Supporting information

Nanoprecipitation of biocompatible poly(malic acid) derivative, its ability to encapsulate a molecular photothermal agent and photothermal properties of the resulting nanoparticles.

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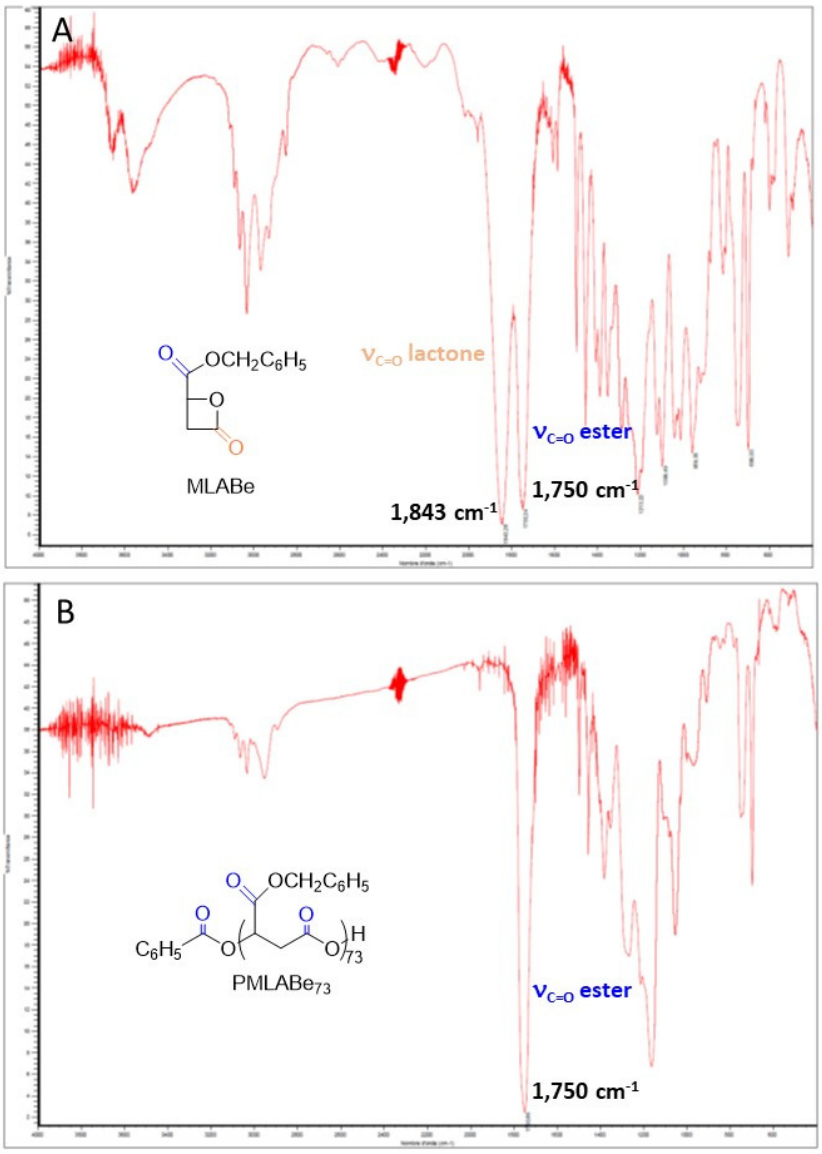

Figure S1. FT-IR spectrum of A). MLABe, and B). PMLABe$_{73}$.

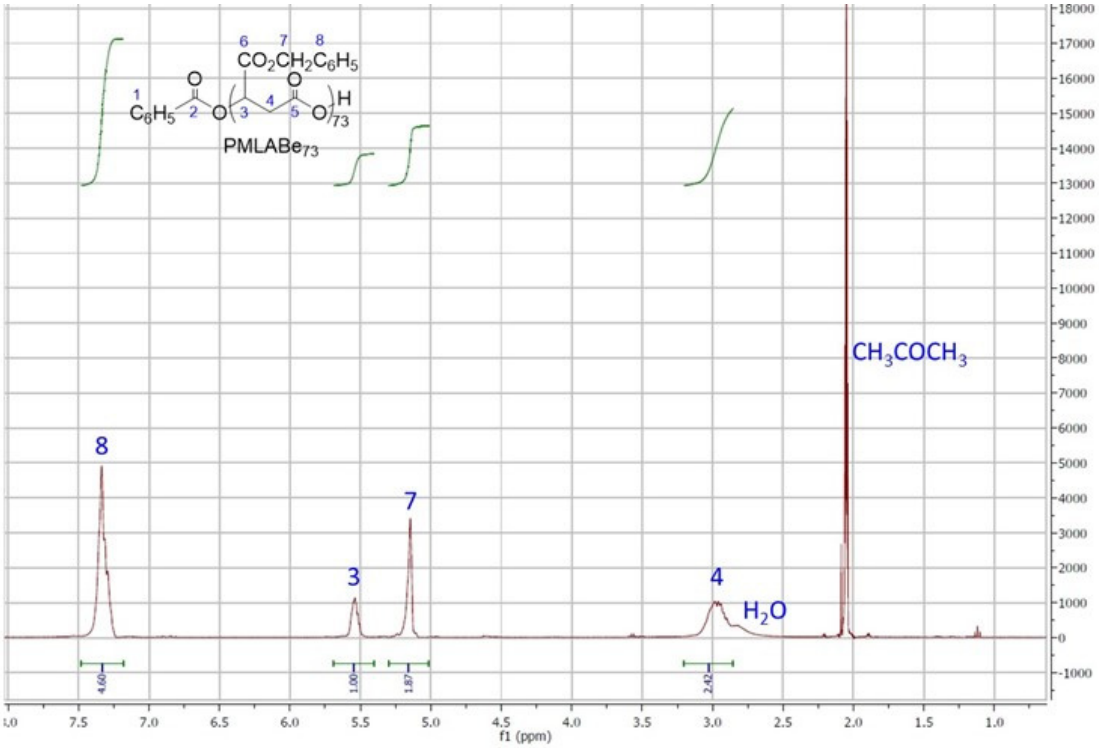

Figure S2. ^{1}H NMR spectrum of $PMLABe_{73}$ in CD_3COCD_3.

