

Supplementary Information for

**Assembly of Nanoions via Electrostatic Interactions: Ion-Like Behavior of
Charged Noble Metal Nanoclusters**

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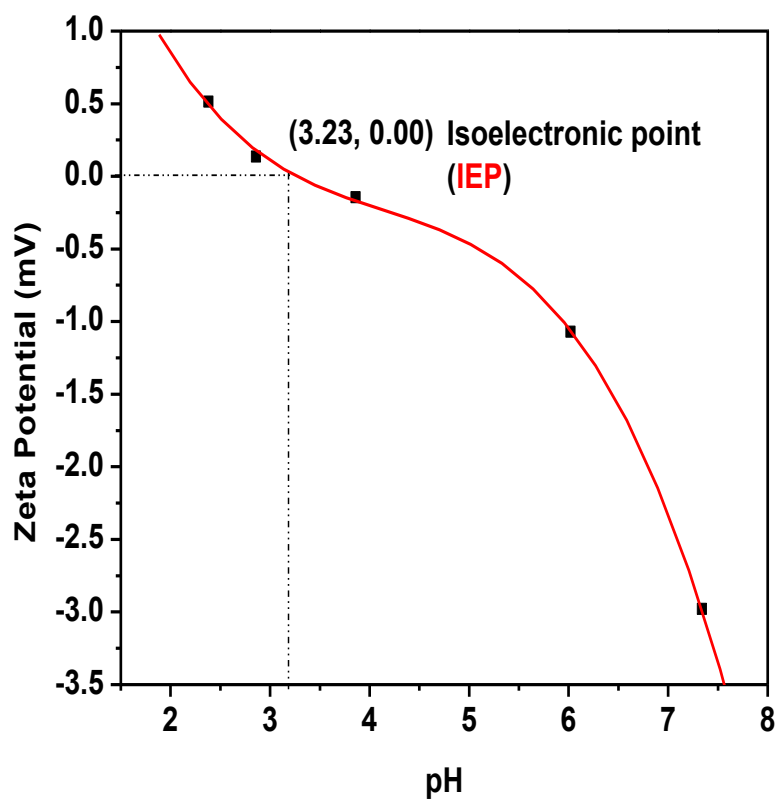


Figure S1 pH dependence of the ζ -potential of orange-emitting Au NCs. The isoelectric point (IEP) of the Au NCs was estimated to be 3.23.

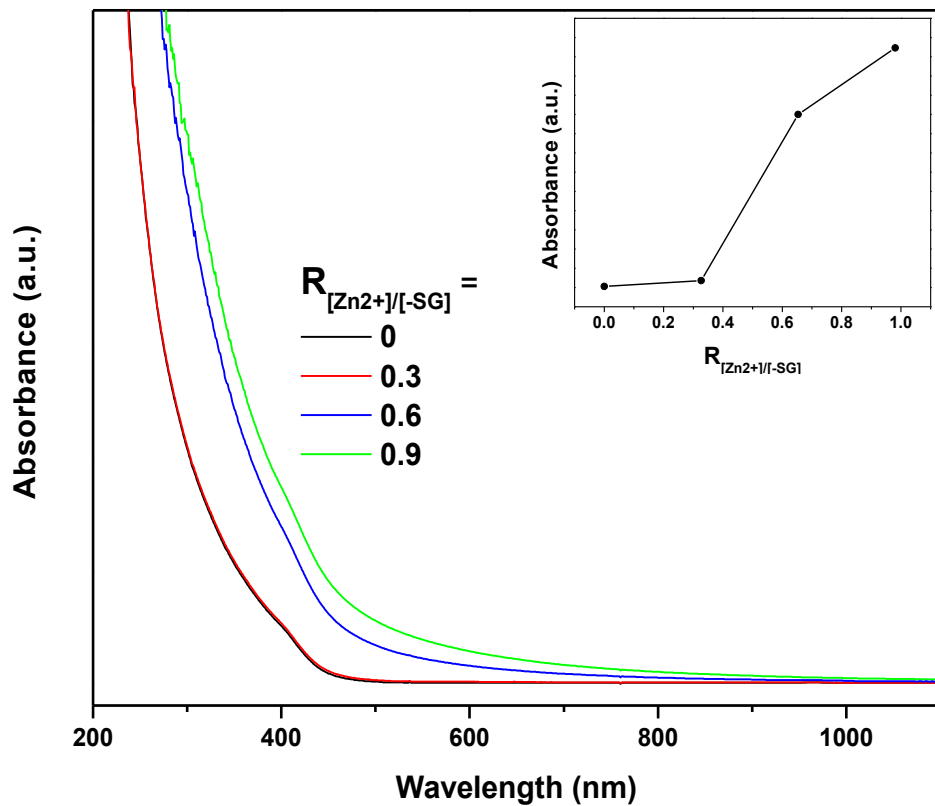


Figure S2 UV-vis absorption spectra of Au NCs assembled at different $R_{[Zn^{2+}]/[-SG]}$ values; the inset shows the absorbance at 400 nm as a function of $R_{[Zn^{2+}]/[-SG]}$.

