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## (Supplementary Information)

Space Charge-Induced Unusually-High Mobility of Solution-Processed Indium Oxide Thin Film Transistor with Ethylene Glycol Incorporated Aluminum Oxide Gate Dielectric

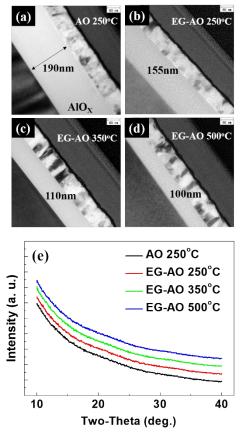
Hyungjin  $Park^{\ddagger a}$ , Yunyong  $Nam^{\ddagger a}$ , Jungho Jin<sup>b</sup>, and Byeong-Soo Bae<sup>a\*</sup>.

<sup>a</sup>Laboratory of Optical Materials and Coating (LOMC), Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), 291 Daehak-ro, Yuseonggu, Daejeon 305-701, Korea.

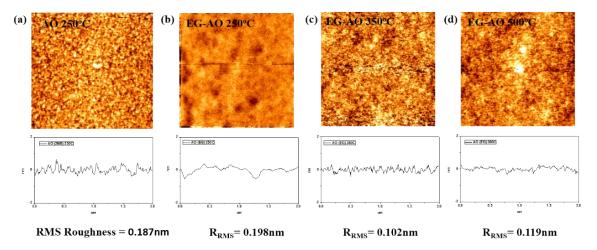
<sup>b</sup>Multiscale Hybrid Materials Laboratory (MHML), School of Materials Science and Engineering, University of Ulsan, 93 Daehak-ro, Nam-gu, Ulsan 680-749, Korea

\*Corresponding author. E-mail address: bsbae@kaist.ac.kr

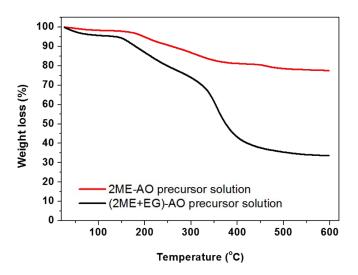
<sup>‡</sup>Both Hyungjin Park and YunYong Nam contributed equally.



**Fig. S1**. Cross sectional TEM images of the gate dielectric layer: (a) AO 250oC, (b) EG-AO 250oC, (c) EG-AO 350oC, and (d) EG-AO 500oC. (e) XRD spectra of AO and EG-AO gate dielectric layers annealed at various temperatures.



**Fig. S2**. AFM images and line profiles of (a) AO 250°C, (b) EG-AO 250°C, (c) EG-AO 350°C, and EG-AO 500°C gate dielectric layer.



**Fig. S3.** TGA results of AO precursor solution (only 2-ME for solvent) and EG-AO precursor solution (both 2-ME and EG) after drying  $120\,^{\circ}$ C.