

## Supporting Information

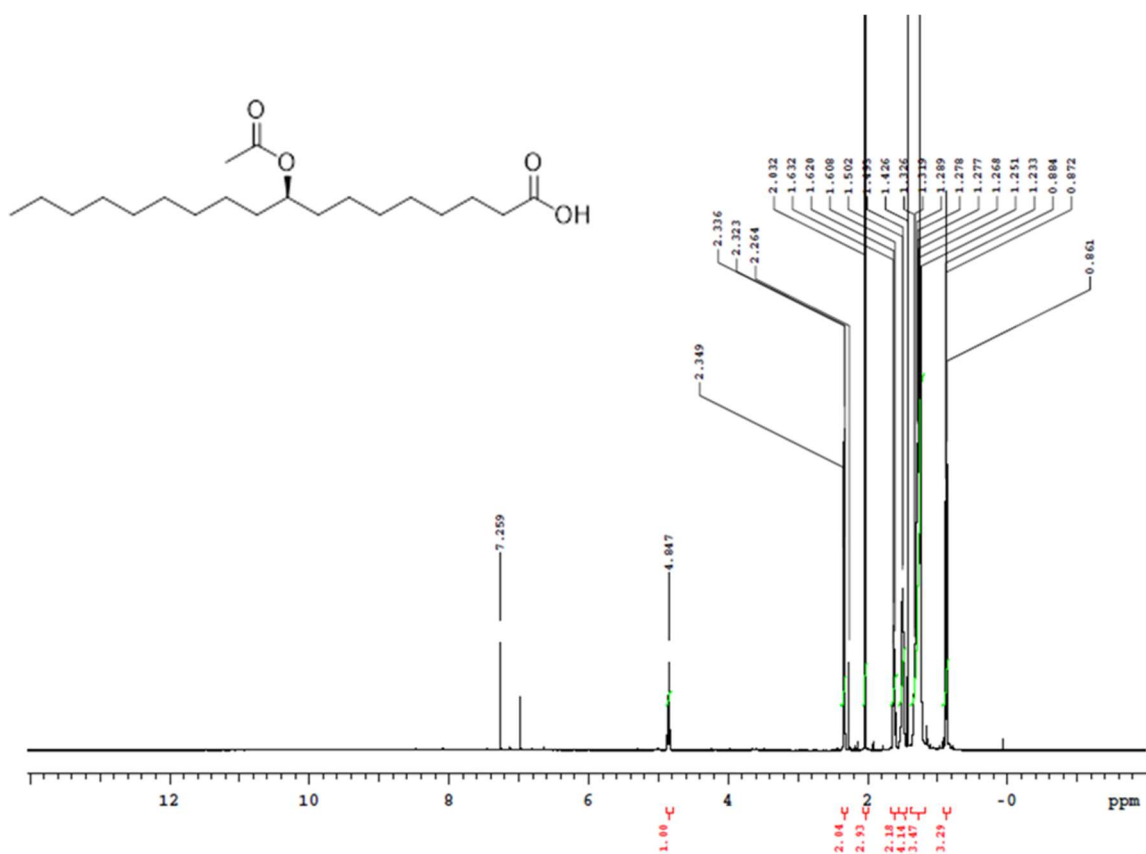
# Magnetic nanoparticles coated with (*R*)-9-acetoxystearic acid for biomedical applications

