Supplementary Material

Improved separation in Horizontal protein SDS-PAGE with Double-deck flat electrodes and Field-inversion gel electrophoresis module

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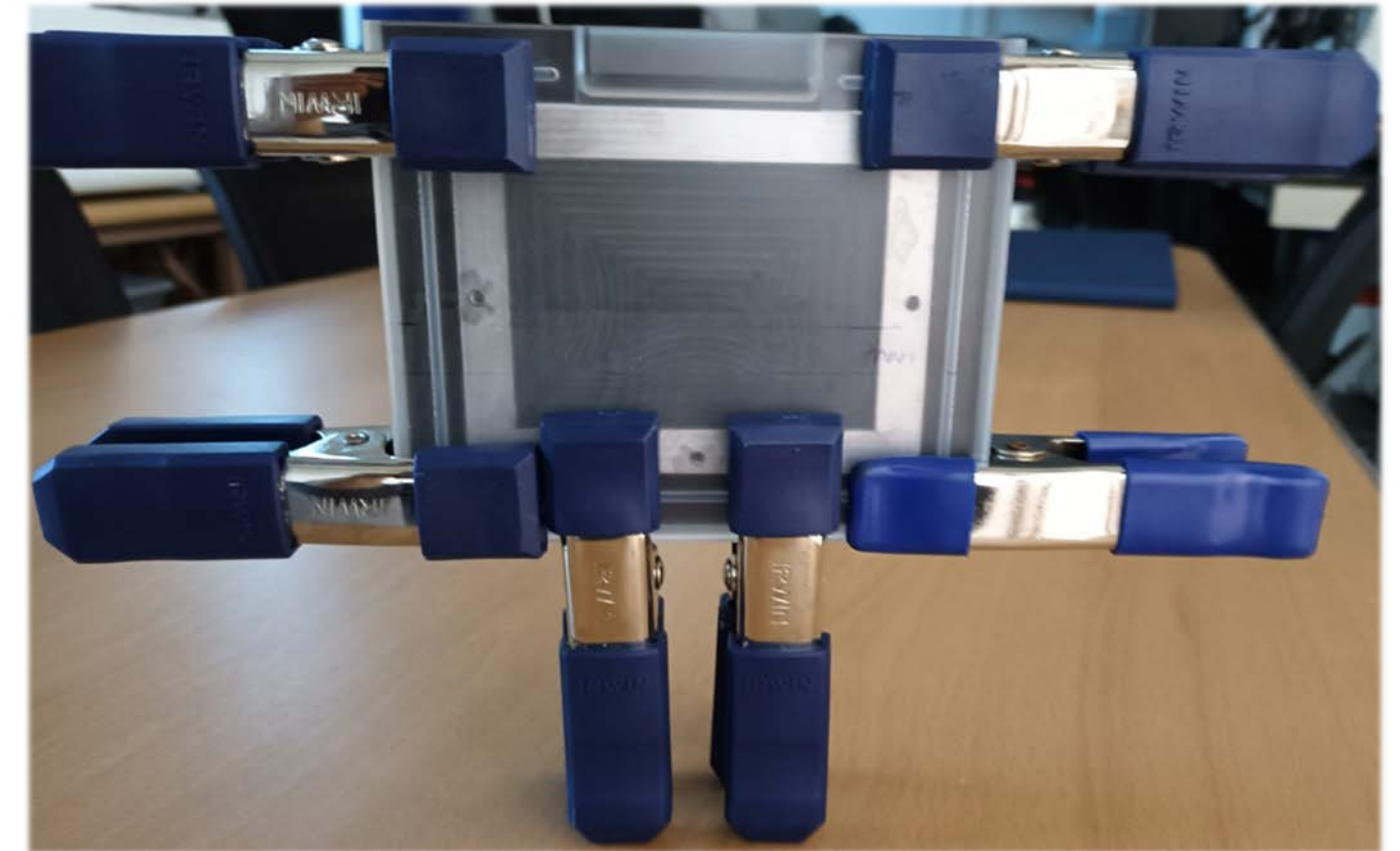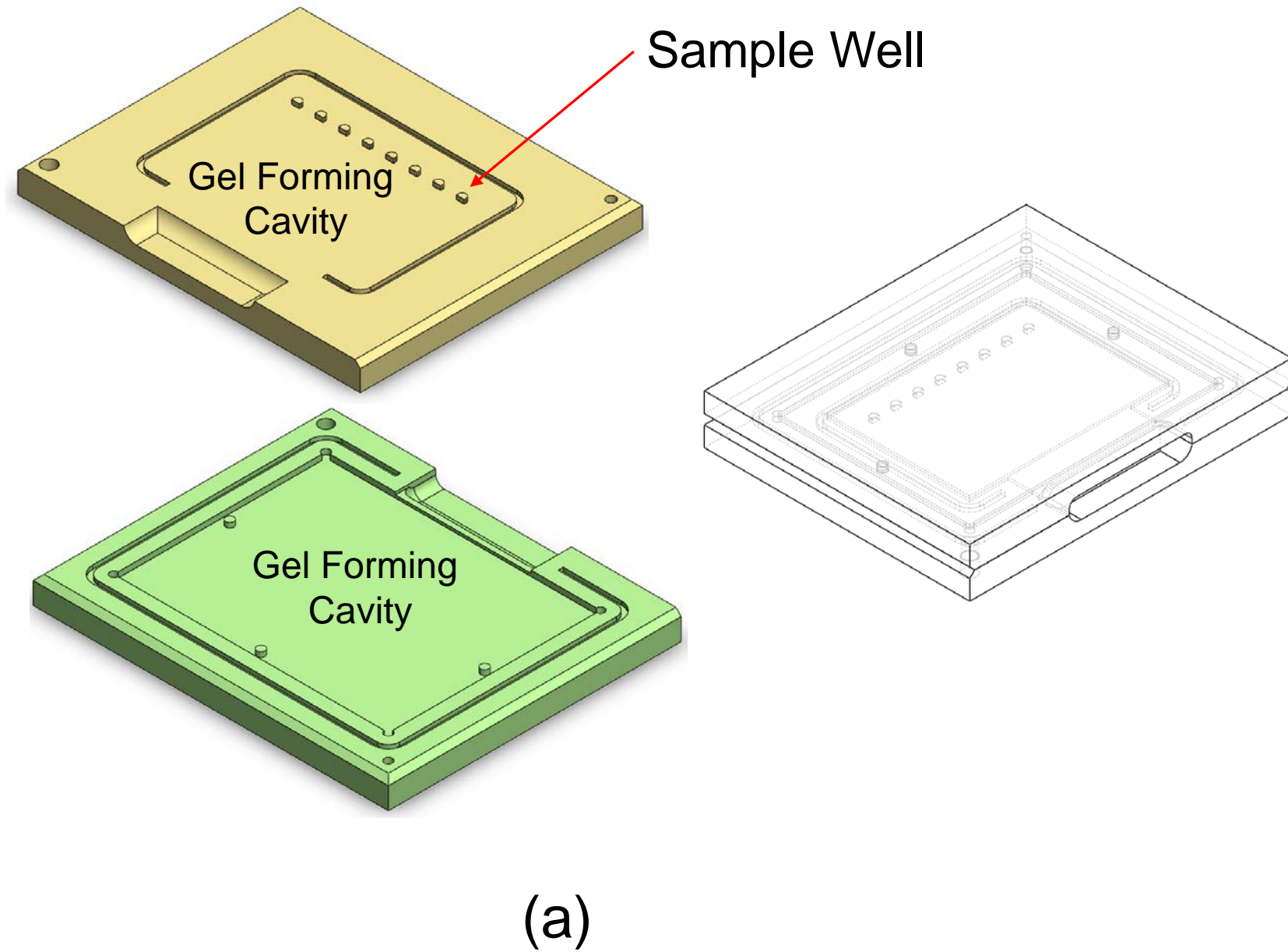   Full name: Sunghyun Kang Ph.D.
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Sample Well

Gel Forming Cavity

Gel Forming Cavity

(a)

(b)

Figure S1 Polyacrylamide gel caster. Perspective views of the polyacrylamide gel caster parts (a). After the assembly of the caster, the polyacrylamide gel mixture was poured into the cavity of the caster and polymerized (b).
