

Covalently Conjugated Gold–Porphyrin Nanostructures

Luca Spitaleri^{1,2,*}, **Chiara M. A. Gangemi**¹, **Roberto Purrello**^{1,2}, **Giuseppe Nicotra**³, **Giuseppe Trusso Sfrazzetto**^{1,2,*}, **Girolamo Casella**⁴, **Maurizio Casarin**⁵ and **Antonino Gulino**^{1,2,*}

¹ Department of Chemical Sciences, University of Catania, Viale Andrea Doria 6, 95125 Catania, Italy; luca.spitaleri@phd.unict.it (L.S.); gangemichiara@unict.it (C.M.A.G.); rpurrello@unict.it (R.P.)

² National Interuniversity Consortium of Materials Science and Technology (I.N.S.T.M., Research Unit (UdR) of Catania, Viale Andrea Doria 6, 95125 Catania, Italy

³ National Research Council - Institute for Microelectronics and Microsystems (CNR-IMM), Strada VIII, 5, 95121 Catania, Italy; giuseppe.nicotra@imm.cnr.it (G.N.)

⁴ Department of Earth and Sea Sciences, University of Palermo, Via Archirafi 22, 90123 Palermo, Italy; girolamo.casella@unipa.it (G.C.)

⁵ Department of Chemical Sciences, University of Padova, Via Francesco Marzolo 1, 35131 Padova, Italy; maurizio.casarin@unipd.it (M.C.)

* Correspondence: giuseppe.trusso@unict.it (G.T.S.); agulino@unict.it (A.G.); Tel.: +39-095-7385067(A.G.); Fax: +39-095-580138 (A.G.)

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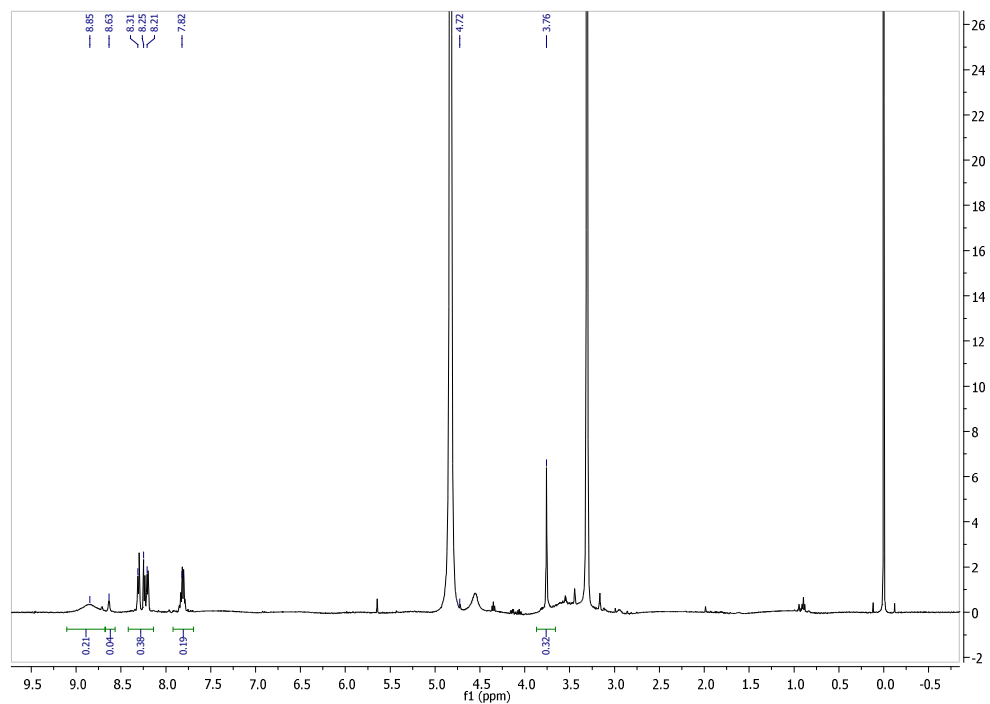


Figure S1. ^1H NMR spectrum of the 5,15,-Di(phenyl) 10, 20 -Di-benzamide, N-ethyl, N- 1,3,5 Tri-aminotriazine, 21H,23H-porphine recorded in methanol.

