Electronic Supplementary Material (ESI) for Nanoscale Advances.

Synthesis and *in vitro* and *in vivo* comparative investigation of alginate, gelatin and silk-fibroin capped silver nanoparticles

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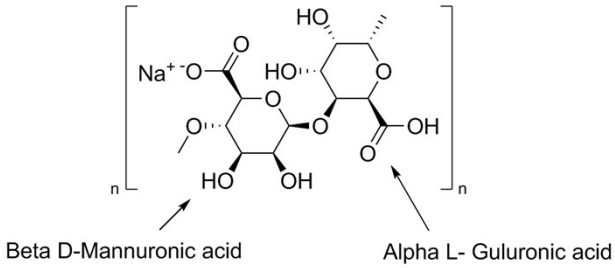
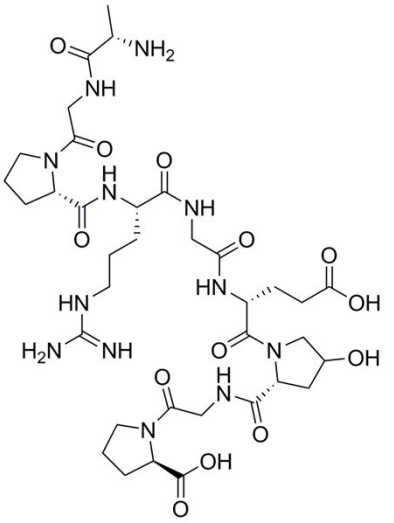
Supplementary data

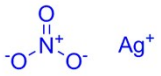


Sodium alginate derived from Alginic acid

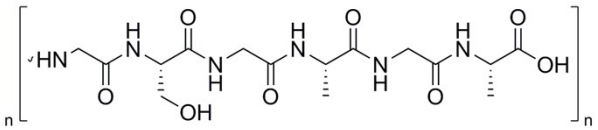


Ala-Gly-Pro-Arg-Gly-Glu-Hyp-Gly-Pro-

Gelatin



Silver nitrate



Gly-Ser-Gly-Ala-Gly-Ala

Silk fibroin

Figure S1: XPS survey spectra of individual atom constituents of a) Sodium alginate b) Gelatin c) Silk fibroin- stabilized nanosilver composites.

