MAGNETIC LOGIC WITH PERPENDICULAR ANISOTROPY

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In magnetic logic the direction of the magnetisation in sub-micron patterned ferromagnets is identified with Boolean logic 1 or 0. As first demonstrated Magnetic Logic with perpendicular magnetic anisotropy promises low power non-volatile computing, massively parallel character and fast operation and thus has the potential to become a key technology for logic circuits. NOT-gate and domain wall generator are presented. Both structures use nucleation strategy. First results showed problems with control nucleation processes in the magnetic nanostructures. Magnetooptic Kerr effect was used for the observations magnetic logic device.

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