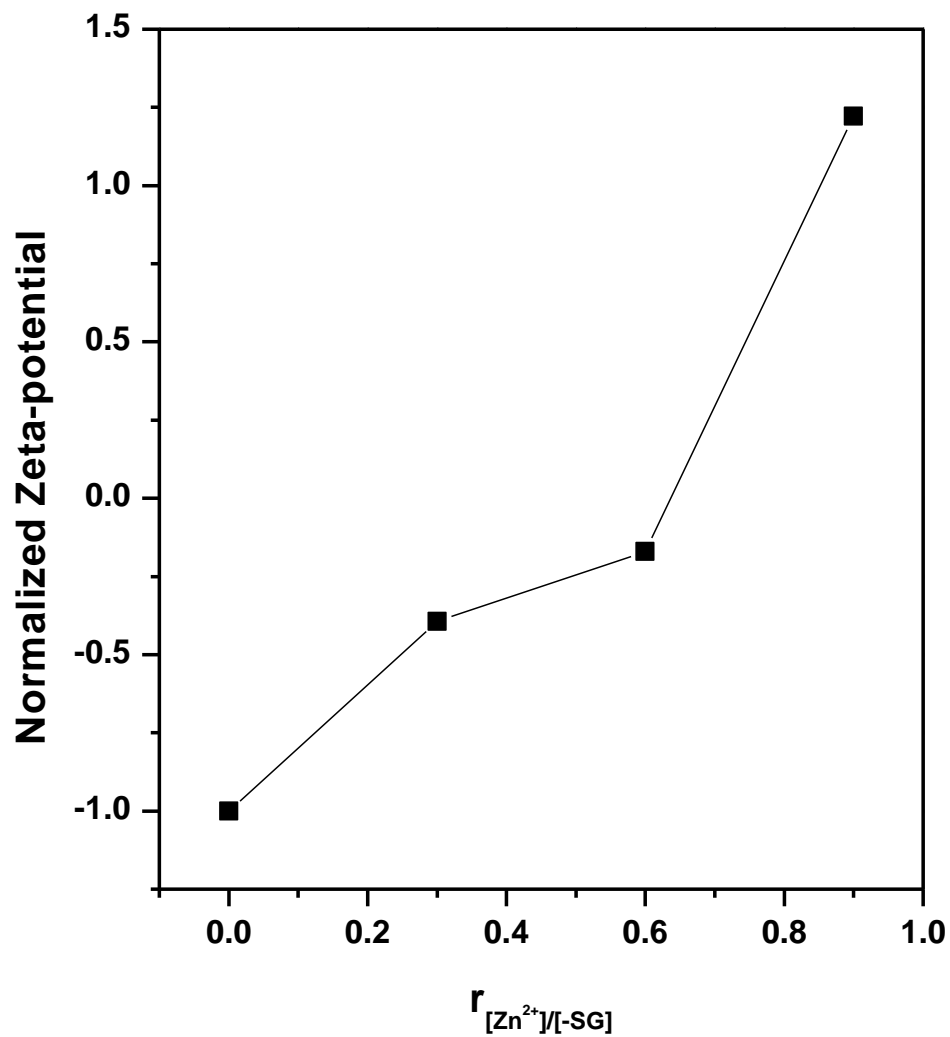


Figure S3 ζ -potential of Au NCs assembled under different $R_{[Zn^{2+}]/[-SG]}$ values. The ζ -potential at $R_{[Zn^{2+}]/[-SG]} = 0$ was arbitrarily set at -1 for ease of comparison.

