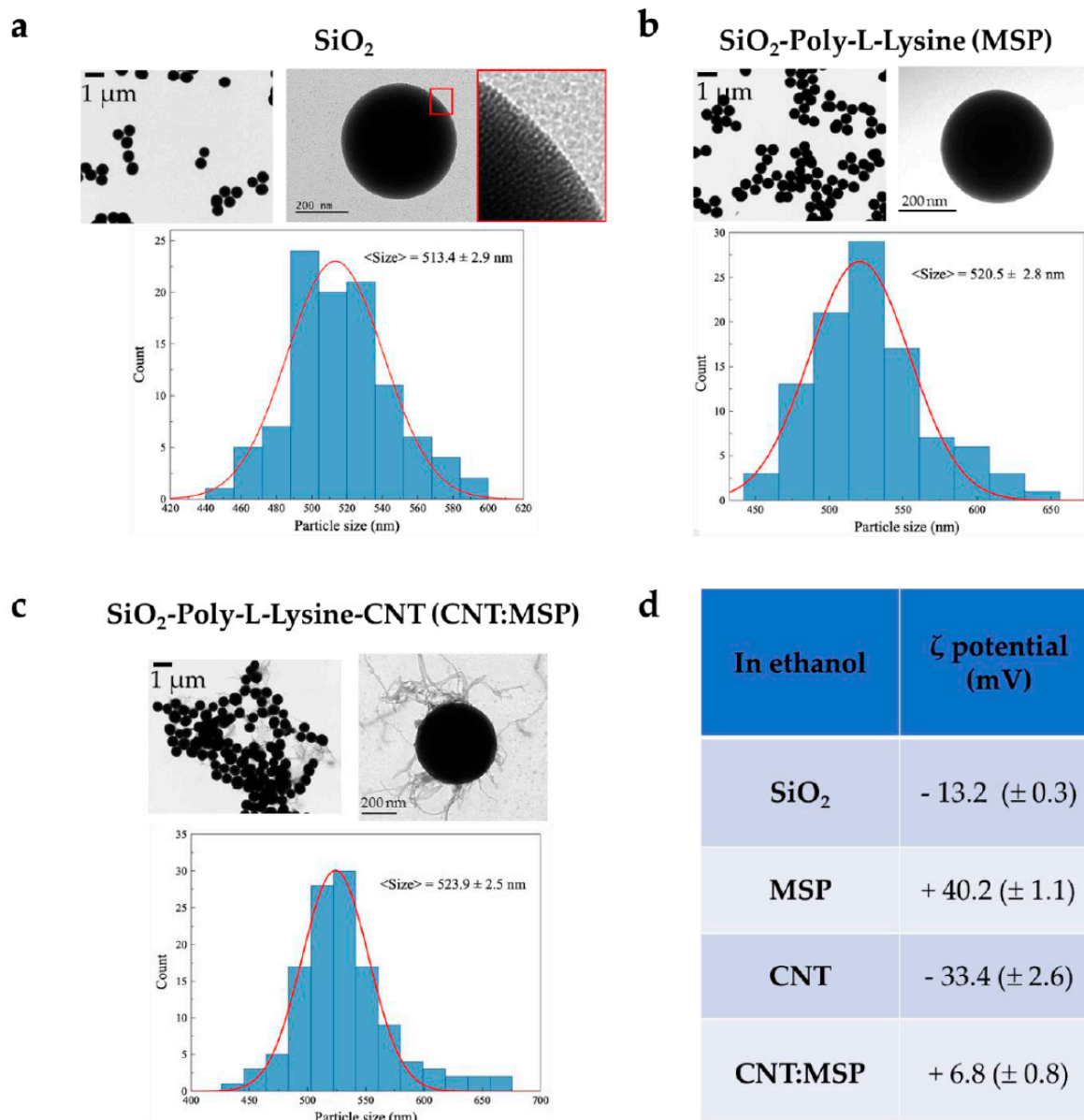
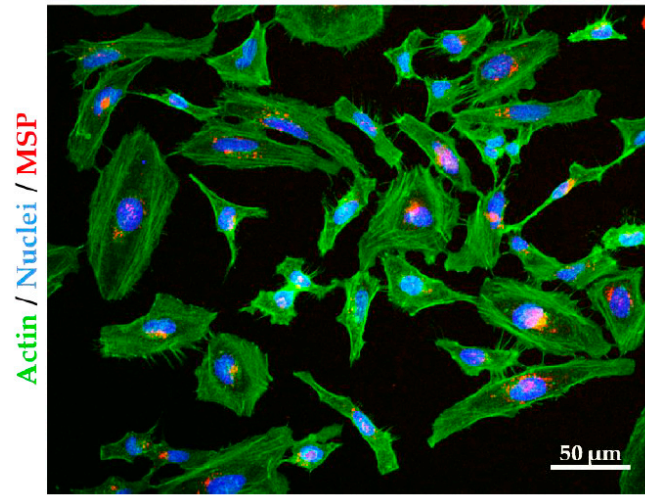


