Supplementary data for

Photoacoustic excitation profiles of gold nanoparticles

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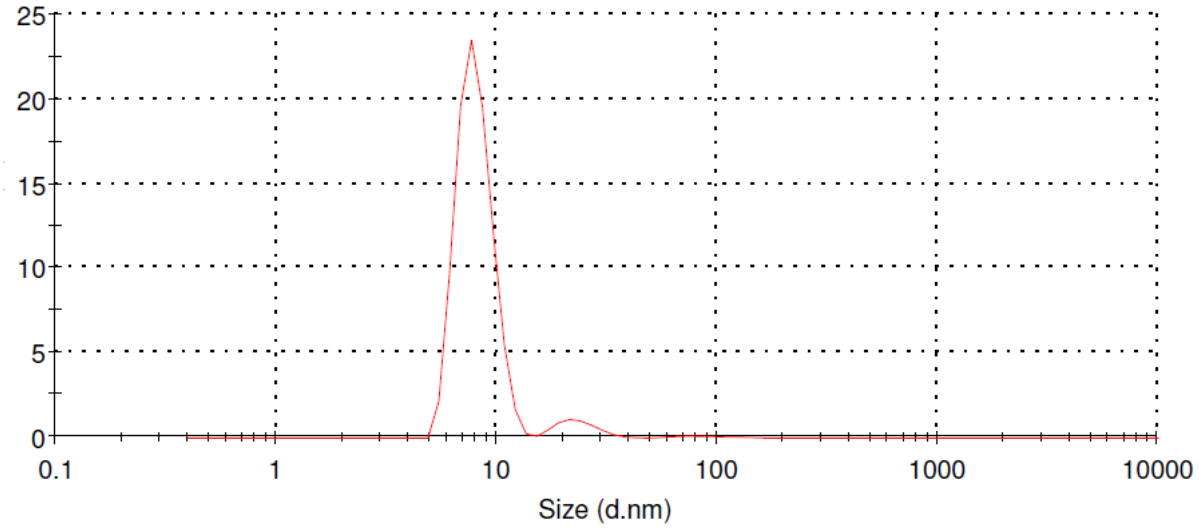
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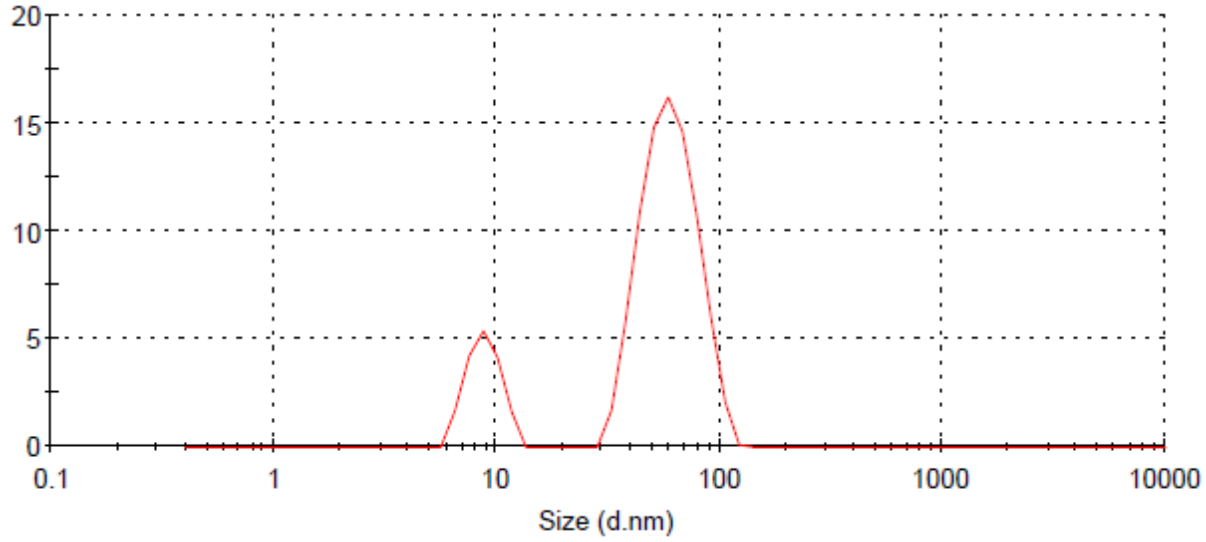
