Supporting Information

A flexible VOCs sensor based on 3D Mxene framework with high sensing performance

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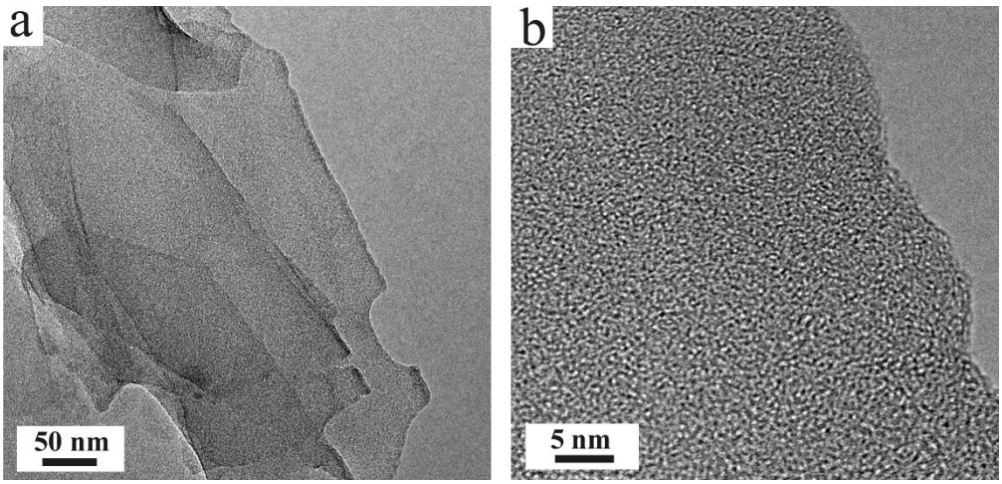

Figure S1. TEM images of Mxene sheets.

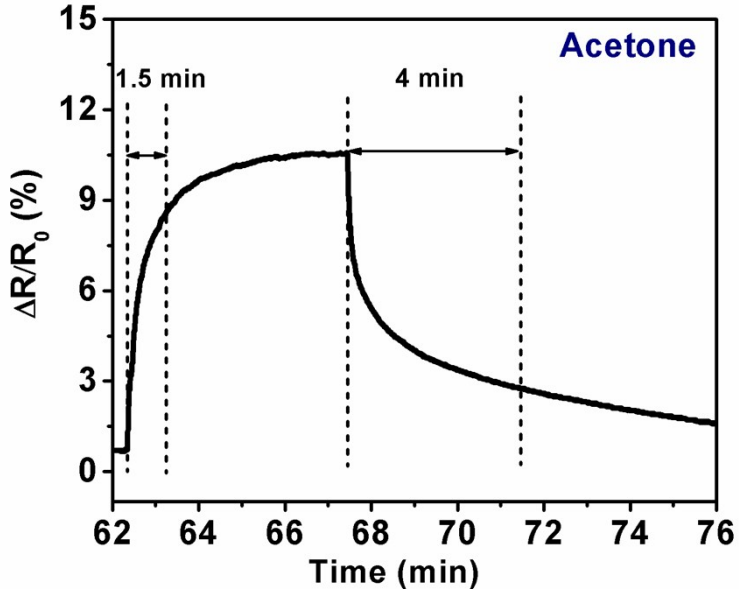

Figure S2. Analysis of the response and recovery time at saturated acetone vapor.

