Job Offer - PhD position RECYCAL 3 project

Description

We are looking for a PhD candidate in the frame of the RECYCAL 3 research project between an industrial partner together with the Vrije Universiteit Brussel. The goal of the project is to develop aluminium extrusion profiles made from 100% recycled aluminium with equal or better properties than primary alloys. The additional trace elements can have an unknown impact on the alloy properties. Understanding the interactions of the different elements and their possible synergistic effects will allow us to maximise the recycling content. We aim to reach a full cradle-to-cradle principle as envisaged in a circular economy and on top minimise the ecologic impact of alloy production.

Your task within the project will be to investigate the surface properties of the developed alloys and perform the various pre-treatment steps including etching, conversion coating and anodising. You will further evaluate technological possibilities to reduce the fear of recycled products in the market. You will work in close contact with our industrial project partner who is one of the main players on the European market for recycled aluminium extrusion alloys. The research will be performed at SURF research group at the Vrije Universiteit Brussel in Belgium who is well known for its outstanding research in surface science, (local) electrochemistry, corrosion and modelling.

Requirements

The PhD candidate should have successfully completed a master’s degree in Engineering, Chemistry, Material Science or equivalent. Ideally, the applicant has a background in experimental Electrochemistry, Metallurgy and Surface Engineering. A strong interest in anodising and coatings is certainly beneficial, but not mandatory. The applicant should also not be afraid to dive into new technological pathways and be willing to possibly think out of the box to tackle the faced challenges. We are looking for open minded researchers that fit into our culturally diverse research group and can work together in a very dynamic team. An independent working style and willingness to contribute to the engineering education programs as part of your PhD training are desired. Speaking Dutch is an advantage.

The project is a 3-year project, starting with a maximum of 1-year as trial period and a possible prolongation for a fourth year. Interested candidates are welcome to send you CV including your academic track record (courses and scores) to professor Iris De Graeve (Iris.De.Graeve@vub.be).

Prof. Dr.ir. Iris De Graeve Vrije Universiteit Brussel (VUB), Dept. of Chemistry and Materials (MACH), Research group of Electrochemical and Surface Engineering (SURF), Faculty of Engineering Sciences, Pleinlaan 2 - 1050 Brussel - www.vub.ac.be; www.surfgroup.be