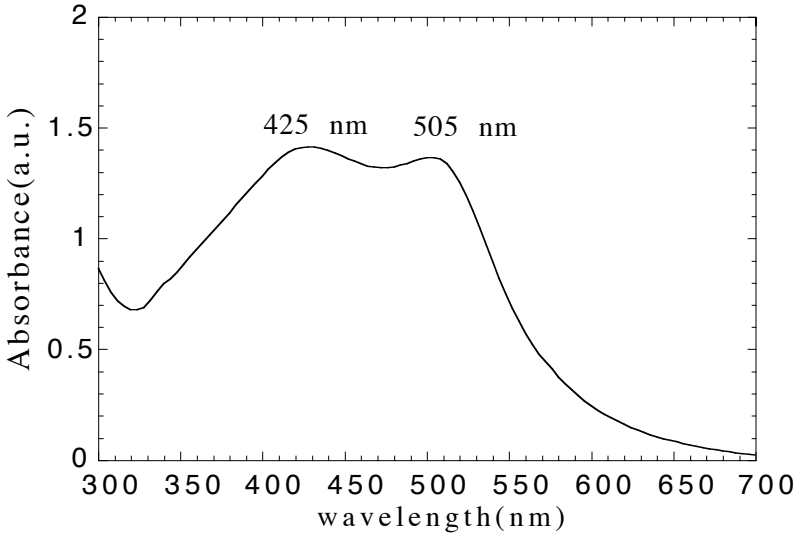


Figure 1S. The effect of simultaneous reduction of a 1:1 mixture of $Ag(NO_3)$ and $HAuCl_4$ by $LiBH_4$ in a non-ionic inverse micelle in octane on the solution absorbance properties.

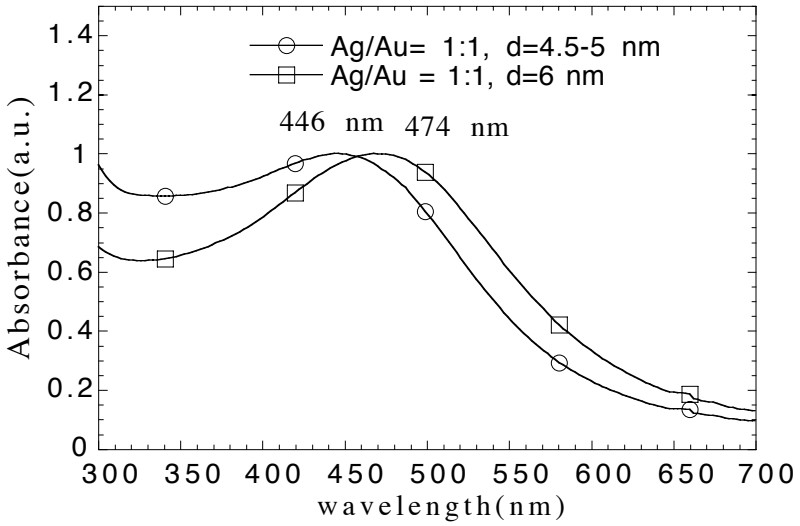


Figure 2S. The effect of sequential deposition of Au on Ag nanocluster seeds with D=4.0 nm, is compared to that of Ag deposited onto D=5.4 nm Au seeds. Both cluster compositions are Au:Ag = 1:1.

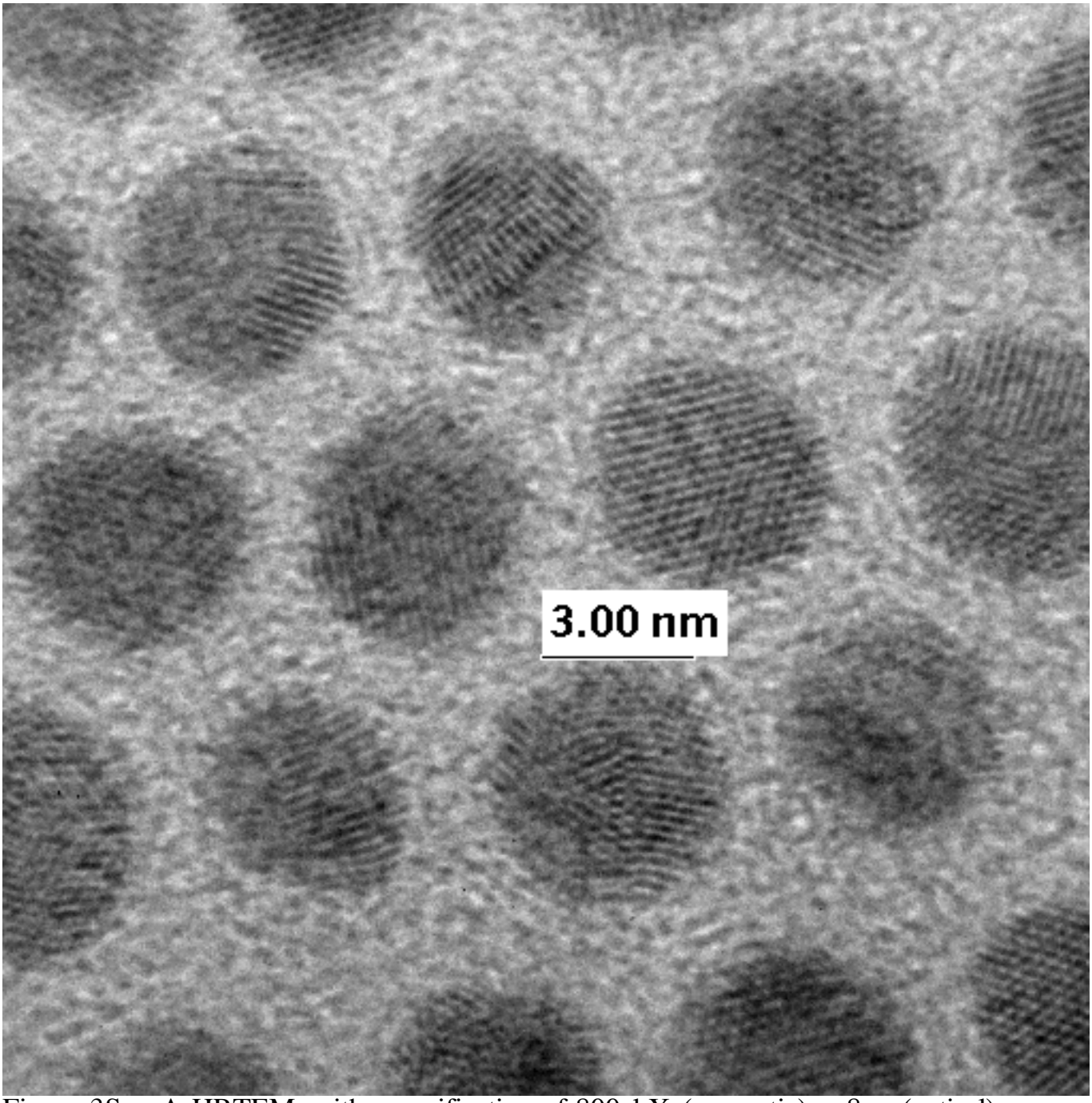


Figure 3S. A HRTEM, with magnification of 800 kX (magnetic) x 8 x (optical), Au clusters, D=4.0 nm, with Ag deposited onto them (see figure 2S). The lattice fringes of each particle can be easily seen. The total Ag shell thickness should be about 1 nm if all the material is deposited onto the Au seeds.