

7. Publications, 2008/2009

7.1 Publications 2008

1. **E Amsterdam, R Goodall, A Mortensen, P R Onck and J Th M De Hosson** "Fracture behaviour of low-density replicated aluminium alloy foams", *Mat Sci Eng A*, **496** (2008) 376-382.
2. **M Audronis, A Matthews and A Leyland** "Pulsed-bias sputter deposition of chromia and alumina films at low substrate temperature", *Society of Vacuum Coaters, 51st Annual Tech Conf Proc* (2008) ISSN 0737-5921, 14-19.
3. **P B S Bailey, S A Hayes, R J Hand and B Zhang** "Chemical monitoring of composite matrices by evanescent wave spectroscopy", *Adv Sci and Technol*, **56** (2008) 298-302.
4. **A S Barinov, G A Varlakova, S V Stefanovsky and M I Ojovan** "Changes of structure and properties of vitrified radioactive wastes during long-term storage in an experimental repository", *Atomic Energy*, **105(2)** (2008) 110-117.
5. **A S Barinov, G A Varlakova, I V Startceva, S V Stefanovsky, M I Ojovan and B P McGrail** "Corrosion durability of NPP vitrified radioactive waste", *Radiation Safety Issues*, **3** (2008) 22-33.
6. **M A Bashir, T Schrefl, J Dean, A Goncharov, G Hrkac, S Bance, D Allwood and D Suess** "Microwave-assisted magnetization reversal in exchange spring media", *IEE Trans Magn*, **44(11)** (2008) 3519-3522.
7. **O G Batyukhnova, A E Arustamov, S A Dmitriev, V V Agrinenko, M I Ojovan and Z Drace** "Training activities on radioactive waste management at Moscow SIA "Radon": Experience, practice, theory", *Proc WM'08 Conference*, 24th-28th February 2008, Phoenix Arizona, WM-8164, 8pp.
8. **I Betancourt, G Hrkac and T Schrefl** "Micromagnetic simulation of domain wall dynamics in permalloy nanotubes at high frequencies", *J Appl Phys*, **104** (2008) 023915-1 – 023915-6.
9. **K J Briston, Y Peng, N Grobert, A G Cullis and B J Inkson** "Field emission from iron-filled carbon nanotubes observed in-situ in the scanning electron microscope", *Proc EMC 2008 14th Euro Microcopy Congress*, 1st-5th September 2008, Aachen, Germany, Vol 2: Materials Science, 169-170.
10. **S J Brookes, D J Searles and K P Travis** "The effect of confinement and wall structure on the kinetics of isomerisation of *n*-butane", *Molecular Simulation*, (2008) 1-14, ISBN 0892-7022 print/ISSN 1029-0435 online.
11. **B Burakov, V Gribova, A Kitsay, M Ojovan, N Hyatt and M Stennett** "Synthesis of crystalline ceramics for actinide immobilisation", *Proc 11th Int Conf Envir Remed Rad Waste Manage*, ICEM'07, 2nd-6th September 2007, Oud Sint-Jan Hospital Conference Center, Brugge, Belgium. ICEM07-7047, 5pp ASME (2008).
12. **J Dean, M A Bashir, A Goncharov, G Hrkac, S Bance, T Schrefl, A Cazacu, M Gubbins, R W Lamberton and D Suess** "Thermally induced adjacent track erasure in exchange spring media", *Appl Phys Lett*, **92** (2008) 142505-1 – 142505-3.
13. **J P Foreman, S Behzadi, D Porter, P T Curtis and F R Jones** "Hierarchical modelling of a polymer matrix composite", *J Mater Sci*, **43** (2008) 6642-6650.
14. **J Fu, M Kobayashi and J M Parker** "Terbium-activated heavy scintillating glasses", *J Luminescence*, **128** (2008) 99-104.
15. **J Fu, M Kobayashi, S Sugimoto and J M Parker** "Eu³⁺-activated heavy scintillating glasses", *Mat Res Bulletin*, **43** (2008) 1502-1508.
16. **B Glettner, F Liu, X Zeng, M Prehm, U Baumeister, M Walker, M A Bates, P Boeseck, G Ungar and C Tschierske** "Liquid-crystalline kagome", *Liquid Crystals, Angew Chem Int Ed*, **47** (2008) 9063-9066.
17. **T Gnanavel, Z Saghi, Y Peng and G Möbus** "Nanofabrication by 3D E-beam cutting", *Micro Micro*, **14** (2008) DOI: 10.1017/S1431927608085413, 2pp.
18. **V Hearnden, G Battaglia, C Murdoch, M Thornhill and S MacNeil** "Imaging of polymersome penetration into 3D tissue engineered models of oral mucosa and head and neck cancer", *Euro Cells and Mat*, **16** (2008) 58.
19. **W H Howie, F Claeysens, H Miura and L M Peter** "Characterization of solid-state dye-sensitized solar cells utilizing high absorption coefficient metal-free organic dyes", *J Am Chem Soc*, **130** (2008) 1367-1375.
20. **G Hrkac, T Schrefl, S Bance, D Allwood, A Goncharov, J Dean and D Suess** "Mutual phase locking in high-frequency microwave nano-oscillators as a function of field angle", *J Magn Magn Mat*, **320** (2008) L111-L115.
21. **J M Juoi, M I Ojovan and W E Lee** "Microstructure and leaching durability of glass composite wasteforms for spent clinoptilolite immobilisation", *J Nucl Mater*, **372** (2008) 358-366.
22. **P Kapranos** "Thixofforming: From automotive to aerospace", *APT Aluminium, Process and Product Technology*, **5(1)** (2008) 39-44.
23. **O K Karlina, V L Klimov, G Yu Pavlova and M I Ojovan** "Thermodynamic simulation and experimental study of irradiated reactor graphite waste processing with REE oxides", *Mater Res Soc Symp Proc*, **1107** (2008) 109-116.
24. **S Kelly, E M Regan, J B Uney, A D Dick, J P McGeehan, The Bristol Biochip Group, E J Mayer and F Claeysens** "Patterned growth of neuronal cells on modified diamond-like carbon substrates", *Biomaterials*, **29** (2008) 2573-2580.
25. **A J Lockwood, J J Wang, R Gay and B J Inkson** "Characterising performance of TEM compatible nanomanipulation slip-stick inertial sliders against gravity", *J Phys: Conf Series*, **126** (2008) 012096-1 – 012096-4.
26. **A Matthews and A Leyland** "Materials related aspects of nanostructured tribological coatings", *Society of Vacuum Coaters, 51st Annual Tech Conf Proc Proc* (2008) ISSN 0737-5921, 56-62.
27. **Q Mistral, M van Kampen, G Hrkac, J-V Kim, T Devolder, P Crozat, C Chappert, L Lagac and T Schrefl** "Current-driven vortex oscillation in metallic nanocontacts", *Phys Rev Lett*, **100** (2008) 257201-1 – 257201-4.

