Supporting Information

Nonvolatile Memory Device Using Gold Nanoparticles Covalently Bound to Reduced Graphene Oxide

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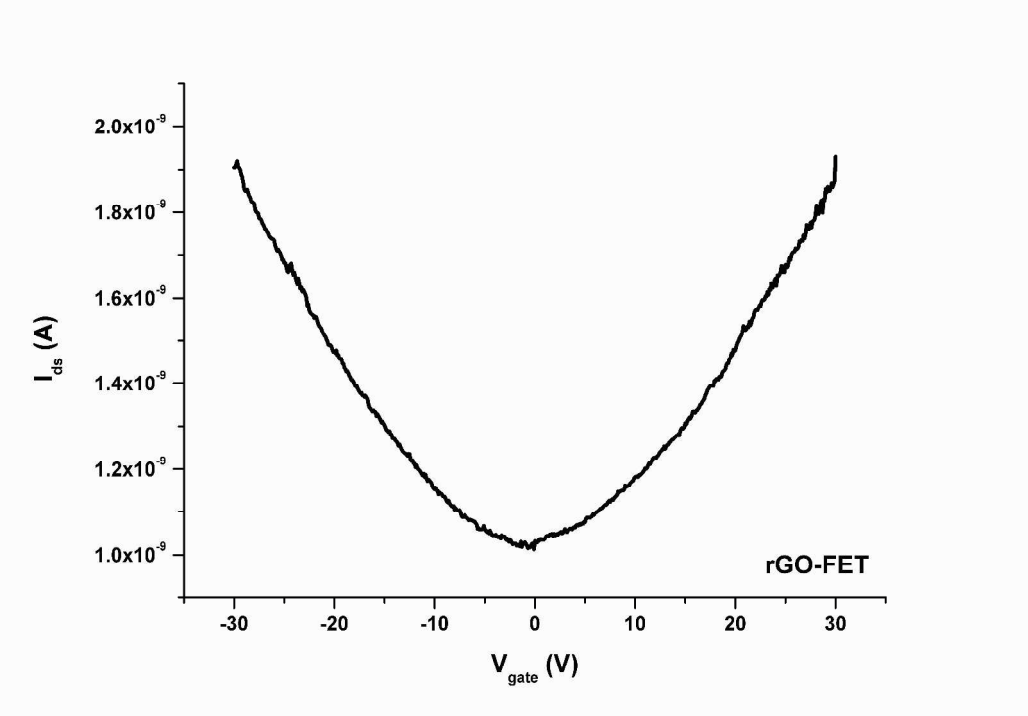


Figure S1. I-V characteristics of the bare rGO-FET device.

