Electronic Supplementary Material (ESI) for RSC Advances.

PtCu Bimetallic Alloy Nanotubes with Porous Surface for Oxygen Reduction Reaction

Shaofang Fu, Chengzhou Zhu, Qiurong Shi, Dan Du, Yuehe Lin**

The School of Mechanical and Materials Engineering, Washington State University, Pullman, WA 99164, USA.

Email: chengzhou.zhu@wsu.edu and yuehe.lin@wsu.edu

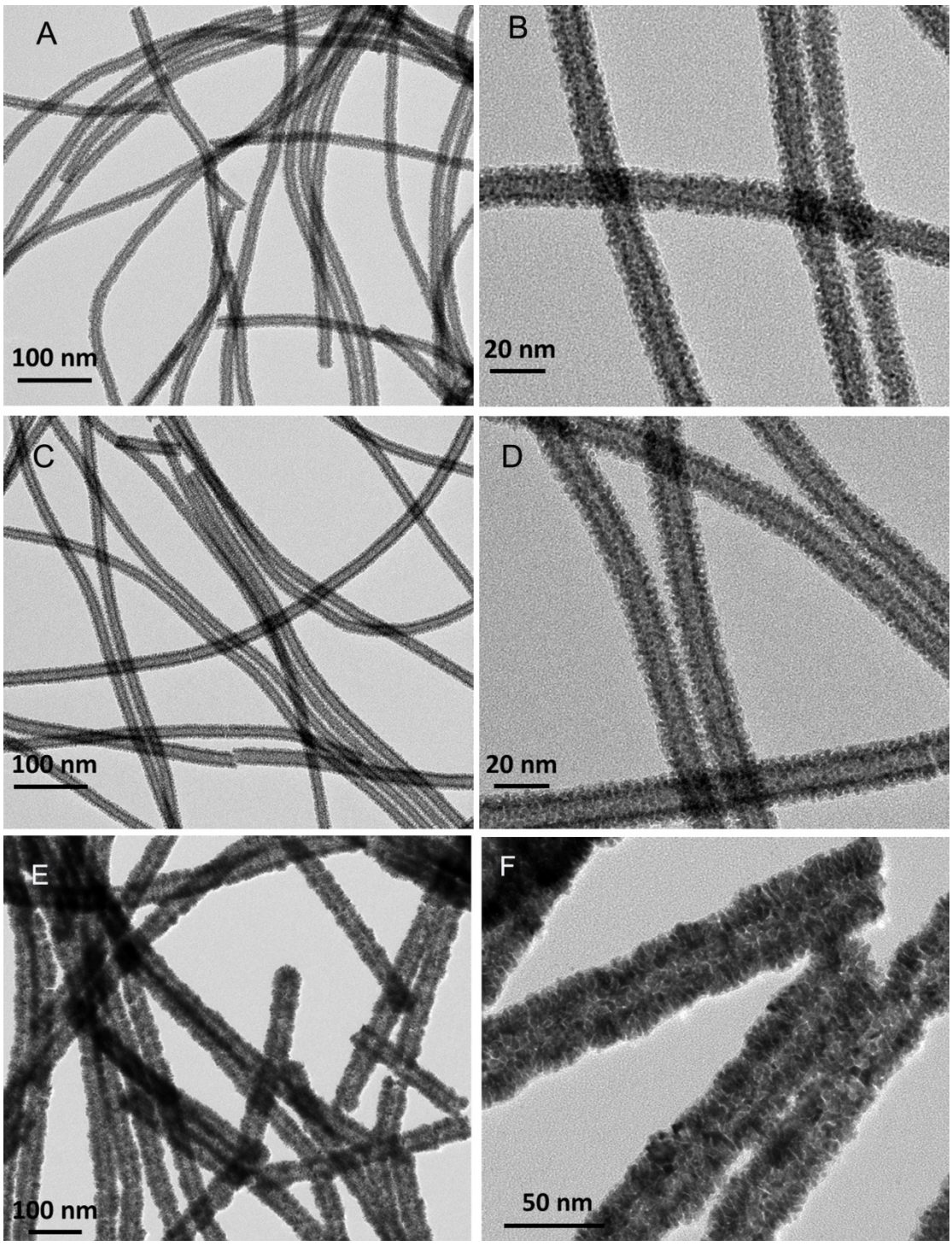

Figure S1. TEM images of $Pt_{63}Cu_{37}$ (A, B), $Pt_{82}Cu_{18}$ (C, D) BANTs, and Pt NTs (E, F).

