Geometric scaling of elastic instabilities in the Taylor-Couette geometry: A theoretical, experimental and numerical study

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PII: S0377-0257(18)30118-6
DOI: 10.1016/j.jnnfm.2018.06.002
Reference: JNNFM 4019

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

Received date: 9 April 2018
Revised date: 31 May 2018
Accepted date: 4 June 2018

Please cite this article as: Christof Schaefer, Alexander Morozov, Christian Wagner, Geometric scaling of elastic instabilities in the Taylor-Couette geometry: A theoretical, experimental and numerical study, *Journal of Non-Newtonian Fluid Mechanics* (2018), doi: 10.1016/j.jnnfm.2018.06.002

Highlights

- Curvature-dependence of the first instability in viscoelastic Taylor-Couette flow is investigated.
- The scaling of the critical Weissenberg number with the curvature is obtained experimentally.
- The results disagree significantly with the linear stability analysis, but are well-described by the Pakdel-McKinley criterion.