Electronic Supplementary Information (ESI)

Mesocrystal nanosheet of rutile TiO_2 and its reaction selectivity as a photocatalyst

Yuka Aoyama,[a] Yuya Oaki,[a] Ryuta Ise[a] and Hiroaki Imai*[a]

Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan.
Fax: +81 45 566 1551; Tel: +81 45 566 1556, E-mail: hiroaki@applc.keio.ac.jp

The XPS analysis for the remaining chloride species

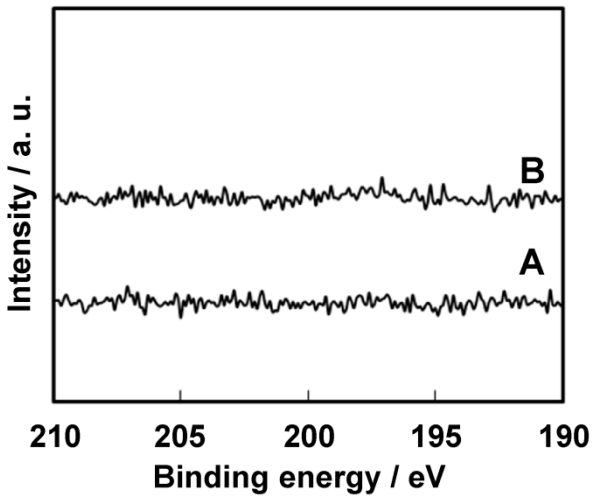

Figure S1. XPS spectra of the nanoneedles (A) and the nanosheets (B).

The peak of chloride (Cl $2p_{3/2}$) was not detected from the nanosheets on the substrate around 199 eV.

Submicrometer-sized rod and nanoneedles of rutile as the references

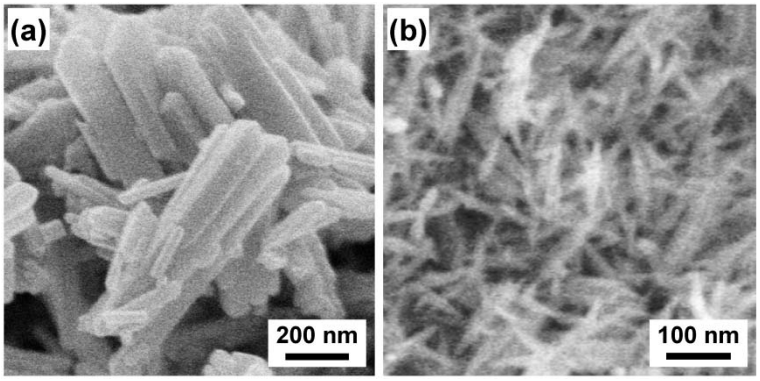

Figure S2. FESEM images of the micometer-sized rods (a) and the nanoneedles (b) synthesized from $TiCl_3$ under the different conditions.

The rutile submicrometer-sized rods 50–100 nm in width and 100–600 nm in length and rutile nanoneedles 10 nm in width and 100 nm were used as the references. The BET surface areas of the submicrometer-sized rods and nanoneedles were 8.3 $m^2 g^{-1}$ and 106 $m^2 g^{-1}$, respectively. These samples were used as the references for the mesocrystal nanosheets.