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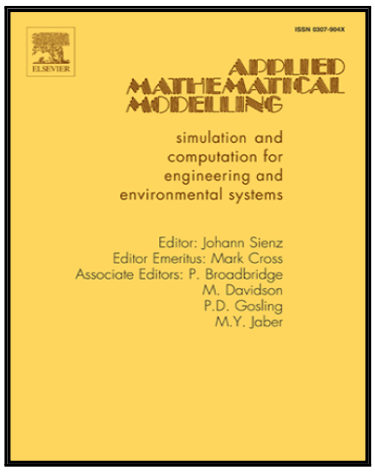

A Physically-Based Fractional Diffusion Model for Semi-Dilute Suspensions of Rods in a Newtonian Fluid

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Highlights

- Anomalous diffusion is associated to rods suspensions.
- Fractional Brownian motion allows an adequate modeling.
- A mesoscopic model based on a fractional Fokker-Planck equation is derived.
- Linear viscoelasticity is successfully explained.
- Nonlinear rheology is investigated.

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