Supporting information

Unique Hydrogenated Ni-NiO Core-Shell 1D Nano-heterostructures With Superior Electrochemical Performance as Supercapacitor

Ashutosh K. Singh, ‡,† Debasish Sarkar, ‡,† Gobinda Gopal Khan, #,‡,* and Kalyan Mandal †

† Department of Condensed Matter Physics and Material Sciences, S. N. Bose National Centre for Basic Sciences, Block JD, Sector III, Salt Lake City, Kolkata 700 098, India

# Center for Research in Nanoscience and Nanotechnology, University of Calcutta, Technology Campus, Block JD2, Sector III, Salt Lake City, Kolkata 700 098, India

*To whom correspondence should be addressed

Center for Research in Nanoscience and Nanotechnology, University of Calcutta, Technology Campus, Block JD2, Sector III, Salt Lake City, Kolkata 700 098, India

* E-mail: gobinda.gk@gmail.com, Corresponding author.
MATERIAL CHARACTERIZATION.

Figure S1. FESEM micrograph of the as prepared Ni NWs.

Figure S2. The XRD pattern of the as-prepared H-Ni/NiO core/shell NHs.
Figure S3. The EDAX spectrum of the H-Ni/NiO core/shell NHs.

ELECTROCHEMICAL ANALYSIS

Figure S4. Peak current ($I$) vs. square root of scan rate ($f'$) plot for both types of capacitors.
**Figure S5.** Cyclic performance of H-Ni/NiO core/shell NHs at a current density of 8.6 Ag⁻¹. The inset shows the charging/discharging curves for last 10 cycles of H-Ni/NiO core/shell NHs at a current density of 8.6 Ag⁻¹.