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Nota di contenuto	Introduction -- Graphene and Its Derivatives: Concise Review of Some Basic Fundamentals -- Polymer Nanocomposite as a Highly Inhomogeneous and Disordered Medium -- Mechanical and Acoustic Characteristics of Polymer Nanocomposites.
Sommario/riassunto	This book highlights the properties of nanocomposite material, especially with inputs from the interphase effects, which are crucial for their diverse applications. It comprises chapters on graphene as a revolutionary material with exceptional electronic, optical, mechanical and thermal properties, and extraordinary properties of graphene based polymer composite materials, especially emphasizing on important role of the filler/matrix interphase areas. The applications of these composite nanomaterials are briefly discussed throughout the

book. In particular, there is currently an outburst in studying polymer-based nanocomposites for various functional applications such as energy storage, thermoelectrics, stretchable electronics, electromagnetic shielding, super-capacitors and lithium-ion batteries. Emphasis is also given to the impact of the nanocomposites on advanced healthcare materials, drug delivery and biomedical applications.

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