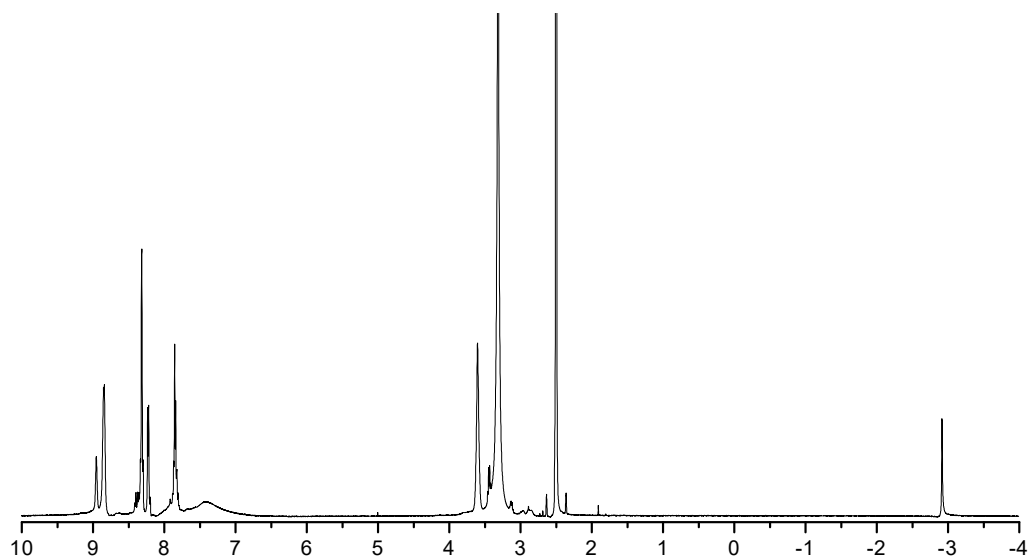


Figure S2. ^1H NMR spectrum of the Di-Triazine-Porphyrin, recorded in $\text{DMSO}-d_6$.

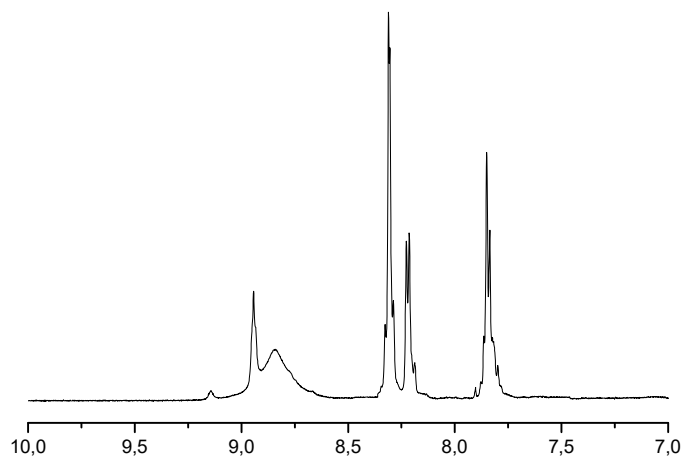


Figure S3. Selected region of the ^1H NMR spectrum of the Di-Triazine-Porphyrin after the addition of 10 μL of D_2O . All broad signals relative to NH-triazine are shifted to 8.84 ppm.

