Supplementary materials

Self-Assembled Monolayers of Copper Sulfide Nanoparticles on Glass as Antibacterial Coatings

Chiara Gargioni¹, Mykola Borzenkov², Laura D'Alfonso², Paola Sperandeo³, Alessandra Polissi³, Lucia Cucca¹, Giacomo Dacarro¹, Pietro Grisoli⁴, PiersandroPallavicini¹, Agnese D'Agostino¹, Angelo Taglietti^{1*}

- ¹ Department of Chemistry, University of Pavia, Viale Taramelli 12, 27100 Pavia, Italy; E-mail: angelo.taglietti@unipv.it
- ² Nanomedicine Center, Department of Physics, University of Milano-Bicocca, piazza dell'Ateneo Nuovo,20126 Milan, Italy
- ³ Department of Pharmacological and Biomolecular Sciences, University of Milan, via Balzaretti 9, 20133 Milan, Italy
- ⁴ Department of Drug Sciences, University of Pavia, Viale Taramelli 14, 27100 Pavia, Italy.
- * Correspondence: angelo.taglietti@unipv.it; Tel.: +39-382-987342

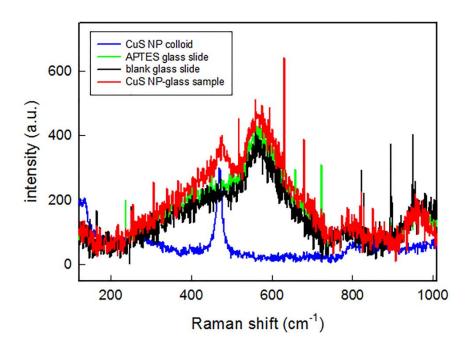


Figure S1 Raman spectra of a colloidal sample of CuS NP dried on glass (blue line), of a CuS NP-glass sample (red line), of a blank glass slide (black line), of an APTES functionalized glass slide (green line).

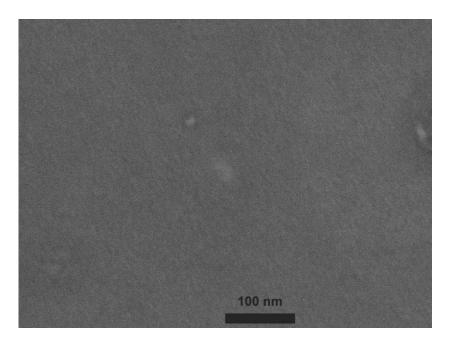


Figure S2 SEM image of a glass slide functionalized with APTES.

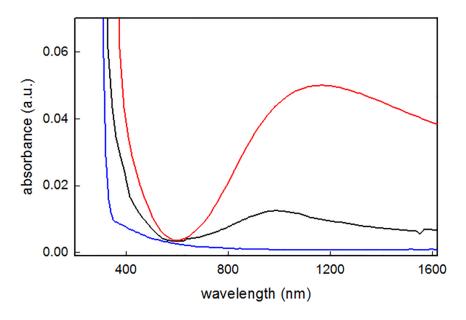


Figure S3 UV—vis spectrum of a CuS NP-glass sample freshly prepared (red line) compared with the spectrum of a CuS NP-glass sample after one week of immersion in water (black line). The blue line represents the spectrum of a glass slide functionalized with APTES.

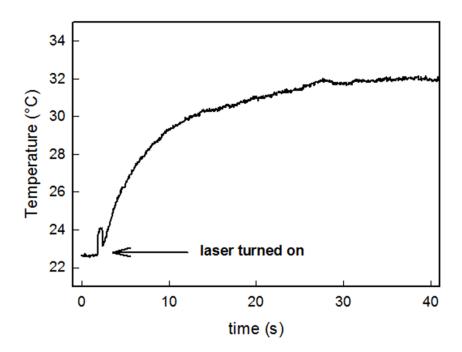


Figure S4 Temperature increase as a function of irradiation time, measured under NIR laser irradiation at 950 nm, 0.35 W/cm² of CuNP-glass sample

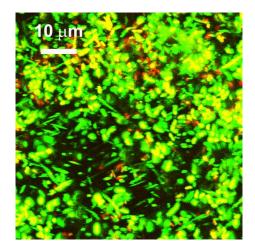


Figure S5 Representative confocal image of bacteria (*P. aeruginosa*) inoculated on blank sample without irradiation. The overall contact time between bacteria inoculation and image registration was of three hours. Field of view: $64.2x64.2 \, \mu m^2$