Supporting Information

New Donor-Acceptor Oligoimides for High Performance Nonvolatile Memory Devices

Wen-Ya Lee,[1,+] Tadanori Kurosawa,[2,+] Shiang-Tai Lin,[1] Tomoya Higashihara,[2]

Mitsuru Ueda,[2,*] and Wen-Chang Chen[1,*]

[1]Department of Chemical Engineering and Institute of Polymer Science and Engineering, National Taiwan University, Taipei 106, Taiwan,

[2]Department of Organic and Polymeric Materials, Tokyo Institute of Technology, Tokyo 152-8552, Japan,

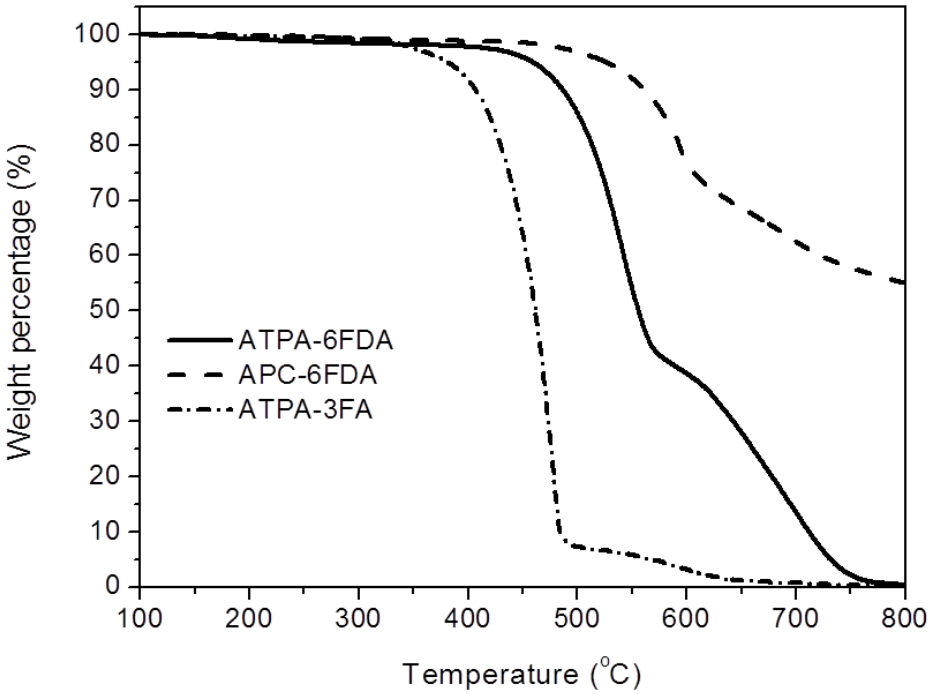
*To whom all correspondence should be addressed

Tel: 886-2-23628398, Fax:886-2-23623040

E-mail:chenwc@ntu.edu.tw, ueda.m.ad@m.titech.ac.jp

+ W. Y. Lee and T. Kurosawa equally contribute to this work.

(a)



(b)

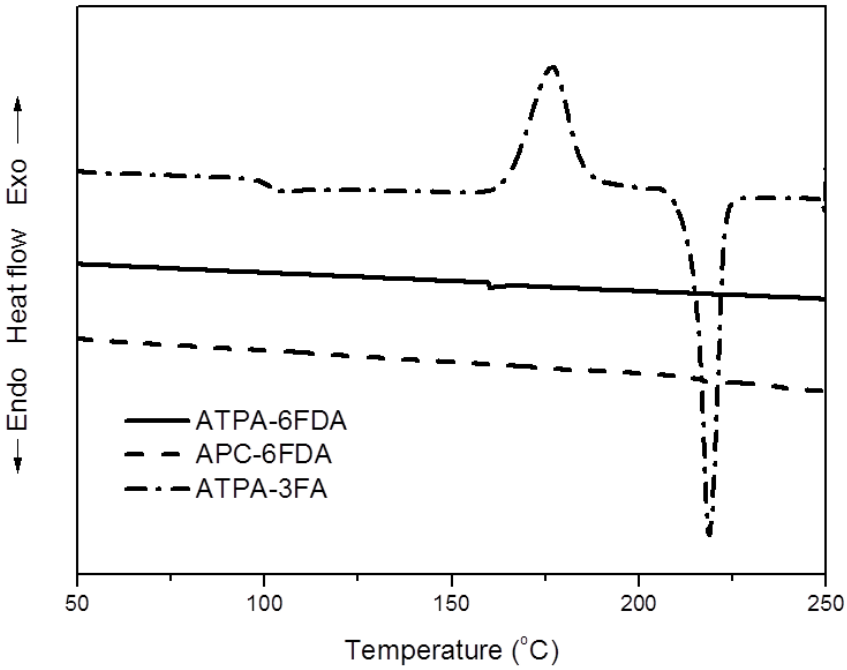


Figure S1. (a) TGA and (b) DSC thermograms of the oligoimides.