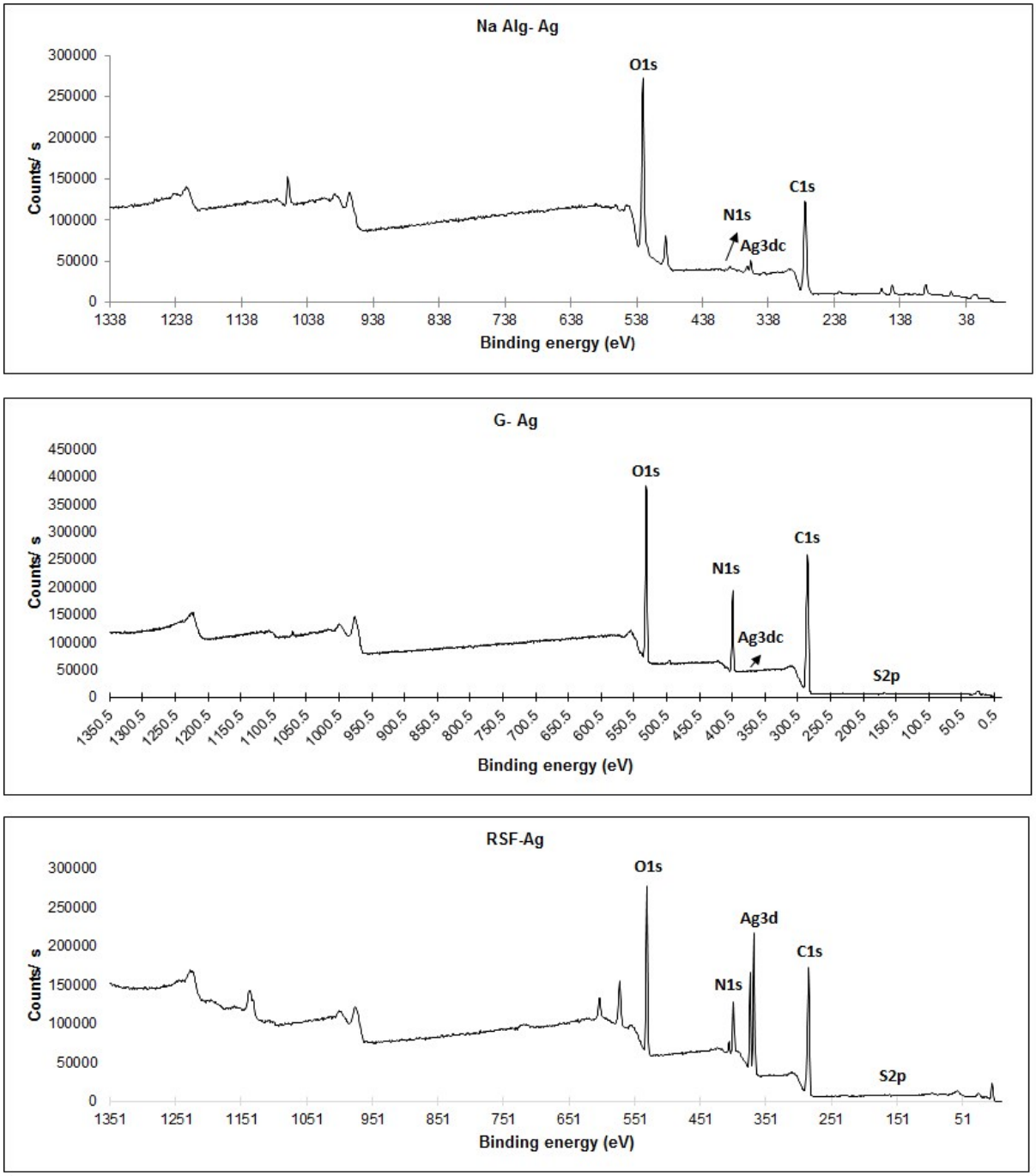


Figure S2: XPS survey scans of