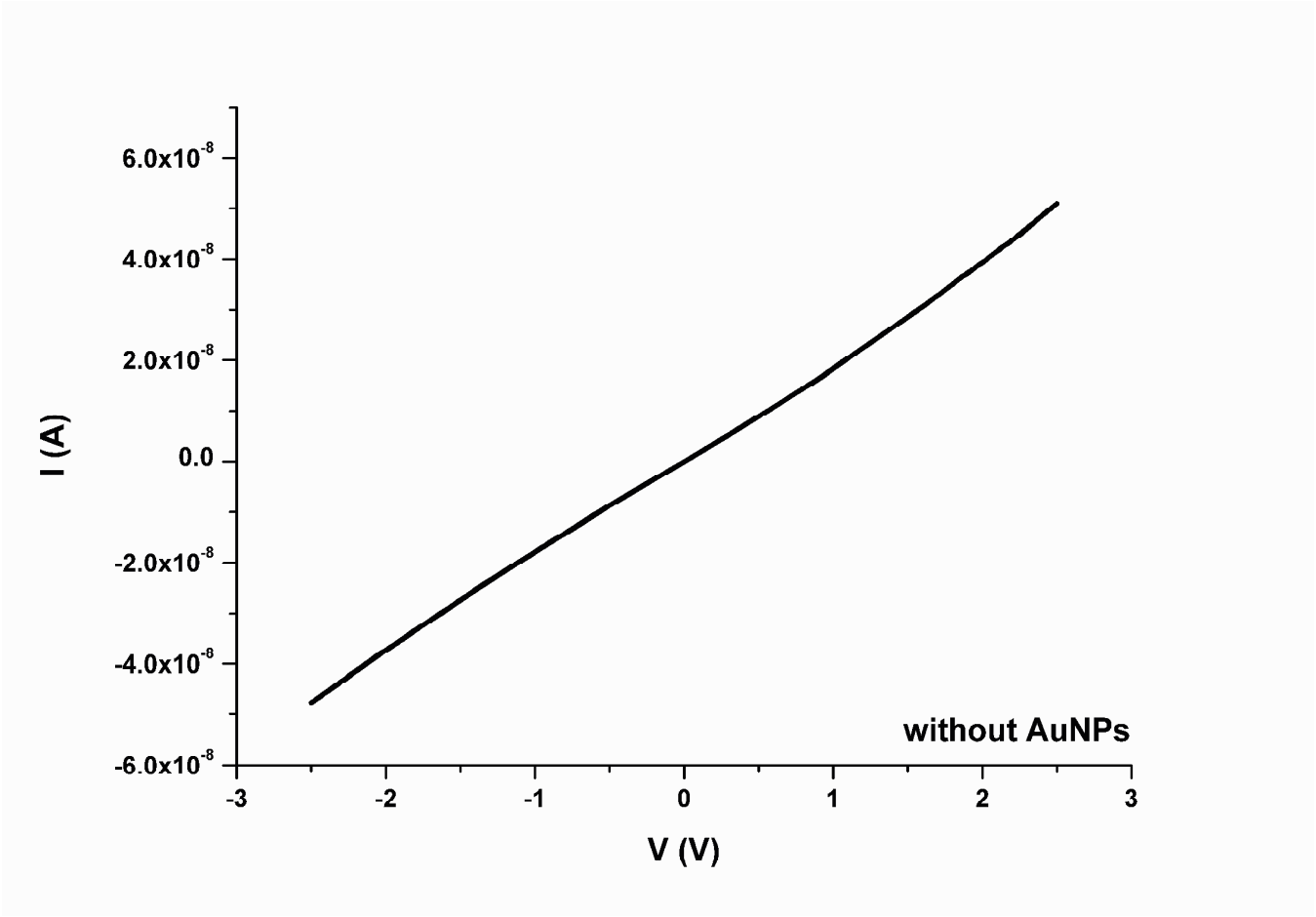


Figure S2. I-V characteristics of the frGO device.