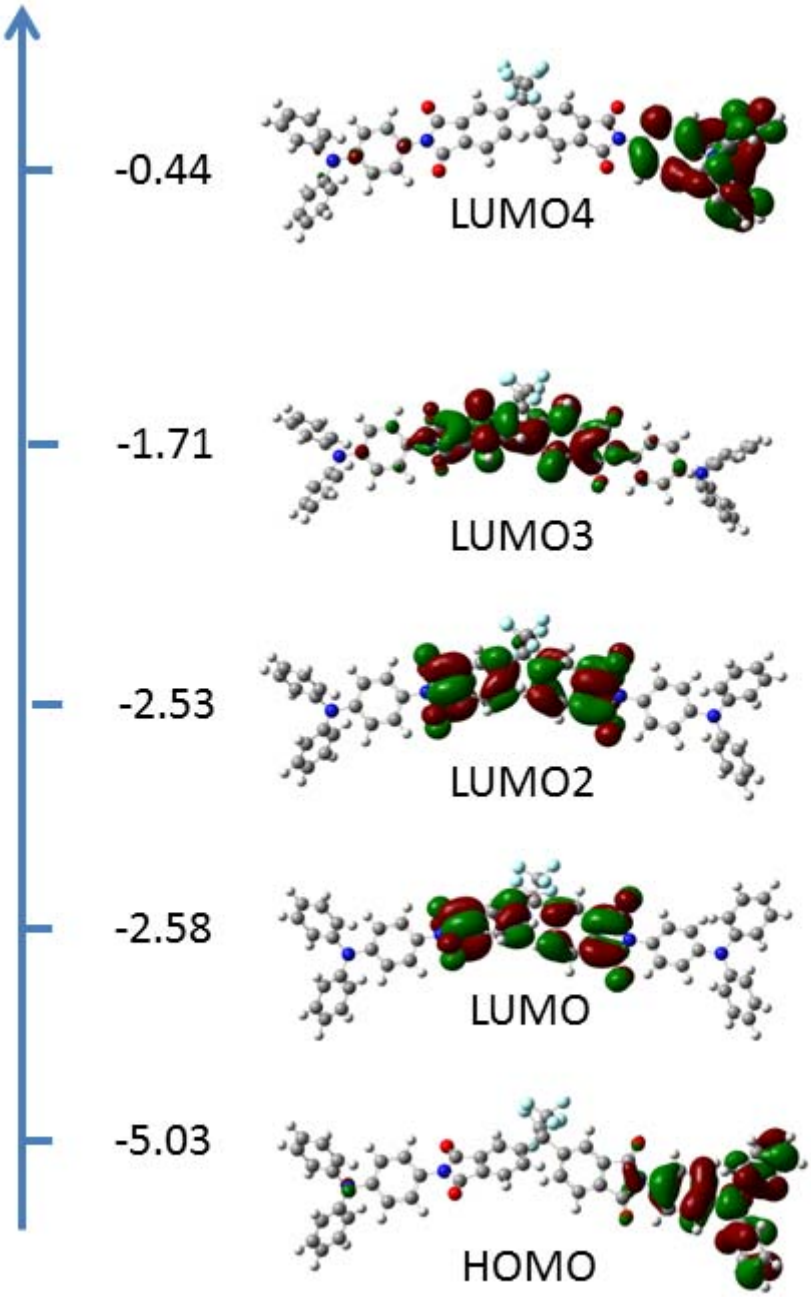


Figure S2. Molecular orbitals of the ATPA-6FDA.

