

Molecular Recognition in Anisotropic Media. Binding of Alkylpyridines to Amphiphilic Zinc Porphyrins Incorporated in Liposomal Bilayer Membranes

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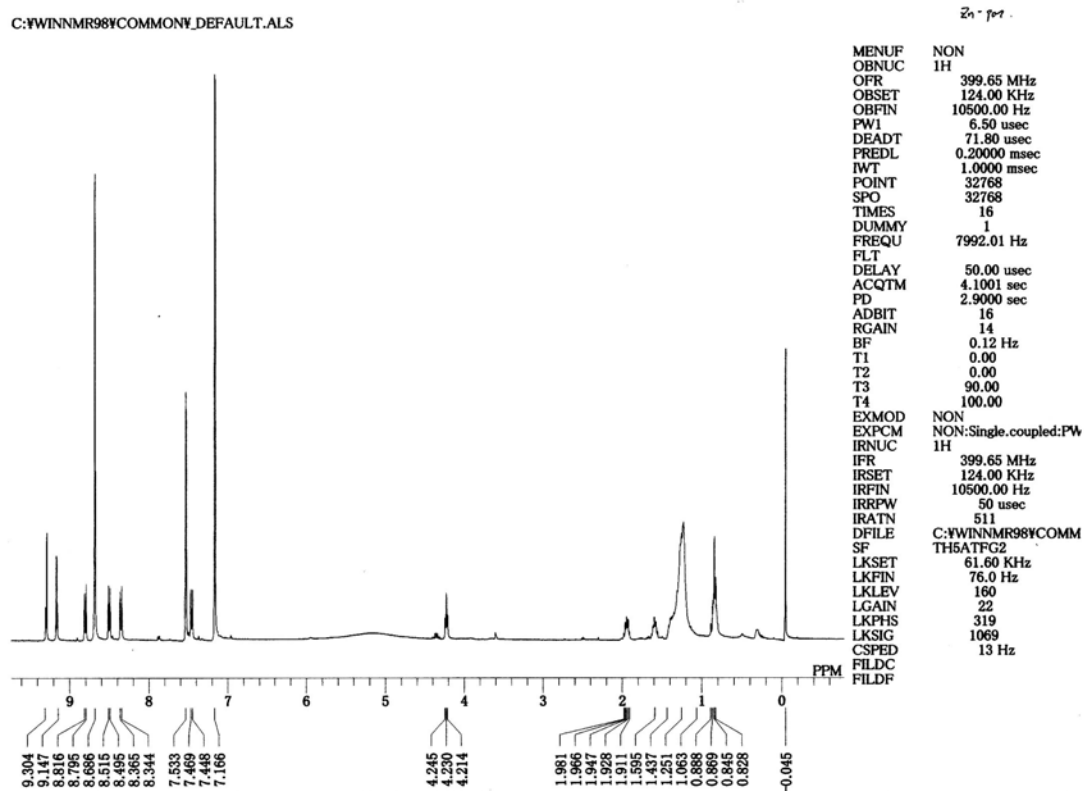


Figure S1. ¹H NMR (400 MHz) of **1** in pyridine-*d*₅.