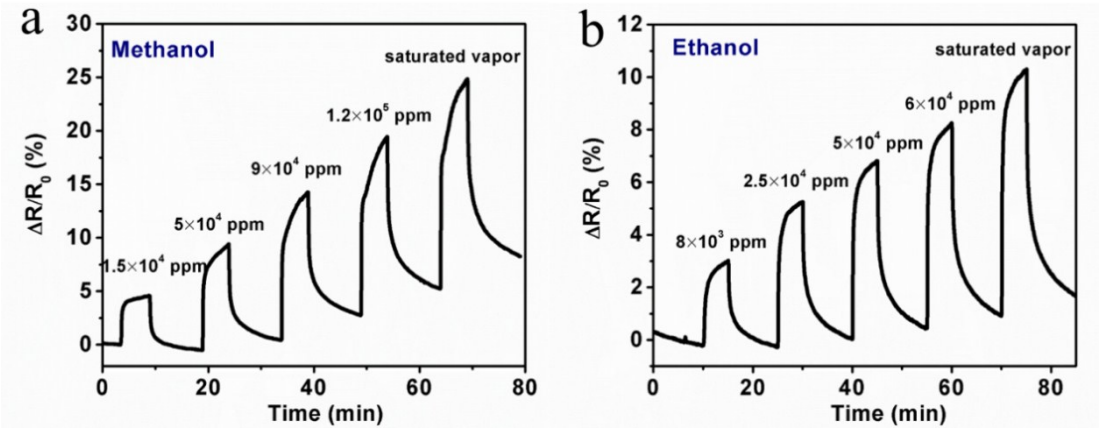

Figure S3. Plot of responses versus time for a 3D-M sensor upon exposure to (a) methanol and (b) ethanol with high concentrations up to saturated vapor steam.

