

## Two fully funded PhD positions are available

in the project capDFT  
in the Statistical Physics of Soft Matter  
and Complex Systems group  
at the Institute of Physics  
at the University of Freiburg (Freiburg, Germany)

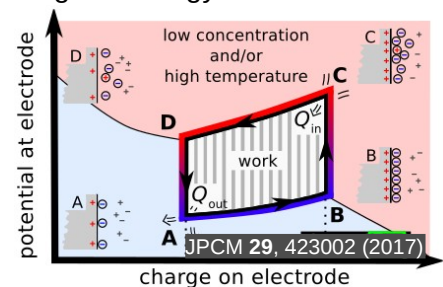
**We search** for candidates who want to perform a PhD in theoretical physics of classical many-body systems. *Successful candidates* hold a Master degree in physics or equivalent and have a solid background in mathematics and like to develop and test new theories. They will use methods including pen-and-paper calculations and software like Mathematica, develop own codes for the numerical treatment of equations, setting up computer simulations, and more. Candidates will profit from C/C++ skills.

**We offer** two fully funded (50% E13) PhD positions in the field of theoretical physics. The projects are hosted in the group of Prof. Schilling (Statistical Physics of Soft Matter and Complex Systems), where successful candidates will find a lively environment for scientific discussions and exchange. Successful candidates will closely collaborate with the members of the hosting group and with international experts in the field. Both open positions are fully funded via the German research foundation (project capDFT) and allow to present scientific results on international conferences and summer schools.

The **project capDFT** aims to improve our knowledge of the structure and properties of electrolytes and electric double layers (EDLs) in order to answer fundamental questions in the field. Results are important to develop and improve related capacitive technologies for a sustainable future treatment of water and the production and storage of energy.

In particular, successful candidates will work on a new microscopic theory for ionic fluids in external fields in the framework of classical density functional theory. They will apply this theory to the present questions on in-plane structure and dielectric screening in EDLs, concentrated electrolytes, and ionic fluids.

The figure shows a capacitive cycle, where blue energy can be harvested from mixing, i.e., sea and river water.



Please send your **application** to

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*Further information:*

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