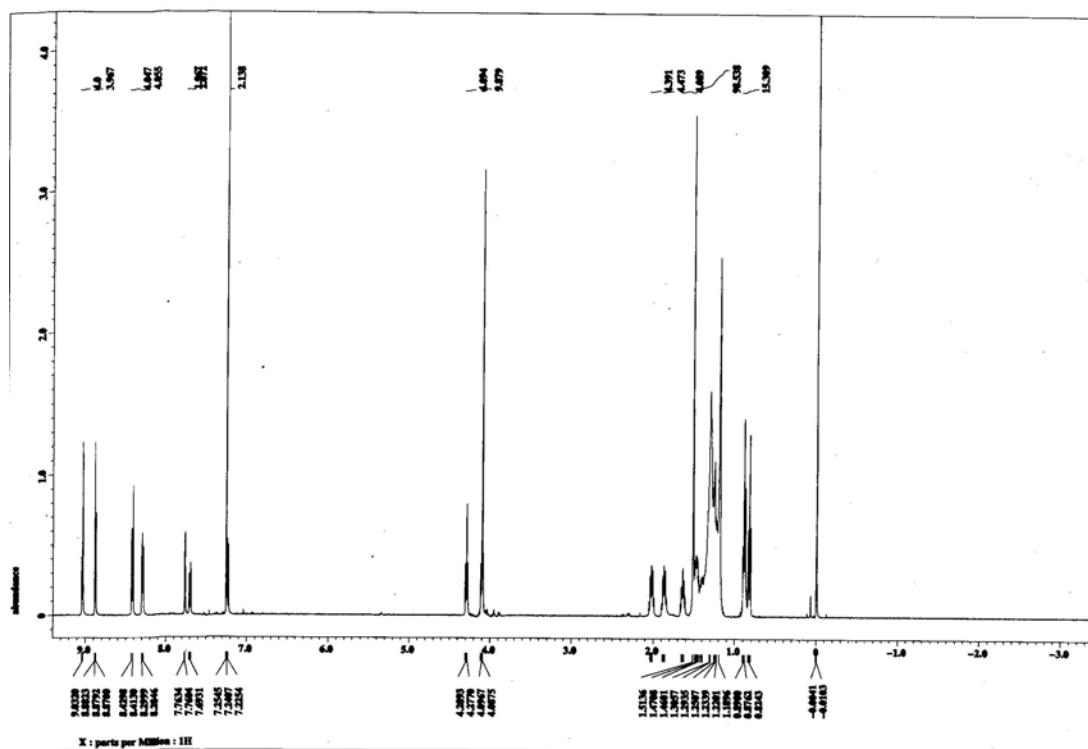
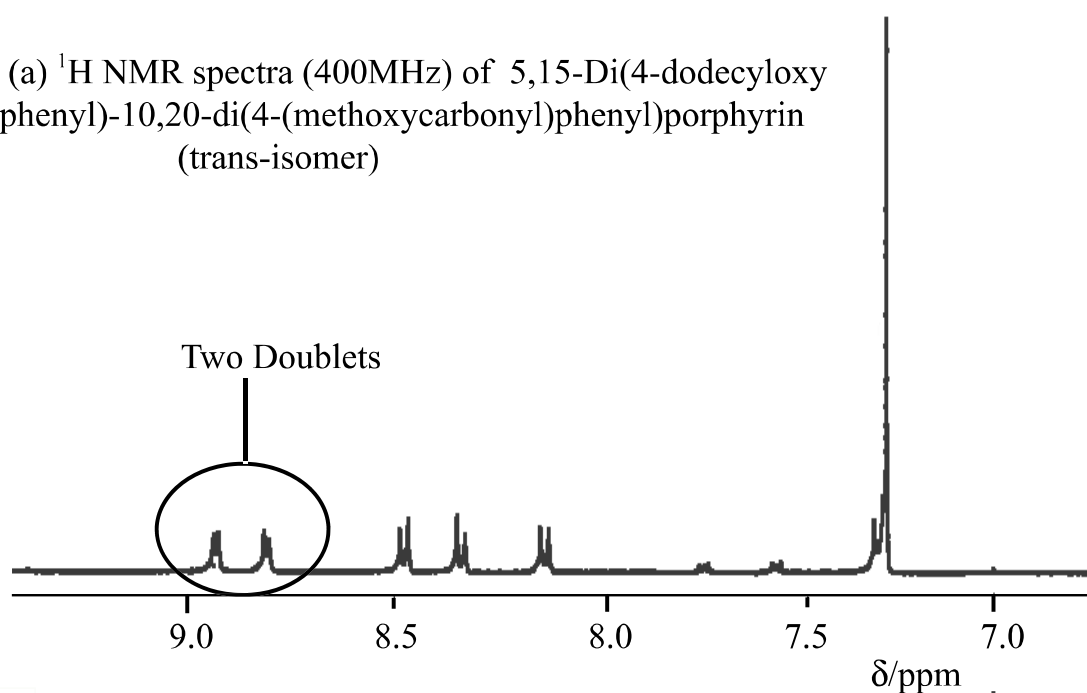


Figure S4. ¹H NMR of **11b** in CDCl₃.

(a) ^1H NMR spectra (400MHz) of 5,15-Di(4-dodecyloxy phenyl)-10,20-di(4-(methoxycarbonyl)phenyl)porphyrin (trans-isomer)



(b) ^1H NMR spectra (400 MHz) of 5,10-Di(4-dodecyloxyphenyl)-15,20-di-(4-(methoxycarbonyl)phenyl)porphyrin (cis-isomer, **10a**)

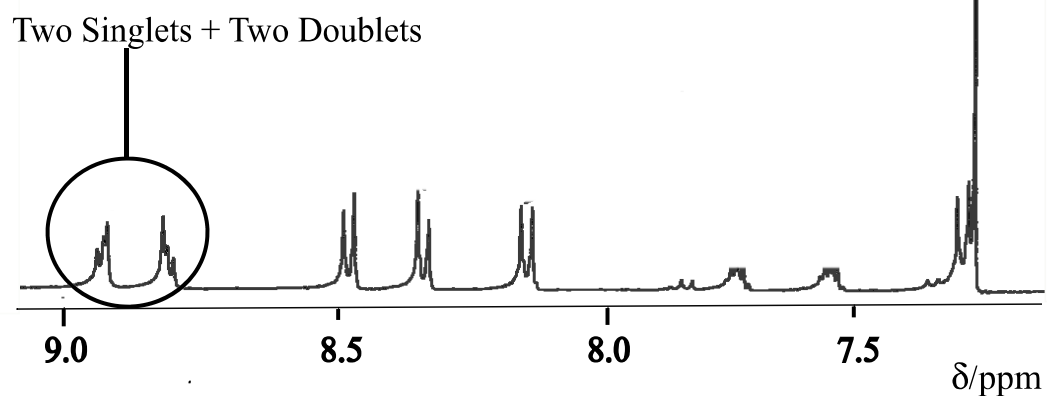


Figure S5. Comparison of ^1H NMR spectra of **10a** (b) and its trans isomer (a) in CDCl_3 .

