

SUPPORTING INFORMATION

Graphene Induced Magnetic Anisotropy of a Two-Dimensional Iron-Phthalocyanine Network

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The pristine XAS data at the Fe $L_{2,3}$ absorption edge taken with circularly polarized light in presence of an applied magnetic field are reported in Figure S1. We show the XAS data for both helicities and the corresponding XMCD signals as derived for a FePc 20nm thick film grown on Gr/Ir(111), and for a FePc single layer on Gr/Ir(111), taken with different incidence angles. The thick film data (Figure S1.c and d) presents only the step-like background due to the Fe signal, while the single layer data (Figure S1.a and b) is superimposed to a slowly varying background, due to the extended X-rays absorption structure above the Ir-N edge.

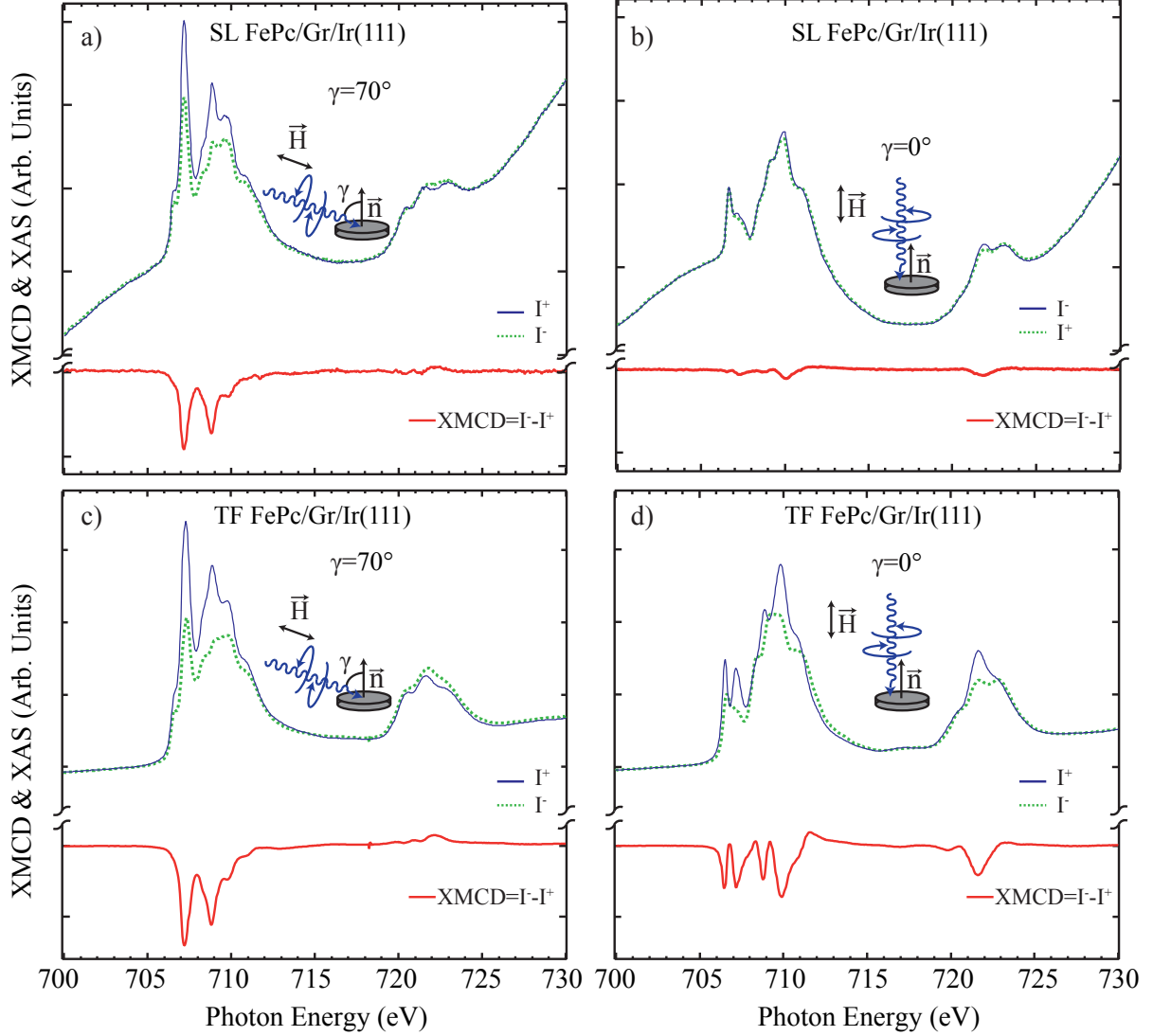


Figure S1: Raw XAS data taken with circularly polarized radiation (5T applied magnetic field, 8K sample temperature.). a,b) Single layer of FePc/Gr/Ir(111) Fe $L_{2,3}$ absorption edge. Parallel configuration (I^+ , blue continuous line), antiparallel configuration (I^- , green dotted line), XMCD signal defined as their difference ($I^- - I^+$); data taken with incidence angles $\gamma = 70^\circ$ (a) and $\gamma = 0^\circ$ (b), as schematically depicted in the inset sketch. c,d) Thin film FePc Fe $L_{2,3}$ absorption edge data taken in the same conditions of the SL.