

Article

Synthesis of Gold Functionalised Nanoparticles with the *Eranthis hyemalis* Lectin and Toxicological Studies on *Caenorhabditis elegans*

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1. Gold (0) concentration in colloid precursor.

Concentration of Gold(0) in the colloid precursor was obtained by UV-Vis measurements at $\lambda = 400$ nm [1,2,3]. For this wavelength, the absorption is mainly due to interband transitions in metallic gold [4,5,6]. We applied a 1:10 dilution to the colloidal solution to obtain the UV-Vis spectroscopic profile, obtaining an $Abs_{400} = 0.19$, corresponding to concentration of $[Au(0)] = 0.08$ mM. Therefore the precursor colloid used for the protein conjugation presented a concentration of 0.8 mM.

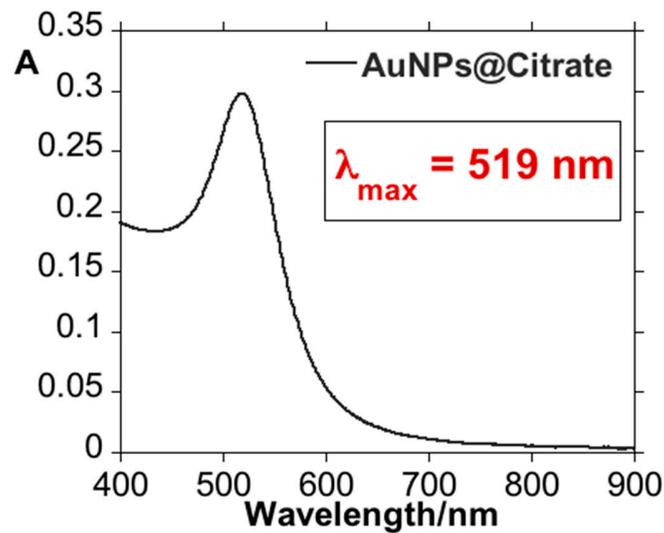


Figure 1S: Spectroscopic profile of AuNPs@Citrate (Dilution Factor = 1:10)

