



Improved barrier properties in polyolefins (Job Code: ME-PDSK032013)

Advanced Materials and Multi-functional Structures (**AM²S**) group at Masdar Institute invites applications for the position of “Post-doctoral Research Fellow” funded by **Borouge**. Successful candidate will work in the Institute Center for Energy (**iEnergy**) and will be based in Mechanical and Materials Engineering (**MME**) department. The proposed approach covers both experimental and modeling aspects of improving barrier performance of polyolefins. It envisages formulation of material design principles and the design of new advanced composite materials which will have superior oxygen barrier performance; these designs will be achieved through the engineered positioning of different materials and geometric features in hybrid material systems so as to achieve better barrier properties.

About Masdar Institute:

Masdar Institute (www.masdar.ac.ae) is the world's first graduate-level university dedicated to providing real-world solutions to issues of sustainability. The Institute's goal is to become a world-class research-driven graduate-level university, focusing on advanced energy and sustainable technologies. The Institute, which was created in collaboration with the Massachusetts Institute of Technology (MIT), integrates theory and practice to incubate a culture of innovation and entrepreneurship, working to develop the critical thinkers and leaders of tomorrow. Masdar Institute is situated in Masdar City (www.masdar.ae), an emerging global clean-technology cluster that aims to be one of the world's most sustainable urban developments, powered by renewable energy and providing students and researchers with a unique opportunity to live and learn in a true "living laboratory" environment.

Requirements:

The ideal candidate will have a PhD in a relevant discipline (Mechanical, Materials, Chemical or Polymer Engineering), and strong publication record in top quality journals. Expertise in at least two of the following areas is a must: material characterization, analytical/computational material mechanics, micro- and nano-composites, Atomistic/MD simulation, soft matter and, Rapid-prototyping

Package:

The position will offer a **very competitive** salary package (tax-free). The position will be for an initial duration of 12 months, extendable (up to 2 years) depending on funding and performance.

Application submittal information:

Application materials should include:

- applicant name and contact information,
- a curriculum vitae,
- statements of research and teaching interests,
- an application letter describing the applicant's current position and how his/her experience matches the position requirements,
- E-mail contact information for at least three references.

Materials must be submitted electronically to **Dr. S. Kumar** (s.kumar@eng.oxon.org and skumaar@mit.edu) as a single PDF file specifying the Job Code ME-PDSK032013. Review of applications will begin immediately and continue until the position is filled. The candidate is expected to start at the earliest possible date. While we thank all applicants for their interest, only those under consideration will be contacted for a follow-up interview.