

## Effect of annealing in external magnetic field on the microstructure and magnetic properties of FePt films

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### Abstract

We have studied the influence of annealing in an external magnetic field on the microstructure and magnetic properties of a multilayer Si/Fe(2 nm)/Fe<sub>50</sub>Pt<sub>50</sub>(20 nm)/Pt(2 nm) structure synthesized by means of sequential RF magnetron sputtering of the components. The magnetic field was oriented perpendicular to layers of the structure. It is established that annealing in the external magnetic field leads to the formation of predominant (001) texture in the multilayer structure with L1<sub>0</sub>-FePt phase. Thus, a method of obtaining multilayer structures based on FePt films required for the perpendicular magnetic recording has been developed. © 2012 Pleiades Publishing, Ltd.

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