

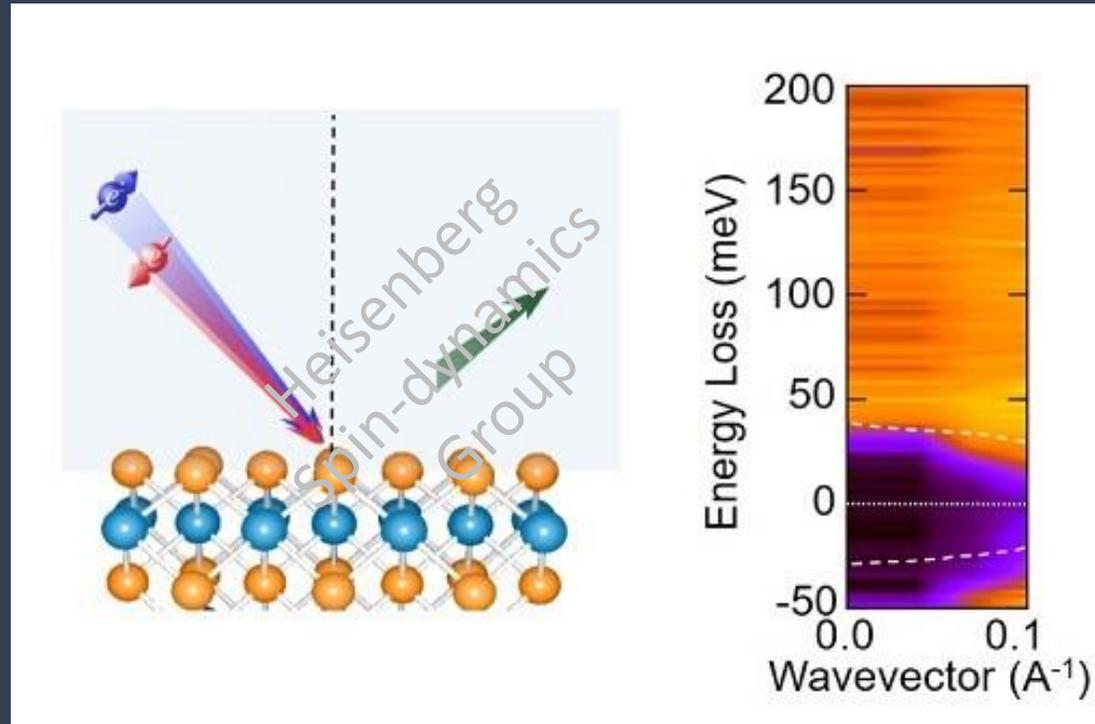
Collective excitations in ultrathin superconductors



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Project description

We are interested in looking at spin-dependent excitations in ultrathin superconductors. The main motivation is understand the microscopic mechanism leading to Cooper pairing in the so-called unconventional superconductors.



Spin-dependent excitations may be probed by spin-polarized electron spectroscopy techniques. Our idea is to implement these techniques to ultrathin superconducting films in order to understand their unique properties. The sample preparation and all the analysis will be performed under ultra-high vacuum. The spin-dependent excitations shall be investigated by our unique spin-polarized high-resolution electron energy loss spectrometer.