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Retardant Mechanism; 3.2.1 Polystyrene Nanocomposites
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5.2 Influence of Nanostructured Morphology5.2.1 Intercalation, Delamination, Distribution, and Exfoliation; 5.2.2 Orientation; 5.2.3 Morphology During Combustion or Barrier Formation; 5.3 Fire Retardancy Effects and Their Impact on the Fire Behavior of Nanocomposites; 5.3.1 Inert Filler and Char Formation; 5.3.2 Decomposition and Permeability; 5.3.3 Viscosity and Mechanical Reinforcement; 5.3.4 Barrier for Heat and Mass Transport; 5.4 Assessment of Fire Retardancy; 5.4.1 Differentiated Analysis with Regard to Different Fire Properties
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7 Flame Retardant Properties of Organoclays and Carbon Nanotubes and Their Combinations with Alumina Trihydrate

Sommario/riassunto

Flame Retardant Polymer Nanocomposites takes a comprehensive look at polymer nanocomposites for flame retardancy applications and includes nanocomposite fundamentals (theory, design, synthesis, characterization) as well as polymer flammability fundamentals with emphasis on how nanocomposites affect flammability. The book has practical examples from literature, patents, and existing commercial products. Readers can design new work based upon the material in the book or use it as a handy reference for interpreting existing work and results.