
 - The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 20) March 2007, Institute of Physics, Chinese Academy of Sciences, Beijing.
 - The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 21) March 2007, Nanjing University.
 - The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 22) March 2007, Soochow University.
 - The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 23) April 2007, Dresden IFW.
 - The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 24) April 2007, Dowa Electronics Ltd.
 - Development of Metal Particle Technology for Flexible Media
- 25) June 2007, Seagate Northern Ireland.
 - The Origins of Exchange Bias in Polycrystalline Metallic Thin Films
- 26) June 2007, Nanomagnet Workshop, Madrid.
 - The Physics of Biomedical Applications of Magnetic Nanoparticles
- 27) November 2007, MRS Fall Meeting Boston.
 - Factors Affecting Exchange Bias in Polycrystalline in Metallic Thin Films
- 28) December 2007, University of Warwick Departmental Colloquium
 - Liquid Magnets
- 29) March 2008, University of York Departmental Colloquium
 - A New Paradigm for Exchange Bias
- 30) March 2008, University of Delft
 - Magnetic Nanoparticles for Artificial Silia
- 31) July 2008, Dowa Electronics Ltd, Japan

- The Magnetic Properties of Metal Particles
- 32) July 2008, University of Tohoku
 - Magnetisation Reversal in Composite Media
- 33) July 2008, IEEE TMRC Conference
 - Magnetisation Reversal in Exchange Coupled Composite Media
- 34) January 2009, York/Tohoku Seminar, Japan
 - Magnetisation Reversal in Exchange Coupled Composite Media
- 35) January 2009, Toshiba Research Centre, Kawasaki
 - Mechanisms of Exchange Bias
- 36) February 2009, Joint Physics/Biology Seminar, University of York
 - Magnetic Nanoparticles for Biomedical Application
- 37) June 2009, IEEE ROMSC Iasi
 - Control of EB in Polycrystalline Systems.
- 38) May 2009, NTU, Taipei, Tsing Hua University
 - Mechanisms of Exchange Bias
- 39) June 2009, University of Cardiff
 - Mechanisms of Exchange Bias
 - Ferrofluids
- 40) August 2009, IEEE Magnetics Society Summer School, Nanjing 2 lectures
- 41) 2010. IEEE Magnetics Society Distinguished Lecturer
 - A New Paradigm for Exchange Bias in Polycrystalline Thin Films

12-Jan-10	IEEE Santa Clare Chapter, US
13-Jan-10	Hitachi GST, San Jose, US
14-Jan-10	Seagate, US
15-Jan-10	University of Minnesota, US
00 Feb 10	Seagate Technology, Northern Ireland
17-Feb-10	University of Glasgow, UK
10-Mar-10	Manchester, UK
16-Mar-10	Sheffield, UK
23-Mar-10	Grenoble, France
24-Mar-10	Lyon, France
25-Mar-10	Paris, France
12-Apr-10	UPM,Spain
13-Apr-10	Zaragoza, Spain
15-Apr-10	University of Barcelona, Spain
16-Apr-10	ICAMB

