

Supplementary Information

The interplay between size and valence state on the antibacterial activity of sub-10 nm silver nanoparticles

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Characterizations of MSA-Silver Nanoparticles

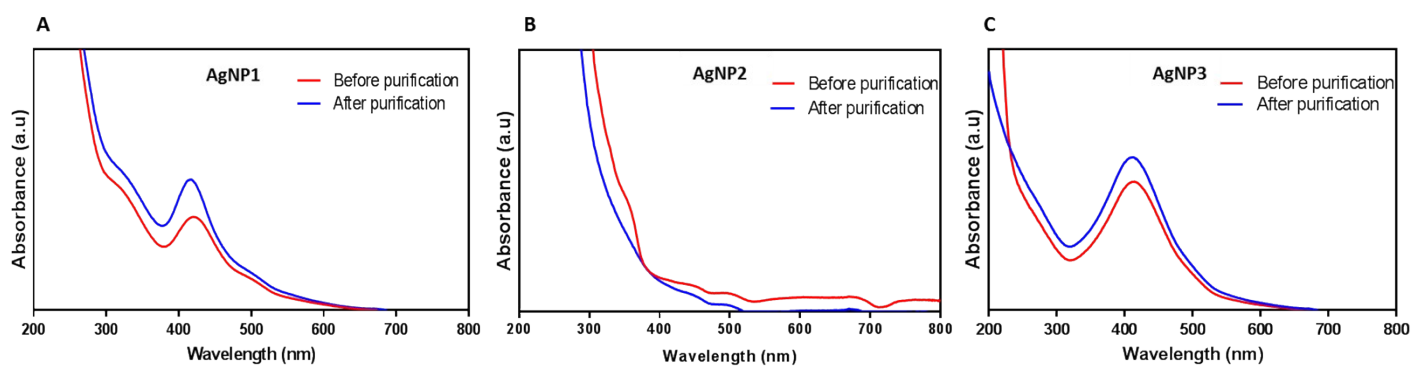


Fig.S1 (A-C) UV-vis spectra of all three AgNPs before and after purification through dialysis membrane.