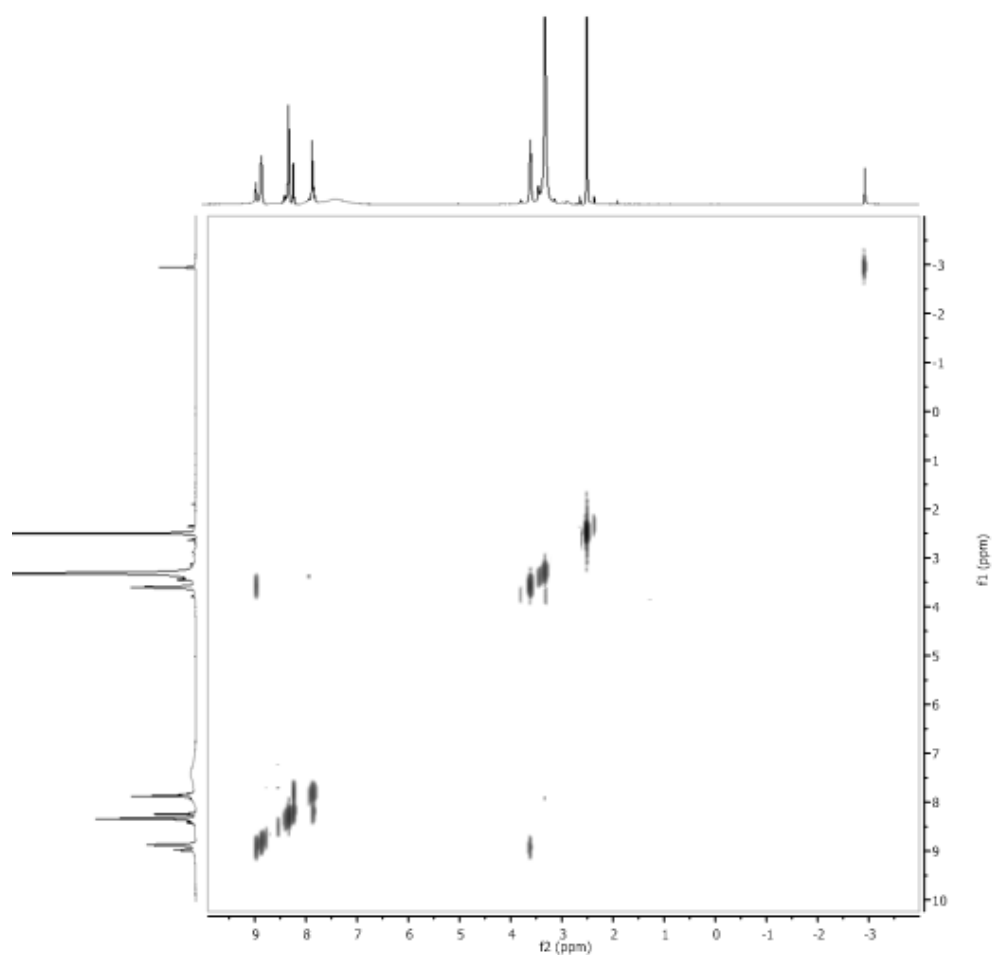


Figure S4. gCOSY spectrum of the Di-Triazine-Porphyrin recorded in $\text{DMSO}-d_6$

