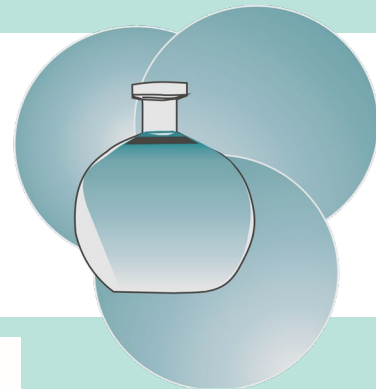


# Fakultät für Naturwissenschaften

# Institut für Chemie



lädt ein

gemeinsam mit der Gesellschaft  
Deutscher Chemiker  
zum



**Vortrag**  
von Frau

**Dr. Liza Herrera  
Diez**

Centre of Nanoscience and  
Nanotechnology  
**CNRS-Université  
Paris Saclay**

## "Oxygen-based magneto-ionics: mechanisms, recent developements and perspectives"

am: 23. Mai 2024

um: 16:00 Uhr

WO: im Raum 1/232

Die kleine Kaffeerunde vor dem Vortrag beginnt  
um 15:30 Uhr im Raum 1/232.

Das Mitbringen von eigenen Trinkgefäßen ist  
erwünscht.

Gäste sind herzlich willkommen!

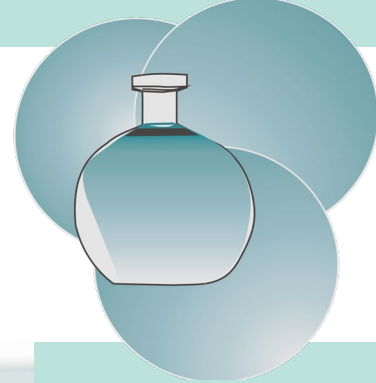


TECHNISCHE UNIVERSITÄT  
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DEUTSCHER CHEMIKER

## **Oxygen-based magneto-ionics: mechanisms, recent developements and perspectives**

The ability to manipulate magnetic properties through ionic motion in ferromagnetic/oxide structures in a non-volatile way, rather than the volatile purely electronic means, presents exciting opportunities for the development of functionalities like reconfigurable multistate memories and the implementation of cumulative gate effects in spintronics devices. Oxygen-based magneto-ionics takes inspiration from memristor technologies and offers one of the most advanced approaches today for controlling magnetic properties using ionics.

In this talk, I will discuss the chemical-physical mechanisms underlying the observed effects on magnetic properties and explore the various available device geometries. Furthermore, I will provide an overview of recent advancements and novel functionalities enabled by oxygen-based magneto-ionics in spintronics devices, while also addressing the challenges and opportunities associated with this field.

