

*Supplemental Material*  
**Low Operation Voltages Macromolecular Composite  
Memory Assisted by Graphene Nanoflakes**

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**Electrical properties of memory device fabricated with different GNFs concentrations:**

Figs. S1(a) and (b) show the electrical properties of ITO/GNFs-PVA/Ag devices containing 11.8% and 10.3% GNFs, respectively. There are no apparent rewritable characteristics for those devices, instead they exhibit a write-once-read-many-times type memory effects.<sup>s1</sup>

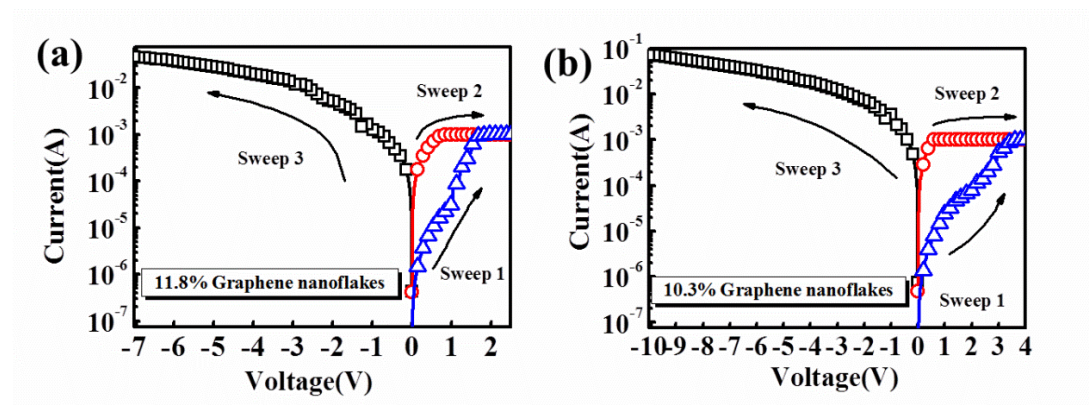


Fig. S1 Electrical properties of ITO/GNFs-PVA/Ag devices containing (a) 11.8% and (b) 10.3% GNFs.

**References**

S1. J. Liu, Z. Yin, X. Cao, F. Zhao, A. Lin, L. Xie, Q. Fan, F. Boey, H. Zhang, W. Huang, *ACS Nano* 2010, **4**, 3987-3992.