Simple and Covalent Fabrication of Paper Device and Its Application in Sensitive Chemiluminescence Immunoassay

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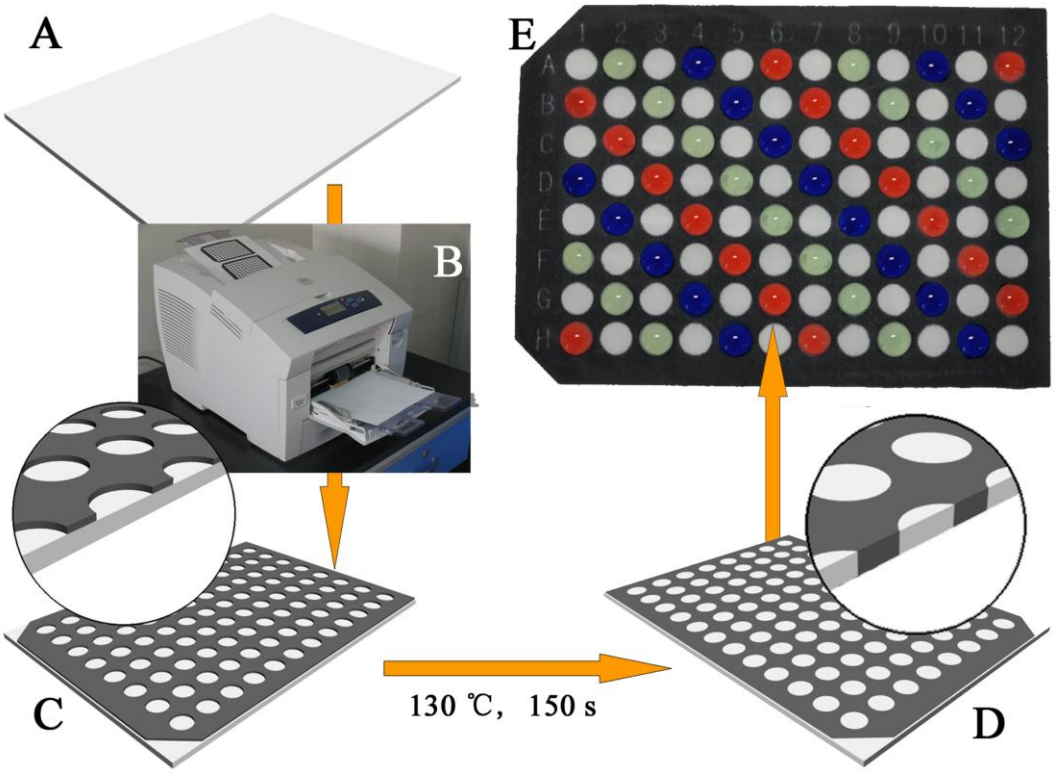
Supplemental Information



Scheme S1. The schematic representation of process to fabricate paper microzone plate by wax printing: (A) original paper; (B) printing device; (C) wax printed paper; (D) wax penetrated paper; (E) Image showing the water-control ability of the paper microzone plate.

