Supporting Information

Facile Preparation of Reduced Graphene Oxide-Based Gas Barrier Films for Organic Photovoltaic Devices

Taehoon Kim, Jong Hun Kang, Seung Jae Yang, Sae Jin Sung, Yern Seung Kim and Chong Rae Park*

Carbon Nanomaterials Design Laboratory, Global Research Laboratory, Research Institute of Advanced Materials, and Department of Materials Science and Engineering, Seoul National University, Seoul 151-744, Korea



Figure S1. J-V curves of P3HT:PCBM devices treated by solvents.



Figure S2. SEM micrographs of the (a) GO(S), (b) GO(M), and (c) GO(L).



Figure S3. Relative performance of the organic photovoltaic device under an ambient condition without encapsulation.



Figure S4. XRD pattern GO(L) and GO(L, sonic) samples.



Figure S5. Images of (a) GO film on PEN substrates, (b) after dipping in NaBH₄ solution for 2 hours at 80 °C, and (c) after thermal annealing at 200 °C.



Figure S6. Quantitative analysis of various forms of C in the products, calculated from the C1s spectral deconvolution.



Figure S7. Efficiency variation of OPV devices stored at ambient air without encapsulation.