

研究论文

无探针紫外光谱法测定CTAB的第二临界胶束浓度

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摘要 应用无探针的紫外吸收分光光谱法(UV)测定了十六烷基三甲基溴化铵(CTAB)溶液的第一、第二临界胶束浓度(CMC), 并用 ^1H NMR谱和动态光散射的实验方法检测到了两个浓度时溶液中聚集体的转变, 从而验证了无探针紫外光谱法测定CTAB溶液第二临界胶束浓度的可行性. 此外, 我们还利用紫外光谱法研究了CTAB/KBr体系, 证实KBr可诱导CTAB形成蠕虫状胶束.

关键词 [CMC](#) [UV](#) [CTAB](#) [动态光散射](#) [\$^1\text{H}\$ NMR](#)

分类号

Determination of the Second Critical Micelle Concentration of CTAB by UV Spectra without Probe

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Abstract In this article, ultraviolet absorption spectra (UV) without probe were used to determine the first and second critical micelle concentration (CMC) of cetyltrimethylammonium bromide (CTAB), and the transformation of congeries at the CMC were detected by ^1H NMR spectra and dynamic light scattering, which just tested and verified the feasibility of using UV spectra without probe to determine the second CMC of the aqueous solution of CTAB. Furthermore, UV spectral method was also used to investigate the CTAB/KBr system, and it was confirmed that the formation of CTAB wormlike micelle could be induced by the aqueous solution of KBr.

Key words [CMC](#) [UV](#) [CTAB](#) [dynamic light scattering](#) [\$^1\text{H}\$ NMR](#)

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