

Multifunctional Inorganic Hybrid Nanomaterials for Biomedical Applications

Dr Zhan Ong

Applications are invited for a PhD project designing novel inorganic hybrid nanomaterials that have potential for the targeted delivery and controlled release of high amounts of therapeutic cargoes at diseased sites, and with built-in capabilities for easy monitoring of treatment response and/or photothermal enhancement of therapeutic effects. This project will involve the synthesis and characterisation of these novel inorganic hybrid nanoparticles with varying size, shape and chemical functionalities, as well as the evaluation of their biological safety and efficacy in addressing key global health challenges such as cancer therapy or antimicrobial resistance.

This project is well-suited to a self-motivated student with a keen interest in the development of novel nanotechnologies for biomedical applications, and with a strong interest in working in a highly interdisciplinary environment. Students are expected to possess a minimum of an upper second class degree (or equivalent) in a relevant Physics, Chemistry, Materials science/engineering, or Pharmaceutical/biomedical science background. The successful candidate will be trained in a wide range of in-demand skills in the interdisciplinary area of Bionanotechnology such as nanoparticle fabrication, use of electron microscopes (TEM/SEM), XPS, DLS, ICP-AES, dark field and confocal microscopes, molecular biology, *in vitro* cell culture and/or animal work.

This project will be supervised by Dr. Zhan Yui Ong, Prof. Steve Evans, and Prof. David Jayne. Any enquiries relating to the project and/or suitability should be directed to Dr. Ong (z.y.ong@leeds.ac.uk). Applications are invited on an on-going basis but early expression of interest is encouraged.