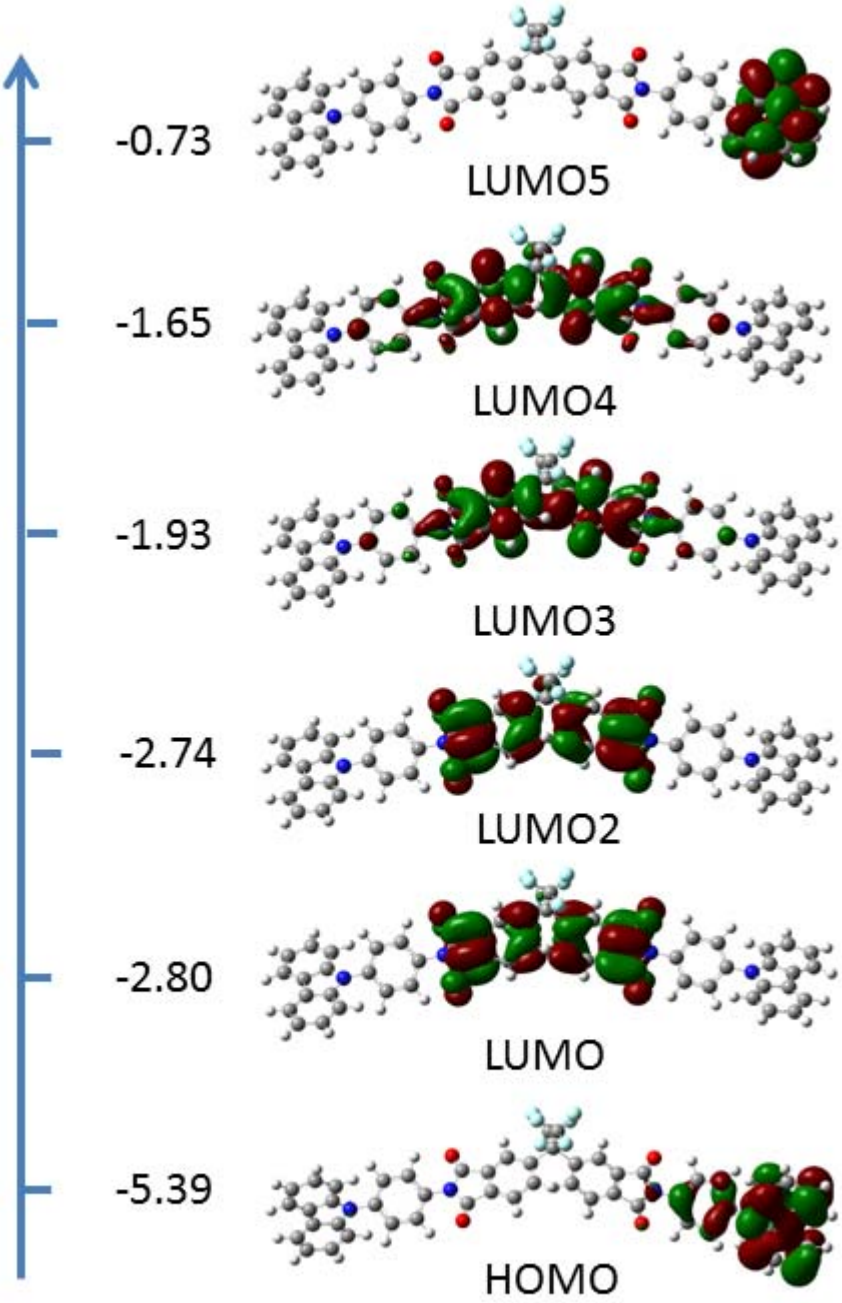


Figure S3. Molecular orbitals of the APC-6FDA.

