Electronic Supplementary Material (ESI) for Lab on a Chip. This journal is © The Royal Society of Chemistry 2017

## The caption of Code:

Code. MATLAB source code for trajectory tracing.

The caption of Cells Releasing:

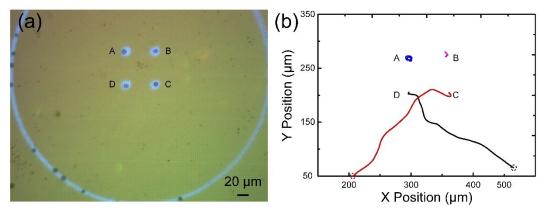
Cells Releasing. Trajectory analyses of C. reinhardtii cells after being released.

## The caption of Movie S1:

Movie S1. Trapping and transportation of swimming algal cells.

## The caption of Movie S2:

Movie S2. Pattern of swimming algal cells.



**Fig. S1** (a) Four *C. reinhardtii* cells were trapped. (b) Trajectory analyses of *C. reinhardtii* cells after being released.