DESCRIPTION

The definitive reference on the properties and applications of polyolefin blends

Polyolefins account for more than half of total plastics consumption in the world. In recent years, usage of and research on polyolefin blends have increased significantly due to new applications in medicine, packaging, and other fields and the development of novel polyolefins. With a special emphasis on nano- and micro-structures of crystals and phase morphology, Polyolefin Blends condenses and consolidates current information on polyolefins so that the reader can compare, select, and integrate a material solution. Focusing exclusively on the fundamental aspects as well as applications of polyolefin blends, this authoritative reference:

* Features an introductory chapter that serves as a guide to polyolefin blends

* Includes chapters covering formulation design, processing, characterization, modeling and simulation, engineering performance properties, and applications

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Covers polyolefin/polyolefin blends and polyolefin/non-polyolefin blends

Discusses miscibility, phase behavior, functionalization, compatibilization, microstructure, crystallization, hierarchical morphology, and physical and mechanical properties

Covers new research trends including in-situ reactor blending and reactive processing, such as compatibilization/functionalization in the melt

Contains practical examples from open literature sources and commercial products

With chapters contributed by leading experts from several countries, this is a must-have reference for scientists and engineers conducting research on polyolefin blends and for professionals in medical, packaging, and other commodity fields. It is also an excellent text for graduate students studying polymer science and polymer processing.

ABOUT THE AUTHOR

Domasius Nwabunma is a research specialist at 3M with expertise in polymer processing. He holds three patents, has authored numerous well-cited journal papers, and has been a speaker at various conferences. He is a senior member of the Society of Plastics Engineers (SPE) and a member of the American Chemical Society (ACS) and the Polymer Processing Society (PPS). He has received many awards and honors and has held many leadership positions. His most recent leadership post was as President of the Upper Midwest (S22) Section of the Society of Plastics Engineers. THEIN KYU is a Distinguished Professor in the Department of Polymer Engineering at the University of Akron. He has written 180 refereed papers and book chapters, holds four patents, and coedited Liquid-Crystalline Polymer Systems, an ACS symposium book.

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