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| Sommario/riassunto      | <p>Carbon-based nanomaterials such as carbon nanotubes, graphene and its derivatives, nanodiamond, fullerenes, and other nano-sized carbon allotropes have recently attracted a lot of attention among the scientific community due to their enormous potential for a wide number of applications arising from their large specific surface area, high electrical and thermal conductivity, and good mechanical properties. The combination of carbon nanomaterials with polymers leads to new nanocomposites with improved structural and functional properties due to synergistic effects. In particular, the properties of carbon-based polymer nanocomposites can be easily tuned by carefully controlling the carbon nanomaterial synthesis route and additionally the versatile synergistic interactions amongst the nanomaterials and polymers. This book provides selected examples of the most recent advances regarding carbon nanomaterial-reinforced polymeric composites. It includes the most representative types of polymeric matrices and covers aspects of new processing techniques, novel surface modifications of carbon nanomaterials and their applications in diverse fields, in particular in electronics and energy storage.</p> |