Supporting information

Tailoring the Stability, Photocatalysis and Photoluminescence Properties of Au_{11} Nanocluster *via* Doping Engineering

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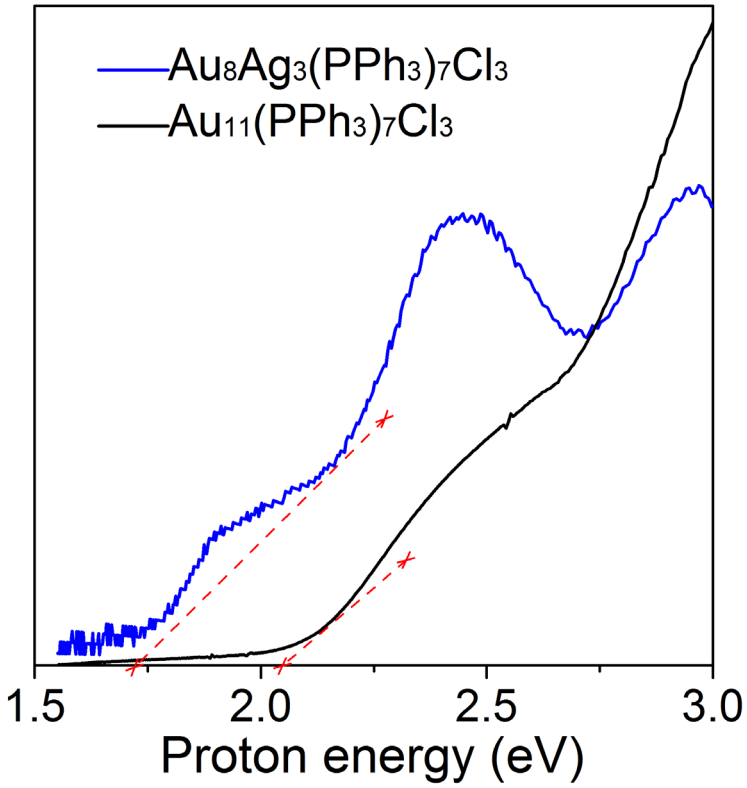

Figure S1. The optical energy gap of the $Au_8Ag_3(PPh_3)_7Cl_3$ and $Au_{11}(PPh_3)_7Cl_3$ cluster

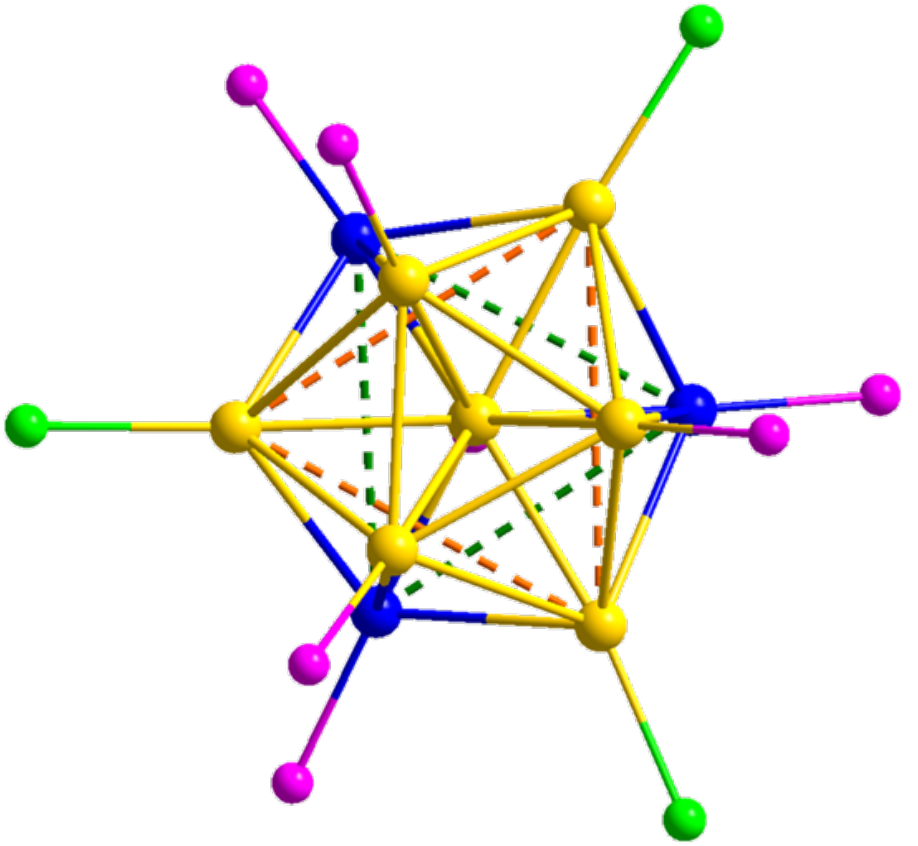

Figure S2. Structure of the β-$Au_8Ag_3(PMe_3)_7Cl_3$ mode. Color code: Au, orange; Ag, blue; P, purple; Cl, green.

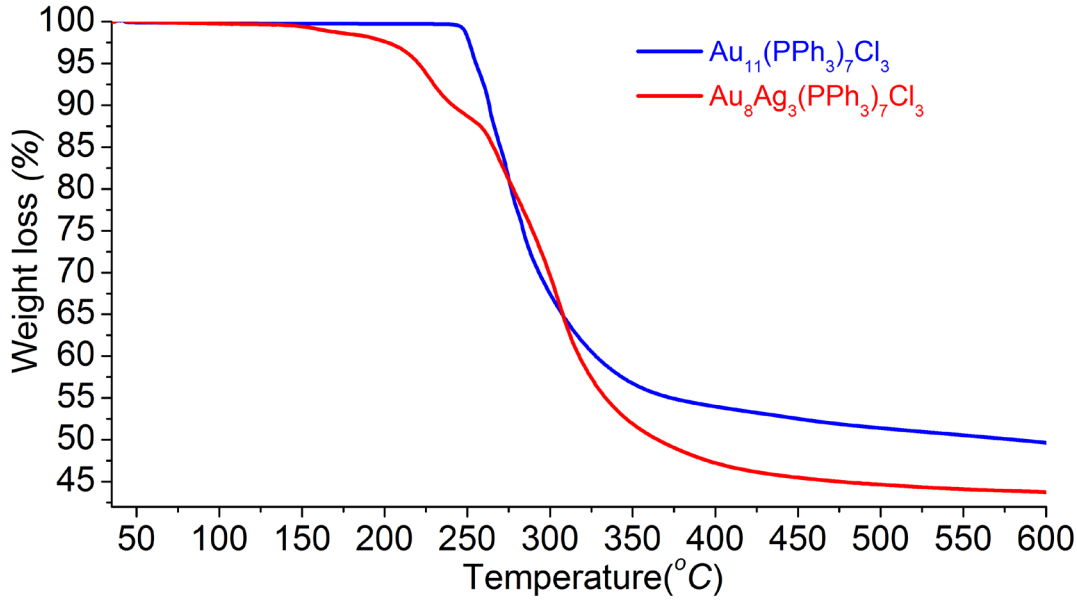

Figure S3 TGA of $Au_8Ag_3(PPh_3)_7Cl_3$ alloy nanocluster and $Au_{11}(PPh_3)_7Cl_3$ nanocluster