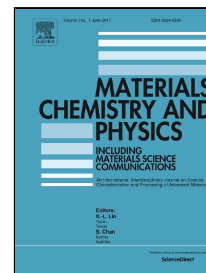


Accepted Manuscript

Hollow Nickel-Aluminium- Manganese layered triple hydroxide nanospheres with tunable architecture for supercapacitor application



Nivedhini Iswarya Chandrasekaran, Harshiny Muthukumar, Aiswarya Devi Sekar, Matheswaran Manickam

PII: S0254-0584(17)30310-3
DOI: 10.1016/j.matchemphys.2017.04.027
Reference: MAC 19629
To appear in: *Materials Chemistry and Physics*
Received Date: 13 February 2017
Revised Date: 11 April 2017
Accepted Date: 14 April 2017

Please cite this article as: Nivedhini Iswarya Chandrasekaran, Harshiny Muthukumar, Aiswarya Devi Sekar, Matheswaran Manickam, Hollow Nickel-Aluminium- Manganese layered triple hydroxide nanospheres with tunable architecture for supercapacitor application, *Materials Chemistry and Physics* (2017), doi: 10.1016/j.matchemphys.2017.04.027

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.

***Hollow Nickel-Aluminium- Manganese layered triple hydroxide nanospheres
with tunable architecture for supercapacitor application***

Nivedhini Iswarya Chandrasekaran, Harshiny Muthukumar, Aiswarya Devi Sekar
Matheswaran Manickam*

Department of Chemical Engineering, National Institute of Technology, Tiruchirappalli,
India-620015

* Corresponding author email ID: math.chem95@gmail.com

Tel: +91-431-2503120 Fax: + 91-431-2500133

Highlights

- An approach to acquire a hollow Ni-Al-Mn layered triple hydroxide is presented.
- HLTH shows a large surface area suitable for electrochemical performance.
- Exhibits high energy density of 239.07 Wh/kg at a power density of 1980 W/kg.
- Recorded specific capacitance of 1756 F/g at current density 4 A/g.
- HLTH retains 89.5 % of initial capacitance values after 4000 cycles.

Download English Version:

<https://daneshyari.com/en/article/5448194>

Download Persian Version:

<https://daneshyari.com/article/5448194>

[Daneshyari.com](https://daneshyari.com)