

Electronic Supplementary Information for Roughness-dependent clogging of particle suspensions flowing into a constriction

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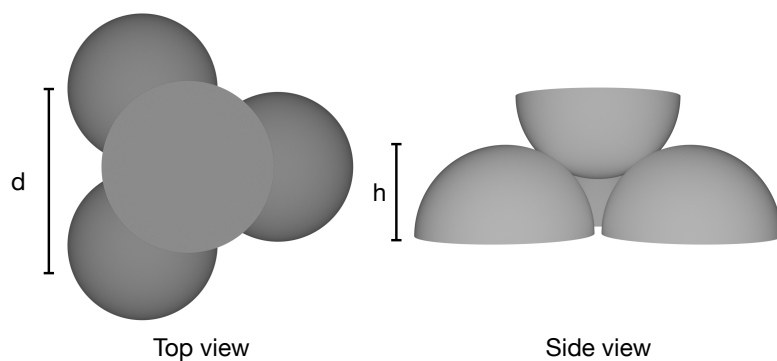
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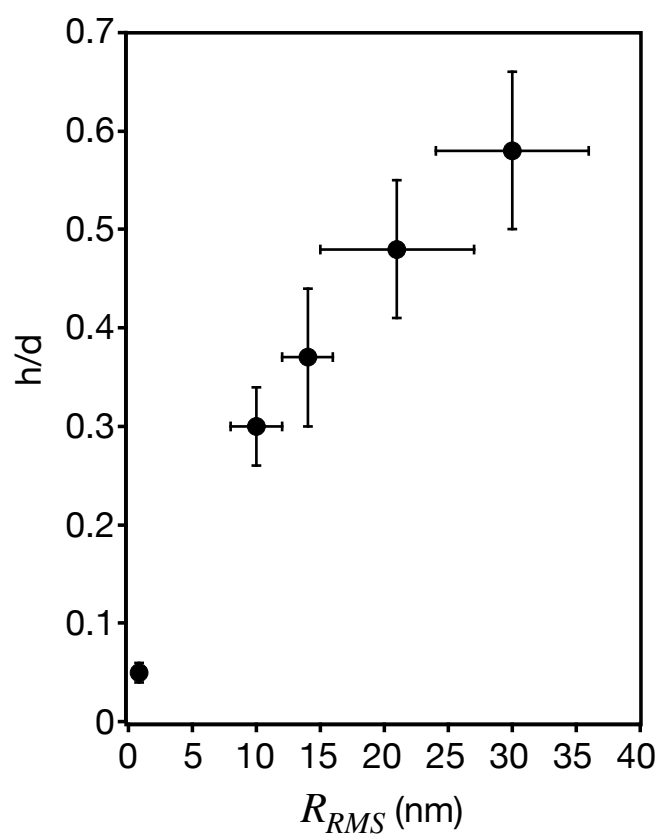
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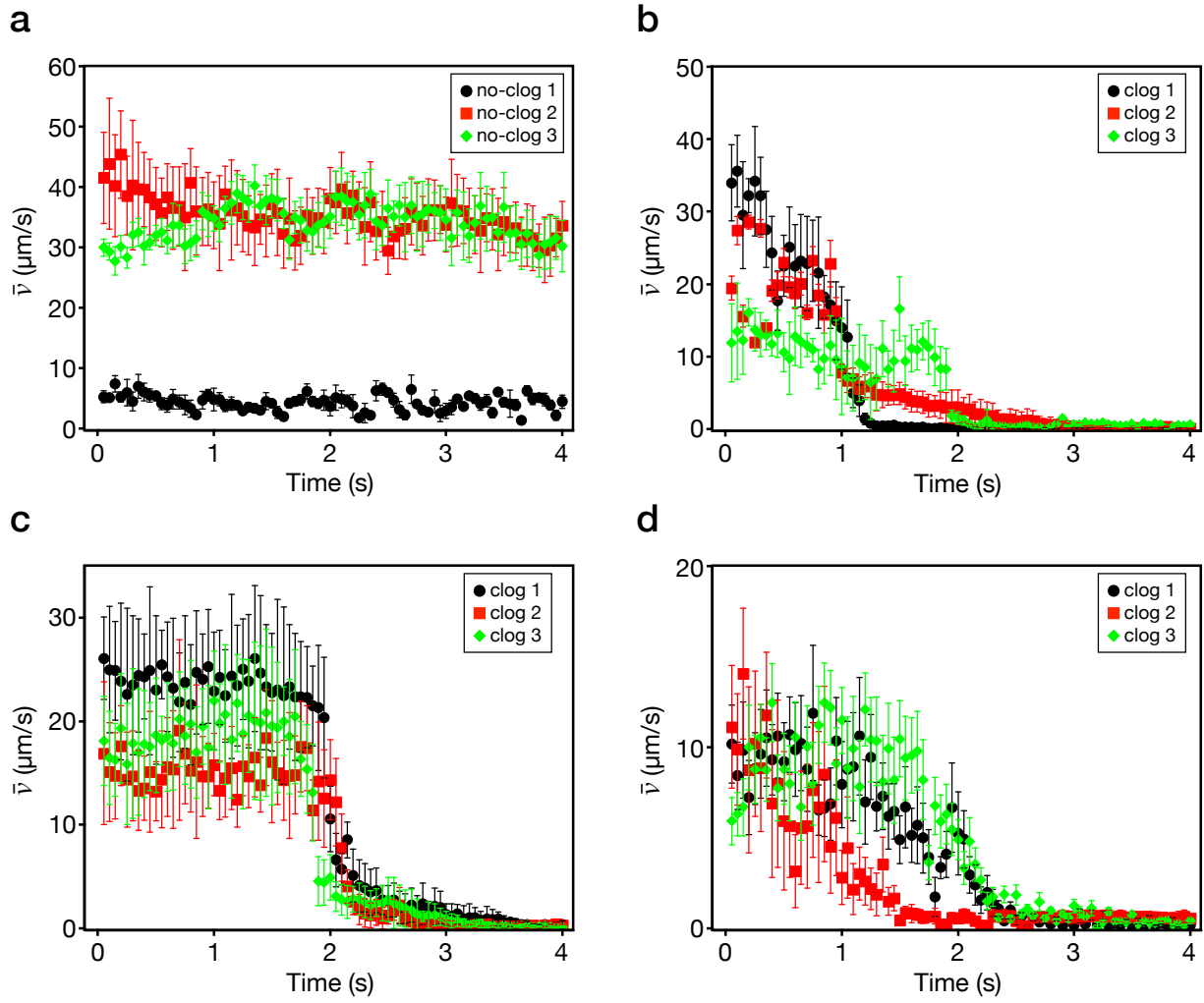
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Supplementary Figure 1. **Asperity interlocking model.** Schematics of asperity interlocking modelled with hexagonally-packed semi-spheres. The effective particle size of the interlocked rough particles is modelled by representing the rough surface as a surface with hexagonally-packed semi-spheres, where the distance between the semi-spheres equals the average surface distance between asperities, d , and the radius of the semi-sphere equals the average asperity height, h .



Supplementary Figure 2. **h/d and RMS roughness.** Correlation between h/d and RMS roughness for the particles utilized in this study. Each point represents one particle system. Error bars represent the standard deviations from AFM roughness measurements.



Supplementary Figure 3. **Temporal evolution of the mean velocity.** Time evolution of the mean velocity (\bar{v}) of non-clogging flows for SM (a), clogging for RB_10 (b), clogging for RB_14 (c), and clogging for RB_21 (d). Error bars represent the standard deviations of the velocity extracted from PIV measurements dividing each frame in a 10×10 matrix.