2. Dynamic light scattering (DLS) studies of the different AuNPs@EHL conjugated NPs.

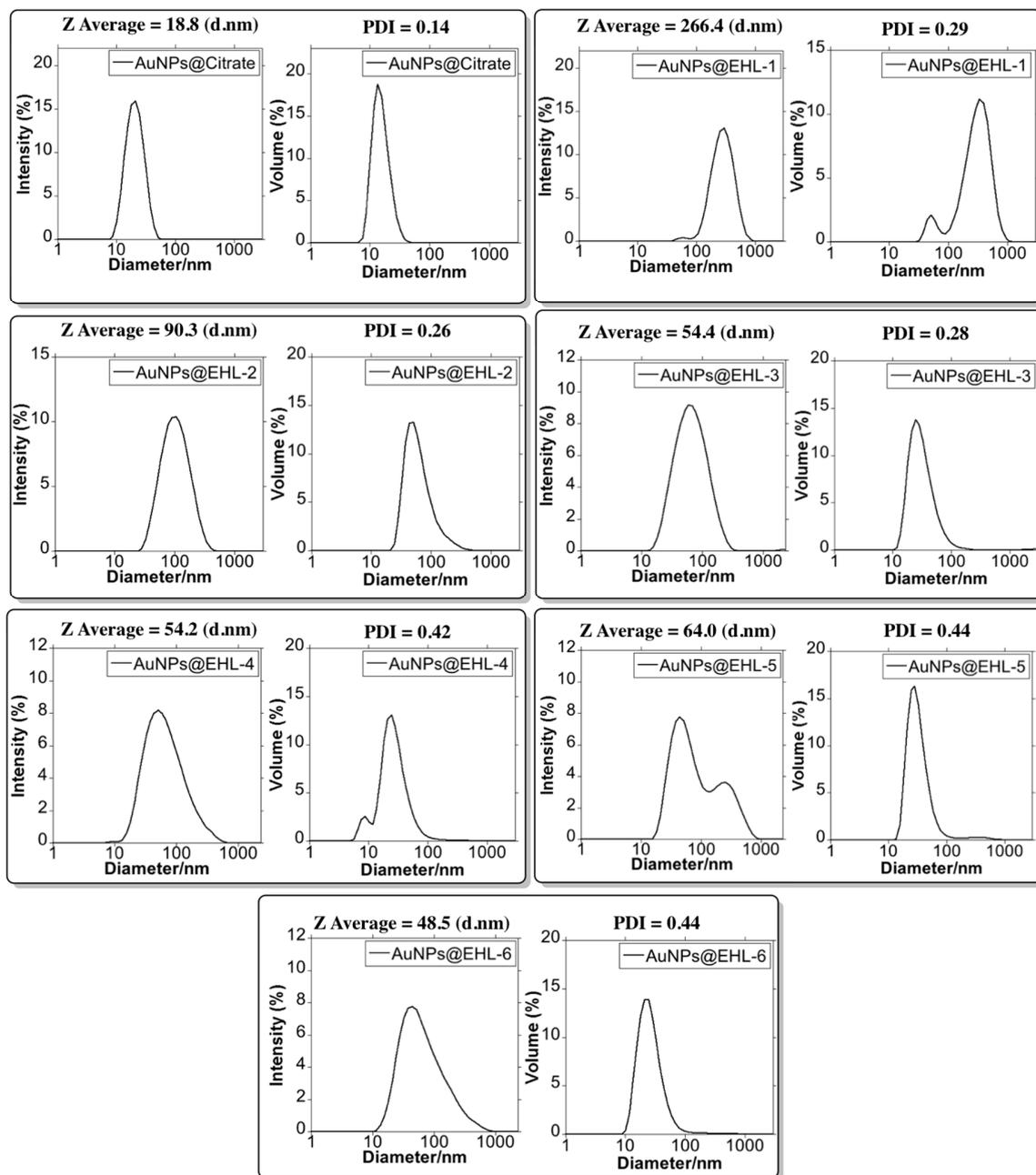


Figure 2S: Size distribution measured by Dynamic Light Scattering. Distribution by %Intensity and %Volume.

3.- Bradford Quantification

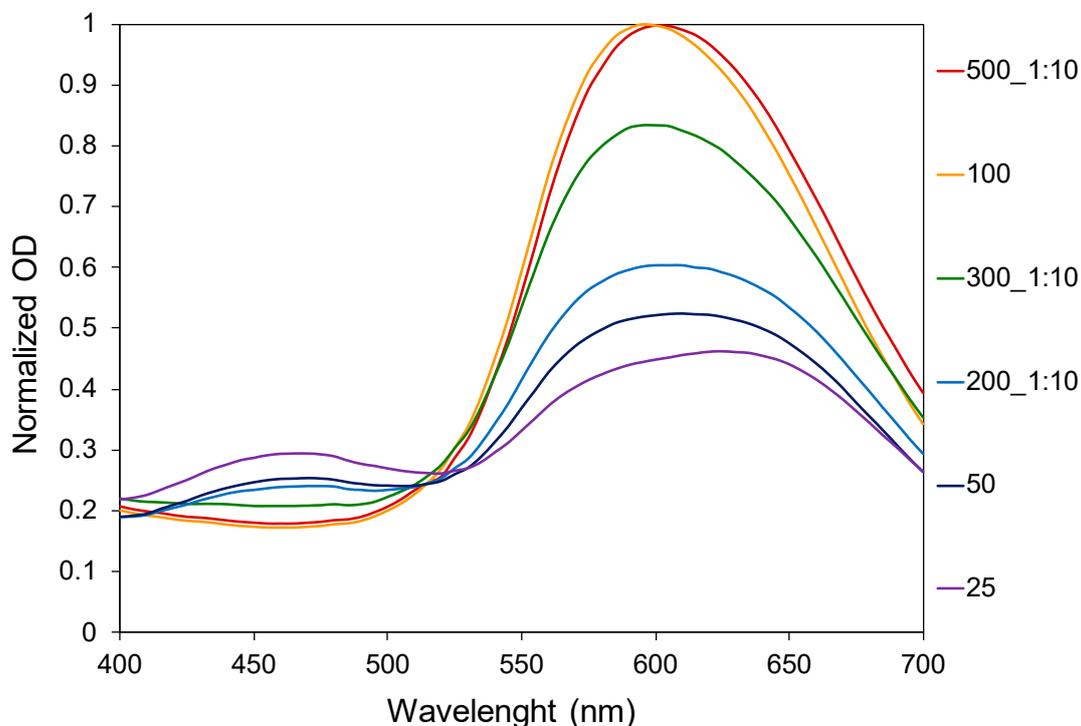


Figure 3S: UV-vis spectra used for EHL quantification by the Bradford technique.

[1] A “Tips and Tricks” Practical Guide to the Synthesis of Gold Nanorods

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[3] Tuning Gold Nanorod Synthesis through Prereduction with Salicylic Acid. *Chem. Mater.* 2013, 25, 4232–4238.

[4] Kinetics of Growth of Nanosized Gold Clusters in Glass. *J. Non-Cryst. Solids* 1996, 203, 202–205.

[5] Seeded High Yield Synthesis of Short Au Nanorods in Aqueous Solution. *Langmuir* 2004, 20, 6414–6420.

[6] Spatially-Directed Oxidation of Gold Nanoparticles by Au(III)-CTAB Complexes. *J. Phys. Chem. B*, 2005, 109(30), 14257-14261.