



# EINLADUNG

zum **Vortrag**  
von

**Univ.Prof. Dr. Markus Valtiner**

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**Understanding reactivity at electrified interfaces with force probe experiments: From electric double layers, to corrosion and SEI formation on Li-anodes**

**Dienstag, 22. November 2022, um 17:30 Uhr**

**Ort:** Lise-Meitner-Hörsaal, Fakultät für Physik, Universität Wien,  
1090 Wien, Strudlhofgasse 4 / Boltzmannngasse 5, 1. Stock

*Barrierefreier Zugang: Boltzmannngasse 5, Lift, 1. Stock rechts über den Gang zum Hintereingang des Hörsaals*

## Abstract

Electrochemical solid|liquid interfaces are critically important for materials for energy storage, harvesting, and conversion, and for material stability in general. Yet, a real-time visualization of dynamic processes at electrified solid|liquid interfaces with close to atomic resolution is extremely challenging. Processes such as an electrochemical surface modification, or localized surface reactions in confinement are inherently difficult to visualize in real time with micro-to-nano scale resolution.

In this presentation I will highlight recent advances in characterizing electrochemical interfaces with the electrochemical surface forces apparatus (EC-SFA) and high-resolution AFM imaging and force probe studies, ranging from electric double layer characterization in ionic liquids, to real-time measurement of corrosion rates in confined localized areas, to electrochemical growth of solid electrolyte interfaces on Li-battery anodes.