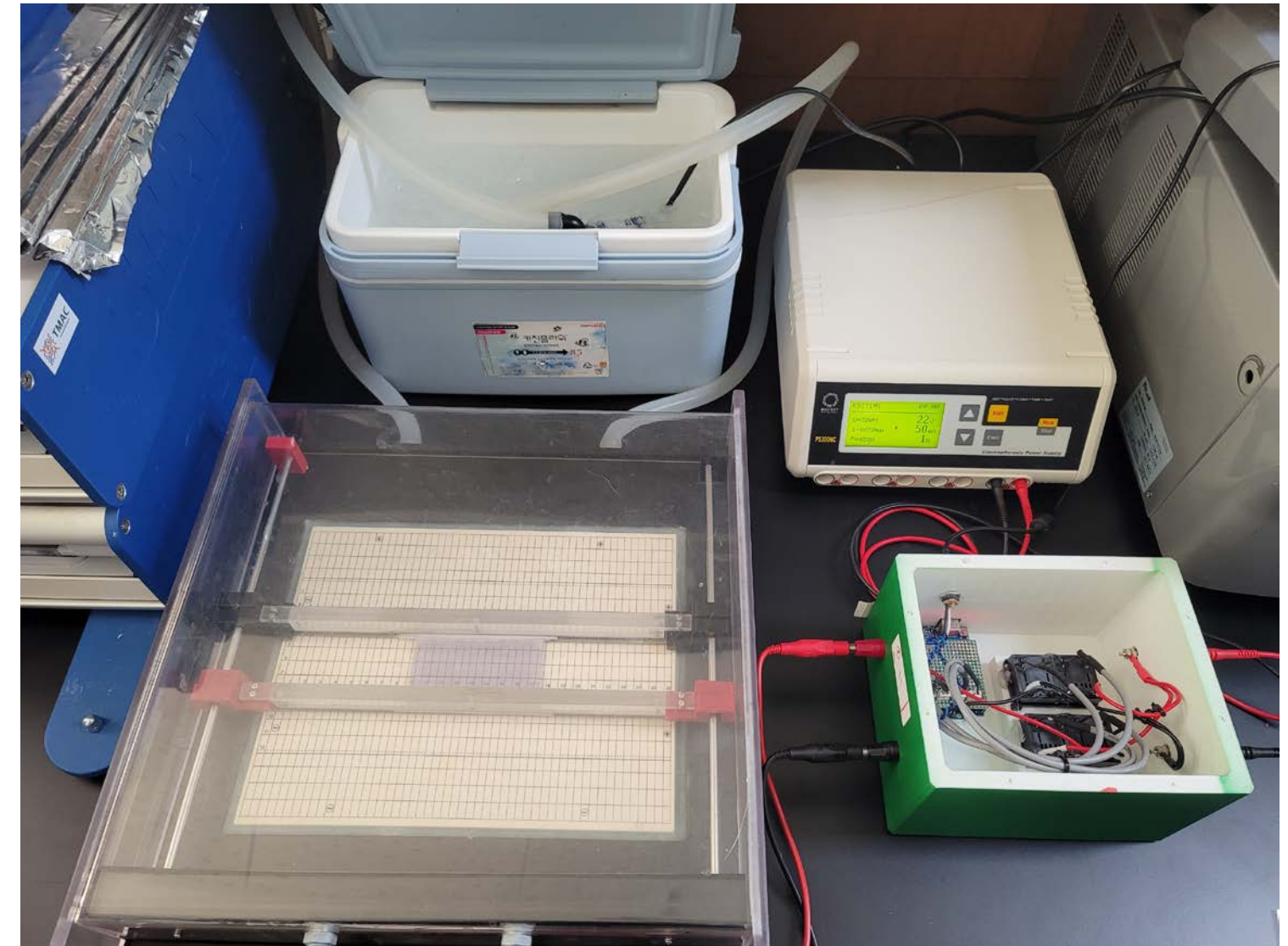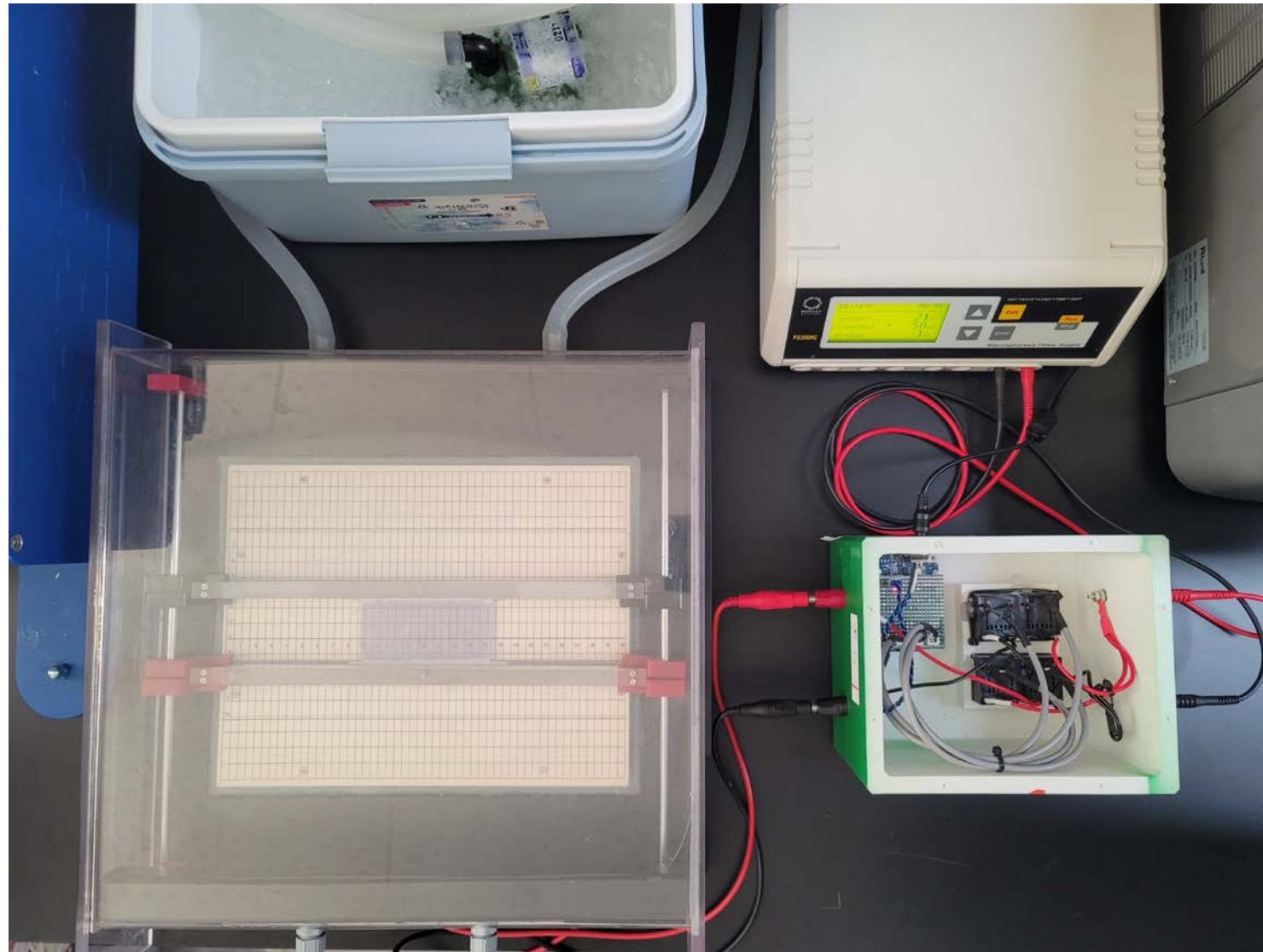
Supplementary Figure S2
