URN etd-0407109-183716-1263
Author Meng-Yin Hsieh
Author's Email Address No Public.
Statistics This thesis had been viewed 36 times. Download 33 times.
Department
Year 2007
Semester 1
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title Preparation of different Morphology of Intrinsically Conductive Polymer by Interfacial Polymerization Technique
Date of Defense 0000-00-00
Page Count 84
Keyword
polyaniline
poly(aniline-co-pyrrole)
chemical oxidization method
Interfacial polymerization
dodecylbenzene sulfonic acid

Abstract
This study contains two parts.
First part：
The chemical oxidization method is used to prepare the conductive polyaniline (PANI) doped with dodecylbenzene sulfonic acid (DBSA) by interfacial polymerization which an immiscible interface is formed by water and organic solvent (chloroform). The experimental results indicate that the conductivity of PANI is ranged from 0.1 to 0.25 S/cm when the molar ratio of AN/DBSA are various. The images of transmission electron microscopy (TEM) show that the morphology of PANI looks like dendritic fiber and particles when the molar ratios of AN/DBSA are form 1：0.125 to 1：0.5. However, the morphology of the PANI looks like rods and particles when the molar ratios of AN/DBSA are from 1：1 to 1：3. The PANI doped by DBSA can be dissolved in chloroform.
Second part：
The chemical oxidization method is used to prepare conductive poly(aniline-co-pyrrole) doped with hydrochloric acid (HCl) by interfacial polymerization which employ an immiscible interface formed by water and organic solvent (chloroform). The experimental results indicate that the conductivity of poly(aniline-co-pyrrole) is the best when the molar ratio of An/Py is 9：1 (AnPy 9-1). The images of TEM demonstrate that the structure of poly(aniline-co-pyrrole) is like dendritic fiber when the molar ratios An/Py of are from 9：1 to 5：5. On the other hand, the copolymers look like particles when the molar ratios of An/Py are from 3：7 to 1：9.
Advisory Committee CHENG-HO CHEN - advisor

Files etd-0407109-183716-1263-001.pdf

indicate access worldwide
Date of Submission 2008-08-08