Electronic Supplementary Material (ESI) for Soft Matter
This journal is © The Royal Society of Chemistry 2011

# Supporting Information for

## Protein Detection Using Aqueous/LC Interfaces Decorated with a Novel Polyacrylic Acid block Liquid Crystalline Polymer

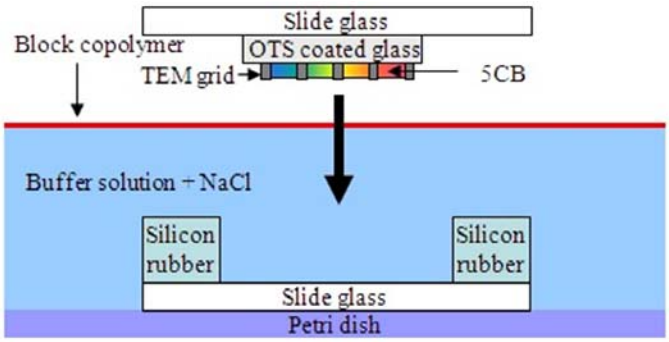
Jung-Min Seo, Waliullah Khan, and Soo-Young Park*

Department of Polymer Science, Kyungpook National University, #1370 Sangyuk-dong, Buk-gu, Daegu 702-701,South Korea

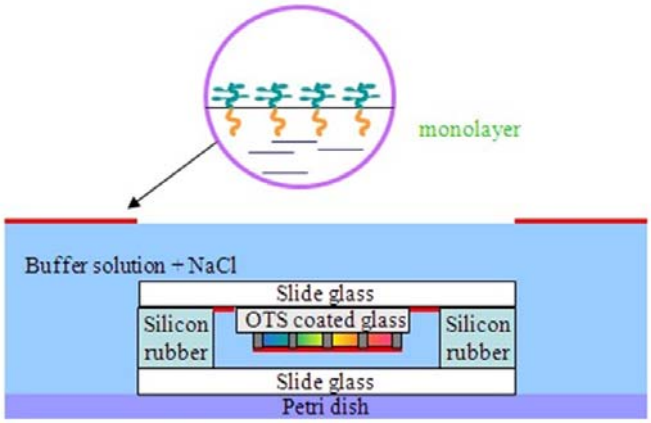
* To whom correspondence should be addressed,

Tel +82-53-950-5630; Fax +82-53-950-6623; e-mail psy@knu.ac.kr

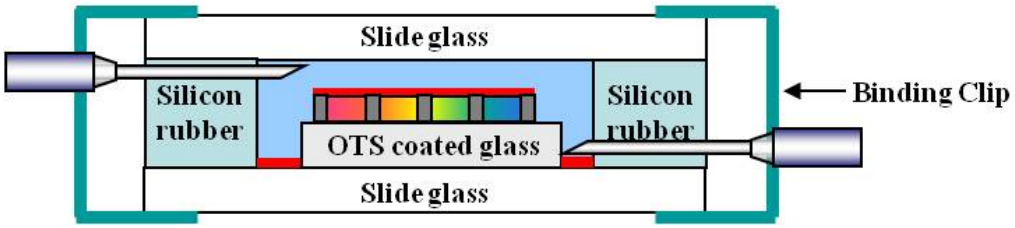
This journal is © The Royal Society of Chemistry 2011




(a)




(b)




(c)

**Figure SI 1.** The schematic of the flow chamber used in this study (a) before and (b) after the PAA-b-LCP was coated on the 5CB in the TEM grid cell and (c) the TEM grid cell in the flow chamber.

