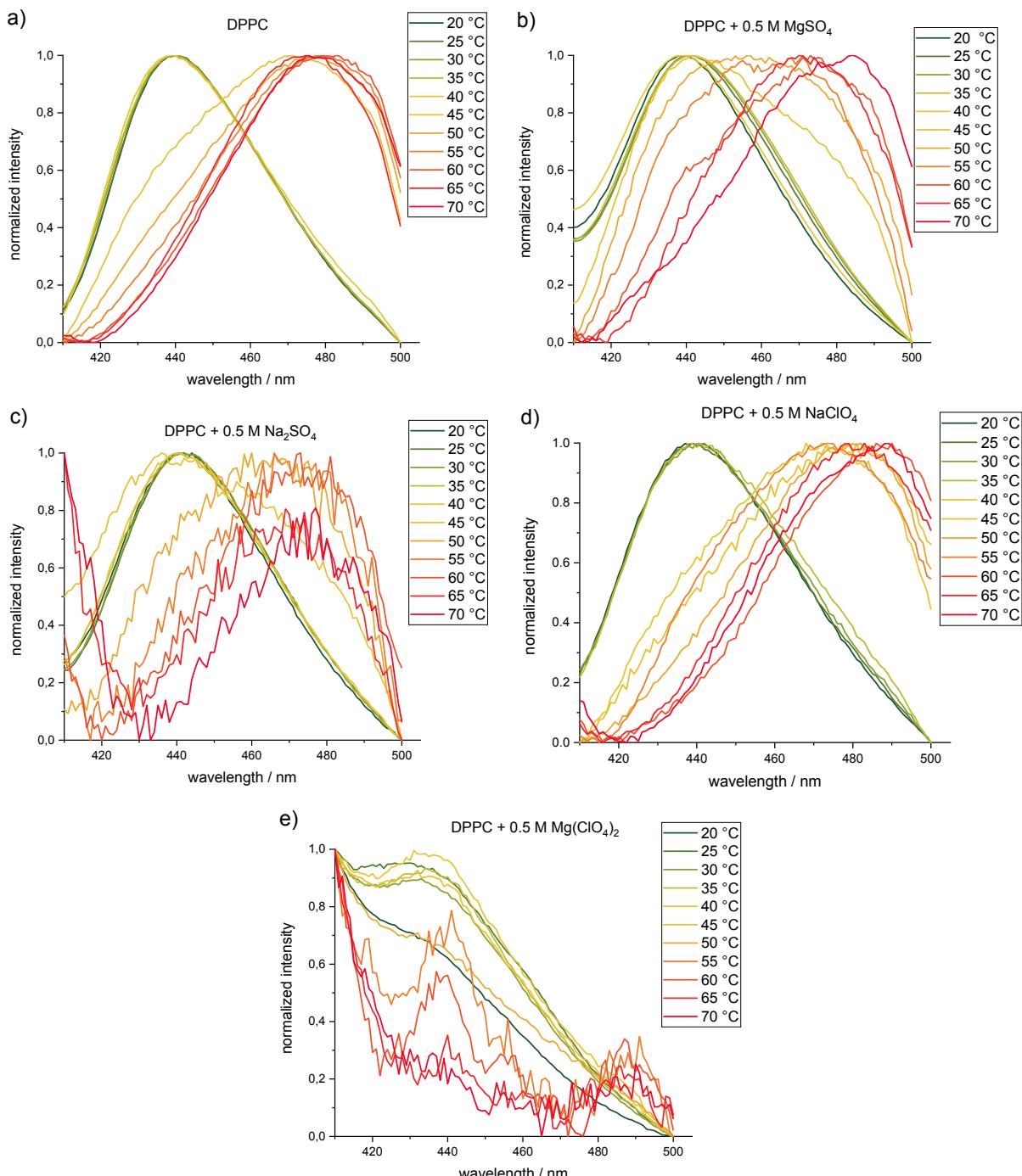
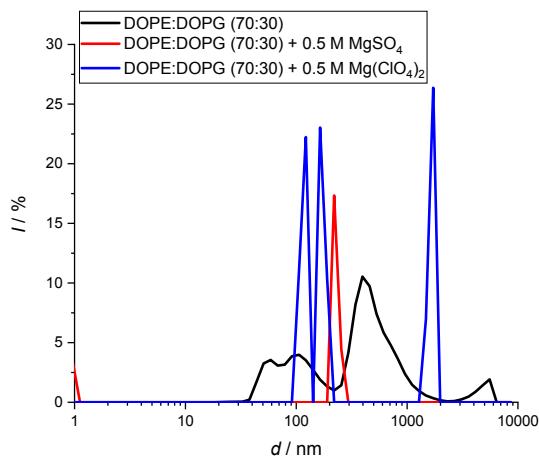


## Supplementary Information

### Additional Figures and Data



**Figure SI 1.** Emission spectra of Laurdan in DPPC unilamellar vesicles in the absence and presence of 0.5 M MgSO<sub>4</sub>, Na<sub>2</sub>SO<sub>4</sub>, NaClO<sub>4</sub>, and Mg(ClO<sub>4</sub>)<sub>2</sub>.



**Figure SI 2.** DLS experiments: Diameter distribution function of MLV dispersions of DOPE:DOPG (70:30) in the absence and presence of 0.5 M  $\text{MgSO}_4$  or  $\text{Mg}(\text{ClO}_4)_2$ . The addition of the magnesium-containing salts reduces the polydispersity of the multilamellar vesicles.

**Table SI 1.** Lamellar  $d$ -spacings of phospholipid bilayers in the absence and presence of magnesium sulfate and perchlorate determined by SAXS.

Lipid bilayer system	$d$ / nm
20 wt% DOPC	$6.48 \pm 0.08$
20 wt% DOPC + 0.5 M $\text{MgSO}_4$	$7.19 \pm 0.09$
20 wt% DOPC + 0.5 $\text{Mg}(\text{ClO}_4)_2$	$5.44 \pm 0.03$
10 wt% DOPE:DOPG (70:30)	$5.48 \pm 0.09$
10 wt% DOPE:DOPG (70:30) + 0.5 $\text{Mg}(\text{ClO}_4)_2$	$5.6 \pm 0.3$