



**MSc Nanotechnology – A selection of project titles 2010-11:**

The use of Electric Fields for Morphological Control of Films by Chemical Vapour Deposition

Catalytic Nanomaterials

Optically Pumped Photonic Crystal Lasers

Photoinduced Cross-linking of Conjugated Polymer Semiconductors: Applications to Multilayer PLEDs and Plastic Nanoelectrodes

Low Energy Gap Organic Semiconductors (OS) and Near Infra-Red (NIR) Light-emitting Diodes

Characterisation of Liquid Crystal Materials at Terahertz Frequencies

Tuneable and Reconfigurable Liquid Crystal-based Microwave Devices

High Performance Diamond Nanoelectronic Devices

Nanodiamond Devices for the Detection of ‘Threat Signatures’

Optical Nanofibres

Self-assembled Systems containing Nanoparticles

Materials for Novel Optical Amplifiers – Erbium-doped Silicon Nanoclusters

DNA Microarrays

Transparent Electronics

Design of Optical Absorbers based on Plasmonic Nanostructures

Antimicrobial Polymers- Reducing Hospital Acquired Infections

Next Generation Nano-Sensors for Environmental Monitoring

Zinc Oxide Nanocrystals

Magnetic Beads for Novel Cancer Therapies

Development of Superconducting Nanobridges with External Capacitive Shunts

Magneto-Fluorescent Nanoparticle Interfacing with Living Cells

Optical Metamaterials