Electronic Supplementary Material (ESI) for CrystEngComm.

Supplementary Information

Supersaturation-controlled synthesis of diverse In_2O_3 morphologies and their shapes-dependent sensing performances†

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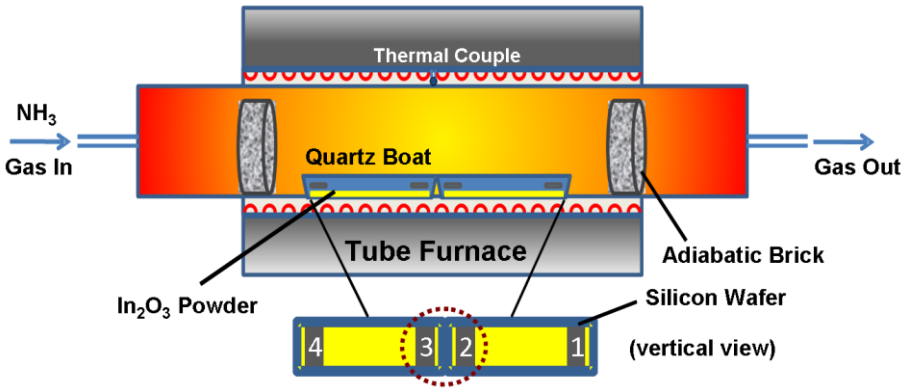

Fig. S1 Schematic illustration of the apparatus used for the synthesis of diverse In_2O_3 morphologies by nitriding In_2O_3 under NH_3 flow at 700 ℃ for 2 h and subsequently re-oxidized for another 1 h at the same temperature.

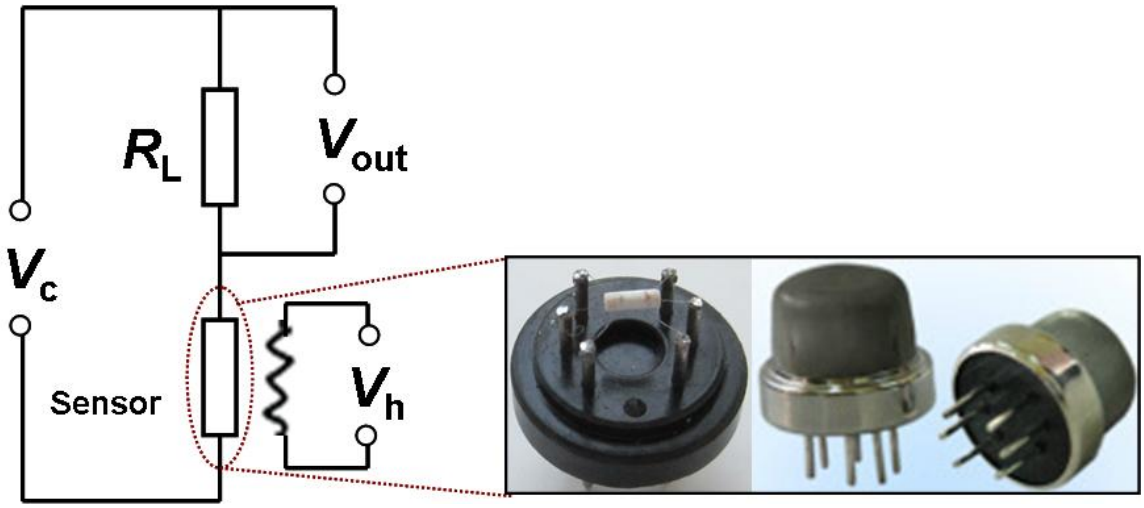

Fig.S2 The measuring electric circuit for the gas sensor.