28. **G Möbus, G Yang, Z Saghi, X Xu, R J Hand, A Pankov and M I Ojovan** "Electron irradiation and electron tomography studies of glasses and glass nanocomposites", Mater Res Soc Symp Proc, **1107** (2008) 239-244.
29. **M I Ojovan** "Configurons: thermodynamic parameters and symmetry changes at glass transition entropy", **10** (2008) 334-364; <http://www.mdpi-org/entropy/list08.htm#e10030334>; <http://www.mdpi.org/entropy/papers/e10030334.pdf>.
30. **M I Ojovan** "Viscosity and glass transition in amorphous oxides", Advances in Condensed Matter Physics (2008) Article ID 817829, 23pp; <http://www.hindawi.com/GetArticle.aspx?doi=10.1155/2008/817829>.
31. **M I Ojovan and F G F Gibb** "Exploring the earth's crust and mantle using self-descending, radiation-heated, probes and acoustic emission monitoring", Chapter 7 in: Nuclear Waste Research: Siting, Technology and Treatment. Editor: Arnold P Lattefer, ISBN 978-1-60456-184-5, Nova Science Publishers Inc (2008) 207-220.
32. **M I Ojovan, J M Juoi, A R Boccaccini and W E Lee** "Glass composite materials for nuclear and hazardous waste immobilisation", Mater Res Soc Symp Proc, **1107** (2008) 245-252.
33. **M I Ojovan, J M Juoi and W E Lee** "Application of glass composite materials for nuclear waste immobilisation", J Pak Mater Soc, **2** (2008) 72-76.
34. **J M Parker** article on glass flow in "Do polar bears get lonely?" New Scientist, (2008) 41-45.
35. **Y Peng, T Cullis and B Inkson** "Accurate electrical testing of individual gold nanowires by in situ scanning electron microscope nanomanipulators", Appl Phys Lett, **93** (2008) 183112-1 – 183112-3.
36. **L Perlin, S MacNeil and S Rimmer** "Production and performance of biomaterials containing RGD peptides", Soft Matter, **4** (2008) 2331-2349.
37. **M Prades, H Beltrán, N Masó, N Masó, E Cardoncillo and A R West** "Phase transition hysteresis and anomalous Curie-Weiss behaviour of ferroelectric tetragonal tungsten bronzes $Ba_2RETi_2Nb_3O_{15}$; RE=Nd, Sm", J Appl Phys, **104** (2008) 104118-1 – 104118-7.
38. **M Prehm, F Liu, X Zeng, G Ungar and C Tschierske** "2D and 3D ordered columnar liquid crystal phases by bundles of bolaamphiphiles and swallow-tail side chains", J Am Chem Soc, **130** (2008) 14922-14923.
39. **M Rosso, D Ugues, E Torres, M Perucca and P Kapranos** "Performance enhancements of die casting tools through PVD nanocoatings", Int J Mater Form, DOI 10.1007/s12289-008-0 - 131 z, Springer/ESAFORM 2008.
40. **Z Saghi, X Xu and G Möbus** "Three-dimensional metrology and fractal analysis of dendritic nanostructures", Phys Rev B, **78** (2008) 205428-1 – 205428-5.
41. **Z Saghi, T Gnanavel, Y Peng, B J Inkson, A G Cullis, M R Gibbs and G Möbus** "Tomographic nanofabrication of ultrasharp three-dimensional nanostructures", Appl Phys Lett, **93** (2008) 153102-1 – 153102-3.
42. **D C Sayle, S Seal, Z Wang, B C Mangili, D W Price, A S Karakoti, S V T N Kuchibhatla, Q Hao, G Möbus, X Xu and T X T Sayle** "Mapping nanostructure: A systematic enumeration of nanomaterials by assembling nanobuilding blocks at crystallographic positions", Am Chem Soc, **2(6)** (2008) 1237-1251.
43. **A Sittichokechaiwut and G C Reilly** "Development of a Culture System to Modulate Tissue Engineered Bone Formation by Varying Loading Conditions", Proc 7th Intl Confon Manufacturing Research 2009. 8pp.
44. **L M Spasova, F G F Gibb and M I Ojovan** "Characterisation of partial melting and solidification of granite E93/7 by acoustic emission technique", Mater Res Soc Symp Prov, **1107** (2008) 75-82.
45. **L M Spasova and M I Ojovan** "Characterisation of Al corrosion and its impact on the mechanical performance of composite cement wastefoms by the acoustic emission technique", J Nucl Mater, **375** (2008) 347-358.
46. **L M Spasova, M Ojovan, M Hayes and H Godfrey** "Acoustic emission monitoring of cementitious wastefoms", Proc 11th Int Conf Envir Remed Rad Waste Manag ICEM'07, 2nd-6th September 2007, Out Sint-Jan Hospital Conference Center, Bruges, Belgium, ECEM07-7049, ASME (2008) 8pp.
47. **L Wang, X Nie, J Housden, E Spain, J C Jiang, E I Meletis, A Leyland and A Matthews** "Material transfer phenomena and failure mechanisms of a nanostructured Cr-Al-N coating in laboratory wear tests and an industrial punch tool application", Surf Coat Technol, **203** (2008) 816-821.
48. **X J Xu, A Lockwood, W Guan, R Gay, Z Saghi, J J Wang, Y Peng, B J Inkson and G Möbus** "MRT Letter: Full-tilt electron tomography with a piezo-actuated rotary drive", Microsc Res Tech **71** (2008) 773-777.
49. **X Xu, Z Saghi, G Yang, R Gay and G Möbus** "Electron tomography of CeO_2 nanostructures", J Phys: Conf series, **126** (2008) 012016-1 – 012016-4.
50. **G Yang, R Hand and G Möbus** "EELS studies of nanoprecipitates in borosilicate glasses", J Phys: Conf Series, **126** (2008) 012021-1 – 012021-4.

