

Supporting Information:

One-pot Synthesis of Uniform Mesoporous Rhodium Oxide / Alumina Hybrid as High Sensitivity and Low Power Consumption Methane Catalytic Combustion Sensor

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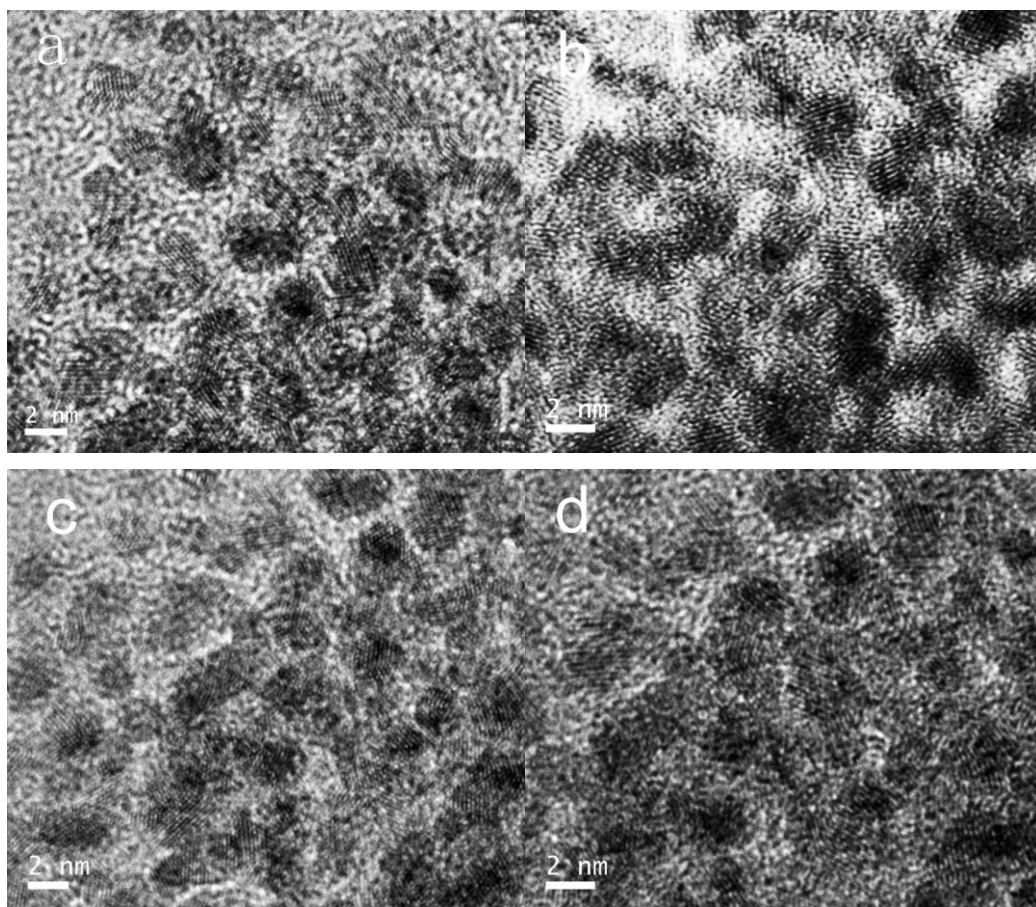


Fig. 1 HRTEM images of the hybrids with different Rh/Al mole ratios: a: Rh/Al=1/1, b: Rh:Al=2/1, c: Rh/Al=4:1, d: Rh/Al=8:1

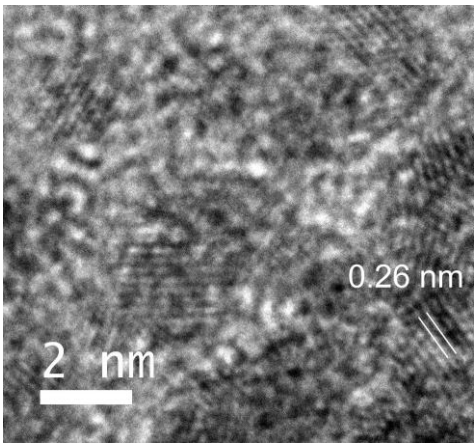


Fig. 2 A selected area of HRTEM image with the measured interplanar distance

Table 1. Pore volumes of Rh₂O₃/Al₂O₃ hybrids

Mole ratio of Rh/Al	1:1	2:1	4:1	8:1
Pore volume (cm ³ /g)	0.28	0.19	0.16	0.06

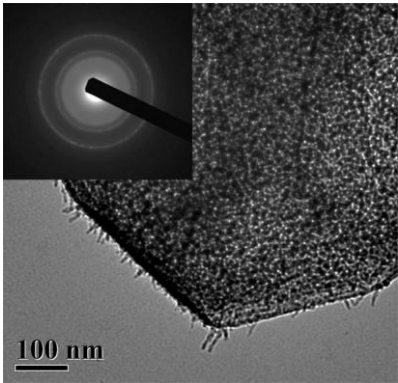


Figure 3. TEM image of pure mesoporous alumina

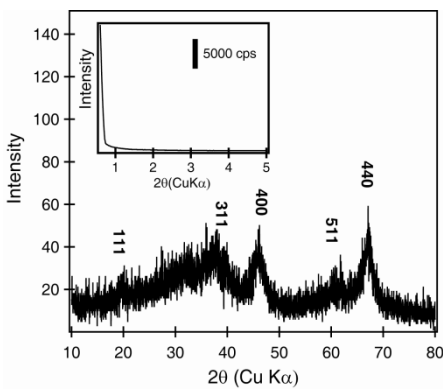


Figure 4. Wide and small (inset) angle XRD patterns of mesoporous γ -alumina

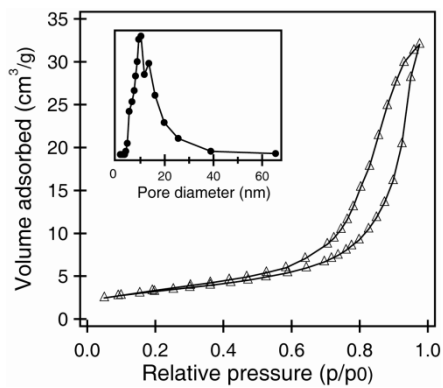


Figure 5. N_2 adsorption-desorption isotherms and the corresponding pore size distribution of mesoporous γ -alumina (surface area: 200 m^2/g)