

EFFECTIVE MAGNETIC DIPOLAR ANISOTROPY
IN NANOMAGNS: EQUILIBRIUM
MAGNETIZATION STATES

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Equilibrium magnetization states of thin nanoparticles of different forms were studied theoretically, using the approach of the effective anisotropy caused by the magnetic dipolar interaction. The magnetization distributions for a plane angle and for dots, which have form of regular polygons, were predicted theoretically for magnets with weak exchange interaction. The sizes of magnetization nonuniformities near the angle vertex were estimated theoretically. The analytic results are in a good agreement with micromagnetic simulations for square prisms.