Supporting Information for:

# Peptide-Mediated Reduction of Silver Ions on Engineered Biological Scaffolds

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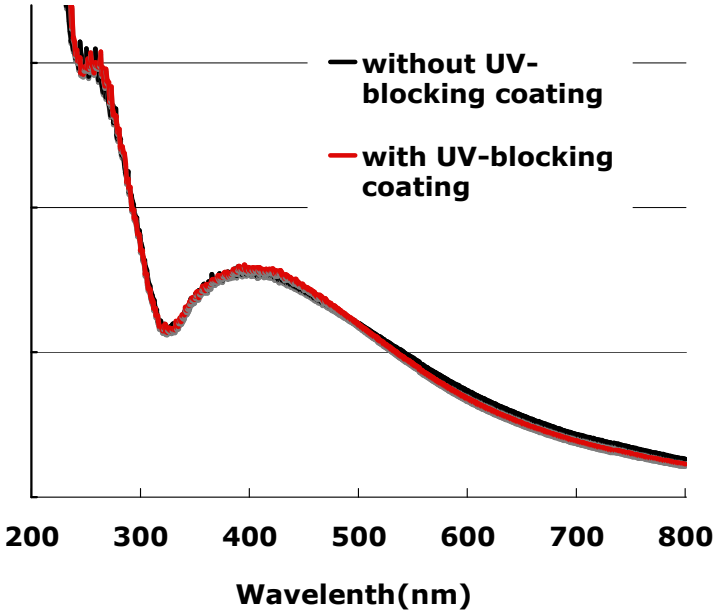


Figure S1. UV-Vis absorption spectra of the $E_6$ yeast with and without UV-light blocking polymer coatings under white fluorescent light in dark room. Yeast solutions are incubated in 1 mM $AgOOCCH_3$ solution.

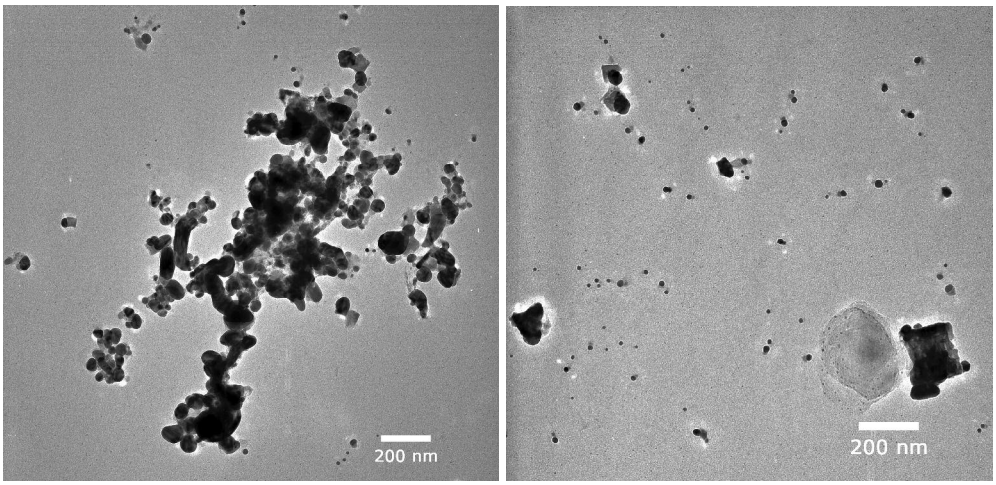


Figure S2. Silver nanoparticles synthesized by un-induced yeast solution. Particles are aggregated and not bound to yeast surface peptides.