11-May-10	Conference - National Meeting on Condensed Matter Physics, Sao, Paulo, Brazil
17-May-10	University, Belo Horizonte, Brazil
18-May-10	UFRGS, Porto Allegro, Brazil
19-May-10	University of Sao Paulo, Brazil
20-May-10	Brazilian Centre for Physics Research (CBPF), Rio de Janeiro, Brazil
21-May-10	Universidade Federal de Pernambuco, Recife, Brazil
04-Jun-10	Rome, Italy
04-Jul-10	National Taiwan University, China
07-Jul-10	Taiwan, China
07-Jul-10 08-Jul-10	University of Hong Kong
09-Jul-10	Nanjing, China
20-Jul-10	Tohoku University, Japan
21-Jul-10	Tokyo Institute of Technology, Japan
21-Jul-10 22-Jul-10	Nagaoka, Japan
23-Jul-10	University of Osaka, Japan
29-Jul-10	Cambridge, UK
12-Aug-10 13-Aug-10	Rossendorf, Germany Kaiserslautern, Germany
15-Aug-10 16-Aug-10	•
C	Dresden, Germany
17-Aug-10	Dresden, Germany
06-Sep-10	University of Western Australia, Perth, Australia
08-Sep-10	University of New South Wales Australian Defence Force Academy, Canberra, Australia
09-Sep-10	Australian Nuclear Science and Technology Organisation, Sydney, Australia
10-Sep-10	University of Wollongong, New South Wales, Australia
13-Sep-10	Monash University, Victoria, Australia
16-Sep-10	Data Storage Institute, Singapore
01-Nov-10	Colorado State University, Fort Collins, US
02-Nov-10	National Institute of Standards & Technology, Boulder, Colorado, US
03-Nov-10	University of Colorado at Colorado Springs, US
04-Nov-10	Seattle, US
08-Nov-10	Massachusetts Institute of Technology, US
08-Nov-10	Northeastern University, Boston, US
09-Nov-10	John Hopkins University, Baltimore, US
10-Nov-10	National Instute of Standards & Technology, Gaithersburg, US
10-Nov-10	George Washington University, Washington DC, US
11-Nov-10	MINT Centre, University of Alabama, US
11 1107 10	Time Come, Chirotony of Finadama, Co

42) August 2009, IEEE Magnetics Summer School, Nanjing University, China

- Basic Magnetism
- Magnetic Liquids

43) 2010, IEEE Magnetics Society Summer School, Dresden Basic Magnetism

- Magnetic Liquids

- 44) August 2011, IEEE Magnetics Society Summer School, New Orleans
 - Basic Magnetism
 - Magnetic Liquids
- 45) September 2012, JEMS, Parma, Italy
 - Optimization of Exchange Bias in Polycrystalline Thin Films. (Semi-plenary)
- 46) October 2012, Magnetic Materials Conference, Huangshan, China
 - Control of Exchange Bias in Polycrystalline Films for Applications
- 47) November 2012, IMR Tohoku University, Japan
 - Origin of Magnetic Hyperthermia

B2 Research Funding

- **1. 1984.** £60,000 Wolfson Foundation.
 - 'Magnetic Inks for Automatic Document Processing'.
 - *K. O'Grady and S.W. Charles (Dept. of Chemistry UCNW),
- 2. 1984. £5,000 Rolls Royce plc of Derby.
 - 'A Magnetic Filter for the Removal of Wear Particles'.
 - *K. O'Grady,
- 3. 1985 £3,600 Russell Attitude Systems Ltd of Cheltenham.
 - 'Magnetic Filtration of Ferrofluids'.
 - *K. O'Grady,
- **4. 1985** £2,600 Control Data Corporation of Brynmawr.
 - 'Evaluation of Switching Field Distributions in Data Tape'.
 - *K. O'Grady,
- **5. 1985** £7,300 from SERC.
 - 'A Study of the Effects of Dipolar Interactions in Particulate Systems'.
 - *R.W. Chantrell, A Bradbury and K. O'Grady,
- **6. 1985** SERC CASE Studentship in Collaboration with Xidex UK Ltd.
 - 'The Effects of Magnetic Viscosity on Digital Recording Processes'.
 - *K. O'Grady,
- 7. 1985 SERC CASE Studentship in Collaboration with Gestetner Mfg Co.
 - 'The Properties of Toners for Magnetography'.
 - *K. O'Grady,
- **8. 1986** SERC CASE Studentship in Collaboration with Oxford Instruments Ltd providing £75,000 in additional support.

'The Development and Applications of a High Field Vibrating Sample Magnetometer' *K. O'Grady,

9. 1986 SERC CASE Studentship in Collaboration with Data Magnetics Ltd of Deeside.

'The Anisotropy of Magneto-optic Recording Media'.

*K. O'Grady,

10. 1986 SERC CASE Studentship in Collaboration with Russell Attitude Systems Ltd of Cheltenham.

'HGMS of Ferrofluids'

*K. O'Grady,

11. 1987 £8,500 from Xerox UK Ltd.

