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## **Supporting Information**



**Figure S1**. (a) Optical photographs of microwave reactor; (b), (c) the large-scale products of nickel hydroxide precursors (1.48 g) and NiO nanosheets (1.14 g) synthesized one times.



Figure S2. FESEM image at low magnifications of NiO nanosheets.



**Figure S3.** N<sub>2</sub> adsorption-desorption isotherm of NiO nanosheets. The inset shows the pore size distributions. The isotherm belongs to type IV and exhibits an obvious hysteresis loop, indicating a typical mesoporous structure. The pores of NiO nanosheet could be created by the evacuation of gaseous contents. The most probable pore size of NiO nanosheet is 2.73 nm. The pores in a wide range of pore size should stem from the restack of the sheets.