

Synthesis of Fluorescent Ag₈ Clusters

Synthesis of fluorescent Ag₈ nanoclusters surrounding a Ag nanoparticle shell

The procedure described in detail below is taken from the following publications. If this procedure is followed, please cite appropriately.

Bimalendu Adhikari and Arindam Banerjee, *Chem. Mater.* **2010**, 22, 4364–4371.

Chen, W.-T.; Hsu, Y.-J.; Kamat, P. V. *J. Phys. Chem. Lett.* **2012**, 3, 2493-2499.

<http://pubs.acs.org/doi/full/10.1021/jz300940c#cor1>

1. Take 104 mg of lipoic acid and 18.4mg of NaBH₄ mix with 5 ml of H₂O sonication for 30 minutes then get light yellowish DHLA solution.
2. Add 2ml of 0.1M AgNO₃ into DHLA solution, you should see yellowish precipitate (Ag-DHLA complex).
3. Take 2ml of Ag-DHLA complex then add fresh prepared 15mg of NaBH₄ in 2 ml H₂O solution. After 6 hours the solution color from brown turn into bright orange indicates Ag₈ cluster formation.