Direct Numerical Simulation of Magnetic Particles Suspended in a Newtonian Fluid Exhibiting Finite Inertia Under SAOS

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Highlights

- The stress response of non-gap-spanning magnetic clusters suspended in a Newtonian fluid is investigated at finite inertia.
- Small amplitude oscillatory shear tests are conducted, and viscosity and elasticity of the system are studied as functions of the strength of the magnetic field and frequency.
- The effects of inertia on the viscoelastic response of the model are presented.