



Early Stage Researcher position (PhD student) – “Active coatings based on multiphase dispersions” - available in the Marie Curie Initial Training Network (ITN) 'NewGenPak'.

The NewGenPak ITN is an interdisciplinary research training network of 8 European universities, 3 research institutes and 6 enterprises from 10 European countries. It is funded under the Marie Curie 7 Framework Programme.

The network will deliver a joint multidisciplinary research training programme for ten Early Stage Researchers (ESRs) and three Experienced Researchers (ERs) who have the acumen, enthusiasm and motivation to make a significant contribution to a challenging, interdisciplinary research project.

The NewGenPak partnership will encourage and foster the growth of the researchers' skills in scientific expertise, technological knowledge and professional aptitude. The key vehicle in this strategy is a supervised personal, original research project in a critical aspect of sustainable packaging.

Further information about the Marie Curie programme, the eligibility criteria and the salary/benefits for researchers can be found at <http://ec.europa.eu/research/mariecurieactions/index.htm>

Description

The aims of the NewGenPak ITN are:

- (i) to conduct top-level research and training and devise innovative solutions for specific EU needs in the area of sustainable packaging,
- (ii) to advance the state-of-the-art in wood cellulose based sustainable packaging in three specific areas (a) next generation packaging composites, (b) cellulose-fibre based active packaging and (c) environmental, economic and societal aspects of packaging production,
- (iii) to educate the next generation of researchers inside a broad European research training network which includes universities, research centres and industry, thereby accelerating the researchers' advancement in their chosen career,
- (iv) to improve the career prospects of ERs and ESRs through complementary training such as; writing and presentation skills; language, effective communication and collaboration; project management and finance; project/product cycles; entrepreneurship; IPR.

Early Stage Researcher Position

“Active coatings based on multiphase dispersions”. HOST: Center of Bioimmobilisation and Innovative Packaging Materials (CBIMO), West Pomeranian University of Technology, Szczecin, Poland.

The ESR will develop new ‘smart delivery systems’ in which stable dispersion systems, including micro- and nano- capsules, will change their release profile as a function of external parameters including water adsorption, humidity, temperature or pH. For example, pH-dependent antimicrobial release will be achieved using polyelectrolyte complexes with antimicrobial proteins, such as enzymes and bacteriocins by appropriate combinations of anionic and cationic biopolymers. The controlled release of other actives e.g. aroma profilers or indicators will also be evaluated. Smart, bioreactive coatings will be achieved by developing enzyme mediated cross-linking between

biopolymeric micro- and nano-carriers and active substances such as enzymes and bacteriocins, thus, simultaneously achieving a higher stability without changing the active properties.

During the appointment at CBIMO the ESR will likely undertake secondments to (i) Karlstad University in Sweden to learn how to apply rheology of the coating dispersions to predict the structure of multiphase dispersion, and (ii) Azienda Speciale Innovhub - Stazioni Sperimentale per l'industria in Italy to practice the antimicrobial evaluation methods.

Benefits:

- full-time, fixed term contract for three years starting in June 2012;
- competitive salary conditions in line with the Marie Curie Actions rates of pay;
- excellent work environment.

It is expected that the ESR appointed will register for a PhD in his/her host institution and also submit his/her thesis within the 36 month period of employment.

Eligibility requirements:

a. Qualifications and research experience:

At the time of recruitment, the applicant has not yet been awarded the doctorate degree and must be in the first four years (full-time equivalent) of his/her research career. Research experience (full-time equivalent) is measured from the date when an ESR applicant obtained the degree which formally entitled him/her to embark on a doctorate.

The successful candidate will have previous experience in the fields of chemical engineering, material science or education close related to material chemistry and engineering. Moreover the following expertise will be desirable: packaging materials, paper and paperboard technology, surface modification and dispersion/colloidal technology.

b. Mobility rule:

The applicant can be any nationality, but he/she must comply with the rule for mobility: at the time of recruitment by the host organisation, the applicant must not have resided or carried out his/her main activity (work, studies, etc.) in Poland for more than 12 months in the 3 years immediately prior to his/her recruitment under the project. Compulsory national service and/or short stays such as holidays are not taken into account.

Required languages:

A good knowledge of the English language (fluent speaking and writing is required).

Application procedure:

Candidates should send their CV and motivation letter to mobility@zut.edu.pl. Selected applicants will be invited for an interview via Skype which will be held in the first quarter of May 2012.

Deadline:

The application deadline is April 13, 2012.

Enquiries:

For further information about NewGenPak and the ESR position at West Pomeranian University of Technology, Szczecin contact mobility@zut.edu.pl .

The work in the Center of Bioimmobilisation and Innovative Packaging Materials as well as information on CBIMO facilities can be viewed at [CBIMO](#) web site.

See also the [Foreign Researchers Guide to Poland](#).