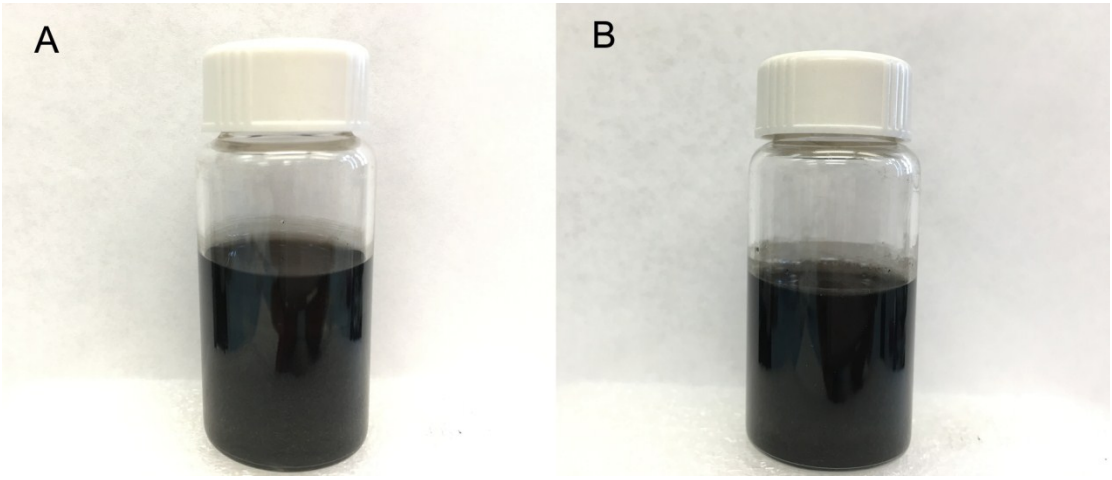

Figure S2. Digital pictures of PtCu BANTs dispersed in water (A) and ethanol (B).

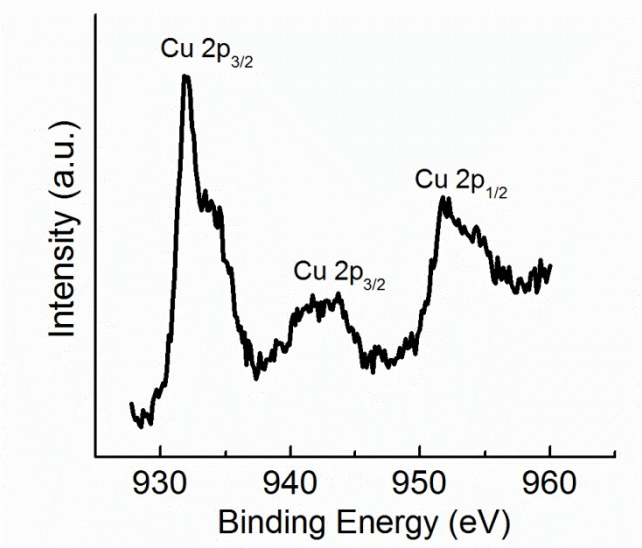

Figure S3. High resolution XPS spectrum of Cu in $Pt_{76}Cu_{24}$ BANTs.

