PhD position, HMI Group

The Hybrid Materials Interfaces Group at the Bremen Center for Computational Materials Science of the University of Bremen is offering – under the condition of job release – a position for a

PhD researcher

at the German TV-L 13 (75%) payscale

The appointment will be limited to **three years** and is available immediately.

The successful candidate will perform atomistic simulations based on classical biomolecular force fields to study the influence of different buffer conditions that contribute to the fibrillogenesis of fibrinogen. The simulation of individual protein domains will go hand in hand with the establishment of the complete protein model including post-translational modifications. The simulation work is part of a joined experimental/theoretical project funded by the German Research Foundation (DFG) in cooperation with the Institute for Biophysics of the University of Bremen (Prof. Dorothea Brüggemann). The successful candidate will have the opportunity to discuss the results from the atomistic simulations with the experimental results, such as dynamic light scattering, turbidimetric measurements and morphology and composition analyses from the cooperating group.

The aim of the project is to provide fundamental insights into *in vitro* fibrillogenesis of fibrinogen, which are necessary to develop a new class of fibrinogen nanofibers with defined structure-function-relationships. The wide range of used methods will enable us to interpret single-molecule information in the light of results obtained from an ensemble of fibrinogen structures/conformations. This will lead us to propose a detailed mechanism for the *in vitro* fibrillogenesis of fibrinogen with a clear dependence on environmental parameters.

Requirements

Applicants are expected to possess outstanding academic records and a solid background in (bio)physics, (bio)chemistry, materials science or related disciplines. The knowledge of programming and scripting languages as well as excellent written and spoken English skills are essential. Existing expertise with molecular dynamics simulation methods represents a strong advantage.

Further information

As the University of Bremen intends to increase the proportion of female employees in science, women are particularly encouraged to apply. In case of equal personal aptitudes and qualification priority will be given to handicapped applicants. The University of Bremen expressly invites persons with migration background to apply.

The employment is fixed-term and governed by the Act of Academic Fixed-Term Contract (*Wissenschaftszeitvertragsgesetz – WissZeitVG*). Therefore, candidates may only be considered for appointment if they still have the respective qualification periods available in accordance with § 2 (1) WissZeitVG.

Application procedure

The application is open until the **30th of November 2021** or until the position is filled. Please send your electronic application with the reference **DFG-2021-FG** as **one single pdf** document including (1) a motivation letter, in which you make clear why your study background fits to the advertised position; (2) your curriculum vitae including a list of publications, if available; (3) full transcripts of your academic records; (4) the names of two reference persons

to

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