## Microwave-assisted fast synthesis of hierarchical NiCo<sub>2</sub>O<sub>4</sub> nanoflower-like supported Ni(OH)<sub>2</sub> nanoparticles with enhanced electrocatalytic activity for methanol

Bingrong Wang<sup>a, b</sup>, Yang Cao<sup>a</sup>, Yong Chen<sup>a</sup>, Ruzhi Wang<sup>b</sup>, Xiaohong Wang<sup>a</sup>, Xiaoyong Lai<sup>c</sup>, Chunhui Xiao<sup>d</sup>, Jinchun Tu<sup>a, \*</sup>, Shujiang Ding<sup>d, \*</sup>

<sup>a</sup>State Key Laboratory of Marine Resource Utilization in South China Sea, Key Laboratory of Tropical Biological Resources of Ministry of Education Hainan University, Haikou 570228, P. R. China

<sup>b</sup>College of Materials Science and Engineering, Beijing University of Technology, , Beijing 100124, P. R. China

<sup>c</sup>State Key Laboratory of High-efficiency Utilization of Coal and Green Chemical Engineering and College of Chemistry and Chemical Engineering, Ningxia University, Yinchuan 750021, P. R. China

<sup>d</sup>Department of Applied Chemistry, School of Science, MOE Key Laboratory for Nonequilibrium Synthesis and Modulation of Condensed Matter, State Key Laboratory for Mechanical Behavior of Materials, Xi'an Jiaotong University, Xi'an 710049, P. R. China

<sup>\*</sup> Corresponding author. Tel: +86 898 66259764; fax: +86 898 66259764. *E-mail address*: tujinchun@hainu.edu.cn

<sup>\*</sup> Corresponding author. Tel: +86 029 82668391; fax: +86 029 82668391. *E-mail address*: dingsj@mail.xjtu.edu.cn

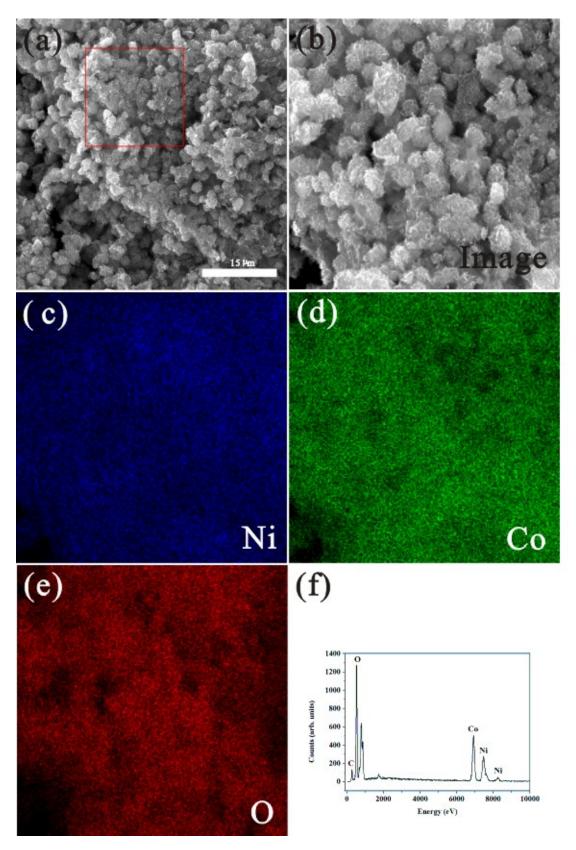


Fig. S1. (a) SEM images of NiCo<sub>2</sub>O<sub>4</sub>/Ni(OH)<sub>2</sub>; (b-e) SEM-EDS images from region marked by red box in (a); (f) EDX spectra from region marked form region marked by red box in (a).