



# Physics Colloquium

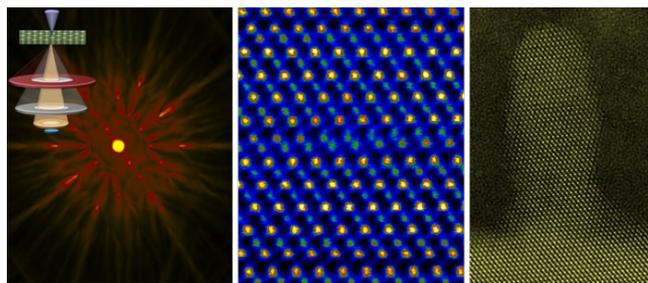
Tuesday, 17 Mai 2022 at 17:00

**Dr. Andriy Lotnyk**

IOM - The Leibniz Institute of Surface Engineering , Leipzig

## Phase change thin films: From peculiarities of local structure to the dynamics of structural changes

Chalcogenide based phase change alloys exhibit unique material properties and are used as active layer for data storage in phase change memory technology. The control of the disorder in such materials is very important for the application. Of particular importance in that process is unravelling the local structure of different states of phase change alloys. Moreover, nanoscale observation of atomic scale processes in such materials are also crucial for optimization of the performance of phase change memory devices and for understanding the underlying switching mechanisms. This talk discusses the local structure and nanoscale processes in Ge-Sb-Te thin films and artificial GeTe-Sb<sub>2</sub>Te<sub>3</sub> superlattices which were studied by direct imaging in real space and with high-spatial resolution utilizing state-of-the-art aberration-corrected scanning transmission electron microscopy and its *in situ* capabilities.



Venue: Universität Leipzig, Faculty of Physics and Earth Sciences  
04103 Leipzig, Linnéstraße 5, Lecture Hall for Theoretical Physics

At 16:30, coffee and cookies are offered in front of the lecture hall

*Wir bitten Sie, die jeweils geltenden Maßnahmen der Infektionsschutzvorkehrungen zu beachten.*