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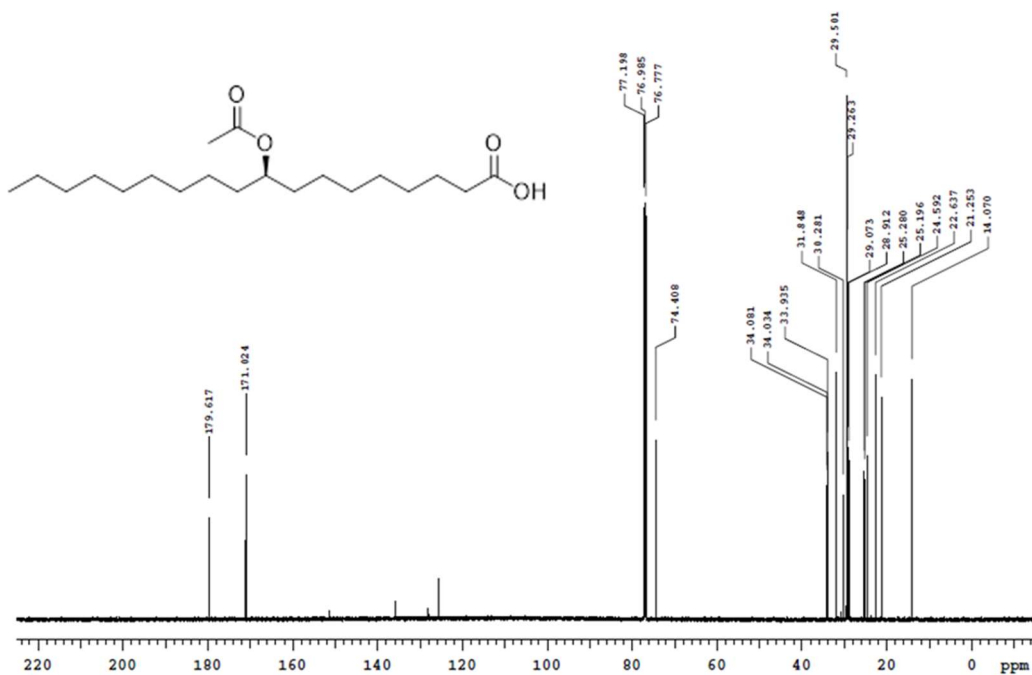
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**Figure S1.** <sup>1</sup>H NMR spectrum (600 MHz, CDCl<sub>3</sub>, 298 K) of (R)-9-acetoxyoctadecanoic acid (2), (with traces of BHT).



**Figure S2.** <sup>13</sup>C NMR spectrum (150.8 MHz, CDCl<sub>3</sub>, 298 K) of (R)-9-acetoxyoctadecanoic acid (2), (with traces of BHT).

