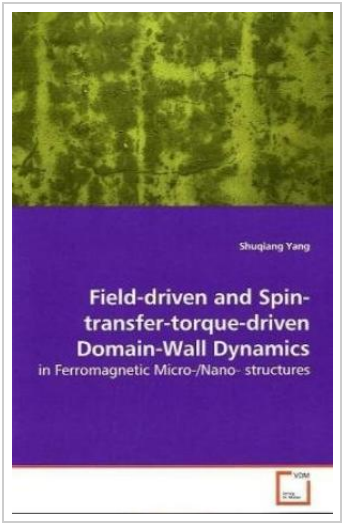

Field-driven and Spin-transfer-torque-driven Domain-Wall Dynamics

By Yang, Shuqiang

Condition: New. Publisher/Verlag: VDM Verlag Dr. Müller | in Ferromagnetic Micro-/Nano- structures | The main topic of this book is to exploremagnetic-field- and electric-current-drivendomain-wall motion in thin-film-based magneticmicrostructures. Conventional thin-film growth andmicrostructure fabrication techniques includingelectron-beam lithography and focused ion beammilling are used to fabricate nanometer-scaleone-dimensional and two-dimensional magneticstructures that support magnetic domains (regions ofdifferent magnetization orientation separated bydomain walls). A high-spatial resolution,high-temporal resolution technique for measuring thefield- or current- driven dynamics of the domainwalls, based on the magneto-optic Kerr effect, isdeveloped and used to study the wall dynamics.Domain-wall motion driven by (spin-polarized)electric current is studied in nano-scale thin-filmbased wires. The experiments address issuespertaining to the basic mechanisms responsible forcurrent-driven domain-wall motion, which are believedto be the adiabatic spin-torque mechanism andnon-adiabatic mechanisms. | Format: Paperback | Language/Sprache: english | 150 gr | 220x150x5 mm | 100 pp.

Reviews

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