

Abstract Submitted
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Properties of SmCo nanoparticles prepared by surfactant-assisted ball milling YIPING WANG, YANG LI, CHUANBING RONG, J. PING LIU, Department of Physics, University of Texas at Arlington, Arlington, TX, 76019 — SmCo series nanoparticles were successfully prepared by surfactant-assisted ball milling process. After ball milling with surfactant, these nanoparticles were nicely dispersed in the solution. The phases of these nanoparticles were determined by XRD. By controlling the settling down time, SmCo nanoparticles with different sizes could be obtained. The magnetization measurement shows that the magnetic properties of SmCo nanoparticles intensively depend on the particle size. The larger nanoparticles present a good coercivity of 5 kOe, however, these small size nanoparticles of about 7nm only show a coercivity of several tens Oersteds.

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