ELECTRON MICROSCOPY OF ANIONIC SURFACTANT-DIRECTED SYNTHESIS OF MAGNETITE NANOPARTICLES

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Abstract. Here we report a new work on the synthesis and an electron microscopy study of the earliest known magnetic material, magnetite (Fe_3O_4). We have synthesized a variety of magnetite nanoparticles which appear to have biogenic signatures and could give insights into how the nanomagnetite in biological systems form, and how they are associated with Alzheimer's disease. We have also synthesized mesoporous magnetite nanoparticles which have potential use in the targeted drug delivery.

Keywords: magnetite, magnetic nanoparticles, hydrothermal synthesis, drug delivery.

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