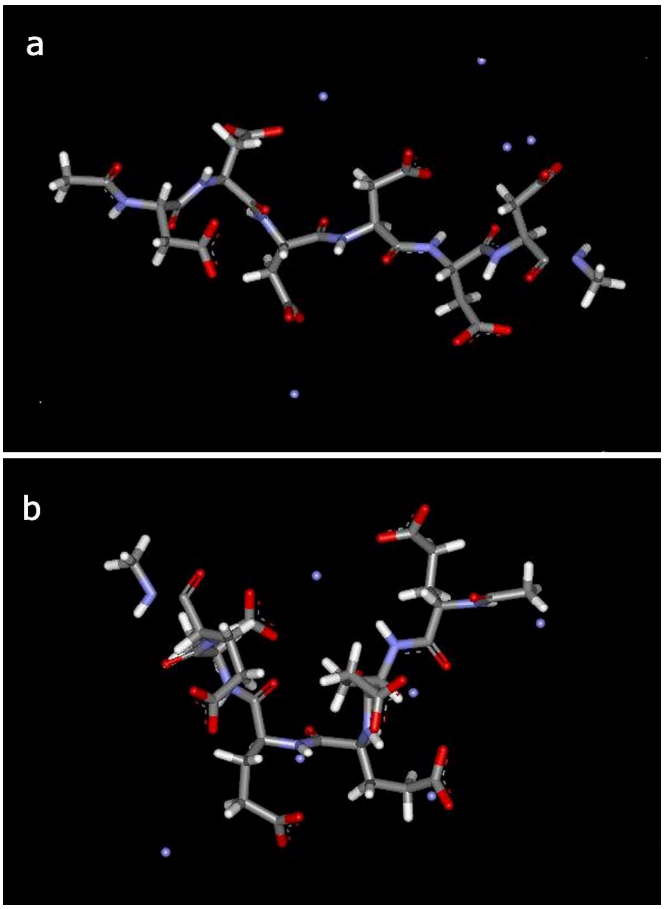


Figure S3. Average conformations of (a) hexa-aspartic acids($D_6$) and (b) hexa-glutamic acids($E_6$) from Monte Carlo simulations. Atom colors are: grey – carbon, white – hydrogen, red – oxygen, blue – nitrogen. Blue spheres indicate counter ions (Z = +1) placed in simulation to balance charge during the simulation.

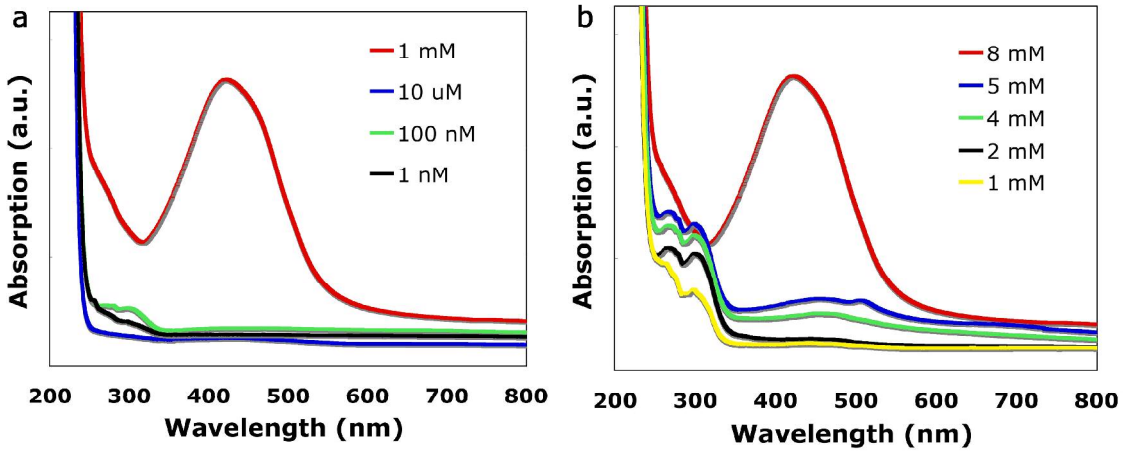


Figure S4. UV-Vis absorption analysis of the silver reduction by soluble hexa-glutamic acid peptide. (a) Various peptide concentrations. Concentration of $AgOOCCH_3$ is 8 mM. (b) Various $AgOOCCH_3$ solution concentrations. Concentration of hexa-glutamic acid solution is 1 mM.

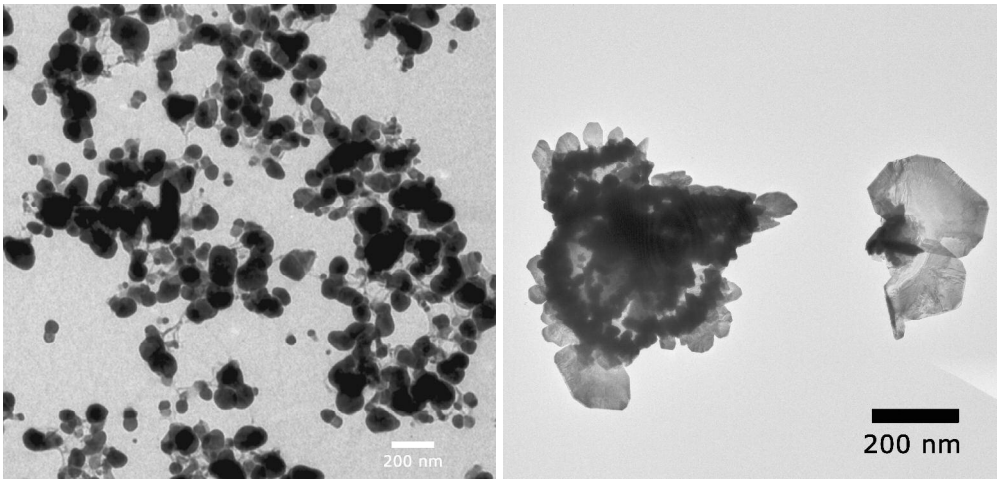


Figure S5. Silver nanoparticles produced by wild-type M13 viruses. Large and irregular silver particles are generated.