

Supplementary Information for:

**Facile Route to Functionalized Mesoporous Silica
Nanoparticles by Click Chemistry**

Nirmalya Moitra, Philippe Trens, Laurence Raehm, Jean-Olivier Durand, Xavier Cattoën and Michel Wong Chi Man

*Institut Charles Gerhardt Montpellier, UMR 5253 CNRS-UM2-ENSCM-UM1,
CC1701 Place Eugène Bataillon, 34095 Montpellier Cedex 05, France.*

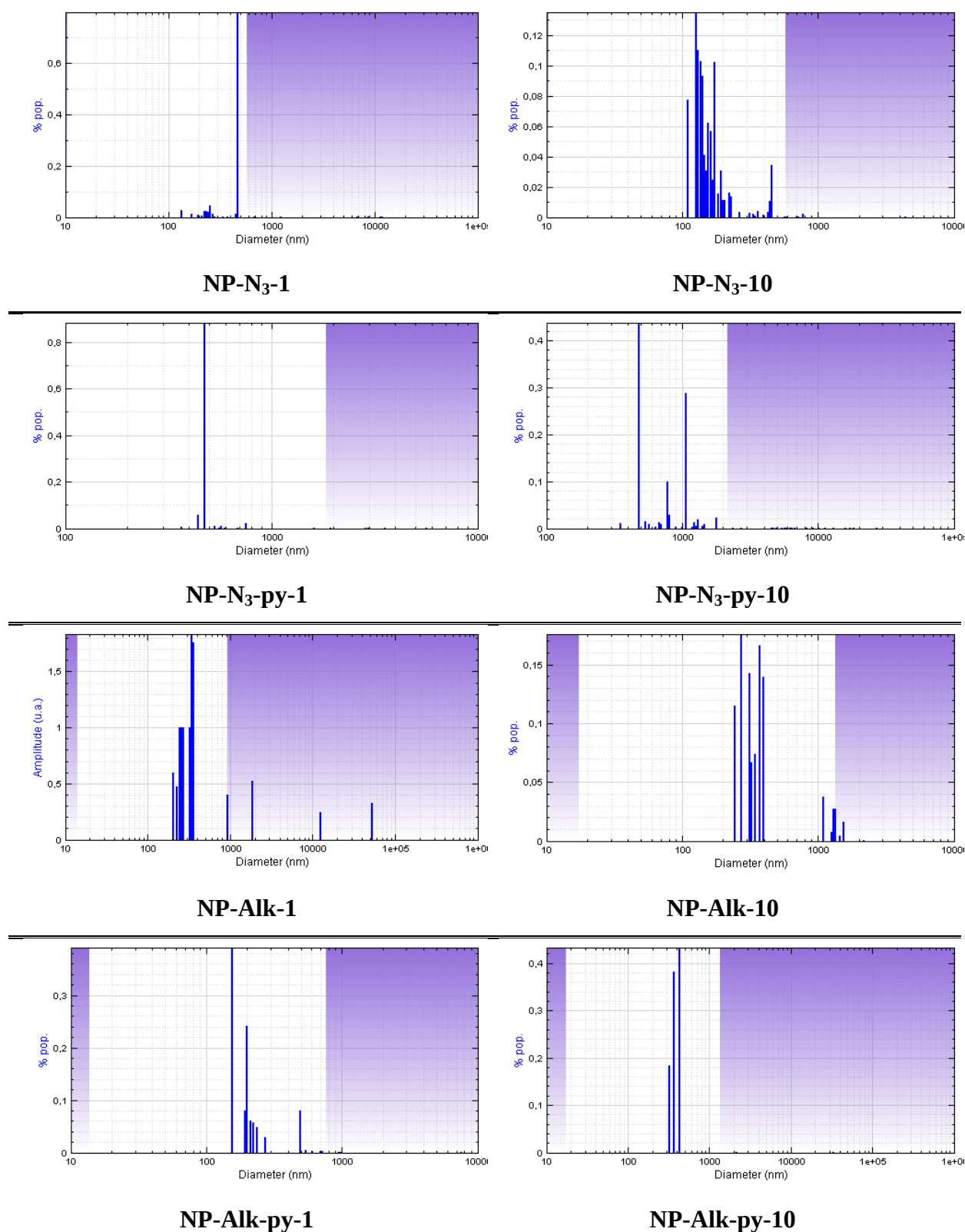


Fig. S1: Size distribution of the nanoparticles as determined by DLS (MIE representation)