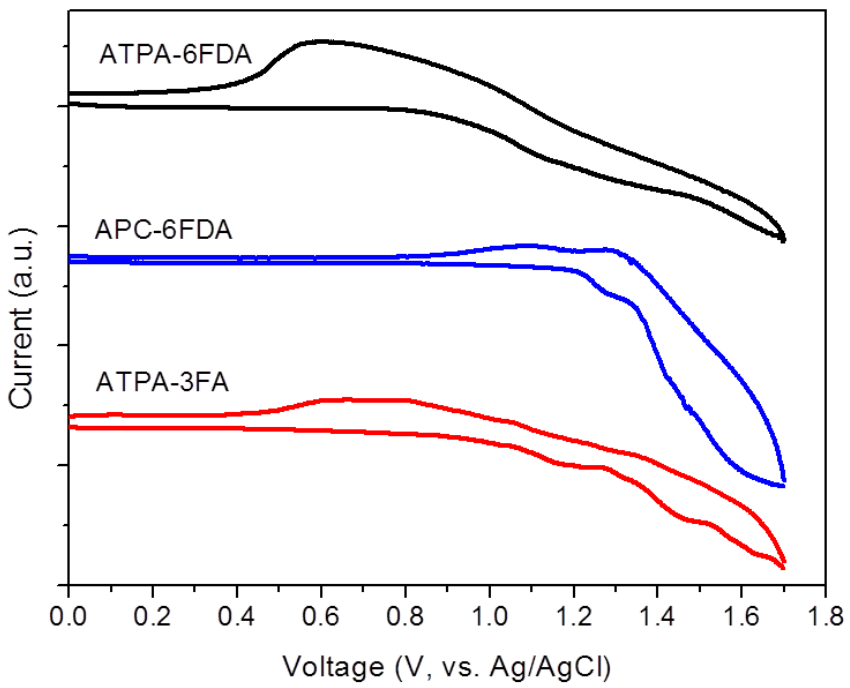


Figure S4. CV curves of the oligoimides

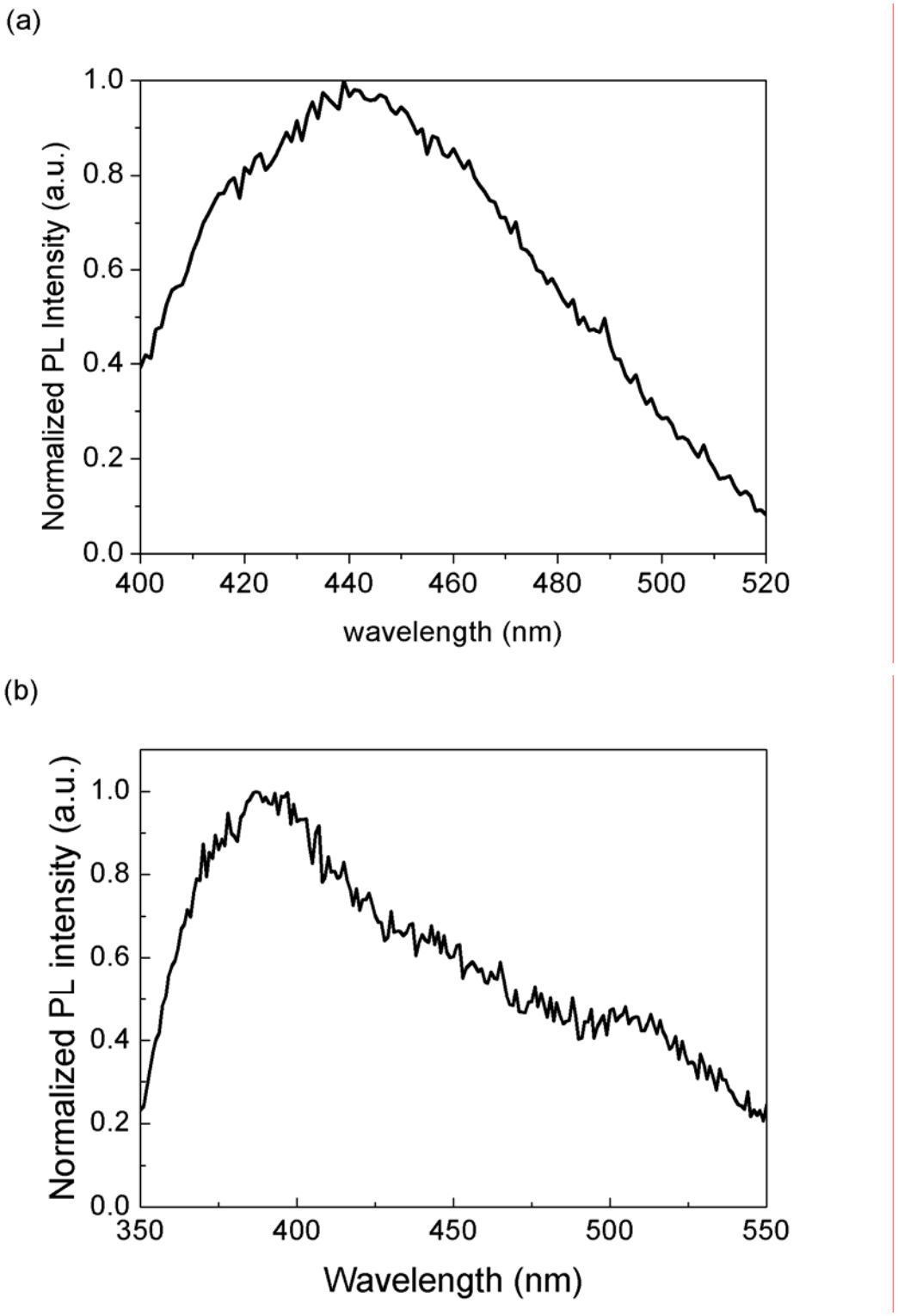


Figure S5. Photoluminescence spectra of (a) ATPA-6FDA