

Investigation of the influence of cluster sizes on light scattering processes in the structured ferrofluid

Classic ferrofluid (FF) is a colloidal suspension of magnetic nanoparticles in a carrier-liquid, which stabilized by surfactant. FF is a unique substance that combines liquid properties (viscosity, fluidity, surface tension, etc.) and ability to interact with the magnetic field. Although there were made many different investigations of FF, full classification of aggregate formation and transformation processes were not created before. But such researches are very important due to the possibility of medical usage of FF.

The main idea of this work is a simulation of the light scattering on FF's aggregates. The main phase of our investigations was analyzing light scattering spectrum.

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