Electronic Supplementary Material (ESI) for RSC Advances.

Metal nanoparticle catalyzed charge rearrangement in selenourea probed by surface-enhanced Raman scattering

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Supplementary Information

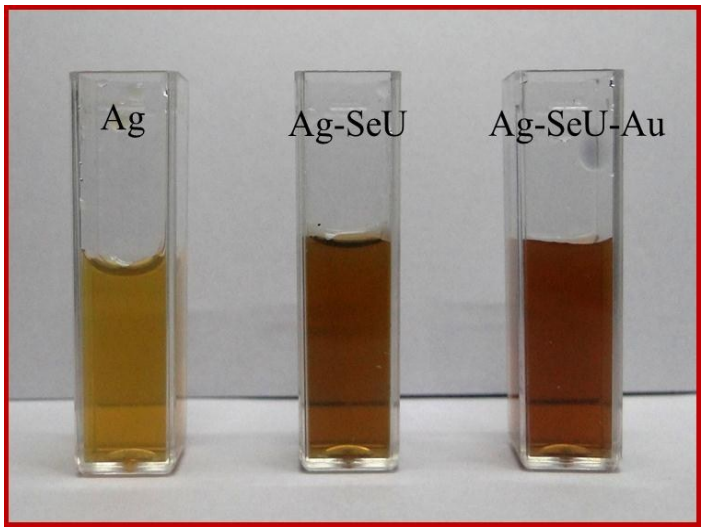

Figure S1. Colour changes in 1mM Ag NPs after addition of 0.2 mM SeU (Ag-SeU) and 150 μM Au NPs (Ag-SeU-Au).

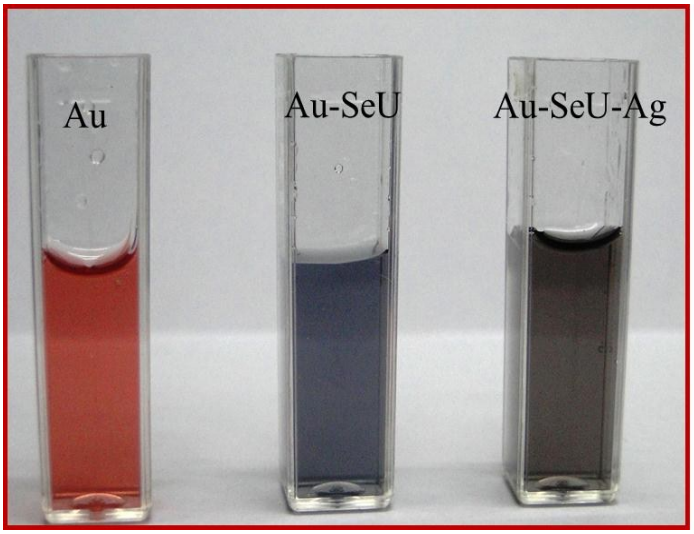

Figure S2. Colour changes in 0.1 mM Au NPs after addition of 0.2 mM SeU (Au-SeU) and 150 µM Ag NPs (Au-SeU-Ag).

