

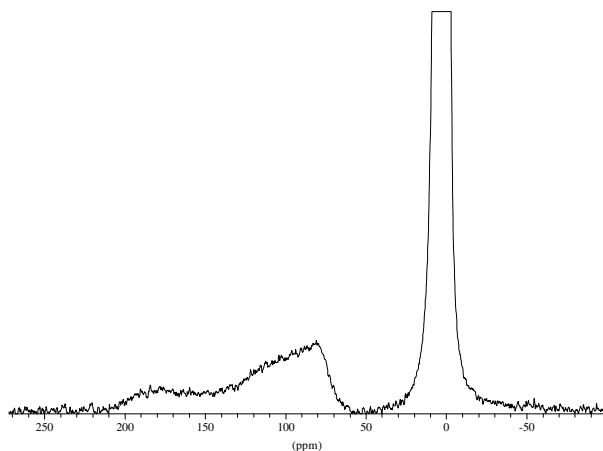
Supplementary material for
Distribution and Modification of Sorption Sites in Amphiphilic Calixarene-based Solid Lipid
Nanoparticles from hyperpolarized ^{129}Xe NMR spectroscopy

Experimental: NMR experiments were carried out on Bruker DSX-400 spectrometer (magnetic field 9.70 T, ^{129}Xe resonance frequency 110.70 MHz). A commercial 7 mm Bruker MAS probe was modified according to a design proposed by Hunger *et al.*¹. Methylene Chloride was entrained in a helium stream and combined with the flow of polarized xenon. Optical polarization of xenon was achieved with an apparatus similar to that described in ref 2, with the optical pumping cell in the fringe field of the spectrometer magnet. The gas mixture with polarization of ^{129}Xe up to several percent was delivered at a flow rate 50-150 cm³/min into the detection region via plastic tubing. Delivery of the mixture of HP Xe in buffer gas (1% N₂, 98% He) was facilitated by expansion to a pressure close to atmospheric (1050-1100 mbar) immediately after the pumping cell.

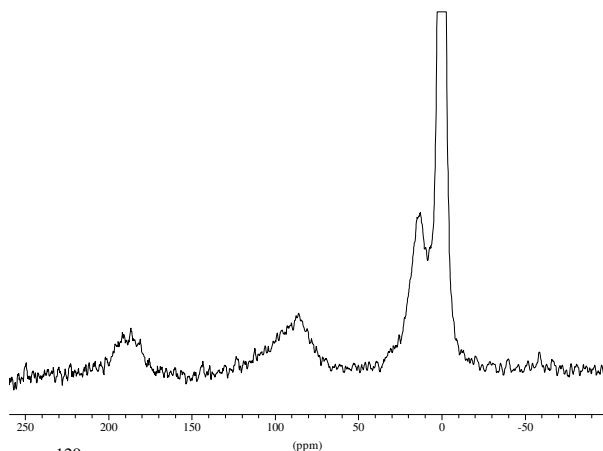
(1) Hunger, M.; Horvath, T. *J. Chem. Soc. Chem. Commun.* **1995**, 1423.

(2) Driehuys, B.; Cates, G. D.; Miron, E.; Sauer, K.; Walter, D. K.; Happer, W. *Appl. Phys. Lett.* **1996**, 69, 1668.

DSC measurements were obtained on a TA instruments 2920 system at heating rate of 5°C/min.



Static ^{129}Xe NMR spectra recorded under continuous flow of hyperpolarized xenon (70 cm³/min), 293 K. 210 mg of crystalline powder of C6OH, 2048 scans.



Static ^{129}Xe NMR spectra recorded under continuous flow of hyperpolarized xenon (75 cm³/min), 293 K. 46 mg of C6OH based SLNs, 128 scans.