Supporting Information

Small Naked Pt Nanoparticles Confined in Mesoporous Shell of Hollow Carbon Spheres for High-Performance Nonenzymatic Sensing of H_2O_2 and Glucose

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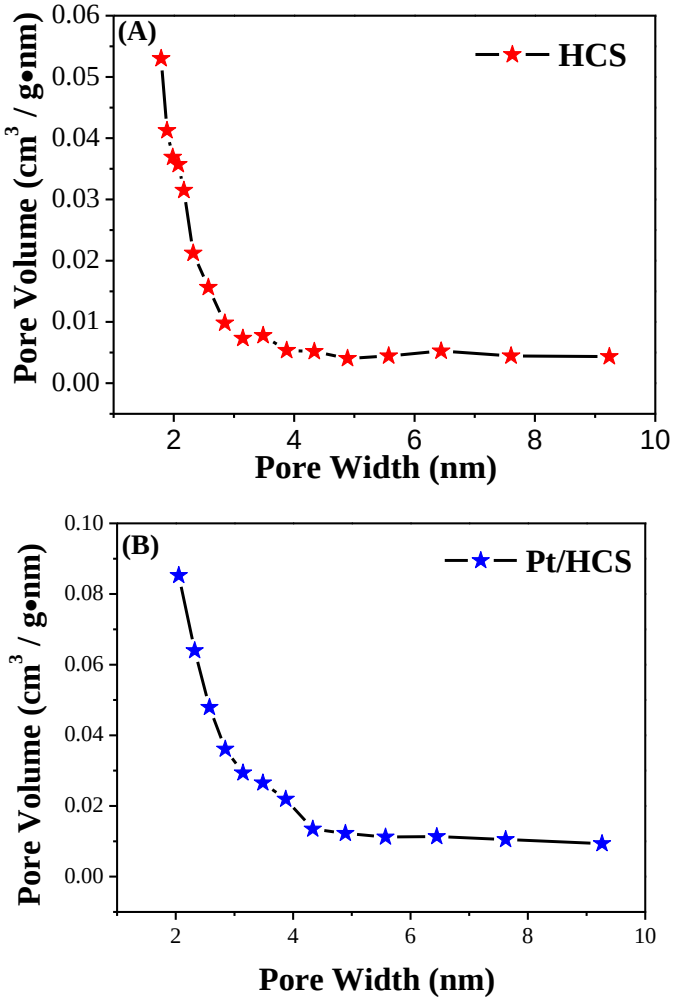

Figure S1 Pore size distributions of HCS (A) and Pt/HCS (B).