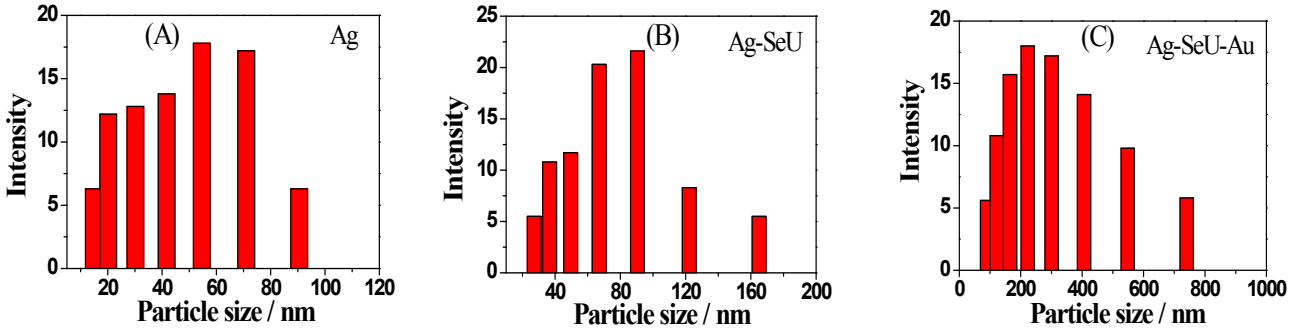

Figure S3. Particle size distribution of (A) Ag, (B) Ag-SeU and (C) Ag-SeU-Au NPs obtained from DLS measurements.

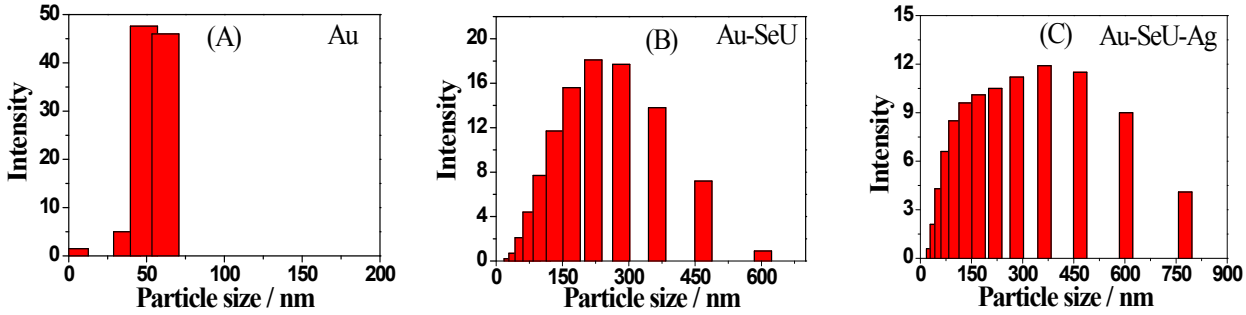

Figure S4. Particle size distribution of (A) Au, (B) Au-SeU and (C) Au-SeU-Ag NPs obtained from DLS measurement.

