

Supporting information for

Amperometric Proton Selective Sensors Utilizing Ion Transfer Reactions across a microhole Liquid/Gel Interface

Shaikh Nayeem Faisal^a, Carlos M. Pereira^b, Sangchul Rho^c and Hye Jin Lee^{a*}

^a*Department of Chemistry, Kyungpook National University, 1370 Sankyuk-dong, Buk-gu, Daegu-city, 702-701, Republic of Korea*

^b*Centro de Investigação em Química –UP, L4, Departamento de Química da Faculdade de Ciências, Universidade do Porto, Rua do Campo Alegre, 687, 4169-007 Porto, Portugal*

^c*THE BIO R&D center, THEBIO Co., Ltd, 208 Pohang technopark, 601, Jigok-dong, Nam-gu, Pohang, Gyeongbuk, 790-834, Republic of Korea*

**E-mail address: hyejinlee@knu.ac.kr*

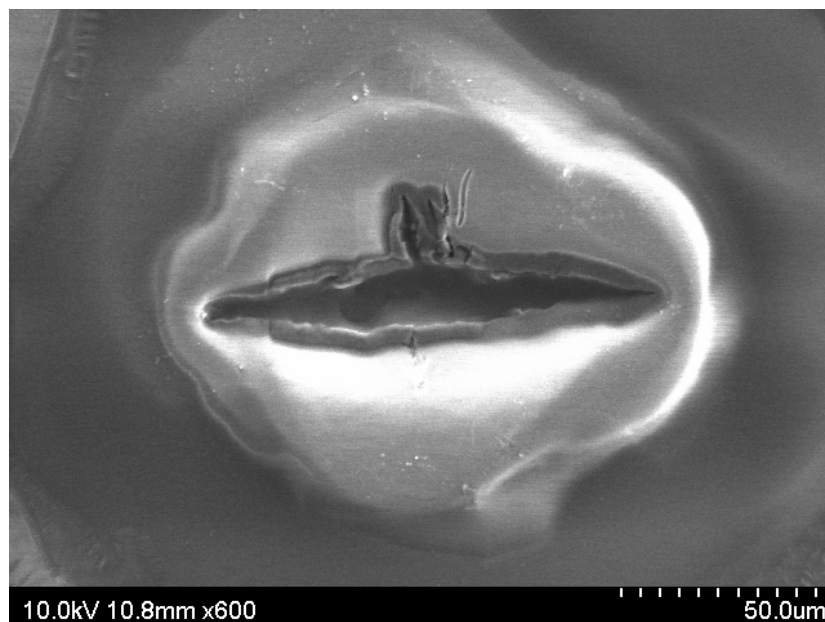


Figure S1. Field-emission scanning electron microscope (FE-SEM, HITACHI S-4800) image showing a single elliptical microhole filled with the PVC-NPOE gel. The microhole was fabricated by a simple mechanical punching through the PVC supporting film with a sharp needle. The image was taken from the opposite side of the microhole on which the gel was casted. It can be seen that the PVC-NPOE gel was settled into the microhole structure without excessive flow on to the opposite surface of the PVC film. Also note that the oval shadow area around the edge of the ellipse could be the gel deposited on the sloppy space created at the exit side of the microhole when punching under pressure. The brighter outer ring region shows a different surface morphology of PVC film probably caused by the film deformation under the pressure-driven force during the punching with a needle.