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iX-factory is looking for candidates with a PHD (or equivalent) degree in chemical or biochemical engineering, chemistry or biotechnology (or related) for a project in microfluidics.

iX-factory GmbH is an innovative technical service provider in the area of micro- and nanotechnology. The company's service portfolio consists of the elements: MEMS Foundry Service, Design and Project Work, Prototyping and Batch Production. iX-factory GmbH delivers singular technical services as well as complex, long-term projects to its customers. Customers from diverse markets benefit from first-class technical service support, which are based on glass or silicon – or on

both combined. Individual and customised solutions are the highest goal of iX-factory GmbH. Offering optimised and standardized processes to customers and guaranteeing consistent and constant improvements of several business areas are the main goals of quality management certifications. ISO 9001 certification focuses on various business areas within an organisation such as project quality, transparency of processes and targeted training of team members. Special expertise is held by the highly experienced engineers in the technology area of microfluidics, micro reactors and optofluidics.

<u>Title of research project:</u> Microfluidic bioreactor design for monitoring and control

Host institution: iX-factory GmbH, Dortmund, Germany

<u>Brief description of individual project:</u> The task is to design and fabricate microbioreactors with integrated sensors for precise in situ monitoring and control. The candidate will focus on the design and the fabrication of MBRs for use with different integrated sensor layers materials for monolithical integration like nanosensor particles, magnetic nanosensor particles

<u>Planned Secondments:</u>

2 months at UOULU (University of Oulun Yliopisto, Finnland) - to acquire knowledge about biosensor technology

2 month at UL (University of Ljubljana, Slovenia) - to acquire knowledge about magnetic-field supported MBRs.

The candidate will visit the following conferences (e.g. IMTB 2015, IMRET, BIOTRANS, etc.) where oral or poster presentations are planned.

Duration of appointment: 18 months

<u>Educational requirements:</u> Candidates should have a PHD (or equivalent) degree in chemical or biochemical engineering, chemistry or biotechnology (or related).

Other specific requirements:

- The project will require creativity, perseverance, and hands-on laboratory/cleanroom processing skills
- Knowledge of biocatalytic processes would be preferable
- Good communication skills (oral and written) in English
- Interest to perform independent research and to work in a multidisciplinary team
- Interest in the design and development of microfluidic devices

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