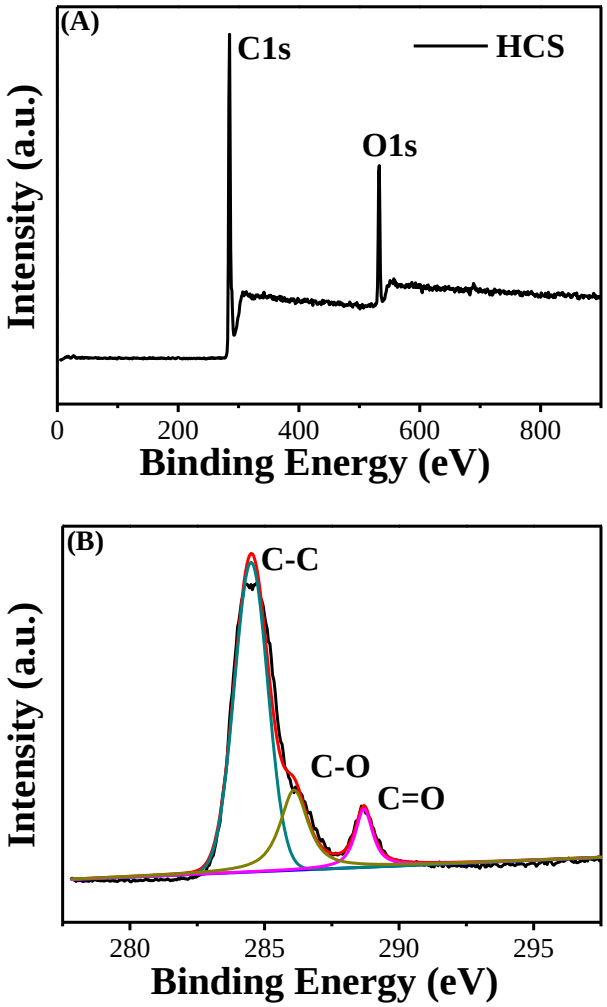

Figure S2 (A) XPS survey spectrum and (B) high-resolution C 1s XPS spectrum of HCS.

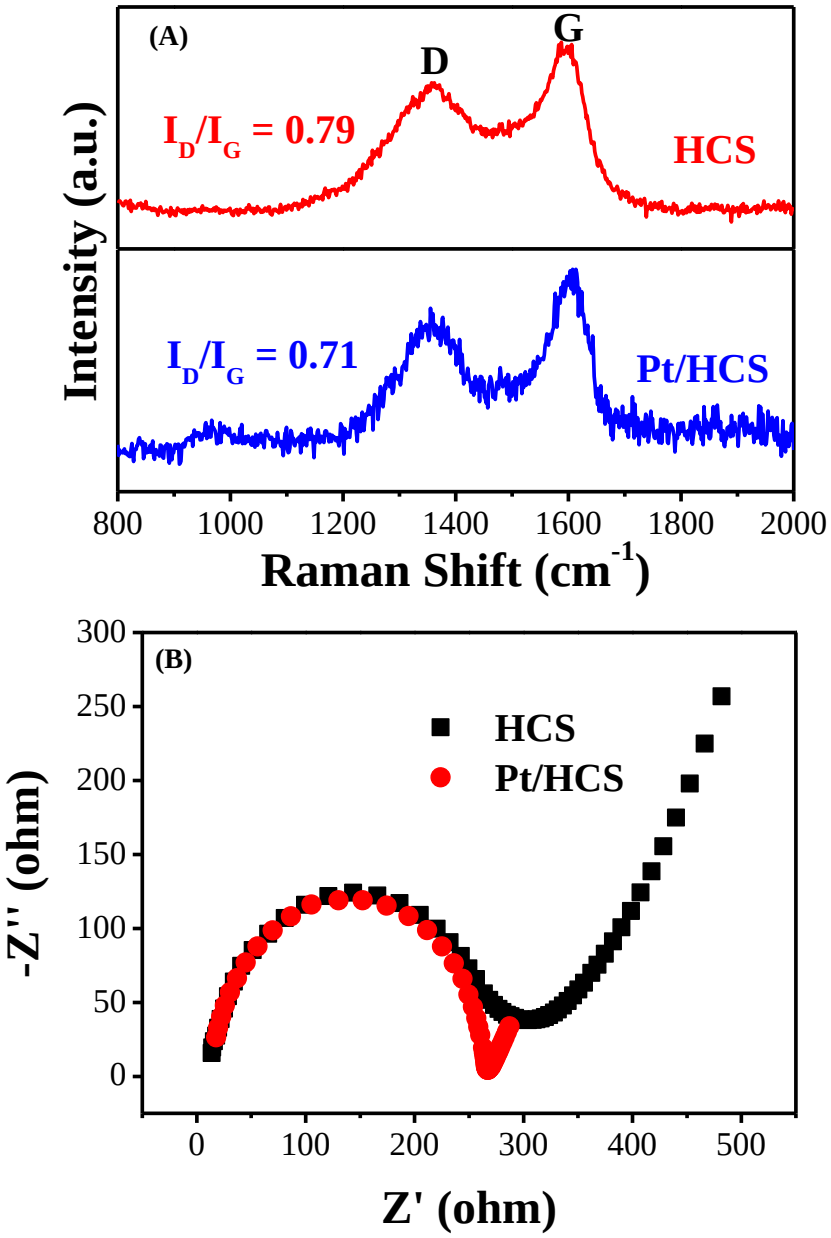

Figure S3 (A) Raman spectra of HCS (red line) and Pt/HCS (blue line). (B) Electrochemical impedance plots (Nyquist plots) of HCS and Pt/HCS in 0.1 M PBS (pH =7.4) buffer solution.

