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Supporting Information

All-Inorganic Core-Shell Silica-Titania Mesoporous Colloidal Nanoparticles Showing Orthogonal Functionality

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The zeta potential measurement gives information about the surface charge of a material by changing the pH of a buffer solution where the sample is dispersed. The results, reported in Figure S-1, show a constant slight decrease of the zeta-potential values as the content of Ti in the CMS-shell increases. The pure silica sample (grey empty squares) is also added for comparison, showing zeta-potential values slightly closer to neutrality than the other Ti-containing samples. Their negatively charged surface results in a high repulsion between the nanoparticles in solution, and as a consequence in the small effective particle size and high colloidal stability of the Ti-shell CMS nanoparticles, as shown with Dynamic Light Scattering (DLS) measurements in Figure 1 of the main text.

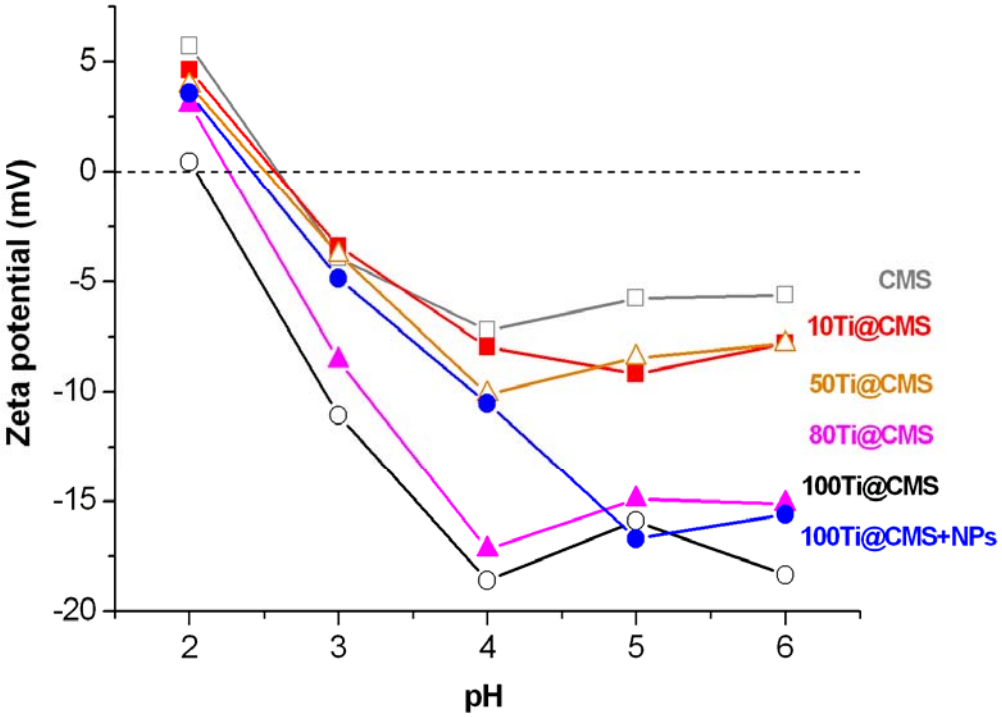

Figure S-1. Z-potential measurements of the xTi-shell containing CMS nanoparticles (red filled squares: 10Ti@CMS; orange empty triangles: 50Ti@CMS; magenta filled triangles: 80Ti@CMS; black empty circles: 100Ti@CMS; blue filled circles: 100Ti@CMS+NPs) compared with the pure silica CMS nanoparticles (grey empty squares).