

Thermal and Electrical Controls of Magnetization Reversal in FeRh films

Dorj Odkhuu^{*}

Department of Physics, Incheon National University, Incheon 22012, Republic of Korea

Phenomena originating from spin-orbit interaction such as magnetic anisotropy, Rashba-type interactions, or topological insulators have drawn huge attention for its intriguing physics as well as advances in practical applications. In particular, it seems that modern spintronics relies on perpendicular magnetic anisotropy (PMA) and its switching in an antiferromagnetic material. In this talk, I will present results of first-principles calculations on viable routes, by means of thermal and electric fields, that can lead to the large but also switchable PMA in FeRh films on MgO and BaTiO₃.