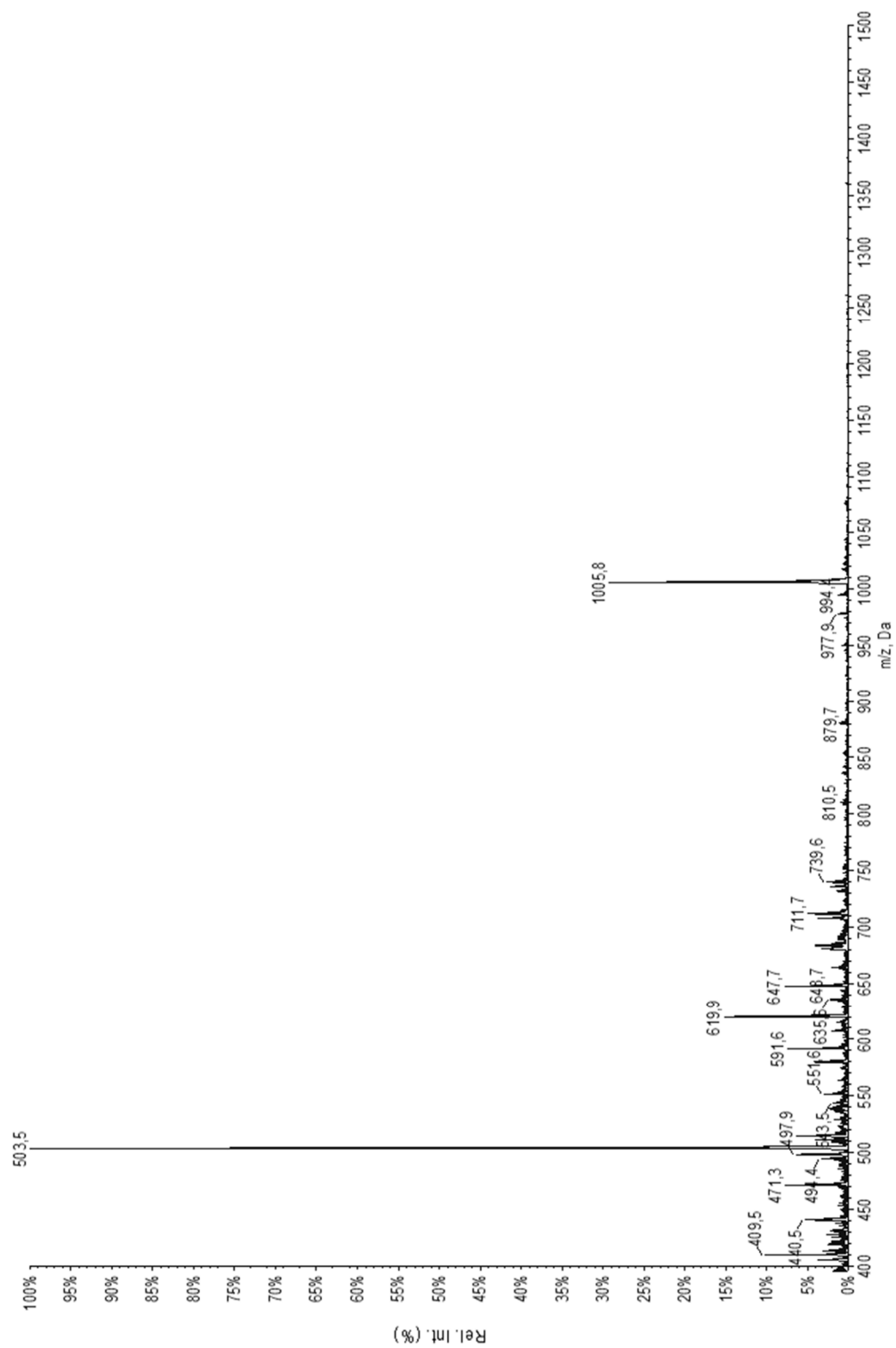


Figure S5. ESI-MS spectrum of Di-Triazine-Porphyrin.

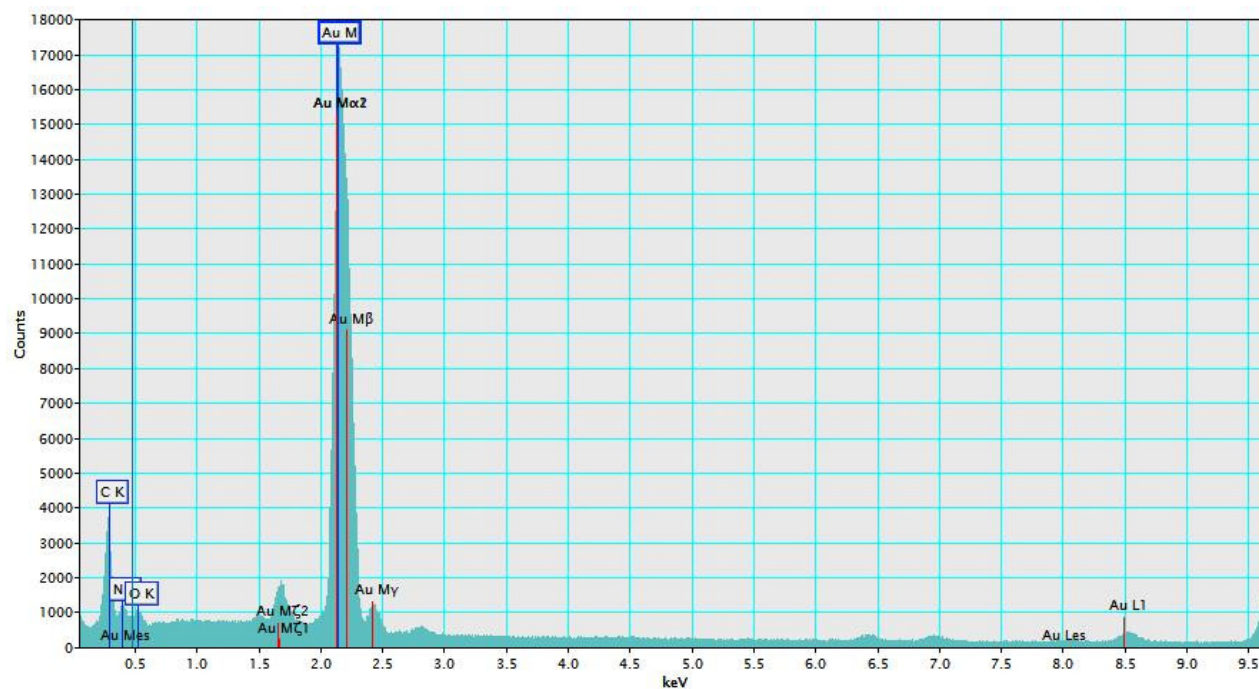


Figure S6. EDX spectrum of the Au NPs conjugated with the 5,15,-Di(phenyl) 10, 20 -Di-benzamide, N-ethyl, N- 1,3,5 Tri-aminotriazine, 21H,23H-porphine.

