Accepted Manuscript

Title: Nickel/cobalt layered double hydroxide hollow microspheres with hydrangea-like morphology for high-performance supercapacitors



Author: Yan Tao Li Ruiyi Yang Tingting Li Zaijun

PII:	S0013-4686(14)01846-5
DOI:	http://dx.doi.org/doi:10.1016/j.electacta.2014.08.149
Reference:	EA 23380
To appear in:	Electrochimica Acta
Received date:	6-6-2014
Revised date:	20-8-2014
Accepted date:	30-8-2014

Please cite this article as: Y. Tao, L. Ruiyi, Y. Tingting, L. Zaijun, Nickel/cobalt layered double hydroxide hollow microspheres with hydrangea-like morphology for high-performance supercapacitors, *Electrochimica Acta* (2014), http://dx.doi.org/10.1016/j.electacta.2014.08.149

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Nickel/cobalt layered double hydroxide hollow microspheres with

hydrangea-like morphology for high-performance supercapacitors

Yan Tao^{*a*}, Li Ruiyi^{*a*}, Yang Tingting^{*a*} and Li Zaijun^{**a,b*}

^a School of Chemical and Material Engineering, Jiangnan University, Wuxi, 214122, China

^b The Key Laboratory of Food Colloids and Biotechnology, Ministry of Education, Wuxi 214122, China

We report a new template synthesis of nickel/cobalt layered double hydroxides (Ni/Co-LDH) without any adscititious alkali source, oxidant and step for removal of the template. The perfect match between generation rate of Ni/Co-LDH nanoflakes and removal rate of template creates elaborate three-dimensional architecture with well-defined hollow interior and hydrangea-like exterior. The unique structure improves faradaic redox reaction and mass transfer during the redox process, thus the Ni/Co-LDH electrode provides excellent electrochemical performance for supercapacitors.



Download English Version:

https://daneshyari.com/en/article/6612677

Download Persian Version:

https://daneshyari.com/article/6612677

Daneshyari.com