7.2 Publications 2009

- 51. D A Allwood, J Dean, M T Bryan and A Baker** "Bringing science research into secondary schools", *Phys Ed*, **44(6)** (2009) 627-632.
- 52. P S Anderson, S Guerin, B E Hayden, Y Han, M Pasha, K R Whittle and I M Reaney** "Optimization of synthesis of the solid solution, $Pb(Zr_{1-x}Ti_x)O_3$ on a single substrate using a high-throughput modified molecular-beam epitaxy technique", *J Mater Res*, **24(1)** (2009) 164-172.
- 53. M Audronis, O Jimenez, A Leyland and A Matthews** "The morphology and structure of PVD ZrN-Cu thin films", *J Phys D: Appl Phys*, **42** (2009) 085308-1 – 085308-10.
- 54. D A A Aziz, I Sterianou and I M Reaney** " $(1-x)CaTiO_3-x(Li_{0.5}Nd_{0.5})TiO_3$ for ultra-small dielectrically loaded antennas", *J Mater Sci*, **44(23)** (2009) 6247-62500.
- 55. A Baker, M Billiard, K Brown, A Boadsby, S Green, C Howard, S Kodippili, A Newton, X Ning, M Stead, L Vallance, L Zang, D A Allwood, M T Bryan and J Dean** "A study of hard:soft layer ratios and angular switching in exchange coupled media", *J Appl Phys*, **106** (2009) 053902-1 – 053902-4.
- 56. R Baker, G Möbus and P D Brown** eds *J Phys Conf Ser*, **126** (2008) IoP Publishing.
- 57. A S Barinov, G A Varlakova, L V Startceva, S V Stefanovsky and M I Ojovan** "Infrared spectroscopy structural analysis of corroded nuclear waste glass K-26", in: Scientific Basis for Nuclear Waste Management XXXII, edited by R B Rebak, N C Hyatt, D A Pickett (*Mater Res Soc Symp Proc 1124*, Warrendale, PA, 2009) Q03-08, 7pp.
- 58. M A Bashir, T Schrefl, D Suess, J Dean, A Goncharov, G Hrkac, S Bance, D A Allwood and J Fidler** "Exchange coupled bit patterned media under the influence of RF-field pulses", *IEEE Trans on Magn*, **45(10)** (2009) 3851-3854.
- 59. S Basu, P W Fry, M R J Gibbs, T Schrefl and D A Allwood** "Control of the switching behavior of ferromagnetic nanowires using magnetostatic interactions", *J Appl Phys*, **105** (2009) 083901-1 – 083901-6.
- 60. O G Batyukhnova, A E Arustamov, S A Dmitriev, M I Ojovan and Z Drace** "Key Issues of Personnel Education and Training in the Context of Changing Radioactive Waste Management Conception", *Proc. WM'09 Conference*, 1st-5th March 2009, Phoenix, Arizona, WM – 9053, (2009) 7pp.
- 61. O G Batyukhnova and M I Ojovan** "Tribochemical treatment for immobilisation of radioactive wastes", in: Scientific Basis for Nuclear Waste Management XXXII, edited by R B Rebak, N C Hyatt, D A Pickett (*Mater Res Soc Symp Proc 1124*, Warrendale, PA, (2009) Q007-20, 6pp.
- 62. A J Beck, Y A Gonzalvo, A Pilkington, A Yerokhin and A Matthews** "Positive ion mass spectrometry during an atmospheric pressure plasma treatment of polymers", *Plasma Process Polym*, **6** (2009) 9pp.
- 63. K Bertal, J Shepherd, C W I Douglas, J Madsen, A Morse, S Edmonson, S P Armes, A Lewis and S MacNeil** "Antimicrobial activity of novel biocompatible wound dressings based on triblock copolymer hydrogels", *J Mater Sci*, **44** (2009) 6233-6246.
- 64. I. Betancourt and H A Davies** "Exchange coupled nanocomposite hard magnetic alloys", *Intl Journal of Materials Engineering and Technology*, **1(1)** (2009) 53-92.
- 65. R Bhagat, M Jackson, D Inman and R Dashwood** "Production of Ti-W alloys from mixed oxide precursors via the FFC Cambridge Process", *J Electrochem Soc*, **156(1)** (2009) E1-E7.
- 66. P A Bingham, A J Connelly, R J Hand, N C Hyatt and P A Northrup** "Incorporation and speciation of sulphur in glasses for waste immobilisation", *Glass Technol, Eur J Glass Sci Technol A*, **50(3)** (2009) 135-138.
- 67. P A Bingham, R J Hand, O M Hannant, S D Forder and S H Kilcoyne** "Effects of modifier additions on the thermal properties, chemical durability, oxidation state and structure of iron phosphate glasses", *J Non-Cryst Solids*, **355** (2009) 1526-1538.
- 68. P A Bingham, N C Hyatt, R J Hand and C R Wilding** "Glass development for vitrification of Wet Intermediate Level Waste (WILW) from decommissioning of the Hinkley Point "A" site", *Mater Res Soc Symp Proc*, **1124** (2009) Materials Research Society 1124-Q03-07 6pp.
- 69. P Bredell, Z Drace, S Hudson, D Janenas, L Jova-Sed, F King, G Linsley, M Lust, I Mele, I D Metcalfe, S D Misra, L Nachmilner, M Ojovan, J Rowat and G Siraky** "Policies and strategies for radioactive waste management", IAEA Nuclear Energy Series, NW-G-1.1, STI/PUB/1396, IAEA, Vienna (2009) 68pp; http://www-pub.iaea.org/MTCD/publications/PDF/Pub1396_web.pdf.
- 70. E Buixaderas, I Gregora, S Kamba, P Kuzel and I Reaney** "Phonon anomalies in $Pb_{1-x}La_x(Zr_{0.9}Ti_{0.1})O_3$ ceramics", *Appl Phys Lett*, **94(5)** (2009) 052903-1 – 052903-3.
- 71. I Cantón, R McKean, M Charnley, K A Blackwood, C Fiorica, A J Ryan and S MacNeil** "Development of an ibuprofen-releasing biodegradable PLA/PGA electrospun scaffold for tissue regeneration", *Biotechnology and Bioengineering* (2009) 13pp.
- 72. M Charnley, K Fairfull-Smith, S Haldar, R Elliott, S L McArthur, N H Williams and J W Haycock** "Generation of bioactive materials with rapid self-assembling resorcinarene-peptides", *Adv Mater*, **21** (2009) 2909-2915.
- 73. W-T Chen, A J Williams, L Ortega-San-Martin, M Li, D C Sinclair, W Zhou and J P Attfield** "Robust antiferromagnetism and structural disorder in $Bi_xCa_{1-x}FeO_3$ perovskites", *Chem Mater*, **21** (2009) 2085-2093.
- 74. C-J Chung, P-Y Hsieh, C-H Hsiao, H-I Lin, A Leyland, A Matthews and J-L He** "Multifunctional arc ion plated TiO_2 photocatalytic coatings with improved wear and corrosion protection", *Surf Coat Technol*, **203** (2009) 1689-1693.
- 75. C-J Chung, H-I Lin, P-Y Hsieh, K-C Chen, J-L He, A Leyland and A Matthews** "Growth behaviour and microstructure of arc ion plated titanium dioxide", *Surf Coat Technol*, **204** (2009) 915-922.
- 76. F Claeysens, J N Hard, N L Allan and J M Oliva** "Solid phases of phosphorus carbide: An ab initio study", *Phys Rev B*, **79** (2009) 134115-1 – 134115-14.

