

Supplementary Information: Magnetophoretic induced convective capture of highly diffusive superparamagnetic nanoparticles

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S1 Average fluid velocity

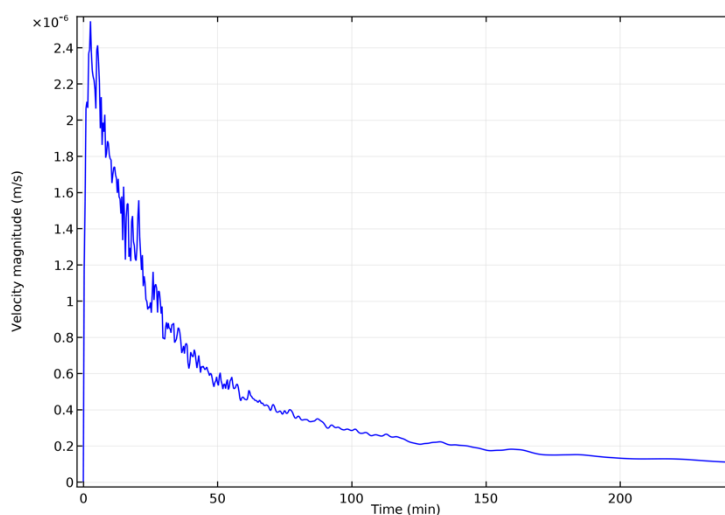


Figure S1: Average (over droplet) fluid velocity in a magnetic nanoparticle suspension of concentration 0.25 mg.ml^{-1} . After a short period of acceleration, nanoparticles start to be captured and the fluid velocity reduces over time. Once all particles are captured, the convection stops and the average fluid velocity drops to 0.

S2 Video 1

Recording of a 5 s sequence at 10 fps of a 0.25 mg.ml^{-1} nanoparticle suspension containing fluorescent latex microparticles. Flow behavior was recorded through an Olympus BX41M (Olympus, Tokyo) fluorescence microscope at x20 magnification.

S3 Video 2

Recording of a 5 s sequence at 10 fps of a ddH_2O droplet containing fluorescent latex microparticles. Flow behavior was recorded through an Olympus BX41M (Olympus, Tokyo) fluorescence microscope at x20 magnification.