

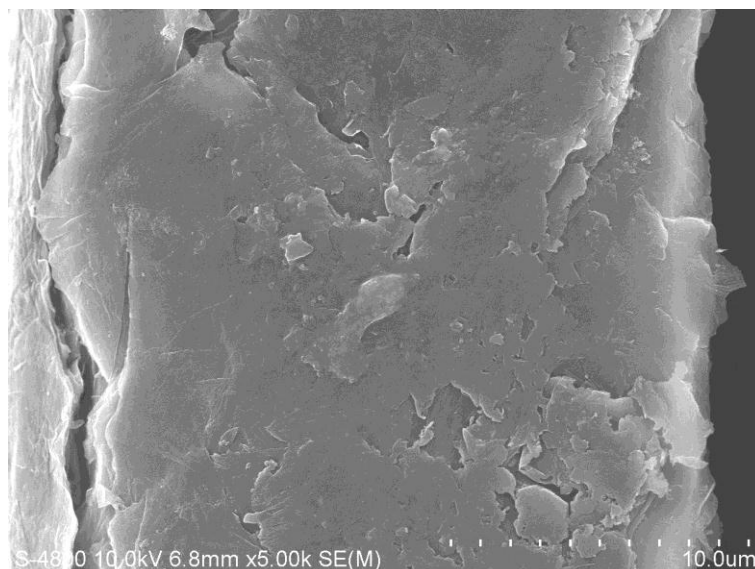
Electronic supplementary information (ESI)

**Graphene/carbon nanospheres sandwich supported PEM fuel cell metal
nanocatalysts with remarkable high activity and stability**

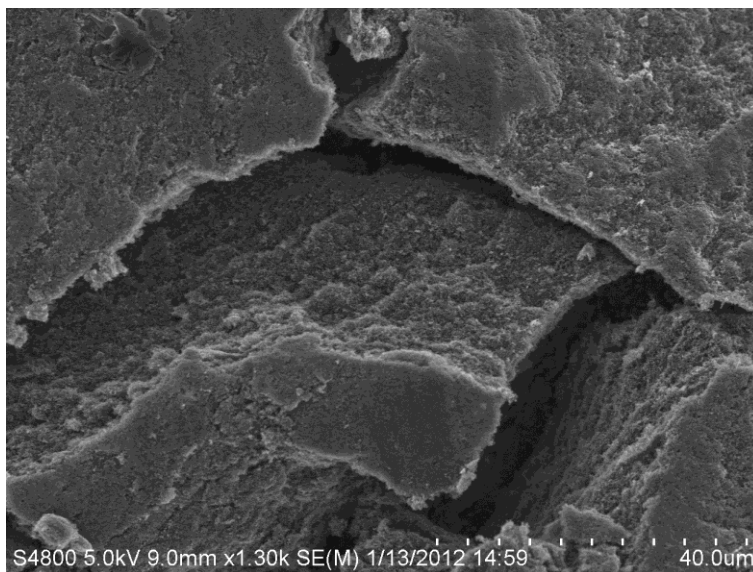
Fig. S1 shows SEM images of GNS and GCS. Differently from the smooth surface of GNS (Fig. S1a), the GNS shows a much rougher surface due to that CNS particles on the graphene surface act as nanoscale spacers and increase the spacing between adjacent carbon sheets preventing face-to-face van der Waals contact between neighboring graphene sheets (Fig. S1b). Figure S1c gives a clear shown of CNS particles between the GNS layers.

Figure S1

a



b



c

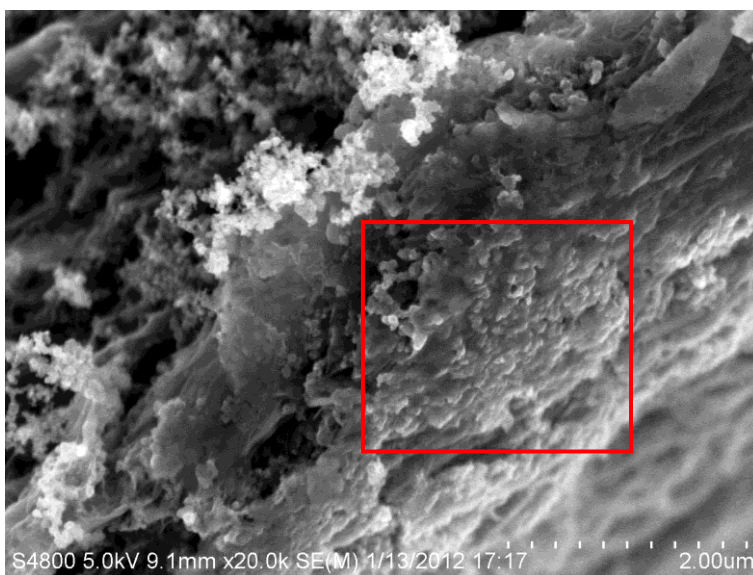


Fig. S1 SEM images of GNS (a) and GCG (b, c)