

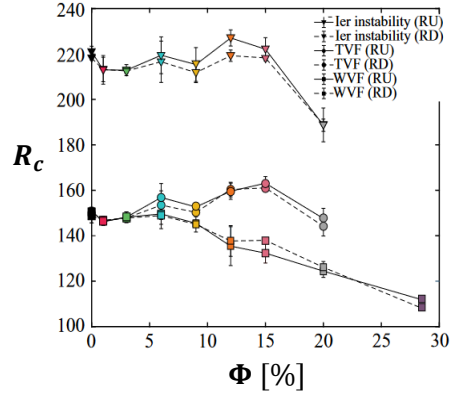


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Particles alteration of elasto-inertial transitions in viscoelastic Taylor-Couette flow



Charles Carré, Masoud Moazzen, Tom Lacassagne, Amir Bahrani

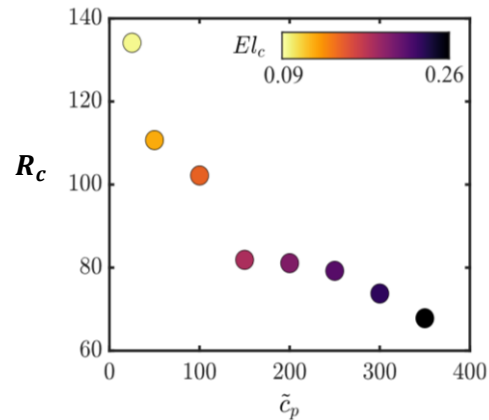


Particles in newtonian solvent

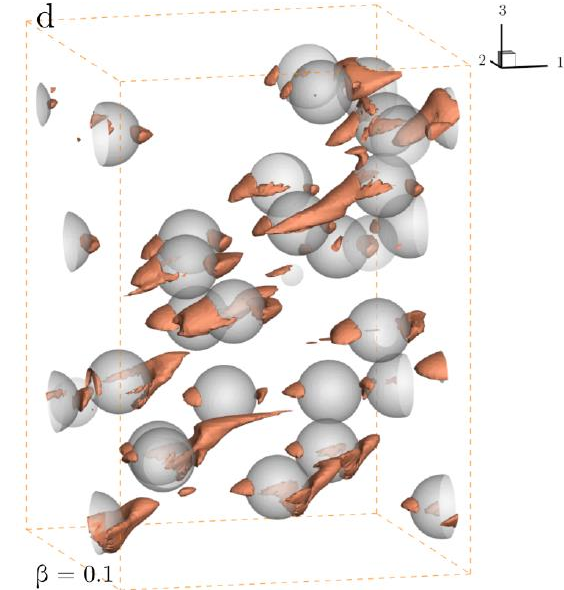
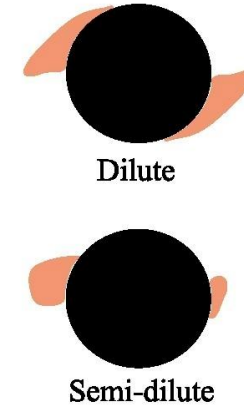
Moazzen et al. (2022)

Particles + Polymer

Polymer + solvent



Moazzen et al. (2023)

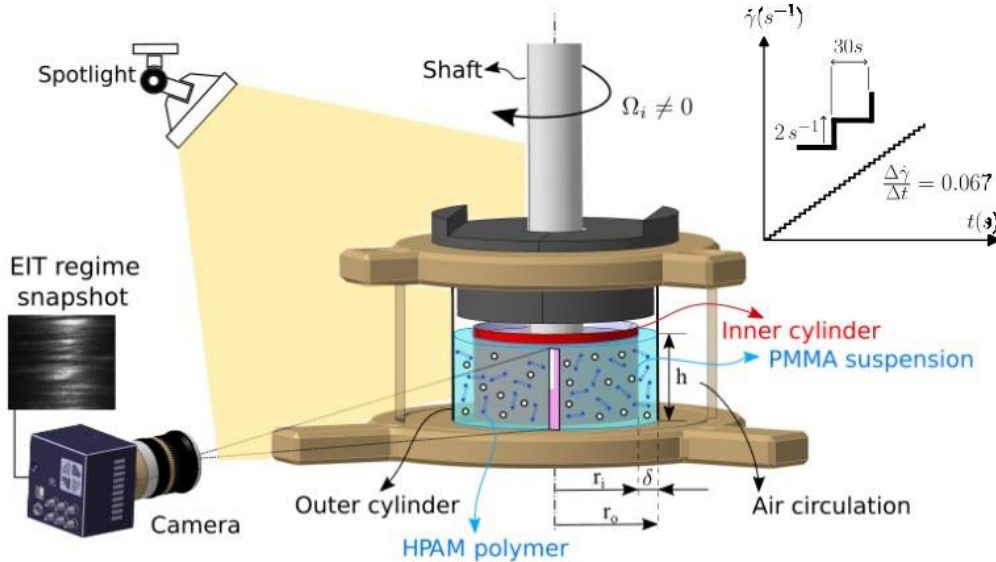


Zhang et al. (2023)

Impact of particles-polymer chain and particle-particle interactions on instabilities ?



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Taylor-Couette cell in MCR102 rheometer
Inner cylinder rotation – outer cylinder fixed

Coupling methods:
Flow visualisation + friction measurement

Elasto-Inertial
Turbulence (EIT)

$$\Phi \leq 2\%$$

Elasto-Inertial
Dissipation (EID)

$$\Phi > 2\%$$

