

Fig. S1

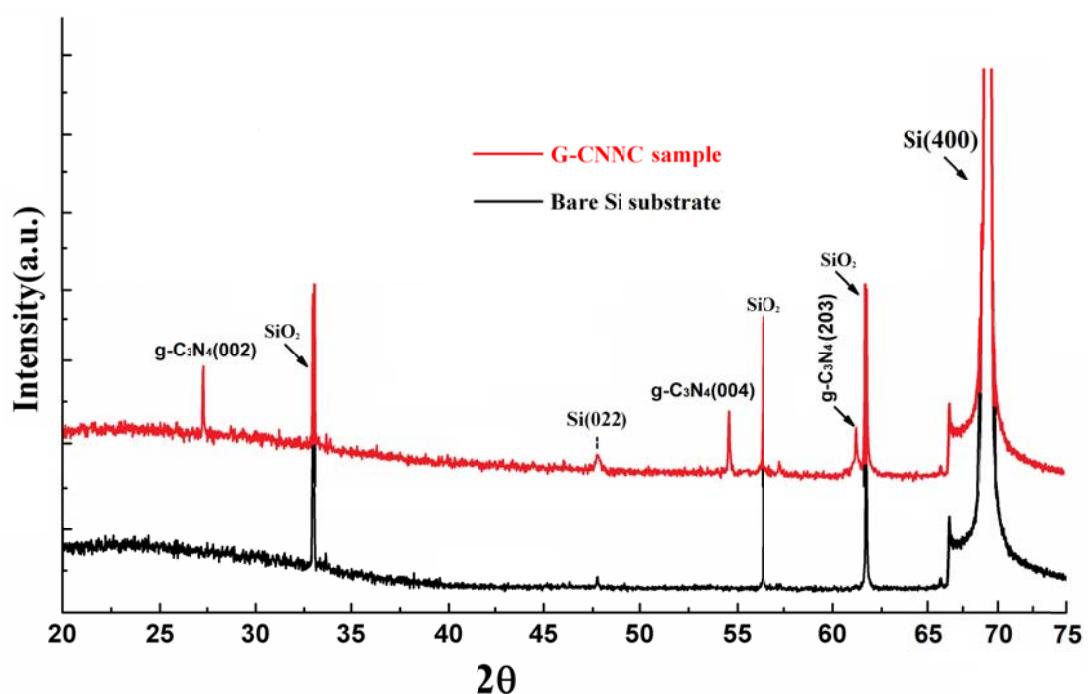


Fig. S2

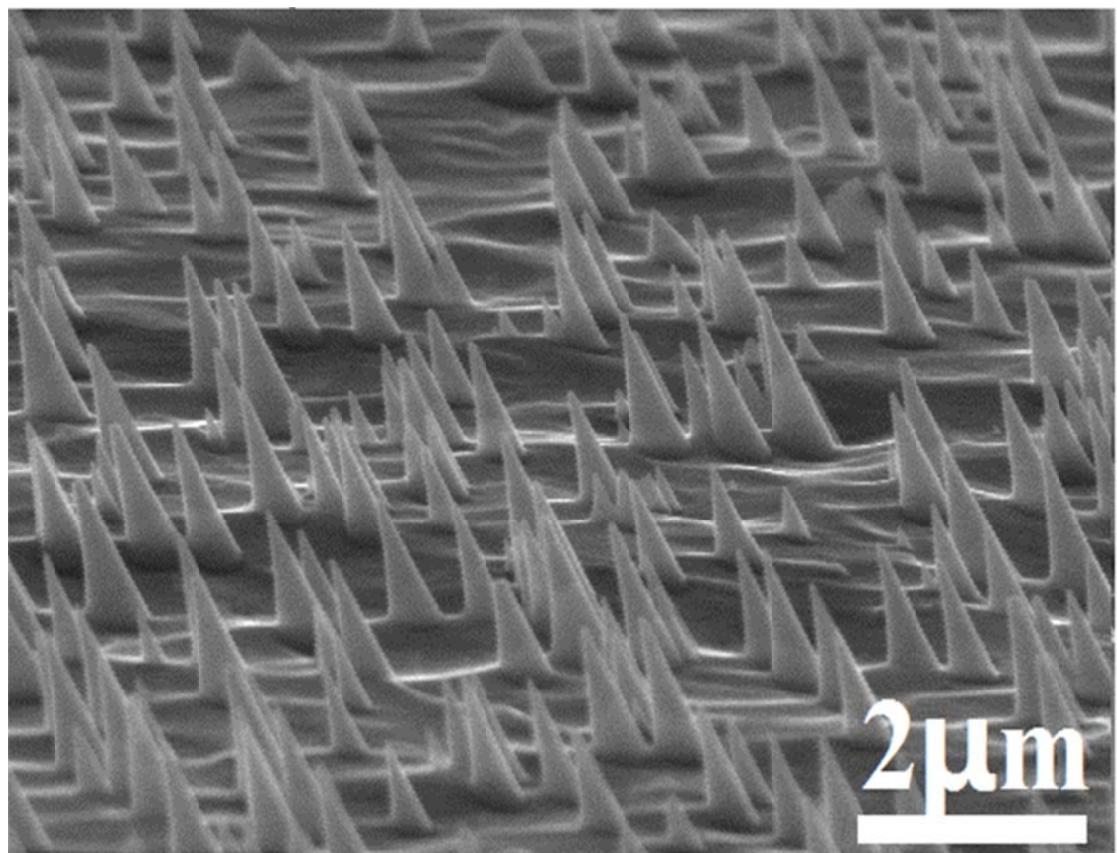


Fig. S3

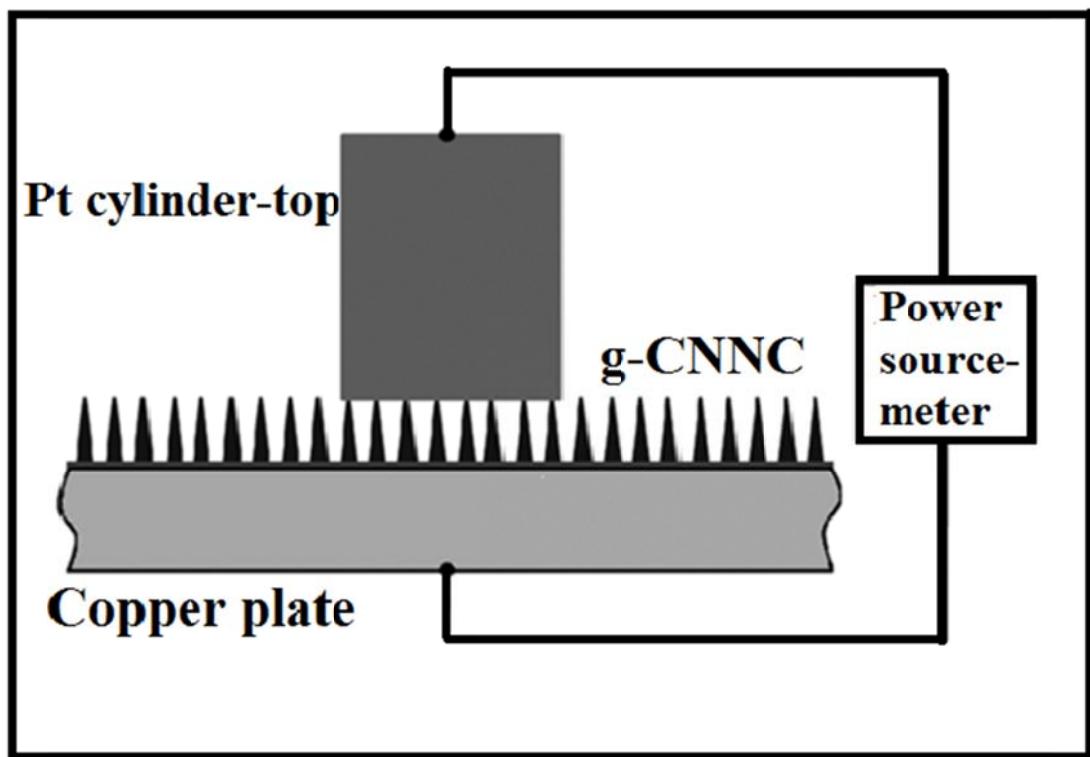


Fig. S4

