Electronic Supplementary Material (ESI) for Soft Matter.

Dynamics and Rheology Of A Superparamagnetic Chain Suspension Under The Combined Effect Of Shear Flow And Rotating Magnetic Field

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SUPLEMENTARY INFORMATION

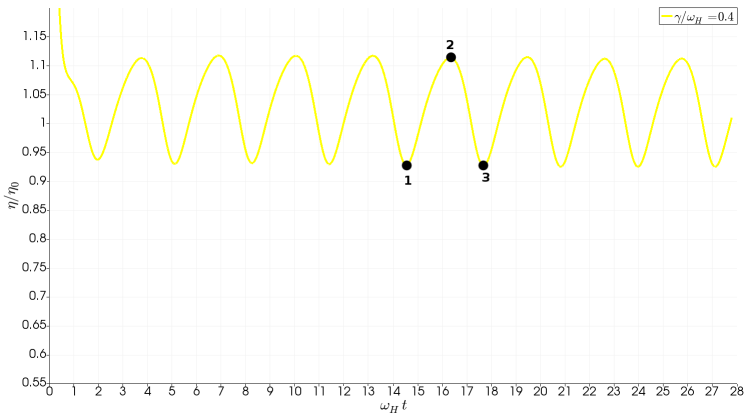

FIG. S.1. η/η_0 time evolution for $\dot{\gamma}/\omega_H = 0.4$. Black dots denotes particular chain configurations in the xz plane: in 1 and 3 the chain is vertical while in 2 is horizontal. Chain configurations and related SPH particles velocities are shown in Fig. S.2

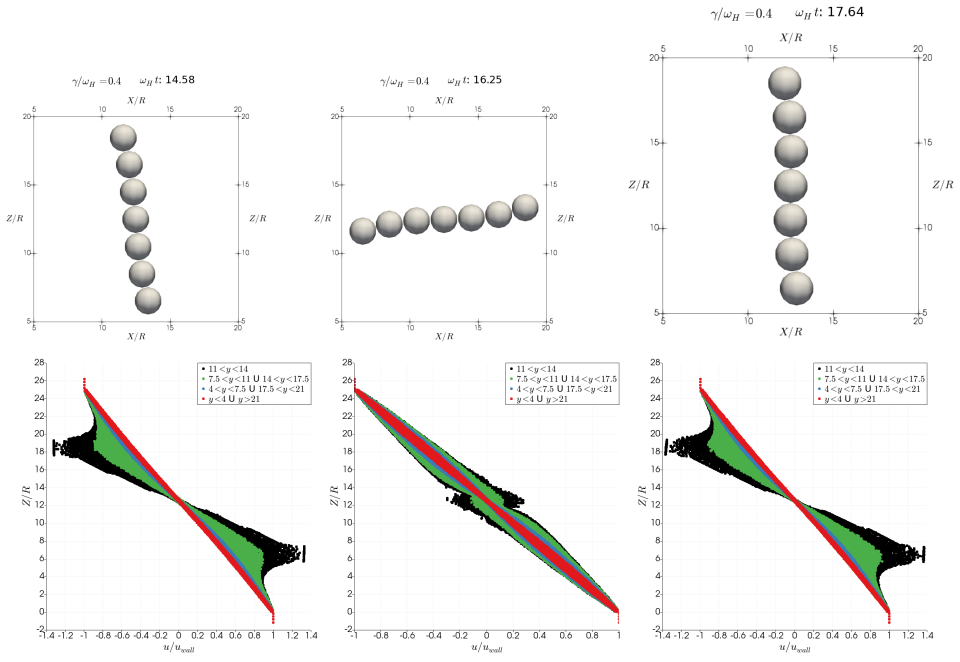

FIG. S.2. Chain configurations and related SPH particles non-dimensional velocities at $\dot{\gamma}/\omega_H = 0.4$ for the time instant shown in Fig. S.1: left 1, center 2, right 3.

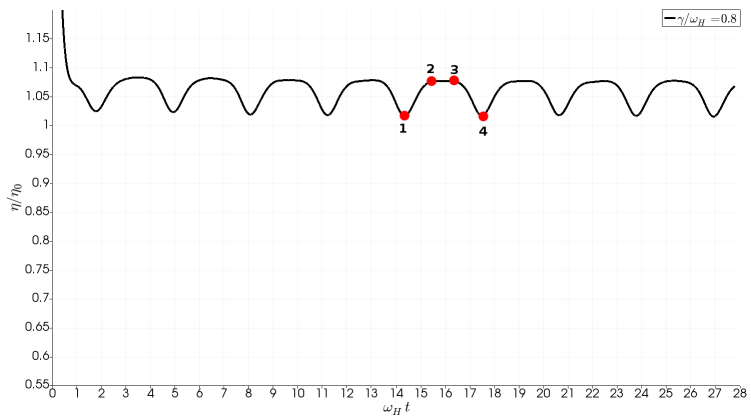

FIG. S.3. η/η_0 time evolution for $\dot{\gamma}/\omega_H = 0.8$. Red dots denotes particular chain configurations in the xz plane: in 1 and 4 the chain is vertical while in 2 and 3 are the start and end point of the viscosity plateau. The chain has a vertical configuration in point 3. Chain configurations and related SPH particles velocities are shown in Fig. S.4

