



Dr. Helen Grüninger

Junior Principal Investigator, BayBatt
Chair of Inorganic Chemistry III

Thursday, **30.04.2026**

3:45 PM in H31 (FAN-B)

Öffentlicher Vortrag im Habilitationsverfahren (Zwischenevaluation)

Structure Meets Transport: Materials for Energy Conversion and Storage

Electronic and ionic transport processes define the performance and stability of materials used for solar energy conversion and electrochemical energy storage. Understanding how these transport processes interact with structure, disorder, and interfaces is therefore essential. I will present my group's efforts to advance this understanding through the combined use of solid-state NMR spectroscopy and X-ray diffraction to track structural evolution and ion transport under external stimuli. This integrated approach reveals how morphology, disorder, interfaces, and confinement impact transport behaviour, for example in hybrid perovskites. Further, I focus on our recent progress toward in situ and operando NMR spectroscopy for studying electrochemical cells. Together, these studies motivate our current work on heterojunction composites for integrated solar conversion and storage in photobatteries within the Emmy Noether project *StoreLight*.

Gäste sind herzlich willkommen!

Guests are very welcome!