



Séminaire – Mercredi 5 novembre (10:30)

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Study of magnetic anisotropy in (Ga,Mn)As

MnAs is an example of material, which combine magnetic and semiconductor properties and thus can be useful for future spintronic applications. Our motivation was to study magnetic anisotropy of GaMnAs layers with epitaxial strain as a function of temperature and as a function of external hydrostatic pressure. Since in this material the direction of magnetization strongly influences current flow distribution magneto-transport measurements (magnetoresistance and anomalous and planar Hall effect) have been performed. From the analysis of the Hall effect data the anisotropy parameters were determined. Magnetoresistance data revealed peculiar peaks at the magnetic fields corresponding to magnetization switching probed by Hall voltage. Computer simulations showed that these “anomalies” could originate from the complex, island-like magnetic domains and their propagation in the sample.