polymer-silver composites

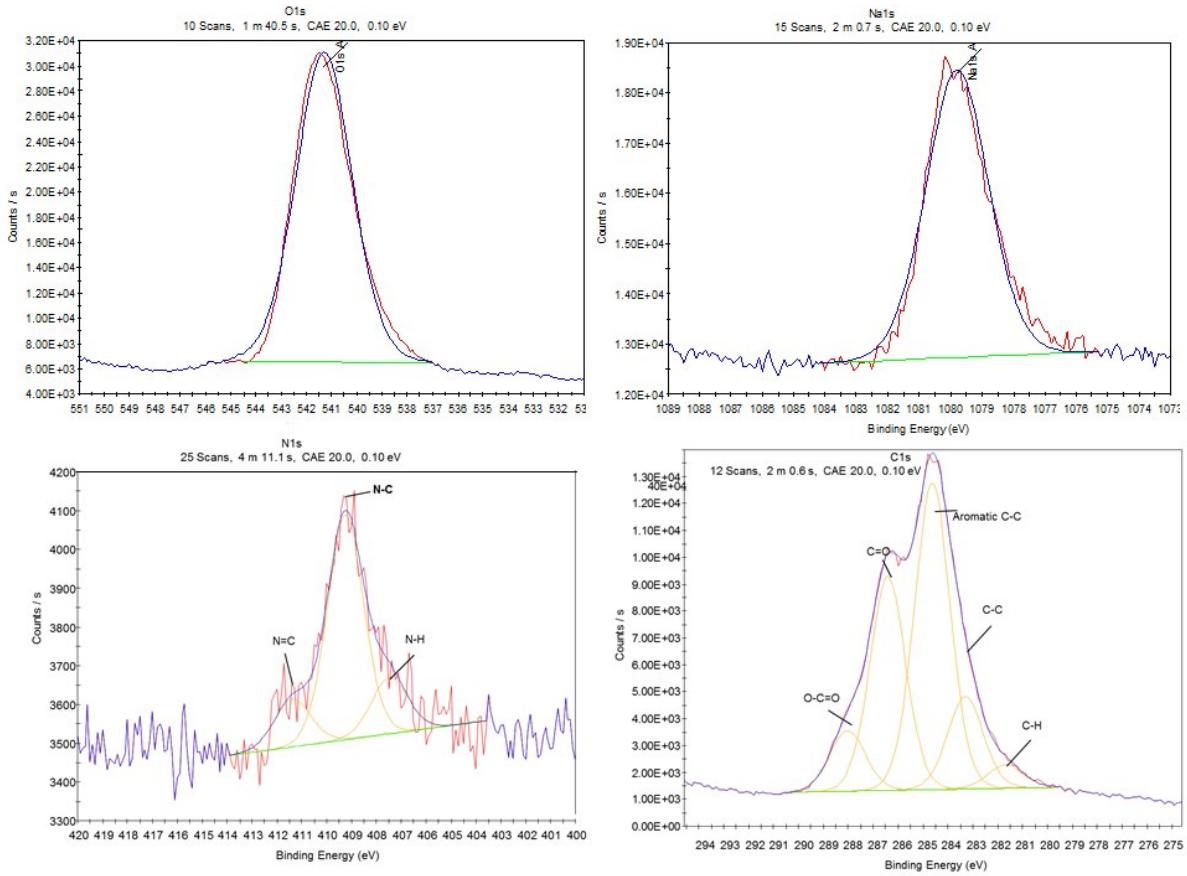
