

Supplementary Information

Novel Porous Brain Electrodes for Augmented Local Field Potential Signal Detection

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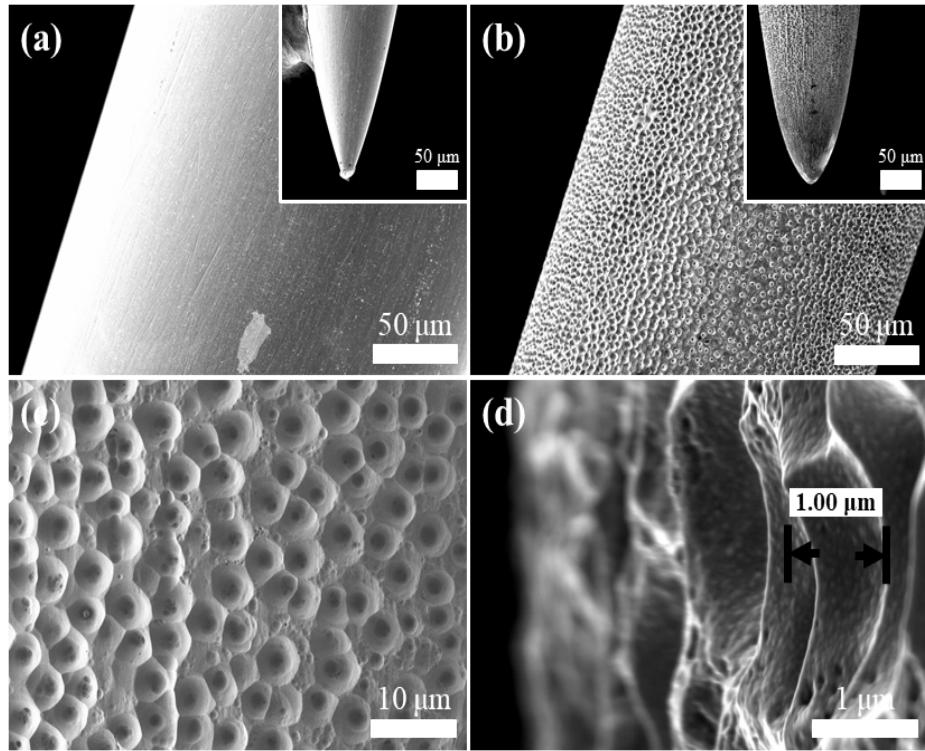


Figure 1. Surface FE-SEM images of second set (a) CNE and (b) PNE, (c) magnified image of (b), and (d) cross-sectional image of PNE. The insets of (a,b) show needle tips.

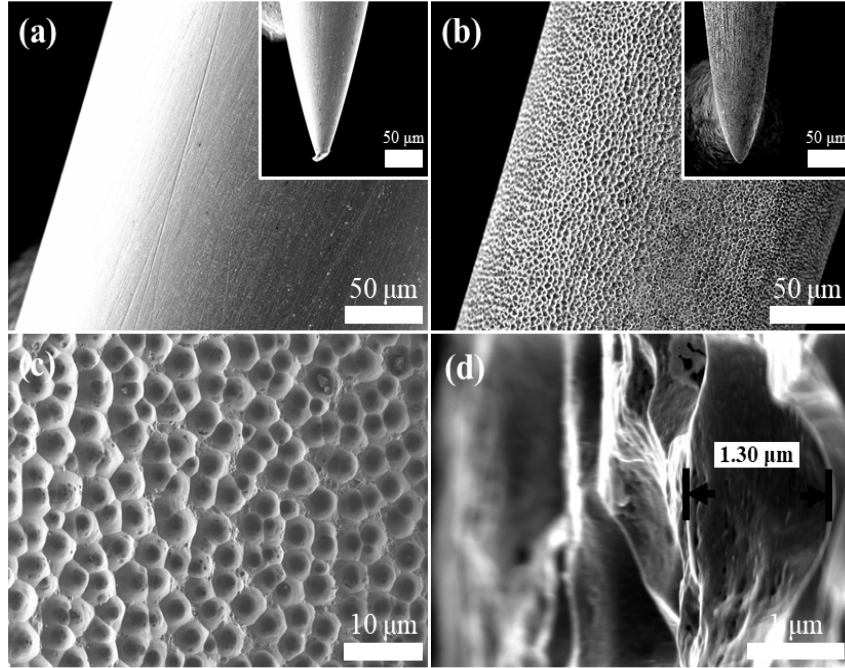


Figure S2. Surface FE-SEM images of third set (a) CNE and (b) PNE, (c) magnified image of (b), and (d) cross-sectional image of PNE. The insets of (a,b) show needle tips.

