

Enhancement of X-ray Detection by Single-Wall Carbon Nanotubes Enriched Flexible Polymer Composite

Heetak Han,¹ Sanggeun Lee,¹ Jungmok Seo,¹ Chandreswar Mahata,¹ Sung Hwan Cho,² A-Reum Han,³
Keun-Sung Hong,³ Joon-Ho Park,³ Myung-Jin Soh,³ Cheolmin Park,² and Taeyoon Lee^{1*}

(1) Nanobio Device Laboratory, School of Electrical and Electronic Engineering, Yonsei University, 50
Yonsei-ro, Seodaemun-Gu, Seoul 120-749, Republic of Korea

(2) Nano-Polymers Laboratory, Department of Materials Science and Engineering, Yonsei University, 50
Yonsei-ro, Seodaemun-Gu, Seoul 120-749, Republic of Korea

(3) Luxen Technologies, Inc., 396 Worldcupbuk-ro, Mapo-Gu, Seoul 121-795, Republic of Korea

* Corresponding author:

Tel: +82-2-2123-5767

Fax: +82-2-313-2879

e-mail address: taeyoon.lee@yonsei.ac.kr



Figure S1 Photograph of 0.1 mg/mL of SWNT dispersion toluene solutions. SWNT dispersion solutions (a) without and (b) with PS-*b*-PPP dispersant

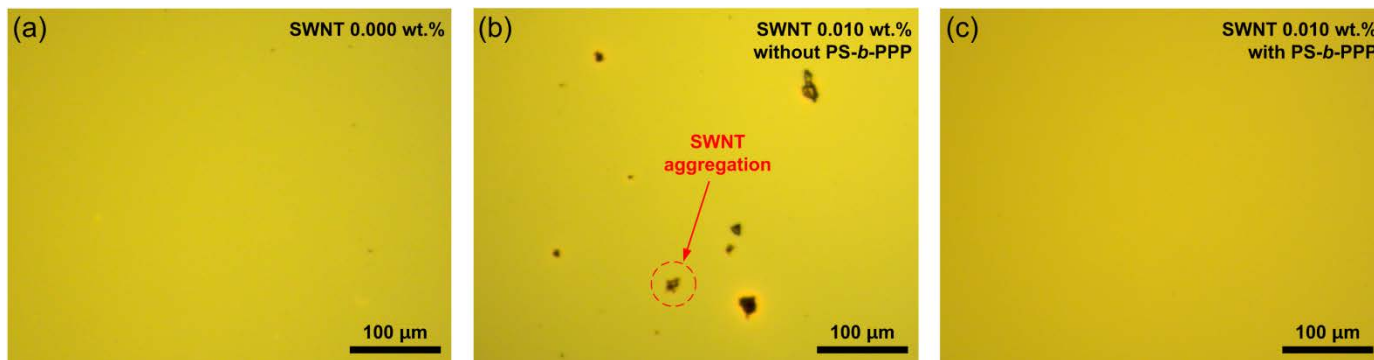


Figure S2 Optical microscope images of SWNTs enriched polymer composite films. The composite films (a) without SWNT, (b) with 0.010 wt.% SWNT, and (c) with 0.010 wt.% SWNT and PS-b-PPP dispersant. The SWNTs formed large aggregates and bundles in the composite films without dispersant. In contrast, there were no significant aggregations of SWNTs on the composite films with PS-b-PPP dispersant.

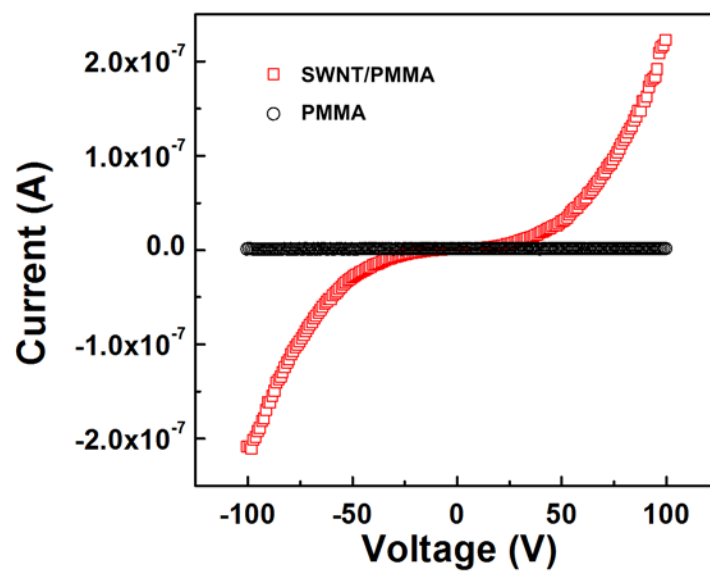


Figure S3 *I-V* characteristics of PMMA and SWNT/PMMA devices. SWNT/PMMA device (SWNT 0.1 wt.%) showed ambipolar characteristics.