

**M. PHILS. (one-year courses), DIPLOMAS AND SPECIAL COURSES**

MICHAELMAS 2004

LENT 2005

EASTER 2005

**M. PHIL. IN MATERIALS MODELLING**

Course Organiser: Dr Z. H. Barber. Email: zb10@cam.ac.uk

Lectures will be delivered in the *Department of Materials Science and Metallurgy*

PROF. H. K. D. H. BHADESHIA AND OTHERS

**MP1a.** Introduction to Materials Science. (Five lectures)

DR P. D. BRISTOWE AND DR M. R. MANNING

**MP1b.** General Methodology of Modelling. (Seven lectures)

DR P. D. BRISTOWE AND DR C. J. PICKARD

**MP2.** Ab Initio Methods and Approximations. (Thirteen lectures)

DR J. A. ELLIOT

**MP3.** Montecarlo and Molecular Dynamics Methods. (Twelve lectures)

PROF. D. J. FRAY AND PROF. H. K. D. H. BHADESHIA

**MP4.** Thermodynamics and Phase Diagrams. (Ten lectures)

PROF. A. L. GREER AND PROF. H. K. D. H. BHADESHIA

**MP6.** Kinetics and Microstructure Modelling. (Fifteen lectures)

DR S. TIN, DR H. R. SHERCLIFFE AND PROF. H. K. D. H. BHADESHIA

**MP7.** Finite Element Modelling. (Six lectures)

PROF. A. H. WINDLE AND PROF. H. K. D. H. BHADESHIA

**MP5.** Mesoscale and Multiscale Modelling. (Seven lectures)

PROF. H. K. D. H. BHADESHIA AND DR T. SOURMAIL

**MP9.** Information Theory. (Four lectures)

PROF. H. K. D. H. BHADESHIA AND DR J. A. ELLIOT

**MP10.** Process Modelling. (Six lectures)

DR H. R. SHERCLIFFE AND DR E. R. WALLACH

**MP11.** Integrated Selection of Materials and Processes. (Four lectures)**M. PHIL. IN MICRO- AND NANOTECHNOLOGY ENTERPRISE**

Course Director: Dr M. Blamire; Course Organiser: Dr S. Friedrichs, e-mail: sf334@cam.ac.uk

Lectures will be delivered in the *IRC in Superconductivity Seminar Room* (except those marked ‘\*’)PROF. M. E. WELLAND, DR S. FRIEDRICHS AND DR D. ROY  
NE.01 Characterisation Techniques (Sixteen lectures)

DR A. A. SESHIA

NE.02 MEMS Design (Sixteen lectures) \*

DR A. FLEWITT

NE.03 Materials and Processes for MEMS (Sixteen lectures) \*

DR D.-J. KANG AND DR M. BLAMIRE

NE.04 Nanofabrication Techniques (Sixteen lectures)

DR S. FRIEDRICHS, DR D. G. HASKO AND DR I. A. KINLOCH

NE.05 Nanomaterials (Sixteen lectures)

DR W. T. S. HUCK, DR T. RAYMENT AND DR STUART CLARK

NE.06 Nanochemistry (Sixteen lectures)

DR C. DURKAN, DR M. BLAMIRE AND DR J. A. ELLIOT

NE.07 Physical Properties at the Nanometre-scale (Sixteen lectures)

DR C. MACPHEE, DR P. D. BARKER AND PROF. C. M. DOBSON

NE.08 Bionanotechnology (Sixteen lectures)

Additional lecture courses:

MR W. BAINS

**BE.03** Building and Financing a new Enterprise (Thirty-two lectures) to be arranged by the Institute of Biotechnology \*

VARIOUS LECTURERS

**MoTI** Management of Technology and Innovation (Forty eight lectures) to be arranged by the Judge Institute of Management \*