The electronmicroscopic investigation of $BaFe_{12}O_{19}$ nanocrystals

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With the help of nonconventional cryochemical technology lamellar nanocrystals $BaFe_{12}O_{19}$ with morphological parameters: d= 7-25 nm, as well as aspect relation d/h= 1-4.5 were obtained. Water-soluble salts of nitric acid we used as the initial builders. Maintance of chemical homogenity of the mixed solution was guaranteed by introducing creating complexes agents from the lines of carbon acids. Using the analysis of the thermogravimetric, the microdiffraction and the electronmicroscopic germ-formation starting temperature was found. Time regime determining full ferritization was also described. Alongside with hexagon crystals ultra thin particles (the thickness of particle with less distinct form is 1-2 of lattice parameter) were found. The latter were identified according to barium hexagonal ferrite structure. The objects in question serve as the model of the crystal surface stratum.

9.7 cm

13.4 cm

Subject category :

3. Transition Metals, Alloys and Compounds

Presentation mode :
poster

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