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The invention relates to the nanostructured material production technology, in particular to methods for producing magnetic nanostructures, which can be used in microelectronics, spintronics or information storage.

The method, according to the invention, consists in the manufacture of an inorganic nanomatrix with a layer of GaAs nanowires by the method of anodizing in an electrolytic 1M HNO<sub>3</sub> solution a GaAs wafer with crystallographic orientation (111)B or (001), after which on the surface of the nanomatrix with nanowires obtained by a galvanostatic method in an electrolytic solution of 0,01 mol/L of FeSO<sub>4</sub>, 0,03 mol/L of (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> and 0,3 mol/L of Na<sub>2</sub>SO<sub>4</sub> with pH 5.1 a magnetic Fe layer is deposited within 15...20 s, forming around the nanowires nanotubes with anisotropic magnetic properties.

Claims: 3

Fig.: 4