Supporting Information

for

Facile synthesis of size-tunable L-carnosine-capped silver nanoparticles and their role in metal ion sensing and catalytic degradation of *p*-nitrophenol

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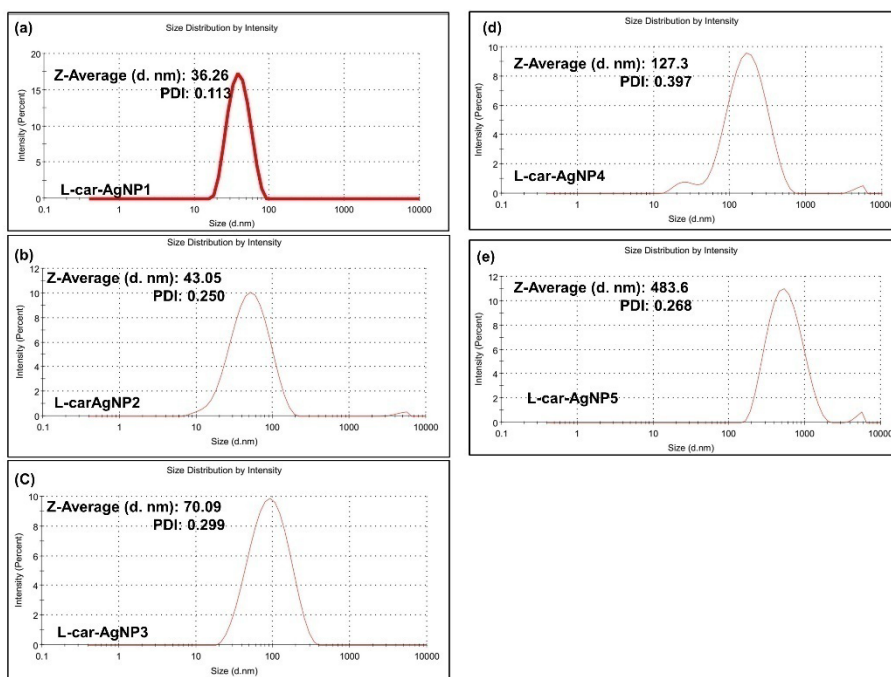and Rayavarapu Raja Gopal

Additional figures

Figure S1: Hydrodynamic size of (a) ʟ-car-AgNP1, (b) ʟ-car-AgNP2, (c) ʟ-car-AgNP3, (d) ʟ-car-AgNP4, and (e) ʟ-car-AgNP5.
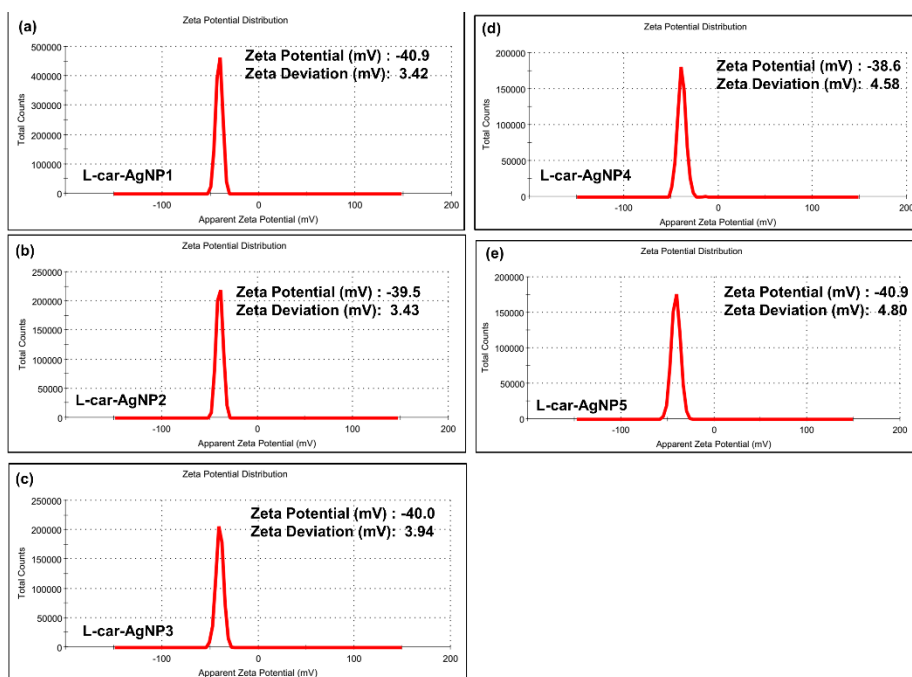

