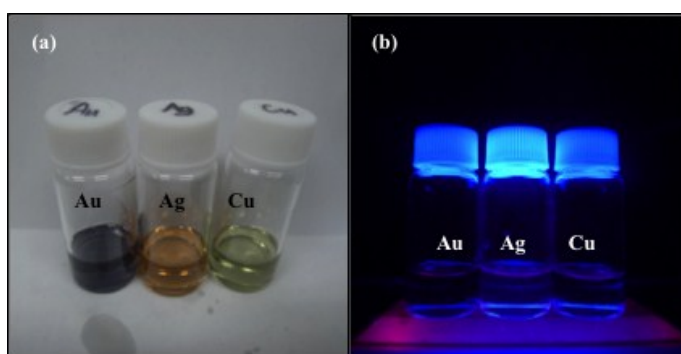


**Supplementary Information for**

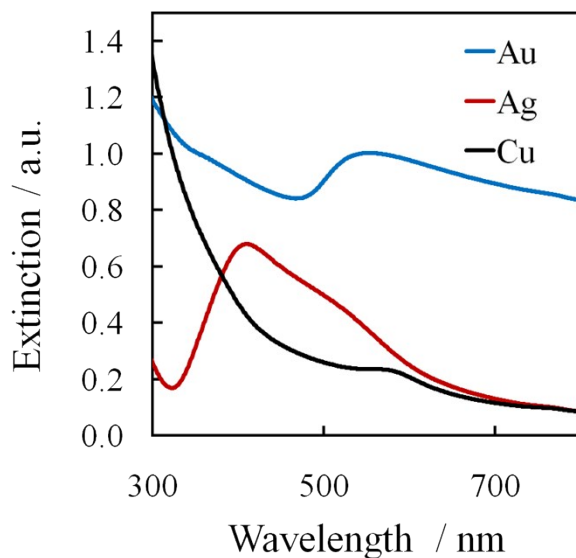
**Synthesis of Cationically Charged Photoluminescent Coinage Metal Nanoclusters  
by Sputtering over Liquid Polymer Matrix**

Ryan D. Corpuz, Yohei Ishida, and Tetsu Yonezawa\*

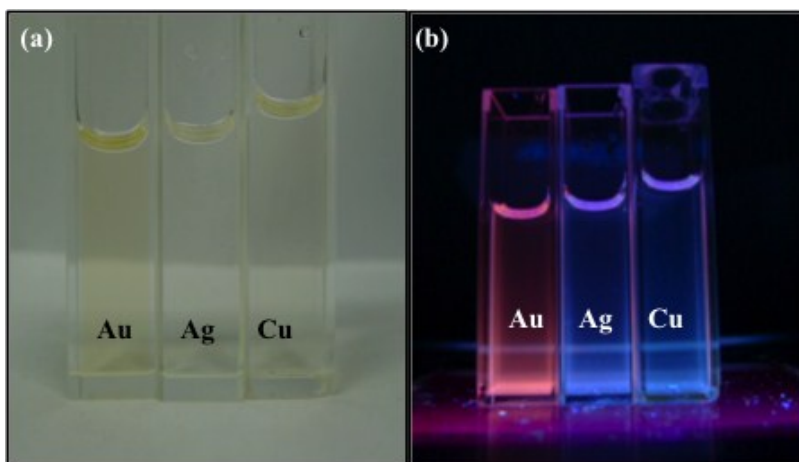
*Division of Material Science and Engineering, Faculty of Engineering, Hokkaido University,  
Kita 13 Nishi 8, Kita-ku, Sapporo, Hokkaido 060-8628, Japan.*



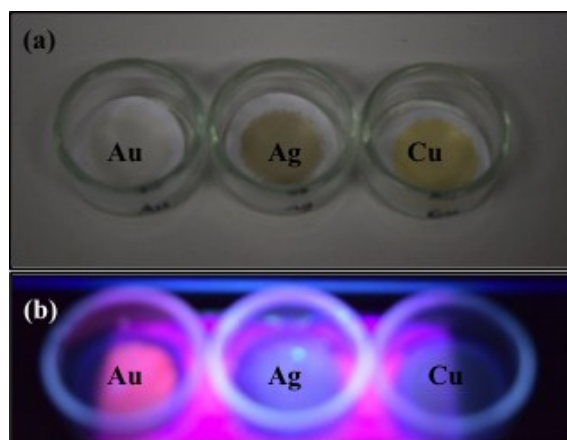
**Figure S1.** Colour of the solution of Au, Ag and Cu plasmonic nanoparticles under (a) sunlight and (b) UV-light irradiation. These plasmonic particles were surely non-photoluminescence.



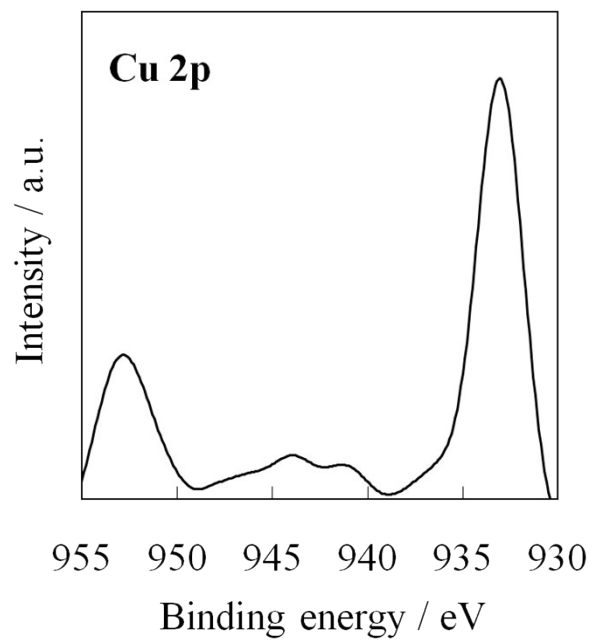
**Figure S2.** UV-Vis extinction spectra of the synthesized plasmonic Au, Ag and Cu nanoparticles in PEG in the absence of MUTAB ligand.



**Figure S3.** Colour of Au, Ag and Cu nanoclusters in PEG with MUTAB: (a) under sunlight and (b) under UV light irradiation.



**Figure S4.** Colour of filtrate after filtration using 0.2  $\mu\text{m}$  hydrophobic PTFE filter: (a) under sunlight and (b) under UV light irradiation.



**Figure S5.** XPS spectra of photoluminescent Cu nanocluster at Cu 2p region.