77. **F Claeysens, E A Hasan, A Gaidukeviciute, D S Achilleos, A Ranella, C Reinhardt, A Ovsianikov, X Shizhou, C Fotakis, M Vamvakaki, B N Chichkov and M Farsari** "Three-dimensional biodegradable structures fabricated by two-photon polymerization", *Langmuir*, **25** (2009) 3219-3223.
78. **M Dapor, M A E Jepson, B J Inkson and C Rodenburg** "The effect of oxide overlayers on secondary electron dopant mapping", *Microsc Microanal*, **15** (2009) 237-243.
79. **M d'Aquino, C Serpico, G Bertotti, T Schrefl and I D Mayergoyz** "Spectral micromagnetic analysis of switching processes", *J Appl Phys*, **105** (2009) 07D540-1 – 07D540-3.
80. **H Davies** "Challenges in the further development of powder processed rare earth-iron-boron magnets", Proc Elsevier Conf: PM Asia 2009, Shanghai, China, 32pp; <http://www.pma-sia2009.com/presentations/>.
81. **P Day, L V Interrante and A R West** "Toward defining materials chemistry" (IUPAC Technical Report), *Pure Appl Chem*, **81(9)** (2009) 1707-1717.
82. **J S Dean, M T Bryan, D A Allwood, S Bance, M A Bashir, G Hrkac, A Goncharov and T Schrefl** "Tailoring domain-wall dynamics with uniaxial anisotropy in nanowires", *IEEE Trans Magn*, **45(10)** (2009) 4067-4069.
83. **P Deshpande, M Notara, N Bullett, J T Daniels, D B Haddow and S MacNeil** "Development of a surface-modified contact lens for the transfer of cultured limbal epithelial cells to the cornea for ocular surface diseases", *Tissue Engineering: Part A*, **15** (2009) 14pp.
84. **D Devaprakasam, P V Hatton, G Möbus and B J Inkson** "Nanoscale tribology, energy dissipation and failure of nano- and micro-silica particle-filled polymer composites", *Tribol Lett*, **34(11-19)** (2009) 11-19.
85. **T Devolder, J-V Kim, P Crozat, C Chappert, M Manfrini, M van Kampen, W Van Roy, L Lagae, G Hrkac and T Schrefl** "Time-resolved zero field vortex oscillations in point contacts", *Appl Phys Lett*, **95** (2009) 012507-1 – 012507-3.
86. **D Dhandapani, A Rao, N A Morley, A Das, M Grell and M R J Gibbs** "Effect of polymer processing on spin magnetoresistance in organic structures", *J Appl Phys*, **105** (2009) 07C702-1 – 07C702-3.
87. **F Diologent, R Goodall and A Mortensen** "Creep of aluminium-magnesium open cell foam", *Acta Materialia*, **57** (2009) 830-837.
88. **F Diologent, E Combaz, V Laporte, R Goodall, L Weber, F Duc and A Mortensen** "Processing of Ag-Cu alloy foam by the replication process", *Scripta Materialia*, **61** (2009) 351-354.
89. **F Diologent, Y Conde, R Goodall and A Mortensen** "Microstructure strength and creep of aluminium-nickel open cell foam", *Philosophical Magazine*, **89:13** (2009) 1121-1139.
90. **F Diologent, R Goodall and A Mortensen** "Surface oxide in replicated microcellular aluminium and its influence on the plasticity size effect", *Acta Materialia*, **57** (2009) 286-294.
91. **Z Drace and M I Ojovan** "The behaviours of cementitious materials in long term storage and disposal: An overview of results to the IAEA co-ordinated research project", *Mater Res Soc Symp Proc* 1193, (2009) 663-672.
92. **J W Eichler and A Matthews** "The effect of superfinishing and PVD/CVD coatings on torque and temperature of SAE 52100 rolling element ball bearings under starved lubrication conditions", Society of Vacuum Coaters, 52nd Annual Tech Conf Proc, Santa Clara, CA, (2009) ISSN 0737-5921, 614-620.
93. **F Elfalagh and B J Inkson** "3D analysis of crack morphologies in silicate glass using FIB tomography", *J Euro Ceram Soc*, **29** (2009) 47-52.
94. **M C Ferrarelli, D C Sinclair and A R West** "Possible incipient ferroelectricity in Mn-doped $\text{Na}_{1/2}\text{Bi}_{1/2}\text{Cu}_3\text{Ti}_4\text{O}_{12}$ ", *Appl Phys Lett*, **94** (2009) 212901-1 – 212901-3.
95. **M C Ferrarelli, D C Sinclair, A R West, H A Dabkowska, A Dabkowski and G M Luke** "Comment on the origin(s) of the giant permittivity effect in $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ single crystals and ceramics", *J Mater Chem*, **19** (2009) 5916-5919.
96. **A Feteira and D C Sinclair** "The influence of nanometric phase separation on the dielectric and magnetic properties of $(1-x)\text{BaTiO}_{3-x}\text{LaYbO}_3$ ($0 \leq x \leq 0.60$) ceramics", *J Mater Chem*, **19** (2009) 356-359.
97. **I A Figueroa, H A Davies and I Todd** "High glass formability for Cu-Hf-Ti alloys with small additions of Y and Si", *Philosophical Magazine*, **89(27)** (2009) 2355-2368.
98. **E Filová, N A Bullett, L Bačaková, L Grausová, J W Haycock, J Hlučilova, J Klima and A Shard** "Regionally-selective cell colonization of micropatterned surfaces prepared by plasma polymerization of acrylic acid and 1,7-octadiene", *Physiol Res*, **58** (2009) 669-684.
99. **P Fiorenza, R L Nigro, P Delugas, V Raineri, A G Mould and D C Sinclair** "Direct imaging of the core-shell effect in positive temperature coefficient of resistance-BaTiO₃ ceramics", *Appl Phys Lett*, **95** (2009) 142904-1 – 142904-3.
100. **C L Freeman, I Asteriadis, M Yang and J H Harding** "Interactions of organic molecules with calcite and magnesite surfaces", *J Phys Chem C*, **113** (2009) 3666-3673.
101. **J Fu, M Kobayashi, S Sugimoto and J M Parker** "Scintillation from Eu²⁺ in nanocrystallized glass", *J Am Ceram Soc*, **92(9)** (2009) 2119-2121.
102. **N F Garza-Montes-de-Oca and W M Rainforth** "Wear mechanisms experienced by a work roll grade high speed steel under different environmental conditions", *Wear*, **267** (2009) 441-448.
103. **L Gilmore, S MacNeil and S Rimmer** "Phosphate functional core-shell polymer nanoparticles for the release of vascular endothelial growth factor", *Chem Bio Chem*, **10** (2009) 2165-2170.
104. **S González, I A Figueroa, H Zhao, H A Davies, I Todd and P Adeva** "Effect of mischmetal substitution on the glass-forming ability of Mg-Ni-La bulk metallic glasses", *Intermetallics*, **17** (2009) 968-971.
105. **Y Han, I M Reaney, D S Tinberg and S Trolier-McKinstry** " $(111)_p$ microtwinning in SrTiO₃ thin films on $(001)_p$ LaAlO₃", *Acta Cryst B*, **65** (2009) 694-698.

