Electronic Supplementary Material (ESI) for Lab on a Chip.

Supplementary Information for

Microfluidic transfer of liquid interface for parallel stretching and stamping of terminal-unmodified single DNA molecules in zigzag-shaped microgrooves

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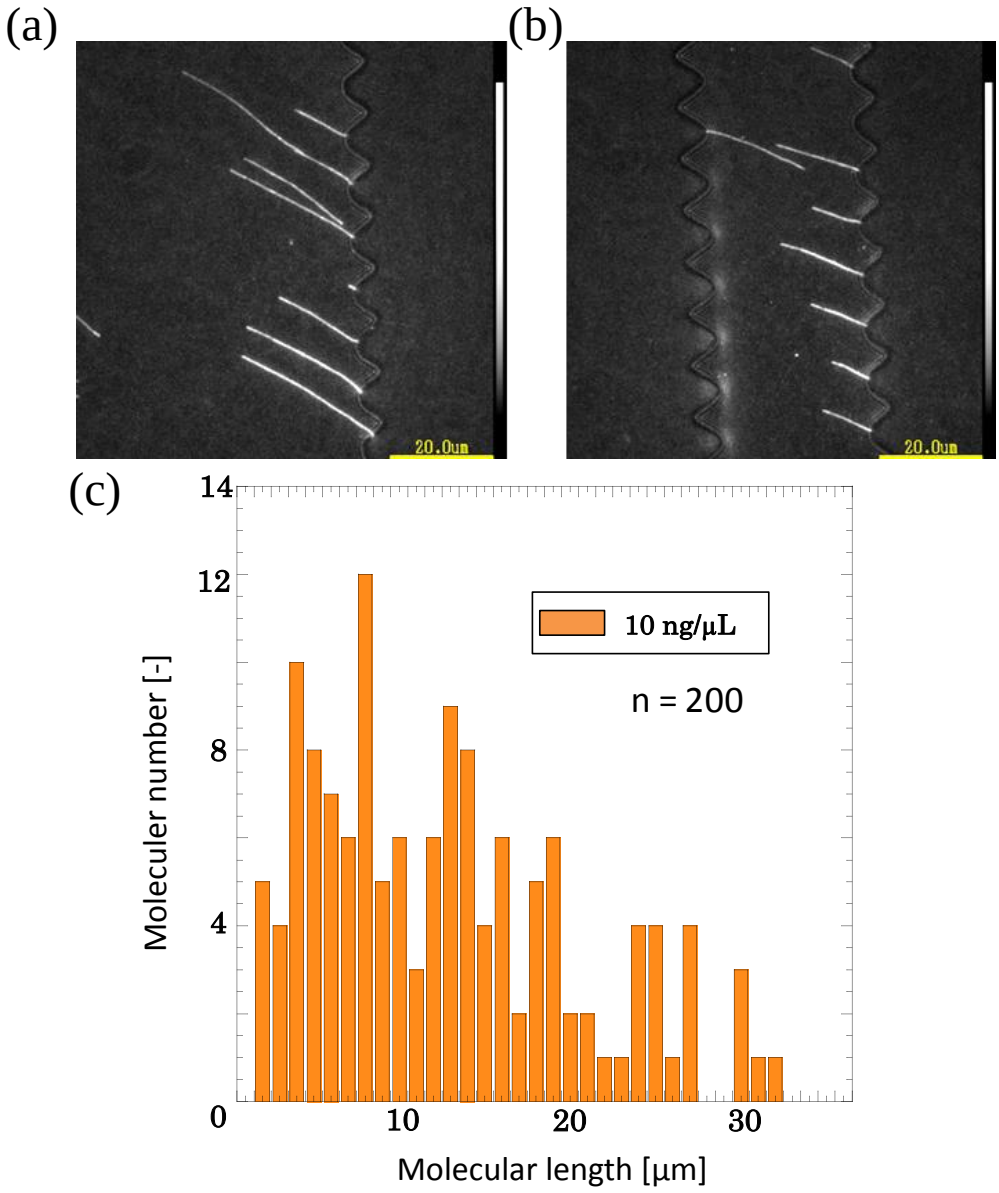
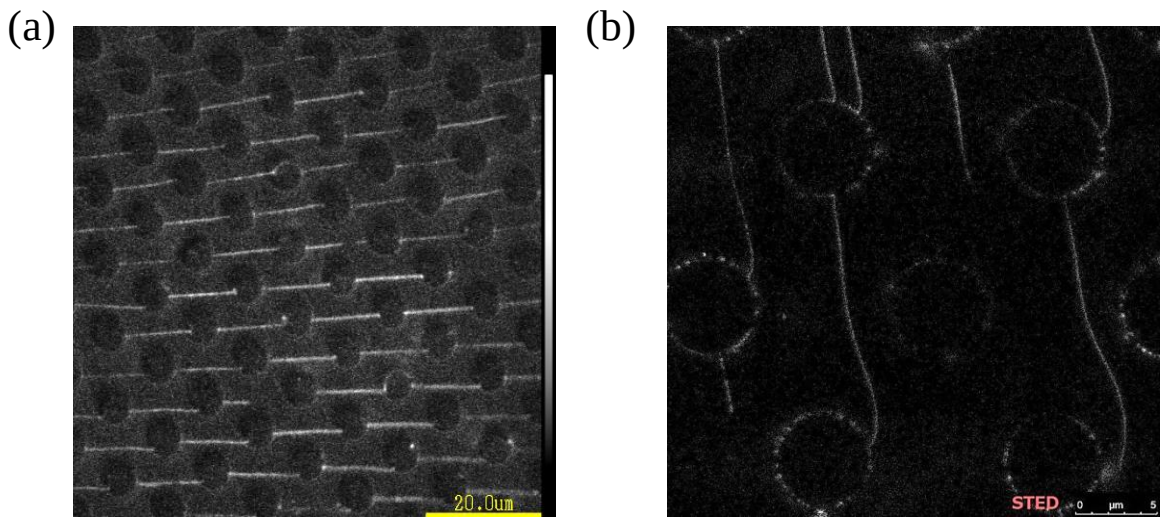
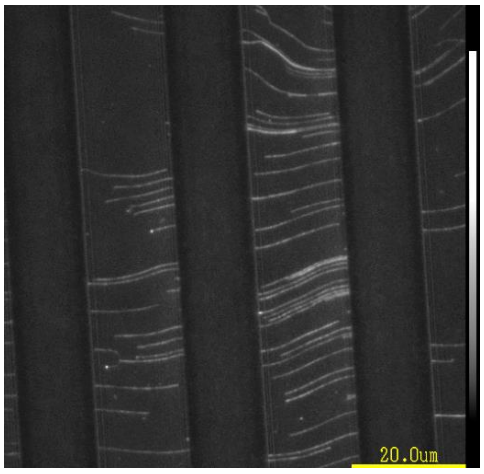