This journal is © The Royal Society of Chemistry 2011

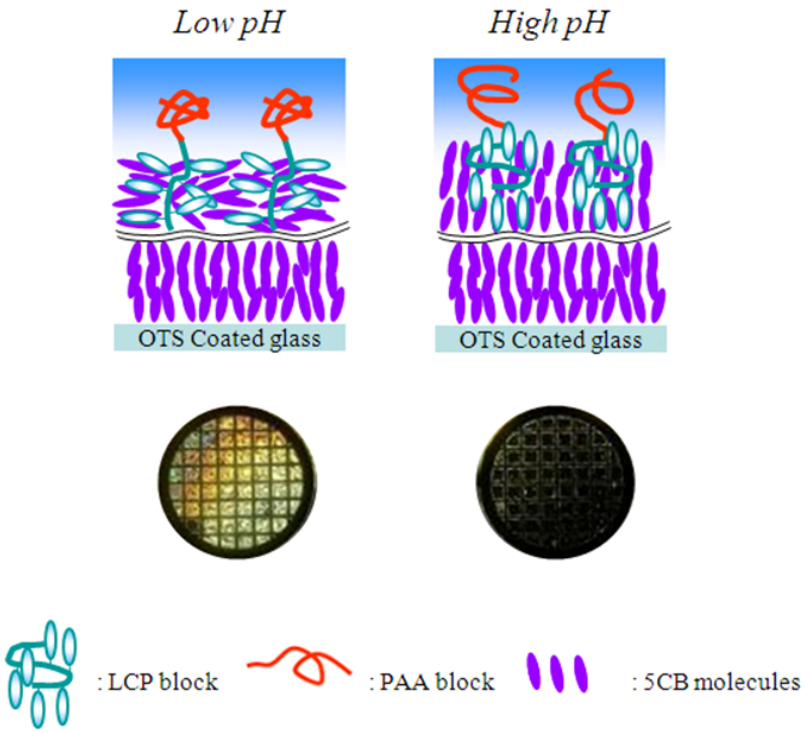



**Figure SI 2.** A schematic diagram of director orientation in the cell, indicating the conformation of the PAA-*b*-LCP on the aqueous/5CB interface at pH 2 (left) and 12 (right).

This journal is © The Royal Society of Chemistry 2011

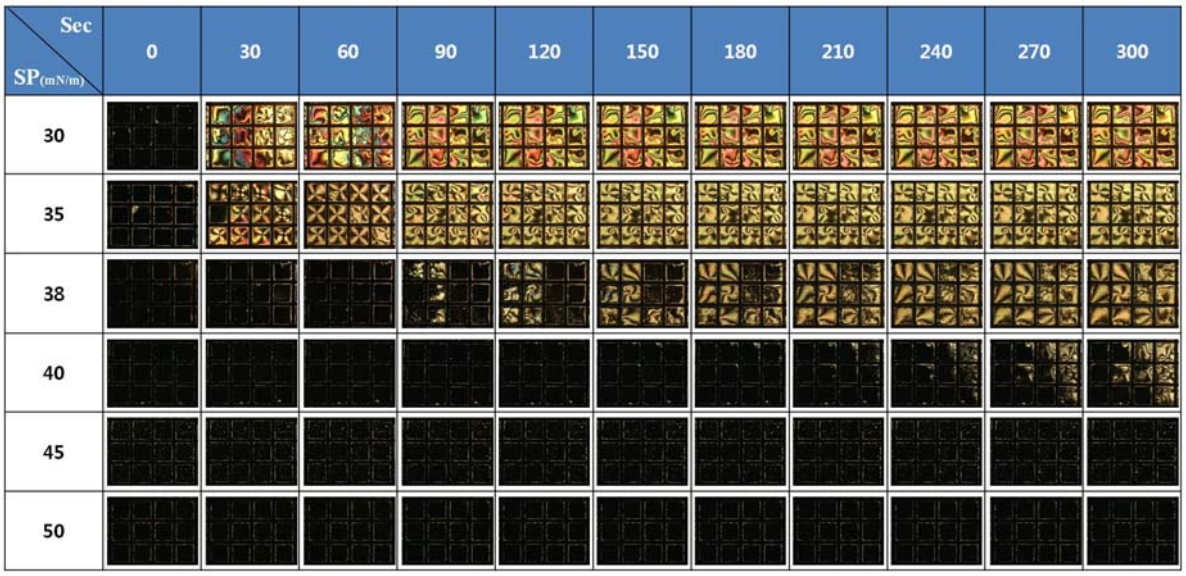



**Figure SI 3.** The optical micrographs of the TEM grid cells under a polarized optical microscope with a cross-polar state after injecting the 1 mg/mL lysozyme solution into the TEM grid cell which is made with the PAA-*b*-LCP decoration on the 5CB at different SPs (mN/m) in the TEM grid cell at pH=12 with the addition of 1 M NaCl.

This journal is © The Royal Society of Chemistry 2011

**Online Movie Legends**

**Movies SI 4(a-c):**

The change of the GI after injecting a 1 mg/mL lysozyme solution in the TEM grid cell at pH=10, 11, and 12 with addition of 1 M NaCl; the monolayer was made at SP=30 mN/m (corresponding to Fig. 2).

**Movie SI 5(a-c):**

The change of the GI at pH=12 after injecting a 1 mg/mL lysozyme solution into the TEM grid cell with different NaCl concentrations (0.1, 0.5 and 1 M); the PAA-*b*-LCP monolayer on the 5CB in the TEM grid cell was decorated at SP=30 mN/m (corresponding to Fig. 3).