

*Supplementary Material*

**Convenient Two-step Method Constructed Silicon-based Microfluidic Chip  
for Fast CYP2C19 SNPs Detection**

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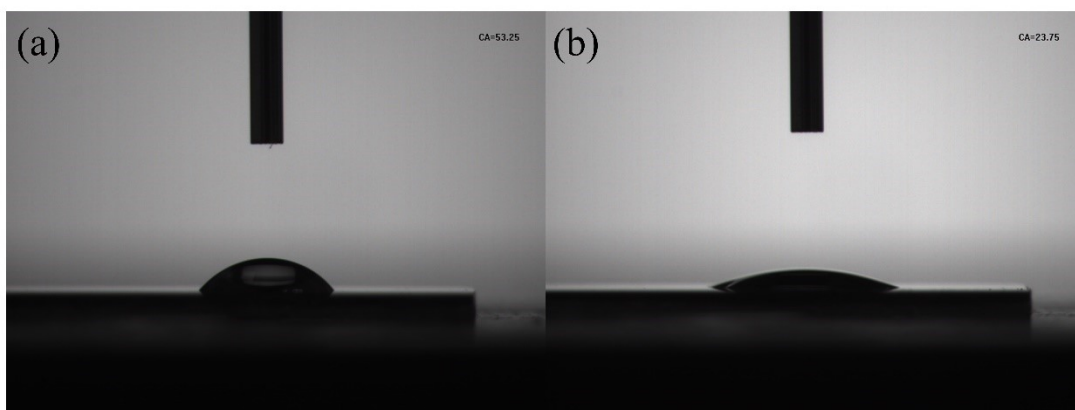


Fig. S1. The water contact angle images of silicon substrates (a) before HPM cleaning; (b) after HPM cleaning.

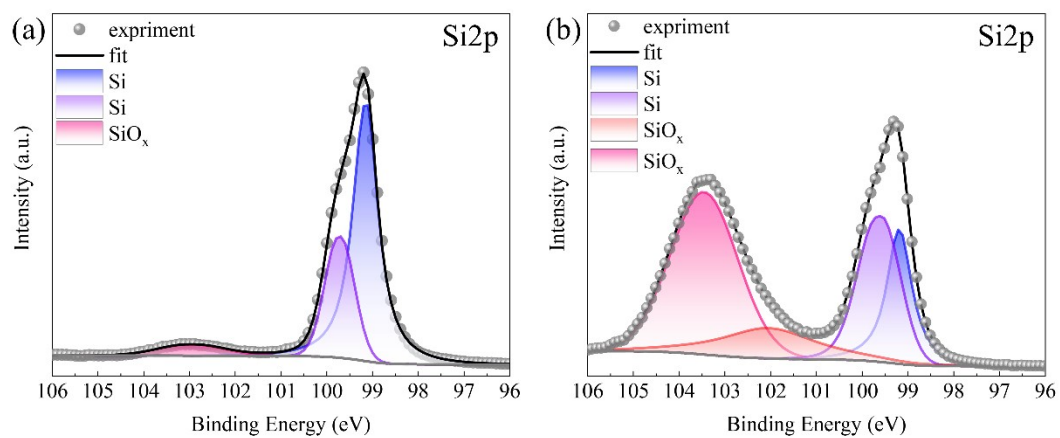


Fig. S2. The XPS results of Si2p (a) before HPM cleaning; (b) after HPM cleaning.

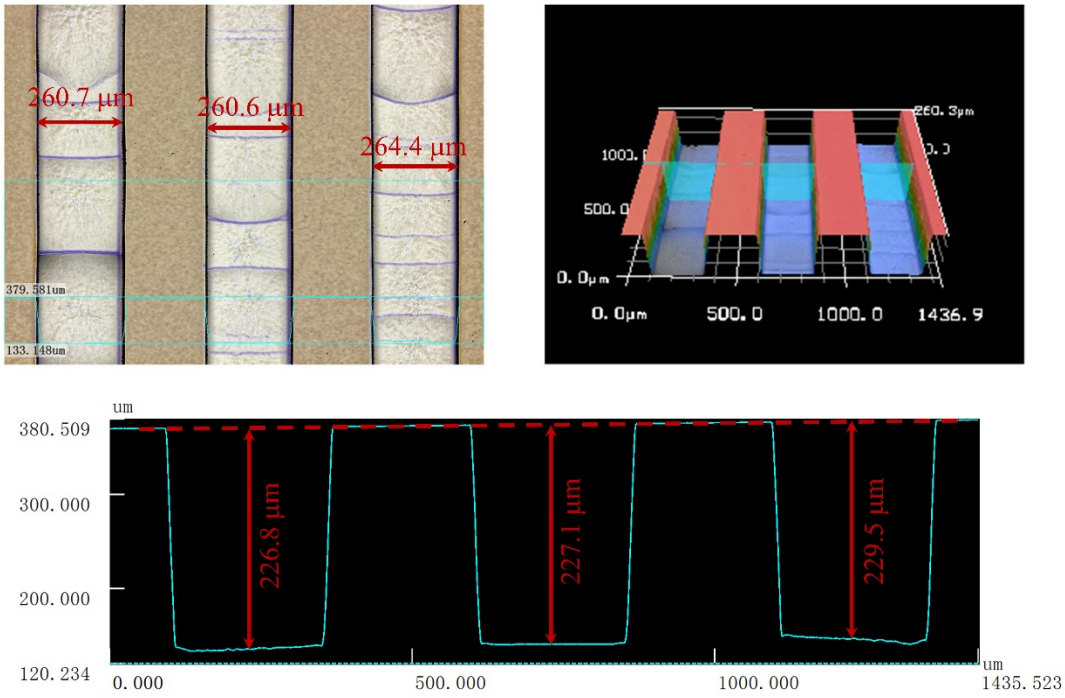


Fig. S3. The 3D surface profiler image for aspect ratio calculation.

The calculation process of aspect ratio:

$$Aspect\ ratio = \frac{226.8 + 227.1 + 229.5}{260.7 + 260.6 + 264.4} = 0.87$$

## **The fluorescence intensity collection process**

The control system controls the CCD camera to take pictures of the microchannel after each thermal cycle, record the gray value in each photo as the fluorescence intensity, and then fitted it to the fluorescence intensity curve. The change in gray value observed in chip photos primarily stems from variations in fluorescence intensity within the microchannel. Therefore, we record the gray value of each photo to reflect the fluorescence intensity inside the microchannel.