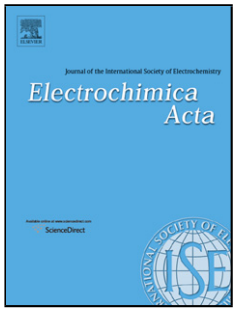

Title: Nickel/cobalt layered double hydroxide hollow microspheres with hydrangea-like morphology for high-performance supercapacitors

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

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.