

Figure S1. Small-angle X-Ray diffraction analysis of the MCM-41 nanoparticles used as cores, after the amination treatment

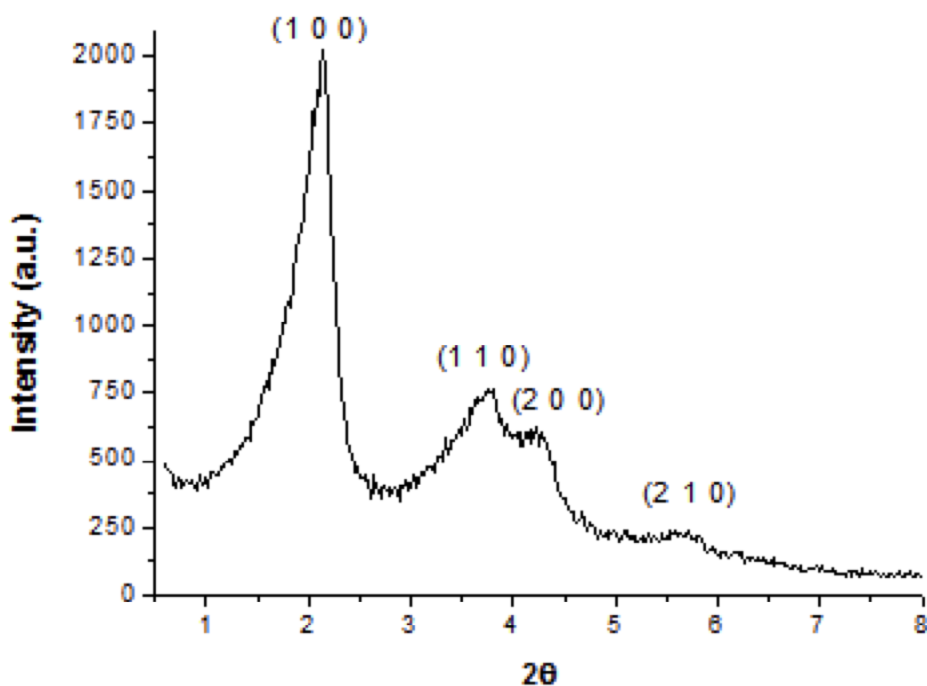


Figure S2. Nitrogen adsorption isotherm of MCM-41 nanoparticles, after amination treatment

