



Institut für Chemische Technologien und
Analytik
Technische Universität Wien



Seminar „Moderne Analytische Chemie“
(151.398) SS 2024

Einladung
zum

Vortrag von

Dr. Margaux Petay

AFM-IR Lab, Institut de Chimie Physique, CNRS - Université
Paris-Saclay, France

“Multimodal and multiscale analysis of complex biomaterials: optimization and constraints of infrared nanospectroscopy measurements”

Abstract: Infrared (IR) nanospectroscopy techniques, particularly AFM-IR (atomic force microscopy-infrared), are promising in the biomedical field as they offer materials' chemical descriptions at the nanometer scale. Up to now, AFM-IR is mainly used in biology for studying individual cells or micro-organisms. Yet, many applications could benefit from such description, such as mineralization phenomena in breast tissue, related to breast pathologies, including cancer. Although AFM-IR measurements of inorganic and crystalline objects can be challenging due to their specific optical and mechanical properties, we demonstrate AFM-IR capabilities to characterize pathological deposits directly in biological tissues. Furthermore, implementing a multimodal and multiscale methodology comes with significant challenges in terms of sample preparation, measurements, data processing, and data management, as well as their interpretation: challenges which will be outlined and addressed.

gemeinsam mit Institut 165

Ort:

Vortmann Hörsaal

1060 Wien, Getreidemarkt 9, Chemiehochhaus, 2. Stock

Zeit:

Donnerstag, 25. April 2024, 16.00 Uhr