MANCHESTER 1824

The University of Manchester

Are you preparing for a career in the oil, petrochemical, energy or chemical industry?

Join us on 12 – 16 April 2010 for a short intensive training course including the fundamentals and applications of :

Heterogeneous Catalysis: Almost all products used by modern societies including fuel, chemicals, plastics, pharmaceuticals and the treatment of air and water pollution depend on catalysts. Moreover the quest for future cleaner greener energy sources is dependent on functioning catalysts – they are the ultimate facilitators of our modern and future lives.

In this course you will learn:

- What is a catalyst?
- How do they function?
- What are the important factors to consider when investigating and developing catalysts?
- What is an active site?
- How do you measure selectivity, activation energy, catalyst surface area etc. using Mass Spectrometry and Gas Chromatography?
- How do you identify the substances produced by a catalyst and determine their reaction kinetics?
- What do you do when you plants productivity suddenly drops?

IR: Infrared spectroscopy has undergone something of a renaissance with recent developments in FTIR instrumentation and sampling accessories. In this course you will learn the fundamentals of modern FTIR as well as methods of sampling solids, liquids and gases, relevant to the fields of petrochemicals and catalysis

XRD: Whether you are preparing for a career in chemical synthesis or oil excavation XRD is a versatile and essential technique to master. Both single crystal and powder diffraction will be considered enabling you at answer the following questions: How does the structure of a material alter during use? What effects can this have on its efficiency? How do you determine the crystal structure of an unknown material? From sample to structure determination in the time it takes to have a coffee.

This course is not limited to just lectures by experts in the field, but also includes extensive workshops. Ensuring you will be able to read and interpret important data and suggest possible routes to problem solving and research in your chosen field.

Register at http://www.istonline.org.uk/catalysis

Price: £2500 inc. all course materials, catering and University of Manchester certificate of completion

Contact: Dr A M Ben Ghalbon
Tel: 00 44 161 306 4512
a.ben-ghalbon@manchester.ac.uk

CENTRE FOR NANOPOROUS MATERIALS