# Supporting Information for

# Metal Complexes Based Multi-Stimuli Responsive Amphiphile: Development into Monolayers and Giant Vesicles

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## Supporting Information

**Contents**

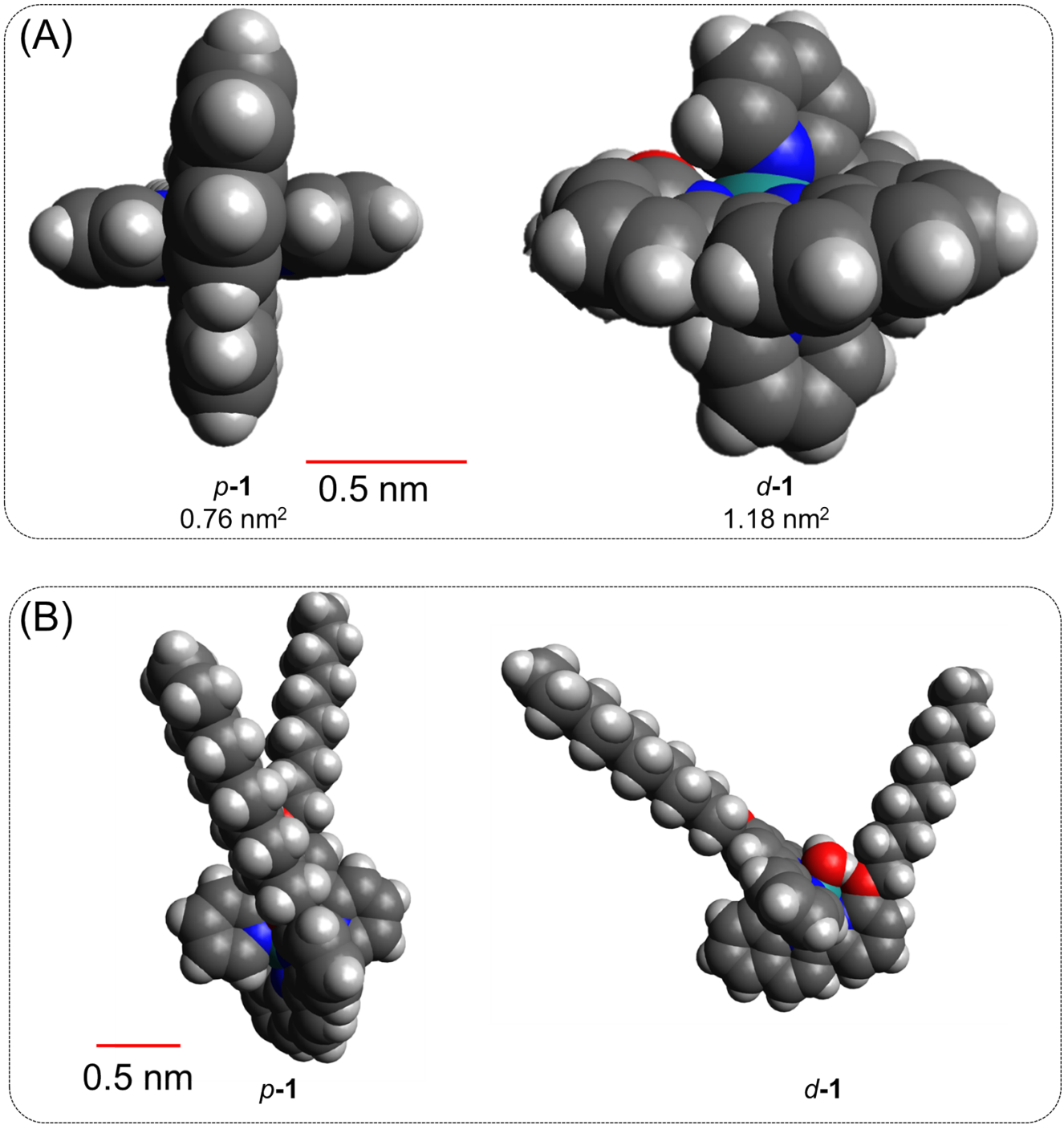


**Figure S1.** (A) Top and (B) side views of *p*-**1** and *d*-**1**. The geometry of complexes were optimized DFT calculation (B3LYP, LANL2DZ).

