

research assistant (postdoc)
limited to 2 years
Entgeltgruppe 13 TV-L FU
reference code: HZB-FU-EXC-EPR

Helmholtz-Zentrum Berlin and FU Berlin pursue a joint project within the framework of the Helmholtz-Exzellenz-Netzwerk and the Center of Excellence UniSysCat in Berlin aiming at the development and application of Electron Paramagnetic Resonance (EPR) methodology to be used in catalysis research. The person will be coopted in the groups of Prof. Klaus Lips, Institute of Nanospectroscopy HZB, and Prof. Thomas Risse, Institute of Chemistry and Biochemistry FU Berlin both being members of the Berlin Joint EPR Laboratory (BeJEL). Both groups are using and developing EPR spectroscopic techniques with particular focus on paramagnetic species at interfaces and their role for the functional properties of the systems. Within this joint project we aim at extending the set of available techniques and apply them to catalytic questions in the realm of heterogeneous catalysis at the liquid/solid interface.

Job description:

We invite applications for a two-year postdoctoral position in the area of experimental condensed matter physics. The person will be involved in a collaborative project to develop and apply EPR spectroscopic methods to be used for catalysis. On the one hand the applicant should develop an in-situ EPR cell to study photo- as well as electrocatalysis at liquid-solid interfaces and couple these measurements with product analytics to characterize the catalytic performance of the system. In a second step, it is envisioned to implement EPR-on-a-chip in the experimental setup, a novel technique co-developed at HZB, which allows operando spin characterization in harsh environments without the limits faced by conventional EPR.

Requirements:

Applicants should have or be close to complete a PhD in physics or chemistry. Experience in EPR spectroscopy is required.

Desirable:

- interest to understand catalytic processes at the atomic level
- experience in heterogeneous catalysis
- experience in liquid phase analytics (HPLC, NMR, MS etc.)

All applications quoting the **reference code** should be addressed no later than **April 15th, 2019** as an e-mail to Prof. Dr. Thomas Risse: risse@chemie.fu-berlin.de or postal to

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