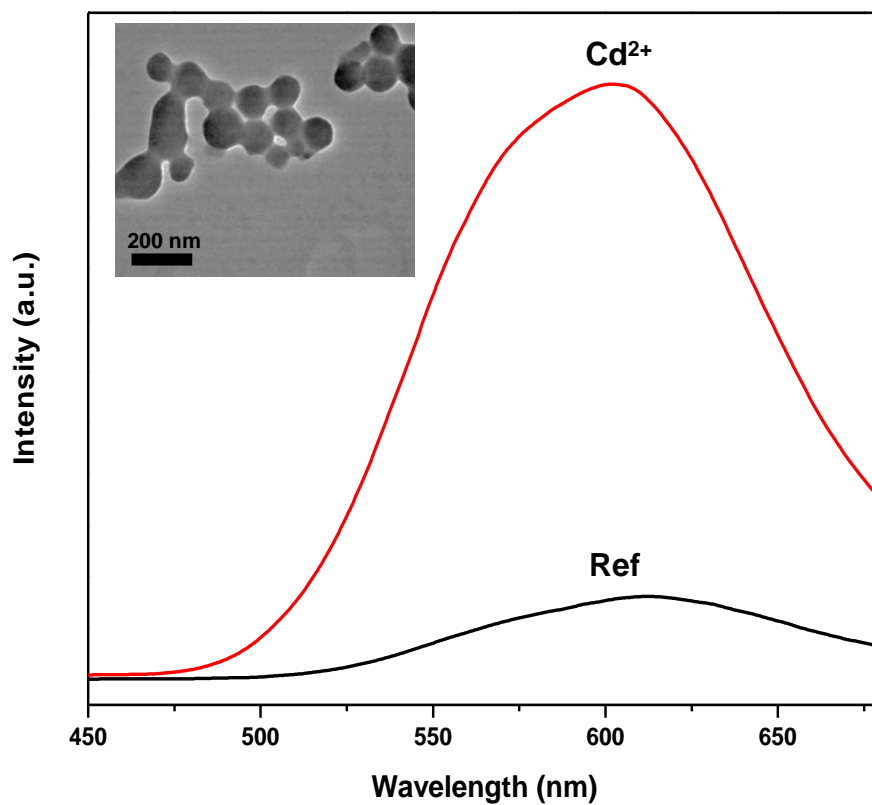


Figure S4 Photoemission spectrum (after excitation at 365 nm) of Au NCs assembled by Cd²⁺ (red lines) with corresponding TEM image shown as an inset. The black line corresponds to Au NCs without Cd²⁺.

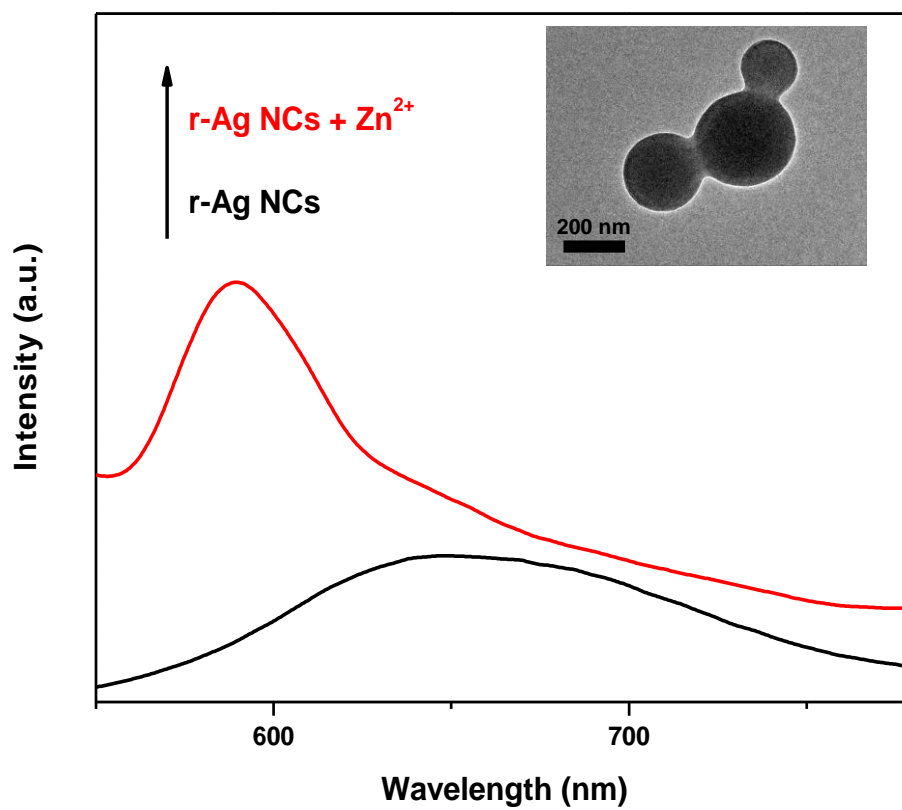


Figure S5 Photoemission spectrum (after excitation at 440 nm) of red-emitting Ag NCs assembled by Zn²⁺ (red lines) with the corresponding TEM image shown as an inset. The black line corresponds to Ag NCs without Zn²⁺.