

Heating time and concentration of Pt influence on Fe-Pt nanoparticles properties: structure, morphology and hysteresis

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L10 FePt is expected to exhibit excellent hard magnetic properties even when its size is as small as 3 to 4 nm, due to its large magnetic anisotropy. Therefore, much attention has been placed on fabrication and magnetic properties of nanostructured L10 FePt both from scientific and technological interests. In this work, FePt nanoparticles were obtained by pulsed plasma in liquid method from FePt –alloy in different content of Pt. further the FePt nanoparticles were annealed at different temperatures and transformed into L0 type. Crystal structure, morphology and hysteresis of the nanoparticles were studied using X-ray diffraction, HR-TEM and VSM analysis.

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