

Supporting Informations

Preparation of Nano-Structured Crystalline Tungsten(VI) Oxide and Enhanced Photocatalytic Activity for Decomposition of Organic Compounds under Visible Light Irradiation

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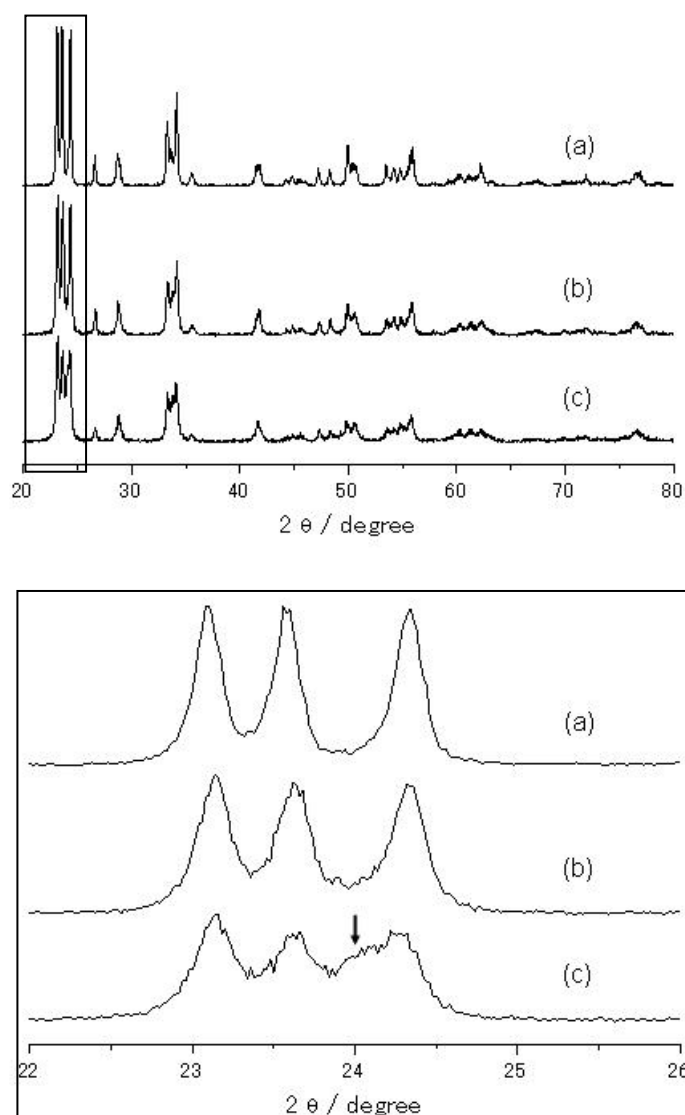


Figure S1. Powder XRD of WO_3 prepared using colloidal crystal template (diameter of PMMA: 180 nm). Sample was prepared at 873 K (a), 773 K (b), and 573 K (c). Top: XRD pattern in a range of 20 to 80°. Bottom: XRD pattern in a range of 22 to 26°. Arrow (in the bottom figure) indicates peak attributed to orthorhombic WO_3 (JCPDS 20-1324). All the other peaks are attributed to monoclinic (JCPDS 43-1035) WO_3 .

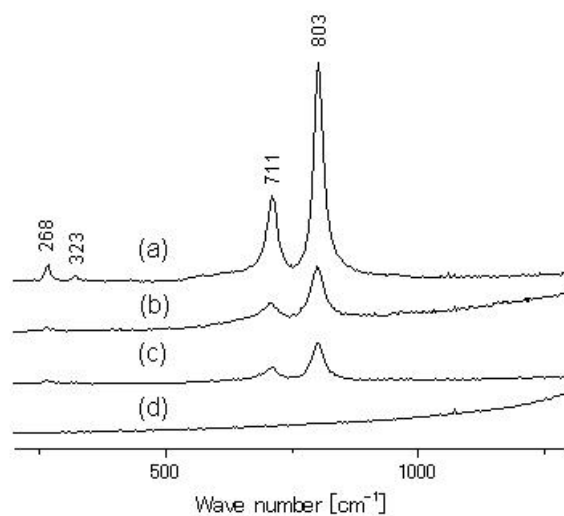


Figure S2. Raman spectra of WO₃ prepared using colloidal crystal template (diameter of PMMA: 180 nm). Sample was prepared at 873 K (a), 773 K (b), 573 K (c), and 523 K (d). All peaks are attributed to monoclinic WO₃.