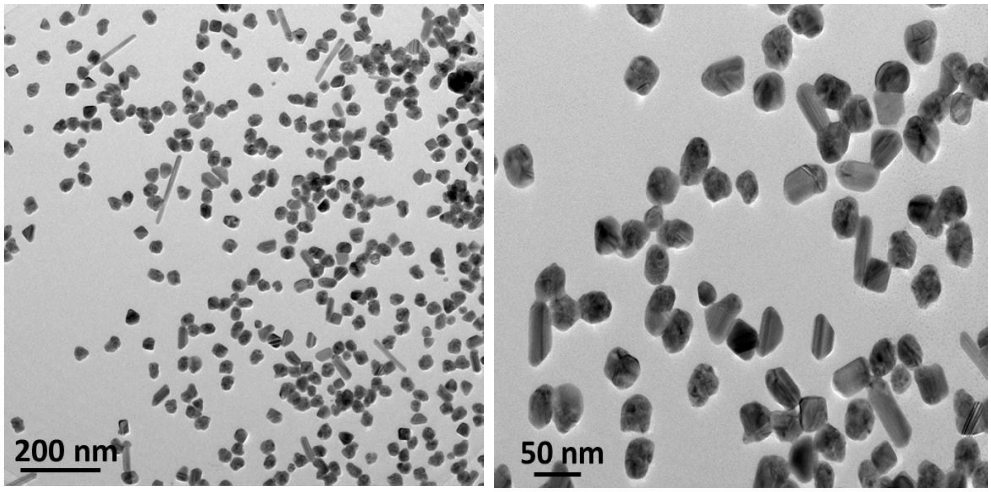

Figure S5. TEM images of the Ag NPs**.**

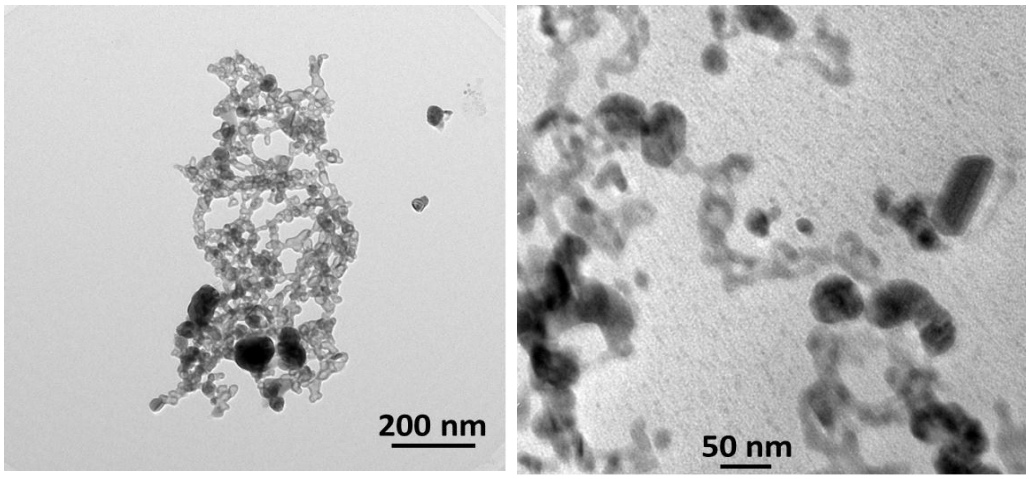

Figure S6. TEM images of the Ag-SeU NPs.

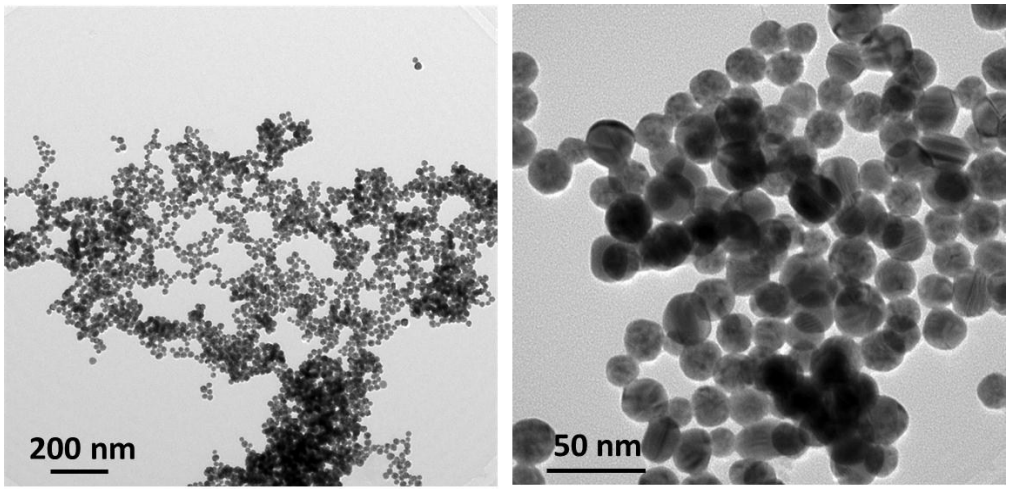

Figure S7. TEM images of the Au-SeU NPs.