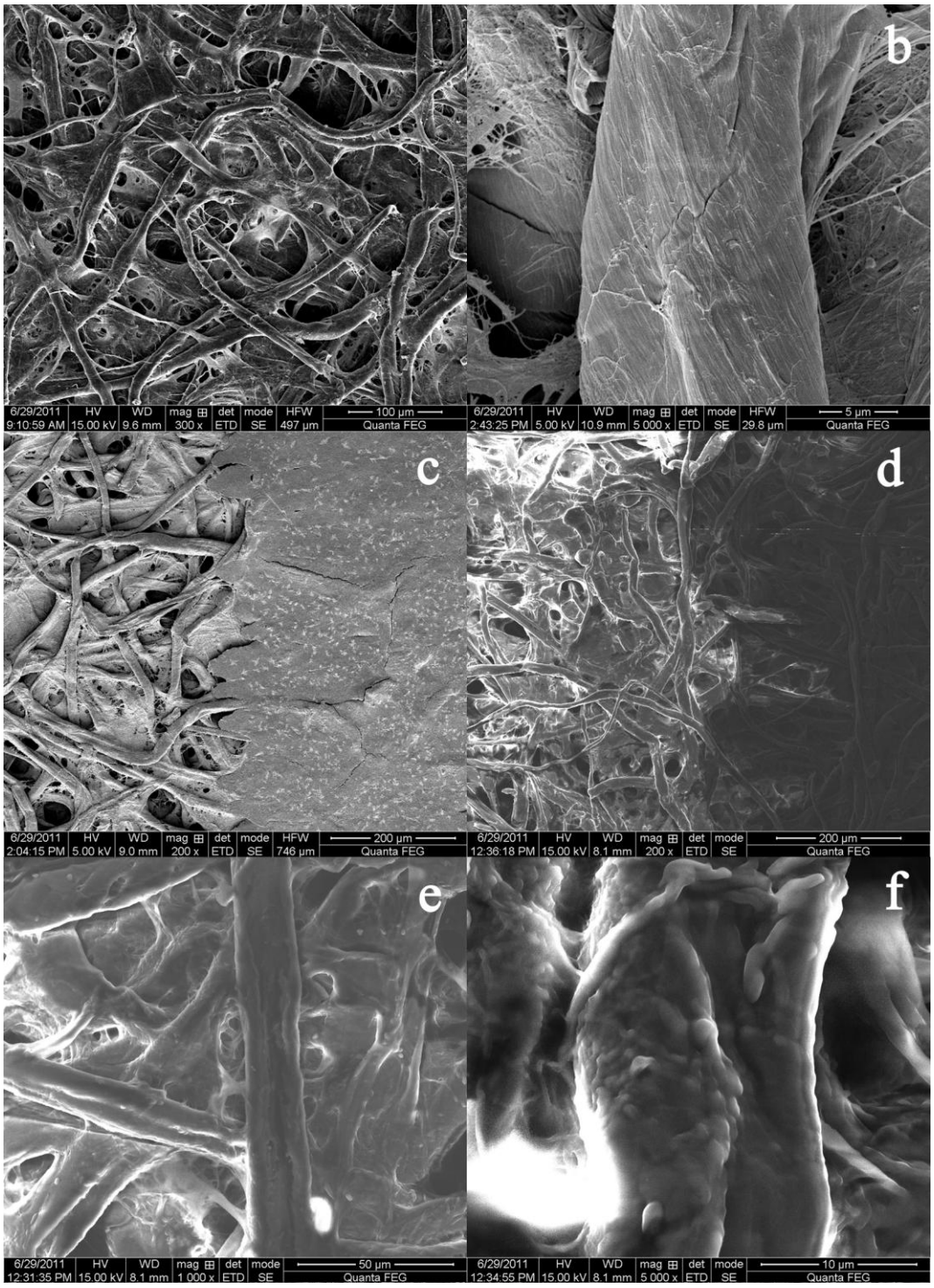


Figure S1. The SEM images of the paper-based microzone plate. (a, b) the porous structures and microfibres of paper zone; (c) wax-printed paper; (d) wax-penetrated paper; (e) the porous structures of wax-penetrated paper; (f) the microfibres of wax-penetrated paper.