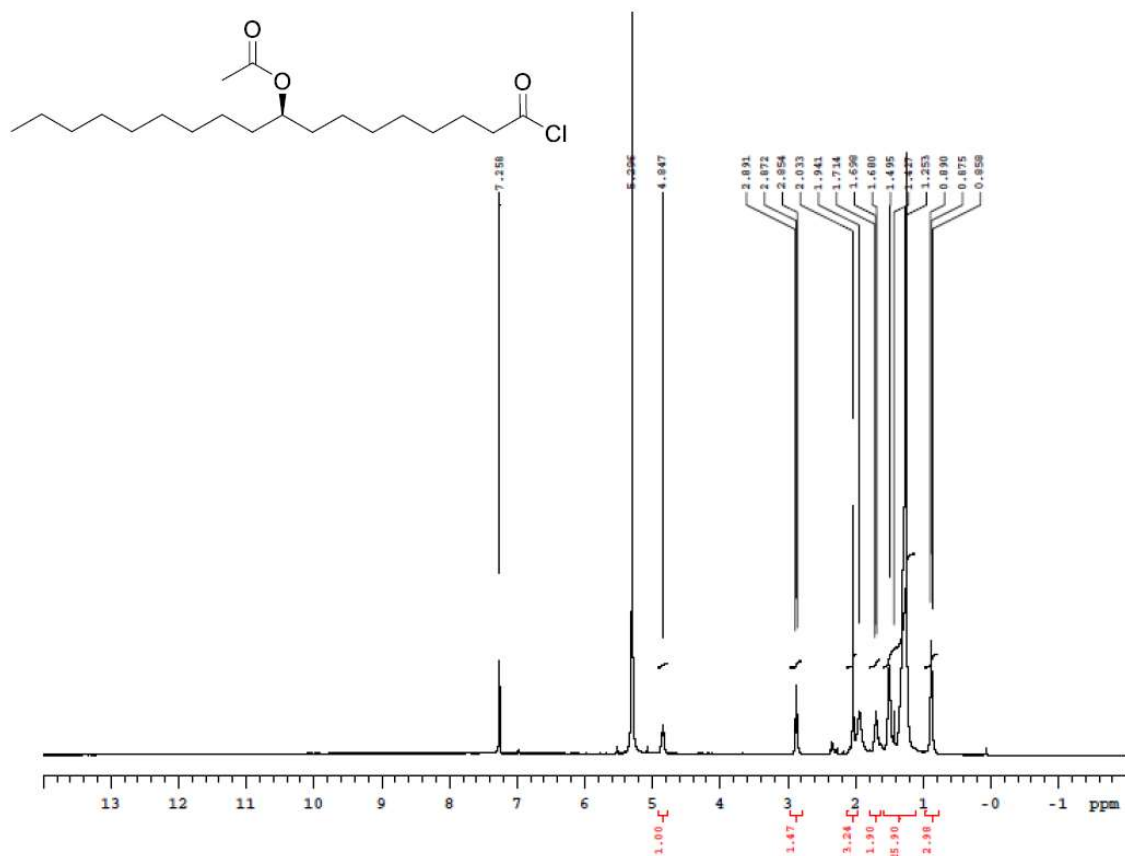


Figure S3.  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ , 298 K) of (*R*)-1-chloro-1-oxooctadecan-9-yl acetate (3).

