

Accepted Manuscript

Numerical simulations of the rheology of suspensions of rigid spheres at low volume fraction in a viscoelastic fluid under shear

Mengfei Yang, Sreenath Krishnan, Eric S.G. Shaqfeh

PII: S0377-0257(16)30059-3
DOI: [10.1016/j.jnnfm.2016.05.004](https://doi.org/10.1016/j.jnnfm.2016.05.004)
Reference: JNNFM 3790



To appear in: *Journal of Non-Newtonian Fluid Mechanics*

Please cite this article as: Mengfei Yang, Sreenath Krishnan, Eric S.G. Shaqfeh, Numerical simulations of the rheology of suspensions of rigid spheres at low volume fraction in a viscoelastic fluid under shear, *Journal of Non-Newtonian Fluid Mechanics* (2016), doi: [10.1016/j.jnnfm.2016.05.004](https://doi.org/10.1016/j.jnnfm.2016.05.004)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- Simulations of the bulk stress of a dilute suspension of spheres in Boger fluids.
- Observed shear-thickening in all the viscometric functions.
- Resolved a discrepancy in the theory for the second normal stress difference.
- Investigated the effect of hydrodynamic interactions on the suspension rheology.

Download English Version:

<https://daneshyari.com/en/article/7061206>

Download Persian Version:

<https://daneshyari.com/article/7061206>

[Daneshyari.com](https://daneshyari.com)