Figure S2: Zeta potential of (a) ʟ-car-AgNP1, (b) ʟ-car-AgNP2, (c) ʟ-car-AgNP3, (d) ʟ-car-AgNP4, and (e) ʟ-car-AgNP5.
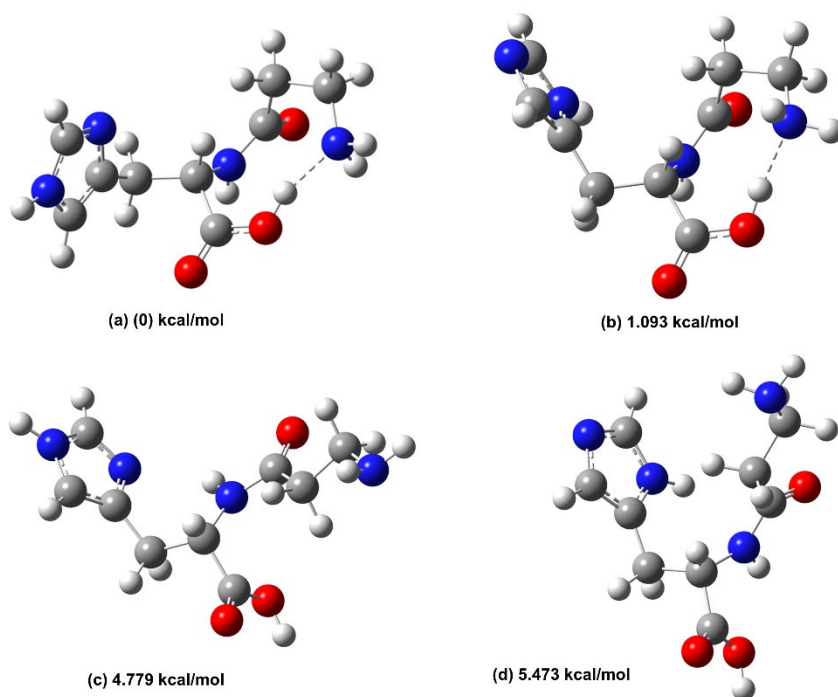
Figure S3: Optimized geometries of ʟ-carnosine along with relative stabilization energies. The color codes to identify the atoms are N (blue), O (red), C (grey), and H (white).
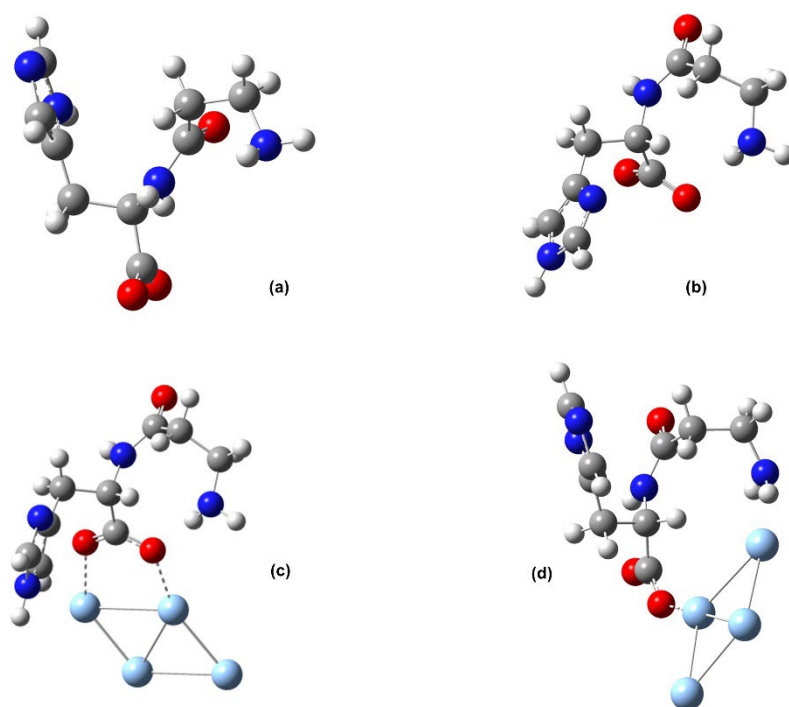