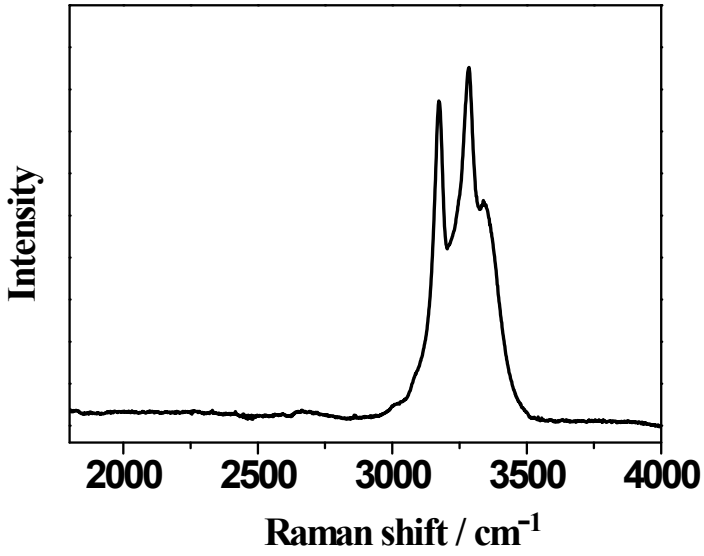

Figure S8. Normal Raman spectrum of solid SeU in higher frequency region by using 514 nm laser lines with 30 sec acquisition time.

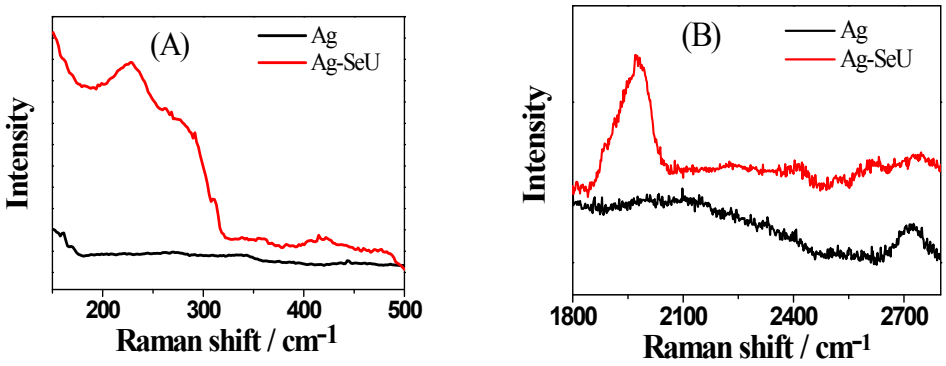

Figure S9. SERS spectrum of Ag and Ag - SeU NPs at 514 nm laser lines (A) 150-500 cm^{-1} (100 sec acquisition time) & (B) 1800- 2800 cm^{-1} (500 sec acquisition time)

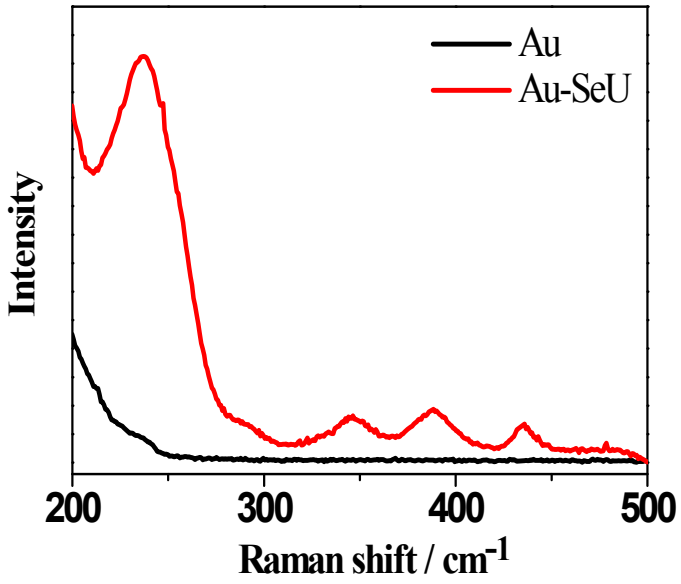

Figure S10. SERS spectrum of Au NPs and Au -SeU NPs in the low frequency region by using 785 nm laser lines with acquisition time 100 sec.

