

Seminar Speaker Series

in the framework of Interreg V-A project CAPSID

presents

Prof. Niels de Jonge

Leibniz Institute for New Materials, Saarland University (DE)

Liquid phase electron microscopy fundamentals:

The application to study membrane proteins in
whole cells, and future outlook

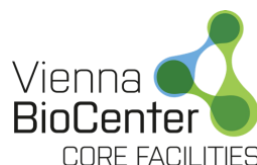
10. 12. 2020 at 14:00

Online virtual talk via Zoom

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Organized by:






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RESEARCH

A central scientific challenge of our time is **to understand the molecular machinery underlying cellular function**. This knowledge is needed on the one hand to develop future technology in the hope that we humans can copy some of nature's design rules, and on the other hand to battle diseases, especially cancer. This challenge requires the development of advanced microscopy techniques.

Our research program aims at finding clues for causes of drug resistance development in cancer, studying membrane protein interactions, and exploring processes of nanomaterials at the solid-liquid interface. For this purpose, we innovate in liquid-phase electron microscopy (LP-EM), 3D scanning transmission electron microscopy (STEM), and in situ STEM. Our focus is on analyzing membrane protein interactions at the single molecule level within whole cells in hydrated state.

The research is conducted by an interdisciplinary team of biophysicists, cell biologists, chemists, and computer scientists. Prof. Dr. Dr. h.c. Niels de Jonge leads the group Innovative Electron Microscopy (IEM) at the INM – Leibniz Institute for New Materials, in Saarbrücken, Germany. He is also honorary professor of physics at the Saarland University (UdS).

REFERENCE

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