# Supplementary Materials: Engineering Sub-Cellular Targeting Strategies to Enhance Safe Cytosolic Silica Particle Dissolution in Cells

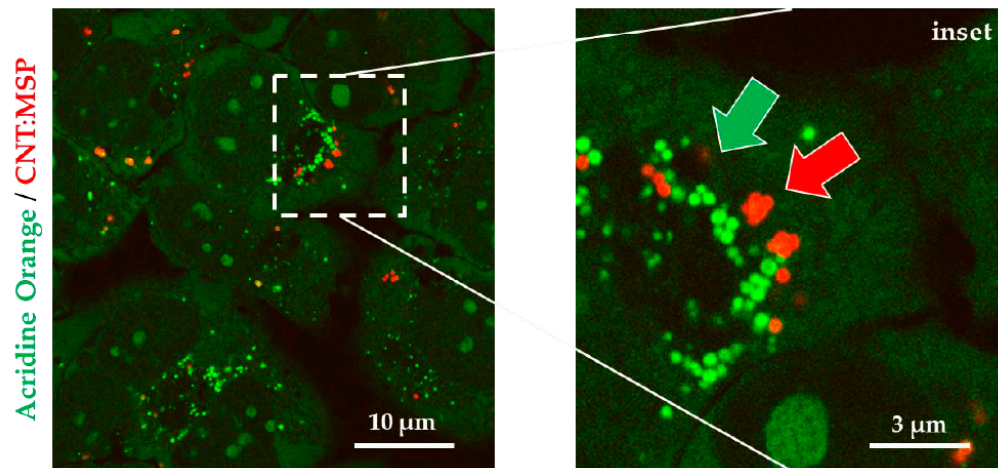
Nerea Iturrioz-Rodríguez, Miguel Ángel Correa-Duarte, Rafael Valiente and Mónica L. Fanarraga



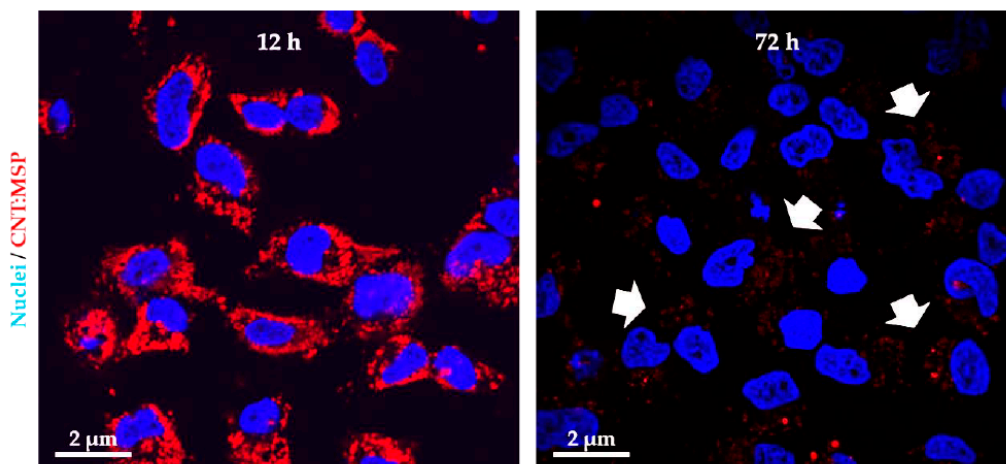
**Figure S1.** Characterization of the silica particles. (a) TEM images and size distribution of silica particles, the amplication of the image in red shows the pore structure of the particles. (b) TEM images and size distribution of silica particles with the Poly-L-Lysine coating (MSP), (c) TEM images and size distribution of MSP with the CNT coating. (d) Calculated ζ potential of the three types of particles and the carbon nanotubes.



**Figure S2.** Fluorescent confocal microscopy image of HeLa cells after 12 h of the administration of MSP. At this time point most particles (red channel) are already in the cytoplasm of the cells.



**Figure S3.** CNT:MSP escape from endo-lysosomes. Fluorescent confocal projection images of HeLa cells exposed to RBITC-labelled CNT:MSP (red arrow) during 48 h. Many particles have escaped into the cytoplasm and do not co-localize with the vesicles (green channel, green arrow).



**Figure S4.** Cytosolic particle surface degradation. Fluorescent confocal projection images of HeLa cells exposed to RBITC-labelled CNT:MSP. After 72 h the surface RBITC-coating of the particles (red channel) has virtually disappeared suggesting surface erosion (white arrows).