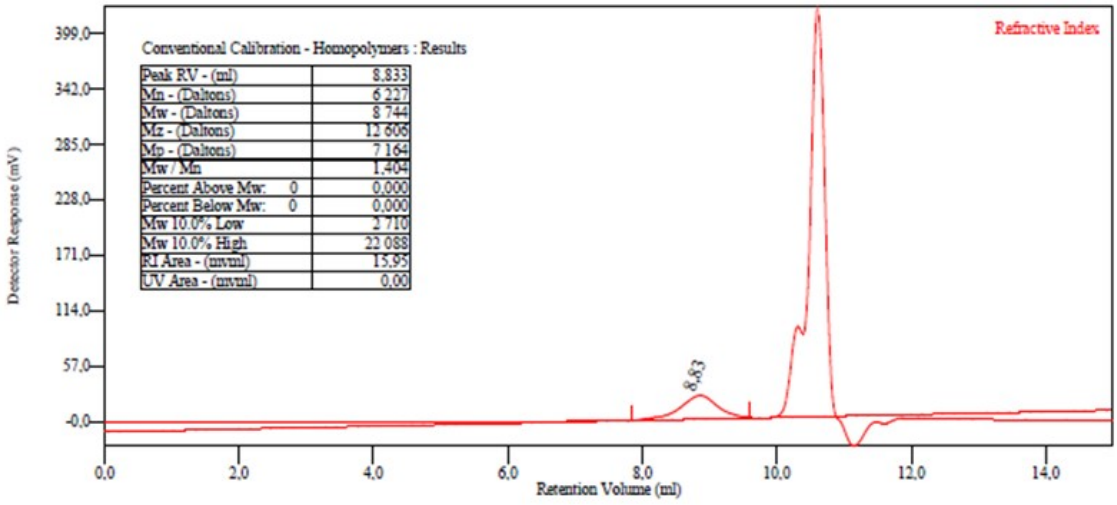

Figure S3. SEC of $PMLABe_{73}$ (THF, 40°C, 1mL/min, Polystyrene standards).

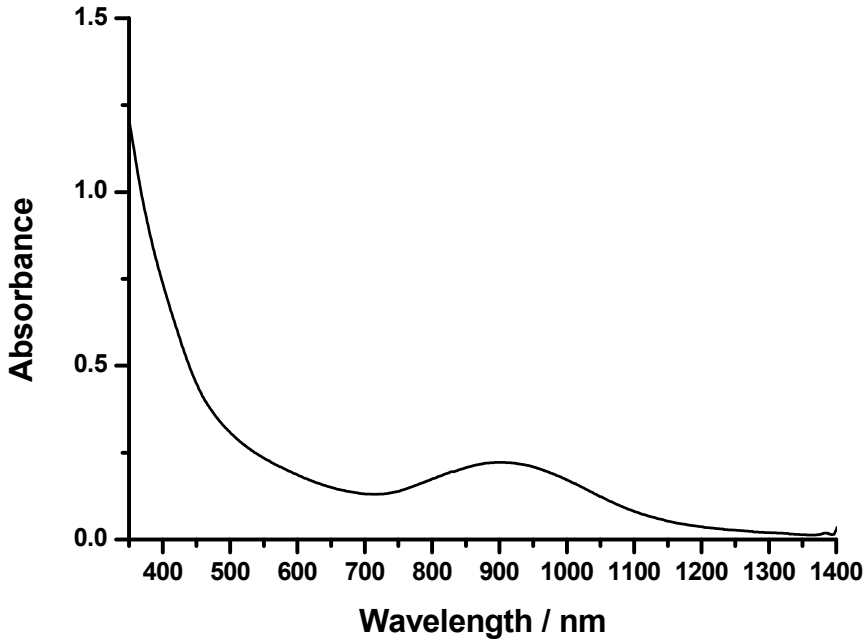

Figure S4. Absorption spectra of a suspensions of PMLABe NPs incorporating 10 wt% of Ni8C12 complexes in water (C_{pol} = 300 μg.mL^{-1}; C_{Ni8C12} = 30 μg.mL^{-1}).

The percentage of Ni8C12 encapsulation inside PMLABe nanoparticles (E.E. %) was determined by UV-Vis spectroscopy by diluting 200 μL of the nanoparticle suspensions in 2.8 mL of purified THF. In order to quantify the mass of Ni8C12 using THF as a solvent by UV-Vis spectroscopy, it was necessary to first determine the molar absorptivity (ε) of Ni8C12 in THF. For this purpose, three solutions of Ni8C12 in THF (C = 2 x 10^{-5} mol.L^{-1}) were prepared and the average ε (ε = 30200 M^{-1}.cm^{-1}) was calculated using the Beer-Lambert law. Knowing the mass of Ni8C12 in 200 μL of the nanoparticle suspension, the encapsulation efficiency was then calculated as the ratio of the mass of Ni8C12 actually encapsulated in the nanoparticles to the mass of Ni8C12 initially introduced in the encapsulation experiments (see equation 1).

E.E. % = (Weight of Ni8C12 effectively encapsulated / Weight of Ni8C12 initially introduced)x100 (1)