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A DPD Model for Simulating Rheological Properties of Fibre Suspensions in Viscoelastic Media

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A novel model of fibre in Dissipative Particle Dynamics (DPD) is developed and presented here. A short-fibre reinforced composite is our main interest. Based on the simulations of viscoelastic fluids [1-3], further simulations of fibre suspension in viscoelastic media are implemented to investigate the rheological properties in Couette flows and some further extensions of the model are then discussed.