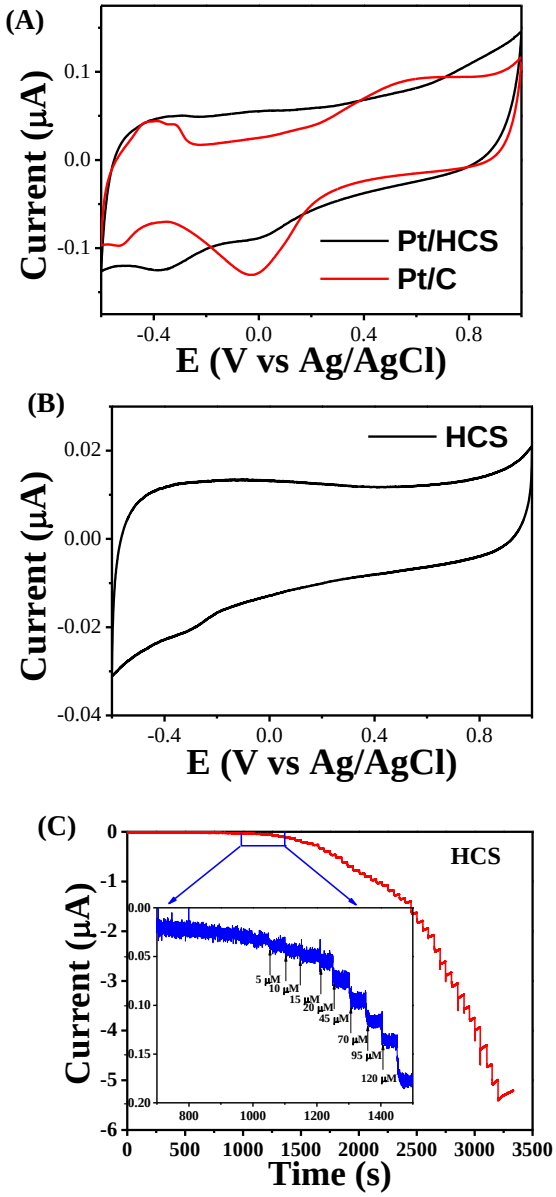

Figure S4 CV curves of Pt/HCS and Pt/C (A), HCS (B) in 0.1 M N_2-saturated PBS (pH = 7.4) solution with a scan rate of 50 mV s^{-1}. (C) Amperometric response of HCS-modified GCE to successive addition of H_2O_2 at the potential of -0.1 V in 0.1 M PBS (pH = 7.4) solution. The inset shows the amplificated current signal at low concentrations of H_2O_2.

