



## VACANCY TECHNOLOGY CENTRE – CHILTON

**Experienced Researcher Fellowship / Post Doc position - *Characterisation of powder properties using DEM.***

Marie Curie Initial Training Network – IPROCUM

Johnson Matthey Technology Centre, Billingham, UK

**Ref: D14**

**£ - Competitive**

**2 years, to start by 1st October 2013**

We are seeking a full time postgraduate researcher with research interests in particle technology, computer modeling and discrete element methods (DEM) to join Johnson Matthey Technology Centre (UK) where you will work on DEM modelling regarding the determination and validation of catalyst particle properties for Discrete Element Method applications, *a research project within the IPROCUM consortium* funded by European Commission under the FP7-PEOPLE-2012-ITN Programme.

For this Fellowship (equivalent to a Post doc position), you will work on developing a DEM modelling platform that can allow the determination and validation of bulk powder properties using the properties of single particles. For example, compression and shear cell tests of particle systems will be simulated using the particle properties as input obtained by other IPROCUM researchers. The bulk powder properties will be determined from the response (stresses and strains) of the entire particle system based on the contact forces between particles. You will be working in collaboration with other IPROCUM researchers to validate the DEM modeling and to provide necessary input information.

IPROCUM (The Development of *in silico* process models for roll compaction) is a multidisciplinary and inter-sectoral consortium aiming to develop robust *in silico* process models that can be used to predict the properties of intermediate (ribbons/granules) and final products (tablets/pellets/components) based on the properties of individual particles and to provide structured training for 15 researchers within a collaborative research network involving 10 full partners and 4 associate partners from 8 EU countries.

The ideal candidate will have previous experience of DEM modelling and simulations, have a good understanding of particle technology and materials characterization. The candidate should work well in teams, be self-motivated with good organizational and clear communication skills. It is also expected that you will participate in a wide range of IPROCUM networking activities, workshops, short courses, dedicated sessions at

international meetings, and network conferences.

This fellowship is offered in the context of a Marie Curie Initial Training Network and transnational mobility is a key element of eligibility. Therefore your eligibility for the post is determined by Marie Curie terms and conditions. Researchers may be either EU citizens or from outside the EU (subject to relevant immigration formalities), but applications will only be accepted from candidates who must not have resided or carried out their main activity (work, studies, etc) in the country of their host organization (UK) for more than 12 months in the 3 years immediately prior to the date of selection by the host institution (UK) - (short stays such as holidays are not taken into account).

*You must be (at the time of recruitment by the host organisation): in possession of a doctoral degree, **or** have at least four years and less than five years of full-time equivalent research experience.*

For informal inquiries contact regarding IPROCUM: Professor Chuan-Yu (Charley) Wu,  
[c.y.wu@surrey.ac.uk](mailto:c.y.wu@surrey.ac.uk)

Link to Prof C Wu Iprocom homepage

[http://www.surrey.ac.uk/cpe/people/prof\\_charley\\_wu/index.htm](http://www.surrey.ac.uk/cpe/people/prof_charley_wu/index.htm)

Although the position will remain open until filled, applicants are encouraged to submit their applications *before the 30<sup>th</sup> of April 2013*.

*The Postdoc position is expected to start at the beginning of October 2013.*

If you would like to be considered for this position please go to our website [www.matthey.com](http://www.matthey.com) or [www.johnsonmatthey.jobs](http://www.johnsonmatthey.jobs) Alternatively the direct link to the vacancy is (<https://www.johnsonmatthey.jobs/site/applynow.cfm?Apply=New&Vacid=341918&mid=0>)

### **Closing date for applications 30<sup>th</sup> April 2013**

Johnson Matthey Plc is an equal opportunities employer and positively encourages applications from suitably qualified and eligible candidates regardless of sex, race, disability, age, sexual orientation, gender reassignment, marriage or civil partnership, pregnancy or maternity, religion or belief.