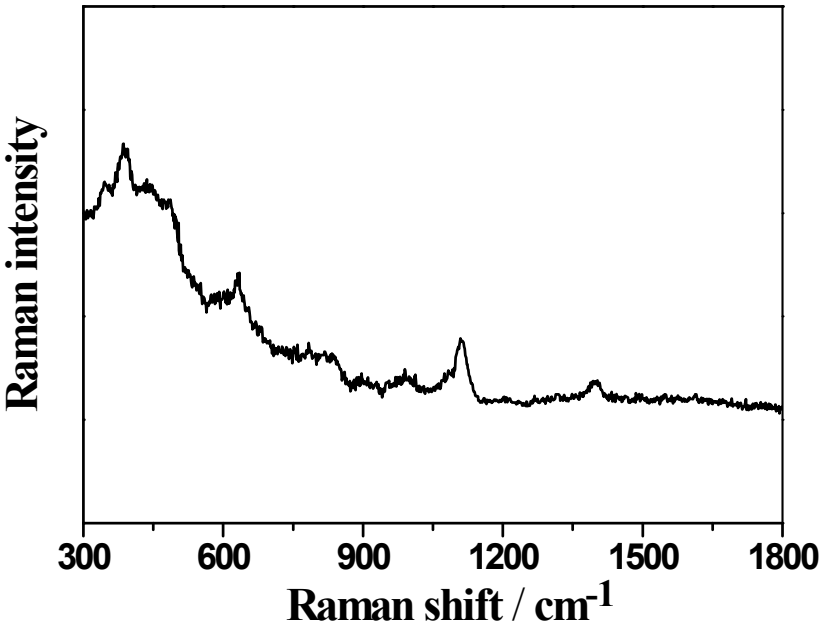

Figure S11. SERS spectrum of Au-SeU recorded at 633 nm laser excitation with 500 sec acquisition time. Laser power on the sample was 40 mW.

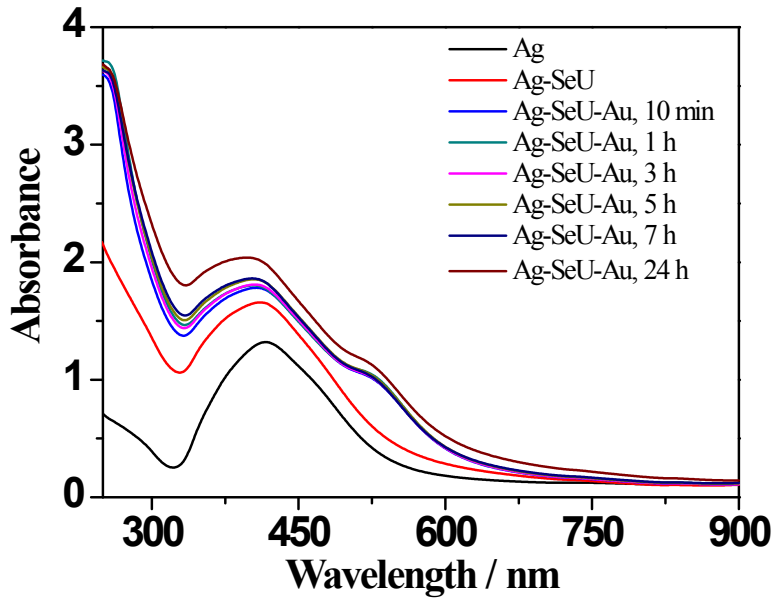

Figure S12. Time dependent UV-Visible absorption spectrum of Ag-SeU-Au nanoassembly.

