Electronic Supplementary Material (ESI) for Soft Matter

ELECTRONIC SUPPORTING INFORMATION

Stick-slip control of the Carbopol microgels on Polymethyl methacrylate transparent smooth walls

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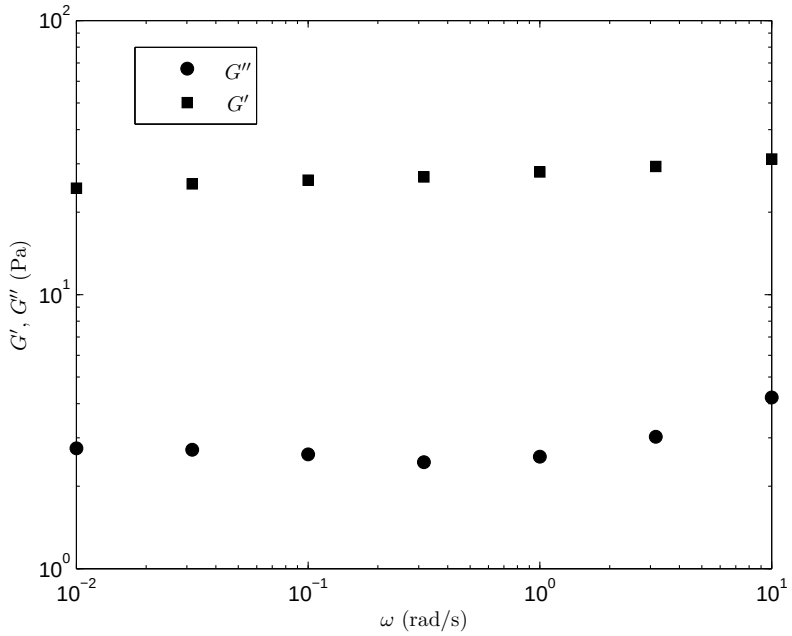
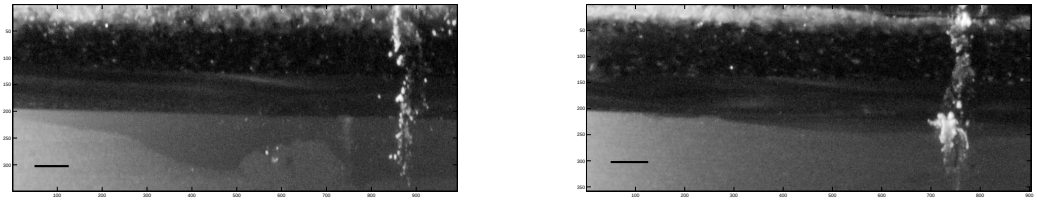
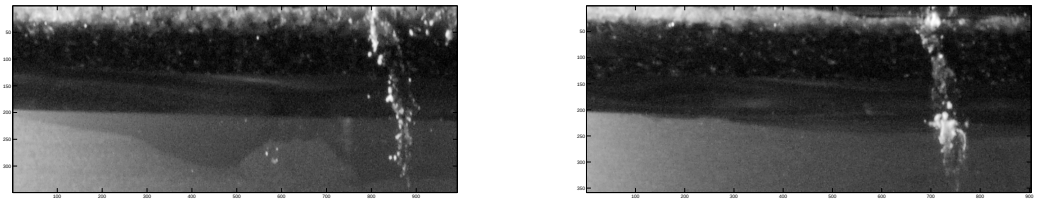


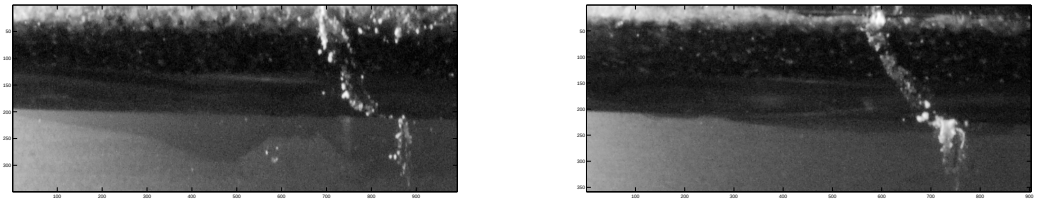
Figure 1: SAOS rheometry of the Carbopol 940 gels at a concentration of 0.15%wt.



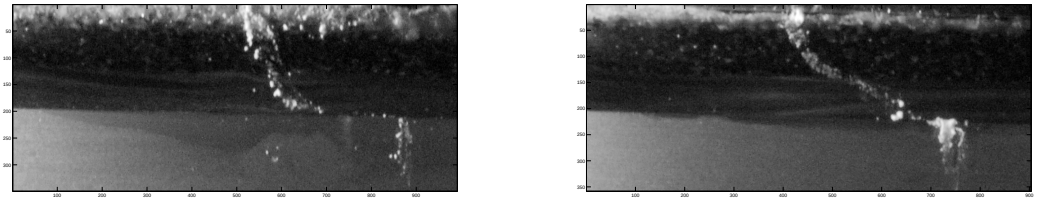
(a) $t = 0$ s



(b) $t = 35$ s



(c) $t = 110$ s



(d) $t = 216$ s

Figure 2: Photographs of the powder vertical line at free surface of Carbopol gels during velocity controlled rheometry ($\dot{\gamma} = 10^{-2}$ s^{-1}). The lower plate is a raw PMMA surface (left row) and a treated PMMA surface (right row), the horizontal black line on frames (a) corresponds to 1 mm. Frames (a): initial line ; (b): elastic response in the samples, no slip at the lower PMMA plate ; (c): Raw PMMA (left) - Elastic response in the sample and the wall slip occurs, Treated PMMA (right) - adherence at the lower plate, the gel is homogeneously sheared in the bulk ; (d): Raw PMMA (left) - Elastic response in the sample (similar to (c)), the wall slip is larger than in (c), Treated PMMA (right) - adherence at the lower plate, the shear is homogeneous in the bulk and larger than in (c).