

SEMINAR

Wednesday, 07.02.2024, 14:00, Kolar's Lecture Hall

Liquid-cell Transmission Electron Microscopy to Understand Electrochemical Processes

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Transmission electron microscopy (TEM) has been used already for many decades to investigate the problems in various fields of materials science down to the atomic-scale. More recently developed liquid-cell TEM holders allow for in-situ studying of materials reactions. Such specialized holders contain liquid cells that can withhold the liquid in a confined environment, allowing the imaging and spectroscopy of samples in the reaction media. Combining the capabilities of liquid-cell TEM holders with micro-size electrodes printed on a chip enables us to study dynamic phenomena during electrochemical reactions at high spatial and temporal resolution with the in-situ Electrochemical Liquid-cell Transmission Electron Microscopy (in-situ EC LC-TEM). In this seminar, I will review the basics of the LC-TEM, the electrochemical aspects of the technique including some of the ongoing works in our liquid-cell TEM lab.

Kindly invited.