

Supplementary Information

Figure S1. Schematic setup of the gas-sensing measurement.

Figure S2. XRD pattern of Cu₂O nanocubes.

Figure S3. A) FESEM image of Cu₂O nanocubes. Inset: high magnification image of two Cu₂O nanocubes. B) TEM image of Cu₂O nanocubes. Inset: the SAED of one cubic Cu₂O. Scale bar: 400 nm.

Figure S4. PL spectra of the obtained Cu₇S₄ nanoboxes with A) single wall, and B) double walls with exciting wavelength of 370 nm.

Figure S5. Room temperature time profiles of PL intensity of sensor based on double-walled Cu₇S₄ nanoboxes to NH₃ for 20 cycles.

Figure S6. Time profiles of PL intensity of sensors based on A) single-walled and B) double-walled Cu₇S₄ nanoboxes to water vapor at room temperature.

Figure S1

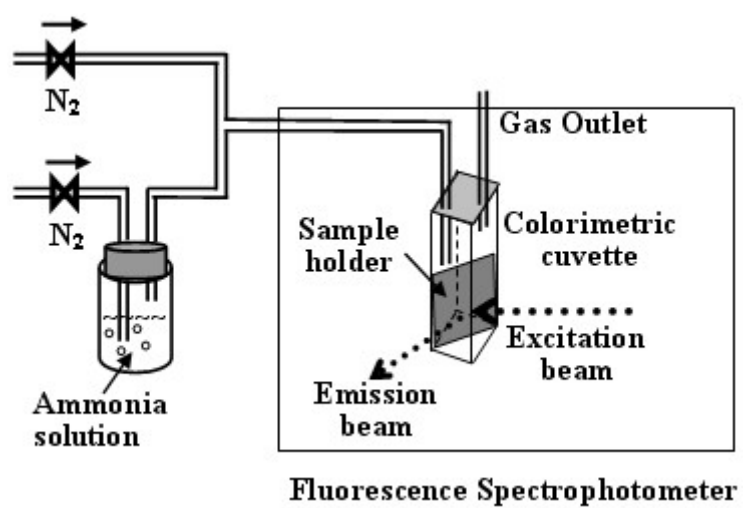


Figure S2

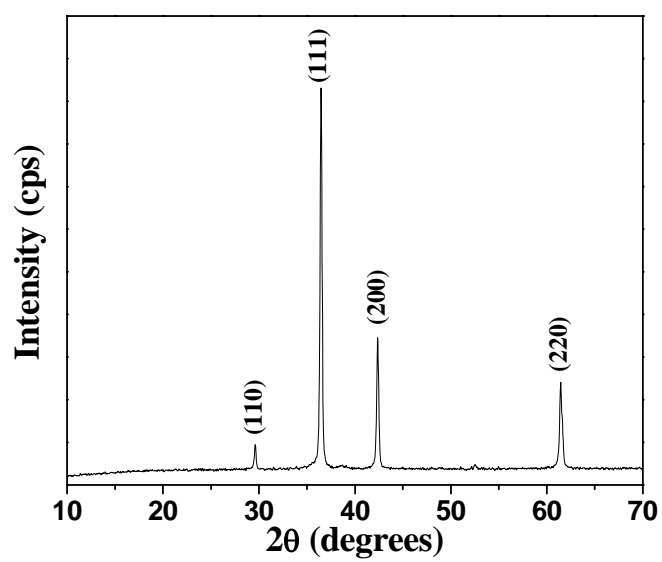


Figure S3

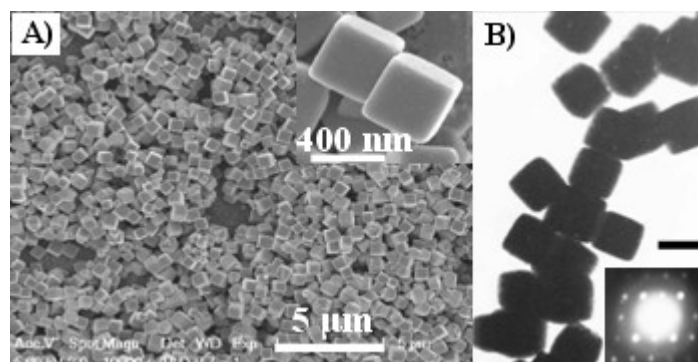


Figure S4

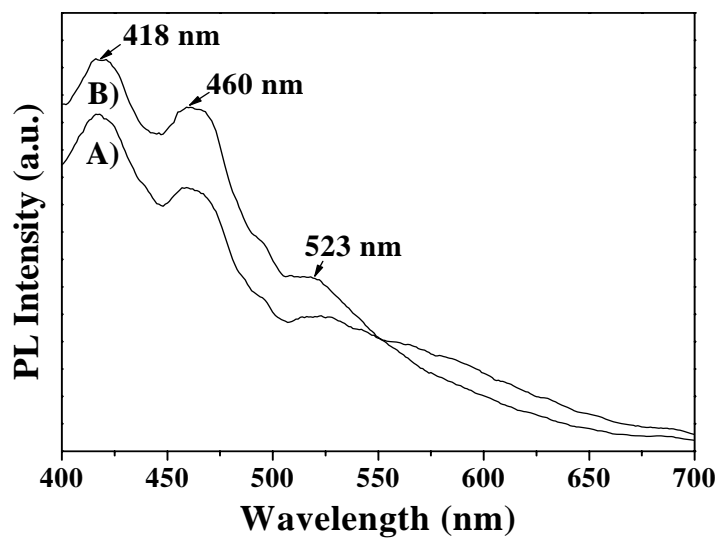


Figure S5

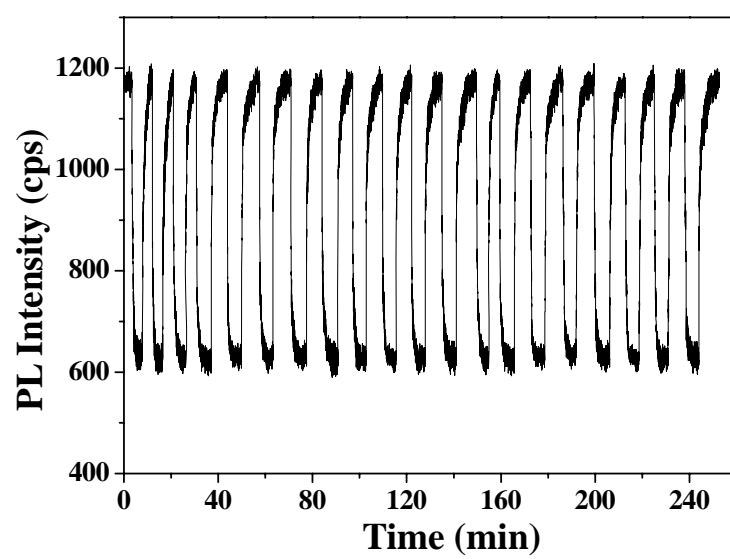


Figure S6

