



PhD Student – Interfaces in inorganic-organic nanocomposite hybrid materials

Ambitious? Dedicated? Want to work in an international environment?

We want you!

YKI, Institute for Surface Chemistry is the internationally leading institute in the area of surface chemistry. We offer a stimulating work and research environment as well as good working conditions. Within this EU-funded project, you also get a chance to work with international partners from industry and academia.

Project description

The PhD project will be aimed at the design and fabrication of functional nanocomposites using inorganic nanoparticles and polymers. The focus will be on fundamental understanding of the nanoparticles and polymer interaction at molecular level. Different surface characterization methods will be used to understand various interactions at the interface between the two components. The PhD work will be carried out in conjunction with the EU-funded project WOODLIFE where a series of surface engineered metal oxide nanoparticles will be synthesized and studied in order to improve the UV-absorption of clear coatings for wood applications. Most importantly, the fundamental understanding of the nanoparticles-polymer interface will be used as main tool to improve the desired properties of the nanocomposites. The PhD student will have an opportunity to apply this knowledge in the development of novel nanocomposites and also for improving performance of industrially relevant nanocomposites.

Requirements

Design and characterization of inorganic-organic nanocomposite with the focus of interface engineering will be the key elements of this PhD project. Thus it is an advantage if the skills of the candidate are multidisciplinary, with a strong background in polymer chemistry and nanomaterials, and a preference for additional experience in colloid and surface science. Furthermore, the applicants should be energetic, highly motivated and possess excellent communication skills both in Swedish and English.

Place of work

You will be employed by and based at YKI in Stockholm. YKI is located on the campus of the Royal Institute of Technology (KTH).

The appointment is planned for four years.

For further information please contact:

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Please send your CV and cover letter to our HR Manager: kerstin.linsten@yki.se, no later than 3 September 2010.

YKI, Institute for Surface Chemistry is the internationally leading industrial research institute in applied surface and colloid chemistry. YKI's clients come from many industrial sectors e.g. pharmaceuticals, biotechnology, food, industrial chemicals, household products, engineering, pulp and paper, coatings, ceramics, adhesives, paint, ink and printing. The 40 member companies in YKI include world leaders in these industrial sectors. 50 % of our industrial partners are based outside Sweden.

YKI is hosting two internationally leading research centers, CODIRECT (Controlled Delivery and Release Centre) and INTERMAT (Interfacial Materials Centre for Cleantech Applications)

YKI has around 65 employees and is located in a research-intensive area on the campus of the Royal Technical University (KTH) in Stockholm. YKI is a member of the SP-Group. For further information please visit our website www.yki.se