

Supporting Information

Branched PdAu nanowires with superior electrocatalytic formic acid oxidation activities

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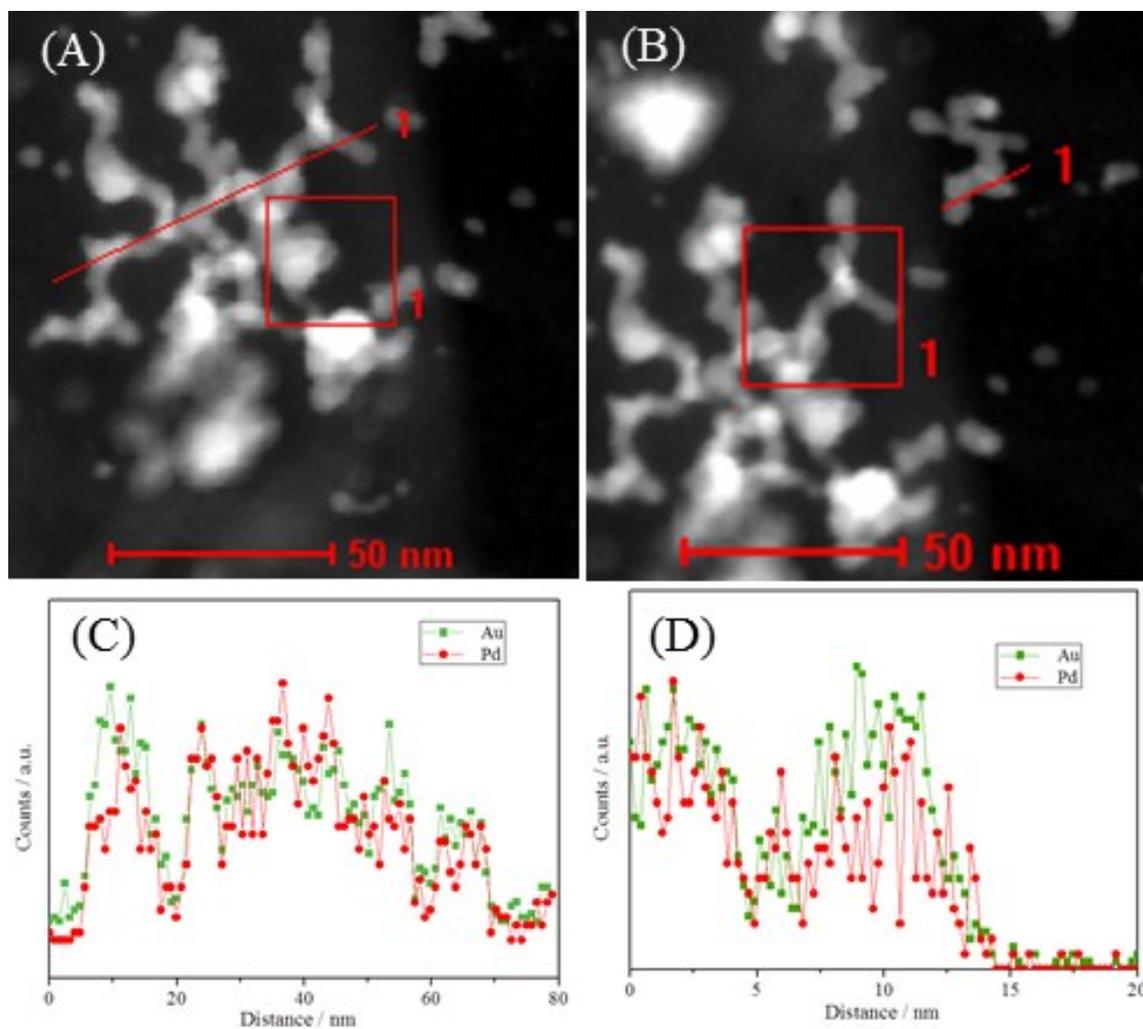


Figure S1. (A, B) HAADF-STEM images of PdAu/graphene, (C, D) STEM-EDS line-scan profile of PdAu/graphene.