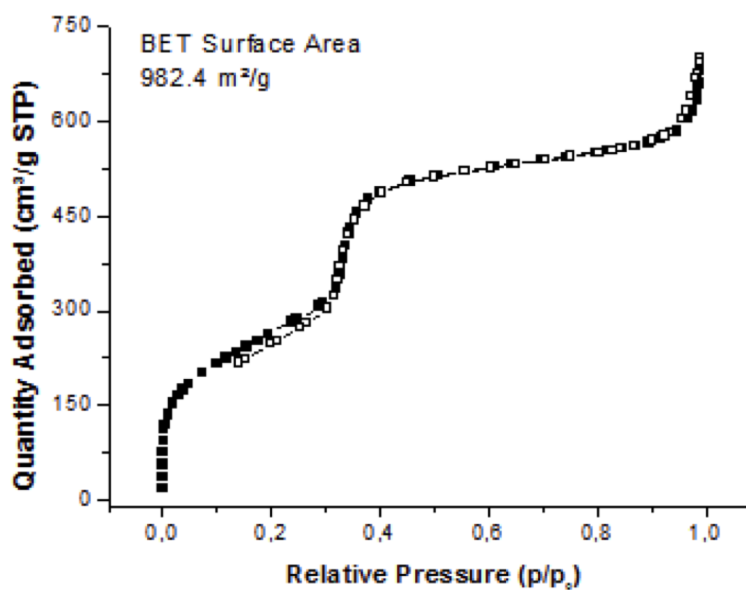
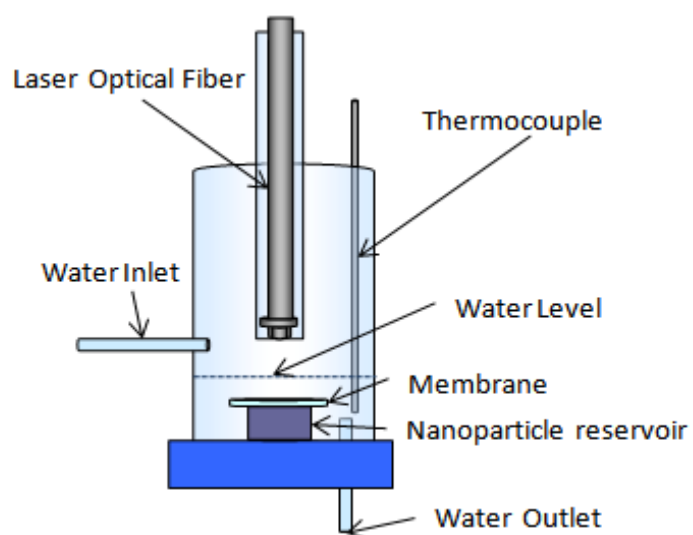
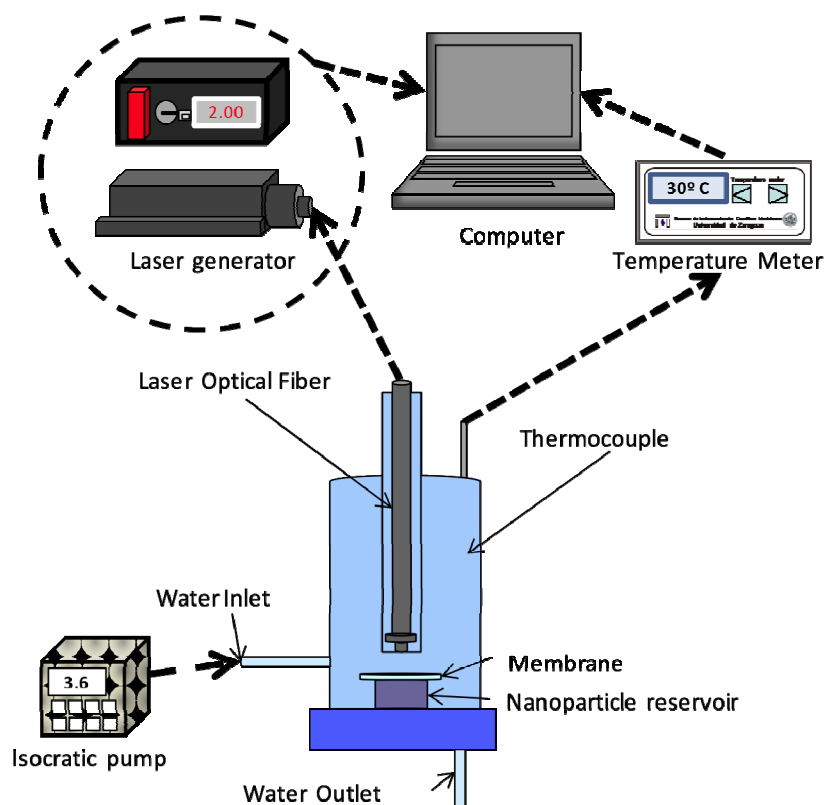


Figure S3 general scheme of experimental setup for NIR enhanced drug release and detail of the release cell



Note: Water inlet flow was 3.6 mL/min. Irradiation was carried out with an infrared diode laser, (power: 2000 mW, wavelength: 808 nm)

Figure S4. Heating under NIR of SiO₂/Au NPs with a dense silica core (ca. 50 and 100 nm diameter) and with a porous silica core (ca. 100 nm diameter). Suspensions for heating contained 0.4 mg of NPs per mL of water.