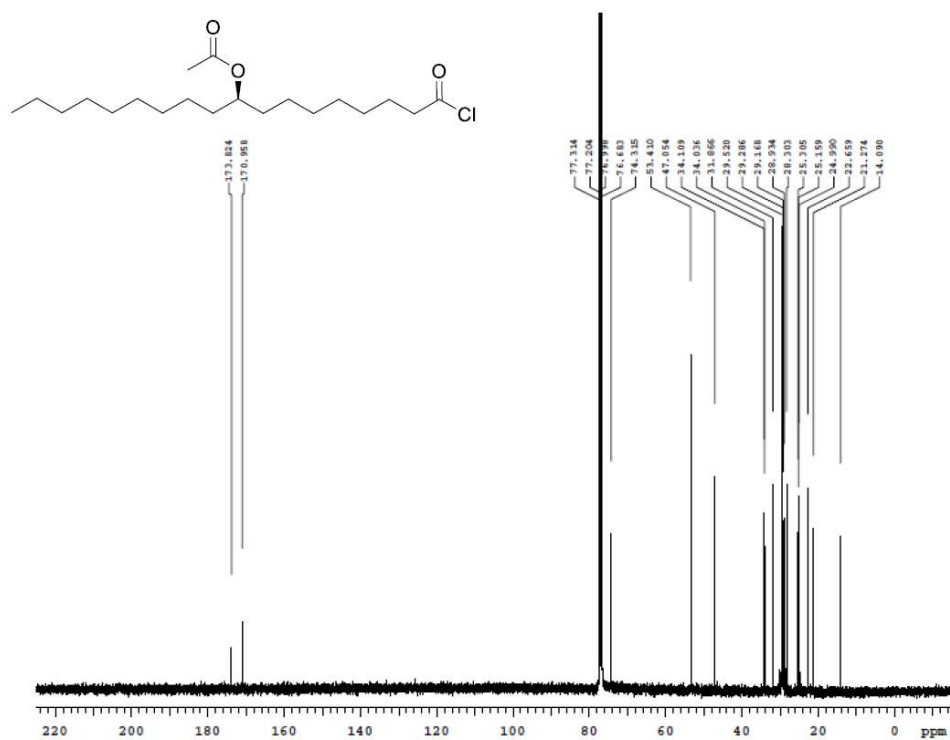
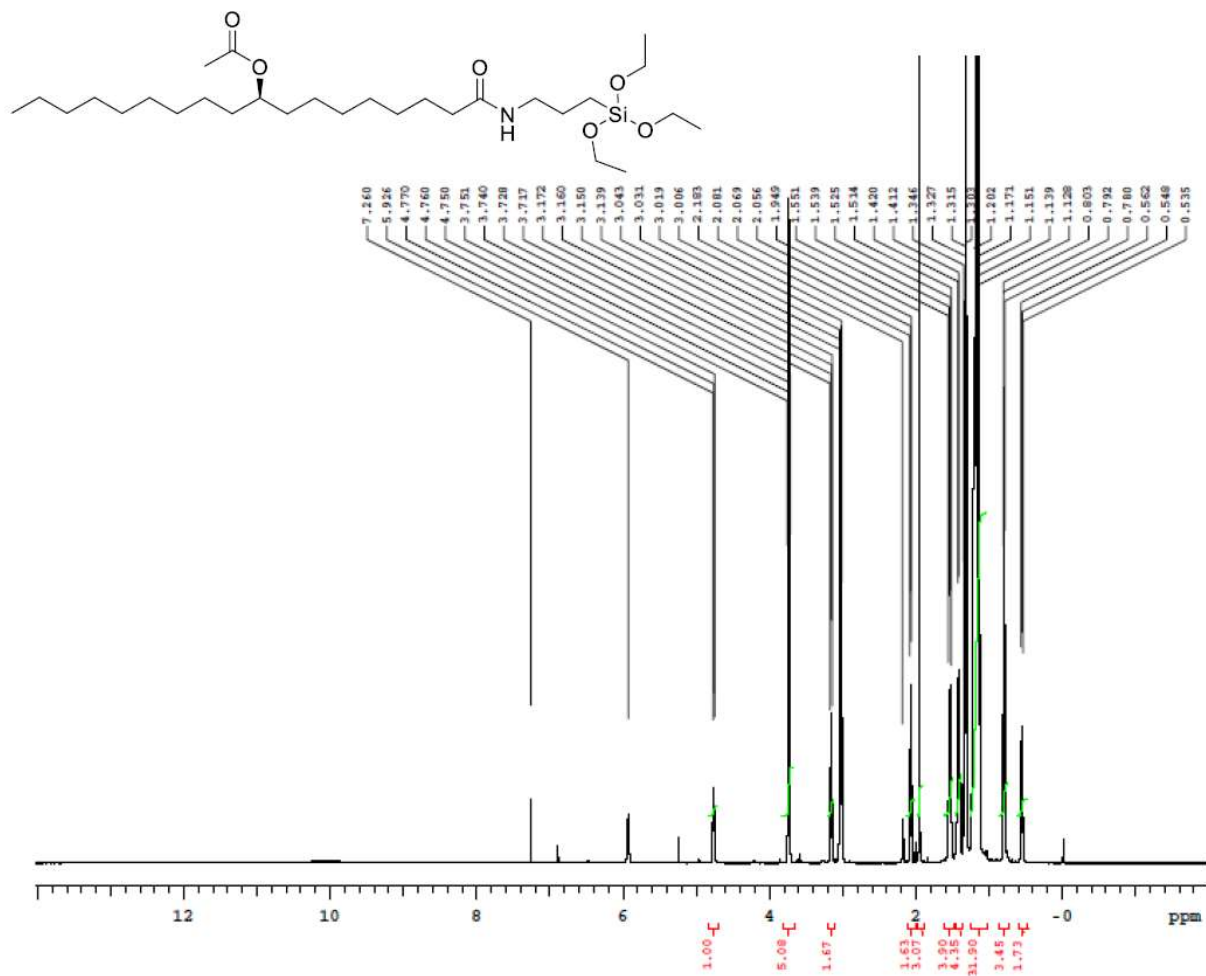
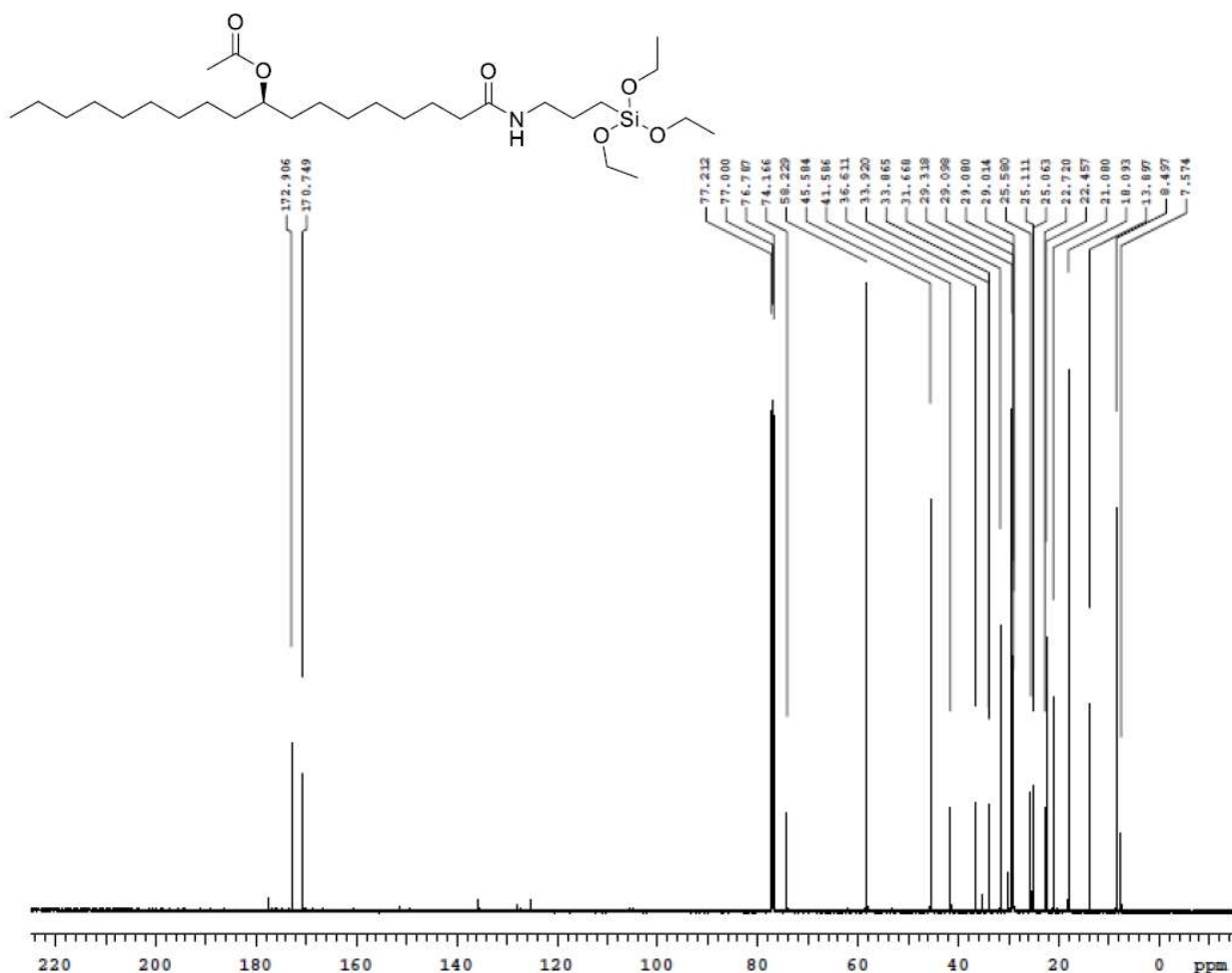