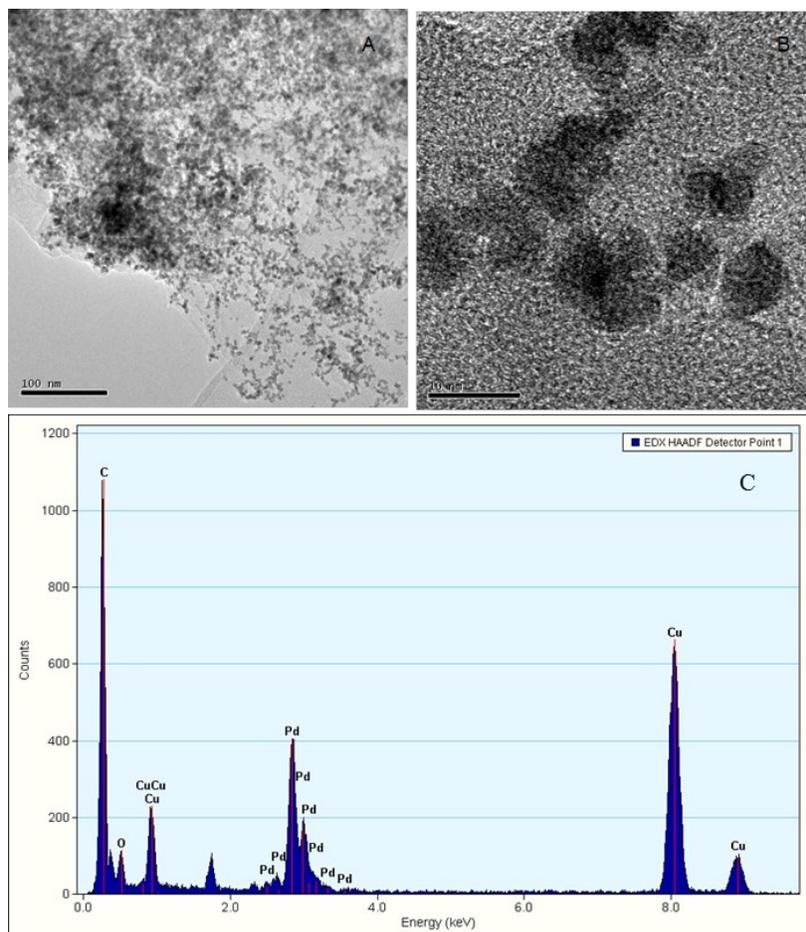


Fig. S2 (A-B) TEM micrographs of Pd/graphene at different magnifications. The scale bars: (A) 100 nm and (B) 10 nm. (C) EDS of Pd/graphene.

