

研究简报

在非水介质中制备聚电解质静电吸附自组装膜

庹新林, 王晓工

清华大学材料科学与工程研究院化工系高分子研究所; 清华大学材料科学与工程研究院化工系高分子研究所 北京

收稿日期 2005-4-1 修回日期 2004-9-27 网络版发布日期 接受日期

摘要

关键词 [非水介质](#) [自组装膜](#) [静电吸附](#)

分类号

CONSTRUCTION OF POLYELECTROLYTE SELF-ASSEMBLED MULTILAYERS IN NONAQUEOUS MEDIA

TUO Xinlin, WANG Xiaogong

Department of Chemical Engineering; School of Materials Science and Engineering; Tsinghua University; Beijing 100084

Abstract Crylic acid and azobenzene containing acrylate copolymers PEAPH were fabricated into multilayers with their counterpart polyelectrolyte poly(diallyldimethylammonium chloride)(PDAC) in *N,N'*-dimethylformamide (DMF) using the layer-by-layer electrostatic adsorption technique. The self-assembly of water soluble and insoluble PEAPH in DMF was studied and compared. FTIR was used to detect the ionization of carboxyl acid of PEAPH during the assembling processes. All results show that both the water-soluble and water-insoluble PEAPH can be deposited with PDAC based on the electrostatic attraction instead of other interactions. In assembling processes PEAPH molecules are deposited in molecular level instead of molecular aggregation and form a cross-linking multilayer structure. Assembling media of DMF and water do not have obvious influence on the multilayer structure.

Key words [Nonaqueous media](#) [Self-assembled multilayers](#) [Electrostatic attraction](#)

DOI:

通讯作者 庹新林

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(741KB\)](#)
- ▶ [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“非水介质”的相关文章](#)
- ▶ [本文作者相关文章](#)
- [庹新林](#)
- [王晓工](#)