

MSc Thesis & BSc projects:

Accessing the Spinterface properties

At the origin of hybrid states at the interface between molecules and ferromagnets.

The adsorption of non-magnetic atoms and molecules on ferromagnetic (FM) transition metal surfaces creates a hybrid interface – often referred to as spinterface - that can exhibit novel and peculiar spin properties. On the one hand, the adsorbate's electronic structure becomes spin-polarized due to the interaction with the ferromagnet, while, on the other hand, the magnetic properties of the ferromagnetic surface can be altered due to hybridization with the adsorbate states.

Accessing the electronic properties of these heterogeneous systems is thus fundamental for spin-related quantum applications.

The proposed BSc. or MSc. projects aim at understanding how hybridization affects both sides of the interface by means of state-of-the-art photoemission and microscopy methods, such as Photoemission Orbital Tomography and Scanning Tunnelling Microscopy.

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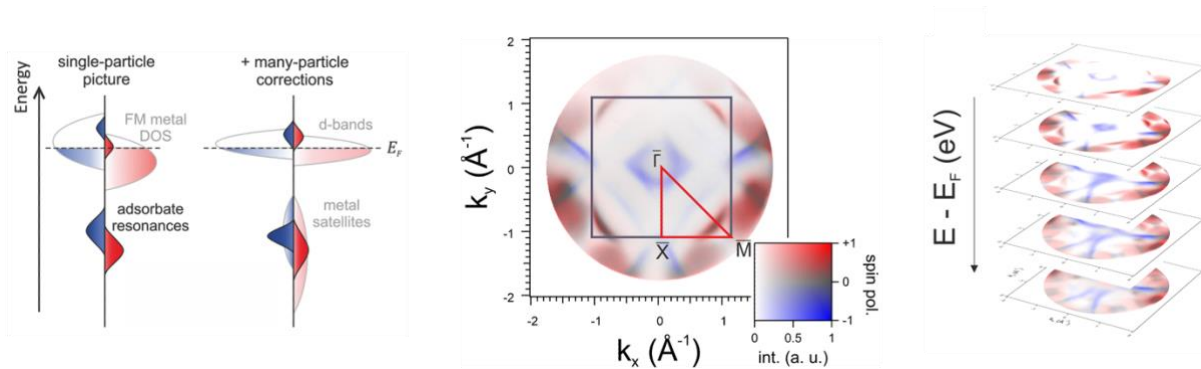


Image taken from: D. Janas GZ et al. *Advanced Materials* **35**, 2205698 (2023).