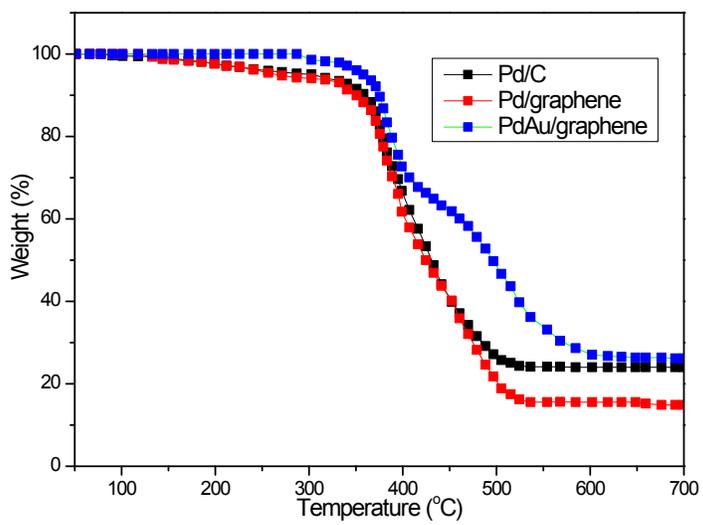


Fig. S3 Thermogravimetric analysis of PdAu/graphene, Pd/graphene and Pd/C

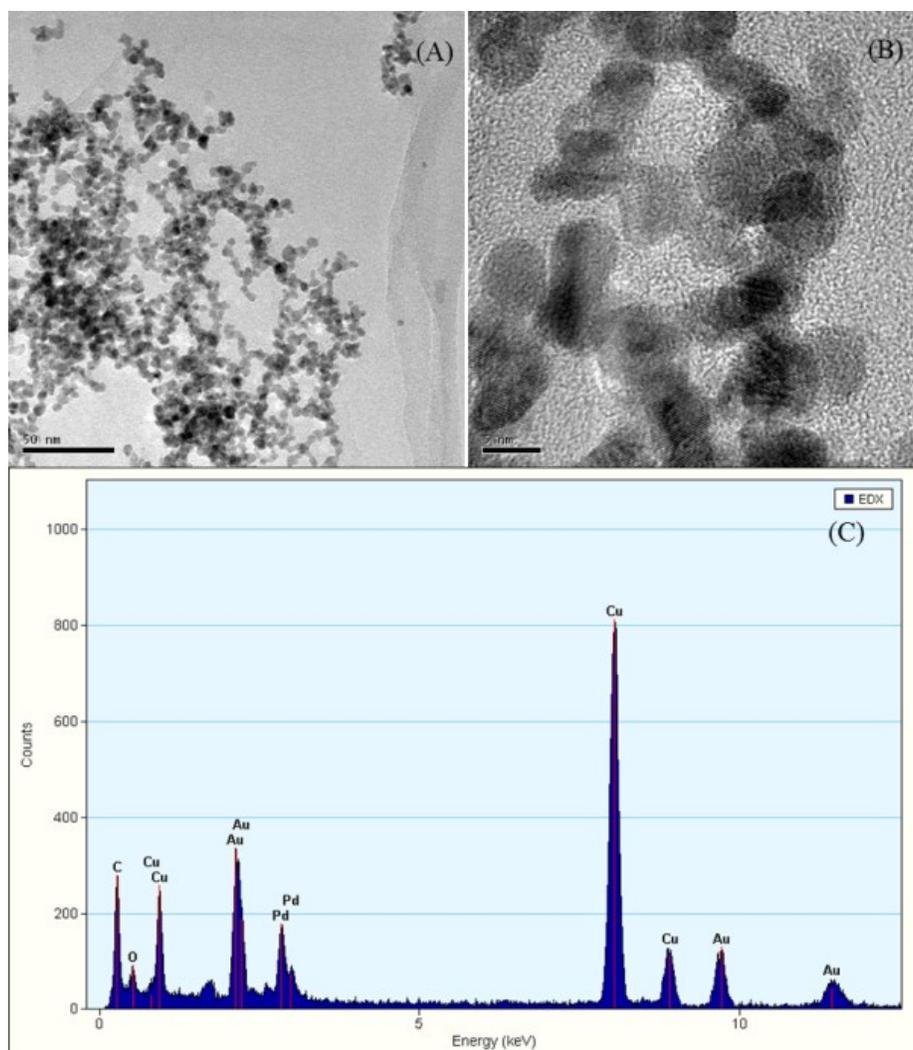


Figure S4 (A, B, C) TEM, HR-TEM and EDS of PdAu/graphene after 300 cycles of CVs in 0.5 M H₂SO₄ + 1.0 M HCOOH solution.

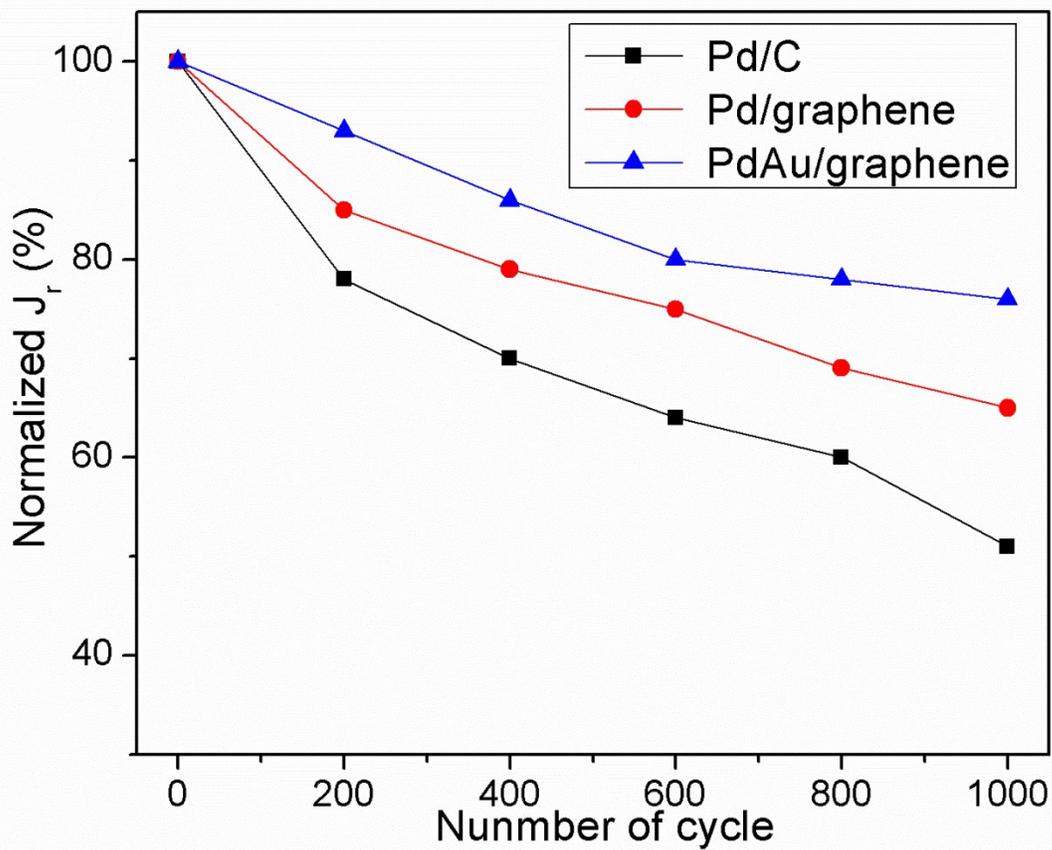


Figure S5 Loss of ECSA of PdAu/graphene, Pd/graphene and Pd/C catalysts as a function of cycling number.

Table S1 Comparison of activity for formic acid oxidation on various electro-catalysts

Catalyst	ECSA m ² g ⁻¹	Mass activity A mg ⁻¹ _{Pd}	Specific activity mA m ⁻²	Reference
PdNi film	31.9	1.39	4.36	1
Pd/Ni ₂ P/C NPs	63.6	1.43	2.25	2
Pd NWs	43.1	1.10	2.55	3
Pd/CNT	55.3	0.75	1.36	4
PdAu/C NPs	95.6	0.52	0.54	5
Pd-Co	20.2	0.27	1.34	6
Pd NWs/graphene	43.5	1.81	4.16	This work
Branched Pd-Au NWs/graphene	40.6	2.92	7.19	This work

References

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