- 106. A J Hand, T Sun, D C Barber, D R Hose and S MacNeil** "Automated tracking of migrating cells in phase-contrast video microscopy sequences using image registration", *J Microscopy*, **234(1)** (2009) 62-79.
- 107. O M Hannant, S D Forder, P A Bingham and R J Hand** "Structural studies of iron in vitrified toxic wastes", *Hyperfine Interact*, **192** (2009) 37-42.
- 108. J N Hart, F Claeysens, N L Allan and P W May** "Carbon nitride: *Ab initio* investigation of carbon-rich phases", *Phys Rev B*, **80** (2009) 174111-1 – 174111-3.
- 109. S Hashimoto, T Asano, K Inoue, S Honda, Y Iwamoto and S Zhang** "Sintering and mechanical properties of complex carbides in the Al-Si-C System", *J Tech Assoc Refract, Japan*, **29(1)** (2009) 21-25.
- 110. S Hashimoto, T Ishihara, K Inoue, S Honda, Y Iwamoto and S Zhang** "Synthesis and mechanical properties of $Al_3B_4C_7$ ", *J Ceram Soc Japan*, **117(1)** (2009) 18-21.
- 111. J W Haycock, S Botchway, J Weinstein and G Williams** "Long-life fluorescent imaging of cells in real time", *SPIE* (DOI: 10.1117/2.1200906.1684).
- 112. V Hearnden, H Lomas, S MacNeil, M Thornhill, C Murdock, A Lewis, J Madsen, A Blanzs, S Armes and G Battaglia** "Diffusion studies of nanometer polymersomes across tissue engineered human oral mucosa", *Pharmaceutical Research*, **26(7)** (2009) 1718-1728.
- 113. R G Hill, R V Law, M D O'Donnell, J Hawes, N L Bubb, D J Wood, C A Miller, M Mirsaneh and I Reaney** "Characterisation of fluorine containing glasses and glass-ceramics by ^{19}F magic angle spinning nuclear magnetic resonance spectroscopy", *J Euro Ceram Soc*, **29(11)** (2009) 2185-2191.
- 114. S Hopkins, S R Carter, J W Haycock, N J Fullwood, S MacNeil and S Rimmer** "Sub-micron poly/N-isopropylacrylamide particles as temperature responsive vehicles for the detachment and delivery of human cells", *Soft Matter*, **5** (2009) 4928-4937.
- 115. G Hrkac, T Schrefl, J Dean, A Goncharov, S Bance, D Allwood, D Suess and J Fidler** "Micromagnetics of single and double point contact spin torque oscillators", *J Appl Phys*, **105** (2009) 083923-1 – 083923-8.
- 116. G Hrkac, T Schrefl, J Dean, A Goncharov, S Bance, D Suess and J Fidler** "Internal effective field sources for spin torque nanopillar oscillators", *J Appl Phys*, **105** (2009) 053901-0 – 053901-6.
- 117. G Hrkac, T Schrefl, A Goncharov, S Bance, D Allwood, D Sues and J Fidler** "Micromagnetics of single and double point contact spin torque oscillators", *J Appl Phys*, **105** (2009) 08923-1 – 08923-8.
- 118. B K Jackson, M Jackson, D Inman, D Dye and R J Dashwood** "Optimization of the FFC Cambridge Process for NiTi Production", *ECS Transactions*, **16(49)** (2009) 211-219.
- 119. M Jackson** "Light metals in the steel city", *Materials Technology*, **24(3)** (2009) 1-3.
- 120. M Jackson, N G Jones, D Dye and R J Dashwood** "Effect of initial microstructure on plastic flow behaviour during isothermal forging of Ti-10V-2Fe-3Al", *Mat Sci Eng A*, **501** (2009) 248-254.
- 121. A Javad, N A Morley and M R J Gibbs** "Structure, magnetic and magnetostrictive properties of -as-deposited Fe-Ga thin films", *J Magn Magn Mat*, **321** (2009) 2877-2882.
- 122. M A E Jepson, B J Inkson, C Rodenburg and D C Bell** "Dopant contrast in the helium ion microscope", *EPL*, **85** (2009) 46001-1 – 46001-4.
- 123. M A E Jepson, B J Inkson, X Liu, L Scipioni and C Rodenburg** "Quantitative dopant contrast in the helium ion microscope", *EPL* (2009) 26005-1 – 26005-5.
- 124. A C Johnson, S A Hayes and F R Jones** "Data reduction methodologies for single fibre fragmentation test: Role of the interface and interphase", *Composites: Part A*, **40** (2009) 449-454.
- 125. F R Jones and N T Huff** "Structure and properties of glass fibres" in: *Handbook of tensile properties of textile and technical fibres*, ed A R Bunsell, Woodhead Publishing in Textiles, No. 91, ISBN 978-1-84569-387-9 (2009) 539-573.
- 126. F R Jones and N T Huff** "Structure and properties of glass fibres" in: *Handbook of textile fibre structure, Volume 2: Natural, regenerated, inorganic and specialist fibres*, ed S J Eichhorn, J W S Hearle, M Jaffe and T Kikutani, Woodhead Publishing ISBN 978-1-84569-730-3 (2009) 307-352.
- 127. N G Jones, R J Dashwood, D Dye and M Jackson** "The flow behaviour and microstructural evolution of Ti-5Al-5Mo-5V-3Cr during substransus isothermal forging", *Met Mat Trans A*, **40A** (2009) 1944-1954.
- 128. N G Jones, R J Dashwood, M Jackson and D Dye** " β phase decomposition in Ti-5Al-5Mo-5V-3Cr", *Acta Materialia*, **57** (2009) 3830-3839.
- 129. N G Jones, R J Dashwood, M Jackson and D Dye** "Development of chevron-shaped α precipitates in Ti-5Al-5Mo-5V-3Cr", *Scripta Materialia*, **60** (2009) 571-573.
- 130. P Kapranos and D H Kirkwood** "Thixoforming M2 tool steel – A study of different feedstock routes", *Proc Int Conf Hot forming of steels and product properties*, Grado, Italy, 13th-16th September 2009, pp7.
- 131. S Karimi, I M Reaney, Y Han, J Pokorny and I Sterianou** "Crystal chemistry and domain structure of rare-earth doped $BiFeO_3$ ceramics", *J Mater Sci*, **44** (2009) 5102-5112.
- 132. S Karimi, I M Reaney, I Levin and I Sterianou** "Nd-doped $BiFeO_3$ ceramics with antipolar order", *Phys Lett*, **94(11)** (2009) 112903-1 – 112903-3.
- 133. R Kieffer, M Prehm, K Pelz, U Baumeister, F Liu, H Hahn, H Lang, G Ungar and C Tschierske** "Siloxanes and carbosilanes as new building blocks for T-shaped bolaamphiphilic LC molecules", *Soft Matter*, **5** (2009) 1214-1227.
- 134. A Kovács, A Kohn, J Dean, T Schrefl, A Zeltser and M J Carey** "Reversal mechanism of exchange-biased CoFeB/IrMn Bilayers observed by Lorentz Electron Microscopy", *IEEE Trans Magn*, **45(11)** (2009) 3873-3876.
- 135. P Krone, D Makarov, T Schrefl and M Albrecht** "Effect of the anisotropy distribution on the coercive field and switching field distribution of bit patterned media", *J Appl Phys*, **106** (2009) 103913-1 – 103913-5.

