New Journal of Chemistry

Title: Low temperature operating gas sensor with high response to NO_2 based on ordered mesoporous Ni-doped In_2O_3

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Supporting Information

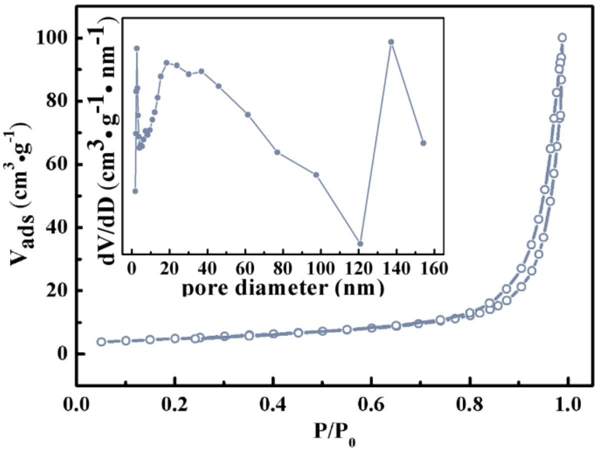

Figure S1. Nitrogen adsorption–desorption isotherms and corresponding pore size distribution(inset) of Ni-doped In_2O_3 without SBA-15

The Ni-doped In_2O_3 without SBA-15 had been synthesized in the same condition with ordered mesoporous Ni-doped In_2O_3 mentioned in the paper. The nitrogen adsorption–desorption isotherms and the corresponding pore size distribution of the Ni-doped In_2O_3 prepared without the template SBA-15 were shown in Fig.S1. The pore size distribution of Ni-doped In_2O_3 without SBA-15 was not single as that of mesoporous ordered In_2O_3. The surface area of Ni-doped In_2O_3 without SBA-15 is 17.1 m^2/g, which is much smaller than that of mesoporous Ni-doped In_2O_3 (58.5 m^2/g) and mesoporous In_2O_3 (50.3 m^2/g). It meant the materials synthesized by nanocasting method with SBA-15 as template had higher surface area.

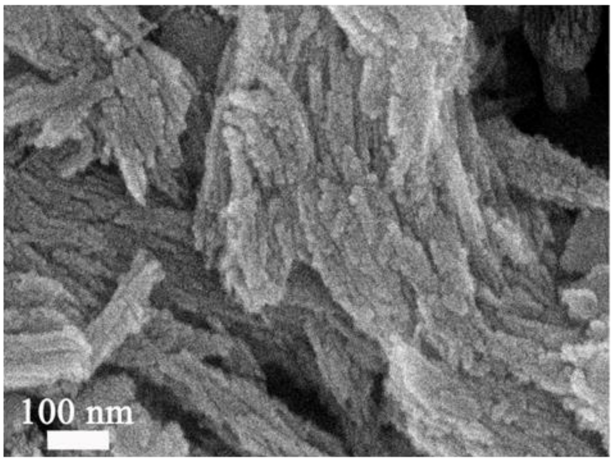

Figure S2. The SEM image of mesoporous Ni-doped In_2O_3

The morphology of mesoporous Ni-doped In_2O_3 was characterized by SEM. It could be seen that mesoporous Ni-doped In_2O_3 consisted of fiber-like aggregates, which was similar to the typical morphology of SBA-15.