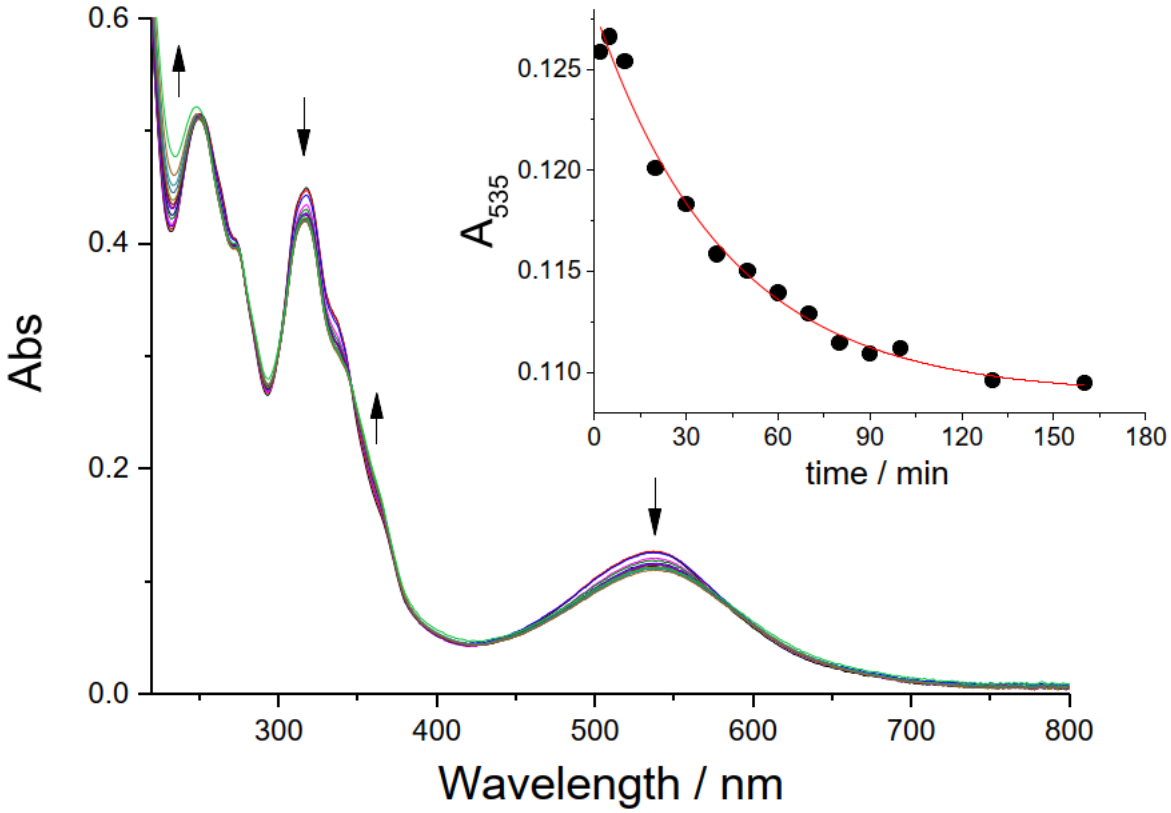


**Figure S2.** UV-Vis absorption spectral change of a vesicle dispersion containing *p*-**1** (40 nmol), DOPC (200 nmol), and water (0.4 mL) under light irradiation with a 100 W halogen lamp (λ > 380 nm, 70 mW $cm^{-2}$).

