Supporting Information

## Importance of Double-Resonance Effects in Two-Photon

## Absorption Properties of $Au_{25}(SR)_{18}^{-}$

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TPA cross sections on a per gold atom basis as a function of the cluster size

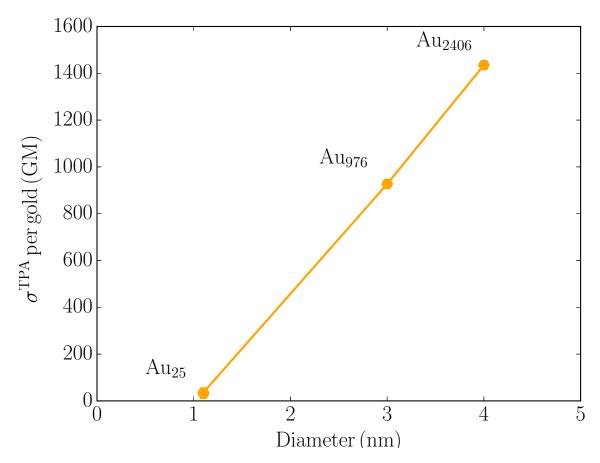


Figure 1: TPA cross section on a per atom basis for three different gold species. The values for the  $Au_{25}(SH)_{18}^{-}$  cluster is based on simulations while those for the  $Au_{976}$  and the  $Au_{2406}$  nanoparticles were obtained using the experimental data from Ref. 1.

## References

 Ramakrishna, G.; Varnavskit, O.; Kim, J.; Lee, D.; Goodson, T. Quantum-Sized Gold Clusters as Efficient Two-Photon Absorbers. J. Am. Chem. Soc. 2008, 130, 5032.