

Prof. Dr. Hans Jockers  
Institut für Physik  
jockers@uni-mainz.de

Prof. Dr. Concettina Sfienti  
Institut für Kernphysik  
sfienti@uni-mainz.de

JOHANNES GUTENBERG  
UNIVERSITÄT MAINZ



# Physikalisches Kolloquium

May 30, 2023 at 4:15 p.m.  
HS KPH

Prof. Angela Wittmann  
JGU Institute for Physics

## **Exploring spintronics at unconventional hybrid interfaces**

Controlled manipulation of a system allows for systematic investigation of the underlying interactions and phenomena. Simultaneously, tunability also enables the development of novel materials systems and devices customized for specific applications. Here, we will focus on materials systems that conventionally have not been used as active components in spintronic devices. We will explore the impact of strain on the antiferromagnetic domain structure via magneto-elastic coupling<sup>1</sup>. Furthermore, we will delve into hybrid molecule-magnetic interfaces. Molecules offer a unique way of controlling and varying the structure at the interface making it possible to precisely tune the spin injection and diffusion by molecular design<sup>2</sup>. In particular, chirality has gained recent interest in the context of the chiral-induced spin selectivity effect<sup>3</sup>. Here, we will explore signatures of spin filtering at a non-magnetic chiral molecule-metal interface paving the path toward novel hybrid spintronics.

Contact:  
Caroline Hoffmann  
Sekretariat Prof. Dr. Hans Jockers  
Institut für Physik  
choffman@uni-mainz.de

Sibylle Wittek  
Sekretariat Prof. Dr. Concettina  
Sfienti  
Institut für Kernphysik  
swittek@uni-mainz.de