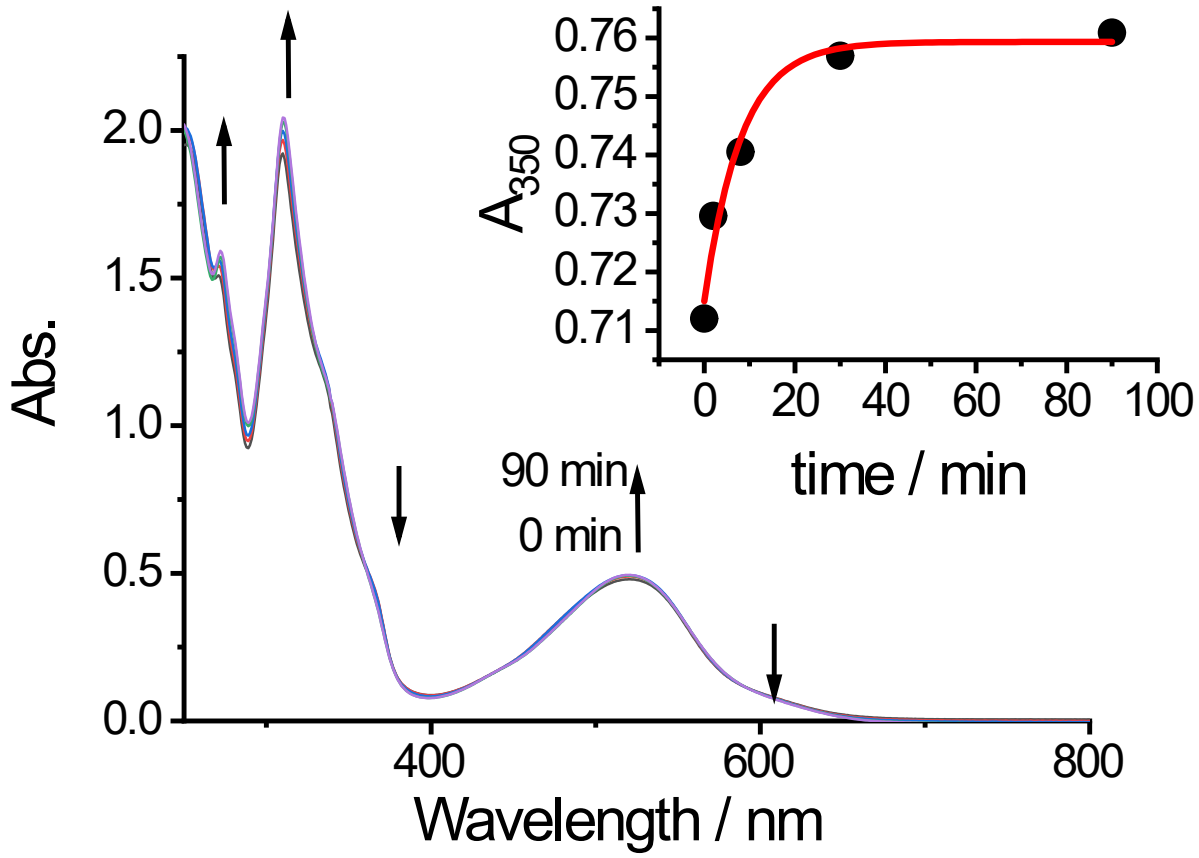


**Figure S3.** UV-Vis absorption spectral change of a *p*-**1** in mixed aqueous solution (MeOH:$H_2O$ = 2:3) under light irradiation with a 100 W halogen lamp ($\lambda > 380$ nm, 70 mW $cm^{-2}$).