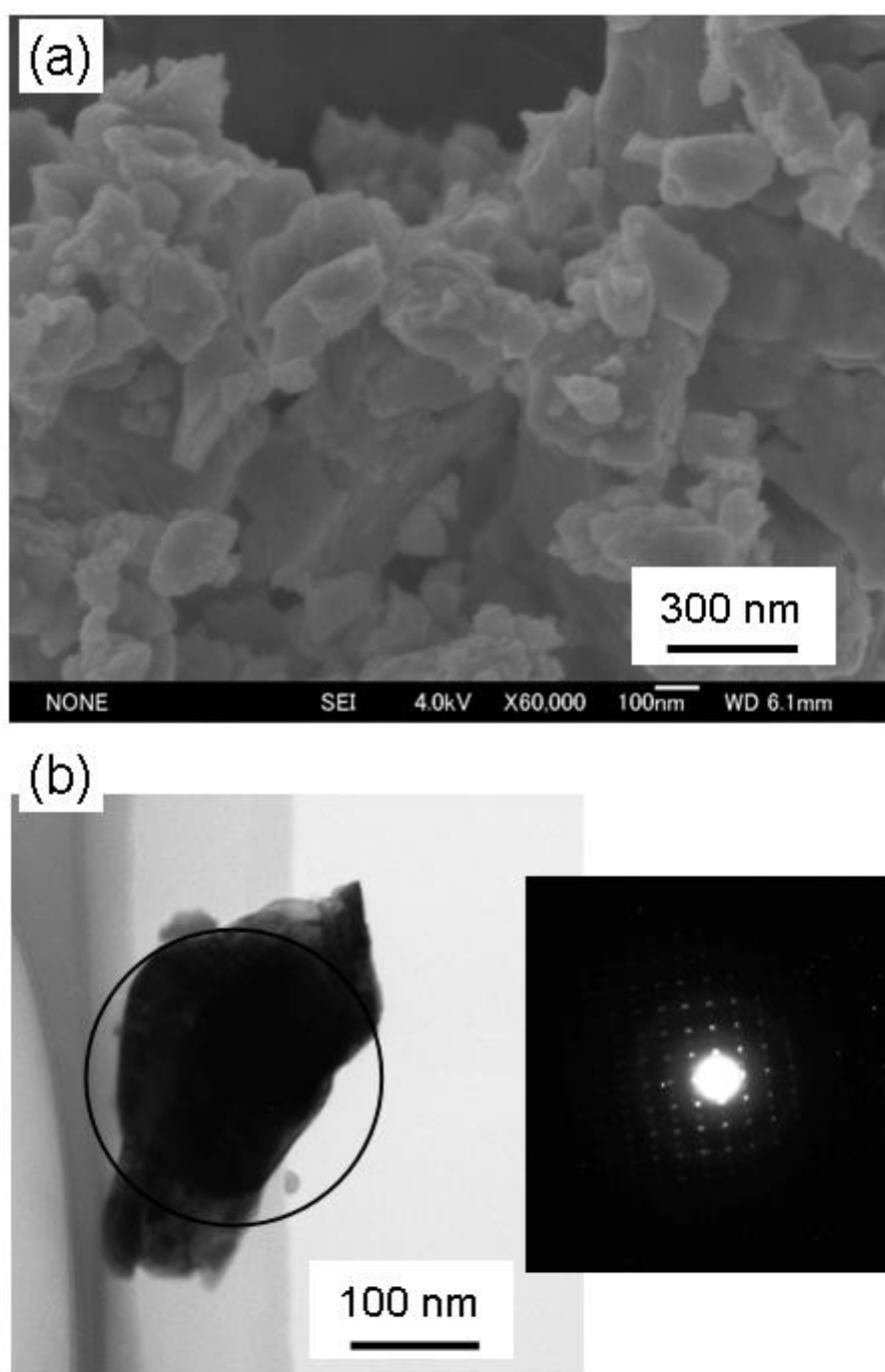


Figure S3. SEM image (a) and TEM image (b) of WO_3 prepared without colloidal crystal template. Sample was prepared at 773 K