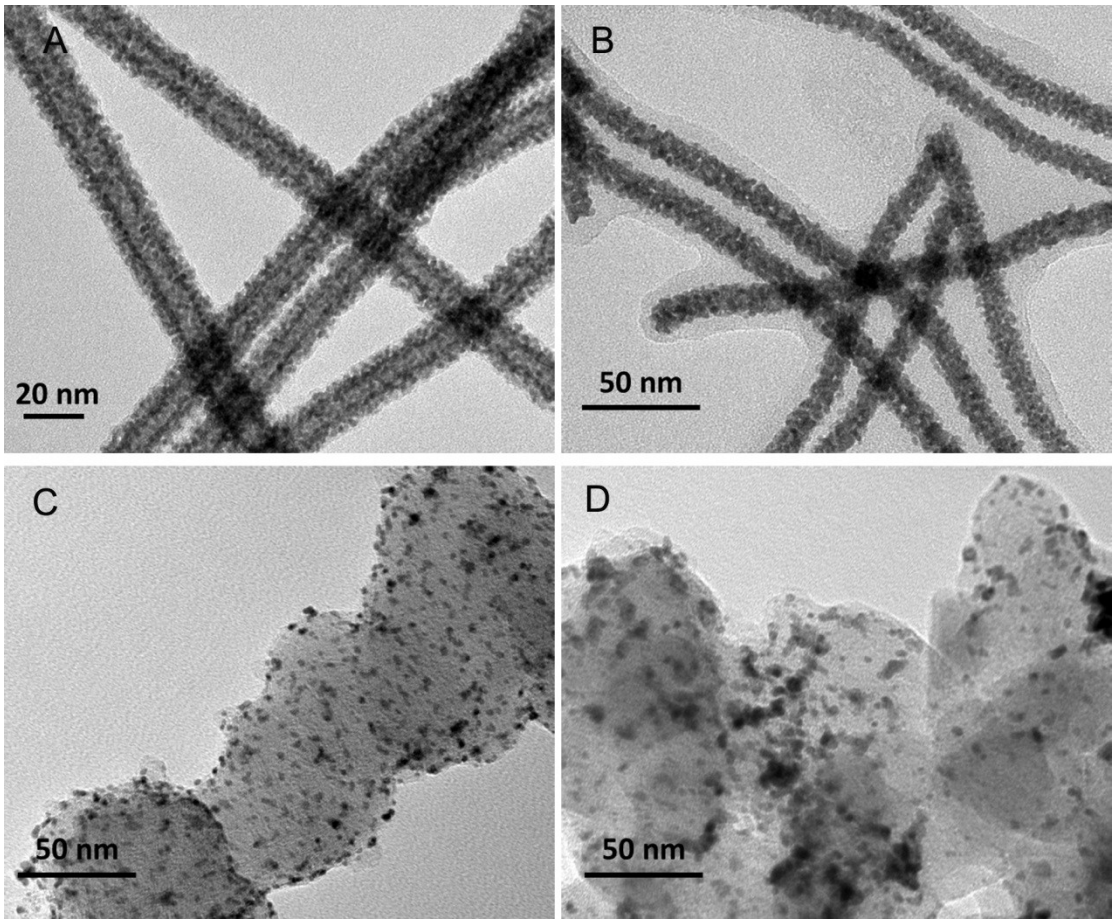

Figure S4. TEM images of $Pt_{76}Cu_{24}$ BANTs before (A) and after (B) ADT. TEM images of commercial Pt/C catalyst before (C) and after (D) ADT.

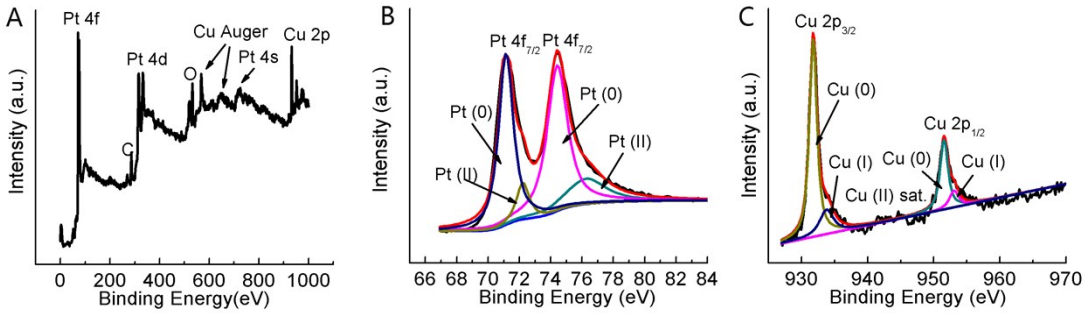

Figure S5. XPS spectrum, high resolution XPS spectra of Pt and Cu in $Pt_{76}Cu_{24}$ BANTs after ADT.