'Development of a dc Permeameter'.

*K. O'Grady,

12. 1987 £102,000 from Video-jet Systems Inc of Chicago.

'Development of Magnetic Inks for Ink-jet Printing'.

*K. O'Grady and S.W. Charles

13. 1988 £5,500 from B.P. International Ltd.

'Interaction Effects in Magnetic Dispersions'.

*K. O'Grady,

14. 1989 £100,265 SERC grant in collaboration with Lancashire Polytechnic and Keele University. This grant was an invited bid with all resources coming to UCNW.

'A Study of Time Dependent Effects in Magnetic Materials, Using a Vibrating Sample Magnetometer'.

*K. O'Grady, R.W. Chantrell and E.W. Williams,

15. 1989 £70,000 as part of EEC CAMST programme.

'Magnetic Reversal in Particulate Media'.

*K. O'Grady,

16. 1989 £140,000 SERC grant in collaboration with Keele University. UCNW share £42,500.

'Laser Annealing of Magneto-optic Films'.

=E.W. Williams, W.G. Stirling and K. O'Grady,

17. 1989 SERC CASE Studentship in collaboration with Sperry Sun UK Ltd.

'Interaction Effects in Ferrofluids'.

*K. O'Grady,

18. 1989 £10,000 from Post Office Research.

'Development of Magnetic Inks'.

*K. O'Grady and S.W. Charles

19. 1989 £3,100 from AERE Harwell Laboratory.

'Magnetic Measurements on High-T Superconductors'.

*K. O'Grady,

20. 1989 £6,000 from IBM Corp., San Jose.

'Magnetic Evaluation of Thin Film Recording Media'.

*K. O'Grady,

21. 1989 £3,100 from Sperry Sun UK Ltd.

'Magnetic Measurements on Ferrofluids'.

*K. O'Grady,

22. 1990 £60,000 SERC collaborative research grant with Xidex UK Ltd and Lancashire Polytechnic. All resources to UCNW.

'Characterisation of Magnetic Pigment Dispersions'.

*K. O'Grady and R.W. Chantrell,

23. 1990 £59,400 SERC in collaboration with Keele and Liverpool Universities. All resources to UCNW.

'Magnetic Studies Using an A.G.F.M.'

*J. Popplewell, K. O'Grady, R.W. Chantrell and C.E. Johnson,

24. 1990 £15,000 from IBM Corp. San Jose.

'Magnetic Measurements on Thin Film Recording Media'

*K. O'Grady,

25. 1990 £15,400 from 3M Corp. St. Paul, USA.

'Measurements on High Density Recording Media'

*K. O'Grady,

26. 1991 355,000 ecu from EC Brite-Euram Programme.

'Development of Ferrofluids and Complimentary Devices'

*K. O'Grady and S.W. Charles,

27. 1992 £74,000 from SERC

'Interaction Mechanisms in Thin Films and Multilayers'

*K. O'Grady

28. <1992 400,000 ecu Administered by University of Twente.

'CAMST II' EC Meeting and Collaboration Project.

29. 1992 £255,000 ecu from EC Brite-Euram Programme

'Characterisation of Dispersions for Process Control in the Production of Particulate Magnetic Media'

Media

*K O'Grady

30. 1992 £3,300 for SERC Visiting Fellowship for Prof. R. Street.

'Studies of Magnetic Viscosity'

*R.W. Chantrell, J. Popplewell and K. O'Grady

31. 1993 £71,000 from SERC.

'Magnetic and Transport Properties of GMR Films'

<J.F. Gregg and K. O'Grady.

32. 1993 £3,500 from SERC.

'Magnetic Relaxation at Low Temperatures' *K. O'Grady.

33. 1993 £72,000 from SERC/Aerosonics

Development of a High Resolution VSM
Teaching Company Programme with Aerosonics Ltd
of Newtown, Powys
*K O'Grady

34. 1994 £30,000 p.a. for two years.

Spanish Government Scholarship for Dr M P Morales *K O'Grady

35. 1994 £33,000 from SERC.

