

Supporting Information

Solution Processable 2D Polymer/Graphene Oxide Heterostructure for Intrinsic Low Current Memory Device

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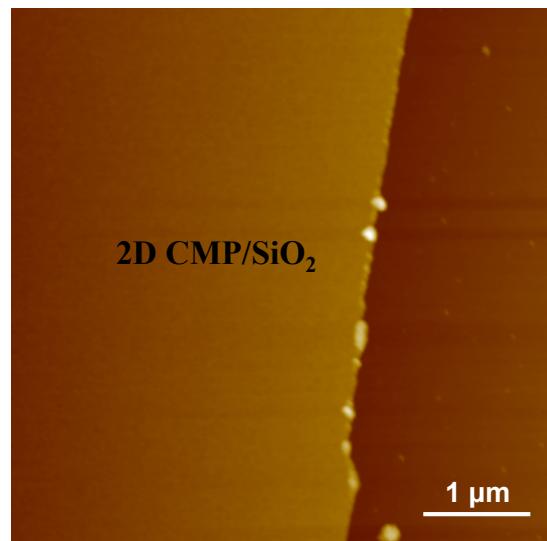


Figure S1. AFM image of 2D CMP grown on Si/SiO₂.

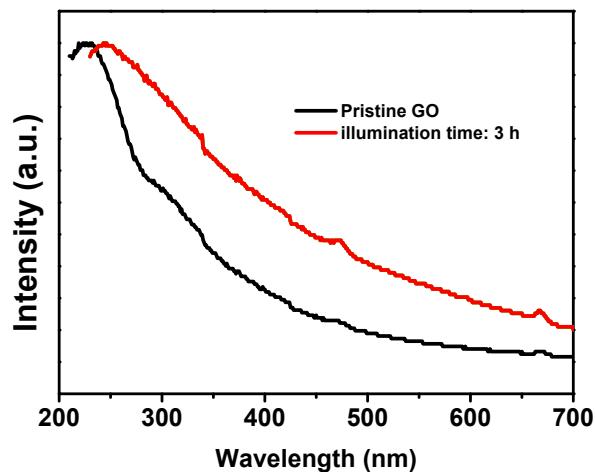


Figure S2. Normalized UV-vis absorption spectra of GO, GO illuminated for 3 hours.

Under UV illumination, the carbonyl and carboxyl groups in GO can be removed. And the sp³ hybridized carbon was transformed to the planar sp² hybridized carbon, resulting in the partial reduction of GO.

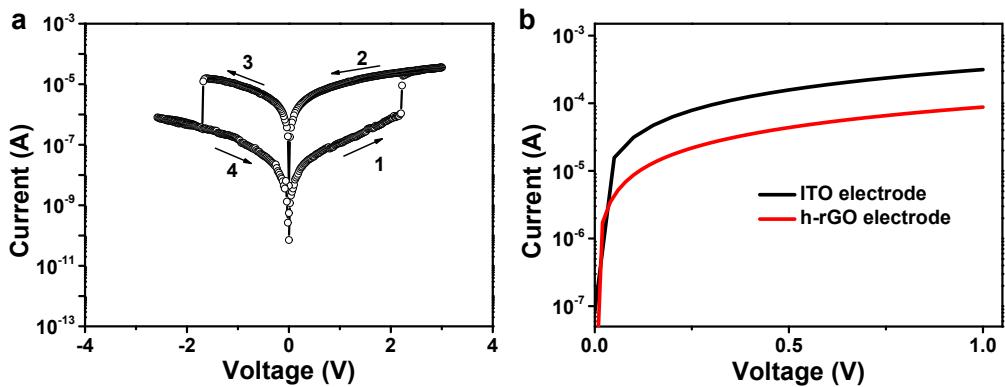


Figure S3. The current-voltage (I-V) characteristics of (a) ITO/2D CMP/p-rGO/Al, (b) The current-voltage curves of ITO electrode and h-rGO electrode.

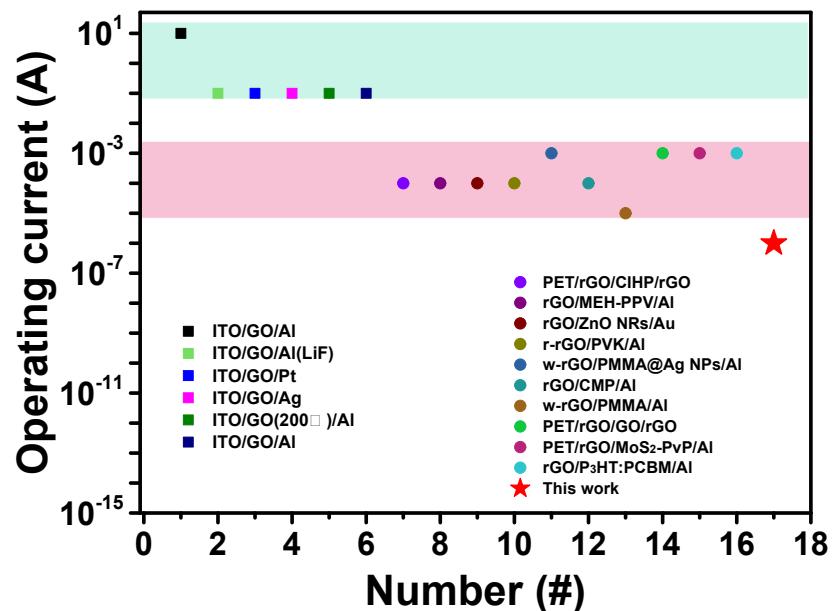


Figure S4. The comparison of operating current in previous reported memory devices and our low-current memory device, the data in previous memories were summarized from the references 1-16. It is found that the operating current of ITO-based memory devices increases an order of magnitude than h-rGO-based memory devices, indicating that h-rGO electrode facilitates to achieve low operation current.

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