Supporting Information

CuO Nanostructures as Quartz Crystal Microbalance Sensing Layers for Detection of Trace Hydrogen Cyanide Gas

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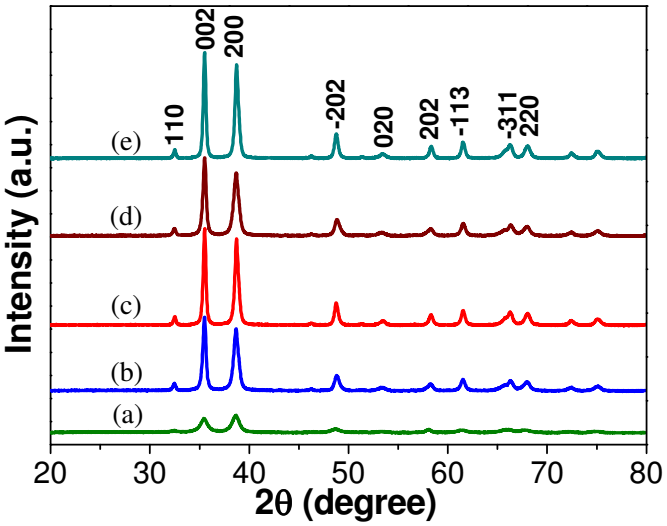

Figure S1. XRD patterns of CuO products: (a) commercial CuO, (b) flower-like CuO, (c) boat-like CuO, (d) ellipsoid-like CuO, (e) plate-like CuO.

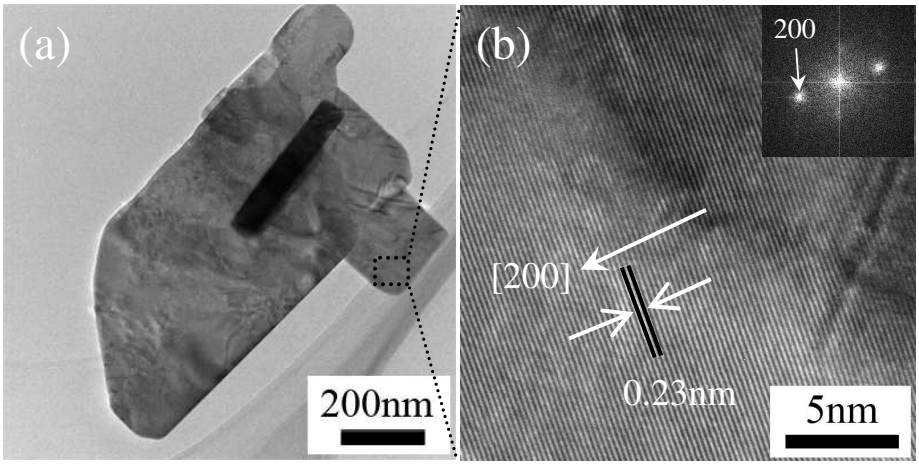

Figure S2. TEM (a), HRTEM (b) images and fast Fourier transform (FFT) pattern (inset) of the HRTEM image of plate-like CuO.

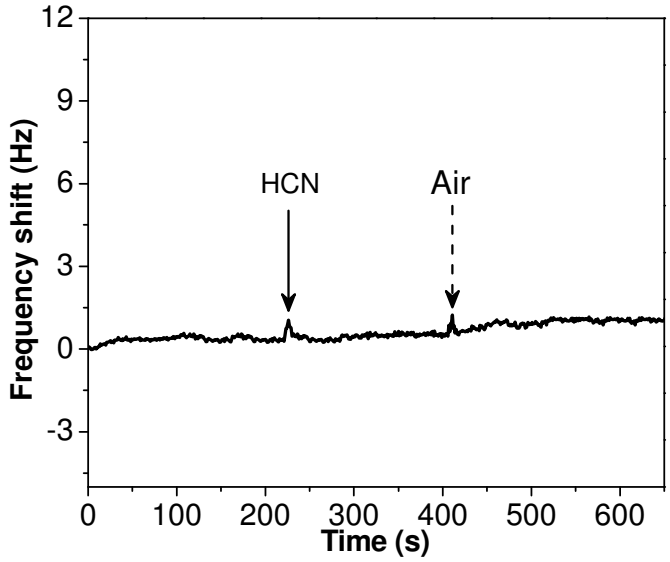

Figure S3. Profile of frequency shift of naked silver-coated QCM resonator upon exposure to air containing 50 ppm HCN at 25 ^{o}C.