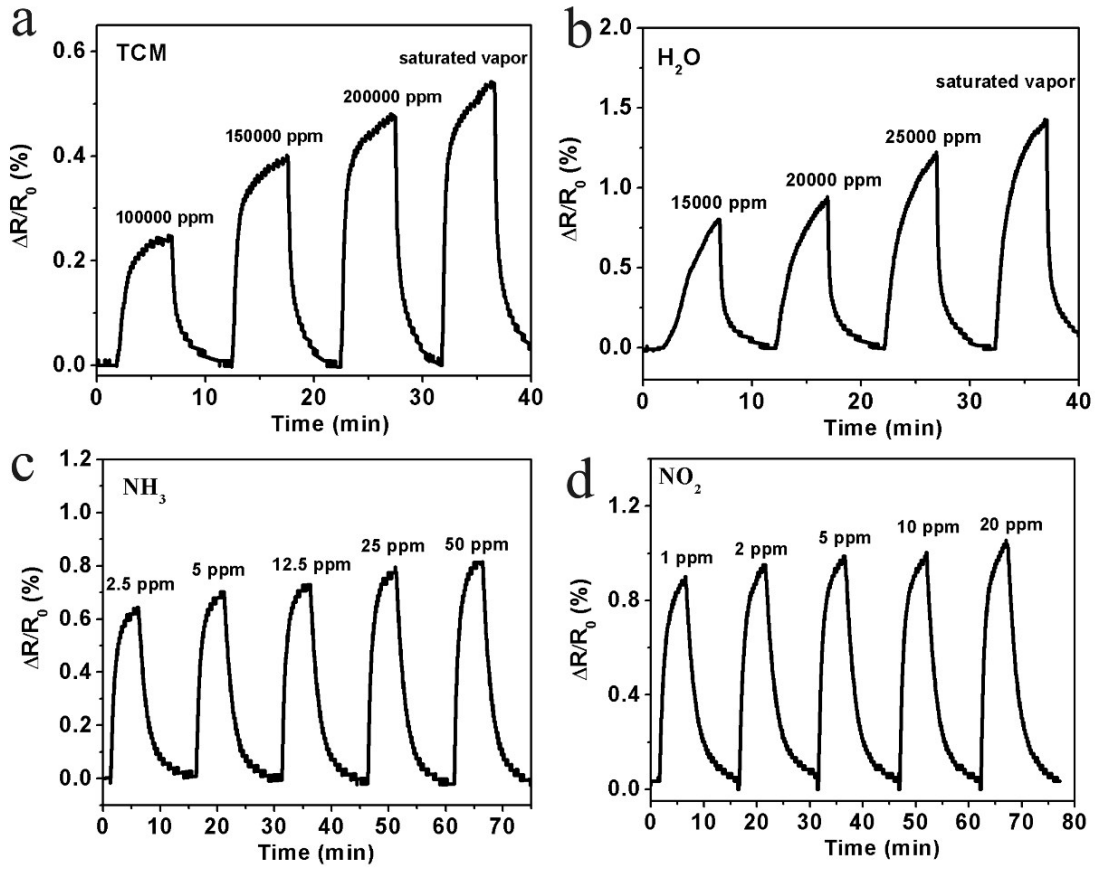

Figure S4. Sensing responses of 3D-M sensor upon exposure to (a) TCM and (b) H_2O at higher concentrations up to saturated vapor; Sensing responses of 3D-M sensor upon exposure to (c) NH_3 and (d) NO_2 at high concentrations untile the responses approxamated saturation.

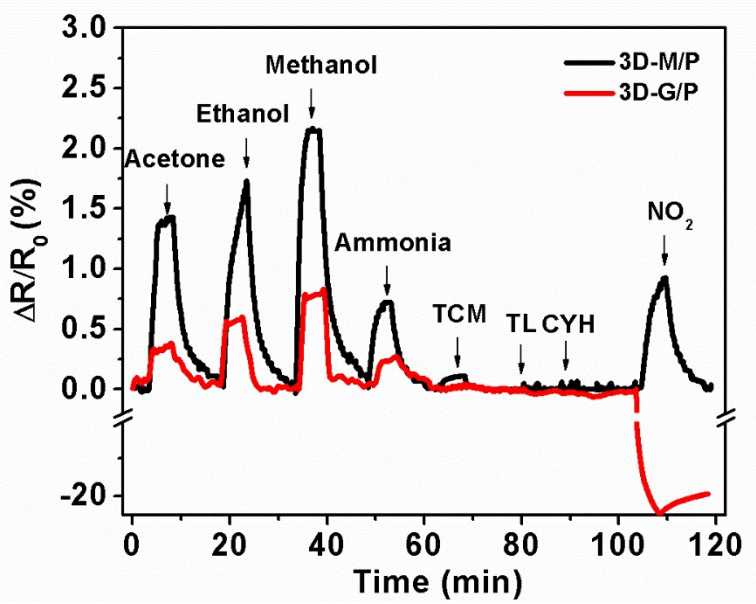

Figure S5. Comparison of the sensing responses of the 3D-M and 3D-G sensor upon exposure to different organic and inorganic gases (acetone, ethanol, methanol, ammonia and NO_2: 10 ppm; TCM, TL, CYH: 10000 ppm)

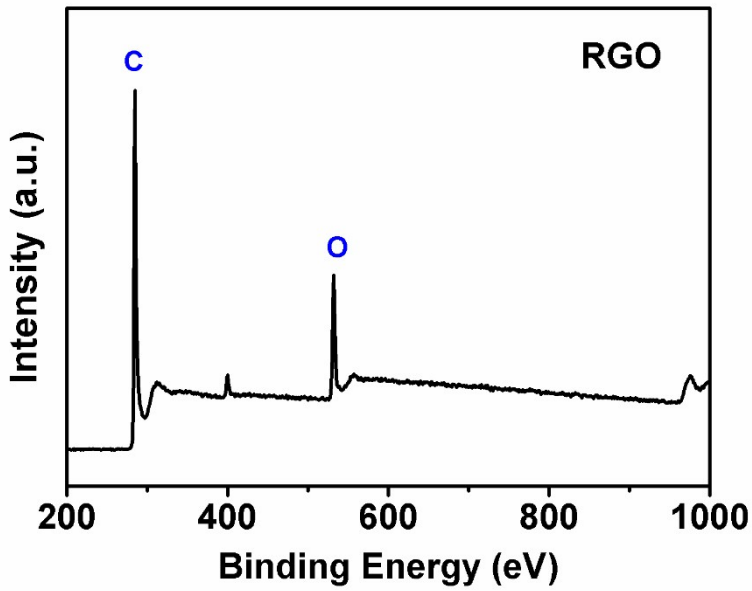

Figure S6. XPS spectrum of the RGO film.