Electronic Supplementary Material (ESI) for Nanoscale

Supporting Information

Multifunctional gold coated thermo-sensitive liposomes for multimodal imaging and photo-thermal therapy of breast cancer cells

Aravind Kumar Rengan,[a] *Madhura Jagtap,*[b] *Abhijit De,*[b] *Rinti Banerjee*[a] *and Rohit Srivastava*[a*]

[a] Department of Bioscience and Bioengineering, IIT Bombay, Mumbai – 400076 (INDIA).

[b] Molecular Functional Imaging Lab, KS-325, 326, ACTREC, Tata Memorial Centre, Kharghar, Sector 22, Navi Mumbai - 410210 (INDIA).

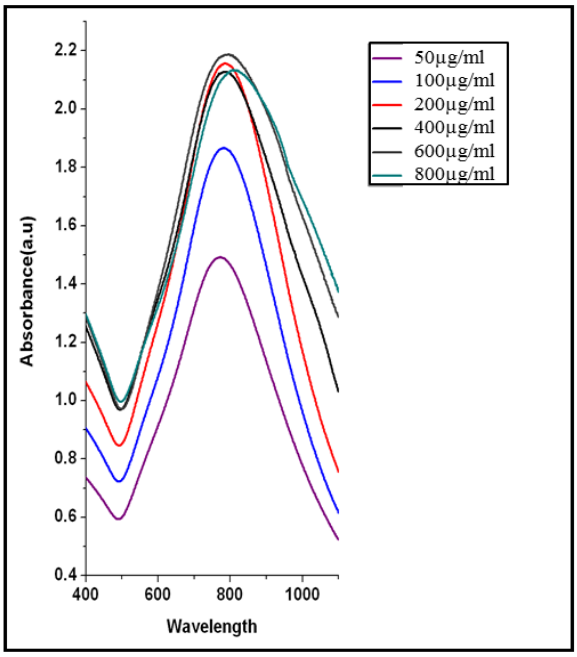
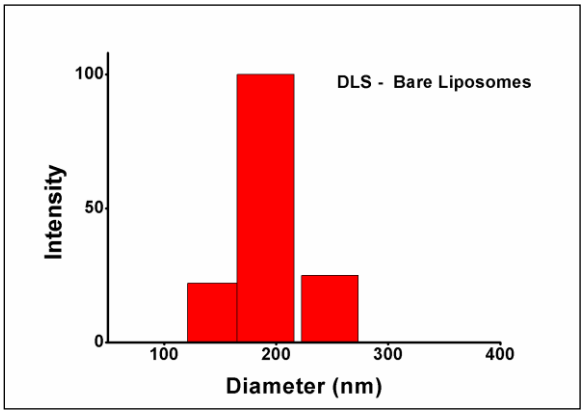
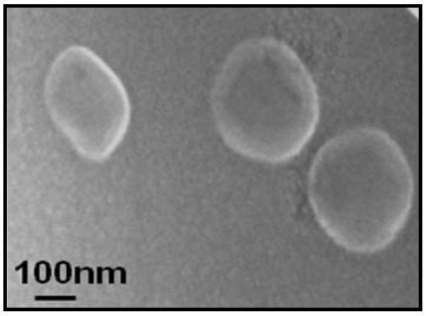


Fig. S1. Optimization of Lipid concentration with respect to fixed concentrations of $HAuCl_4$ (5 mM) and ascorbic acid (20mM). The absorbance was saturated at 200 - 400µg/ml of lipid concentration.

a)



b) LIPOSOME FEG -SEM



c) LIPOSOME FEG -TEM

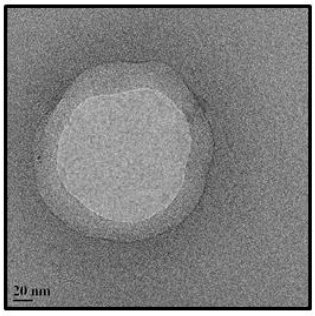


Fig. S2. Liposome (DSPC : CHOL/8:2 wt%) a) DLS graph, b) FEG-SEM and c) FEG TEM images.