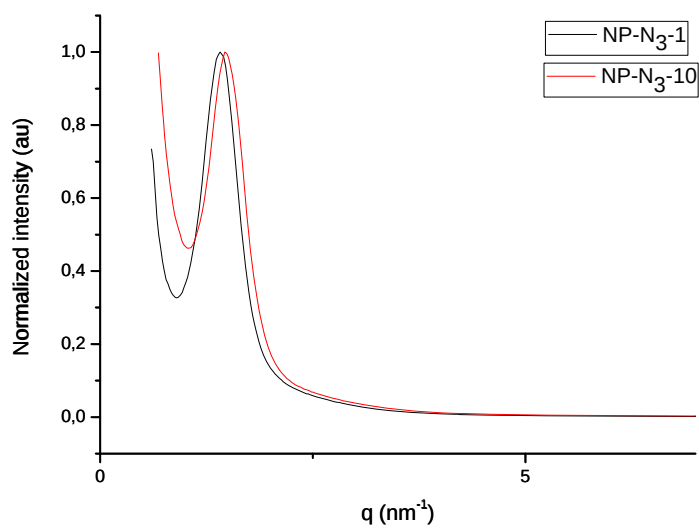


Fig. S2: SAXS of the azide-functionalized MSN

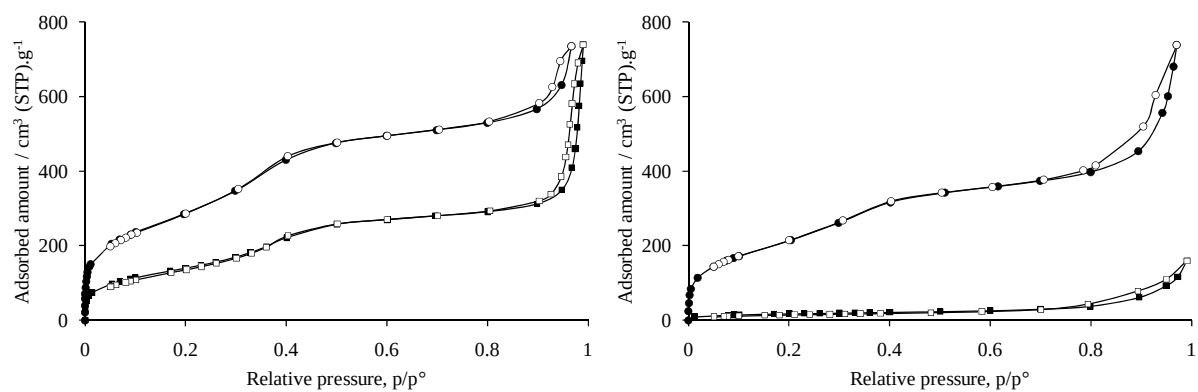


Fig. S3: N₂-adsorption –desorption isotherms of nanoparticles: **NP-N₃-1** (left) and **NP-N₃-10** (right), before (circles) and after (squares) the click reaction with **3** (Adsorption branches (filled symbols), desorption branches (empty symbols)).

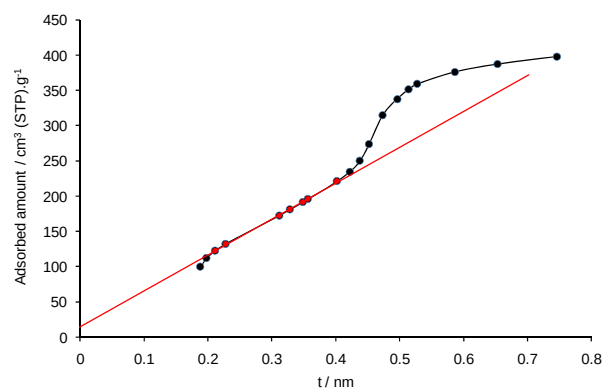


Fig. S4: α_s plot in the case of NP-Alk-1.