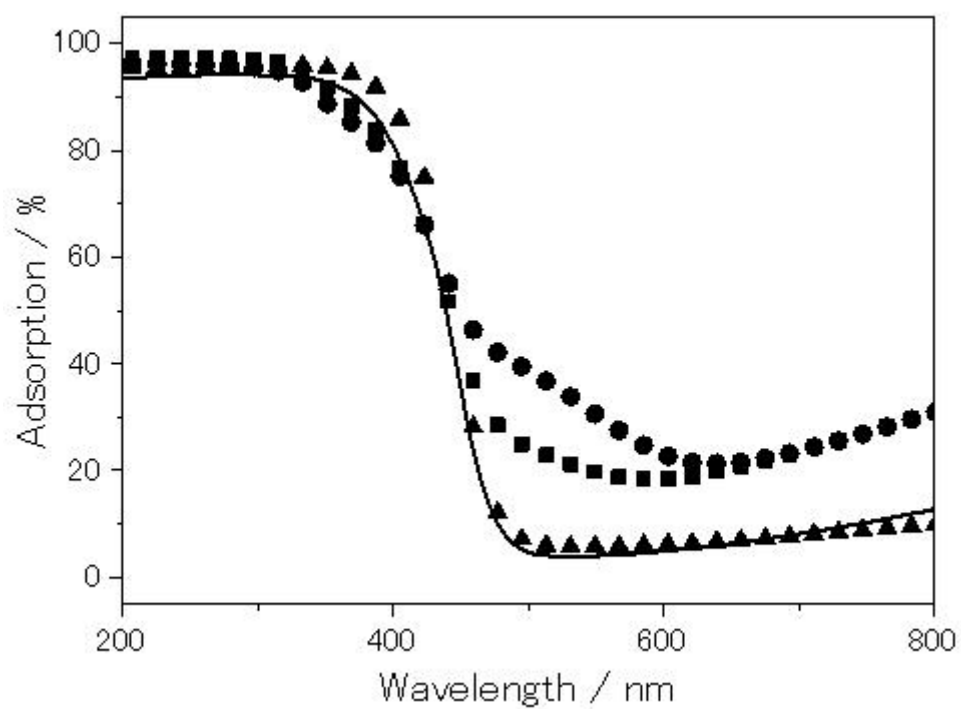


Figure S4. UV-Vis spectra of 3DOM WO₃ prepared at 673 K (closed circle), 773 K (closed square), 873 K (solid line), and 973 K (closed triangle).

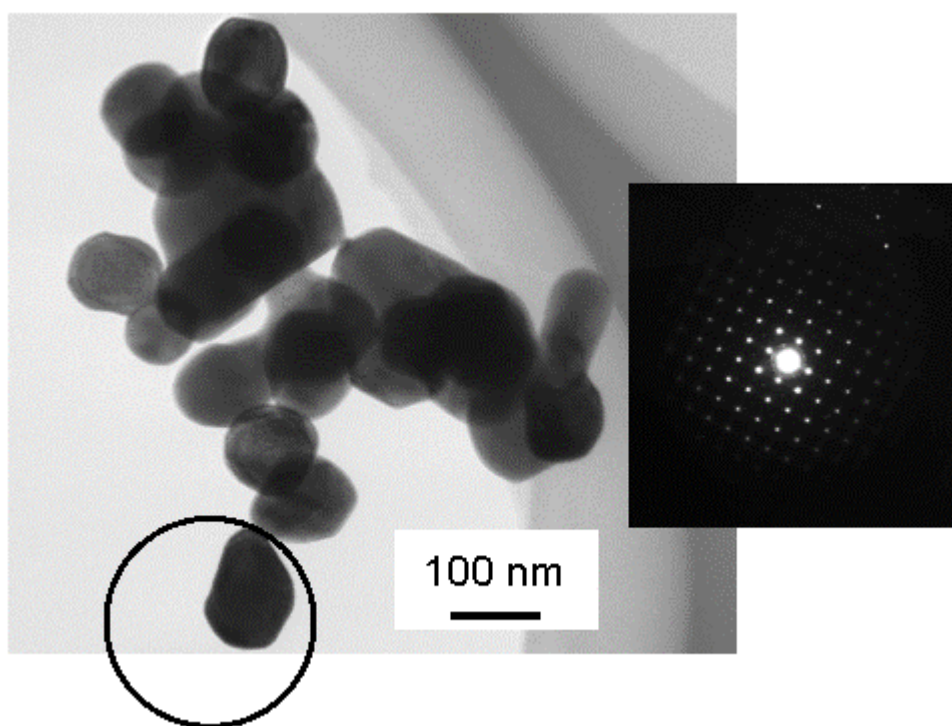


Figure S5. TEM image and selected area ED pattern of WO_3 prepared using colloidal crystal template (PMMA diameter: 180 nm). Calcination temperature was 873 K. Zone in the TEM image is selected area.