Supplementary information

Graphitic Carbon Nitride Nanosheets for Solution Processed Non-volatile Memories

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Fig. S1. High-resolution XPS spectra of a) C 1s and b) N 1s of the g-C₃N₄ nanosheets sample.



Fig. S2. EDS pattern of the $g-C_3N_4$ nanosheets sample.



-3 nm

Fig. S3. The AFM image of the active layer.



Fig. S4. I-V curve of pristine PMMA based RRAM device.



Fig. S5. a) The I-V curves of a single cell memory device. b) The distribution of the SET/RESET voltage of a single cell device.



Fig. S6. The I-V curves of the g-C₃N₄ based RRAM devices stored different days.



Fig. S7 KPFM images of the pristine PMMA film (a) Before the tip bias (initial state). (b) After a -6V tip bias in contact mode. (c) After a +6V tip bias in contact mode. (The scanning area of contact mode is $5 \mu m * 5 \mu m$)