

芳砜在微环境中的光化学反应

杨博,李干佐,佟振合

山东大学化学学院;中国科学院感光化学研究所

收稿日期 修回日期 网络版发布日期 接受日期

摘要 本文研究了十二烷基磺酸钠-正戊醇-水三组分体系相图,并用小角度X衍射仪确定了相图中液晶区域为层状。在不同微环境(W/O型微乳液、液晶、O/W型微乳液)中,研究了对甲基苄基苄基砜(ASO2B)的光化学反应影响。结果发现微环境对反应产物分布(笼效应)有很大影响。外加磁场明显降低笼效应。证实了芳砜的光化学反应经历自由基中间体,并且反应的激发态为三重态。

关键词 [砜](#) [光化学反应](#) [水](#) [激发态](#) [烷基磺酸盐](#) [笼格效应](#) [戊醇](#) [相图](#)

分类号 [0644](#)

Photochemical reaction of arylmethyl sulphone in microemulsions

YANG BO,LI GANZUO,DONG ZHENHE

Abstract The photochemical reactions of benzyl p-methylbenzyl sulfone (ASO2B) in sodium dodecylsulfonate (As)-pentanol-H₂O microemulsions and lyotropic liquid crystals have been studied. The effects of microenvironments provided by microemulsion and lyotropic liquid crystal on product distribution have been investigated. While W/O emulsion gave a cage effect analogous to pentanol, the lyotropic liquid crystal and O/W emulsion provided supereages. This results were explained by consideration of the hydrophobic of the sulfone and the structure of the reaction media. Application of a weak external magnetic field to the photochemical reaction of ASO2B in O/W microemulsion leads to a decrease in cage effect, suggesting that the photochemical reaction proceeds via a triplet excited state.

Key words [SULFONE](#) [PHOTOCHEMICAL REACTION](#) [WATER](#) [EXCITED STATE](#) [ALKYLSULFONATE](#) [CAGE EFFECT](#) [PENTANOL](#) [PHASE DIAGRAM](#)

DOI:

通讯作者

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(375KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“砜”的 相关文章](#)
- ▶ 本文作者相关文章

- [杨博](#)
- [李干佐](#)
- [佟振合](#)