and (b) APC-6FDA in thin films.

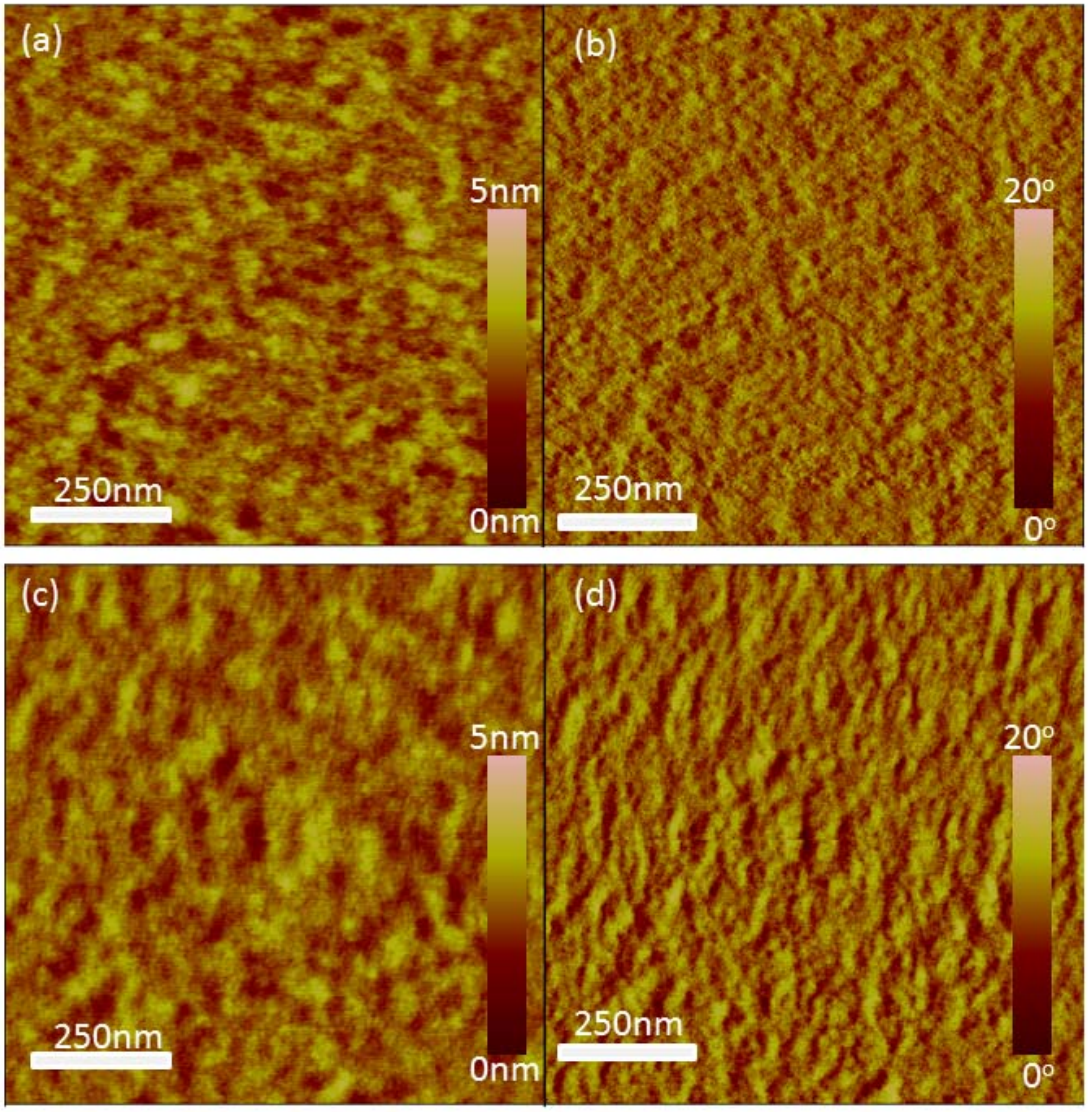


Figure S6. (a, c) AFM Height and (b, d) phase images of (a-b) ATPA-6FDA and (c-d) APC-6FDA.

