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

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Highlights

- Curvature-dependence of the first instability in visco-elastic 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.

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