Supplementary Information (SI) for Lab on a Chip.

Low-Cost and Automated Magnetic Bead-based DNA Data Writing via Digital Microfluidics

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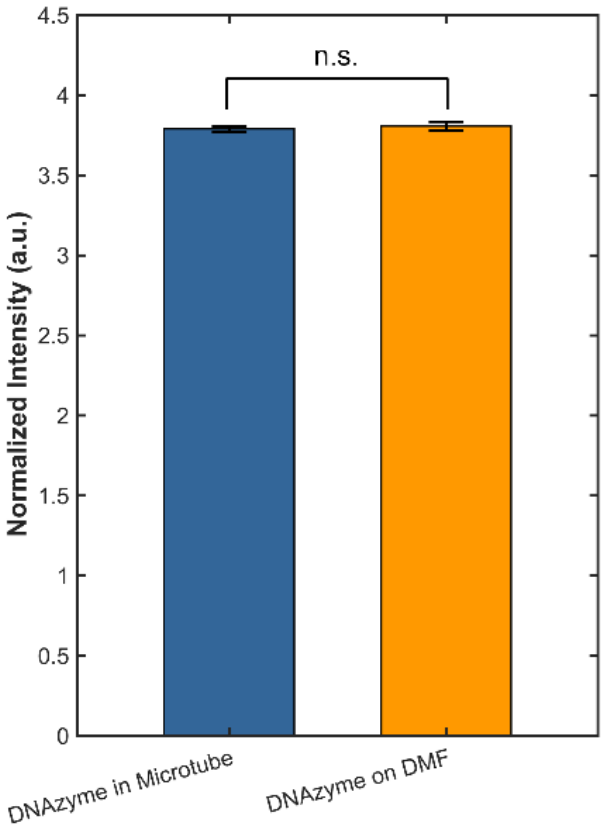

Figure S1. Ligation incubated inside microtube versus DMF. The experiment was conducted three times on separate days to ensure the accuracy of the results. Error bars represent the standard deviation of the mean.

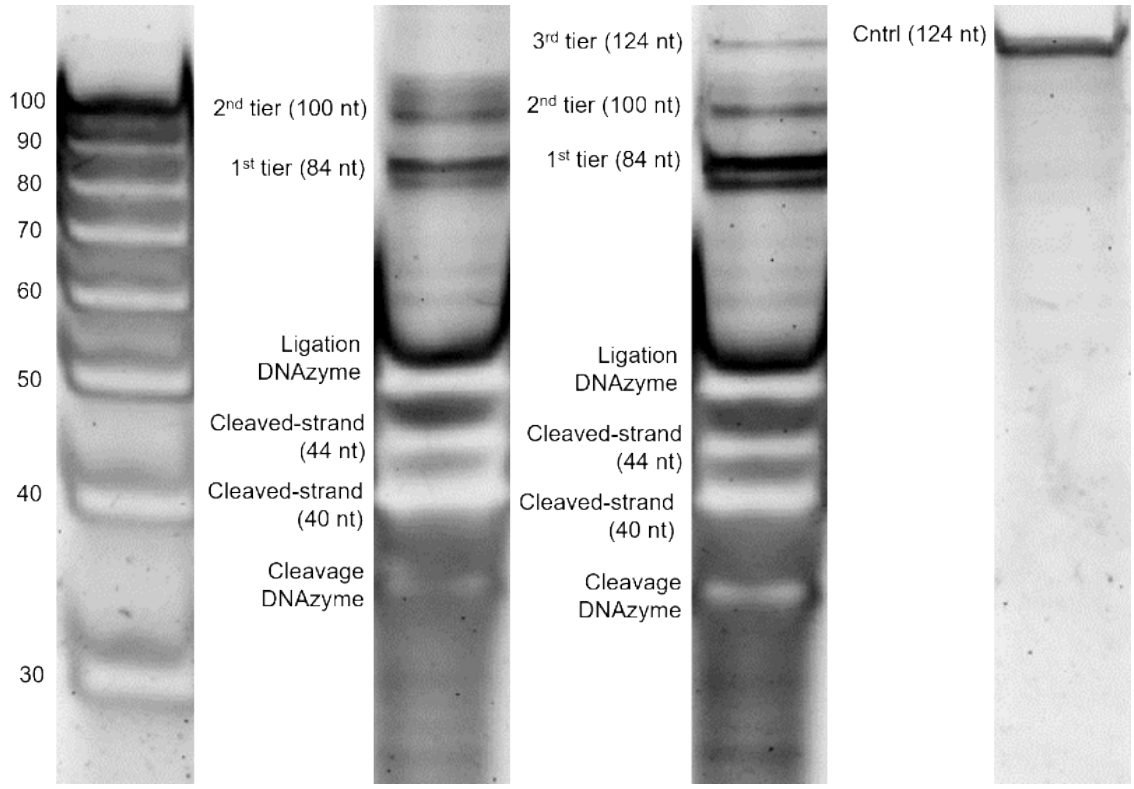

Figure S2. Gel image of three rounds of beads-assisted DNAzyme ligation. The first-round (84 nt) ligation product was ligated with a 16 nt DNA block, resulting in a 100 nt product. This 100 nt DNA was then ligated with a 24 nt DNA segment, yielding a third-ligation product (124 nt). Control (124 nt) was ssDNA ordered from IDT DNA.

