



Contribution ID: 159

Type: Oral

## Fabrication, Characterization, and Electrochemical Properties of Electrospun MnCo<sub>2</sub>O<sub>4</sub> Nanofibers

*Tuesday 29 November 2016 11:15 (15 minutes)*

Manganese cobalt spinel oxide (MnCo<sub>2</sub>O<sub>4</sub>) nanofibers were fabricated by electrospinning technique using polyacrylonitrile (PAN) as a polymer source and Mn and Co nitrates as metal sources. TGA-DSC was used to study the thermal property of the as-spun. The as-spun and calcined MnCo<sub>2</sub>O<sub>4</sub> samples were characterized by X-ray diffraction (XRD) and transmission electron microscopy (TEM). After calcination of the as-spun MnCo<sub>2</sub>O<sub>4</sub> nanofibers (fiber size of 986±12 nm in diameter) at 700, 800, and 900 °C in air for 3h, the MnCo<sub>2</sub>O<sub>4</sub> nanofibers with spinel structure were successfully obtained. The MnCo<sub>2</sub>O<sub>4</sub> nanofibers have fiber size of 274±8, 254±8, and 239±7 nm in diameter for the sample calcined at 700, 800, and 900 °C, respectively. The electrochemical performance was investigated by using a three-electrode cell system in 6.0 M KOH. The results show that the specific capacitance was determined to be 44.30, 31.79, and 25.27 F/g at a scan rate of 2 mV/s, and 66.78, 57.12, and 51.12 F/g at a current density of 1.0 A/g for the samples calcined at 700, 800, and 900 °C, respectively. The best capacitance retention over 70% after 1000 cycles was observed for an electrode prepared from 700°C-calcined MnCo<sub>2</sub>O<sub>4</sub>, indicating its long term cycling stability.

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**Session Classification:** Heron 1

**Track Classification:** Nano-energy & storage