A facile method to synthesize supported Pd-Au nanoparticles using graphene oxide as the reductant and their extremely high electrocatalytic activity for the electrooxidation of methanol and ethanol

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E-mail address: jianpinggao66@yahoo.cn (J.P. Gao); tjlifeihui@126.com (F.H. Li).
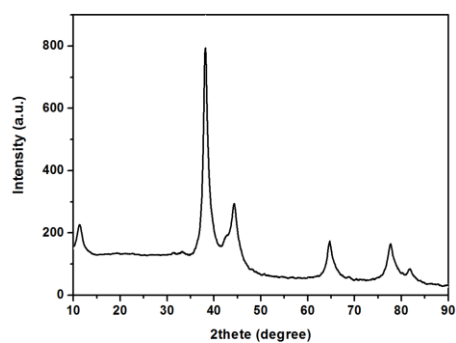
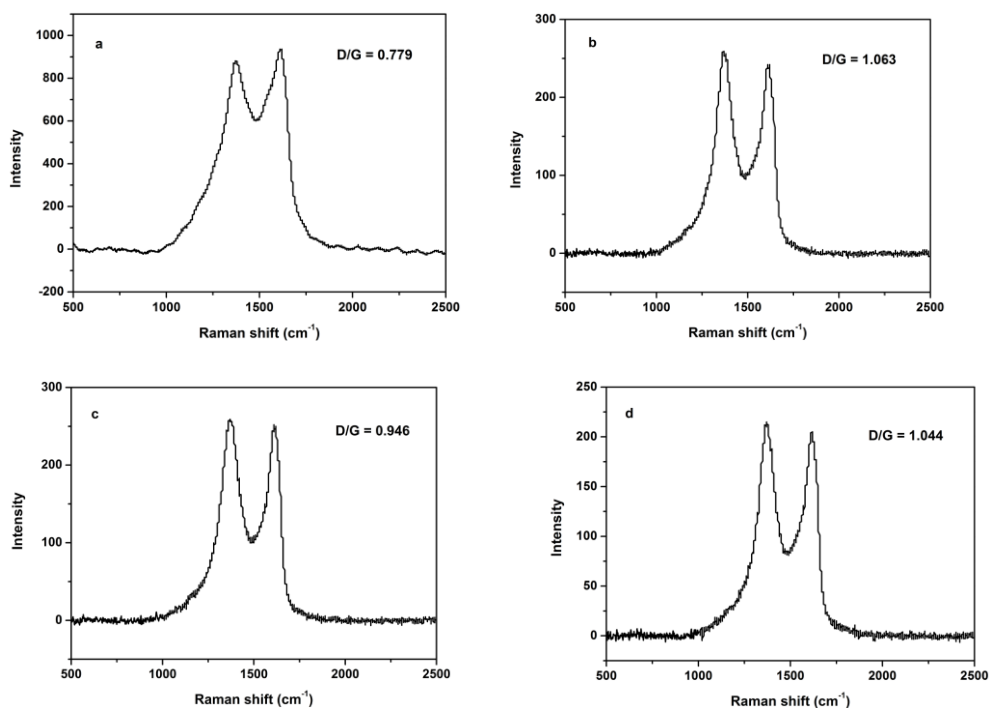Fig. 1S XRD pattern of Pd-Au(1:1)/GO.