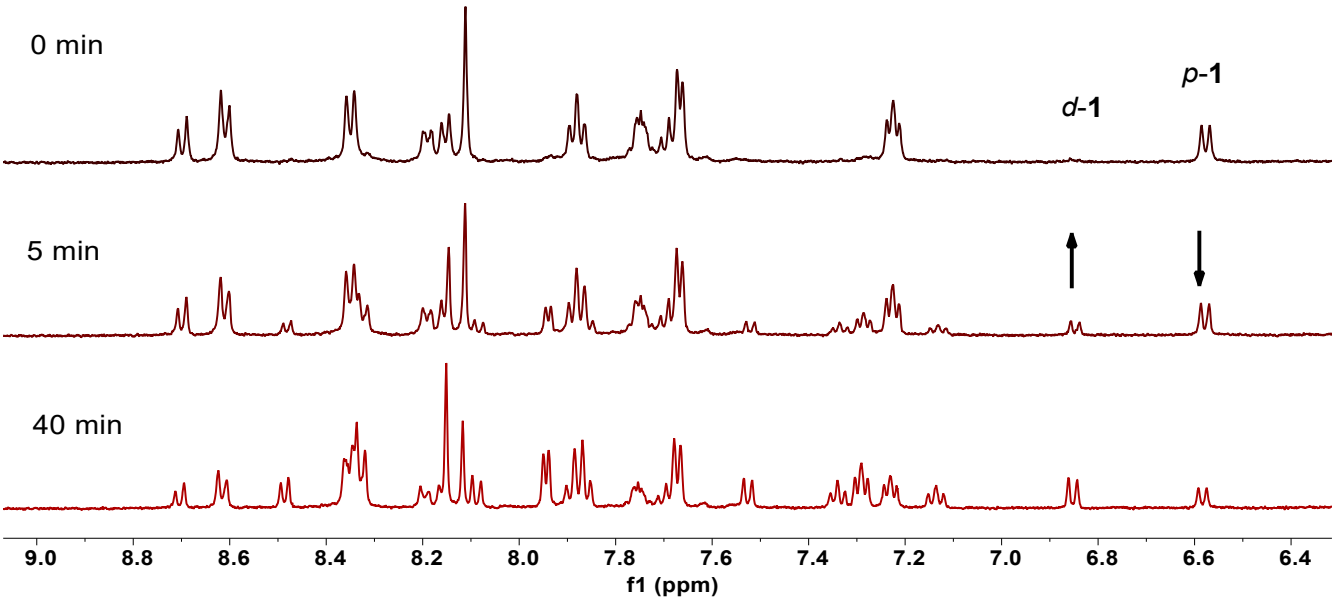


**Figure S4.** $^1$H NMR spectra of *p*-**1** (1.1 mM) in a mixed aqueous solution ($D_2O$/$CD_3OD$/*d*-acetone = 4:2:1) under light irradiation with a 100 W halogen lamp (λ > 380 nm, 70 mW cm$^{-2}$).

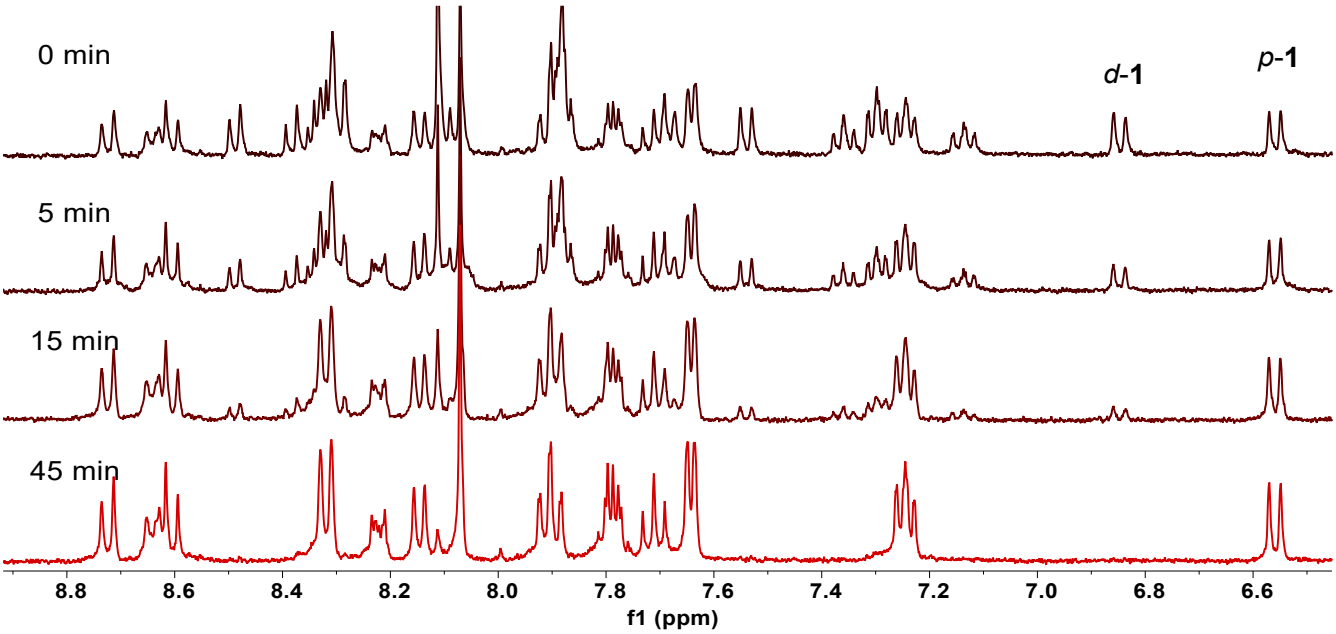


**Figure S5.** $^1$H NMR spectra during thermal back isomerization from *d*-**1** to *p*-**1** at 293 K. The sample solution was prepared by light irradiation to an aqueous solution of *p*-**1** (1.5 mM) in mixed aqueous solution ($D_2O$ : $CD_3OD$ : TFE = 70 : 50 : 2).