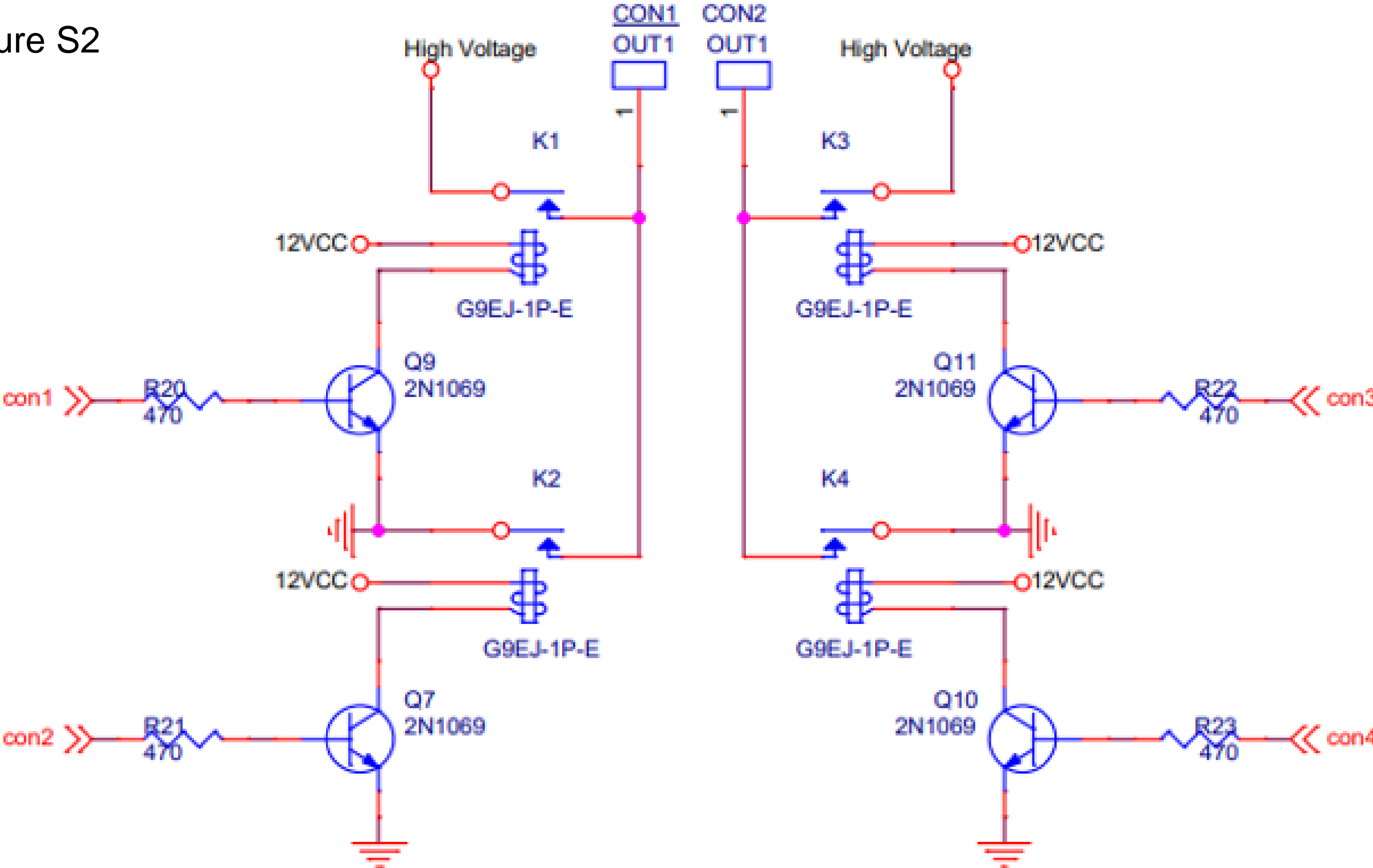
Figure S2 Electric circuit of the pulse generator in the FIGE module. The electric circuit generated positive and negative square-wave electric fields during field inversion experiments.
