

Environmentally friendly polymer nanocomposites : types, processing and properties / Suprakas Sinha Ray

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Abstrak

Concerns about global warming and the depletion of oil reserves have led to significant research into more sustainable composite materials made from natural materials. Recently, research has focussed on the development of nanoscale reinforcements for this new group of composites, significantly improving and extending their range of desirable properties. Environmentally friendly polymer nanocomposites summarises this wealth of research and its practical implications.

After an introduction to the subject, part one looks at matrix and reinforcement materials as well as their characterisation. Part two reviews key properties such as tensile and dynamic mechanical properties and thermal stability. It also considers issues such as barrier properties, biodegradability, rheology, electrical and thermal conductivity. The book concludes by reviewing potential applications.