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

Ultrasensitive optofluidic enzyme-linked immunosorbent assay by on-chip integrated polymer whispering-gallery-mode microlaser sensors

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The PDF file includes the following:

Fig. S1 (a) Schematic of optical 3D μ-printing technology. (b) Characterization of the relation between cure depth and exposure time: (i) Optical microscope image. (ii) 3D laser-scanning confocal image of fabricated SU-8 micropillars. (iii) Cured depth versus the exposure time on a natural-logarithm scale. Inset shows the dependence of cure depth on exposure time.

Fig. S2 Fabricated SU-8 mould for preparation of the microfluidic chip by the casting method. (a) Photo of SU-8 mould on silicon wafer. (b) Enlarged images of different parts. Scale bars are 500 μm.

Fig. S3 Treatments on the SU-8 surface for binding with PDMS or the antibody. (a) O_2 plasma treatment. (b) Silanization of the SU-8 surface by using aqueous APTES. (c) Binding with PDMS. (d) Binding with the antibody via electrostatic attraction.

Fig. S4 Simulation of the electric field distributions of the fundamental mode of WGMC-1 (a), WGMC-2 (b) and WGMC-3 (c). The radial mode numbers of the three abovementioned WGMs were calculated to be 940, 1186, and 1585, respectively. Scale bars are 2 μm.

Fig. S5 Comparison of the absorbance spectra of TMB and its mixture with HRP-streptavidin. The absorption peaks resulted from the catalytic product of TMB during chromogenic reaction.

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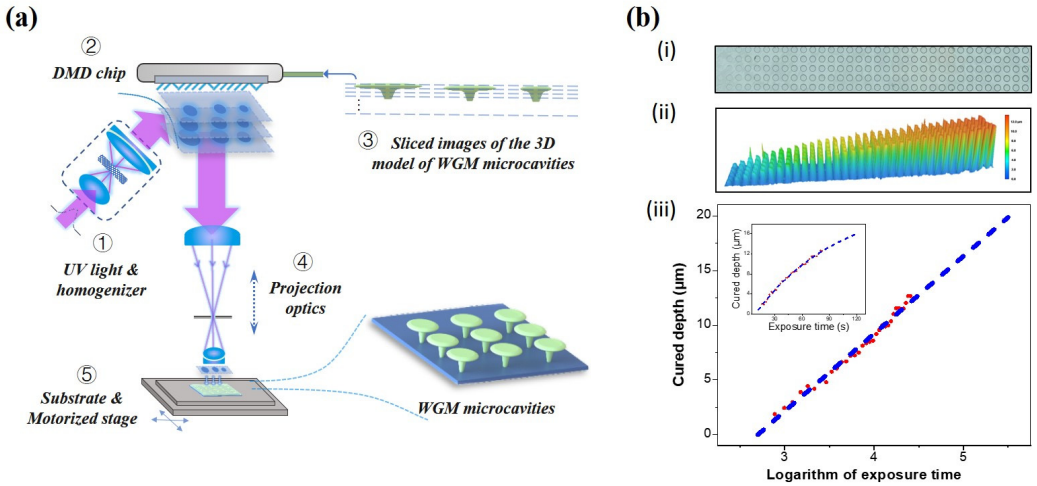

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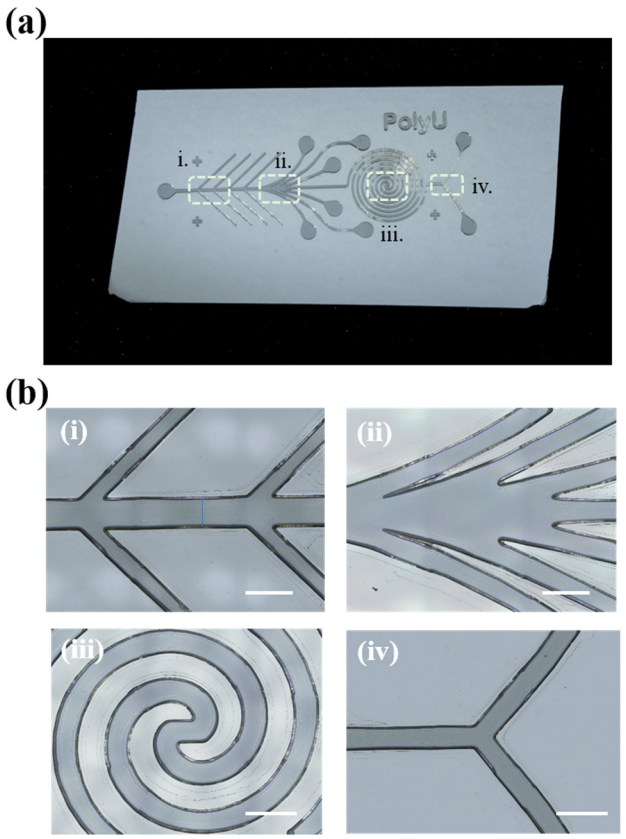