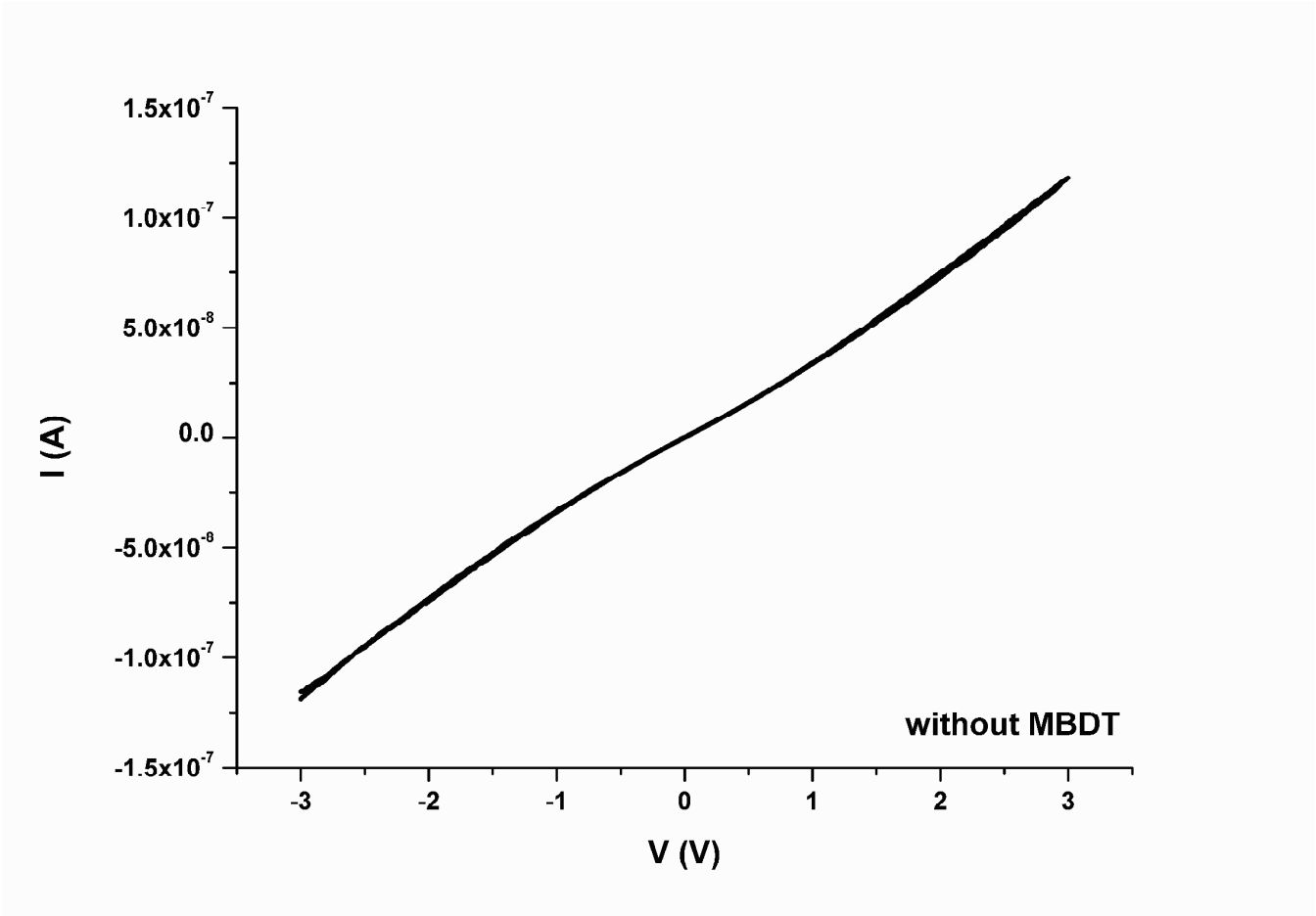
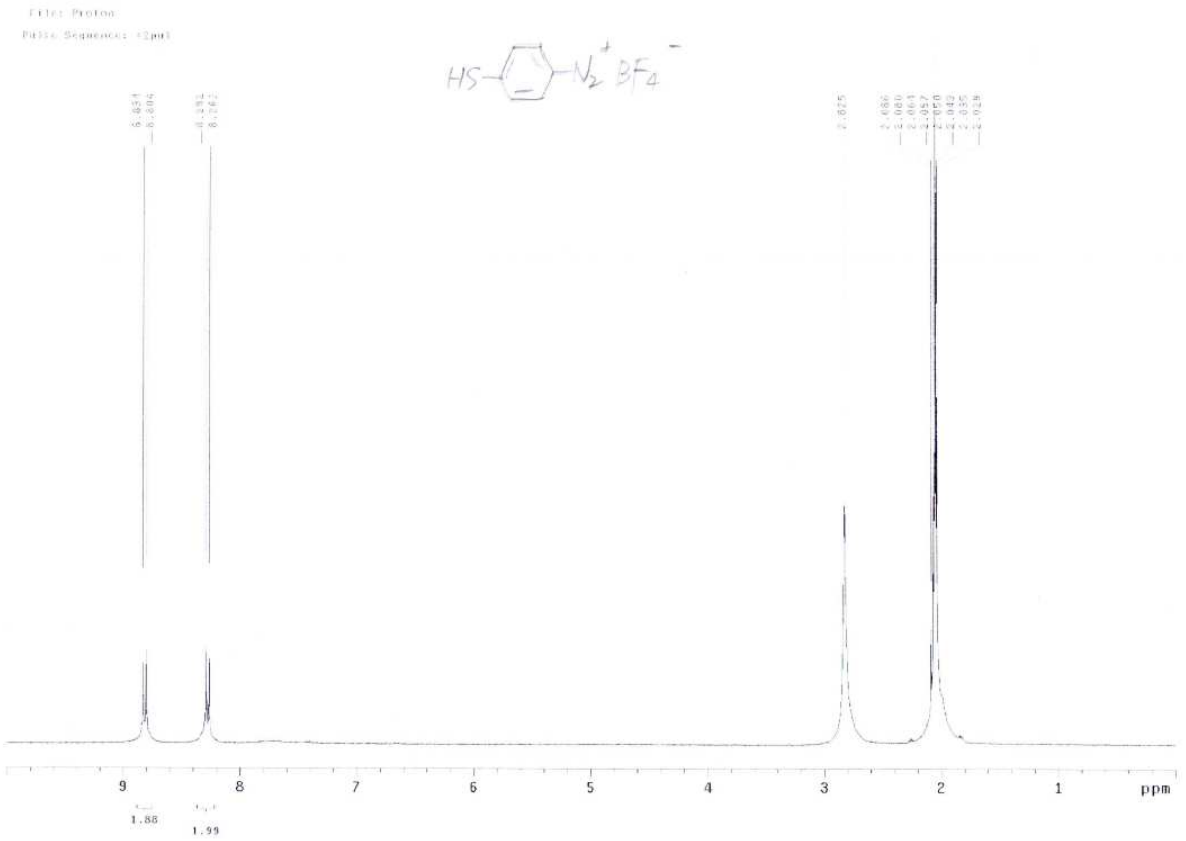
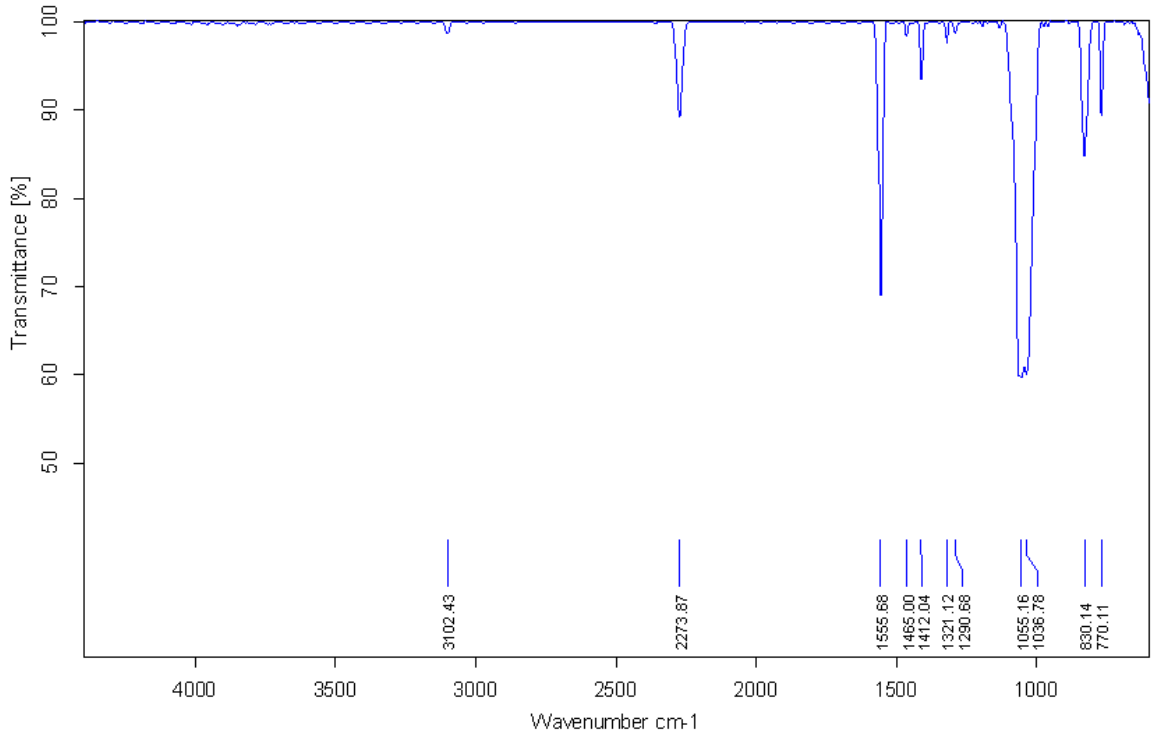


Figure S3. I-V characteristics of the AuNP-rGO device as a control experiment.



Supporting NMR data. ^{1}H-NMR spectra of 4-Mercapto-benzenediazonium tetra-fluoroborate salt (MBDT). ^{1}H NMR (300MHz, Acetone-d_6): δ=8.262-8.292 (m, 2H), 8.804-8.834 (m, 2H). ^{1}H-NMR spectra was obtained on a Varian 300-MR spectrometer.



Supporting FT-IR data. FT-IR spectrum of MBDT; FT-IR (powder) wave number (cm^{-1}): 770, 830, 1036, 1055, 1290, 1321, 1412, 1465, 1555, 2273, 3102. The peak at 2273.67 cm^{-1} is the diazonium functional group.