

Supporting Information

NH₃ Sensor Based on ZIF-8/CNT Operating at Room Temperature with Immunity to Humidity

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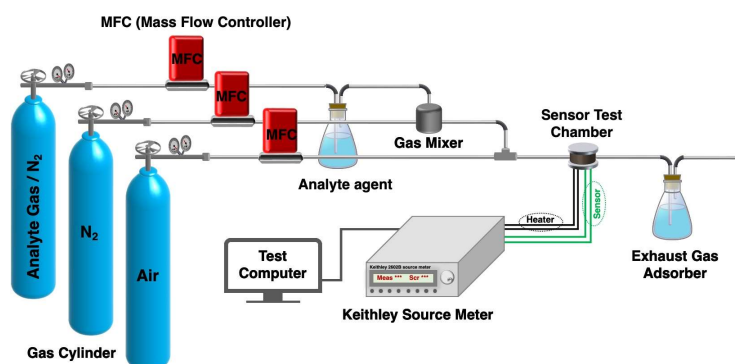


Figure S1. Schematic view of gas-sensing setup. Inset shows the sensor device diagram.

The gas-sensing tests were performed using a self-made setup (Figure S1). The sensor device was placed in a gas flow chamber ($\sim 3 \text{ cm}^3$ volume). Separate cylinders containing ammonia gas ($10 \times 10^{-3} \text{ mol/mol}$), N₂ gas (99.999%) and pure air (99.999%) were connected to individual mass flow controllers (MFCs, Horiba) to mix and deliver the gas pulse with precise concentrations. The total flow rate of both target gases at various concentrations diluted by N₂ gas and purge air was 100 sccm. Response signals of sensor device were measured and collected by Keithley 2602B source-meter when exposed to a sequence of pulses of target gases and purging cycles of pure air. For all measurements, the ambient temperature was kept at around 25 °C, and the sensor current was measured at 5 V.

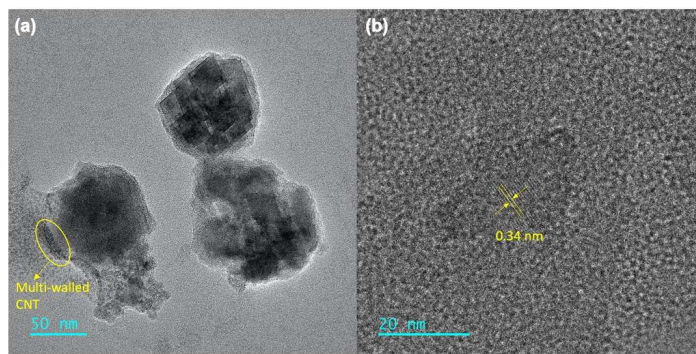


Figure S2. TEM images of ZIF-8/CNT.