Job Offer - PhD position H2020 project NICKEFFECT

Description

We are looking for a PhD candidate in the frame of the Horizon 2020 Nickeffect. The goal of Platinum group metals (PGM) are currently highly demanded due to their unique properties which have made them indispensable in different strategic sectors as renewable energy, electric mobility and digital technologies. The proposed alternative is based on nickel (Ni), an earth-abundant element with ferromagnetic character. To enhance the catalytic performance of Ni, innovative deposition techniques to obtain coatings, with ordered and pseudo-ordered porosity, will be. The NICKEFFECT project brings together a strong consortium composed of twelve different partners with complementary profiles and large expertise, covering the special skills, capabilities and certification expected for the project. SURF group is looking for a person with skills in electrochemical modelling based on Finite Element Modelling. You will work in close contact with other partners of the project, both from industry (producers and users of coatings) and from research centers, with diverse backgrounds: software development, electrochemistry research (experimental and modelling), artificial intelligence, ... enabling the PhD candidate to also develop his/her interdisciplinary skills.

The research will be performed at SURF research group at the Vrije Universiteit Brussel in Belgium. SURF has a long and fruitful tradition of combining both modelling and experimental approaches in electrochemistry. By combining both fields, advances in fundamental and applicable knowledge are gained which would otherwise be impossible.

Requirements

The PhD candidate should have successfully completed a master's degree in engineering, physics, chemistry or equivalent. A strong interest in finite element modelling and (basic) programming is paramount. Ideally, the applicant has a background in experimental electrochemistry, with an understanding of electrodeposition of metals and experience with commercial FEM tools. The applicant should not be afraid to dive into some source code.

As we are an international research group (group SURF as part of the Dept. Materials and Chemistry (MACH)) with people from all over the world, uniting all languages and cultures in one large community, we are looking for researchers that can work together in a very dynamic team, open minded, fluent in English communication and willing to contribute to the engineering education programs as part of your PhD training. The University has its own unique identity, so I invite you to look at the VUB website.

The project is a 4-year project, starting with a maximum of 1-year as trial period.

You are welcome to send you CV including your academic track record (courses and scores) to professor Herman Terryn (herman.terryn@vub.be).

Prof. Dr.ir. Herman Terryn

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