Supporting Information

Enhanced photovoltaic performance of polymer solar cells by adding fullerene end-capped polyethylene glycol

Qidong Tai^{*a,b*}, Jinhua Li^{*a*}, Zhike Liu^{*a*}, Zhenhua Sun^{*a*}, Xingzhong Zhao^{*b*}, and Feng YAN^{**a*}

^a Department of Applied Physics The Hong Kong Polytechnic University, Kowloon, Hong Kong (China) E-mail: apafyan@polyu.edu.hk

^b KeyLaboratory of Artificial Micro- and Nano-structures of Ministry of Education and School of Physics and Technology Wuhan University, Wuhan 430072 China



Figure S1. ¹HNMR (CDCl₃) spectra of PEG and PCBPEG



Figure S2. TEM images of the pure (a),(b) P3HT/PCBM blend film (c),(d) 5%PCBPEG modified film prior to thermal annealing and the (e) 5% PEG modified film annealed at 150° C for 2h.



Figure S3. TEM image of a P3HT/PCBM blend film. The high resolution image shows parallel lattice planes of a PCBM crystallite in dark region. The distance between the neighboring planes is ~ 0.45nm, which is similar to the value reported before [Y. Kim *et al. ACS Nano*, **3**, 2557-2562 (2009)].