



VRIJE
UNIVERSITEIT
BRUSSEL



Postdoc researcher vacancy on fibre-reinforced 3D printed composites, based on recycled polyethylene terephthalate (PET)

Duration

A full-time job position for 4 years.

Where

The Department **Mechanics of Materials and Constructions** of the Vrije Universiteit Brussel and the **Polymer Chemistry & Biomaterials Group (Centre of Macromolecular Chemistry)** of Ghent University invite candidates to apply for a vacancy as post-doctoral researcher (M/F).

Our research environments are situated in the capital of Europe, Brussels Humanities, Sciences & Engineering Campus, Pleinlaan 2, Brussels (<http://www.vub.ac.be/english/infoabout/campuses/index.html>) and Krijgslaan 281, Building S4, Ghent (<https://www.ugent.be/en>) respectively.

More information on studying in Brussels and Ghent can be found at <http://www.vub.ac.be/en/studying-at-the-vub/studying-in-brussels> and <https://www.ugent.be/en/staff> respectively.

Job content

The Postdoc researcher will contribute in a large research project RELFICOM 'Reliability of fibre-reinforced composites: materials design and variability' part of the program NANOFORCE 'Next generation nano-engineered polymer hybrids', that is funded by the Flemish funding organization SIM (Strategic Initiative Materials - <http://www.sim-flanders.be/>). This project addresses the reliability of fibre-reinforced composites, through improved material design and through better understanding and controlling variability. This will lead to reductions in safety factors, and hence lighter and safer composite structures.

The department of Materials Engineering (MTM), Composite Materials Group (CMG) of KU Leuven (Dr. Y. Swolfs, Dr. L. Gorbatikh and Prof. S. Lomov) is the project coordinator. Other research partners are the department of Mechanical Engineering, Production engineering, Machine design and Automation group (PMA) of KU Leuven (Prof. D. Vandepitte).

As a postdoc researcher you will work for the Department of Organic and Macromolecular Chemistry, Polymer Chemistry & Biomaterials group (PBM) of UGent (Prof. S. Van Vlierberghe) and the Department of Mechanics of Materials

and Constructions (MeMC) (Prof. L. Pyl and Prof. D. Van Hemelrijck). Both campuses can be reached easily by public transport.

The project has six industrial partners (REIN4CED, Tridea, TWE, Toyota Motor Europe, Optimum CPV and Siemens Industry Software).

In close collaboration between the VUB-MeMC research group and the UGent-PBM group, you will focus on aspects of improved recyclability of composites by using/developing fibre-reinforced filaments in 3D printing based on recycled polyethylene terephthalate (PET).

The candidate should have a strong background (and PhD degree) in materials (mechanics, chemistry, characterization).

Research Environment

The Mechanics of Materials and Constructions Department consists of 4 full-time professors and 0.5 part-time professors, 5 postdoctoral researchers and 25 PhD students. The successful candidate can benefit from strong collaborative links with other universities (UGent, KU Leuven,...). Besides, 15 PhD students have successfully obtained their PhD degree in the last five years. The Polymer Chemistry & Biomaterials Group consists of 2 full-time professors, 3 postdoctoral researchers and 15 PhD students.

As a postdoctoral research fellow you will help in the guidance of the PhD students.

You hold a PhD in Mechanical Engineering, Material science, Chemistry or a related field and want to contribute to innovations in fibre-reinforced 3D printed composites. A solid background in mechanics of materials, composite materials, and polymers is strongly recommended. Former experience with experimental material characterization is an advantage. You are interested to interact and collaborate closely with academic and industrial partners and guide PhD students. You are a team-player and can work in an international environment using English as a scientific communication tool. You will be encouraged to publish in peer-reviewed international journals.

Timing

The Postdoc vacancy is a full-time job position for 4 years. Candidates should be highly motivated and have a PhD degree.

Application procedure

Your application should contain:

- A motivation letter with a concise statement of the reason for applying including an explanation why you want to do research
- A curriculum vitae in Dutch or English
- The title and abstract of your PhD thesis
- A copy of diplomas
- A proof of proficiency in English (TOEFL or IELTS certificate) for non-Dutch speaking applicants

- Contact details (name, affiliation, phone number and e-mail address) of two persons who can provide a reference on our request

You send the C.V. by post or e-mail to the following persons:

LINCY PYL
Prof. dr. ir.
Vrije Universiteit Brussel
Faculty of Engineering Sciences
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