Development of Low Temperature AGFM.

*K O'Grady

36. 1994 SERC CASE Award in collaboration with IBM UK Ltd of Havant.

'Magnetic Evaluation of Thin Film Media'

*K O'Grady

37. 1995 £73,000 for SERC/Ferroperm.

Teaching Company with Ferroperm UK Ltd of Ruthin

=A. R. Owens and K O'Grady

38. 1995 £5,200 from Seagate Technology, N. Ireland

Magnetic Properties of Thin Film Head Wafers

*K O'Grady

39. 1995 £1500 from 3M UK Ltd

Orientation Effects in Barium Ferrite Media

*K O'Grady

40. 1996 £3,000 from Thomas de la Rue Co.

Magnetic Measurements of Printing Inks

*K O'Grady

41. 1996 £55.654 EPSRC

'Switching Processes in High Density Particulate Recording Media'

*K O'Grady and DPE Dickson

42. 1996 £163,000 DTI

Teaching Company Project with Aerosonic Ltd.

*K O'Grady

43. 1996 £60,773 EPSRC plus £10,000 Seagate Magnetics Magnetic Characterisation of Advanced Thin Film Media *K O'Grady

44. 1997 £101,095 EPSRC plus £15,000 Hewlett Packard.

Magnetic Studies of Metal Evaporated Tape. K O'Grady.

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45. 1997 £139.566 EPSRC

Coercivity Mechanisms in Metal Particle Pigments.

*K O'Grady

46. 1997 EPSRC CASE Award in collaboration with Imation Research

Ltd. of Harlow. £30,000

'Magnetic Properties of Pigment Dispersions'.

*K O'Grady

47. 1998 £161,031 EPSRC

Correlation of Magnetic Properties with Microstructure in Model

Thin Film Media.

=P.J. Grundy, K. O'Grady and G.A. Jones.

48. 1998 EPSRC CASE Award in collaboration with IBM. £30,000

'Measurement of Anisotropy Fields in Thin Film Media.'

*K O'Grady

49. 1999 Collaboration on EPSRC Grant with P. Reidi.

Value to U.W.B. £18,000.

<K O'Grady

50. 1999 EPSRC £180,000, plus £20,000 Seagate Technology

Magnetisation Reversal in Spin-valves.

*H. Laidler, A.K. Petford-Long and K. O'Grady.

51. 1999 Seagate Technology, £2000

Magnetic Measurements on Spin-valves

*K O'Grady

52. 1999 Quantum Corp. \$4000

Magnetic Measurements of Thin Film Media

*K O'Grady

53. 1999 Seagate Media Division \$30,000

Supplementary funding for EPSRC grant from the Seagate Plan

*K O'Grady

54. 1999 EPSRC grant £124,000

Thermally Activated Processes in Thin Film Media *K O'Grady

55. 2000 Seagate Research Division £30,000

for Post Graduate student support

*K O'Grady

56. 2000 DERA £6.000

Magnetic Susceptibility Measurements of Particles *K O'Grady

57. 2002 EPSRC £162.877

Synchroton X-Ray Measurements K O'Grady

58. 2001/2002 Dowa Mining Co, Okayama, Japan circa £20,000

Salaries and services associated with patent dispute

*K O'Grady

59. 2001 Seagate Research Division £30,000

Post Graduate student support

*K O'Grady

60. 2001 EPSRC £55,891

Amp Network: Adv. Recording Media

K O'Grady

61. 2001. Patent Dispute Sony/Dowa versus Bayer Ag

Contract and consultancy on behalf of SEL Inc of New York and Dowa Mining Company Ltd of Okayama, Japan

Total Value \$250,000

K O'Grady

62. 2002 CEC Research Training Network – NEXBIAS €1.4 million

=K O'Grady (and six other universities)

63. 2002 European Space Agency €100,000

Funding for Post Graduate student

*K O'Grady

64. 2002 Novel Deposition Technology for Magnetic Thin Films

DTI ISD LINK programme in collaboration with Plasma Quest Ltd

K O'Grady, M J Thwaites and P J Grundy

£270,518 (project value £541,036)