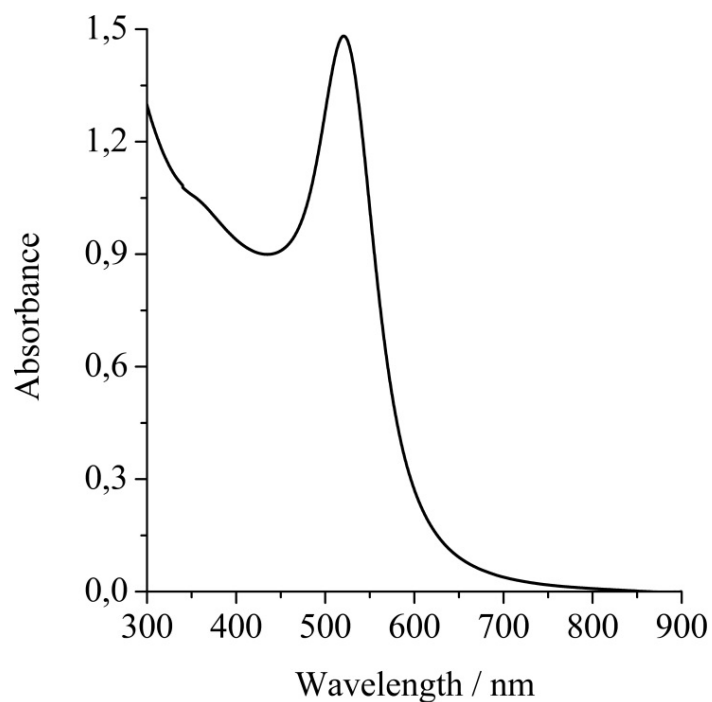


Figure S7. UV-vis absorbance spectrum of the as synthesized aqueous Au NPs $1.97 \cdot 10^{-7}$ M solution.

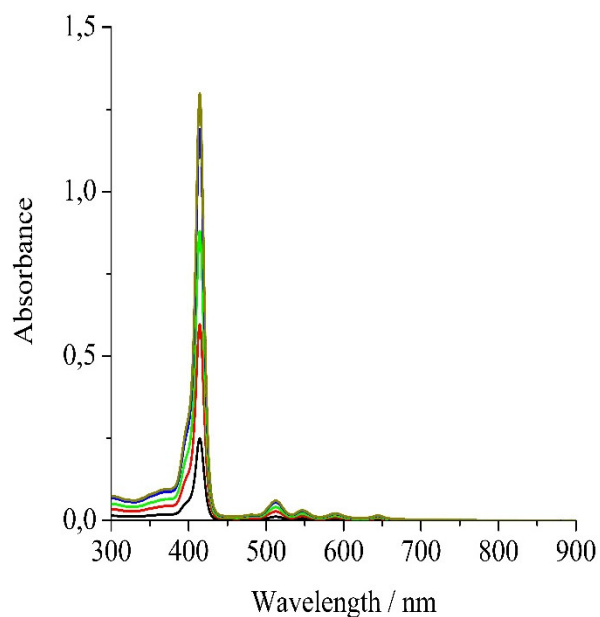


Figure S8. UV-vis absorbance spectra of the porphyrin CH₃OH solution at different concentrations: $9.41 \cdot 10^{-7}$ M, black line; $2.13 \cdot 10^{-6}$ M, red line; $3.66 \cdot 10^{-6}$ M, green line; $5.18 \cdot 10^{-6}$ M, blue line; $6.22 \cdot 10^{-6}$ M, dark yellow line.

