Electronic Supplementary Information (ESI)

Urea hydrogen bond donor-mediated synthesis of high-index faceted platinum concave nanocubes grown on multi-walled carbon nanotubes and their enhanced electrocatalytic activity

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Fig. S1 SEM images of Pt NCs/CNT electrodeposited in ChCl-U based DES containing 10 mM K_2PtCl_6 solution by applying CV for (a) 5, (b) 7, (c) 8, (d) 10, (e) 20, (f) 30, (g) 40, and (h) 60 cycles, respectively. Scan rate: 50 mV s⁻¹; temperature: 60 °C. Insets are the size histograms of Pt NCs with counting 200 particles for each sample.



Fig. S2 Cyclic voltammograms of concave cubic Pt/CNT (red line), flower-like Pt/CNT (blue line) and commercial Pt/C (black line) in 0.1 M HClO_4 solution, scan rate: 50 mV s⁻¹.



Fig. S3 (a) and (b) TEM images of commercial Pt/C catalyst (20 wt%) purchased from Alfa Aesar.