Fig. S2 Raman spectra of GO (a), Pd-Au(1:1)/RGO (b), Pd-Au(1:1)/RGO-1 (c) and
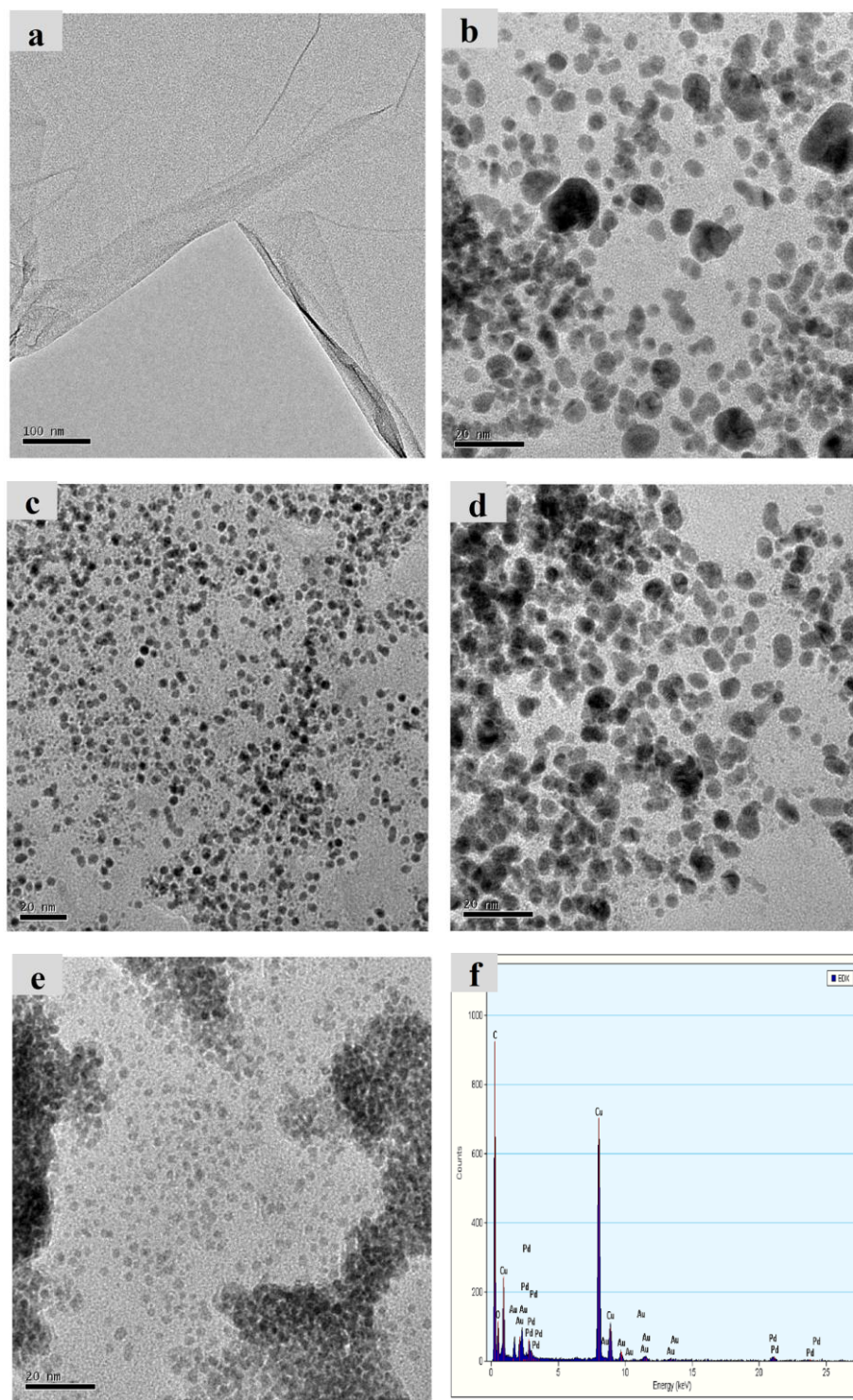
Pd-Au(1:1)/RGO -2 (d).

Fig. S3 TEM images of GO (a), Pd-Au(1:0.5)/GO (b), Pd-Au(1:1)/GO (c), Pd-Au(1:1.5)/GO (d)