Figure S4: Optimized geometries of ʟ-carnosine–AgNPs complex. The color codes to identify the atoms are N (blue), O (red), C (grey), H (white), and Ag (light blue).
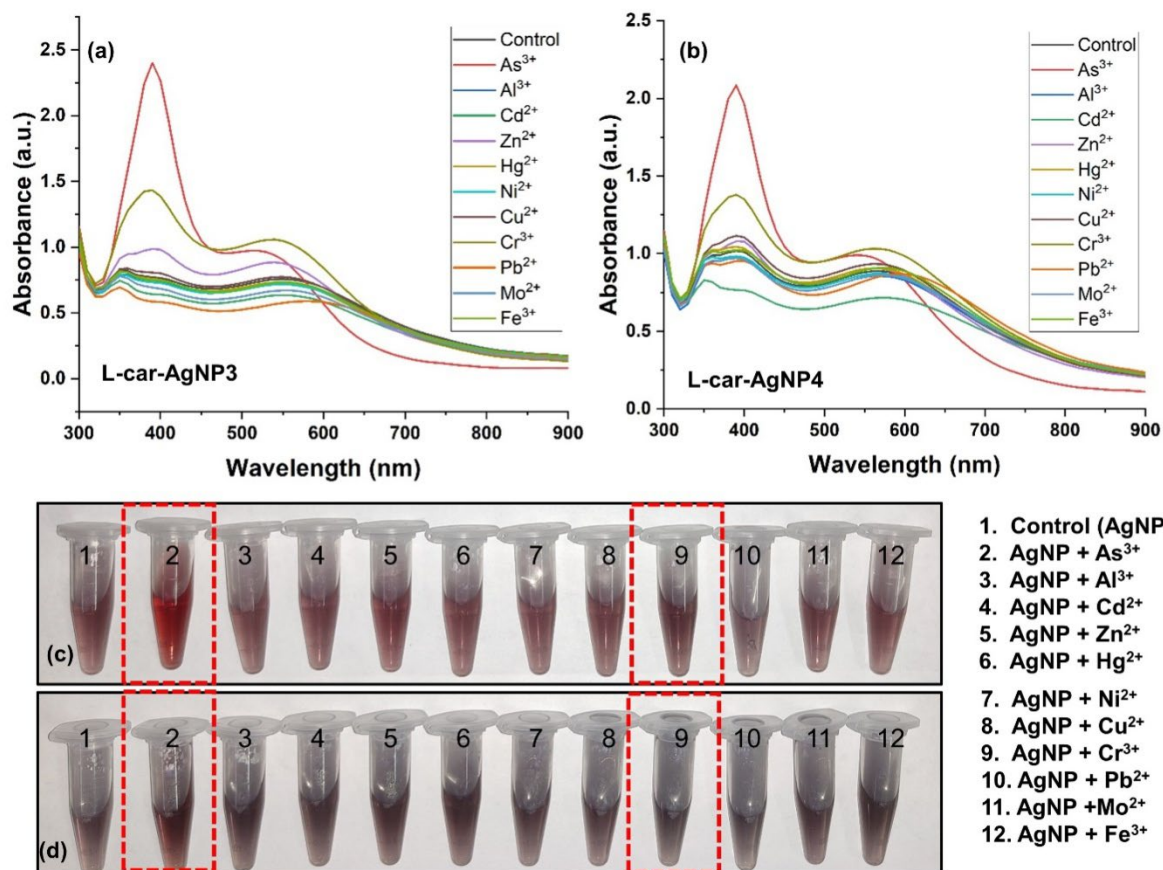
Figure S5: Spectrophotometric detection of heavy metal ions using (a) ʟ-car-AgNP3 and (b) ʟ-car-AgNP4. Colorimetric detection