In vitro gene expression and enzyme catalysis in bio-inorganic protocells

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Supplementary Figures

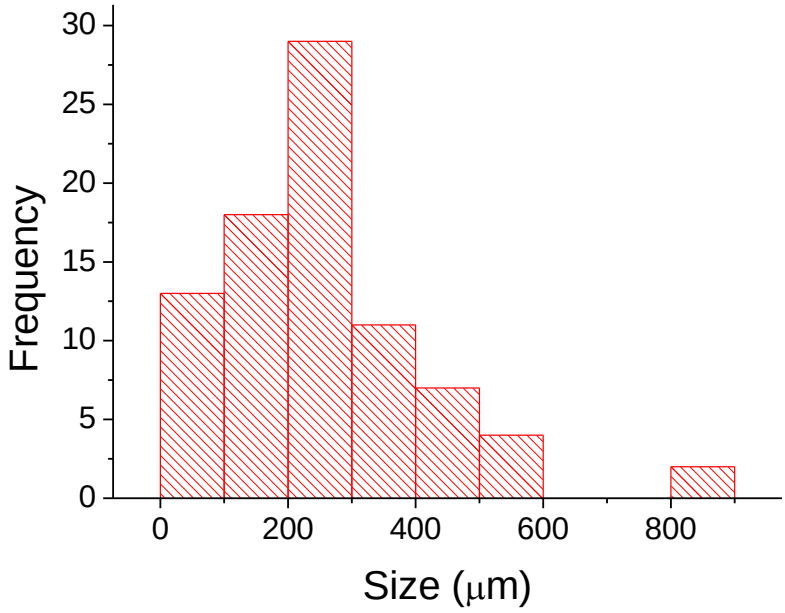

Figure S1 Histogram showing size distribution of colloidosomes produced in dodecane at $\varphi_w = 0.033$ and a loading of 0.3 mg silica nanoparticles per μL of aqueous phase.

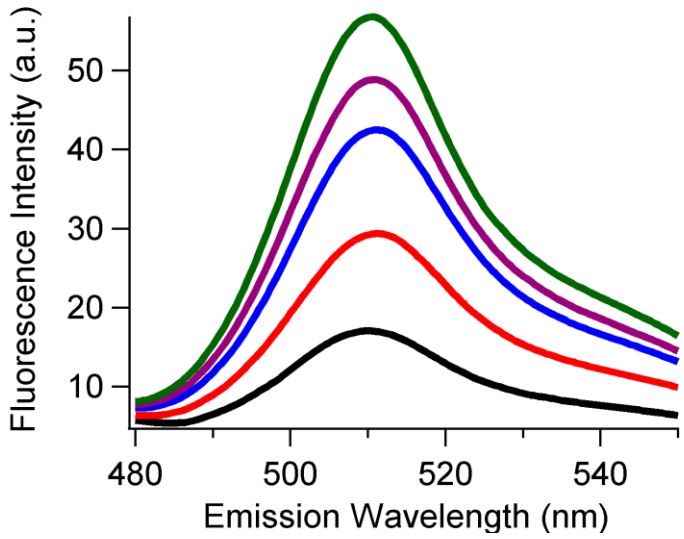

Figure S2 Time dependent eGFP fluorescence spectra recorded at 37°C in bulk aqueous solution containing the plasmid pEXP5-NT/eGFP and a cell-free *in vitro* gene expression solution after 0 (black), 20 (red), 160 (blue), 270 (purple), and 1440 (green) min.

