

Full Papers

烷基聚葡糖苷 $C_{9,6}G_{1,3}/n-C_4H_9OH/n-C_6H_{14}/H_2O$ 微乳液体系的介电弛豫谱研究

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收稿日期 2005-1-6 修回日期 2005-8-4 网络版发布日期 接受日期

摘要 在 $30\pm 0.1^\circ\text{C}$ 下, 绘制了烷基聚葡糖苷 $C_{9,6}G_{1,3}/n-C_4H_9OH/n-$

$C_6H_{14}/H_2O$ 微乳液体系的拟三元相图。测定了该体系的介电弛豫谱, 得到的介电常数、电导率、

松弛强度和松弛时间等用于解释微乳液结构。在 $5\text{Hz}-10^7\text{Hz}$ 范围内, 发现独特的介电弛豫现象,

用界面极化机制进行了解释。从介电弛豫谱确定了微乳液的O/W、B.C. 和 W/O结构,

求得一系列介电参数和相参数, 讨论了介电行为与体系内部微观结构的关系。

关键词 [烷基聚葡糖苷](#), [微乳液](#), [相图](#), [介电弛豫谱](#)

分类号

### Unique Dielectric Behavior of Alkyl Polyglucoside/ *n*-butanol/*n*-hexane/water System

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**Abstract** The pseudotertiary phase diagram of the microemulsion system alkyl polyglucoside/*n*-butanol/*n*-hexane/water was plotted at  $(30.0\pm 0.1)^\circ\text{C}$ . The dielectric measurements, including permittivity, conductivity, relaxation strength, characteristic relaxation time, etc., were applied to investigate the microstructure of the system. Unique dielectric relaxations were observed over the frequency range of  $5-10^7\text{Hz}$ , taking place possibly through an interfacial polarization mechanism. According to the results obtained from dielectric spectroscopy, the structures of the microemulsion O/W, BC and W/O were determined, and some dielectric and phase parameters were calculated.

**Key words** [alkyl polyglucoside](#) [microemulsion](#) [phase behavior](#) [dielectric spectroscopy](#)

DOI:

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