Supporting Information

Electrochemical Performance of (Antimony/Chlorine)-incorporated

Nickel Foam

Keyu Tao, Sen Lv, Yang Hai and Yun Gong*

Department of Applied Chemistry, College of Chemistry and Chemical Engineering,

Chongqing University, Chongqing 401331, P. R. China Tel: +86-023-65678932 E-

mail: gongyun7211@cqu.edu.cn



Figure S1 image of the Ni foam before and after vaper deposition in the presence of SbCl₃

At%	Ni	Sb	Cl	0	С
Method					
EDS	50.7	10.2	6.4	18.3	14.4
XPS	31.7	18.1	23.2	27.0	

Table S1 The atomic percentages for the nanosheet clusters of S-200-E



Figure S2 Schematic diagram of the asymmetrical supercapacitor



Figure S3 Nyquist plots and equivalent circuits of the S-200-E before and after 10000 GCD cycles.

Table S2 The values of the parameters in the equivalent circuits before and after the 10000 GCD cycles.

Sample	R _s /	Q ₁	R _{ct} /	R ₁ /	Q ₂	W /
	Ω cm ⁻²		$\Omega~{ m cm}^{-2}$	$\Omega~{ m cm}^{-2}$		$\Omega~{ m cm}^{-2}$
S-200-E initial	0.77	3.3×10 ⁻³	8.4	0.24	1.9×10 ⁻³	1.5×10 ⁻³
S-200-E after	0.95	2.17×10-	15.8	284	4.3×10 ⁻³	2.8×10 ⁻⁵
10000 cycles		5				

(a)



(b)



(c)



Figure S4 Crystal structures of Ni (a), Ni-Sb1 (b) and Ni-Sb2 (c). Color codes: green, Ni; purple, Sb.

(a)



(c)



Figure S5 Band structures of Ni (a), Ni-Sb1 (b) and Ni-Sb2 (c).

(a)

(b)



(c)



Figure S6 Comparison of DOS (a), Ni 3d (b) and Sb 5p PDOS (c) of Ni, Ni-Sb1 and Ni-Sb2. Fermi level is denoted in dotted line.