We are looking for an excellent and creative doctoral researcher to join our multinational and interdisciplinary team at the Institute of Particle Technology (LFG). As a doctoral researcher, you will be an integral part of CRC 1411 "Design of Particulate Products", which is a newly established initiative funded by the German Research Foundation (DFG). It considers, through 20 participating projects, the predictive model-based design and practical process realization of particulate products. These range from single nanoparticles with controlled shape and composition, through hierarchically organized assemblies of particles, up to particle packings as stationary phases for chromatographic separation. The CRC will target scientific breakthroughs in the product engineering of nanoparticles with optimized optical properties produced by continuous synthesis directly coupled to property-specific classification of nanoparticles by chromatography.

Specifically, we seek a doctoral researcher for project C04 which concerns the comprehensive multidimensional characterization of particle ensembles. New methodologies for the quantitative characterization of nanoparticles with respect to size, density, shape and optical properties (extinction and emission) by means of combined centrifugation and gas phase analytics shall be developed. In addition, systematic non-ideality studies using analytical (ultra)centrifugation are targeted. This will allow the determination of the effect of concentration on the sedimentation and diffusive properties of nanoparticles for narrow and gradually more complex size distributions and will further combine these investigations with supplementary, surface-sensitive techniques.

As a doctoral researcher, you will be expected to actively participate in the integrated Research Training Group of the CRC (IRTG-ParSciTech). This provides a framework for the supervision of individual projects, usually by two principal investigators of the CRC. It also nurtures a collaborative network between all CRC projects through regular meetings and retreats. Finally, it prescribes a qualification programme which aims to promote members' scientific development, through participation in advanced lectures, conferences, stays in research labs abroad, and publishing, but also in transferable skills.

Your Qualifications:

- You hold or expect to soon obtain a very good university degree (Master’s or equivalent) in Chemical Engineering, Chemistry, Materials Science, Physics or a closely related field.
- You have a demonstrable ability to work both with a high level of independence and diligence but also you can present your ideas and results to an interdisciplinary team.
- You are proficient in the English language; knowledge of the German language is
Applications should include the following documents:

- A motivation letter describing your research interests, your qualifications and why you would be a suitable candidate
- A detailed CV
- Academic transcripts from your Bachelor’s and Master’s degrees
- Email addresses of at least two references

Interested applicants should send the necessary documents via email to: Prof. Dr.-Ing. Wolfgang Peukert (wolfgang.peukert@fau.de) with cc to Dr.-Ing. Johannes Walter (johannes.walter@fau.de).

The FAU is a member of "The Family in Higher Education Institutions" best practice club and aims to increase the number of women in scientific positions. Female candidates are therefore particularly encouraged to apply. In case of equal qualifications, candidates with disabilities will take precedence.

Anforderungsprofil

Vergütung
TV-L E13

Art der Beschäftigung
Vollzeit

Zeitraum der Beschäftigung
nach Vereinbarung

Bewerbungsfristende
Montag, 4. Mai 2020 - 23:59

Kontakt

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Bitte beziehen Sie sich in Ihrer Bewerbung auf https://www.stellenwerk-erlangen-nuernberg.de/