1000
10000
Size (d.nm)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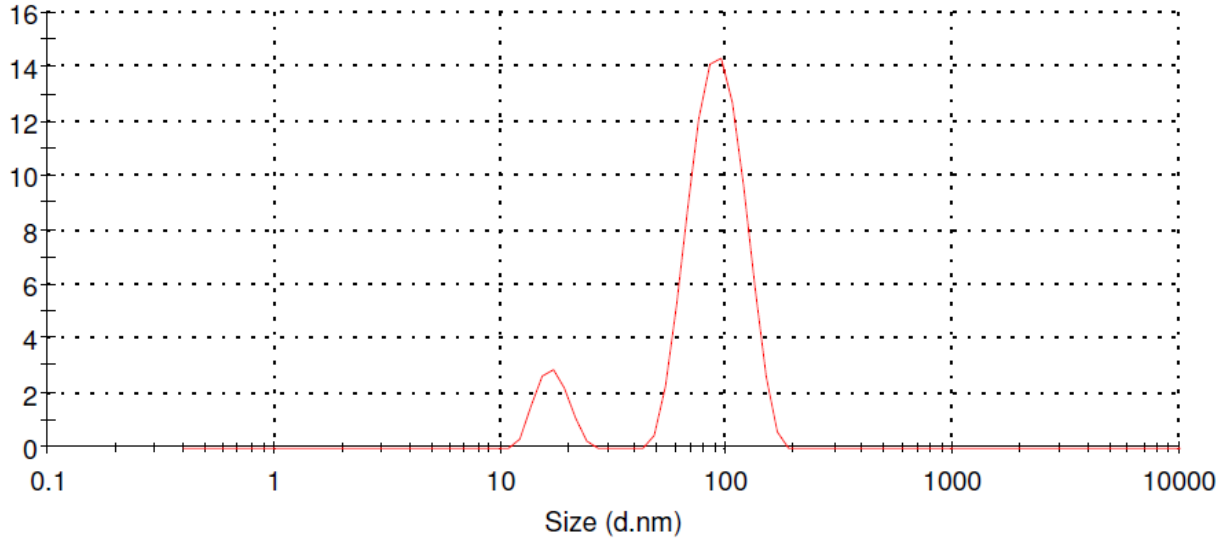
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12
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8
6
4
2
0
0.1
1
10
100
1000
10000
Size (d.nm)