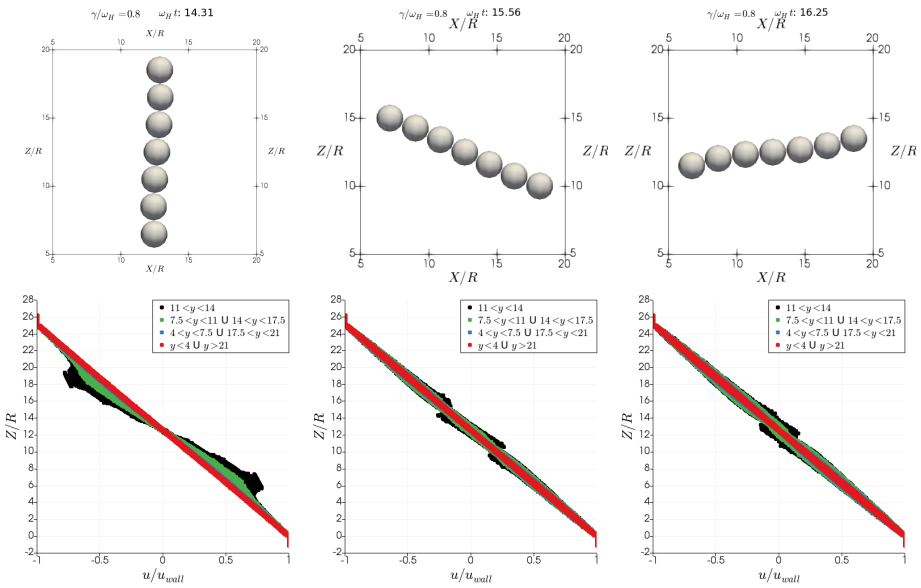

FIG. S.4. Chain configurations and related SPH particles non-dimensional velocities for the time instant shown in Fig. S.3: left 1 & 4, center 2, right 3

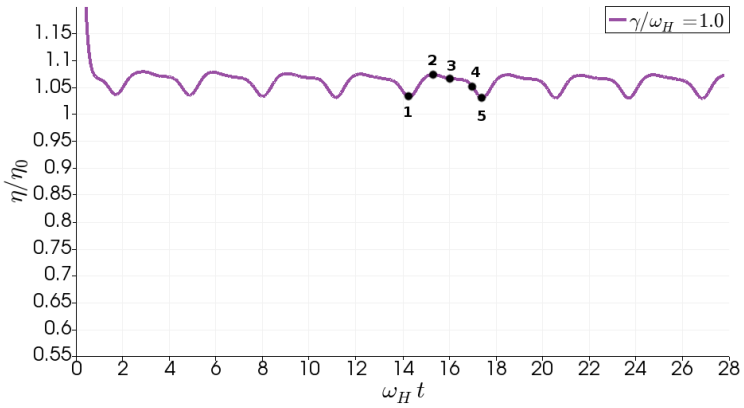

FIG. S.5. η/η_0 time evolution for $\dot{\gamma}/\omega_H = 1.0$. Black dots denotes particular chain configurations in the xz plane: in 1 and 5 the chain is vertical while it is horizontal in 3. Points 2 and 4 corresponds to intermediate configurations. Chain configurations and related SPH particles velocities are shown in Fig. S.6

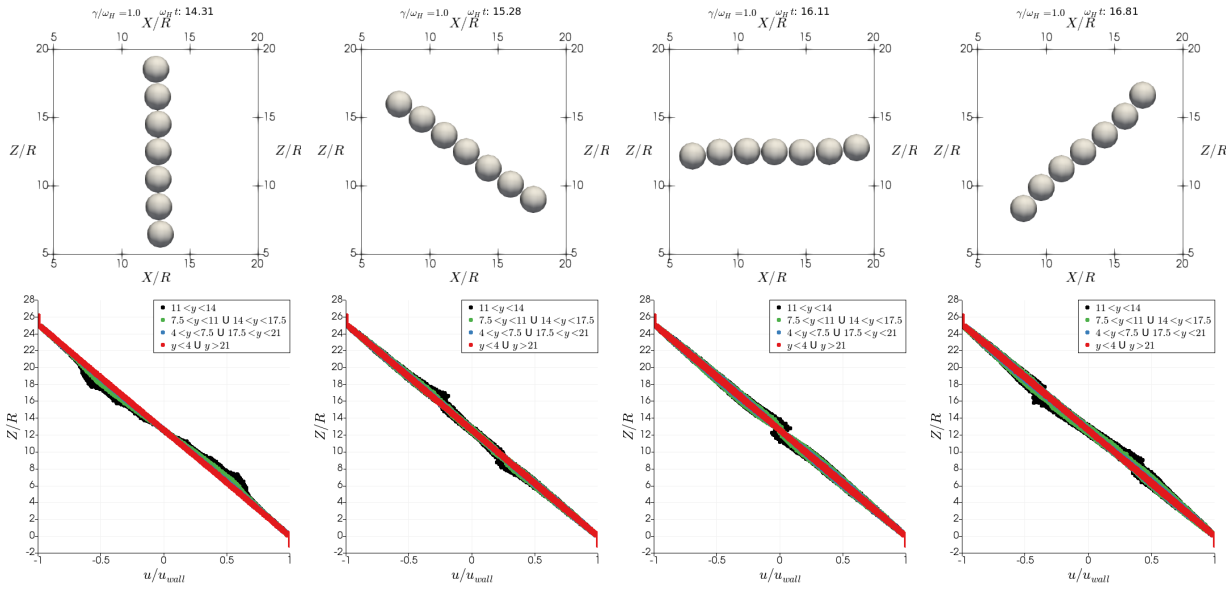

FIG. S.6. Chain configurations and related SPH particles non-dimensional velocities at $\dot{\gamma}/\omega_H = 1.0$ for the time instant shown in Fig. S.5: left 1 & 5, center-left 2, center-right 3, right 4