Supporting information

Direct Photopolymerization and Lithography of Multilayer Conjugated Polymer Nanofilms for High Performance Memristors

Yuhang Yin,‡ Zhengdong Liu,‡ Mengya Song,‡ Shang Ju,‡ Xiangjing Wang,‡ Zhe Zhou,‡ Huiwu Mao,‡ Yamei Ding,‡ Juqing Liu,* and Wei Huang*abc

‡Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Nanjing Tech University (NanjingTech), 30 South Puzhu Road, Nanjing 211816, China.
*E-mail: iamjqliu@njtech.edu.cn; iamwhuang@njtech.edu.cn

b Shaanxi Institute of Flexible Electronics (SIFE), Northwestern Polytechnical University (NPU), 127 West Youyi Road, Xi'an 710072, China. Key Laboratory for Organic Electronics and Information Displays & Institute of Advanced Materials (IAM), SICAM, Nanjing University of Posts & Telecommunications, 9 Wenyuan Road, Nanjing 210023, China

c Y.H.Y. and Z.D.L. contributed equally to this work.
Scheme S1. Synthesis of CMP nanofilms.
Fig. S1 The roughness of CMP nanofilms. Scale bar: 2 μm.
Fig. S2 Synthesis of CMP nanofilms on rGO substrates. The region surrounded by a dotted white line was covered with CMP/rGO. Scale bar: 100 μm.
Fig. S3 The absorption spectra of the dichloromethane solution after washing the monomer films which were irradiated for 120 min (red line) and 150 min (blue line).
It is found that the thickness of the bilayer CMP film is 24.7 nm. Since the single layer film with a thickness of 18.3 nm, we can obtain the thickness of the second layer is 6.4 nm.
Fig. S5 The UV-vis absorption (blue line) and PL spectra (red line) of the (a) bilayer and (b) trilayer CMP nanofilms.