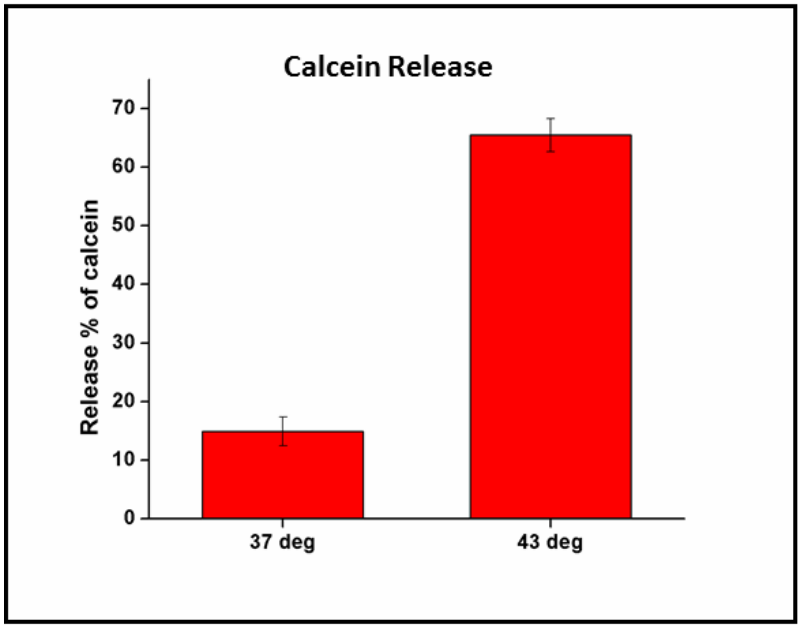


Fig. S3. Thermo-sensitive model drug (calcein) release experiment (from DSPC: CHOL liposomes) at 37 ° C and 43 ° C (water bath mediated- 30 min duration).

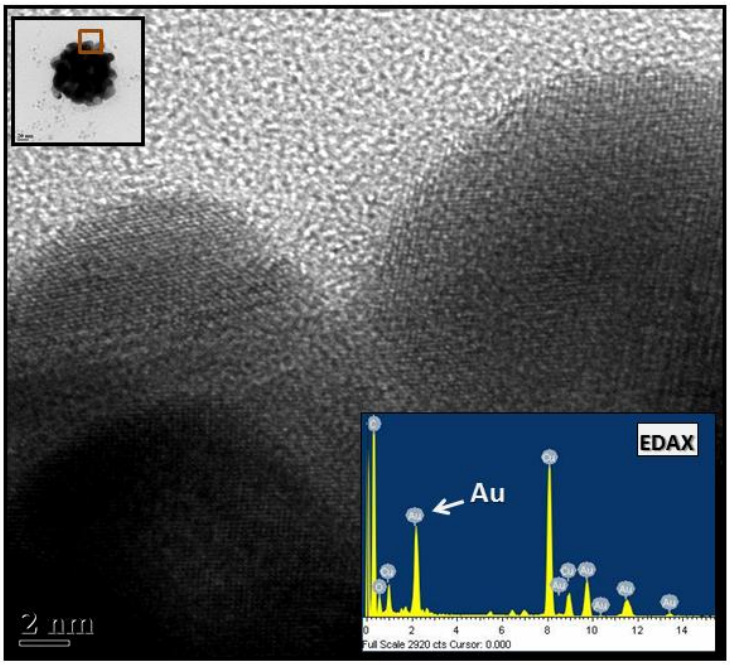


Fig. S4. HR TEM image of Lipos Au NP with confirmation of Au in EDAX.

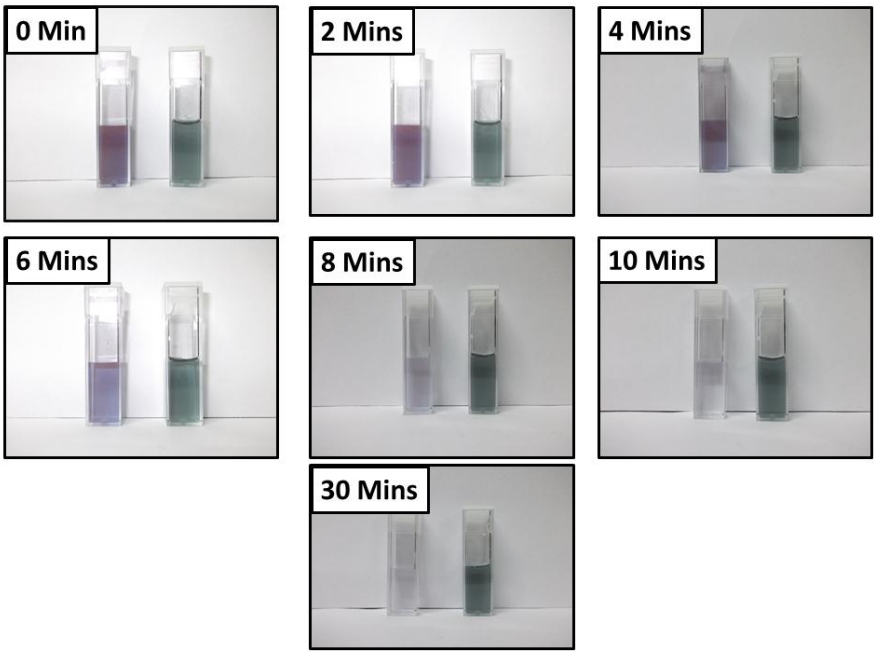


Fig. S5. Bright field images of $HAuCl_4$ Sol. reduced by ascorbic acid in the absence/ presence of liposome template sol. (left and right cuvettes respectively) at varying time periods (0 to 30 min) denoting stability of Lipos Au NPs.