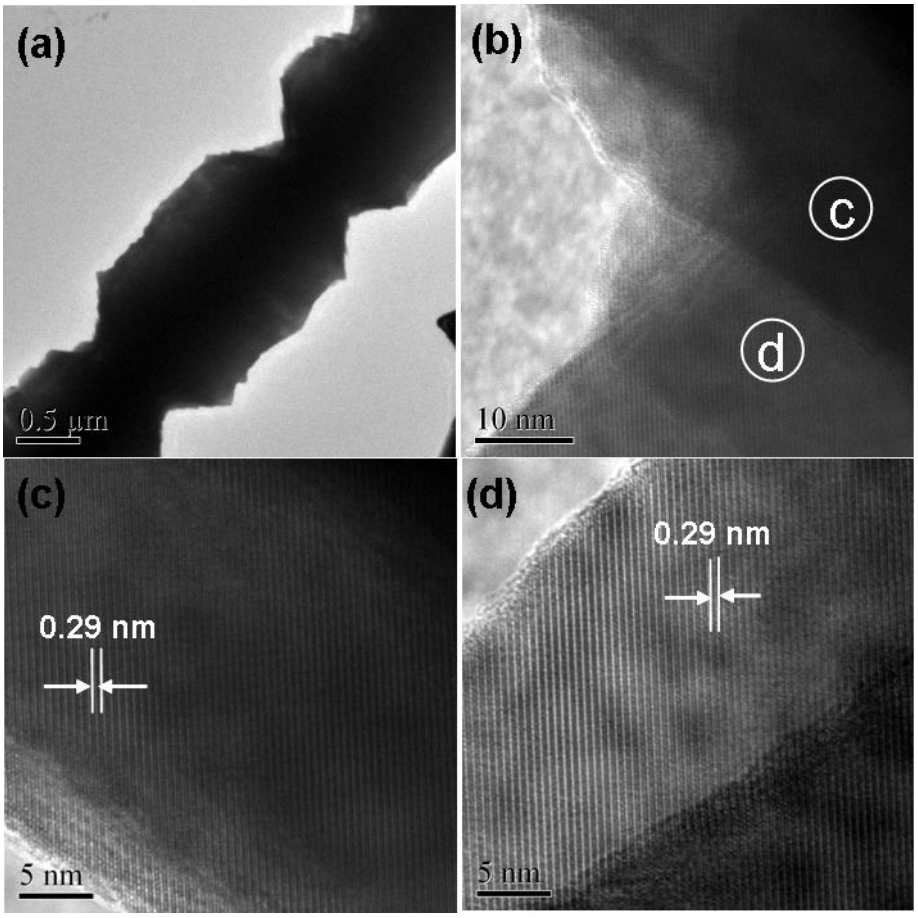

Fig. S3 (a) TEM image of representative In_2O_3 octahedron strings; (b) HRTEM image of individual In_2O_3 octahedron strings, showing the boundary of the upper and lower part; (c, d) HRTEM images of the individual In_2O_3 octahedron strings, exhibiting that both the upper and lower part of the crystals in the In_2O_3 octahedron strings grew in the same direction.

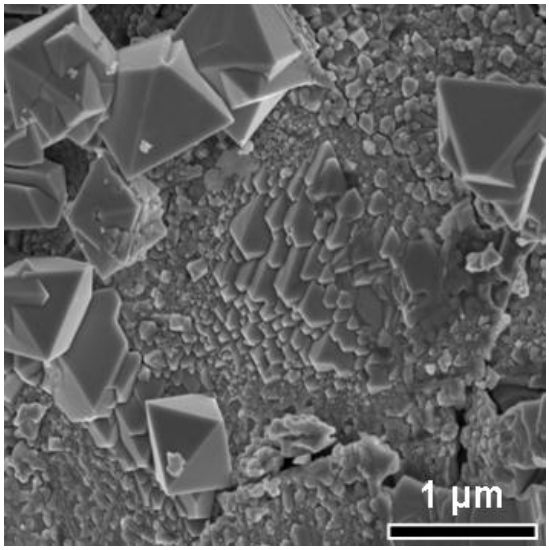

Fig. S4 SEM image of the as-obtained In_2O_3 product (re-introducing air to the evacuated reaction system).

