

Supplementary Information

Supplementary Video 1

Real-time video corresponding to Figure 4 at 0 minutes. An 8.8 μm magnetic bead with a small bacterial cell population attached within a rotating magnetic field.

Supplementary Video 2

Real-time video corresponding to Figure 4 at 30 minutes. An 8.8 μm magnetic bead with a small bacterial cell population attached within a rotating magnetic field after 30 minutes of growth.

Supplementary Video 3

Real-time video corresponding to Figure 4 at 60 minutes. An 8.8 μm magnetic bead with a small bacterial cell population attached within a rotating magnetic field after 60 minutes of growth.