Supporting Information

Transient Effects on Microchannel Electrokinetic Filtering with an Ion-Permselective Membrane

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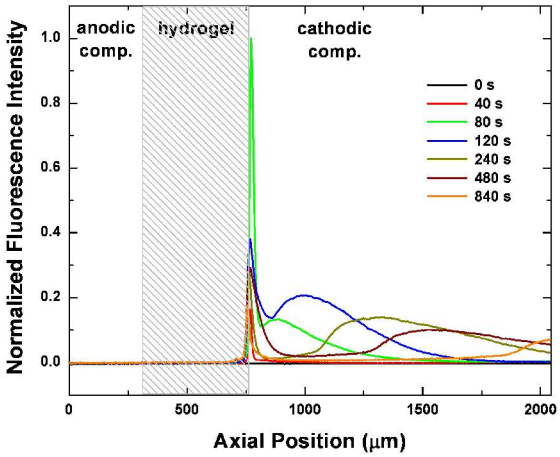

Figure S1. Fluorescence intensity profiles for 22-mer ssDNA obtained parallel to the microchannel incorporating an anionic hydrogel plug. All fluorescence intensity values were corrected by subtracting the background count before normalization. Applied potential bias, 100 V (forward).

Note: The axial position in 'pixels' has been rescaled to 'μm' in Figure 3c of the main text and in Figure S1. For the images (size: 512 pixels × 290 pixels) captured during the experiments described in this paper, 1 pixel equals ~4 μm.

Movie S1. Time-resolved fluorescence micrographs demonstrating concentration enrichment of fluorescein in a microfluidic channel incorporating an anionic hydrogel microplug. Before applying the potential bias (100 V, forward) between reservoirs ResA and ResB (Figure 2a), the buffer solution in the two reservoirs was replaced with 10.0 mM TRIS-HCl buffer containing 5 μM fluorescein. Image frames were captured every 2 s for a total of 541 frames. The image size was 512 pixels × 290 pixels, and the grayscale applied was 1700 to 8000 counts per pixel. The movie will play back at a rate of 10 frames/s so that the total run time is 54 s. This movie was used to obtain the data shown in Figure 3 of the main text.

The timing for the movie is summarized in the following table.

Show Time (s)	Real Time (s)	Bias (V)
0	-60	0
3	0	100 (forward)
51	960	0