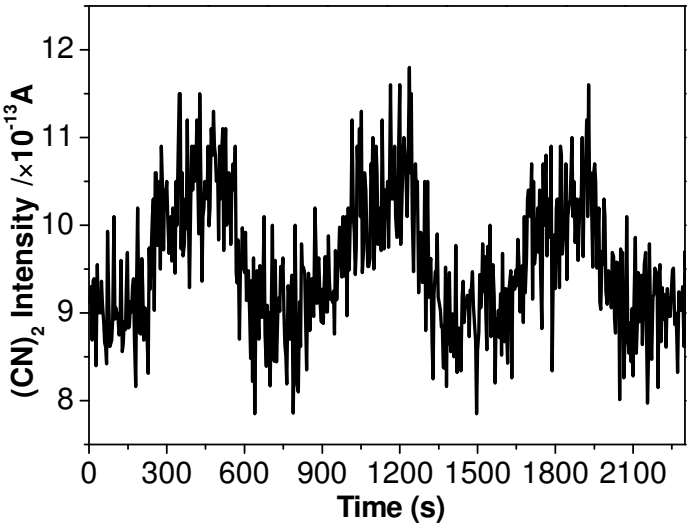

Figure S4. Time-dependence of $(CN)_2$ ion intensity in three continuous cycles.

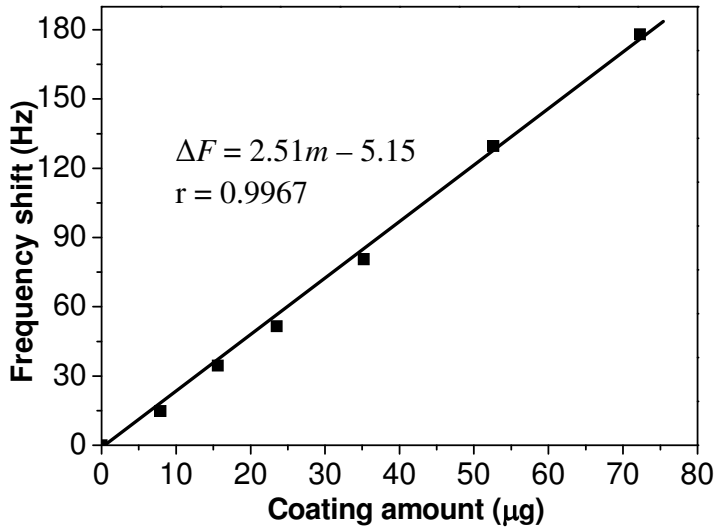

Figure S5. Linear relationship between response and coating amount. The plate-like CuO functionalized QCM resonator was tested at 25 °C, and the HCN concentration was 50 ppm.

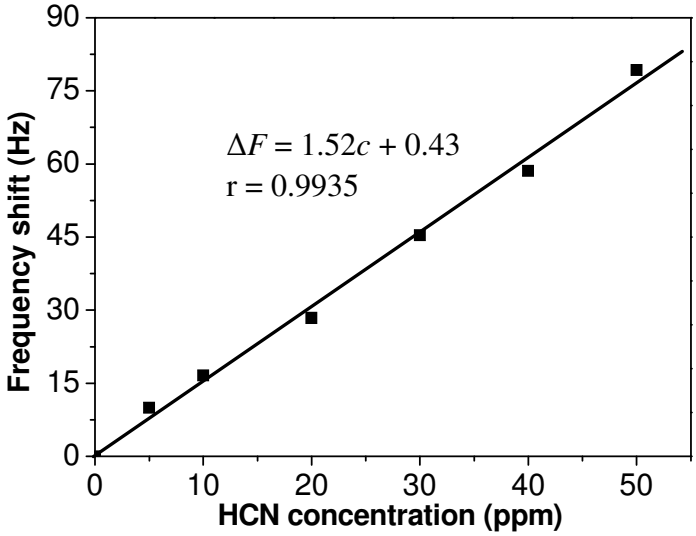

Figure S6. Linear relationship between response and HCN concentration. The plate-like CuO functionalized QCM resonator was tested at 25 °C, and the coating amount was 35 μg.