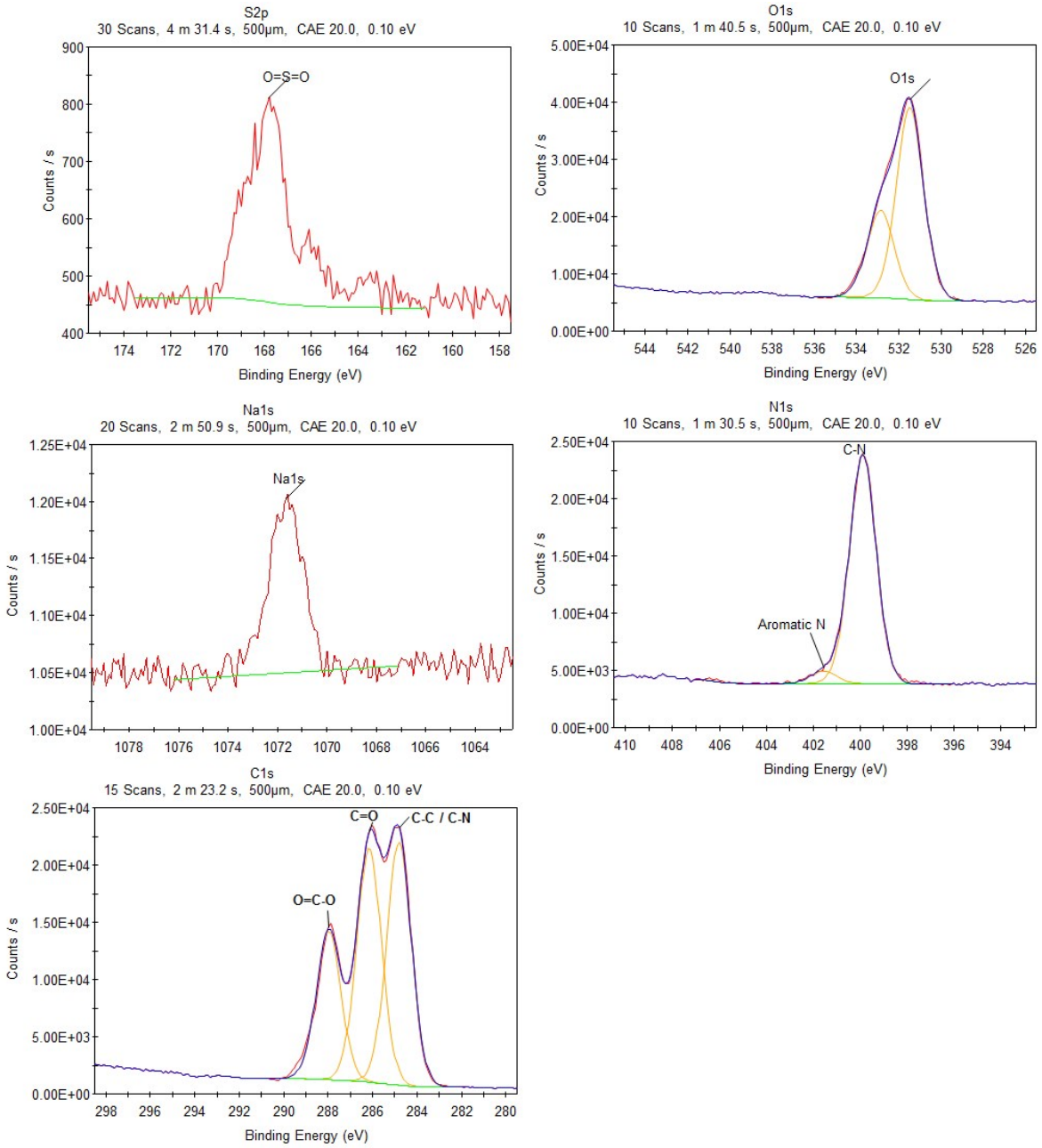
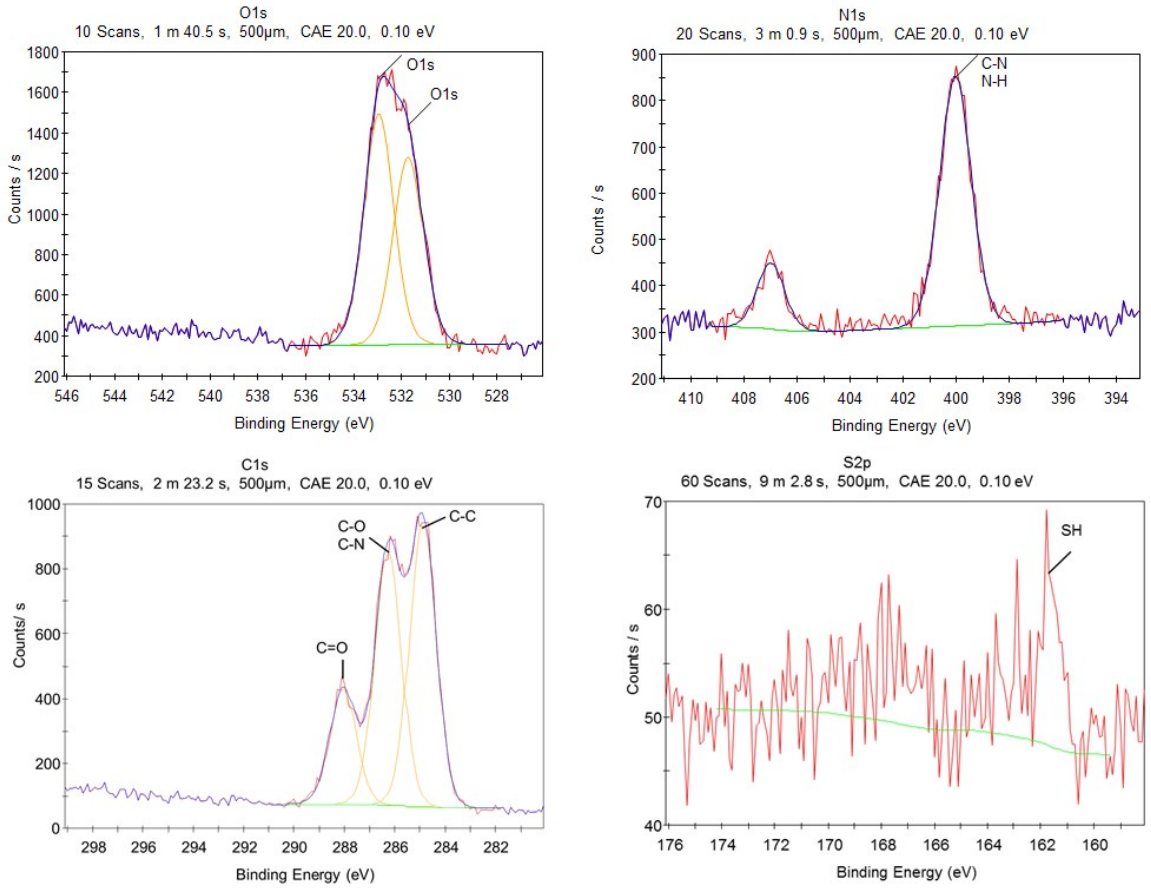