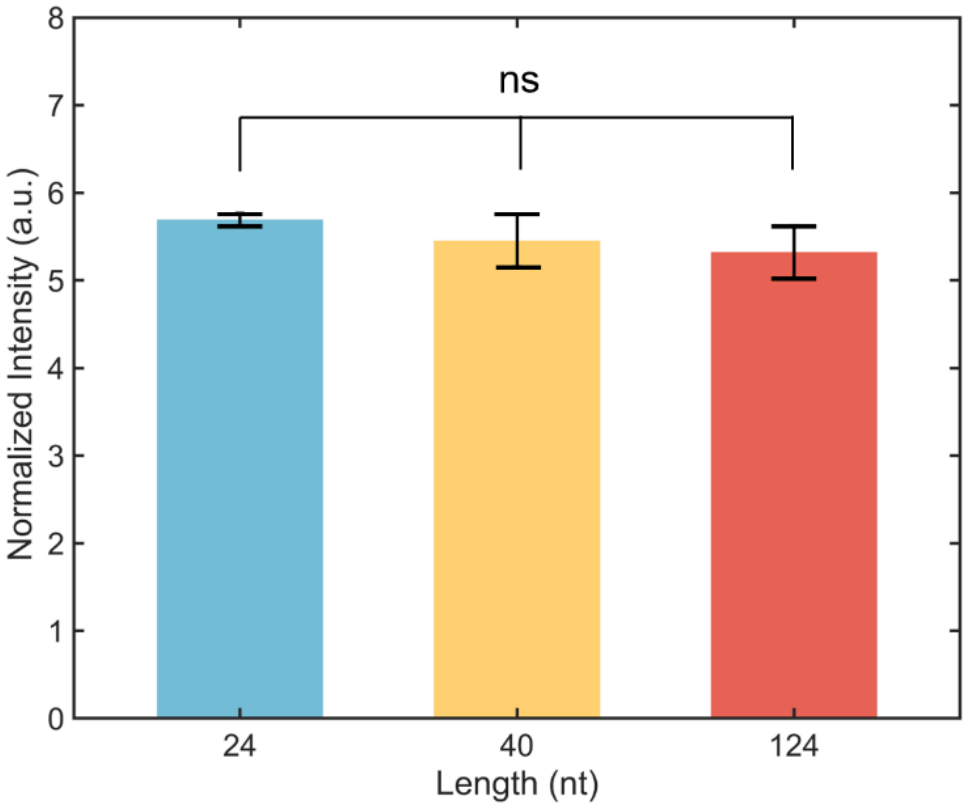

Figure S3. DNAzyme ligation of a 24 nt block with 24 nt, 40 nt, and 124 nt blocks. The experiment was conducted three times on separate days to ensure the accuracy of the results. Error bars represent the standard deviation of the mean.

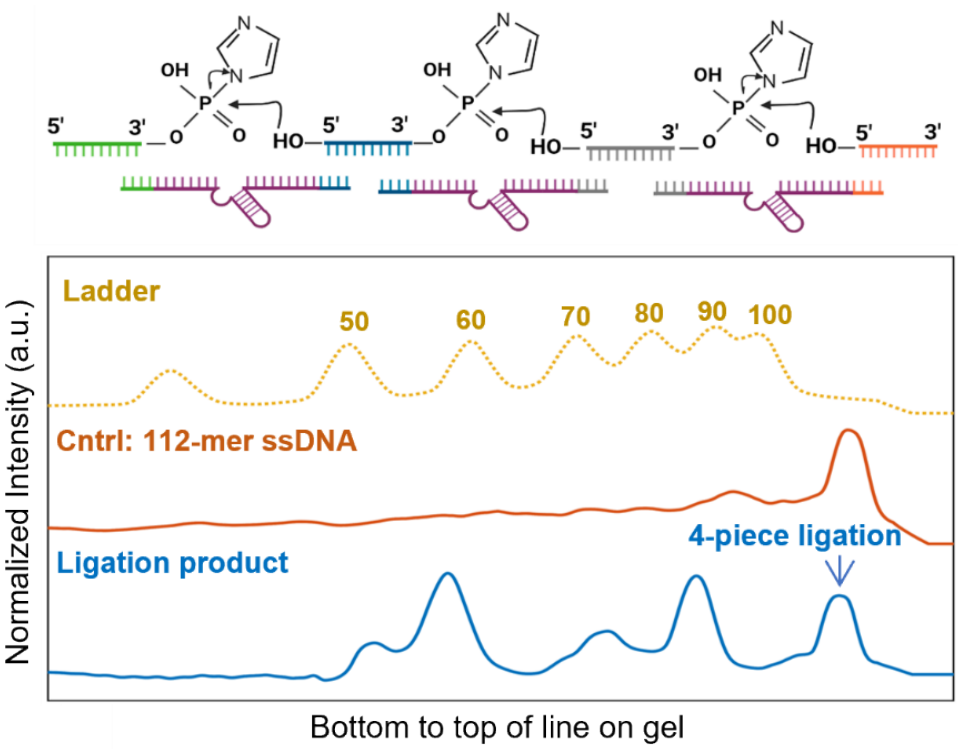

Figure S4. Assembly of four DNA blocks in a single reaction.