

Thermogravimetric study of the decomposition of BSA-coated magnetic nanoparticles

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Magnetic nanoparticles used in biomedicine have to be biocompatible, what can be achieved by the modification of the magnetic particle surface with an appropriate biocompatible substance. In the work protein bovine serum albumin (BSA) was chosen to modify the surface of magnetic nanoparticles. The BSA-coated magnetic nanoparticles with different input weight ratios of BSA to the magnetite Fe_3O_4 were prepared and thermally characterized using thermogravimetric analysis. The adsorption of the biocompatible material BSA on magnetic nanoparticles in wide range of concentration was confirmed. The activation energy of thermal decomposition of complex was estimated.

9.7 cm

13.4 cm

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