Molecular modelling of biospecies adsorption and interactions at cellulose interfaces

Supervisor: Prof. Maria Sammalkorpi
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We are now looking for a **Doctoral Researcher in field of Molecular modelling of Biobased Materials.**

We are now looking for a doctoral researcher to Aalto University School of Chemical Engineering. The position is intended for pursuing a doctoral degree. You will become an expert in advanced computer-based approaches to materials modelling in biomaterials in an active, academically ambitious environment targeting leading edge materials solutions. Join us in shaping the future of materials!

Scientific environment

The selected candidate will join the Soft Materials Modelling group led by Prof. Maria Sammalkorpi in the Department of Chemistry and Materials Science in Aalto University and be part of the interdisciplinary doctoral education network CIMANET. The Soft Materials Modelling group is part of the Academy of Finland Center of Excellence in Life Inspired Hybrid Materials (LIBER) at Aalto University. Characteristic to the environment is that your modelling and theory work is connected with experimental research via collaborations.

Your role and goals

The selected person will be appointed for a fixed term. The successful candidate will conduct computational and theoretical scientific research aiming at the completion of a doctoral degree and high impact scientific publications in the field of soft materials modeling, more precisely molecular modelling of biobased materials. Research methodology is molecular level modelling, data analysis techniques, and statistical mechanics or thermodynamics approaches. The methodology combination offers a strong basis for modern computer-based research approaches. The position also involves participation in departmental teaching and student instruction.

Your experience and ambitions

A study background in physics, chemistry, polymer and biomaterials, or a closely related field with molecular level studies is a good match with the position. You benefit from existing know-how in computational methods at molecular level, for example in molecular dynamics or Monte Carlo simulations techniques at atomistic and molecular level coarse-grained detail. Good mathematical and computer skills are useful in the position. The research work in this position makes use of linux/unix based high performance computing environments (HPC computing) and involves data handling and processing.

An applicant must have completed by 31 July 2024 or preferably earlier (to start employment on 1 August 2024) or by 31 December 2024 or preferably earlier (to start employment on 1 January 2025)

- a master's degree awarded by a university, or
- a study programme that in the awarding country gives eligibility for doctoral level studies

A good command of English is required, Finnish language is not.