65. JEOL UK Ltd. £1.05M for the establishment of York-JEOL Centre for Nanolithography and Analysis

B Cantor, K O'Grady and S P Tear

66. 2003 Novel Deposition Technology for Magnetic Thin Films (2nd grant)

DTI/EPSRC LINK programme

K O'Grady, M J Thwaites and P J Grundy

Total Value £150k Value to York £150k

67. 2004 The York-JEOL Centre

£1.65M from Yorkshire Forward MNT Programme

B Cantor, K O'Grady and S P Tear

68. Various dates. Magnetic Properties of Bank Note Inks

circa £10k from various sources via Bank of England

K O'Grady

69. 2005. Seagate Media Research (Fremont)

Post Graduate Student support £30k

70. 2006. Seagate Technology (N Ireland).

Post Graduate Student support £30k

71. 2007. Western Digital Inc (Fremont)

Studies of Exchange Bias \$25k

72. 2008. Western Digital Inc (Fremont)

Studies of Exchange Bias \$25k

73. 2008. Western Digital Inc (Fremont)

Studies of Exchange Bias \$25k

74. 2008. Western Digital Inc (San Jose)

Post Graduate Student support \$45k

75. 2009. EPSRC/JST

Efficient Spin Voltage/Current Generation in a Ferromagnet/Semiconductor Lateral Spin-Valve £178k

76. 2009-2012. Seagate Technology, N. Ireland

Studentship £14,000 per annum

77. 2010. EPSRC/JST

Spin Injection via Heusler Alloys, £120k

78. 2011. EPSRC

High-Resolution Electron Beam Lithography Critical Mass Grant

£2.3M

- **79. 2012-2015.** Seagate Technology Studentship. £14,000 per annum
- **80. 2012-2015.** JEOL UK Ltd Studentship. £20,000 per annum.
- 81. 2012-2015. JEOL UK Ltd Studentship. £20,000 per annum.

B3 Research Students (Year indicates graduation)

(i) Supervision

Students successfully completed PhD

1990	Dr S H Uren Dr M el Hilo Dr M Holmes	1991 Dr G B Ferguson Dr M Walker Dr P I Mayo	1993	Dr H D Williams Dr T Thomson Dr A M de Witte
1994	Dr V G Lewis	1995 Dr C P Hancock	1996	Dr P E Kelly
1998	Dr G N Philips Dr P Dova	1999 Dr M Blanco Mantecon	2000	Dr A R Goodman
2001	Dr G R Jones	2002 Dr L Holloway Dr J J Blackwell	2005	Dr J D Dutson
2006	Dr B A Jones Dr M A Gonzale Dr L E Fernande		2007	Dr G Vallejo Fernandez Dr S J F Chadwick Dr A E Virden
2009	Dr T Deakin	2010 Dr N P Aley	2011	Dr B Kaeswurm
2012	Dr L Fleet			

Students successfully completed MSc or MPhil

1995	Mr A R Goodman Mr L J Ford	2005	Mr K Schuermann
2007	Mr N Aley	2008	Mr H Khattack
2010	Mr J Chureemart	2011	Ms F Burrows Mr R Carpenter

I currently supervise or co-supervise 10 D Phil students. All my students have submitted their theses/dissertations within deadlines. None have ever failed to get the degrees for which they submitted.

(ii) Examining

I have acted as an external examiner for :-

MSc Candidate (x4)	Manchester University	(1993) (1995) (1996) (2001)
MSc Candidate (x4)	University of Salford	(1993) (1995) (2003) (2003)
PhD Candidate	University of Durham	(1993)
PhD Candidate (x4)	University of W Australia	(1994) (1996) (1999) (2002)
PhD Candidate	University of Liverpool	(1994)
PhD Candidate	Manchester Metropolitan University	(1995)
PhD Candidate	Universidad de Barcelona	(1998)
PhD Candidate	Newcastle University	(1998)
PhD Candidate	Coventry University	(1999)
PhD Candidate (x3)	University of Central Lancashire	(1999) (2001) (2002)
PhD Candidate	Oxford University	(1999)
PhD Candidate	Univrsitée de Grenoble	(2001)
PhD Candidate	Plymouth University	(2004)
PhD Candidate	University of Cambridge	(2003)
PhD Candidate	Birmingham University	(2010)