- 136. N Krstajic, S J Matcher, D Childs, W Steenbergen, R Hogg and R Smallwood** "Evaluation of a cheap ultrasonic stage for light source coherence function measurement, optical coherence tomography and dynamic focusing", *Meas Sci Technol*, **20** (2009) 107002-1 – 107002-5.
- 137. M Krzysanowski and W M Rainforth** "Application of combined discrete/finite element multiscale method for modelling of Mg redistribution during hot rolling of aluminium", *Computer Methods in Materials Science, Informatyka w Technologi Materialów*, **9(2)** (2009) 271-276.
- 138. J Lee, D Suess, T Schrefl, J Dean and J Fidler** "Increases in effective head field gradients in exchange spring media", *Appl Phys Lett*, **95** (2009) 172509-1 – 172509-3.
- 139. J Lee, D Suess, T Schrefl, K H Oh and J Fidler** "Grain geometry induced reversal behaviour alteration", *J Phys D: Appl Phys*, **42** (2009) 045005-1 – 045005-6.
- 140. J Lee, D Suess, T Schrefl, E S Yu, Y S Lee, K H Oh and J Fidler** "Contribution of convex surfaces to magnetostatic interaction in granular medium", *IEEE Trans Magn*, **45(6)** (2009) 2655-2658.
- 141. I Levin, V Krayzman, J C Woicik, J Karapetrova, T Proffen, M G Tucker and I M Reaney** "Structural changes underlying the diffuse dielectric response in AgNbO_3 ", *Phys Rev B*, **79(10)** (2009) 104113-1 – 104113-14.
- 142. M Li, A Feteira and D C Sinclair** "Relaxor ferroelectric-like high effective permittivity in leaky dielectrics/oxide semiconductors induced by electrode effects: A case study of CuO ceramics", *J Appl Phys*, **105** (2009) 114109-1 – 114109-8.
- 143. M Li, Z Shen, M Nygren, A Feteria, D C Sinclair and A R West** "Origin(s) of the apparent high permittivity in $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ ceramics: clarification on the contributions from internal barrier layer capacitor and sample-electrode contact effects", *J Appl Phys*, **106** (2009) 104106-1 – 104106-8.
- 144. S Li, B Livshitz, H N Bertram, M Schabes, T Schrefl, E E Fullerton and V Lomakin** "Microwave assisted magnetization reversal in composite media", *Appl Phys Lett*, **94** (2009) 902509-1 – 902509-3.
- 145. X M Liu, J L Thomason and F R Jones** "The concentration of hydroxyl groups on glass surfaces and their effect on the structure of silane deposits", *Silanes and Other Coupling Agents*, **Vol 5** (2009) 25-38.
- 146. X M Liu, J L Thomason and F R Jones** "XPS and AFM study of the structure of hydrolysed aminosilane on E-glass surfaces", *Silanes and Other Coupling Agents*, **Vol 5** (2009) 39-50.
- 147. Y Liu and A R West** "Ho-doped BaTiO_3 : Polymorphism, phase equilibria and dielectric properties of $\text{BaTi}_{1-x}\text{Ho}_x\text{O}_{3-x/2}$: $0 \leq x \leq 0.17$ ", *J Euro Ceram Soc*, **29** (2009) 3249-3257.
- 148. Y Liu, E E McCabe, D C Sinclair and A R West** "Synthesis, structure and properties of the hexagonal perovskite, $h\text{-BaTi}_{1-x}\text{Ho}_x\text{O}_{3-x/2}$ ", *J Mater Chem*, **19** (2009) 5201-5206.
- 149. Z W Liu and H A Davies** "Intergranular exchange interaction in nanocrystalline hard magnetic rare earth-iron-boron-based melt-spun alloy ribbons", *J Phys D: Appl Phys*, **42** (2009) 1450061 – 145006-14.
- 150. Z W Liu, D C Zeng, R V Ramanujan, X C Zhong and H A Davies** "Exchange interaction in rapidly solidified nanocrystalline RE-(Fe/Co)-B hard magnetic alloys", *J Appl Phys*, **105** (2009) 07A736-1 – 07A736-3.
- 151. Z W Liu, Y Liu, P K Deheri, R V Ramanujan and H A Davies** "Improving permanent magnetic properties of rapidly solidified nanophase RE-TM-B alloys by compositional modification", *J Magn Magn Mat*, **321** (2009) 2290-2295.
- 152. A J Lockwood and B J Inkson** "In situ TEM nanoindentation and deformation of Si-nanoparticle clusters", *J Phys D: Appl Phys*, **42** (2009) 035410-1 – 035410-5.
- 153. L Ma, W M Rainforth, D Sun, J A Wharton and R J K Wood** "A '3-body' abrasion wear study of bioceramics for total hip joint replacements", *Wear*, **267** (2009) 2122-2131.
- 154. X Ma and A Matthews** "Evaluation of abradable seal coating mechanical properties", *Wear*, **267** (2009) 1501-1510.
- 155. Y Ma, B Qi, Y Ren, G Ungar, J K Hobbs and W Hu** "Understanding self-poisoning phenomenon in crystal growth of short-chain polymers", *J Phys Chem B*, **113** (2009) 13485-13490.
- 156. J Madsen, S P Armes, K Bertal, S MacNeil and A L Lewis** "Preparation and aqueous solution properties of thermoresponsive biocompatible AB diblock copolymers", *Biomacromolecules*, **10** (2009) 1875-1887.
- 157. M Mantini, T Devolder, J-V Kim, P Crozat, N Zerounian, C Chappert, W Van Roy, L Lagae, G Hikac and T Schrefl** "Agility of vortex-based nanocontact spin torque oscillators", *J Phys Lett*, **95** (2009) 192507-1 – 192507-3.
- 158. S P H Marashi, A Abedi, S Kaviani, S H Aboutalebi, M Rainforth and H A Davies** "Effect of melt-spinning roll speed on the nanostructure and magnetic properties of stoichiometric and near stoichiometric Nd-Fe-B alloy ribbons", *J Phys D: Appl Phys*, **42** (2009) 115410-1 – 115410-8.
- 159. S J Matcher** "A review of some recent developments in polarization-sensitive optical imaging techniques for the study of articular cartilage", *J Appl Phys*, **105** (2009) 102041-1 – 102041-11.
- 160. S Miao, J Pokorny, U M Pasha, O P Thakur, D C Sinclair and I M Reaney** "Polar order and diffuse scatter in $\text{Ba}(\text{Ti}_{1-x}\text{Zr}_x)\text{O}_3$ ceramics", *J Appl Phys*, **106** (2009) 114111-1 – 114111-6.
- 161. L Miranda, A Feteira, D C Sinclair, K Boulahya, M Hernando, J Ramirez, A Varela, J M González-Calbert and M Parras** "Composition-structure-property relationships of 5H- and 12R-type hexagonal $\text{Ba}(\text{Mn}, \text{Ti})\text{O}_{3-\delta}$ perovskites", *Chem Mater*, **21** (2009) 1731-1742.
- 162. L Miranda, D C Sinclair, M Hernando, A Varela, A Wattiaux, K Boulahya, J M González-Calbert and M Parras** "Mn-rich $\text{BaMn}_{1-x}\text{Fe}_x\text{O}_{3-\delta}$ perovskites revisited: structural, magnetic, and electrical properties of two new 5H polytypes", *Chem Mater*, **21** (2009) 5272-5283.
- 163. C E Mohn, N L Allan and J H Harding** "Ultrathin oxide films and heterojunctions: CaO layers on BaO and SrO", *Phys Chem Chem Phys*, **11** (2009) 3217-3225.
- 164. N A Morley, A Javed and M R J Gibbs** "Effect of a forming field on the magnetic and structural properties of thin Fe-Ga films", *J Appl Phys*, **105** (2009) 07A712-1 – 07A712-3.

