Supporting Information

Electrokinetic Trapping and Concentration Enrichment of DNA in a Microfluidic Channel

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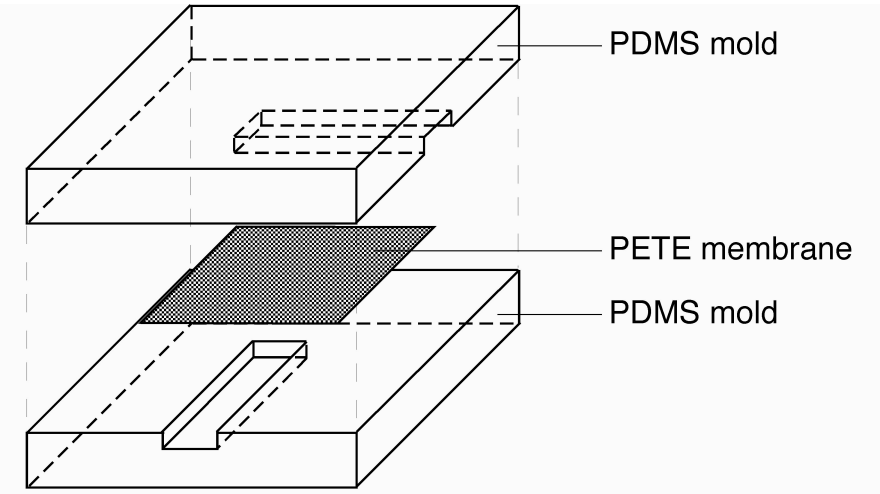
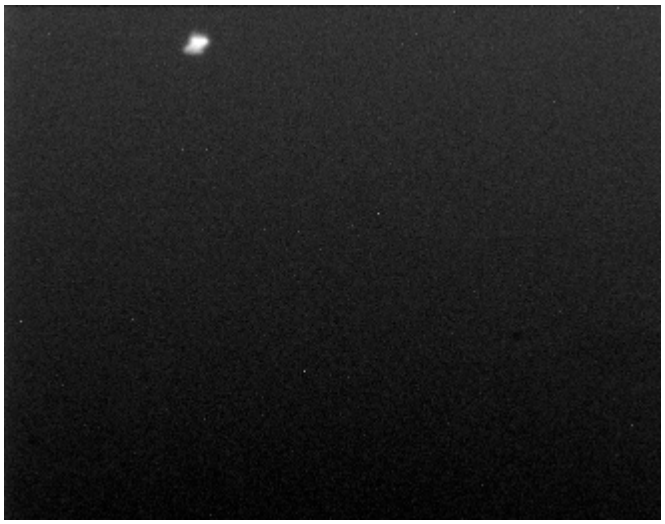
(3 pages total)



Disassembled View of a Fluidic Device Used in This Study

An optical photo of the device

Figure S1. A scheme (top) showing the fabrication of the device (bottom) used for the observation of concentration.



Movie S1. Time-resolved fluorescence micrographs showing the DNA enrichment process. All experimental conditions were the same as those used for Figure 1. At the start of this experiment, the PDMS channels were filled with 1x TBE buffer and the source reservoir was loaded with 1x TBE buffer containing 10 μg/mL DNA. Image frames (329x259 pixel resolution) were captured at a rate of about 1 frame/s for a total of 300 s. The movie will play back at a rate of 3 frames/s so that the total **show time** is 100 s.

Show Time	Real Time	Bias Voltage	Major Event
0 s	0 s	forward: 100 V	Enrichment and Trapping
30 s	90 s	reverse: 100 V	Transfer and Trapping
37 s	111 s	forward: 100 V	Enrichment and Trapping
60 s	180 s	reverse: 100 V	Transfer and Trapping
77 s	231 s	forward: 100 V	Enrichment and Trapping