Supplemental Material for: Numerical study of acoustophoretic motion of particles in a PDMS microchannel driven by surface acoustic waves

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I. SWEEPING LOW VALUES OF THE DISPLACEMENT DECAY COEFFICIENT

In Fig. 1 we show a semilogarithmic plot of the convergence parameter C, as given in Eq. (21), for low values of the displacement decay coefficient C_d. Notice that the field solutions differ only by 4-7 % in the most extreme case of $C_\mathrm{d} = 0$

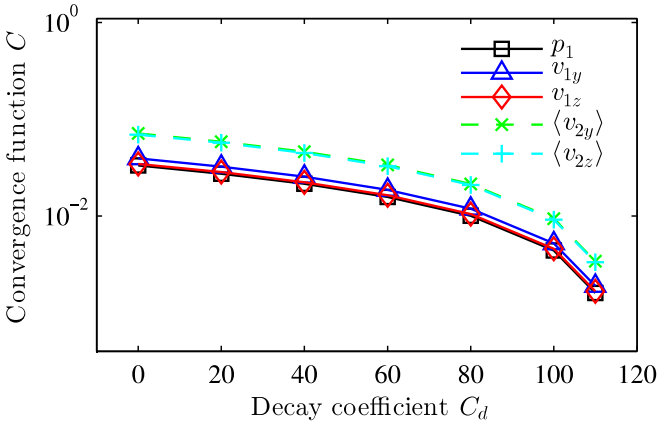

FIG. 1. Semilogarithmic plot of the convergence parameter C, as given in Eq. (21), for low values of the displacement decay coefficient C_d.

II. ACOUSTIC RADIATION FORCE FIELD

In Fig. 2 we show the acoustic radiation force field $\boldsymbol{F}^\mathrm{rad}$, see Eq. (15). Panel (a) shows the force field in the bulk of the microchannel whereas panel (b) shows the force field within a 0.4-µm slab near the bottom actuated boundary. The arrows indicate the force direction and the colors indicate the force magnitude from 0 (blue) to maximum (red). The maximum radiation force magnitude is 80 fN for 1-µm particles, 5.1 pN for 4-µm particles, 41 pN for 8-µm particles, 80 pN for 10-µm particles, and 640 pN for 20-µm particles.

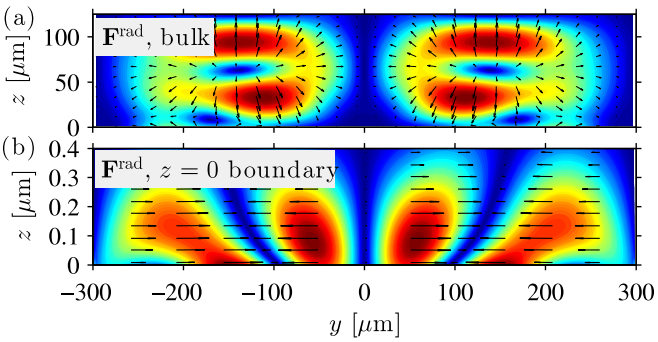

FIG. 2. Acoustic radiation force field (a) in the bulk of the microchannel and (b) within a 0.4-µm slab near the bottom actuated boundary. The arrows indicate the force direction and the colors indicate the force magnitude from 0 (blue) to maximum (yellow).