

Supporting information

A multi-line platinum nanozyme-based lateral flow device for the colorimetric evaluation of total antioxidant capacity in different matrices

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Platinum nanoparticle characterization

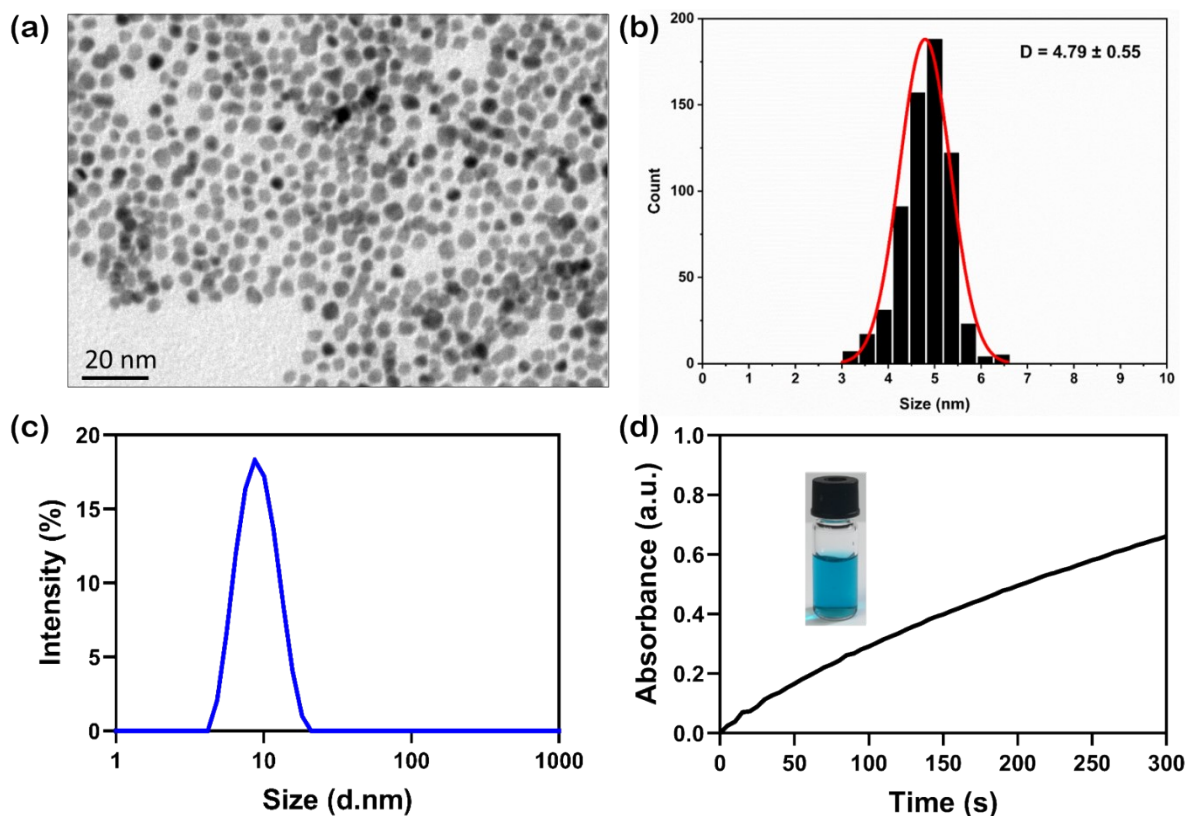


Figure S1. Characterization of the synthesized nanoparticles. (a) Representative TEM image of 5 nm platinum nanoparticles (PtNPs) and (b) relative size distribution. (c) DLS analysis of PtNPs. PtNPs are homogeneous in size and shape and present low polydispersity. DLS peak is centered around 9 nm, consistent with the hydrodynamic radius of citrate capped nanoparticles with a diameter of 5 nm. (d) Peroxidase-like activity of PtNPs, showing their high efficiency in the oxidation of the TMB chromogenic probe at low particle concentrations ($0.33 \mu\text{M}$) in presence of hydrogen peroxide (1 M). Inset: representative photograph of a reaction vial revealing the intense blue color reached in only 5 minutes.