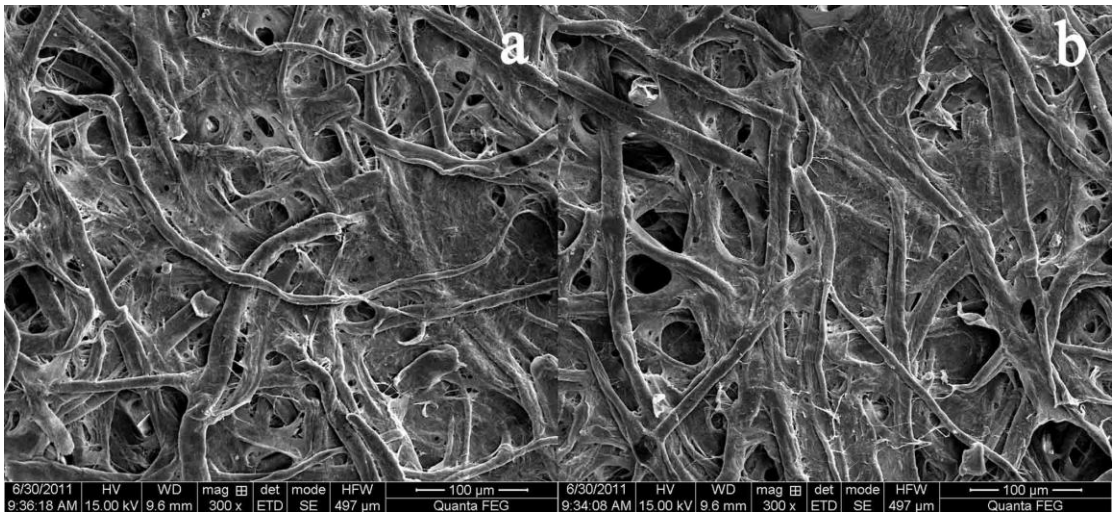


Figure S2. The SEM images of periodate oxidized paper (a) and antibodies immobilized paper (b)

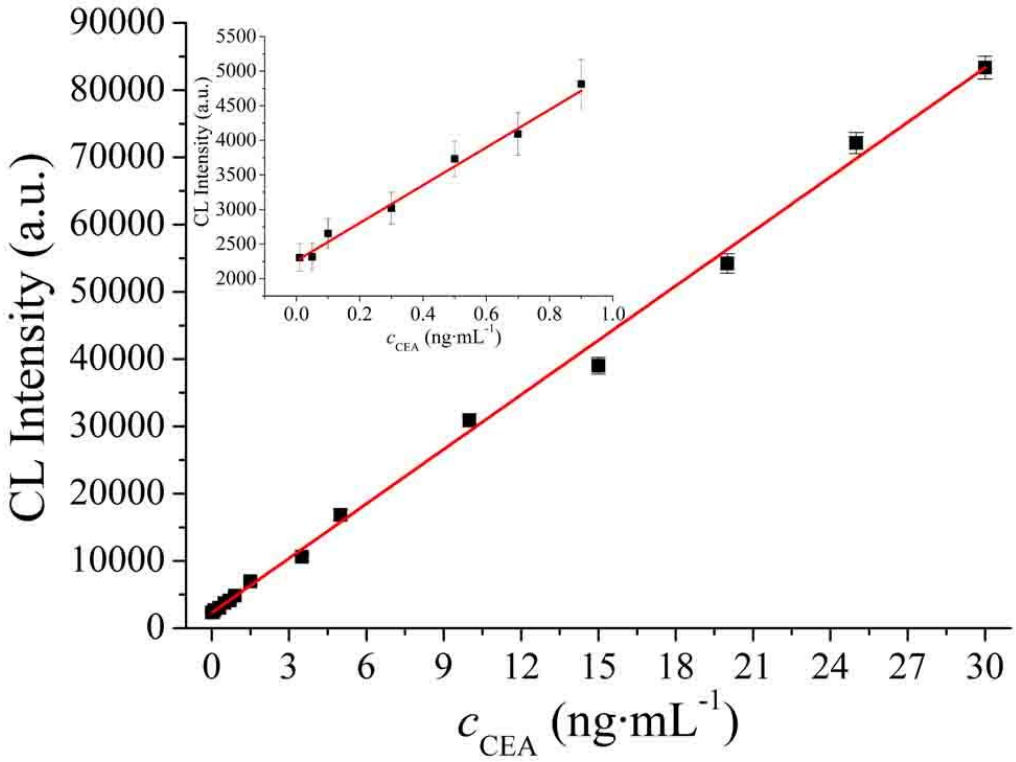


Figure S3. The calibration curve for the determination of CEA through paper-based CLIA on paper immunoplate using AuNPs conjugated HRP-labeled CEA antibodies as reporter under the optimal conditions. Inset was the amplification of the linear range from 0.01 to 1.0 ng·mL^{-1} for CEA determination.