Figure S3: High resolution XPS spectra

(a) Sodium alginate- silver nanocomposites (Na Alg-Ag)



(b) Gelatin- silver nanocomposites (G-Ag)



(c) Silk fibroin- silver nanocomposites (RSF-Ag)

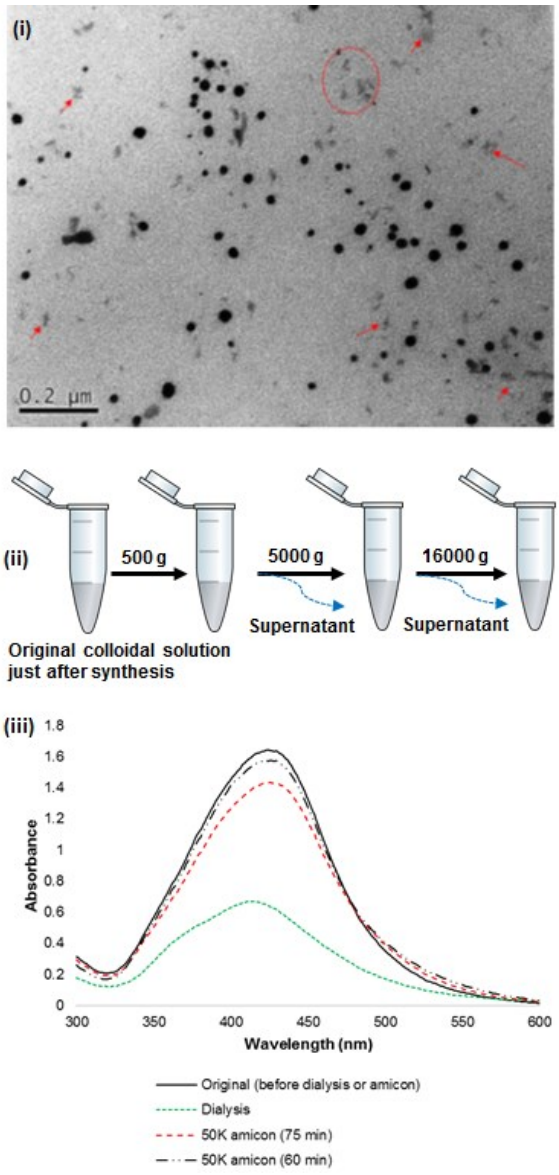


Figure S4: i) Representative TEM image of a nanosilver composite showing the debris associated with particles before purification; ii) Schematic of differential centrifugation protocol adopted to clean the particle preparations and obtain a largely monodisperse population of particles; iii) UV- vis spectrum indicating effects of different purification and/ or concentration techniques on the composites (spectral curves representing Amicon centrifugation were obtained after dilution of sample in 1:50).