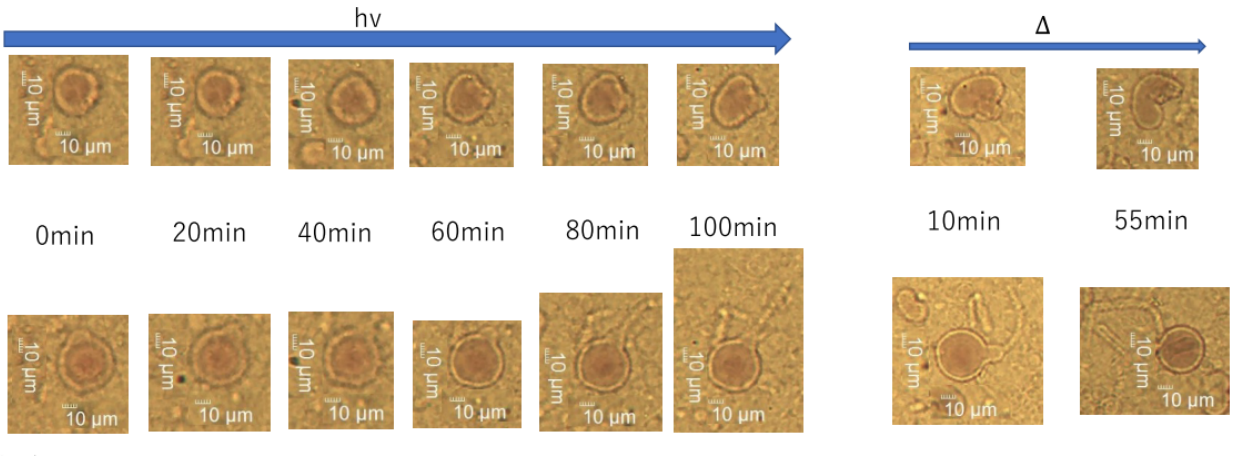


**Figure S6.** Time laps of distortion and fission of MLVs of *p*-**1**/DOPC under visible light irradiation and heating in the dark.