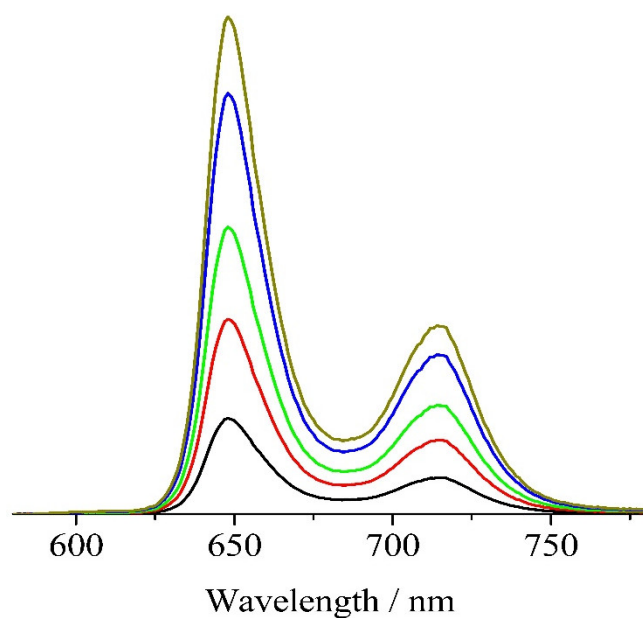


Figure S9. Trend of the luminescence spectra of the porphyrin CH₃OH solution at different concentrations: $9.41 \cdot 10^{-7}$ M, black line; $2.13 \cdot 10^{-6}$ M, red line; $3.66 \cdot 10^{-6}$ M, green line; $5.18 \cdot 10^{-6}$ M, blue line; $6.22 \cdot 10^{-6}$ M, dark yellow line.

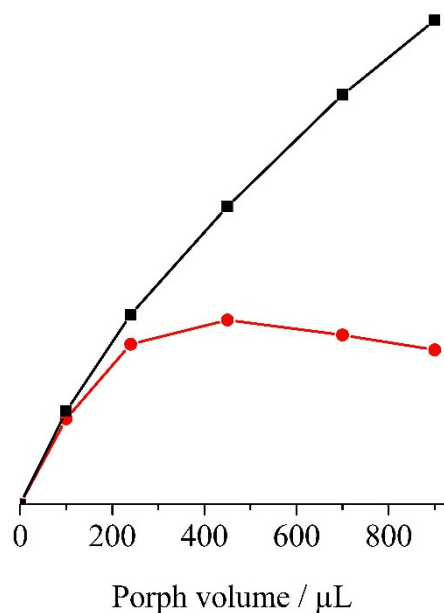


Figure S10. Comparison between the PL intensities of the porphyrin CH_3OH solutions (black line) and those obtained during the Au NPs titration at different concentrations (red line): $9.41 \cdot 10^{-7}$ M, black line; $2.13 \cdot 10^{-6}$ M, red line; $3.66 \cdot 10^{-6}$ M, green line; $5.18 \cdot 10^{-6}$ M, blue line; $6.22 \cdot 10^{-6}$ M, dark yellow line.

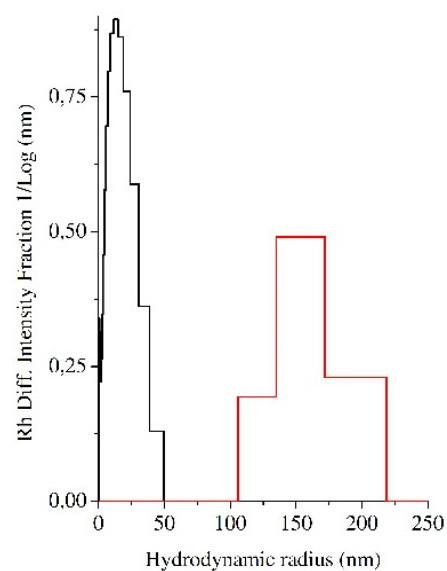


Figure S11. DLS measurements for the $6.57 \cdot 10^{-9}$ M Au NPs (black line) and $6.22 \cdot 10^{-6}$ M Au NPs – porphyrin nanostructure methanol solutions (red line).

Coordinates of the optimized structures of the LC and LB conformers

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N	-13.028669	-0.149759	-1.422481
C	-13.543561	-1.064704	-2.284820
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C	-13.335067	-2.915736	-3.546507
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C	2.886392	1.162825	1.289229

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C	-0.742049	-2.379151	2.857991
C	-1.776859	-1.479417	2.726945
C	-4.722898	1.343702	0.644695
C	-5.478011	2.532401	0.657082
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C	-5.361506	0.155463	0.243154
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