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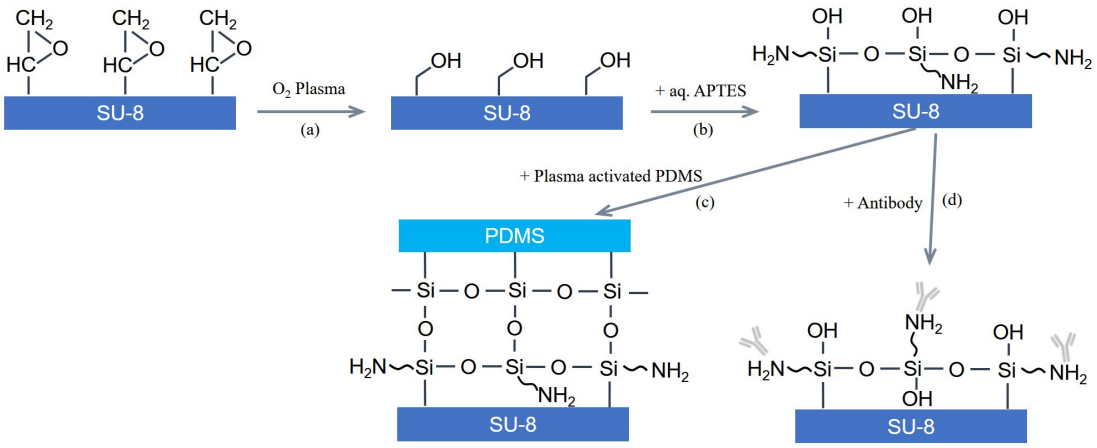

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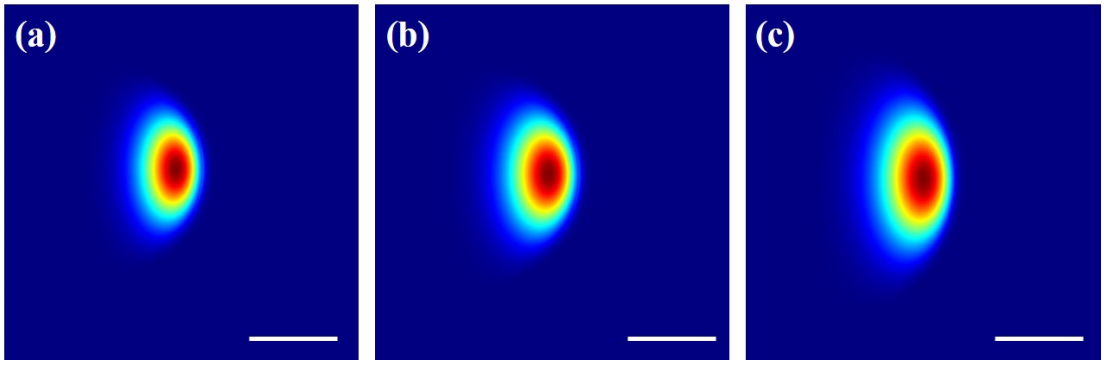

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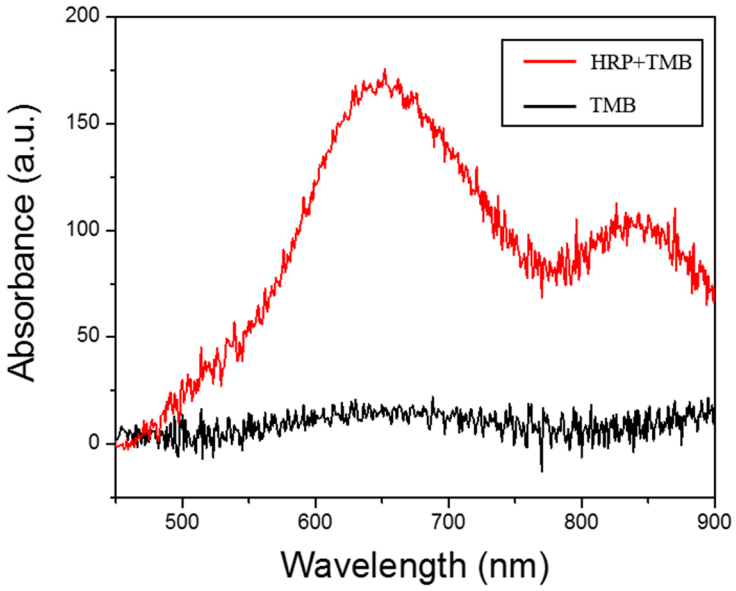

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