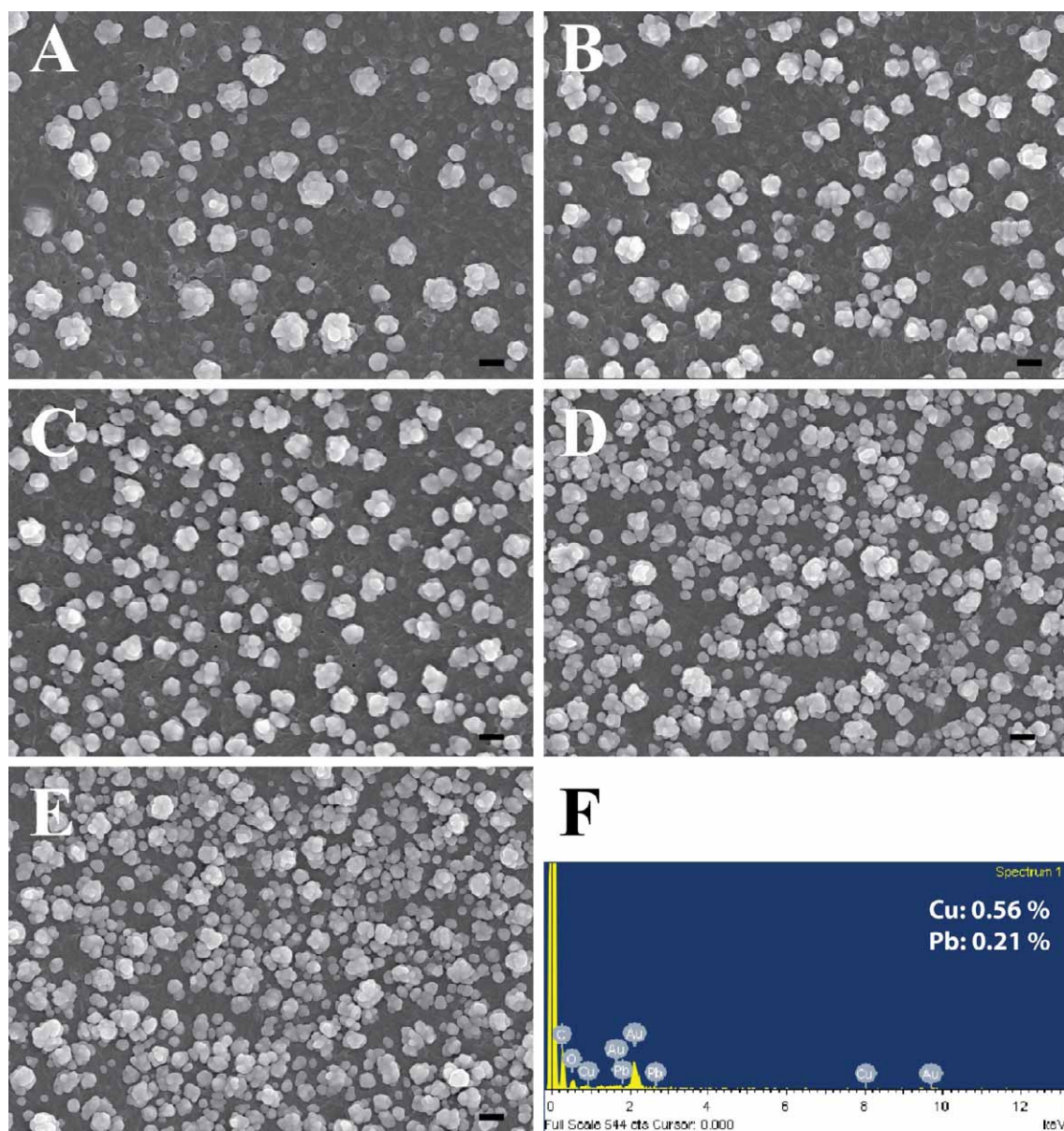


**Supporting Information**

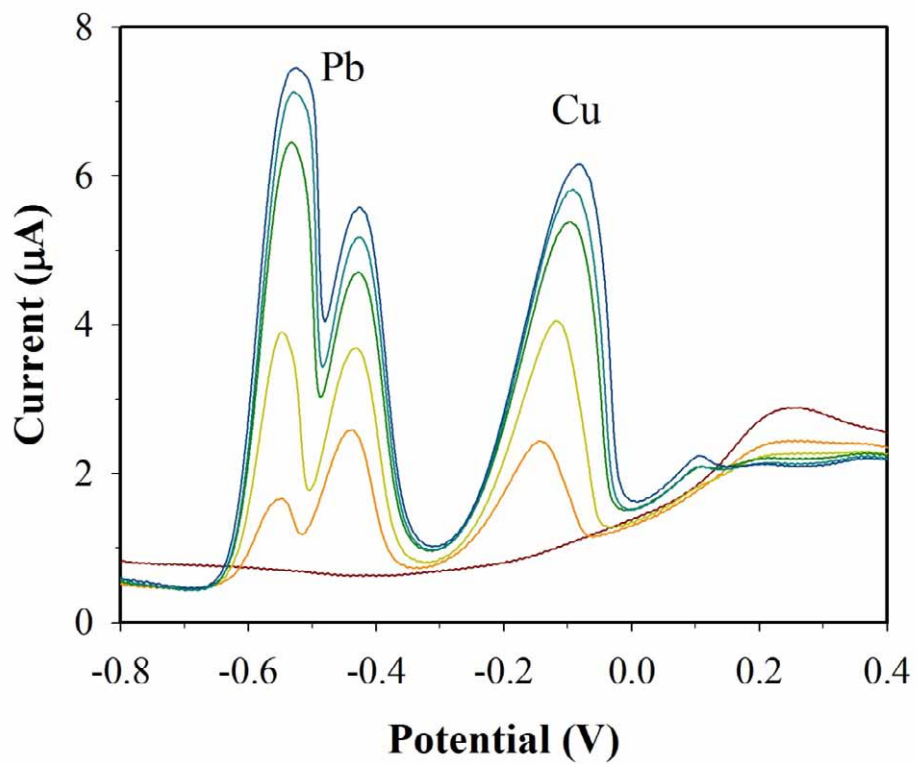
**Simultaneous detection of ultratrace lead and  
copper with gold nanoparticles patterned on  
carbon nanotube thin film**

Minh-Phuong Ngoc Bui, Cheng Ai Li, Kwi Nam Han, Xuan-Hung Pham and Gi Hun Seong\*

*Department of Bionano Engineering, Hanyang University, Ansan 426-791, South Korea*



**Fig. S1.** FE-SEM images of AuNPs electrochemically deposited on SWCNT film after (A) 2, (B) 4, (C) 6, (D) 8, and (E) 10 cyclic voltammetry cycles. (F) EDS analysis of heavy metal composition on the AuNPs-SWCNT surface after deposition (at -0.4 V, 150 s) of a  $\text{Pb}^{2+}$  and  $\text{Cu}^{2+}$  mixture with 33.1 ppb of each analyte.



**Fig. S2.** The SWSV voltammetric behavior of SWCNT film in the simultaneous detection of a Pb<sup>2+</sup> - Cu<sup>2+</sup> mixture. The stripping peak corresponding to Pb<sup>2+</sup> was split into two peaks in the presence of Cu<sup>2+</sup> ions.