MAGNETOELECTRONIC PROPERTIES OF THIN FILM SYSTEMS AND NANOSTRUCTURES

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Following the discovery of the antiferromagnetic coupling of Fe layers via the conduction electrons of Cr in thin multilayered systems by Grnberg and the Giant MagnetoResistance by Fert, solid state researchers started to intensively explore the dependence of the electron transport and tunneling on the spin in thin film systems. This talk will first give an overview of the current status of this work on metallic multilayers and tunneling elements. The second part will concentrate on applications of these new devices and will give an outlook on new developments in magneto- and spinelectronics.