165. **N A Morley, S Rigby and M R J Gibbs** "Anisotropy and magnetostriction constants of nanostructured $Fe_{50}Co_{50}$ films", *J Optoelectronics and Adv Matls – Symposia*, **1(2)** (2009) 109-113.
166. **M I Ojovan** "Radiation-induced decrease of viscosity of silicate glasses on electron irradiation", in: *Modern problems of chemical and radiation physics*, Ed I G Assovskiy, A A Berlin, G B Manelis and A G Merzhanov, Moscow, Chernogolovka OIHF RAN (2009) 336-338.
167. **M I Ojovan** "Radioactive waste immobilisation: Russian (SIA RADON) Experience", in *Decommissioning and Radioactive Waste Management, IBC's 25th Annual Residential Summer School*, 29th June – 3rd July 2009, Christ's College, Cambridge; <http://www.ibcglobalacademy.com/ibca/product/1238379109217/brochure.htm>.
168. **M I Ojovan** "Radiation-Induced Fluidity and Glass-Liquid Transition in Irradiated Amorphous Materials", *Proc. WM'09 Conference*, 1st-5th March 2009, Phoenix, Arizona, WM – 9082, (2009) 10pp.
169. **M I Ojovan and G Möbus** "On radiation induced fluidization (quasi-melting) of silicate glasses", *Mater Res Soc Symp Proc*, 1193 (2009) 663-672.
170. **M Z Omar, H V Atkinson, A A Howe, E J Palmiere, P Kapranos and M J Ghazali** "Solid-liquid structural break-up in M2 tool steel for semi-solid metal processing", *J Mater Sci*, **44** (2009) 869-874.
171. **E V Parfenov, R R Neviantseva, A A Bybin, A L Yerokhin and A Matthews**, "Method of evaluation of the termination point for the plasma electrolytic oxidation process", Patent: Russian Federation, RU 2366765 C1, Published 10/09/2009 (Bulletin No.25).
172. **E V Parfenov, A Yerokhin and A Matthews** "Small signal frequency response studies for plasma electrolytic oxidation", *Surf Coat Technol*, **203** (2009) 2896-2904.
173. **J M Patterson, A J Bullock, S MacNeil and C R Chapple** "Methods to reduce the contraction of tissue engineered buccal mucosa for use in substitution urethroplasty", *European Urology Supplements*, **8(4)** (2009) 186.
174. **P Pawlik, K Pawlik, H A Davies, J J Wyslocki and W Kaszuwara** "Nanocrystalline (Pr,Dy)-(Fe,Co)-Zr-Ti-B magnets produced directly by rapid solidification", *J Phys: Conf Series*, **144** (2009) 012060-1 – 012060-4.
175. **Y Peng, T Cullis and B Inkson** "Bottom-up nanoconstruction by the welding of individual metallic nanoobjects using nanoscale solder", *Nano Letters*, **9(1)** (2009) 91-96.
176. **Y Peng, T Cullis, G Möbus, X Xu and B Inkson** "Conductive nichrome probe tips: fabrication, characterization and application as nanotools", *nanotechnology*, **20** (2009) 395708-1 – 395708-7.
177. **A Phongphiphat, A Leyland, V N Sharifi and J Swithenbank** "High temperature corrosion of the superheater systems in an energy-from-waste plant: Effects of flue gas characteristics, alloy temperature and particle deposition", *World Renewable Energy Congress 2009 – Asia. The 3rd Int Conf on Sustainable Energy and Environment (SEE 2009)*, 18th-23rd May 2009, Bangkok, Thailand, 6pp.
178. **J D Plummer, I A Figueroa, R J Hand, H A Davies and I Todd** "Elastic properties of some bulk metallic glasses", *J Non-Cryst Solids*, **355** (2009) 335-339.
179. **K Polychronopoulou, M A Baker, C Rebholz, J Neidhardt, M O'Sullivan, A E Reiter, K Kanakis, A Leyland, A Matthews and C Mitterer** "The nanostructure, wear and corrosion performance of arc-evaporated CrB_xN_y nanocomposite coatings", *Surf Coat Technol*, **204** (2009) 246-255.
180. **R C Pullar, S J Penn, X Wang, I M Reaney and N McN Alford** "Dielectric loss caused by oxygen vacancies in titania ceramics", *J Euro Ceram Soc*, **29** (2009) 419-424.
181. **D Quigley, P M Rodger, C L Freeman, J H Harding and D M Duffy** "Metadynamics simulations of calcite crystallization on self-assembled monolayers", *J Chem Phys*, **131** (2009) 094703-1 – 094703-11.
182. **R Rawal, A J McQueen, L J Gillie, N C Hyatt, E E McCabe, K Samara, N McN Alford, A Feteira, I M Reaney and D C Sinclair** "Influence of octahedral tilting on the microwave dielectric properties of $A_3LaNb_3O_{12}$ hexagonal perovskites ($A = Ba, Sr$)", *Appl Phys Lett*, **94** (2009) 192904-1 – 192904-3.
183. **M Redpath, C Marques, C Dibden, A Waddon, R Lalla and S MacNeil** "Ibuprofen and hydrogel released ibuprofen in the reduction of inflammation induced migration in melanoma cells", *British Journal of Dermatology*, **161(1)** (2009) 25-33.
184. **A Rico, J Rodriguez, E Otero, P Zeng and W M Rainforth** "Wear Behaviour of nanostructured alumina-titania coatings deposited by atmospheric plasma spray", *Erst.* **267** (2009) 1191-1197.
185. **J Rodrigues, A Rico, E Otero and W M Rainforth** "Indentation properties of plasma sprayed Al_2O_3 -13% TiO_2 nanocoatings", *Acta Materialia*, **57** (2009) 3148-3156.
186. **B M Rosen, D A Wilson, C J Wilson, M Peterca, B C Won, C Huang, L R Lipski, X Zeng, G Ungar, P A Heiney and V Percec** "Predicting the structure of supramolecular dendrimers via the analysis of libraries of AB_3 and constitutional isomeric AB_2 biphenylpropyl ether self-assembling dendrons", *J Am Chem Soc*, **131** (2009) 17500-17521.
187. **Z Saghi, X Xu and G Möbus** "Model based atomic resolution tomography", *J Appl Phys*, **106** (2009) 024304-1 – 024304-8.
188. **Z Saghi, X Xu and G Möbus** "Transition from quantitative to geometric tomography", *J Phys: Conf Series*, **126** (2006) 012063-1 – 012063-4.
189. **J M Schofield, P A Bingham and R J Hand** "The immobilisation of a chloride containing actinide waste surrogate in calcium aluminosilicate glasses", *Ceramic Trans*, **207** (2009) 69-80.
190. **T Schrefl, G Hrkac, A Goncharov, J Dean, S Bance, M A Bashir, D Suess**, "Finite element/boundary element simulation of future hard disk recording" *Conference Information: Applied Computing Conference 2008, COMPUTATIONAL METHODS AND APPLIED COMPUTING* (2008) 430-435.
191. **M Selim, A J Bullock, S MacNeil and C R Chapple** "Evaluation of sterilization methods on biological and mechanical properties of a synthetic biodegradable electrospun scaffold for the creation of tissue engineered buccal mucosa for clinical use", *European Urology Supplements*, **8(4)** (2009) 185.