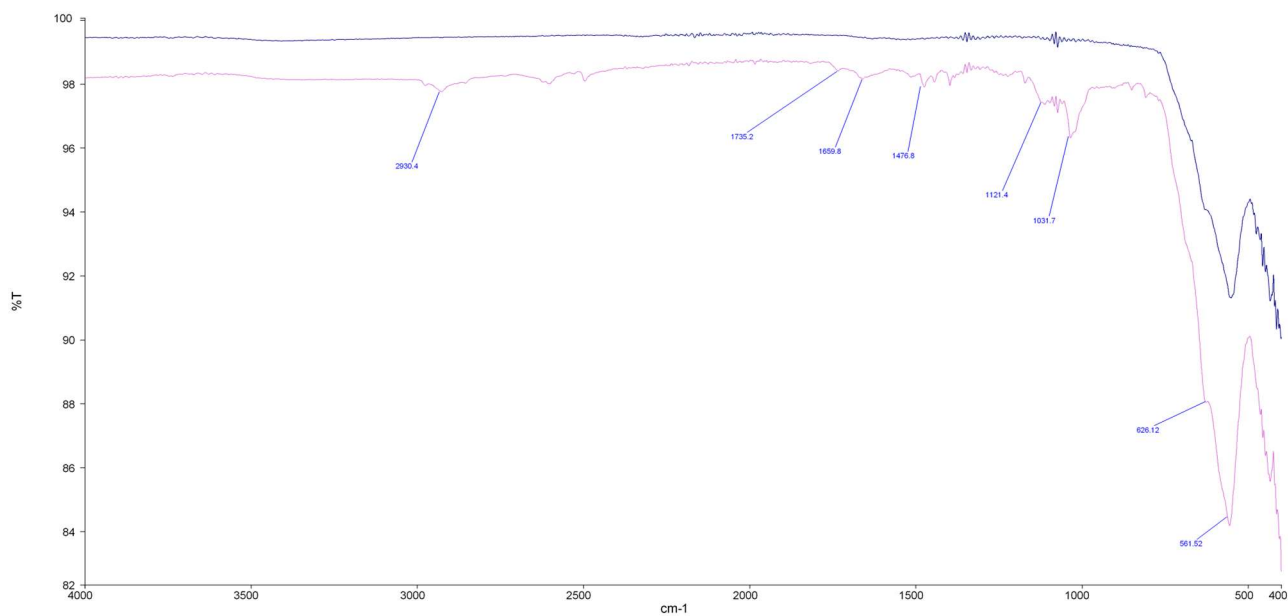
Figure S4.  $^{13}\text{C}$  NMR (100.5 MHz,  $\text{CDCl}_3$ , 298 K) of (*R*)-1-chloro-1-oxooctadecan-9-yl acetate (3).



