

CHAPTER 50

TECHNOLOGY
APPLIED CHEMISTRY
&
POLYMER TECHNOLOGY

Doctoral Theses

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Synthesis and Studies on Polymer Blends of Poly (2, 6-Dimethyl 1- 4Phenylene Oxide) with Nylon, Poly (Carbonate Bisphenol-A)
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Abstract

Immiscible polymer blend systems, which forms multi-phase systems, there exists a composition gradient, whose level depends on the intensity of mixing and on solubility parameter values of the polymers. Hence a third component is required i.e. compatibilizer or interfacial agent which can reduce the interfacial tension between polymer components in the blend matrix. This will help the components to form certain degree of miscibility and improve the compatibility by mechanical or physical / chemical means. The stabilized morphology is observed only by the involvement of compatibilizer in immiscible blends to miscible one. The Compatibilizers like block, graft or ionomeric copolymers and unsaturated olefinic compounds are generally used in the formation of compatible polymers lead to formation of alloys, where interpretation of domain achieved to great extent.

Contents

1. Introduction. 2. Literature review of PPO blends and objectives and aim of present work. 3. Experimental & characterization techniques. 4. Results and discussion. 5. Summary, conclusion. Bibliography.