of heavy metal ions using (c) ʟ-car-AgNP3 and (d) ʟ-car-AgNP4.
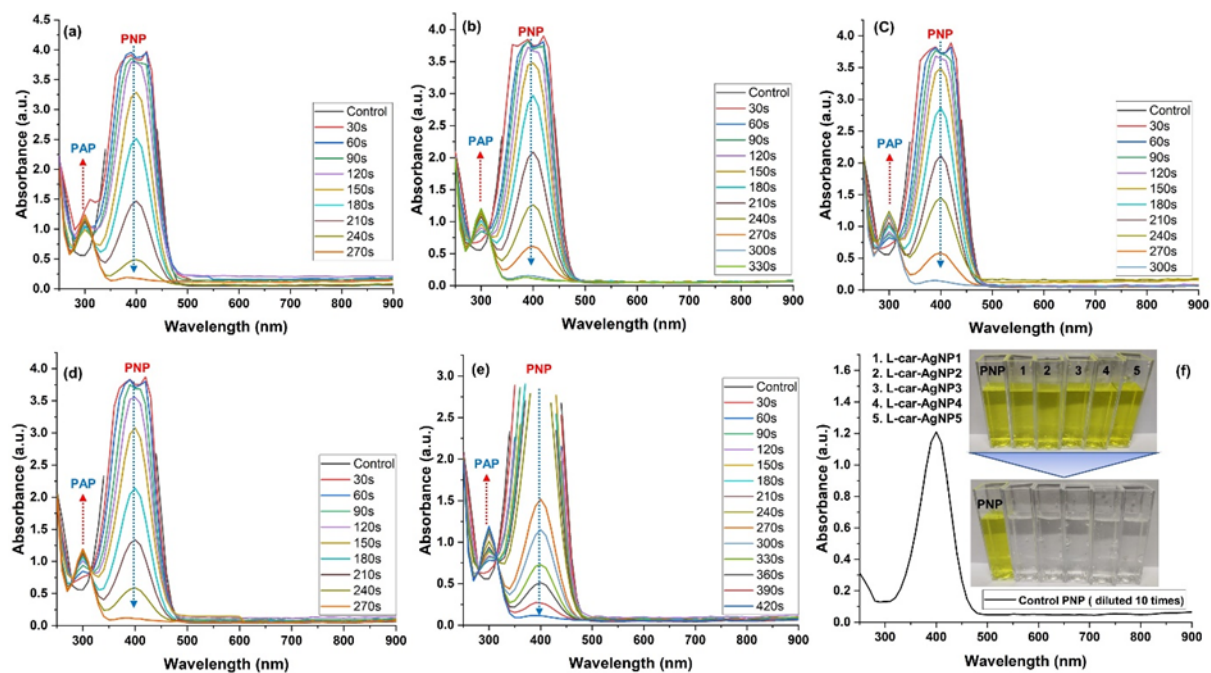
Figure S6: Catalytic degradation of 1 mM P-NP using (a) L-car-AgNP1, (b) L-car-AgNP2, (c) L-car-AgNP3, (d) L-car-AgNP4, and (e) L-car-AgNP5. (f) Colorimetric image showing the degradation of P-NP in the presence of L-car-AgNPs.