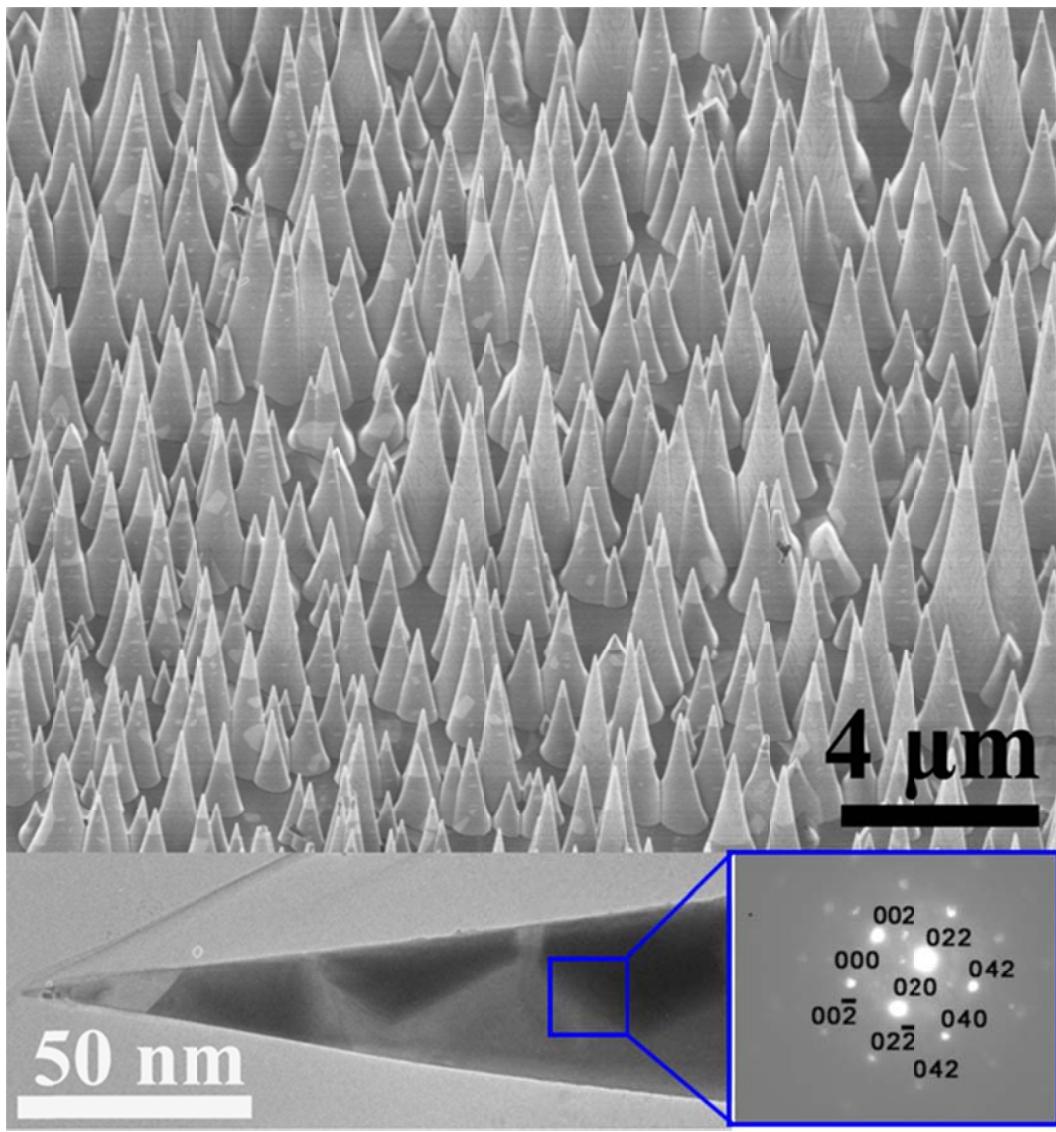


Fig. S5

Table S1- The Electrical testing results and related information.

Type	Test radius (m)	Density (m^{-2})	h (nm)	r_1 (nm)	r_2 (nm)	R_{test} ($\Omega \cdot \text{m}$)	R_{norm} ($\Omega \cdot \text{m}$)
Si nanocone	0.5×10^{-3}	5.6×10^{11}	2.5×10^3	20	500	4.42×10^3	4×10^3
g-C ₃ N ₄ nanocone	0.5×10^{-3}	2.4×10^{11}	4×10^3	25	625	3.32	—