

Gate- and Light-Tunable pn Heterojunction Microwire Arrays Fabricated via Evaporative Assembly

Jae Hoon Park,¹ Jong Su Kim,¹ Young Jin Choi,¹ Wi Hyoung Lee,³ Dong Yun Lee,⁴ Jeong Ho Cho^{1,2*}

¹SKKU Advanced Institute of Nanotechnology (SAINT), ²School of Chemical Engineering, Sungkyunkwan University, Suwon 440–746, Korea.

³Department of Organic and Nano System Engineering, Konkuk University, Seoul 05029, Korea.

⁴Department of Polymer Science and Engineering, Kyungpook National University, Daegu, 41566, Korea.

*Corresponding author: jhcho94@skku.edu

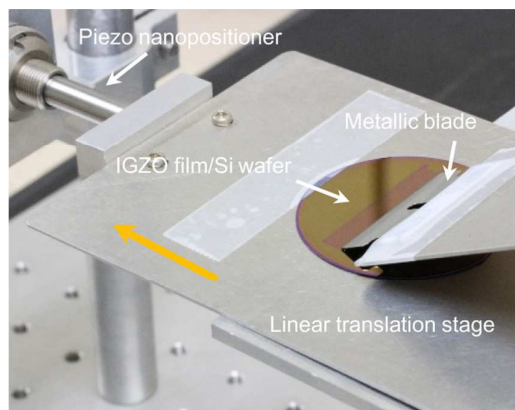


Figure S1. Photographic images of flow-coating setup.

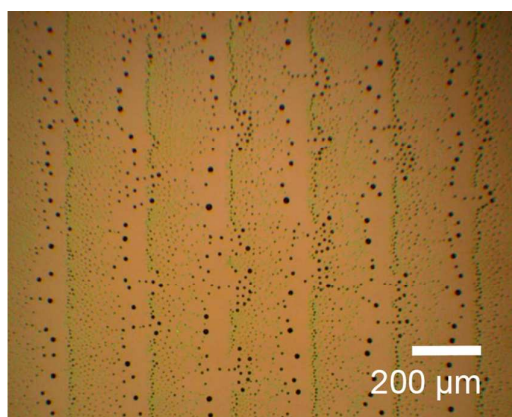


Figure S2. Optical microscopy image of the TIPS-PEN microwire fabricated using only TIPS-PEN solution without PMMA.

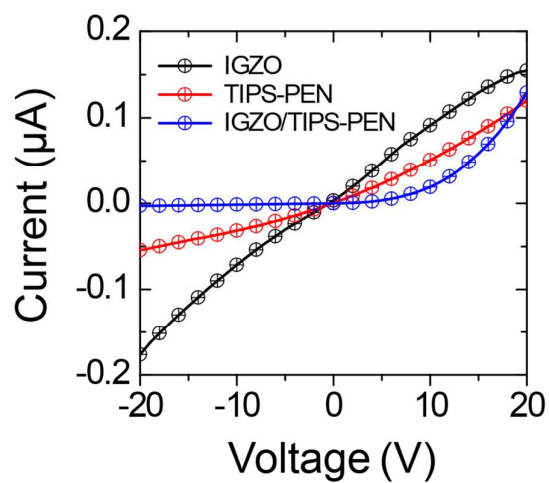


Figure S3. Current-voltage characteristics of the IGZO microwire, the TIPS-PEN microwire, and the IGZO/TIPS-PEN heterojunction.

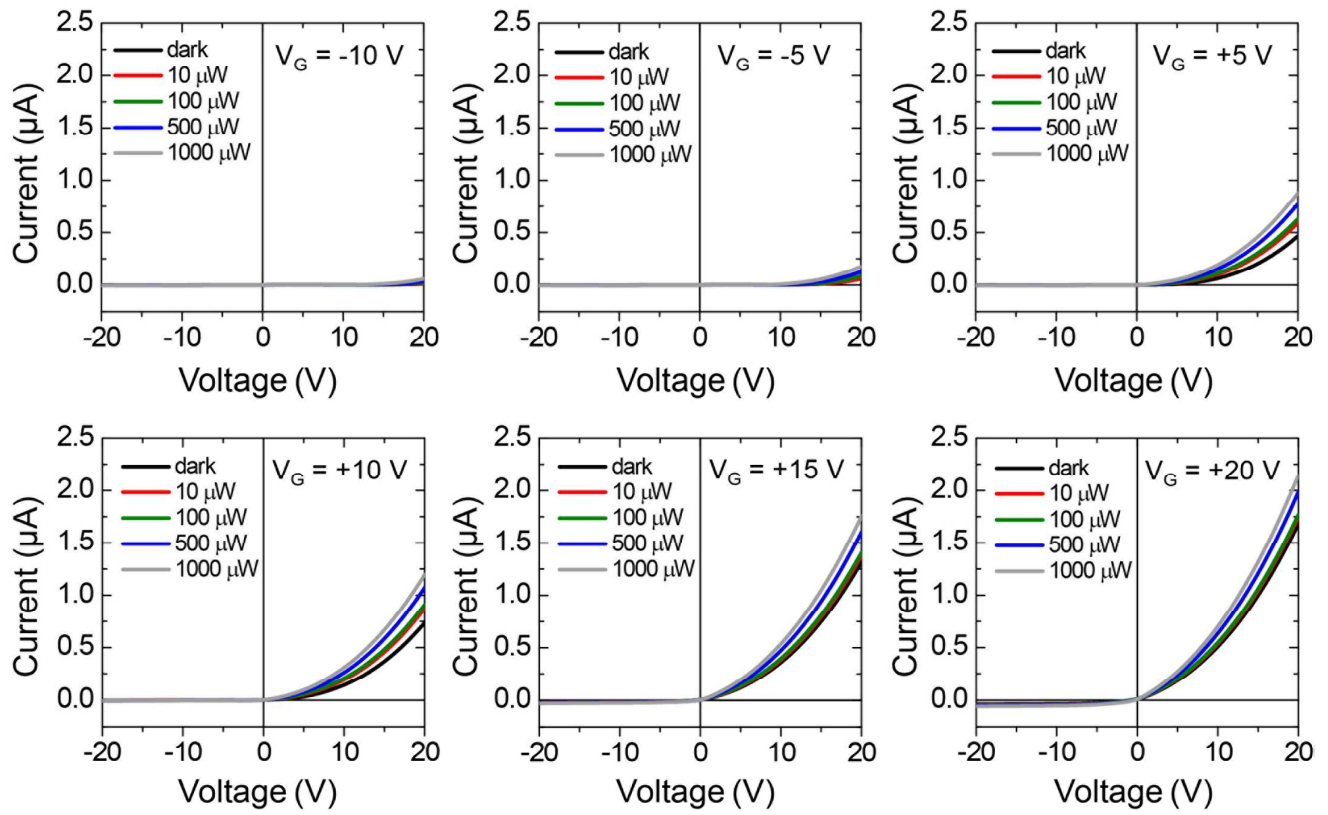


Figure S4. Illumination power-dependent current-voltage characteristics of the cross-stacked pn heterojunction diodes at various gate voltages ($V_G = -10, -5, +5, +10, +15$, and $+20$ V) under light illumination with a fixed wavelength of 650 nm.