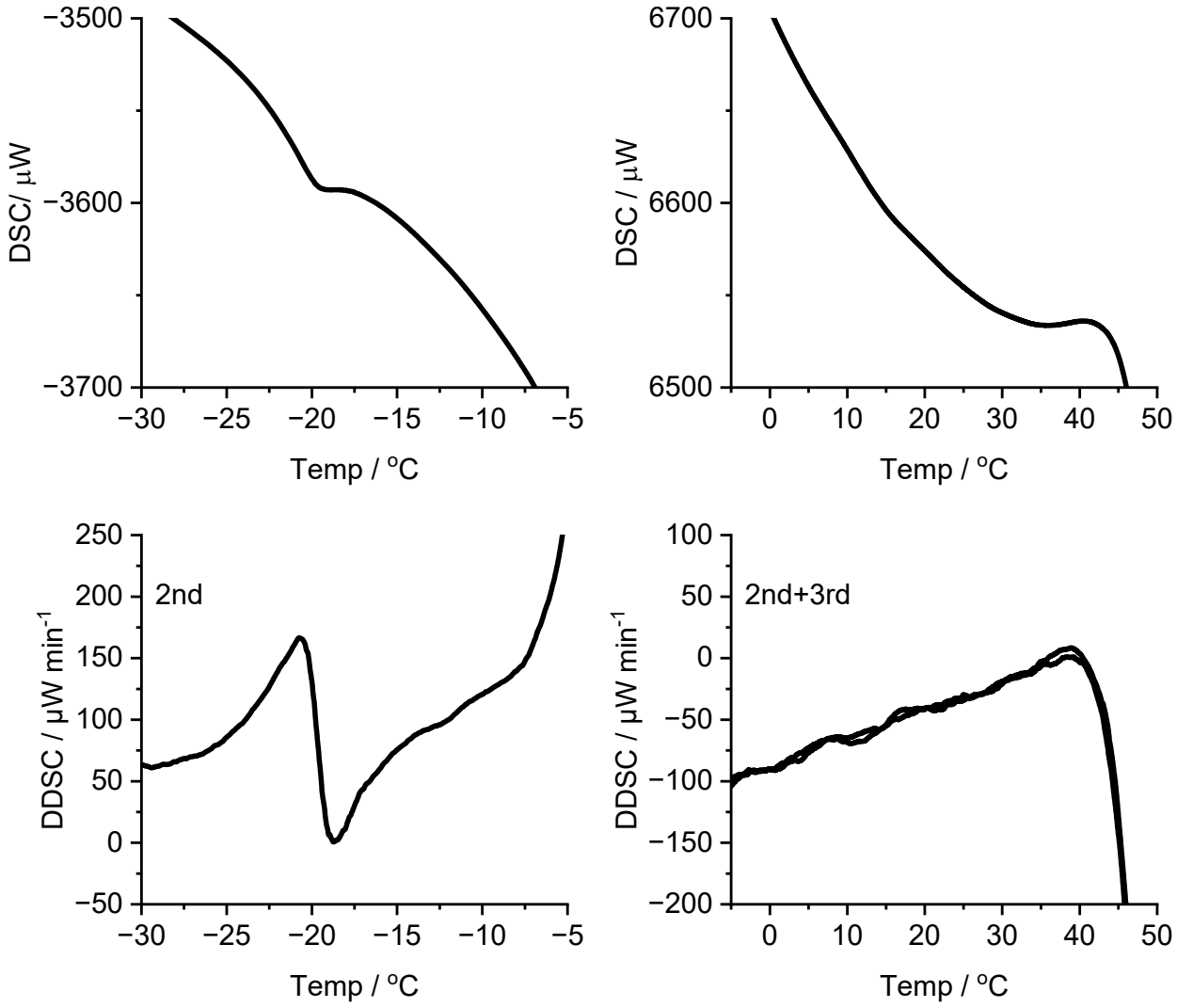


**Figure S7.** DSC and DDSC plots for *p*-**1**/DOPC.

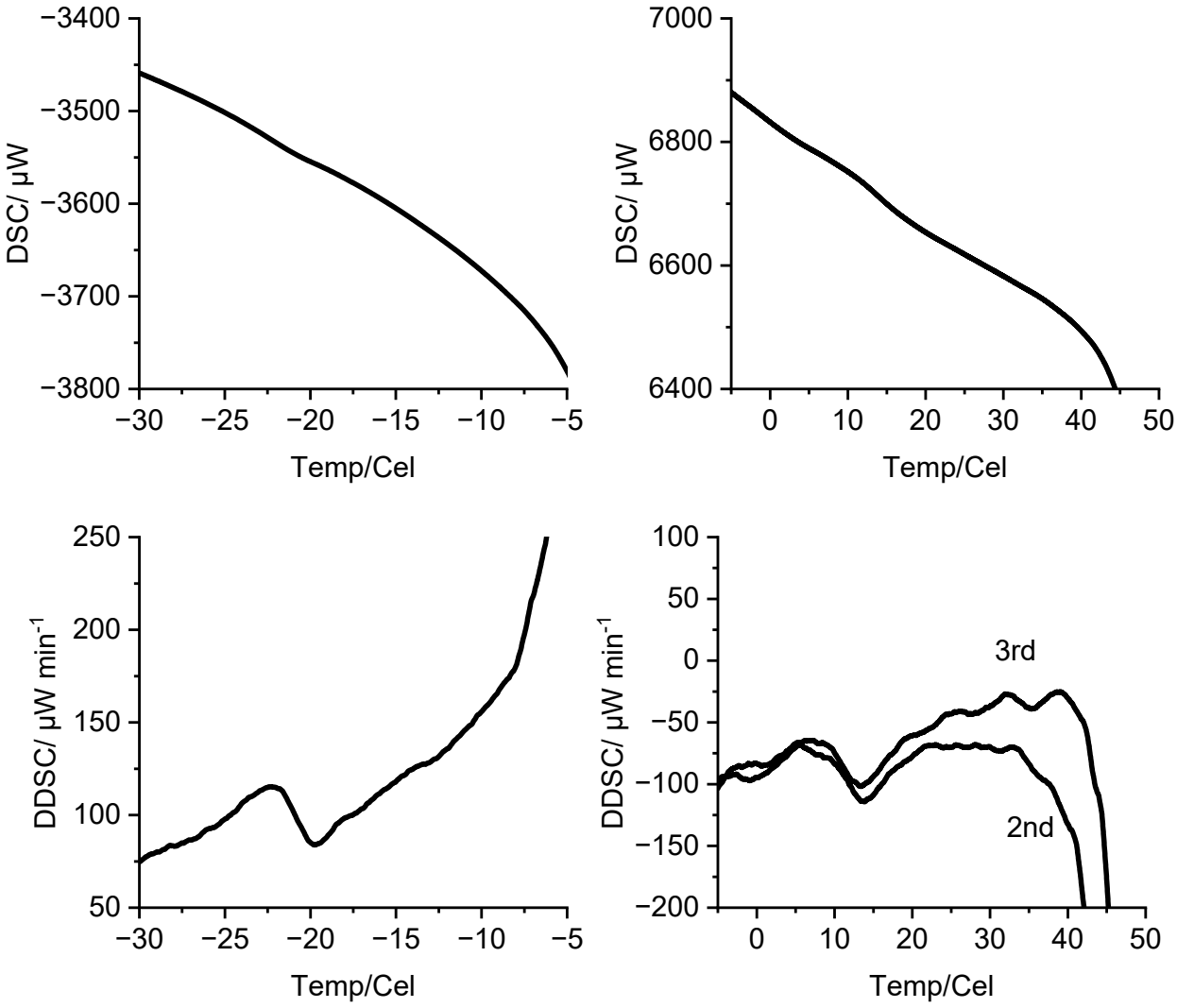


