

Contribution submission to the conference Regensburg 2010

Structural and transport properties of Permalloy nanowires

— ●SALEH GETLAWI, MICHAEL R KOBLISCHKA, and UWE HARTMANN
— Institute of Experimental Physics, Saarland University, Campus C
6 3, D-66123 Saarbrücken, Germany

The study of the relationships between geometry and structure of magnetic nanowires on the one hand and their electron transport properties on the other hand is a growing research area of current importance. Permalloy nanostructures with contact pads of various designs (diamonds, ellipses, rectangles, squares) were prepared by electron-beam lithography and the lift-off process in order to find the optimally suited structure for measurements of the magnetoresistance and magnetoimpedance and simultaneous domain observation by means of magnetic force microscopy (MFM). For this purpose, all samples were equipped with four current/voltage electrodes made of Pt by employing a dual-beam focused-ion beam system. The obtained MFM images were compared to micromagnetic simulations.

Part: MA
Type: Vortrag;Talk
Topic: Spinelektronik / Spininjektion in Heterostrukturen;Spinelectronics / Spininjection in Heterostructures
Email: s.getlawi@mx.uni-saarland.de