

Einladung zum ICP-Kolloquium (Präsenzveranstaltung)

Prof. Dr. Benjamin Rotenberg
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hält am

Montag, 12.06.2023, 14:00 Uhr
ICP Seminarraum 1.079, Allmandring 3

einen Vortrag über das Thema:

“Making Sense of Electrical Noise by Simulating Electrolyte Solutions”

Abstract:

Seemingly unrelated experiments such as electrolyte transport through nanotubes, nano-scale electrochemistry, NMR relaxometry and Surface Force Balance measurements, all probe electrical fluctuations: of the electric current, the charge and polarization, the field gradient (for quadrupolar nuclei) and the coupled mass/charge densities. Using molecular and mesoscopic simulations, it is possible to predict the fluctuations of these observables from the dynamics of ions and solvent molecules, thereby enabling experimentalists to decipher the microscopic properties encoded in the measured electrical noise. This presentation will illustrate this idea, focusing on quadrupolar NMR relaxation as a probe of collective dynamics in aqueous electrolyte solutions, and on the link between the electrode charge fluctuations in nanocapacitors and the dynamics of the interfacial electrolyte.

Interessenten sind herzlich eingeladen.

Prof. Dr. C. Holm
Dr. Rudolf Weeber
Dr. Alexander Schlaich