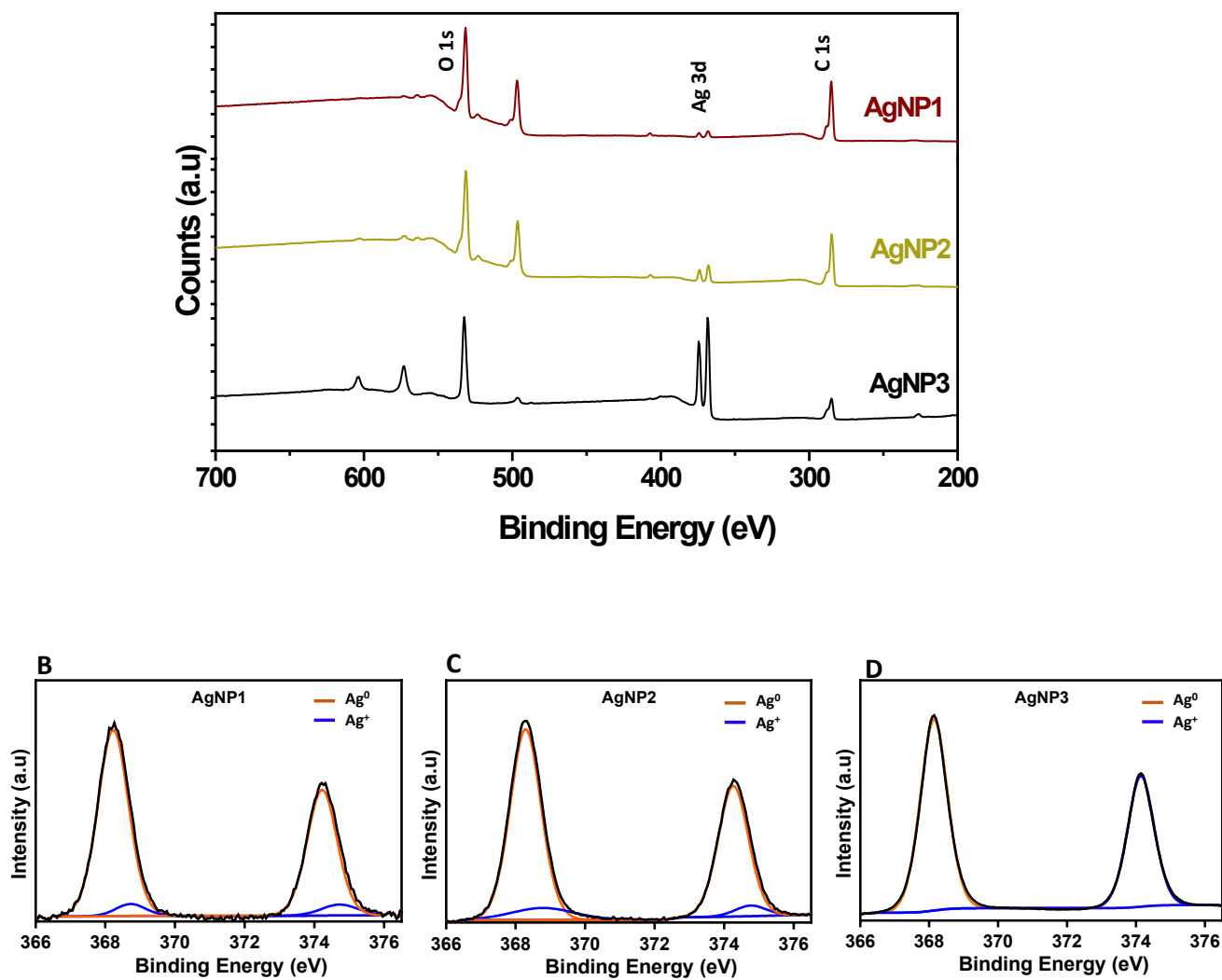


Fig.S2 (A) XPS survey spectra of the AgNPs (B-D) High resolution of Ag 3d deconvolution.

Samples	% of Ag⁰⁴⁴⁴	% of Ag⁺
AgNP1	86.8	13.2
AgNP2	90.79	9.21
AgNP3	98.11	1.89

Table S1 Differences on silver oxidation state of the AgNPs obtained from Ag 3d deconvolution.

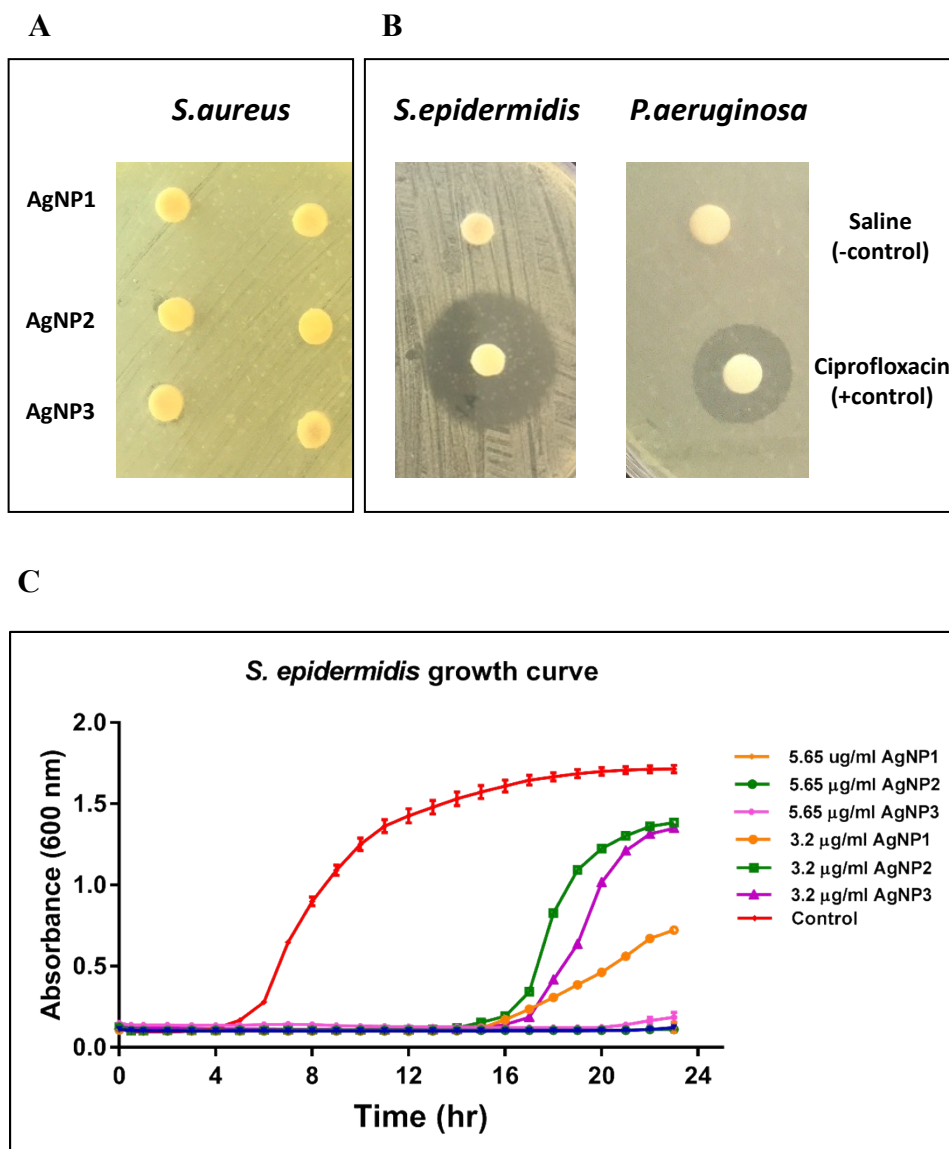


Fig.S3 (A) Zone of inhibition AgNPs (90 $\mu\text{g/ml}$) against *S.aureus* (B) Ciprofloxacin (90 $\mu\text{g/ml}$) and 0.9% saline effect against *S.epidermidis* and *P.aeruginosa*. (C) Representative strain (*S.epidermidis*) growth curve treated with AgNPs at MIC concentration and 0.5X MIC value.