micromachines

Supplementary Information: An ISFET Microarray Sensor System for Detecting the DNA Base Pairing

Peng Sun [1], Yongxin Cong [1], Ming Xu [1], Huaqing Si [1], Dan Zhao [2] and Dongping Wu [1,*]

[1] State Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, Shanghai 200433, China; 18112020068@fudan.edu.cn (P.S.); 15210720050@fudan.edu.cn (Y.C.); xuming123@263.net (M.X.); 17112020035@fudan.edu.cn (H.S.)
[2] Shanghai Turtle Technology Company Limited, Shanghai 200439, China; zhaodan@fudan.edu.cn
* Correspondence: dongpingwu@fudan.edu.cn

The reference electrode (RE), such as the widely used Ag/AgCl redox-couple electrode, is both hard to maintain and difficult to integrate as a constituent of an on-chip sensing system. This work demonstrates a microfluidic based on gold or platinum as a metal electrode that can provide a stable reference potential for ISFET-based biochemical sensors. As shown in Fig. S1, the metal electrode is fixed to the microfluidic module. A rubber washer is placed under the metal electrode to ensure that the metal electrode is placed inside the flow system without solution leakage.

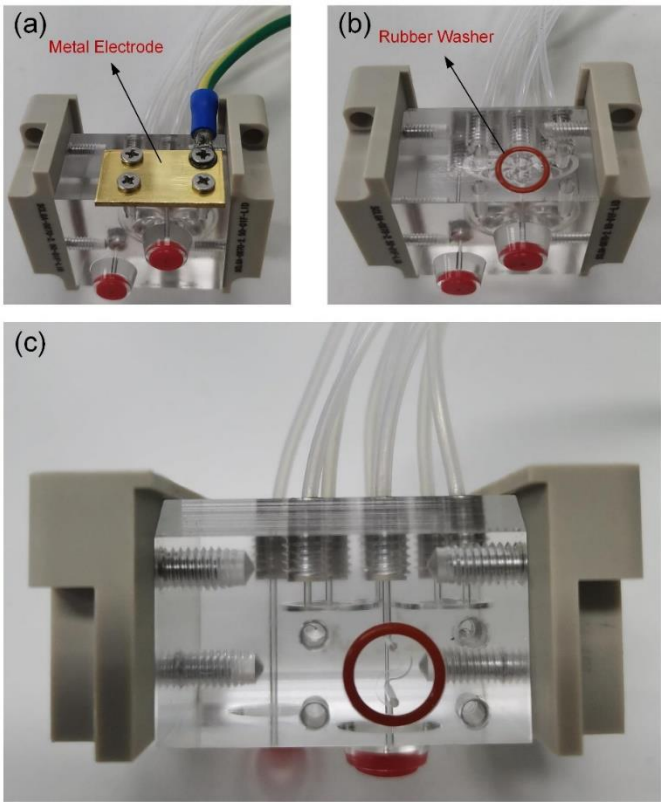

Figure S1. Physical diagram of microfluidic system. (a) The metal electrode is fixed to the microfluidic module. (b,c) A rubber washer is placed under the metal electrode to ensure that the metal electrode is placed inside the flow system without solution leakage.