

## Accepted Manuscript

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PII: S0021-9797(18)30687-8  
DOI: <https://doi.org/10.1016/j.jcis.2018.06.039>  
Reference: YJCIS 23730

To appear in: *Journal of Colloid and Interface Science*

Received Date: 4 May 2018  
Revised Date: 12 June 2018  
Accepted Date: 17 June 2018

Please cite this article as: Y. Yang, G. yong Huang, H. Sun, M. Ahmad, Q. Mou, H. Zhang, Preparation and electrochemical properties of mesoporous  $\text{NiCo}_2\text{O}_4$  double-hemisphere used as anode for lithium-ion battery, *Journal of Colloid and Interface Science* (2018), doi: <https://doi.org/10.1016/j.jcis.2018.06.039>

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# Preparation and electrochemical properties of mesoporous NiCo<sub>2</sub>O<sub>4</sub> double-hemisphere used as anode for lithium-ion battery

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**Abstract** NiCo<sub>2</sub>O<sub>4</sub> is a potential anode material for lithium ion battery due to its many advantages, such as high theoretical capacitance, low cost, and good electrochemical activity. In this study, mesoporous NiCo<sub>2</sub>O<sub>4</sub> double-hemisphere (3~5 μm) with high surface area (270.68 m<sup>2</sup>·g<sup>-1</sup>) and excellent electrochemical performances has been synthesized through a facile precipitation method followed with thermal treatment process. The prepared NiCo<sub>2</sub>O<sub>4</sub> is pure phase and can be indexed as a face-centered-cubic with a typical spinel structure. Electrochemical tests show the prepared material has high specific capacities (910 mAh·g<sup>-1</sup> at 100 mA·g<sup>-1</sup>), excellent

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