



At the group of Prof. Etzold (Department Technische Chemie 1 at the Technische Universität Darmstadt, the position of a

Research Assistant (Ph.D. Student) (f / m / d) – 67 %

is to be filled at the earliest opportunity in an employment contract limited to 3 years.

As part of a project funded by the German Science Foundation (DFG), paper-based microfluidic electrochemical sensors are studied, which provide high sensitivity and selectivity combined with an electrical output needed e.g. for the internet of things. Up to now mainly 2D arrangements are employed and sensors are operated at room temperature. In our previous research it was shown that the electrochemical sensing improves strongly through a 3D arrangement. Furthermore, current studies show, that for alternative electrolytes elevated temperatures would be advantages. Focus of the PhD project are heavy metal sensors. 3D arrangements of the sensing devices incorporating also other functions like temperature control will be developed within the project and structure-sensitivity correlations be developed.

Required qualification:

Motivated candidates with a completed scientific university degree (M.Sc.) in chemistry, chemical engineering, materials science, or an equivalent degree should have in-depth knowledge of electrochemistry, preferably in the field of sensing. Background and practical experience in electrodeposition and stripping experiments, in electrochemical methods in half-cells are advantageous.

The general tasks include the supervision of students in the field of industrial chemistry, e.g. in internships, exercises and seminars, as well as participation in the research and teaching process. There is an opportunity to prepare for a doctorate. The provision of the service also serves the applicant's academic qualification

The remuneration is based on the collective agreement for the Technische Universität Darmstadt (TV - TU Darmstadt).

Application process:

Applications must be sent to Prof. Bastian Etzold latest 31st of January with the usual documents (including copies of certificates) in the form of a single, coherent PDF document. Email: bastian.etzold@tu-darmstadt.de.