Supporting Information

Ultra-high Energy Density Supercapacitors Using Nickel Phosphide/Nickel/Titanium Carbide Nanocomposite Capacitor Electrodes

Jing Xu, a Nianjun Yang, a* Siyu Yu, a,b Anna Schulte, c Holger Schönherr, c Xin Jiang a*

a Institute of Materials Engineering, University of Siegen, 57076 Siegen, Germany

b School of Chemistry and Chemical Engineering, Southwest University, Chongqing 400715, China

c Physical Chemistry I & Research Center of Micro and Nanochemistry and Engineering (Cμ), Department of Chemistry and Biology, University of Siegen, 57076 Siegen, Germany

E-mail: nianjun.yang@uni-siegen.de, xin.jiang@uni-siegen.de
Supporting Figures

Figure S1. SEM images of a Ni$_5$TiO$_7$/TiO$_2$(P) composite film in a (a) side and (b) top view.

Figure S2. EDX line profile (a) and related SEM image (b) of a titanium substrate after a PEO process.
Figure S3. XPS survey spectrum of a Ni$_{12}$P$_5$/Ni/TiC composite film.
Figure S4. Photograph of a supercapacitor demonstrator operated by a single PC device.