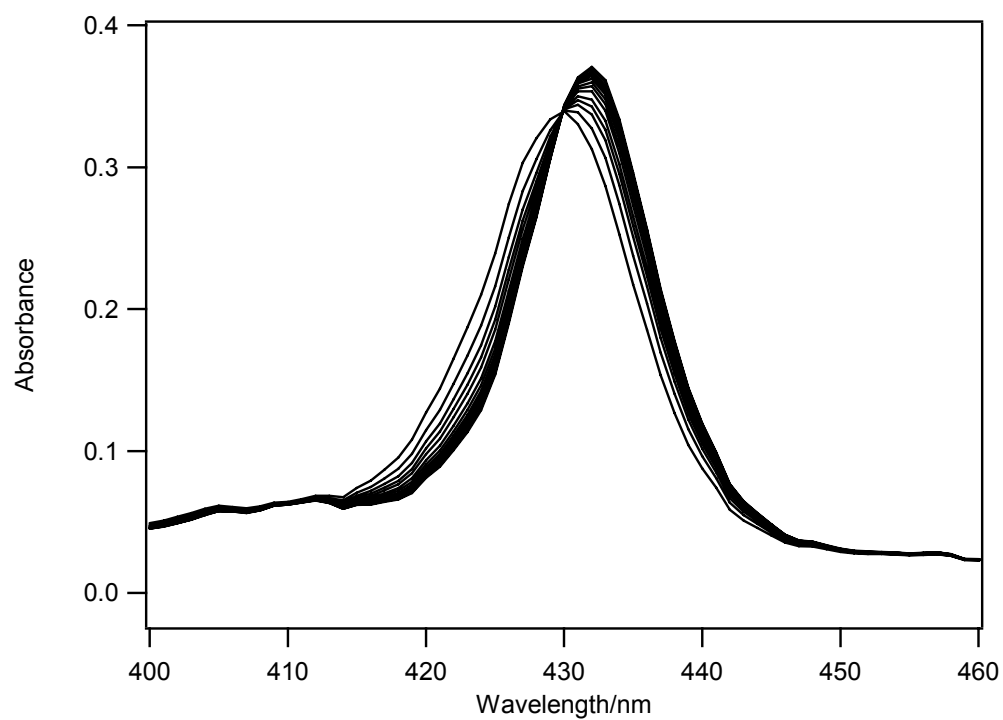


Figure S6. UV-visible spectral changes of **1**-DPPC with increasing concentrations of 4-ethylpyridine at 45 °C.

