

MAGNETORHEOLOGY OF ANISOTROPIC  
SUSPENSIONS OF NON-BROWNIAN  
AGGREGATES OF NANODISPERSED  
PARTICLES IN MAGNETIC FLUIDS

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S u m m a r y

A structure-phenomenological magnetorheological equation for the dilute suspensions of non-Brownian ellipsoidal microaggregates of nanoparticles of the dispersed phase of magnetic fluids is obtained. The magnetorheological characteristics of such suspensions in a simple shear flow in the presence of a transverse magnetic field are studied in the case of the formation of a structural anisotropy in suspensions that appears due to the stationary orientation of suspended microaggregates under the action of hydrodynamic forces and forces that act from the side of an external magnetic field.