Supporting Information for

Enhanced gas sensor based on SiO$_2$@mesoporous MCM-41 core-shell nanocomposites for SO$_2$ visual detection

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Figure S1. The SiO$_2$@MCM-41 sensing system for SO$_2$ gas detection.
Figure S2. The standard working curve of sulfate ion for the chromatographic peak area.

The standard working curve equation of sulfate ion is $y = 0.0324x + 2.2662$, $R^2 = 0.9923$, and the linear range of the equation is 50-1000 mg/L.
Figure S3. Photo image of the homemade sensing system of SO$_2$ GDT.
**Figure S4.** (a) N$_2$ adsorption-desorption isotherm (77 K) and (b) pore size distribution profile of SiO$_2$@MCM-41.