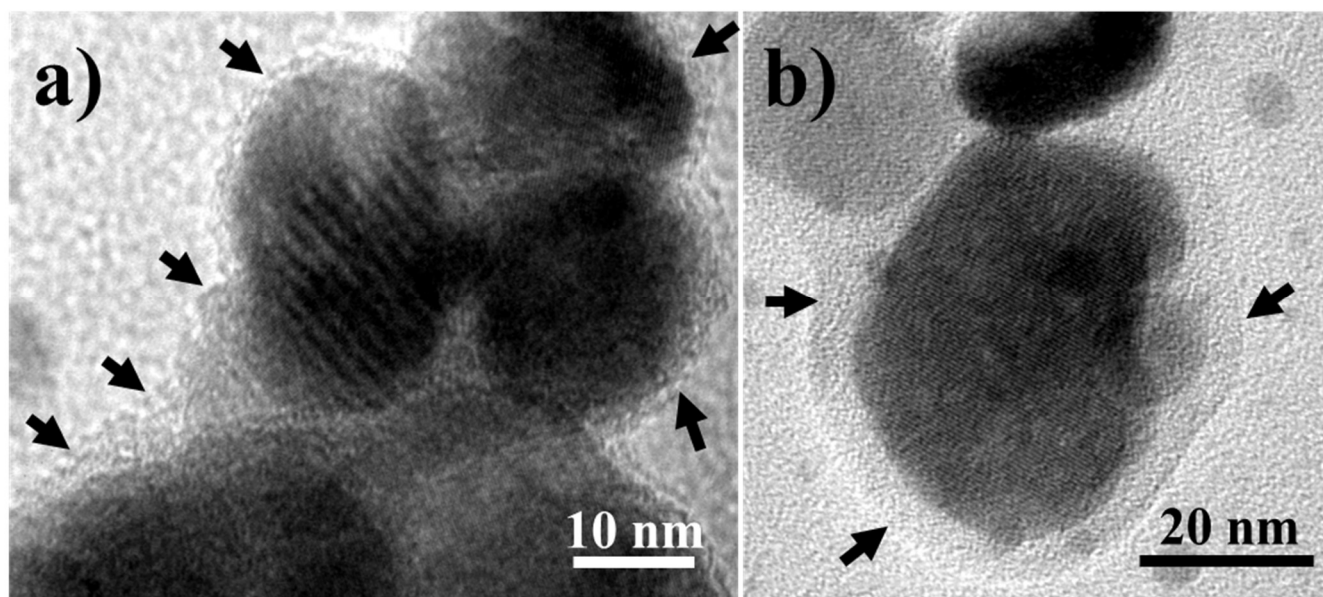
**Figure S5.** <sup>1</sup>H NMR spectrum (600 MHz, CDCl<sub>3</sub>, 298 K) of (R)-1-oxo-1-((3-(triethoxysilyl)propyl)amino)octadecan-9-yl acetate (4).



**Figure S6.** <sup>13</sup>C NMR spectrum (150.8 MHz, CDCl<sub>3</sub>, 298 K) of (*R*)-1-oxo-1-((3-(triethoxysilyl)propyl)amino)octadecan-9-yl acetate (**4**).



**Figure S7.** Up (blue): IR spectrum (ATR) of B-magnetite; Low (pink): IR spectrum (ATR) of MAGOR.



**Figure S8.** TEM bright field images of MAGOR nanoparticles, a) and b). A quite homogeneous amorphous layer (arrows) is visible around nanoparticles. This layer can be associated to the attached organic phase.