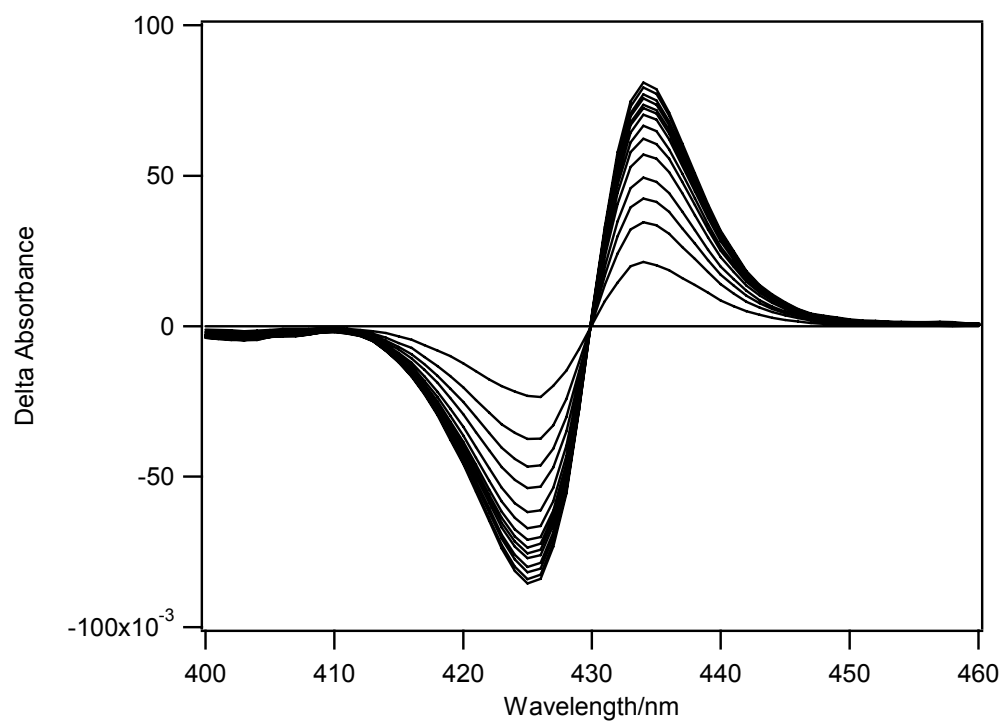


Figure S7. UV-visible difference spectra of **1**-DPPC with increasing concentrations of 4-ethylpyridine at 45 °C.

Table S1. Absorption maxima of porphyrins incorporated in liposomes and the porphyrin-guest complexes in liposomes, maxima and minima of the difference spectra.

Host	Lipo- some	Pyridines	Temp °C	λ_{max} /nm of free porphyrin	λ_{max} /nm of host-guest complex	Maxima of diff. spectra (nm)	Minima of diff. spectra (nm)
1	Egg PC	4-methyl	25	429.5	432	435	425.5
1	Egg PC	4-ethyl	25	429.5	432	434.5	425.5
1	Egg PC	4-propyl	25	429.5	432	434.5	425.5
1	Egg PC	4-pentyl	25	429.5	432	434.5	425.5
1	Egg PC	3-methyl	25	429.5	432	434.5	425.5
1	Egg PC	3-ethyl	25	429.5	432	434.5	425.5
1	Egg PC	3-butyl	25	429.5	432	434.5	425.5
1	Egg PC	3-hexyl	25	429.5	432	434.5	425.5
1	DPPC	4-methyl	25	430.5	432	435.5	426.5
1	DPPC	4-ethyl	25	430.5	432	436	426.5
1	DPPC	4-propyl	25	430.5	432	436.5	426.5
1	DPPC	4-pentyl	25	430.5	432	435.5	426.5
1	DPPC	3-methyl	25	430.5	432	435.5	426.5
1	DPPC	3-ethyl	25	430.5	432	435.5	426.5
1	DPPC	3-butyl	25	430.5	432	436.5	426.5
1	DPPC	3-hexyl	25	430.5	432	435.5	426.5
2	Egg PC	4-methyl	25	431	433	436	427
2	Egg PC	4-ethyl	25	431	433	436.5	427
2	Egg PC	4-propyl	25	431	433	436	427
2	Egg PC	4-pentyl	25	431	433	436.5	427
2	Egg PC	3-methyl	25	431	433	436	427
2	Egg PC	3-ethyl	25	431	433	436	427
2	Egg PC	3-butyl	25	431	433	436	426.5
2	Egg PC	3-hexyl	25	431	433	436.5	427
1	Egg PC	4-methyl	50	429	432	434	425
1	Egg PC	4-ethyl	50	429	432	434	425
1	Egg PC	4-propyl	50	429	432	434	425
1	Egg PC	4-pentyl	50	429	432	434	425
1	Egg PC	3-methyl	50	429	432	434	425
1	Egg PC	3-ethyl	50	429	432	434	425

1	Egg PC	3-butyl	50	429	432	434	425
1	Egg PC	3-hexyl	50	429	432	434	425
1	DPPC	4-methyl	50	429.5	432	434	425
1	DPPC	4-ethyl	50	429.5	432	434	425
1	DPPC	4-propyl	50	429.5	432	434	425
1	DPPC	4-pentyl	50	429.5	432	434	425
1	DPPC	3-methyl	50	429.5	432	434	425
1	DPPC	3-ethyl	50	429.5	432	434	425
1	DPPC	3-butyl	50	429.5	432	434	425
1	DPPC	3-hexyl	50	429.5	432	434	425

Table S2. Absorption maxima of **1** incorporated in liposomes and the **1**-4-ethylpyridine complexes in liposomes, maxima and minima of the difference spectra.

Lipo- some	Temp °C	λ_{max} /nm of free porphyrin	λ_{max} /nm of host-guest complex	Maxima of diff. spectra (nm)	Minima of diff. spectra (nm)
Egg PC	25	429.5	432	435	425.5
Egg PC	35	429.5	432	434.5	425.5
Egg PC	45	429	432	434.5	425.5
Egg PC	50	429	432	434	425
DPPC	25	430.5	432	435.5	426.5
DPPC	30	430.5	432	436	426.5
DPPC	35	430.5	432	436	425.5
DPPC	40	430	432	435	425.5
DPPC	42	429.5	432	434.5	425.5
DPPC	45	429.5	432	434	425
DPPC	50	429.5	432	434	425
DPPC	60	429.5	432	434	425