Electronic Supplementary Material (ESI) for RSC Advances. This journal is © The Royal Society of Chemistry 2014

## **Supporting Information**

Polystyrene-Block-Poly (methylmethacrylate) Composite Materials Film as a Gate Dielectric for Plastic Thin-Film Transistor Applications

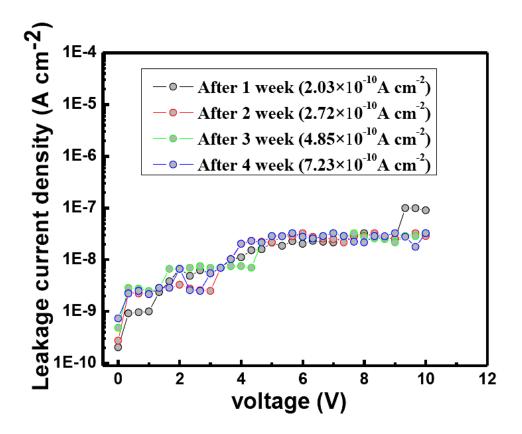
Jagan Singh Meena<sup>ab</sup>, Min-Ching Chu<sup>a</sup>, Ranjodh Singh<sup>a</sup>, Chung-Shu Wu<sup>a</sup>, Umesh Chand<sup>b</sup>, Hsin-Chiang You<sup>c</sup>, Po-Tsun Liu<sup>a</sup>, Han-Ping D. Shieh<sup>a</sup> and Fu-Hsiang Ko<sup>a\*</sup>

<sup>a</sup>Department of Materials Science and Engineering, Department of Photonics and Display Institute, National Chiao Tung University, Hsinchu 30010, ROC, Taiwan

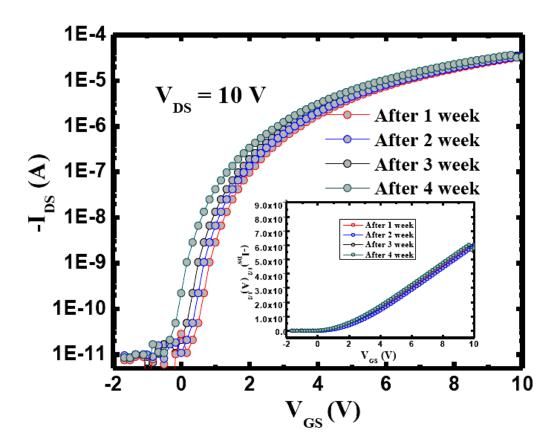
<sup>b</sup>Department of Electronics Engineering, National Chiao Tung University, Hsinchu 30010, ROC, Taiwan

<sup>c</sup>Department of Electronic Engineering, National Chin–Yi University of Technology, Taichung 41170, ROC, Taiwan.

\*E-mail: fhko@mail.nctu.edu.tw



**Figure S1**. Leakage current density measurements test for 1 day to 4 weeks for double layer PS– *b*–PMMA film (28 nm thick) as dielectric layer in MIM structured device.



**Figure S2.** Transfer characteristic ( $I_{DS}-V_{GS}$ ), when  $V_{DS}$ =10 V for double layer PS-b-PMMA film (28 nm thick) as gate dielectric layer and ZnO as semiconductor active layer for day 1 to 4 weeks.