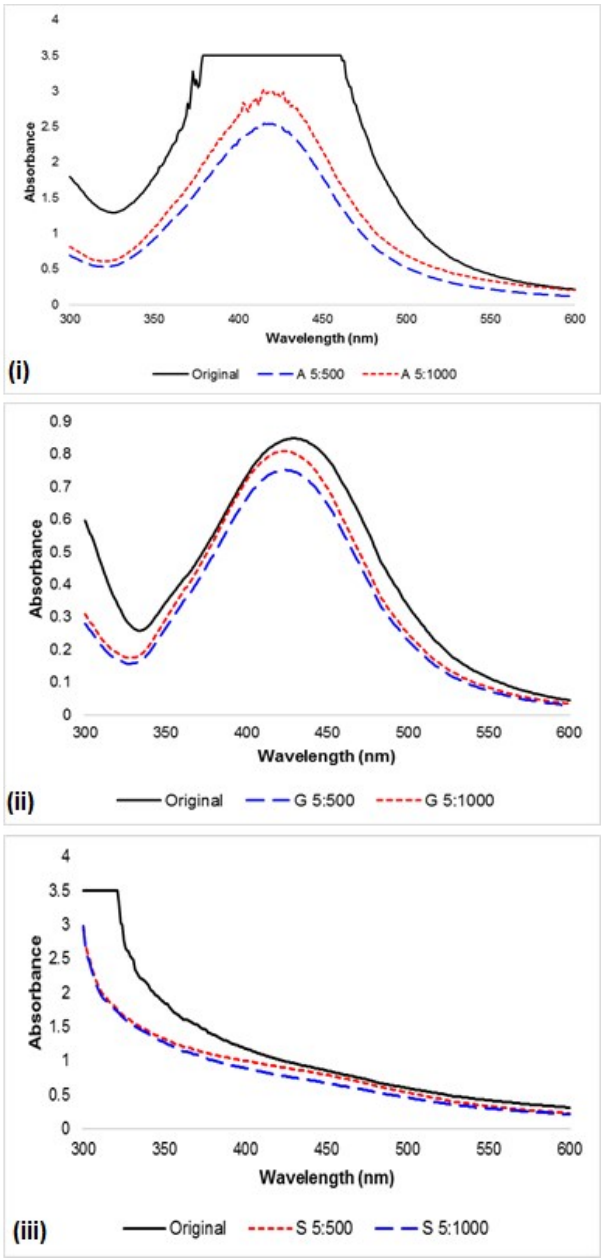


Figure S5: UV-visible spectra of dialyzed and undialyzed nanocomposites against two different buffer volumes with Pur-A-Lyser dialysis tubes. ; i) Alginate, ii) Gelatin, iii) Silk Fibroin

