



Magnetism in Thin Films: The Giant Magnetoresistance Effect

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Applications of Giant Magnetoresistance have revolutionized techniques for retrieving data from hard disks. The discovery also plays an important role in the development of a new generation of electronics and the use of Giant Magnetoresistance can be regarded as one of the first major applications of nanotechnology.

But what is Giant Magnetoresistance? How does it work? What happens inside a material that shows this phenomenon?

In my talk I will try to shed some light on these questions and the physical background of the GMR effect. I will talk about the physical concepts that are essential to this phenomenon, like ferromagnetism, resistance in ferromagnets and interlayer coupling, and how, combined in the right way, they result in Giant Magnetoresistance.

