Electronic Supplementary Material (ESI) for Dalton Transactions. This journal is © The Royal Society of Chemistry 2021

## **Supporting Information**

Emulsion-Template Synthesis of Mesoporous Nickel Oxide Nanoflowers Composed of Crossed Nanosheets for Effective Nitrogen Reduction

Min Zhou<sup>a</sup>, Wei Xiong<sup>a,\*</sup>, Hao Li<sup>b,\*</sup>, Da Zhang<sup>c</sup>, Yaokang Lv<sup>d</sup>

<sup>a</sup> Key Laboratory for Green Chemical Process (Ministry of Education), Engineering
Research Center of Phosphorus Resources Development and Utilization of Ministry of
Education, Hubei Key Laboratory Of Novel Reactor & Green Chemical Technology,
School of Chemistry and Environmental Engineering, Wuhan Institute of Technology,
Wuhan 430205, China

<sup>b</sup> Department of Physics, Technical University of Denmark, Lyngby 2800, Denmark

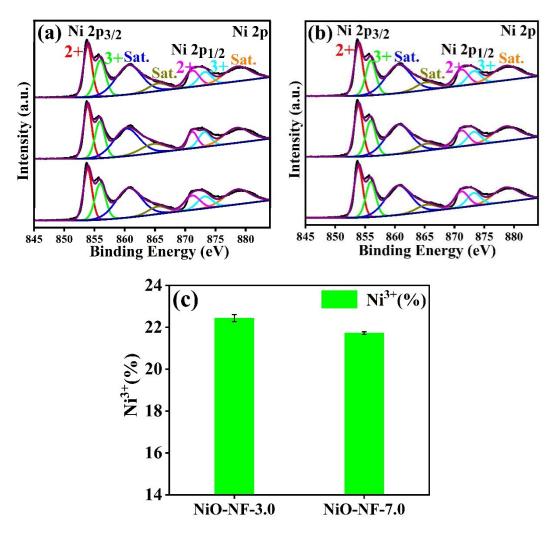
<sup>c</sup> Changjiang River Scientifc Research Institute, Wuhan 430071, China

<sup>d</sup> College of Chemical Engineering, Zhejiang University of Technology, Hangzhou 310014, China

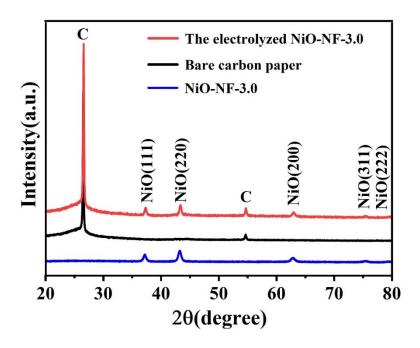
Tel/Fax: +86-27-87195001.

\_

<sup>\*</sup>Corresponding author. E-mail address: xiongwei@wit.edu.cn (W. X); haoli@dtu.dk (H. L)



**Fig.S1**. XPS spectra for Ni 2p of (a) NiO-NF-3.0, (b) NiO-NF-7.0 (testing three times) and (c) corresponding Ni<sup>3+</sup> concentration of NiO-NF-3.0 and NiO-NF-7.0.



**Fig.S2.** XRD patterns of the electrolyzed NiO-NF-3.0 (red line), Bare carbon paper (black line) and NiO-NF-3.0 (blue line).