Electronic Supplementary Material (ESI) for RSC Advances

Supporting Information for:

A Facile Synthesis Method for $Ni(OH)_2$ Ultrathin Nanosheets and Their Conversion to Porous NiO Nanosheets Used for Formaldehyde Sensing

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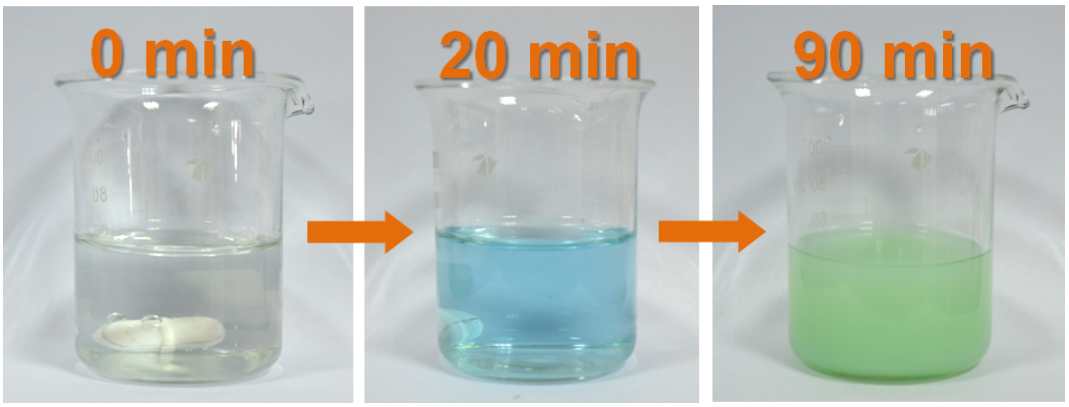

Fig. S1: Photograph of electrolyte (60 mmol NaCl, 10 mmol NH_4Cl, and 7.5 mmol NaOH in 100 ml deionized water) at different reaction time (0, 20, 90 min).

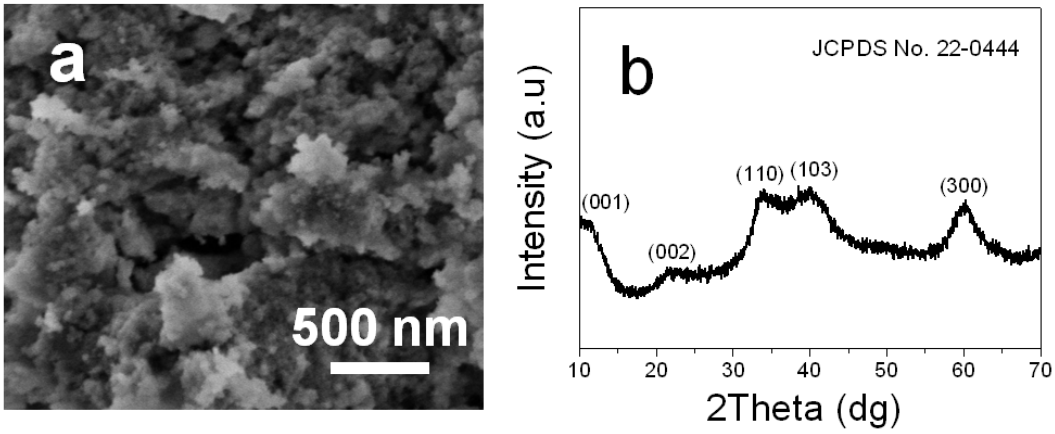

Fig. S2: (a) SEM image and (b) XRD pattern of irregular shaped α-$Ni(OH)_2$ obtained via electrochemical reaction with 1 M NaCl (without NaOH and NH_4Cl).