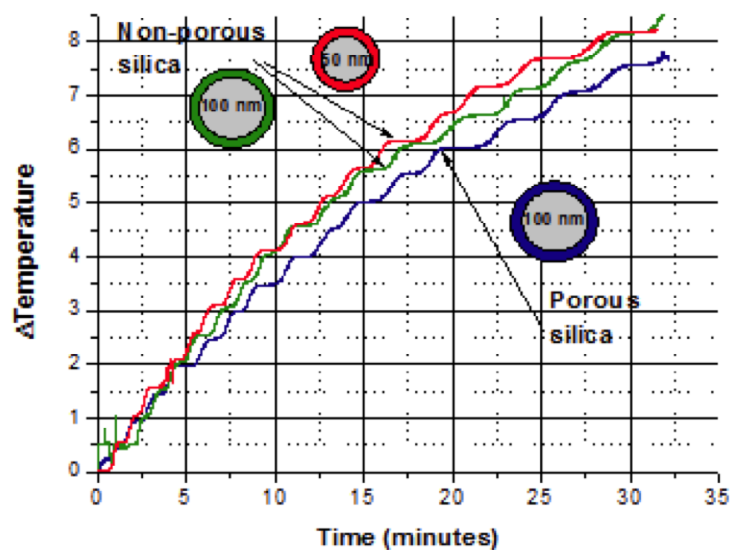


Figure S5. Blank experiment using the same NPs as in figure 3 but without the Au shell

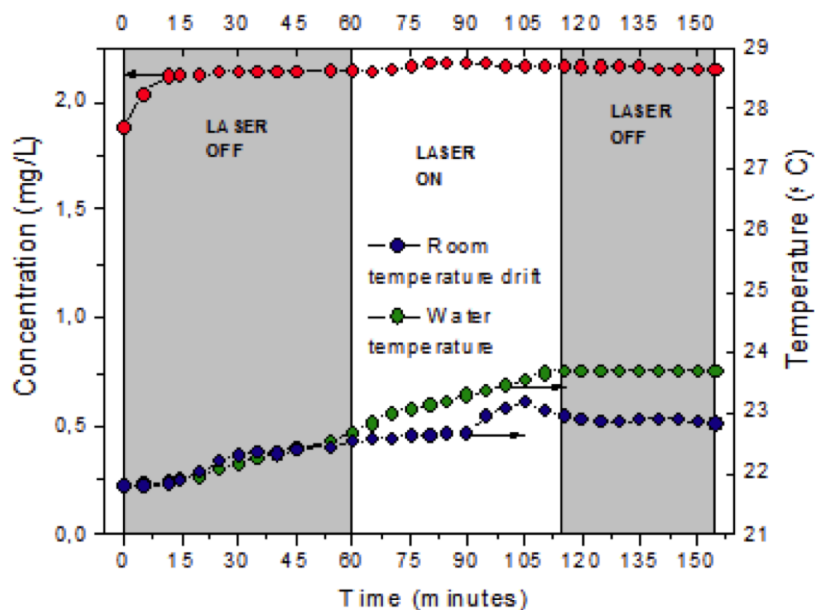
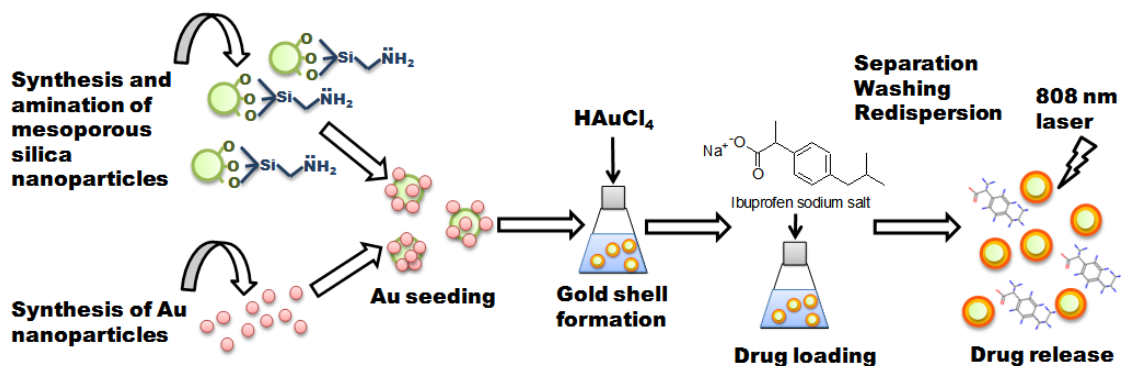


Figure S6. General scheme of the synthesis, drug loading and drug release processes.



Note: The quantification of amines after functionalization was carried out following the colorimetric method described by Bruce and Sen, *Langmuir* **2005**, *21*, 7029-7035.