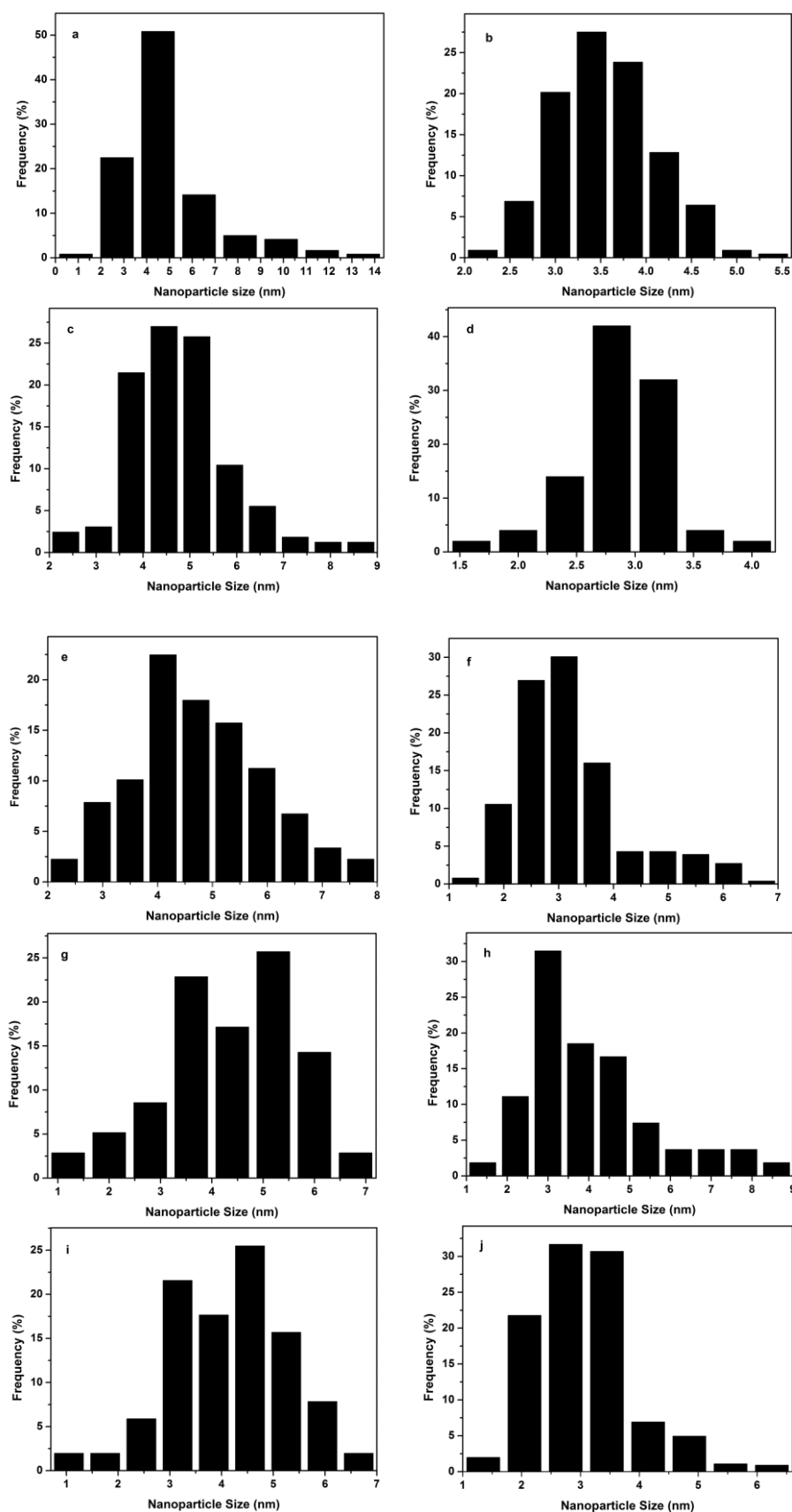and Pd/GO (e), EDX spectrum of Pd-Au(1:1)/RGO catalyst (f).

Fig. S4 Size distributions of the nanoparticle in Pd-Au(1:0.5)/GO (a), Pd-Au(1:1)/GO (b),

Pd-Au(1:1.5)/GO (c), Pd/GO (d), Pd-Au(1:0.5)/RGO (e), Pd-Au(1:1)/RGO (f), Pd-Au(1:1.5)/RGO

(g), Pd/RGO (h), Pd-Au(1:1)/RGO-1 (i) and Pd-Au(1:1)/RGO-2 (j).

Table S1 the conversion of Pd and Au during the reaction of using GO to reducing Pd and Au precursors.

	Conversion of Pd (%)	Conversion of Au (%)
Pd-Au(1:0.5)/GO	76.84	78.63
Pd-Au(1:1)/ GO	77.37	80.08
Pd-Au(1:1.5)/ GO	77.97	79.47
Pd/GO	76.93	