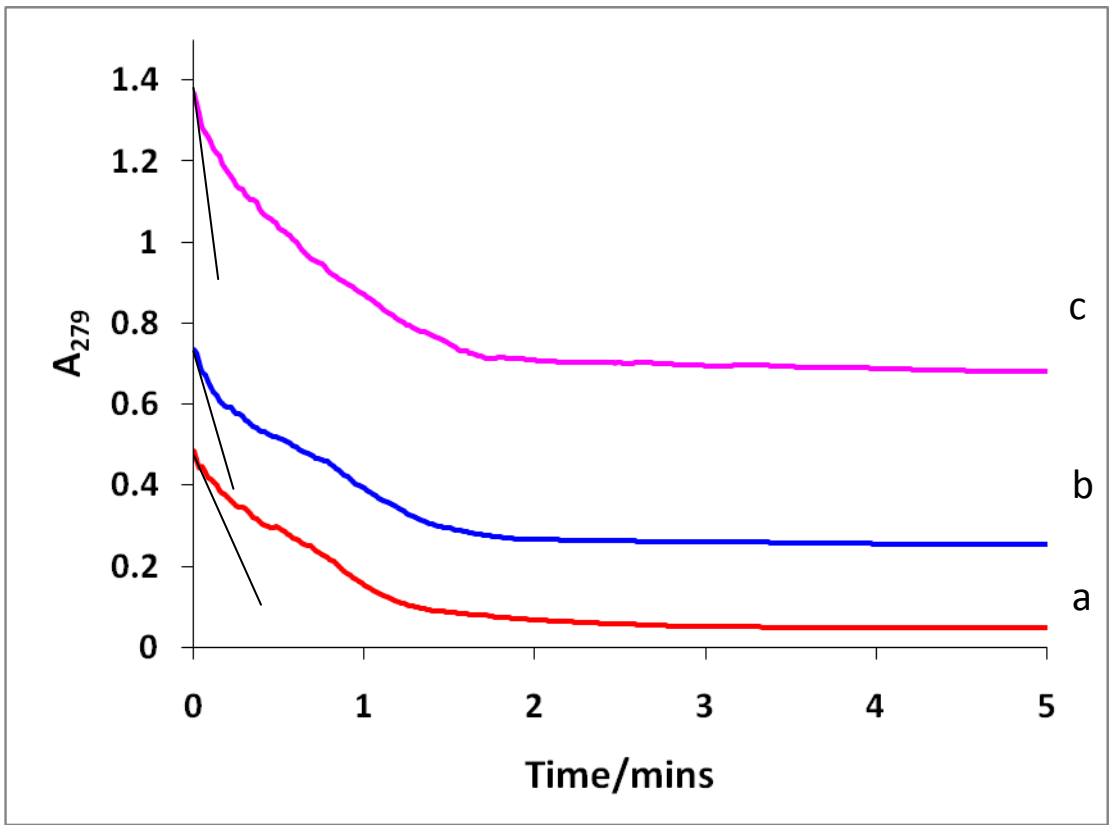

Figure S3 Kinetic curves for colloidosome-entrapped chymotrypsin showing changes with time in the intensity at 279 nm in dodecane after addition of substrate N-benzoyl-*L*-tyrosine ethyl ester (BTEE) to the oil phase at a concentration of (a) 0.5 mM, (b) 0.75 mM and (c) 1 mM. (φ_w = 0.033, loading = 0.3 mg silica nanoparticles per µL of aqueous phase). The initial reaction rates were determined from the first 10-20 seconds of the reaction.

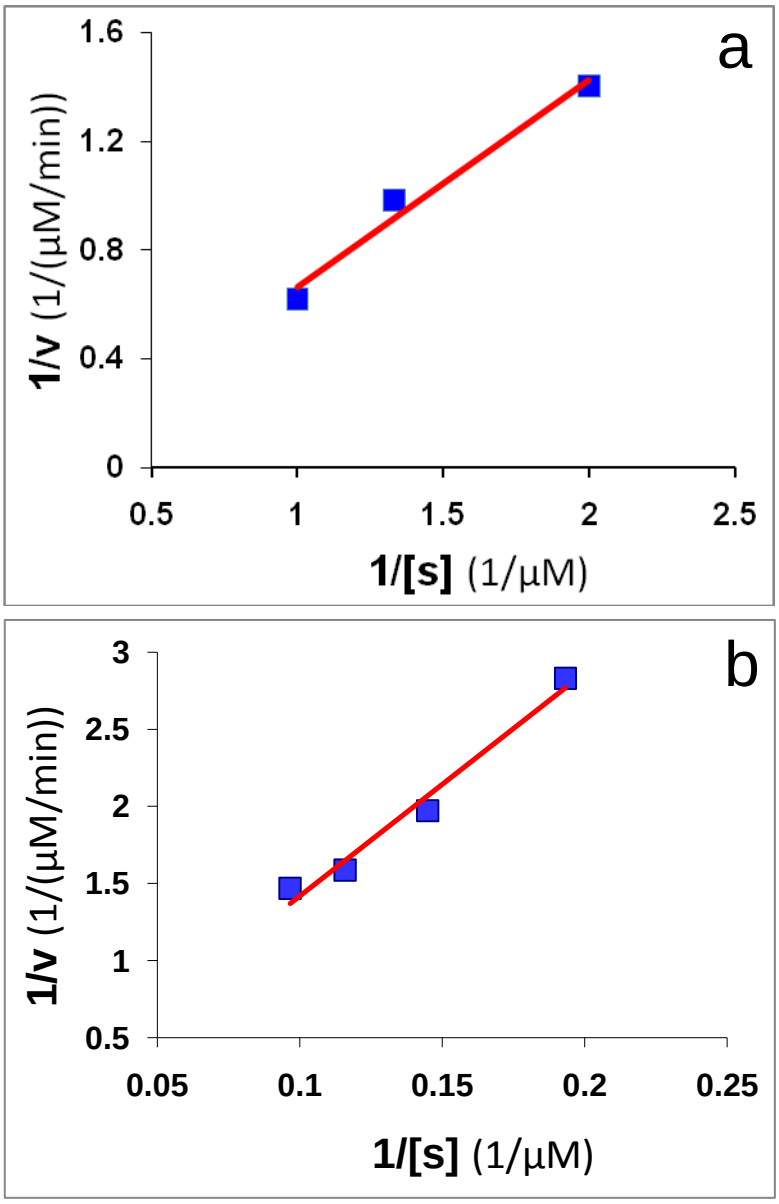

Figure S4 Lineweaver-Burk plots (1/v (v = initial rate against 1/[S] (S = substrate concentration) of (a) chymotrypsin (ChTRP) and (b) alkaline phosphatase (ALP) catalyzed reactions in silica nanoparticle-stabilized colloidosomes.