

Abstract Submitted
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Study of dipolar interaction between nano-disks MEGHA CHADHA, STEPHANIE K. WALTON, KATHARINA ZEISSLER, DAVID M. BURN, Blackett Laboratory, Imperial College, Prince Consort Road, London SW7 2AZ, UK; London Centre for Nanotechnology, London WC1H 0AH, UK, SOLVEIG FELTON, Department of Physics and Astronomy, Queen's University, Belfast BT7 1NN, United Kingdom, LESLEY F. COHEN, WILL R. BRANFORD, Blackett Laboratory, Imperial College, Prince Consort Road, London SW7 2AZ, UK; London Centre for Nanotechnology, London WC1H 0AH, UK, FUNCTIONAL MAGNETISM TEAM — Ferromagnetic nano-dot arrays are interesting for data storage applications, but as the density of disks becomes high the dipolar interactions between disks become strong. In this work we study lithographically prepared arrays of densely packed single domain perm-alloy nano-disks where the dipolar correlations are significant. We study the collective magnetic array properties for different array geometries and varying disk separation and explore the effect of magnetic frustration in these systems.

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