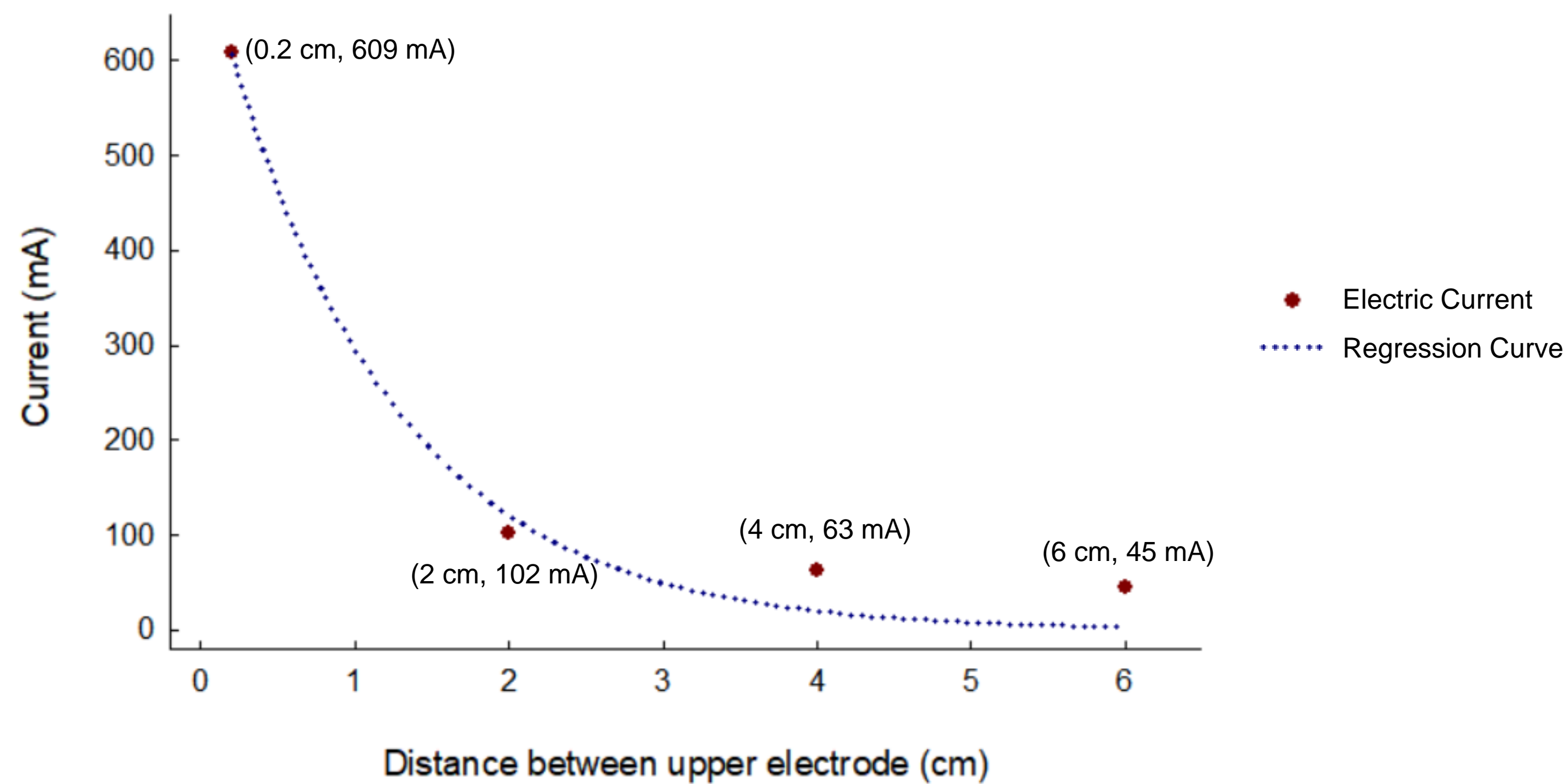
Figure S3 The physical setup of the horizontal PAGE system with the FIGE module. The FIGE module linked the power pack to the horizontal electrophoresis device.

Supplementary Figure S4

Figure S4 The intervals between the electrodes could adjust electric currents. Two upper electrodes from the double-deck electrode module were placed on the top of a gel with varying intervals, and an electric field was applied (50 V). As the intervals narrowed, the electric currents were measured to increase exponentially. The data was fitted with an exponential decay curve (y = 726.2*exp(-0.897*x), r2 = 0.982).