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Foams""; ""2.5. NANOCOMPOSITES OF POLYIMIDES""; ""2.5.1. Preparation Methods""; ""2.5.2. Low k Nanocomposites""; ""2.5.3. Effect of Carbon Nanotubes""; ""2.6. SUMMARY""; ""REFERENCES""; ""POLYMER/CLAY NANOCOMPOSITES THROUGH EMULSION AND SUSPENSION POLYMERIZATION""; ""ABSTRACT""; ""3.1. INTRODUCTION""; ""3.2. POLYMERIZATION IN DISPERSED MEDIA""; ""3.2.1. Polymerization Techniques and Commercial Products""; ""Emulsion Polymerization""; ""Suspension Polymerization"" ""3.3. IMPLICATIONS OF THE TYPE OF CLAY IN THE SYNTHESIS OF WPCNS"" ""3.4. NANOCOM. SYNTHESIS OF COMPOSITES USING PRISTINE BORNESTINE CLAY POLYMERIZED IN WATER""; ""3.4.1. Pristine Clay in Aqueous Phase""; ""3.4.2. In-situ Modified Clay in Aqueous Phase""; ""3.4.3. In-situ Modification of Clay With Non-Cationic Amphiphilic Compounds in Aqueous Phase""; ""3.4.4. Blends of Polymeric Dispersions with Clay Dispersions""; ""3.5. SYNTHESIS OF WATERBORNE POLYMER/CLAY NANOCOMPOSITES USING ORGANICALLY MODIFIED CLAYS (OMC)"" ""3.5.1. OMC Dispersed in the Water Phase and Proceeded as in Emulsion Polymerization"" ""3.5.2. OMC Dispersed in the Organic Phase Followed by Emulsion, Suspension or Miniemulsion Polymerization""; ""3.5.3. Molar Mass Distribution of WPCN Synthesized Using OMCs""; ""3.6. SUMMARY AND FUTURE TRENDS""; ""3.7. ACRONYMS""; ""REFERENCES""; ""STRUCTURE-PROPERTY CORRELATIONS AND INTERACTIONS IN POLYMER/LAYERED-SILICATE NANOCOMPOSITES""; ""ABSTRACT""; ""4.1. INTRODUCTION""; ""4.2. NANOCOMPOSITE STRUCTURE""; ""4.2.1. Particle Structure""; ""4.2.2. Gallery Structure of the Silicate""; ""4.2.3. Exfoliation""; ""4.2.4. Silicate Network""

Sommario/riassunto

Polymer nanocomposites have revolutionised the research effort in the field of composites as they lead to the achievement of synergistic effects from the organic and inorganic components of the system and have led to the expansion of the spectrum of application of the commodity polymers to more advanced high end applications.