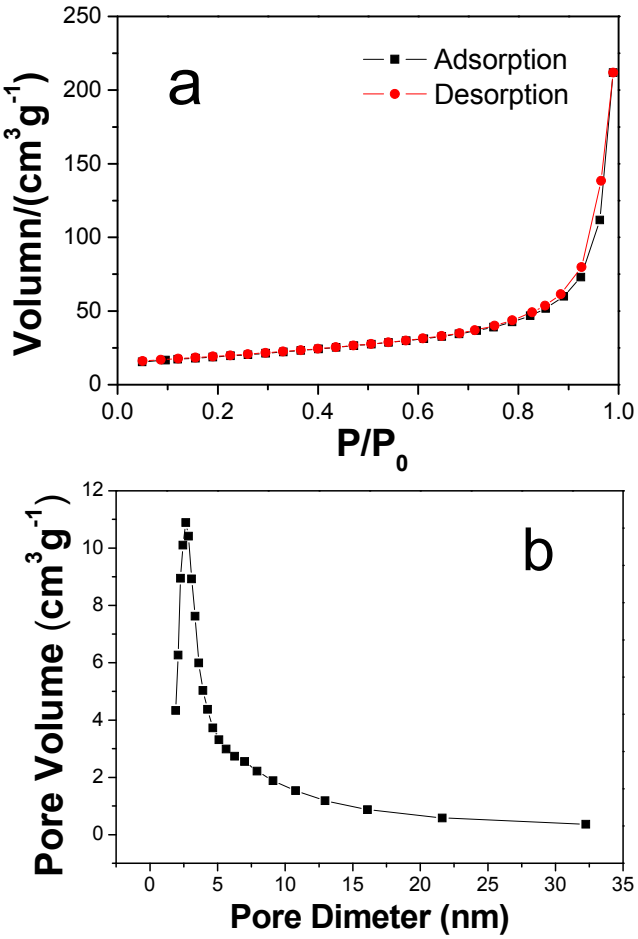

Fig. S3 (a) Typical N_2 adsorption-desorption isotherm, and (b) pore-size distribution of the NiO nanosheets.

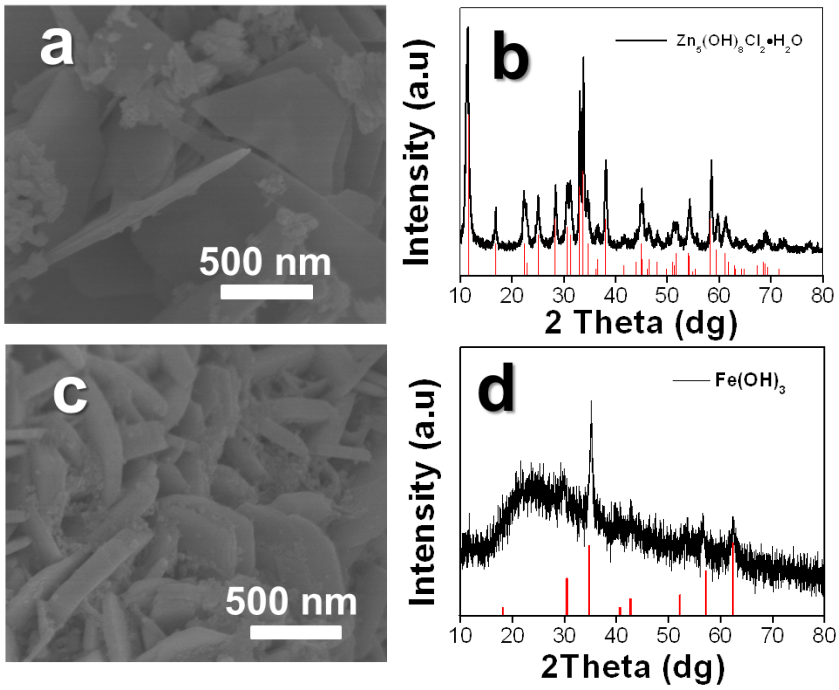

Fig. S4 (a, c) SEM images and (b, d) XRD patterns of obtained $Zn_5(OH)_8Cl_2 \cdot H_2O$ and $Fe(OH)_3$ nanosheets, which were synthesized by electrochemical reactions of Zn and Fe electrodes with electrolyte composed of 0.2 M NaCl, 0.1 M NH_4Cl and 0.075 M NaOH under potentiostatic (5 V) control for 90 min.