

Ultrafast magnetization dynamics in elementary and multisublattice ferromagnets

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In my talk I will give an overview on several topics in the field of magnetization dynamics. I will first shortly discuss our works in the field of ultrafast spin dynamics on 3d-ferromagnets with respect to the evolution of the field, before I will come in more detail to studies on Co-based full Heusler compounds. Here, our interest is especially on the alleged half-metallic properties of such systems and the possible signature of this property in dynamical studies of magnetization. As a last topic I will discuss the field of optical control of magnetization – the so called all-optical magnetization switching (AOS). The focus here will be both on the influence of the properties of the exciting laser pulse for the process of AOS and on the properties of the material systems to be switched.