**Figure S8.** DSC and DDSC plots for *p*-**1**/DOPC/DMPC (DOPC:DMPC = 1:3).

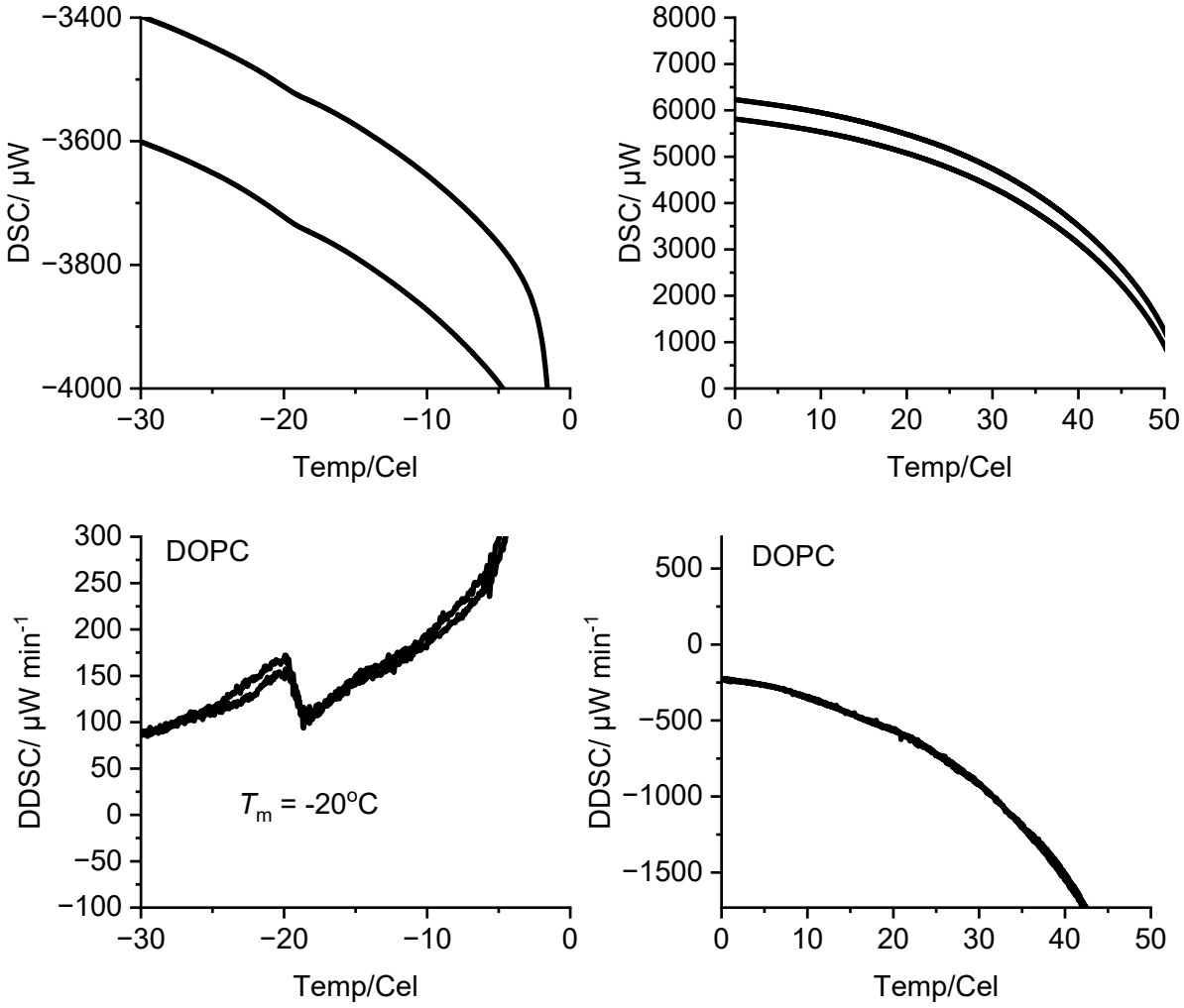


**Figure S9.