Electronic Supplementary Information

Self-template synthesis of defect-rich NiO nanotubes as efficient electrocatalysts for methanol oxidation reaction

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**Fig. S1.** The actual digital photographs during Ni( DMG)$_2$ complex synthesis.

**Fig. S2.** The digital photographs of NiO NTs-400.

**Fig. S3.** Ni 2p XPS spectrum of NiO-400 NTs.
Fig. S4. The actual digital photographs during gram-scale NiO NTs-400 synthesis. After adding 350 mL of 0.1 M DMG ethanol solution into 175 mL of 0.1 M Ni(NO_3)_2·6H_2O aqueous solution, 1.03 g NiO NTs-400 can be obtained ultimately.

Fig. S5. (A) SEM image and (B) XRD pattern of NiO NPs-400.

Fig. S6. CV curves of (A) NiO NTs-350, (B) NiO NTs-400, (C) NiO NRs-450, and (D) NiO NPs-400 recorded in N_2-saturated 1 M KOH solution with different scan rates.
Fig. S7. HR-TEM image of NiO NPs-400.

Fig. S8. SAED pattern of NiO-400 NTs.