

## Effects of Irregular Bimetallic Nanostructures on the Optical Properties of Photosystem I from *Thermosynechococcus elongatus*. *Photonics* 2015, 2, page range

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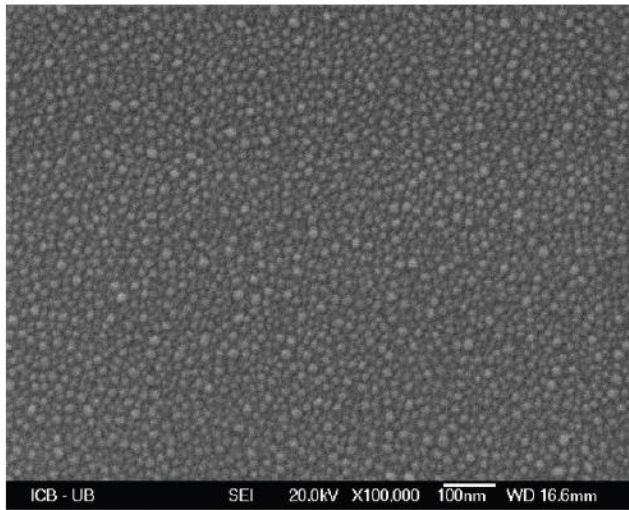
### SEM Images and Detail about Particle Size Distributions

The SEM images of the Ag/Au and Au/Au sample are shown in Figure S1a and Figure S2a, respectively. Details about the fabrication of these nanostructures are given in Reference. (Khaywah, *et al.*, 2015). The size of the particles is different in both of the samples. For Ag/Au, the average size of the particles is  $\approx 18$  nm and the standard deviation of the particle's size distribution is 6.4 nm. In total 1339 particles correspondent to the SEM image are measured for Ag/Au sample.

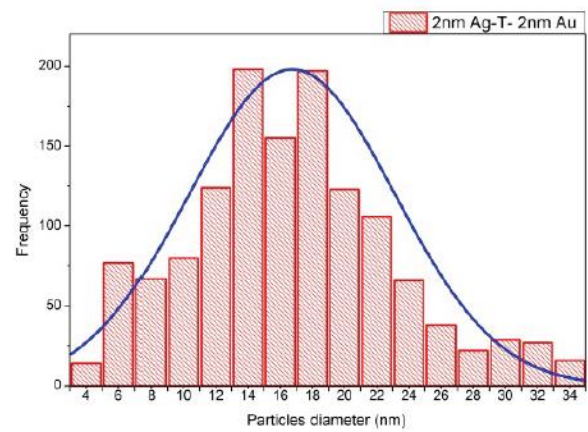
The particle size distribution for Ag/Au sample is given in Figure S1b. The information about the size of the particles of Ag/Au sample is given in Table S1.

Figure S2a shows the SEM image for Au/Au sample where in total 1501 particles are measured. The average size of the particles is  $\approx 19$  nm with standard deviation of 6.1 nm. The size distribution of the particles is demonstrated in Figure S2b. Detailed information about the size of the particles of sample Au/Au is given in Table S2.

(a)



(b)



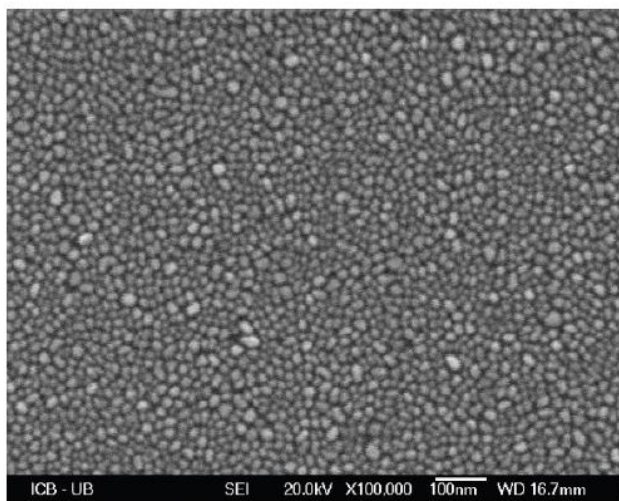
**Figure S1.** (a) SEM image of Ag/Au substrate (b) SEM Image based size distribution of the Ag/Au nanoparticles.

**Table S1.** Particle size distribution of Ag/Au sample.

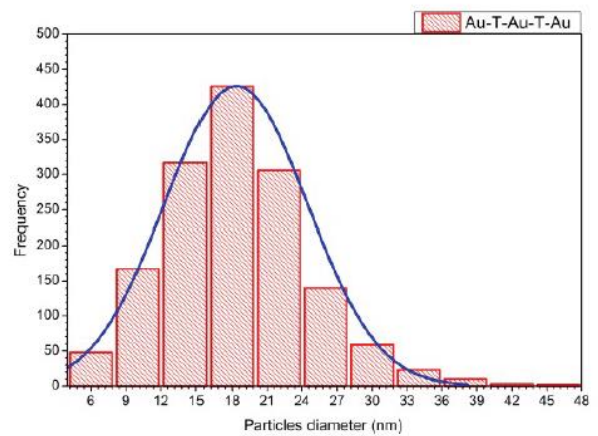
*Statistics on Columns (7/9/2015 13:13:12)*

	N total	Mean	Standard Deviation	Sum	Minimum	Median	Maximum
A	1339	17.73432	6.38481	23746.25231	5.70563	17.37726	35.63172

(a)



(b)



**Figure S2.** (a) SEM image of Au/Au substrate (b) size distribution correspondent to the SEM image of the Au/Au sample.

**Table S2.** Particle size distribution of Au/Au sample.

Statistics on Columns (7/9/2015 13:08:41)

+ Notes							
+ Input Data							
- Descriptive Statistics							
	N total	Mean	Standard Deviation	Sum	Minimum	Median	Maximum
F	1501	18.37348	6.09713	27578.59985	5.67901	18.20454	47.12597

## Works Cited

Khaywah, M.Y.; Jradi, S.; Louarn, G.; Lacroute, Y.; Toufaily, J.; Hamieh, T.; Adam, P.M. Ultra stable, uniform, reproducible and highly sensitive random arrays of bimetallic nanoparticles as reliable large scale SERS substrates. *J. Phys. Chem. C* **2015**, under review.

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