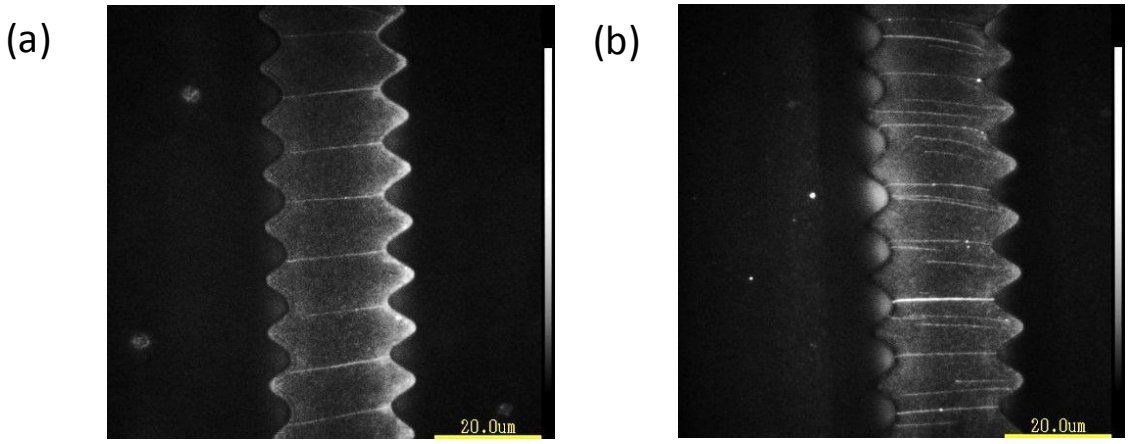
Supplementary Figure 1. Blowing method for simple DNA stretching. (a) and (b) are images of aligned λDNA molecules by air blowing. (c) Histogram of molecular lengths obtained from aligned λDNA molecules.