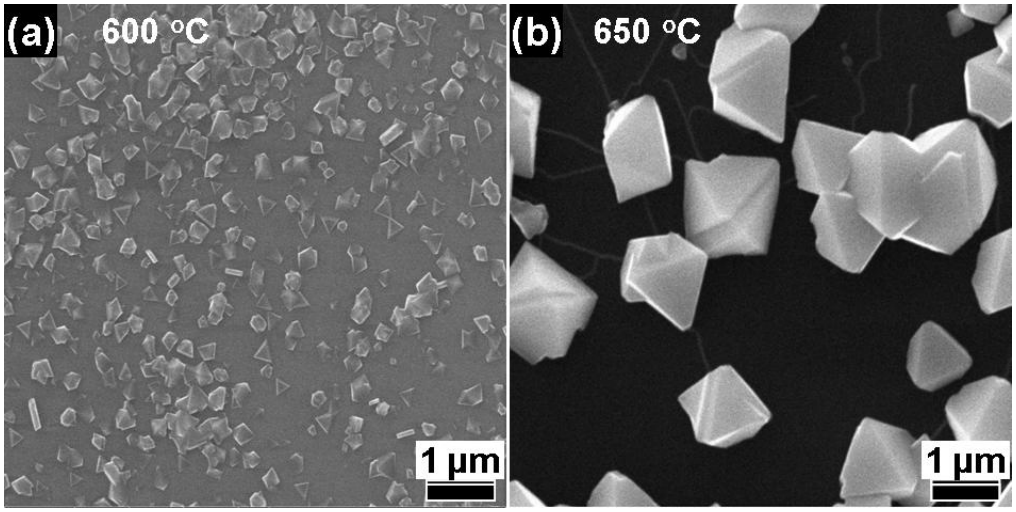

Fig. S5 SEM images of In_2O_3 structures deposited on the surface of the silicon substrates located at region 1 using 100 mg In_2O_3 as starting materials at (a) 600 ℃ and (b) 650 ℃, respectively.

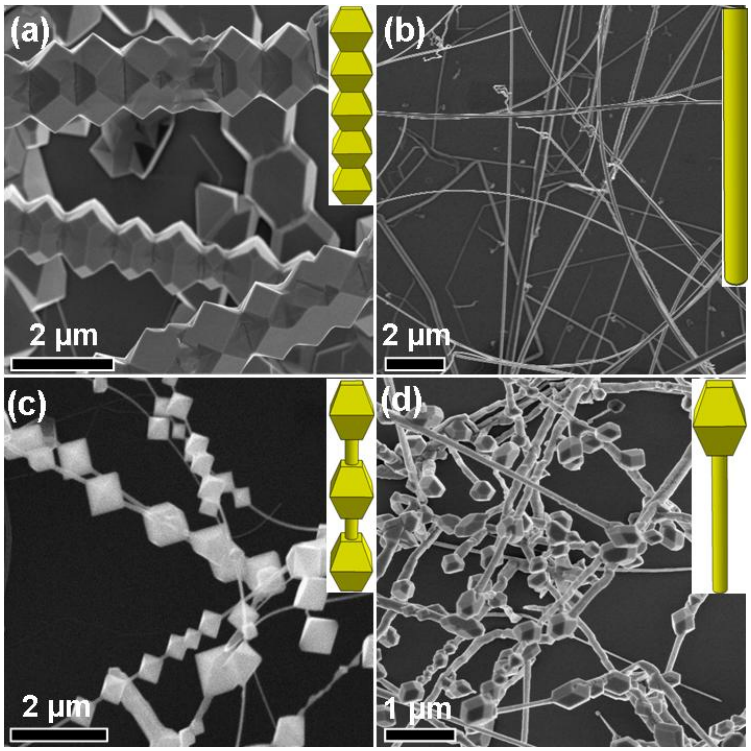

Fig. S6 SEM images of the (a) octahedron strings, (b) nanowires, (c) crystal chains, and (d) lollipop-like structures. All the insets were schematically illustrated in every SEM images.