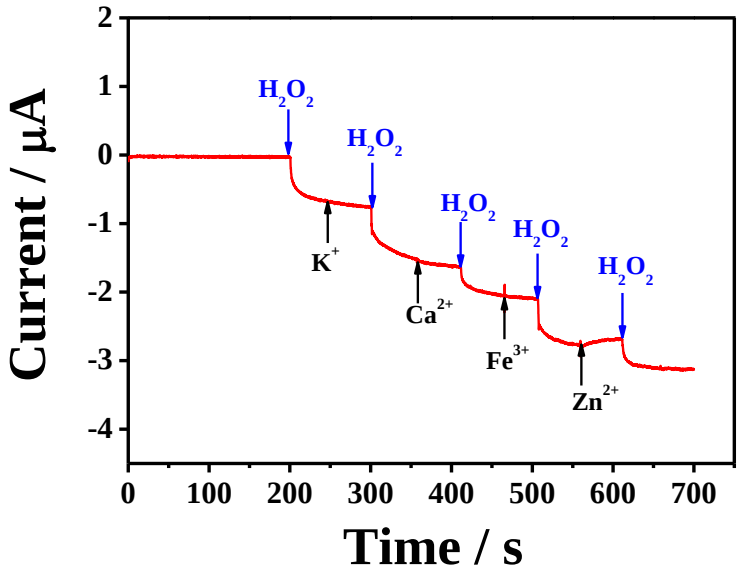

Figure S5 Current responses of Pt/HCS to the addition of 0.1 M H_2O_2 and 0.1 M K^+, Ca^{2+}, Fe^{3+} and Zn^{2+} in 0.1 M N_2-saturated PBS solution.

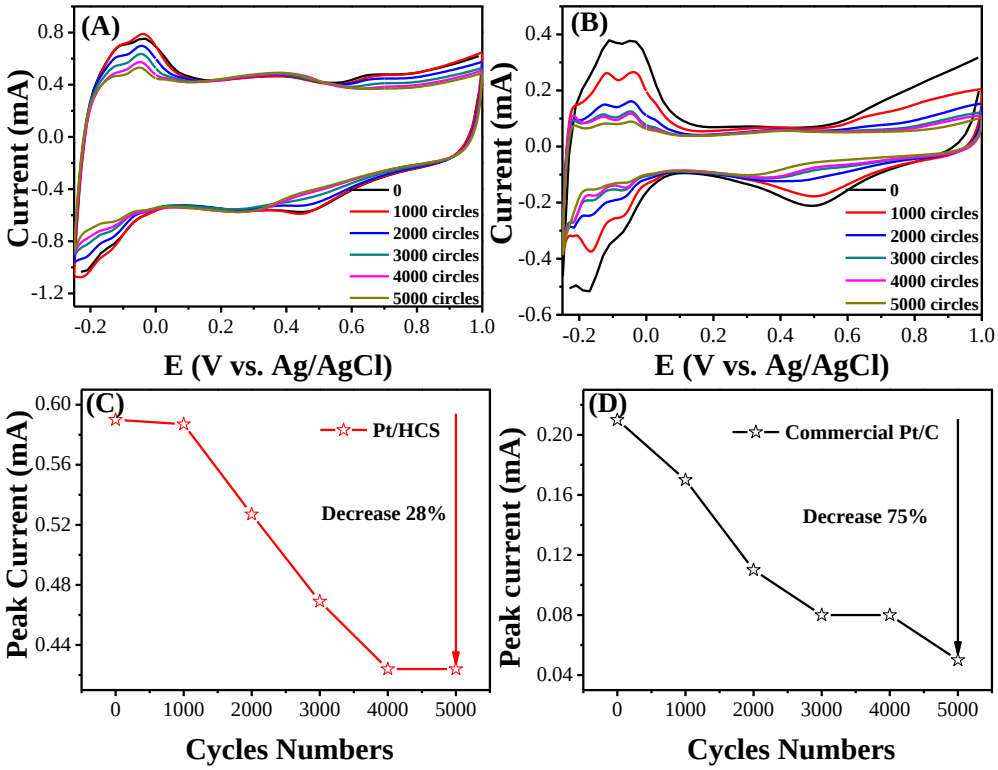

Figure S6 CV curves after 0, 1000, 2000, 3000, 4000 and 5000 cycles of (A) Pt/HCS and (B) commercial Pt/C in 0.1 M $HClO_4$ with the scan rate of 100 mV s^{-1}. The variations of peak currents after different potential scanning cycles on (C) Pt/HCS and (D) commercial Pt/C.