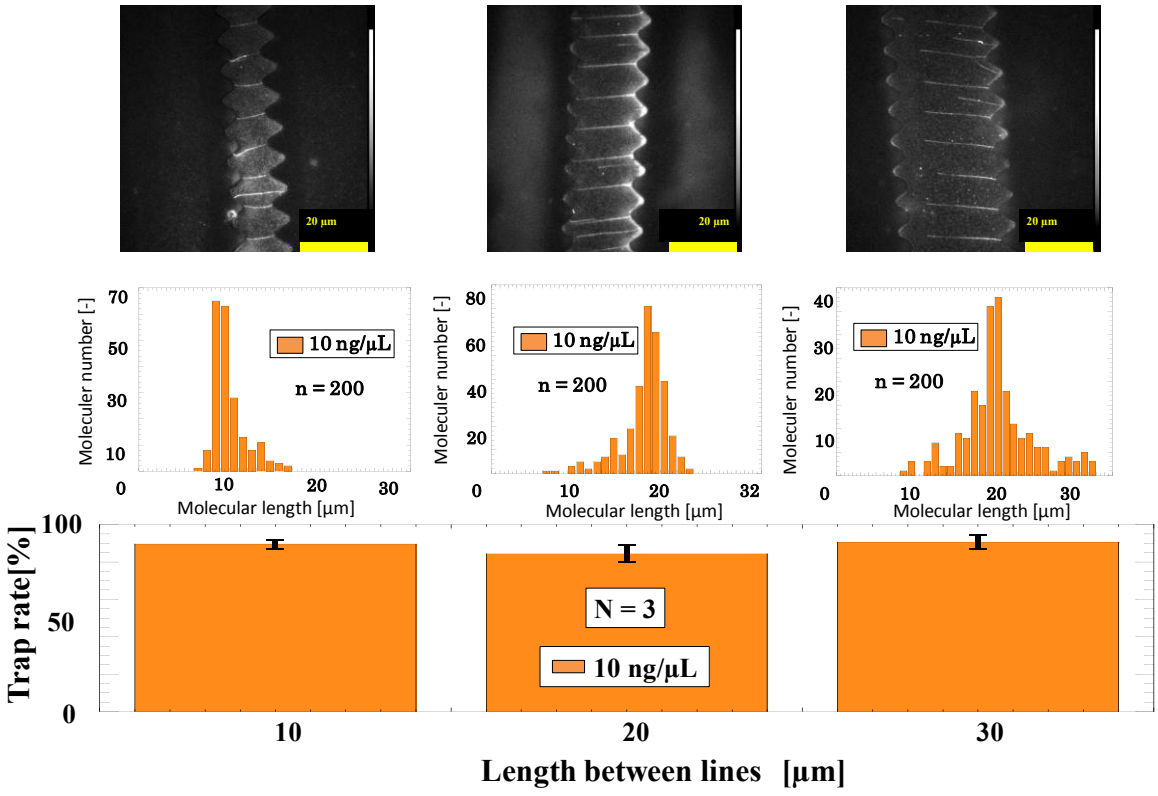
Supplementary Figure 2. Aligned λDNA molecules on a hole structure. (a) TIRFM image. (b) STED image.



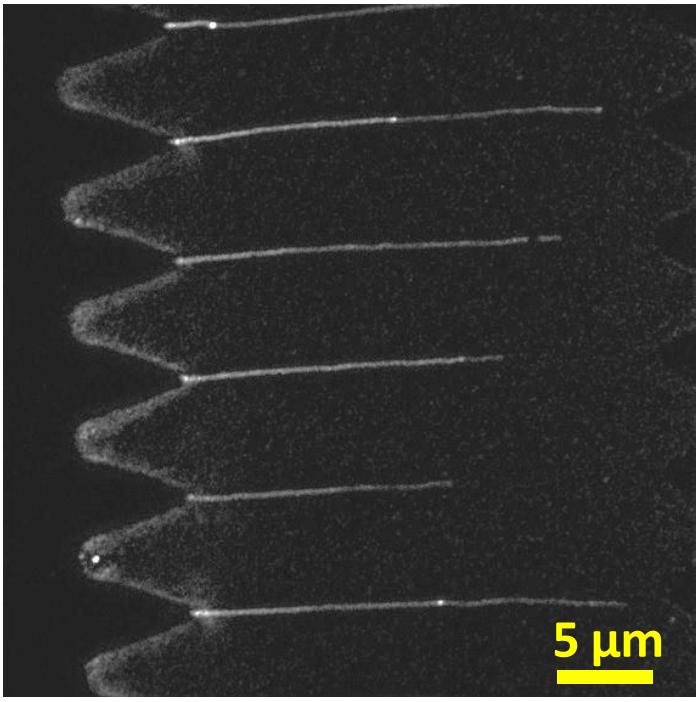
Supplementary Figure 3. Aligned λDNA molecules on a line and space structure.



Supplementary Figure 4. Effect of DNA concentration on stretching form. (a) 10 ng/μL, (b) 20 ng/μL.



Supplementary Figure 5. Rate of DNA trapping for different lengths between cavities in zigzag structures.



Supplementary Figure 6. An STED image of aligned λDNA molecules on a zigzag structure.

Supplementary Video

This movie shows a real-time observation of molecular stretching at the liquid interface on a zigzag structure. The time lapse covers a period of about 17 s. (WMV; 3.4 MB)