** DSC and DDSC plots for DOPC vesicles (1 mM).

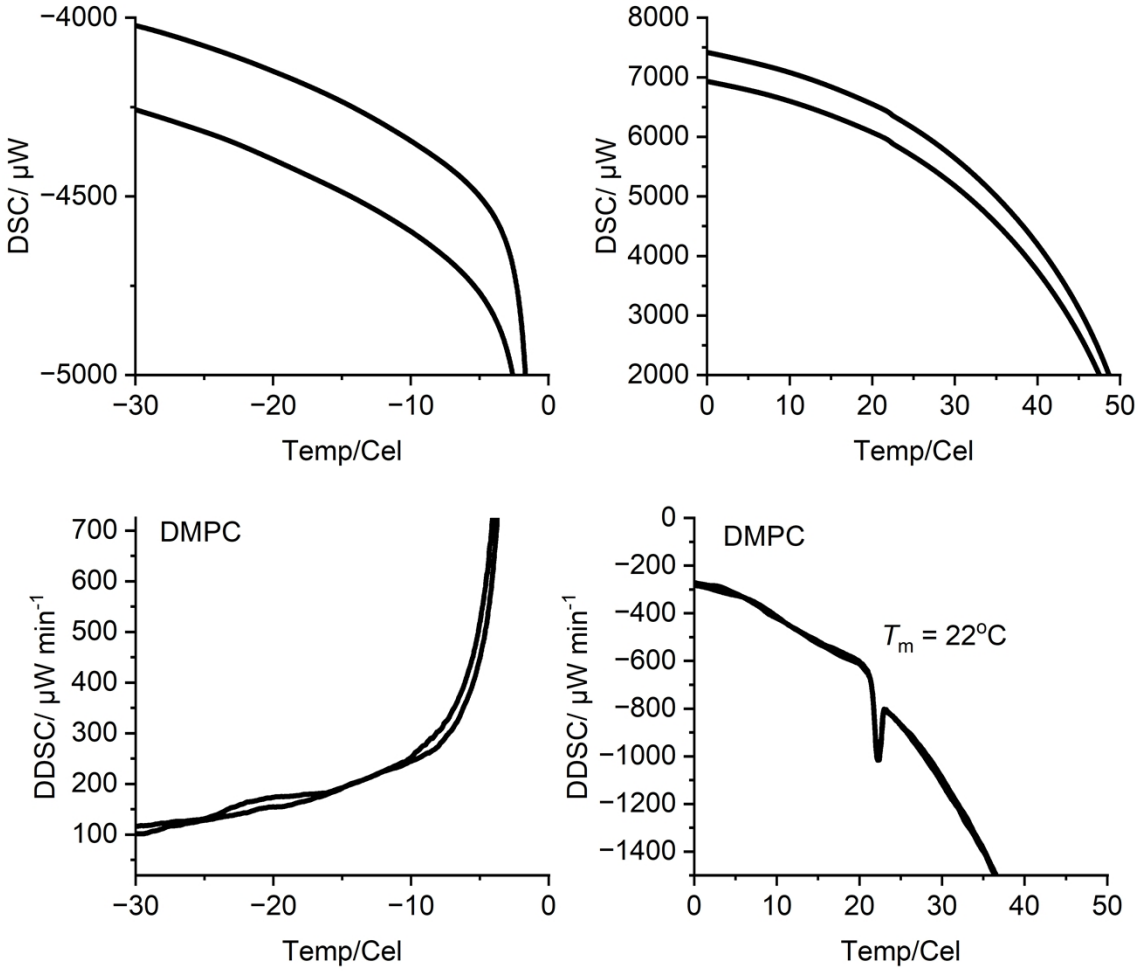


**Figure S10.** DSC and DDSC plots for DMPC vesicles (1 mM).