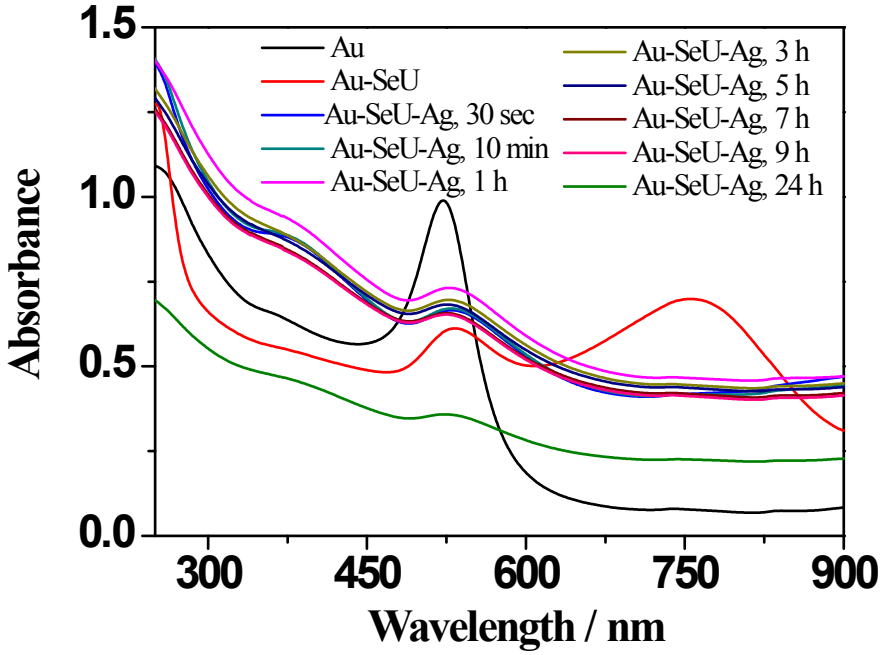

Figure S13. Time dependent UV-Visible absorption spectrum of Au-SeU-Ag nanoassembly.

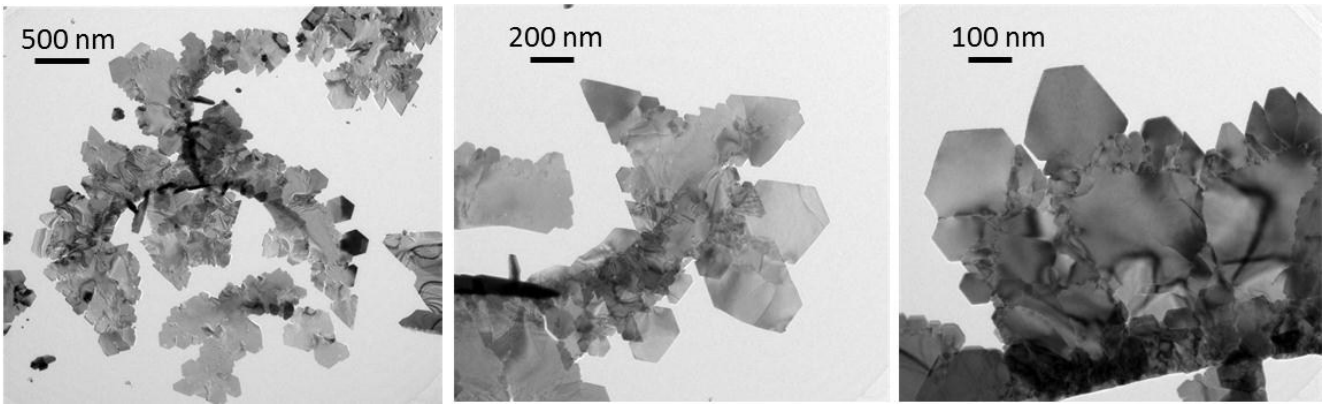

Figure S14.TEM images of the Ag-SeU-Au nanoassembly.