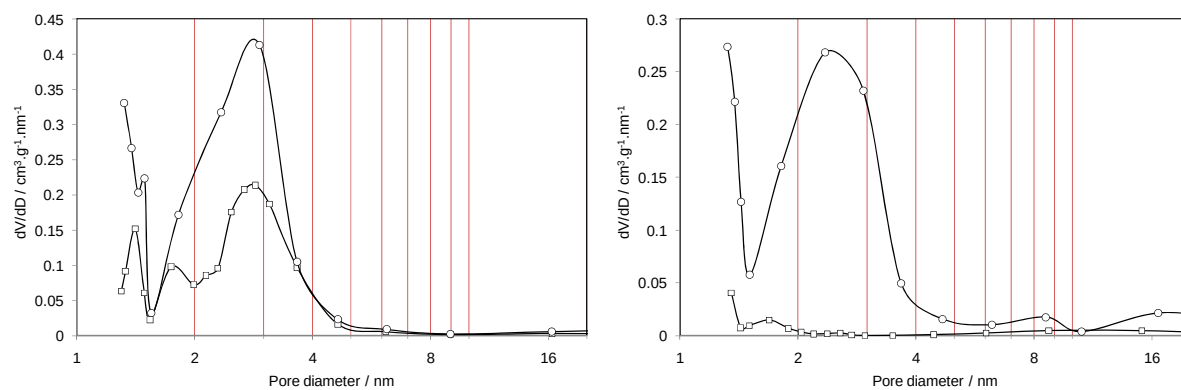


Fig. S5: Pore size distribution of the nanoparticles in the case of **NP-N₃-1** (left) and **NP-N₃-10** (right), before (circles) and after (squares) the click reaction with **3**.

