Supplementary material (ESI) for Journal of Materials Chemistry

Electronic Supplementary Information

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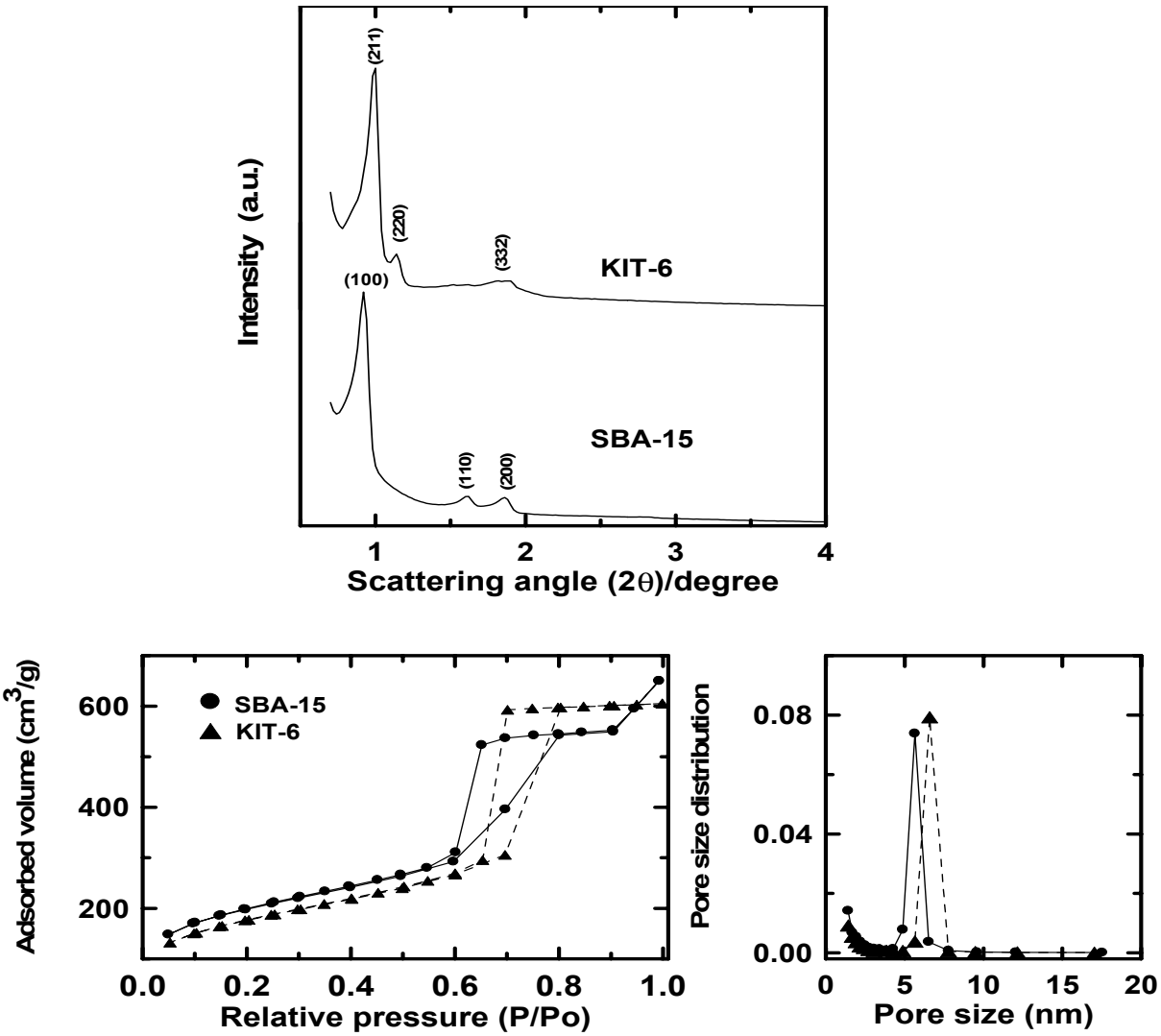
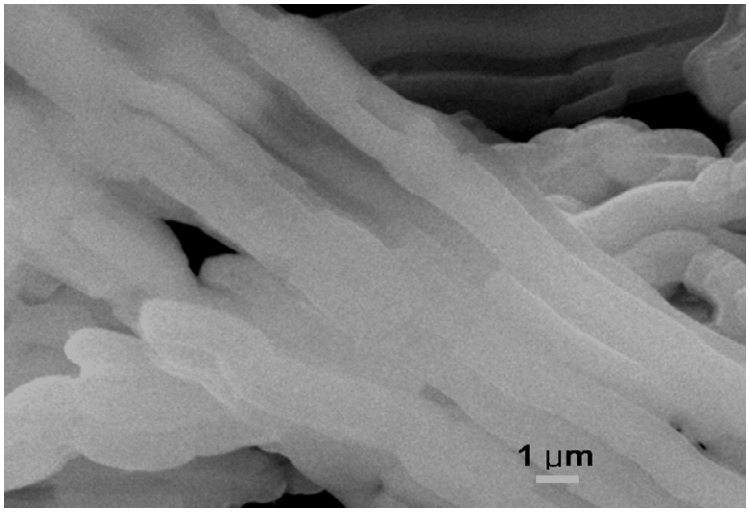
S1 shows low-angle XRD patterns, N_2 isotherms, and the pore size distribution of two mesoporous silica compounds, annealed SBA-15 and KIT-6 at 550^{o}C for 3h, which were used as hard-templates. Both templates show three distinct reflections in the range of 2θ below 3.0^{o}, which are characteristic for these two highly ordered mesostructures, which belong to 2D hexagonal *P6mm* and 3D cubic *Ia3d* space groups, respectively. The nitrogen adsorption-desorption isotherms of both templates are type IV with a sharp capillary condensation step with high relative pressures and H1 hysteresis loops, indicative of large channel-like pores in a narrow size range. The annealed SBA-15 and KIT-6 had a surface area of 677 m^2/g and 606 m^2/g and a pore size of 5.9 nm and 6.2 nm, respectively. The pore-wall thickness was estimated from the difference in the unit cell constant, and the pore size was determined from the desorption branch of the isotherm using the BJH method [21]. The result showed that pore-wall size of the SBA-15 and KIT-6 were 1.5 nm and 2 nm, respectively.



S1. Low-angle XRD patterns, N_2 isotherms, and the pore size distribution of two mesoporous silica compounds, annealed SBA-15 and KIT-6 at 550°C for 3h, which were used as hard-templates.



S2. SEM image of SnO_2 nanowires.