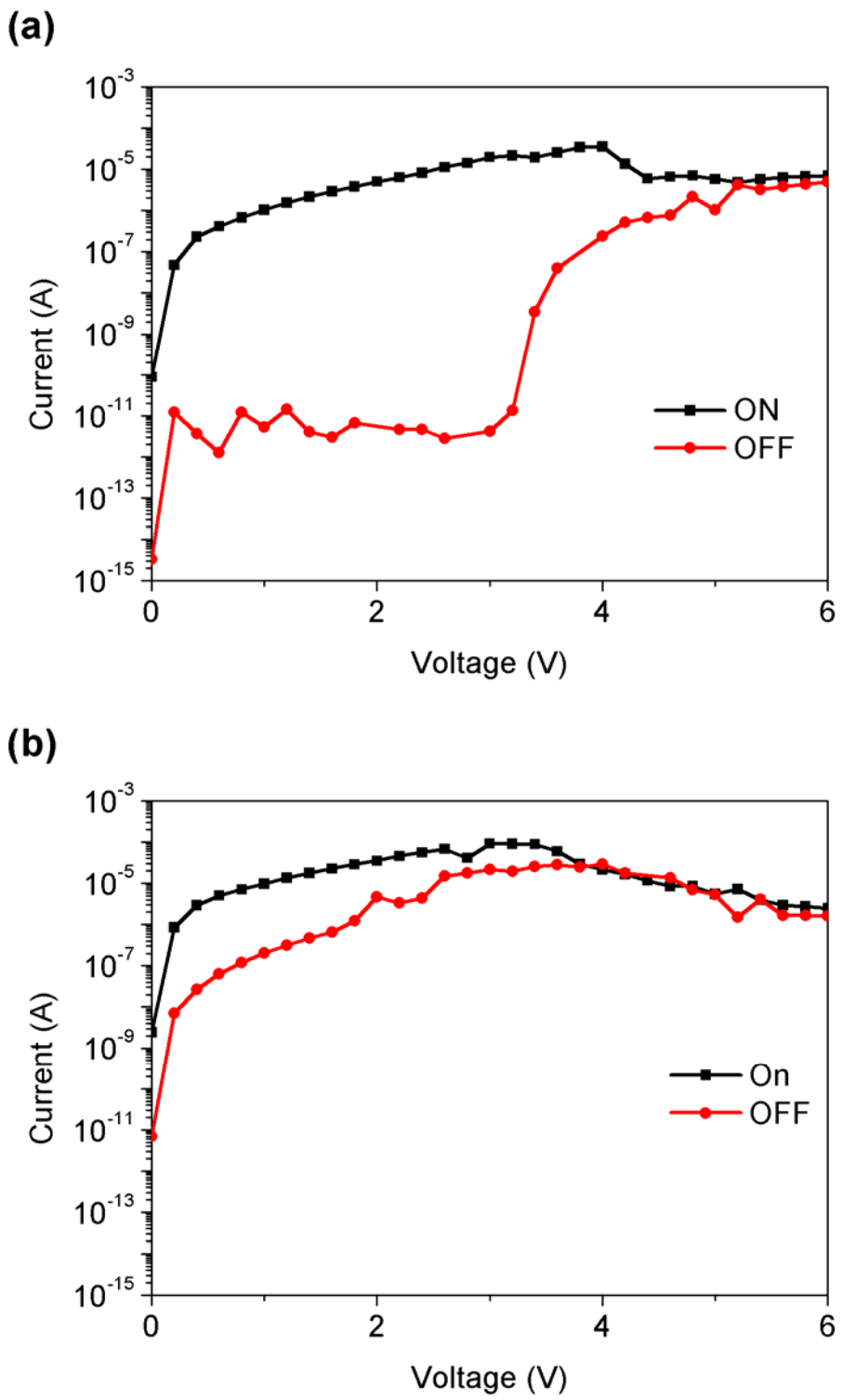


Figure S7. Electrical switching characteristics of the (a) ATPA-6FDA and (b) APC-6FDA thin films annealed at 100°C for 30 minutes.