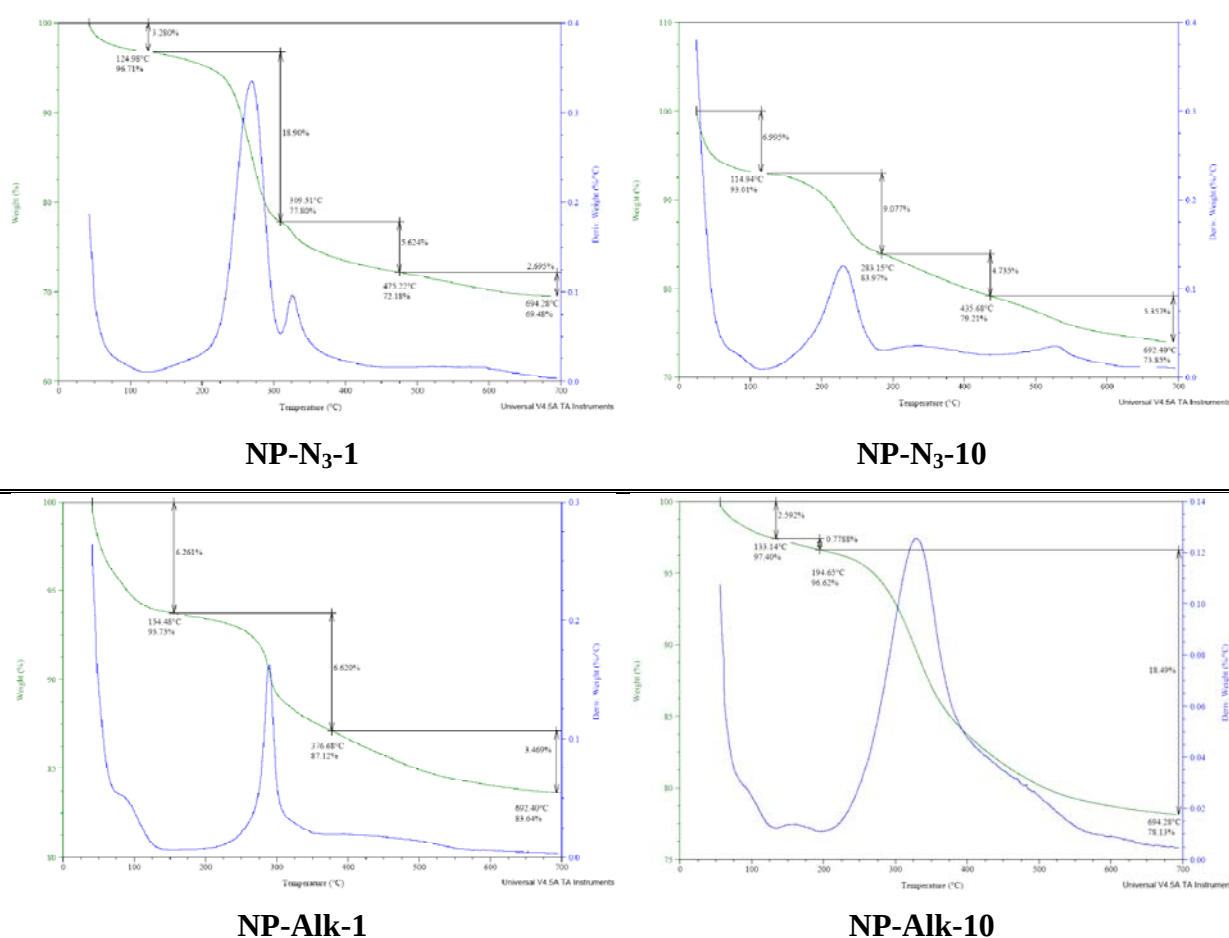


Fig. S6: Thermogravimetric analyses ($10\text{ }^{\circ}\text{C min}^{-1}$) of the clickable nanoparticles (green: weight (%); blue: derivative ($\%\text{ }^{\circ}\text{C}^{-1}$)). The weight loss before $110\text{ }^{\circ}\text{C}$ corresponds to solvent molecules adsorbed on the material; the weight loss centered at $ca\ 300\text{ }^{\circ}\text{C}$ is attributed to the unbound organic fragments (residual surfactant molecules); the final weight loss ($> 300\text{ }^{\circ}\text{C}$) corresponds to the organics covalently anchored to the silica matrix.

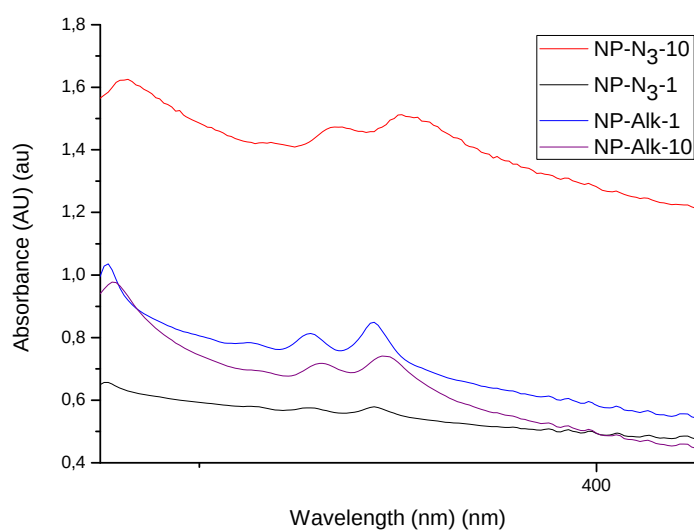


Fig. S7: UV-vis absorption spectra of the clicked MSN.

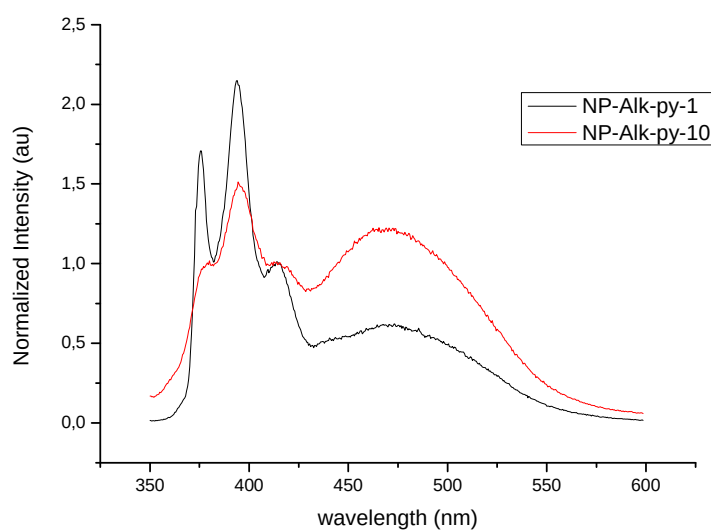


Fig. S8: Fluorescence spectra of the alkyne-functionalized nanoparticles after the click reaction with **4** ($\lambda_{\text{exc}} = 330$ nm, spectra normalized at 415 nm).