B4 Other research activities and distinctions

Research Distinctions

1995-1998	Chair of Technical Committee, IEEE Magnetics Society
1998-2000	Elected Member IEEE Magnetics Society AdCom
2000-2002	Secretary/Treasurer of IEEE Magnetics Society (elected)
2002-2004	Vice President IEEE Magnetics Society (elected)
2004-2006	President IEEE Magnetics Society (progression)
2006-2008	Past President IEEE Magnetics Society
2008-2010	Elected Member IEEE Magnetics Society AdCom
2010	Retired from all IEEE positions

The IEEE is the US based largest professional society in the world with 350,000 members in 93 societies. The Magnetics Society is the largest professional body in my field with 3,500 members and a turnover of \$3M. I am the first non North American to be elected President of the Magnetics Society in its 50 year history. In consequence I have had a self imposed moratorium on invited papers at our major conferences (Intermag and MMM) which have a typical attendance of 1,300 scientists.

I am a member of the International Committees of the following conferences:

- 1. Joint European Magnetics Symposium (Grenoble 2002, Dresden 2004, San Sebastian 2006)
- 2. PMRC (always Japan 2000-date)
- 3. ICFPM (Pittsburgh 2002, London 2004)
- 4. Programme Co-Chair, Intermag, Amsterdam
- 5. ISPMM (Sendai 2003, Singapore 2005)
- 6. ISAMT (Taiwan) 2005
- 7. International Conference on Magnetism (Italy 2003, Kyoto 2006)
- 8. Asia/Pacific Intermag (Nagoya 2005)
- 9. European Intermag Organising Committee (Chairman) (Amsterdam 2002, Madrid 2008)
- 10. Programme Co-chair Intermag Madrid (2008)
- 11. Conference General Chair, Joint Intermag/MMM Conference 2010 in Washington DC
- 12. International Conference on Fine Particle Magnetism 2013

C. TEACHING

C1 List of courses and evidence of teaching quality

1982 - 1984 at UCNW Physics Department

Part I 20 Lectures on Atomic & Nuclear Physics.

Part II (i) 12 Lectures on Solid State Physics.

8 Lectures on Crystallography.

Part I Laboratory 40 X 3hr demonstrating.

1 new experiment developed.

Part II (ii) Laboratory 20 X 9hr demonstrating. (1983/4 only)

2 new experiments developed.

Post Graduate 20 lectures on Magnetism and Magnetic Materials.

1983 - 1984 at Loughborough University of Technology

1st Year 20 Lectures on Mechanics.

5 Lectures on Vector Algebra.

3rd Year 15 Lectures on Solid State Physics.

1st Year Laboratory 40 X 3hr demonstrating.

2 new experiments developed.

Acted as Year Tutor for first year Physics degree.

1985 - 1988 at UCNW Physics Department

1st Year 20 Lectures on Atomic & Nuclear Physics

Part II (i) 10 Lectures on Crystallography.

Part II (ii) 15 Lectures on Magnetism and Magnetic Materials.

Part I Laboratory 40 X 3hr demonstrating.

4 experiments revised and modernized.

1986 Drew up M.Sc. Syllabus on Magnetic Recording including novel part time scheme. Course approved by Faculty Board and Academic Board but never operated due to closure of Physics Department.

This MSc course, which was drawn up in collaboration with colleagues mainly from industry, was the subject of an offer of substantial financial support by both the WDA and a consortium of four industrial companies.

1985 - 1994 at SEECS UCNW

1st Year 24 lectures on Electromagnetism

14 lectures on Atomic and Nuclear Physics

6 lectures on Laboratory Practice 20 x 3 hr Laboratory sessions 3 new experiments developed

2nd Year 12 lectures on Solid State Physics

12 lectures on Nuclear Technology 10x3 hour Laboratory Sessions 3 new experiments developed.

