

FT-IR研究C~nNaPh(1,5)C~6N^+双分子膜-H~2O二元体系的热相变

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摘要 用变温FT-IR研究了系列二元体系C~nNaPh(1,5)C~6N^+-H~2O(n=16,12,10,8,6,4)的热相变。结果表明,脂链CH~2的伸缩振动频率,相对强度和半高宽的突跃变化温度,随尾脂链长度增加而增高,并从频率位移确认其为凝胶相转变为液晶相的相变温度。由FT-IR有关谱带的变化,讨论了各结构单元的聚集态和链长的影响。

关键词 [二元体系](#) [萘 P](#) [溴化物](#) [相变](#) [双分子膜](#) [烃季胺化合物](#) [FT-IR](#)

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FT-IR Study on the thermotropic phase transition of the binary system of C~nNaPh(1,5)C~6N^+-Water

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Abstract Fourier transform IR spectra have been used to study thermotropic phase transition of the naphthalene quaternary ammonium derivative, C_nNaPh(1, 5)C₆N⁺-H₂O (I) (n = 16, 12, 10, 8, 6, and 4) (a choline analog) binary system at different temps. The experimental results suggest that the phase transition temps. of these bilayers can be observed by the drastic changes of the frequencies, relative intensities and half bandwidth of the nasCH₂, nsCH₂ band of alkyl chain in bilayers. The phase transition temperature was increased with increasing length of the alkyl tail chain. The gel-to-liq. crystal phase transition can be confirmed by the frequency shift. Finally, the structural units of the aggregates and the influences on the length of alkyl chain were further discussed from the change of bands of FT-IR.

Key words [BINARY SYSTEM](#) [NAPHTHALENE P](#) [BROMIDE](#) [PHASE TRANSFORMATION](#) [BILAYER MEMBRANE](#) [METHONIUM COMPOUNDS](#)

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