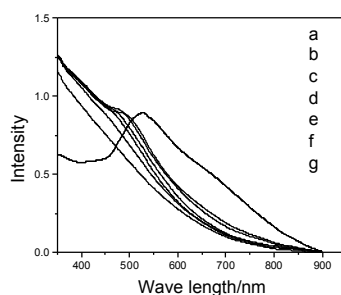


Electronic Supplementary materials

Room temperature synthesis of coinage metal (Ag, Cu) chalcogenides

Snigdhamayee Praharaj, Sudip Nath, Sudipa Panigrahi, Soumen Basu, Sujit Kumar Ghosh, Surojit Pande, Subhra Jana and Tarasankar Pal*

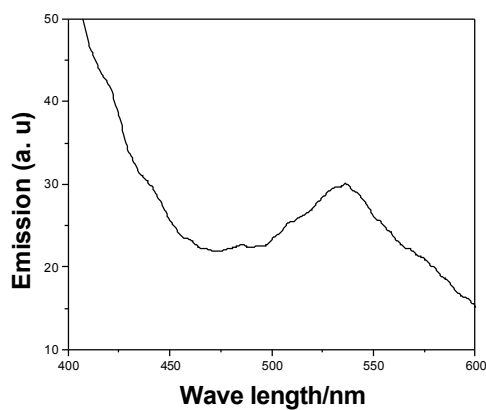
ESI 1. UV-vis spectra



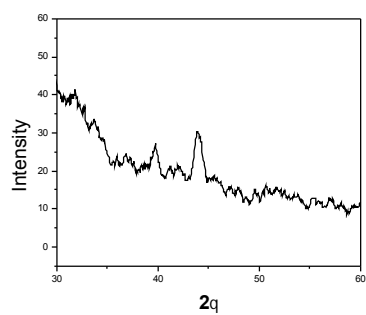
UV-vis spectra of formation of Cu_2Se (a) surface plasmon absorption band of Cu, (b) after mixing with Se and standing (c) 1 hr (d) 2 hr (e) 3 hr (f) 4 hr (g) 5 hr.

ESI 2. Photoluminescence spectra.

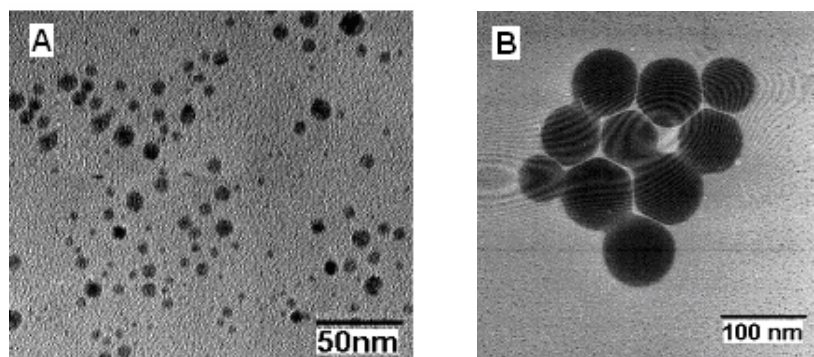
Photoluminescence spectra of Ag_2Se were recorded with an excitation wavelength of 370 nm at room temp. From the emission spectra at 535 nm the calculated band gap is 2.32 eV.



ESI 3. X-ray diffraction pattern Cu_2Se

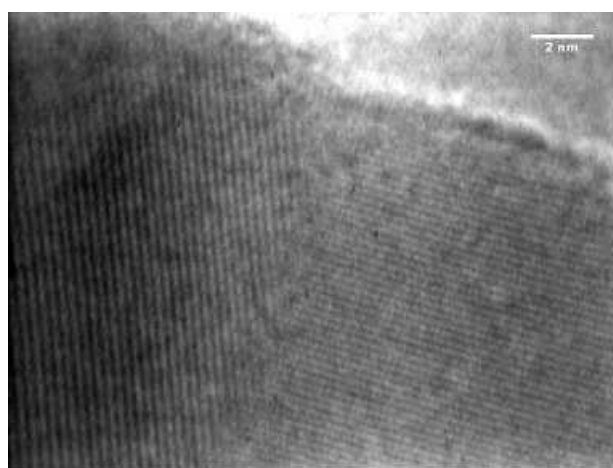


ESI 4. TEM images



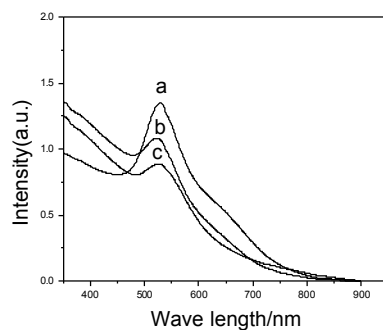
TEM images of (A) Ag (B) Se

ESI 5. HRTEM image



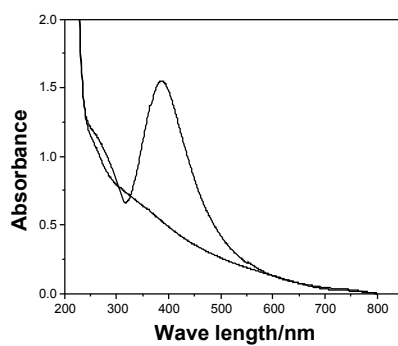
HRTEM image of Ag_2Se (3:1)

ESI 6. UV-vis spectra



UV-vis spectra of gold selenium interaction (a) surface plasmon absorption band of Au, (b) after mixing with Se and (c) after standing the mixture for 5 hrs.

ESI 7. Effect of Heat.



UV-vis spectra of the mixture of silver and selenium nanoparticles (a) before heating (b) after heating 30 mins.