- 192. M A Shcherbina, X Zeng, T Tadjiev, G Ungar, S H Eichhorn, K E S Philips and T J Katz** "Hollow six-stranded helical columns of a helicene", *Angew Chem Int Ed*, **48** (2009) 7837-7840.
- 193. J Shepherd, I Douglas, S Rimmer, L Swanson and S MacNeil** "Development of three-dimensional tissue-engineered models of bacterial infected human skin wounds", *Tissue Engineering: Part C*, **15(3)** (2009) 475-484.
- 194. A Sittichochechaiwut and G C Reilly** "Development of a culture system to modulate tissue engineered bone formation by varying loading conditions", *Proc 7th Intl Conf Manufacturing Research (ICMR09)*, University of Warwick, UK, 8th-10th September 2009, pp6.
- 195. A Sittichochechaiwut, A M Scutt, A J Ryan, L F Bonewald and G C Reilly** "Use of rapidly mineralising osteoblasts and short periods of mechanical loading to accelerate matrix maturation in 3D scaffolds", *Bone*, **44** (2009) 822-829.
- 196. A Skaropoulou, S Tsvivilis, G Kakali, J H Sharp and R N Swamy** "Long term behavior of Portland limestone cement mortars exposed to magnesium sulphate attack", *Cem Conc Comp*, **31** (2009) 628-636.
- 197. A Skaropoulou, S Tsvivilis, G Kakali, J H Sharp and R N Swamy** "Thaumasite form of sulphate attack in limestone cement mortars: A Study on long term efficiency of mineral admixtures", *Const and Build Matls*, **23** (2009) 2338-2345.
- 198. L M Spasova and M I Ojovan** "Acoustic emission characterisation of cementitious wasteforms under three-point bending and compression", in: *Scientific Basis for Nuclear Waste Management XXXII*, edited by R B Rebak, N C Hyatt, D A Pickett (*Mater Res Soc Symp Proc 1124*, Warrendale, PA, 2009) Q07-21, 8pp.
- 199. I Sterianou, D C Sinclair, I M Reaney, TP Comyn and A J Bell** "Investigation of high Curie temperature $(1-x)BiSc_{1-y}Fe_yO_3-xPbTiO_3$ piezoelectric ceramics", *J Appl Phys*, **106** (2009) 084107-1 – 084107-6.
- 200. A M Stoneham and J H Harding** "Mesoscopic modeling: materials at the appropriate scale", *Mat Sci Technol*, **24(4)** (2009) 460-465.
- 201. T Sun, S Adra, R Smallwood, M Holcombe and S MacNeil** "Exploring hypotheses of the actions of TGF- β 1 in epidermal wound healing using a 3D computational multi-scale model of the human epidermis", *PLoS One*, **4(12)** (2009) Available Online, pp13.
- 202. T Sun, R Smallwood and S MacNeil** "Development of a mini 3D cell culture system using well defined nickel grids for the investigation of cell scaffold interactions", *J Mater Sci: Mater Med*, (2009) 20(7):1483-1493.
- 203. R J Talling, R J Dashwood, M Jackson and D Dye** "On the mechanism of superelasticity in gum metal", *Acta Materialia*, **57** (2009) 1188-1198.
- 204. R J Talling, R J Dashwood, M Jackson and D Dye** "Compositional variability in gum metal", *Scripta Materialia*, **60** (2009) 1000-1003.
- 205. M Thomas, T Lindley and M Jackson** "The microstructural response of a peened near- α titanium alloy to thermal exposure", *Scripta Materialia*, **60** (2009) 108-111.
- 206. C E Thorn, S J Matcher, I V Meglinski and A C Shore** "Is mean blood saturation a useful marker of tissue oxygenation?" *Am J Physiol Heart Circ Physiol*, **296** (2009) H1289-H1295.
- 207. D Tricker, M Jackson and R Dashwood** "Direct extrusion of titanium alloy powder", *Mat Tech*, **24(3)** (2009) 174-179.
- 208. N Ugryumova, J Jacobs, M Bonesi and S J Matcher** "Novel optical imaging technique to determine the 3D orientation of collagen fibers in cartilage: variable-incidence angle polarization-sensitive optical coherence tomography", *Osteoarthritis and Cartilage*, **17** (2009) 33-42.
- 209. G Ungar, V Tomasic, F Xie and X Zeng** "Structure of liquid crystalline aerosol-OT and its alkylammonium salts", *Am Chem Soc, Langmuir*, **25(18)** (2009) 11067-11072.
- 210. G A Varlackova, Z I Golubeva, A S Barinov, S V Roschagina, S A Dmitriev, I A Sobolev and M I Ojovan** "Evaluation of the cemented radioactive waste with prolonged tests in mount dype repository", *Atomic Energy*, **107(1)** (2009) 32-38.
- 211. G A Varlackova, Z I Golubeva, A S Barinov, I A Sobolev and M I Ojovan** "Properties and composition of cemented radioactive wastes extracted from the mound-type repository", in: *Scientific Basis for Nuclear Waste Management XXXII*, edited by R B Rebak, N C Hyatt, D A Pickett (*Mater Res Soc Symp Proc 1124*, Warrendale, PA, 2009) Q05-07, 7pp.
- 212. M E Viney, A J Bullock, M J Day and S MacNeil** "Co-culture of intestinal epithelial and stromal cells in 3D collagen-based environments", *Regen Med*, **4(3)** (2009) 397-406.
- 213. F Wang, Y Zhang, G Chen and H A Davies** "Tensile and compressive mechanical behavior of a CeCrCuFeNiAl_{0.5} high entropy alloy", *Intl J Modern Phys B*, **23** (2009) 1254-1260.
- 214. J J Wang, A J Lockwood, Y Peng, X Xu, B S Bobji and B J Inkson** "The formation of carbon nanostructures by in situ TEM mechanical nanoscale fatigue and fracture of carbon thin films", *Nanotechnology*, **20** (2009) 305703-1 – 305703-8.
- 215. J C Walker, I M Ross, C Reinhard, W M Rainforth and P Eh Hovsepian** "High temperature tribological performance of CrAlYN/CrN nanoscale multilayer coatings deposited on γ -TiAl", *Wear*, **267** (2009) 965-975.
- 216. Y Wu, D Pasero, E E McCabe, Y Matsushima and A R West** "Formation of disordered and partially ordered $Li_xCo_{1-x}O$ ", *J Mater Chem*, **19** (2009) 1443-1448.
- 217. Y Wu, D Pasero, E E McCabe, Y Matsushima and A R West** "Partial cation-order and early-stage, phase separation in phase W, $Li_xCO_{1-x}O$: $0.0375 \leq x \leq 0.24-0.31$ ", *Proc R Soc A*, **465** (2009) 1829-1841.
- 218. F L Xiong and C K Chong** "Numerical study of the influence of anastomotic configuration on hemodynamics in Miller Cuff models", *Annals of Biomed Eng*, **17(2)** (2009) 301-314.
- 219. K Yamada, N Shinagawa, M Sogame, I A Figueroa and H A Davies** "Structural Relaxation Process in CuHfTi Amorphous Alloys", *Defect and Diffusion Forum*, **283-286** (2009) 533-538.
- 220. F Yan, I Sterianou, S Miao, I M Reaney, M O Lai and L Lu** "Magnetic, ferroelectric, and dielectric properties of $Bi(Sr_{0.5}Fe_{0.5})O_3$ - $PbTiO_3$ thin films", *J Appl Phys*, **105** (2009) 074101-1 – 074101-6.

221. G Yang, G Möbus, P A Bingham and R J Hand

"Electron beam induced structure changes in borosilicate and borophosphate glasses: a comparison by energy loss spectroscopy", Phys Chem of Glasses: Eur J Glass Sci and Technol Part B, **50(6)** (2009) 378-383.

222. M Yang, P M Rodger, J H Harding and S L S Stipp

"Molecular dynamics simulations of peptides on calcite surface", Molec Simul, **35** (2009) 547-553.

223. B Zalinska, M Mirsaneh and I M Reaney *"BiNbO₄-based glass-ceramic composites for microwave applications"*, J Am Ceram Soc, **92(9)** (2009) 19851-1985.

224. X Zeng, F Liu, A G Fowler, G Ungar, L Cseh, G H Mehl and J E Macdonald *"3D ordered gold strings by coating nanoparticles with mesogens"*, Adv Mater, **21** (2009) 1746-1750.

225. S Zhang *"Low temperature molten salt synthesis of complex oxide and carbide powders and coatings for refractory applications"*, Refractories World Forum, **1** (2009) 140-144.

226. S Zhang, L Yuan and J Yu *"Low temperature molten salt-mediated preparation of porous ceramics"*, Interceram, **06** (2009) 374-377.