Figure S1

Dynamic light scattering (DLS) analysis of D10 and D93 gold nanospheres. The measurements were performed with Malvern instrumentation. (*upper panel*) Size distribution of the nanospheres sample purchased from Sigma-Aldrich. The diameter specified by the producer is 10 nm, whereas the DLS size distribution displays a principal maximum at 8.0 nm and a minor one at 23 nm. (*middle panel*) Size distribution of the medium-sized nanospheres, which have been synthesized in our laboratory according to Turkevich's method. The DLS size distribution has a main maximum centered at 61 nm (17 nm standard deviation) and a secondary maximum at 9 nm. (*lower panel*) Size distribution of the larger-sized nanospheres synthesized in our laboratory according to Turkevich's method. The DLS size distribution has a main maximum centered at 93 nm (24 nm standard deviation) and a secondary maximum at 17 nm.

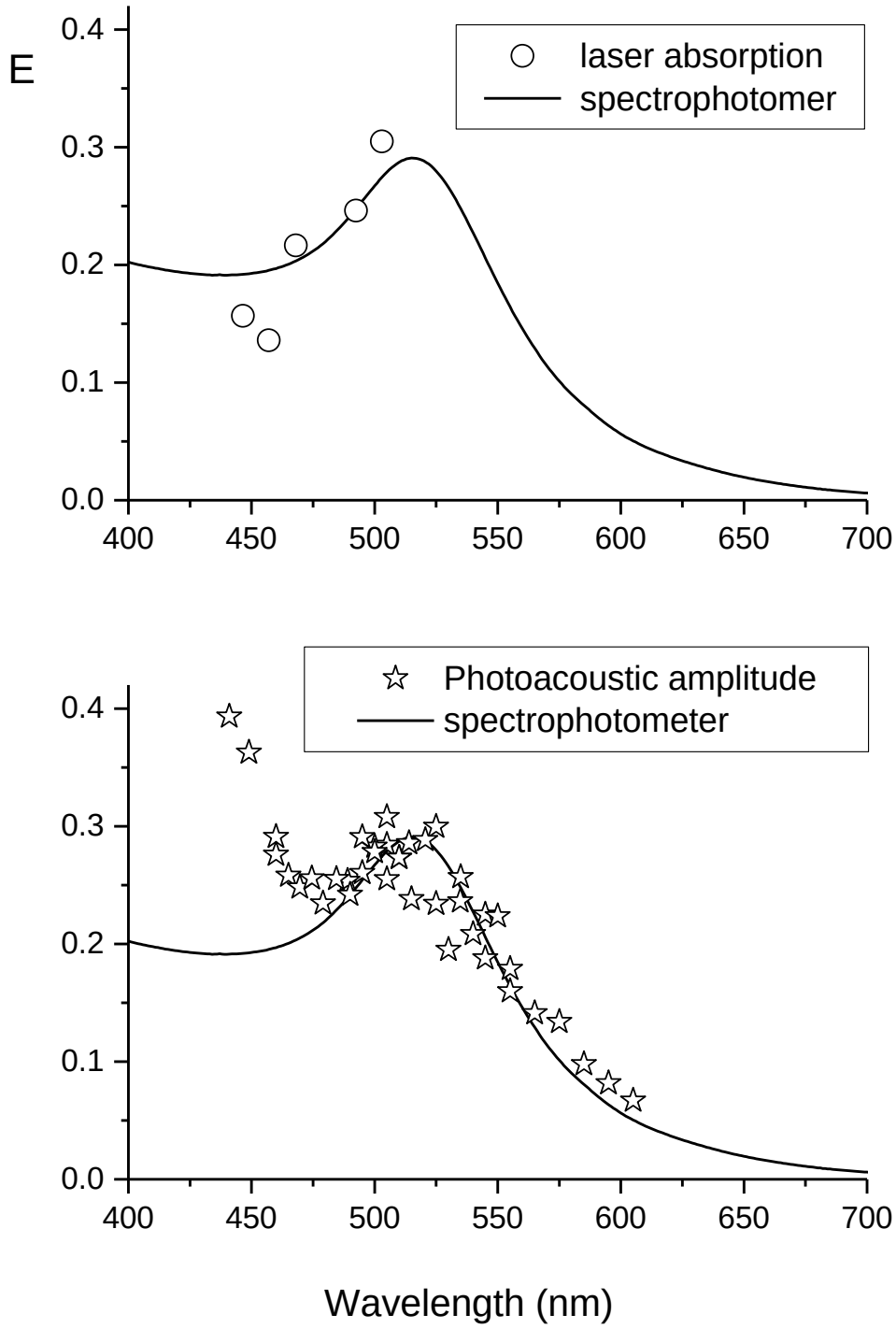
E
laser absorption
spectrophotomer
Photoacoustic amplitude
spectrophotometer
0.0
0.1
0.2
0.3
0.4
400
450
500
550
600
650
700
Wavelength (nm)

Figure S2

(*top*) A comparison between the extinction of D10 nanospheres, as measured by ordinary spectrophotometry (1 cm optical path), and the extinction measured by the absorption of the incident laser by the D10 sample in the same experimental conditions we used for photoacoustic measurements (1 cm optical path, ~ 10 μJ / laser pulse). The latter data set is normalized to the former at 492 nm. (*bottom*) For ease of comparison, the photoacoustic excitation profile of Figure 3 is also shown, the ordinate scale being changed from cross section to extinction (for the spectrophotometric measurement) and normalized photoacoustic signal.
The data clearly indicates that the optical properties of the sample are not changed under laser irradiation, thus, the photoacoustic signal increase at shorter wavelengths does not originate from laser-induced optical changes.