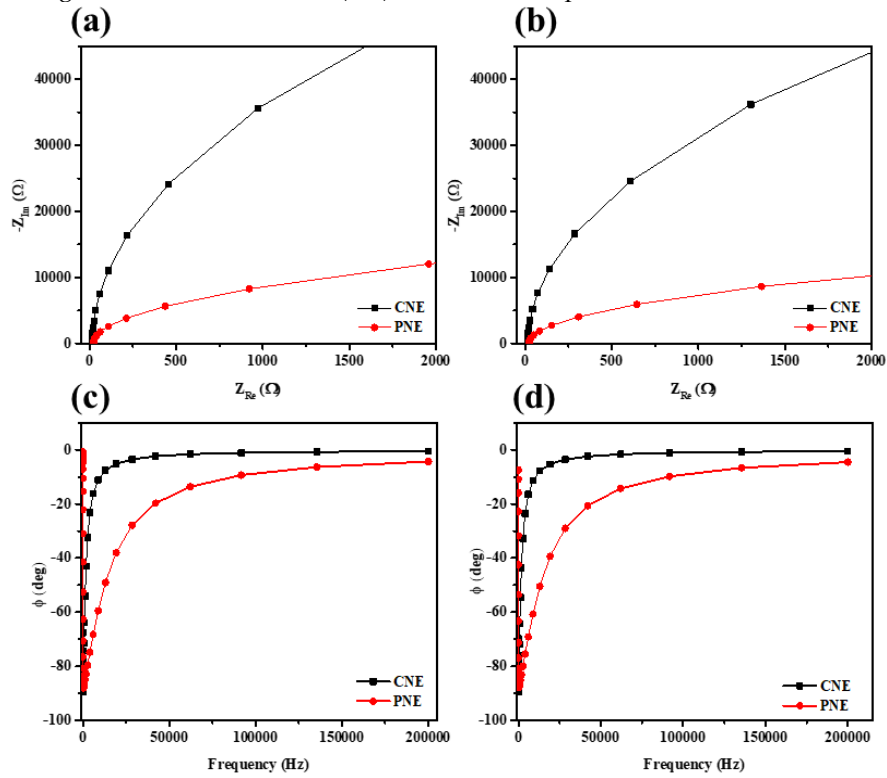


Figure S3. Electrochemical impedance spectroscopy data: (a,b) Nyquist plot and (c,d) Bode plot of second (N = 2) and third set (N = 3) of CNE and PNE.

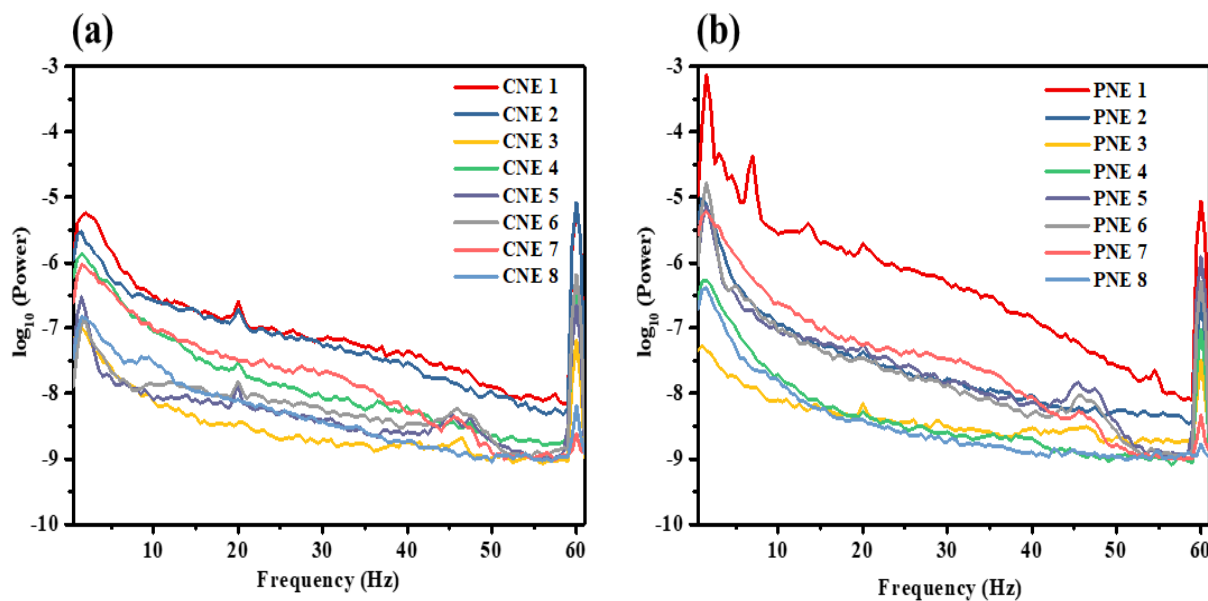


Figure S4. Power spectrum data of (a) CNE, and (b) PNE.

Table S1. EDS (Energy Dispersive Spectrometer) data before and after anodization. (second set of PNE and CNE).

Elements	Before Anodization (CNE)		After Anodization (PNE)	
	Atom. C (at. %)	Error (%)	Atom. C (at. %)	Error (%)
Fe	62.12	2.10	61.24	1.99
Cr	17.96	0.58	18.62	0.58
C	12.99	0.58	14.15	0.60
Ni	6.82	0.30	5.88	0.25
Al	0.10	0.03	0.11	0.03

Table S2. EDS (Energy Dispersive Spectrometer) data before and after anodization. (third set of PNE and CNE).

Elements	Before Anodization (CNE)		After Anodization (PNE)	
	Atom. C (at. %)	Error (%)	Atom. C (at. %)	Error (%)
Fe	61.77	2.07	62.19	2.10
Cr	18.49	0.59	18.23	0.59
C	13.17	0.59	12.99	0.58
Ni	6.50	0.28	6.52	0.29
Al	0.07	0.03	0.06	0.03