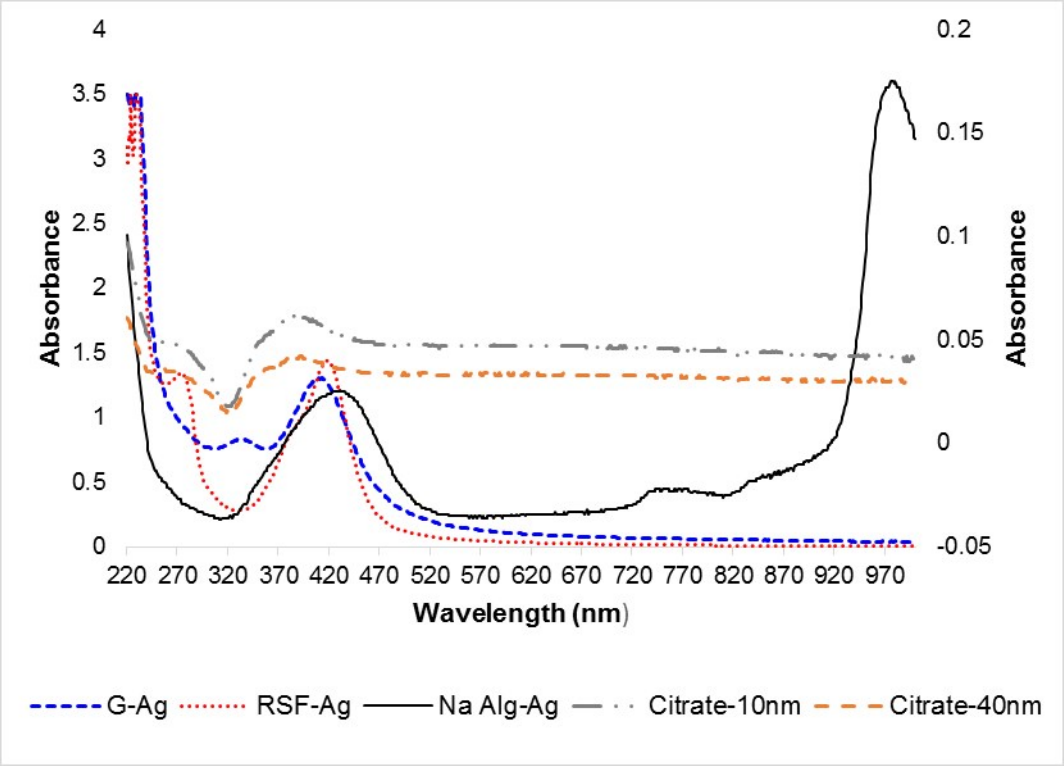


Figure S6: UV-vis spectral profile indicating behaviour of different nanoparticles in PBS (pH 7.4).

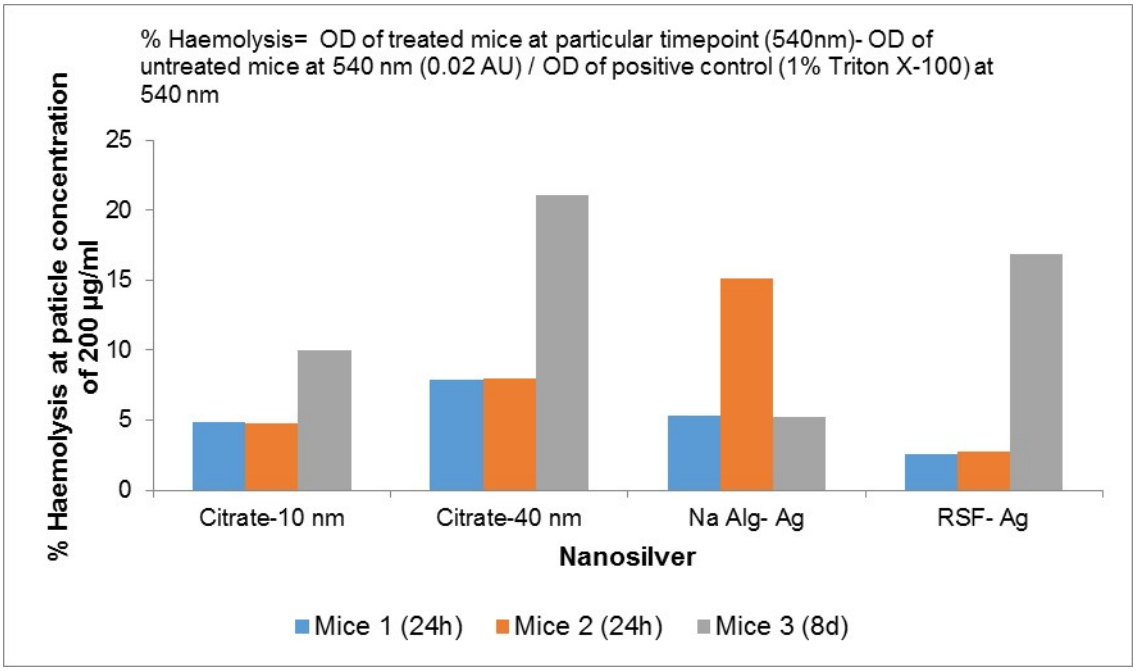


Figure S7: Haemolytic activity of different particles in mouse blood (blood was withdrawn from the thoracic cavity post treatment period and euthanization of animals)