3rd year 24 lectures on Magnetic Materials

12 lectures on Electromagnetic Field Theory

1994 - 1996

1st Year 24 lectures on Electromagnetism

14 lectures on Atomic and Nuclear Physics

2nd Year 24 lectures on Solid State Physics (delivered alternate years).

20x3 hour Laboratory sessions

3rd year 24 lectures on Magnetic Materials (delivered alternate years).

12 lectures on Electromagnetic Field Theory

1996 - 1999

1st Year 24 lectures on Waves and Optics

16 lectures on Electromagnetism

2nd Year 12 lectures on Electromagnetic Field Theory

12 lectures on Small Business Management

2000 - 2002

1st Year 18 lectures on Stars and Planets

2nd Year Demonstrator in Teaching Lab

3rd Year 9 lectures on EM Field Theory

4th Year 9 lectures on EM Field Theory

18 lectures on Magnetism and Magnetic Materials

2002-date

1st Year 18 lectures on Stars and Planets

2nd Year Coordinator of 2nd Year Teaching Lab

Lab redesigned and circa 20 new experiments introduced.

Initiated teaching of LabView

3rd Year 18 lectures on Magnetism and Magnetic Materials

C2 Teaching materials and courses of special significance

Designed and implemented novel design of new 2nd Year Laboratory at York. Over 20 new experiments developed. Lab has received visits form UNSW Australia, University of Glasgow and request for design from CMU, Pittsburgh, PA. High rating and feedback from students and complaints about high standard from external examiner!

Three new experiments introduced to 1st Year Laboratory and two to the 3rd Year Laboratory.

C3 Examining and assessing for undergraduate and taught postgraduate degrees

From 2004-2008 I was external examiner for all Physics degrees at the University of Liverpool.

C4 Other teaching activities and distinctions

1. From 1993 to 2000 I was the founding chairman of the BA section in North Wales organising 2 day BAYSDAYS for 1300 children in Science Week each year.

- 2. From 1992 to 2000 I was an IOP schools lecturer giving a demonstration lecture of Magnetic Liquids typically 4 times/year. I have given the lecture informally ~25 times since coming to York. The lecture was given at an EU Summer School in Biarritz in 2004 to ~100 students. The lecture was given to Tohoku Centre of Excellence in 2007 to ~300 students.
- 3. I am the co-ordinator of the EU NEXBIAS Training Network cited as one of three out of 160 exhibiting best practice.

D. ADMINISTRATION AND MANAGEMENT

D1 Departmental administrative posts - 2007 to date. Departmental Safety Officer

D2 University administrative posts

- 1. From 1 July 2005 to January 2007 I was appointed Director of the York-JEOL Centre having performed much of the role and raising all external resources (£2.65M) in an informal role from 2003.
- 2. From October 2008 I was invited to become the founding Director of the York Institute for Materials Research. The work plan and activity plan for the Institute was designed exclusively by myself and thus far has been implemented. The work plan contains a number of significant deliverables, all of which have been met.

D3 Other administrative work and distinctions

- 1. See details of my role in IEEE Magnetics Society at B4. I regard this as a research distinction but my role is largely administrative. This is the senior post in the largest professional body in my field and I am the first non-North American to be elected to this post.
- 2. From 1998-2001 I was the coordinator of the EPSRC Advanced Magnetics Programme initiating the Seagate Plan which gave additional support of \$0.5M to some 20 universities. The Seagate Plan operates to this day.
- 3. From 2000-2002 I was a member of the DTI Strategic Advisory Group on Basic Technologies.
- 4. I am a member of the Spanish Commission on Nanotechnology.
- 5. I am an advisor to the Bank of England on magnetic bank-note security. This work has generated two UK patents in the last 3 years.
- 6. I worked as an advisor to the Swedish Academy of Sciences 1997-1999
- 7. Served on a grant awarding panel for the Materials Division of Finnish Academy of Sciences 2005.