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Nota di contenuto	Introduction. About heat-resistant thermosets used as matrices for polymer nanocomposites -- CER/POSS nanocomposites -- CER/Montmorillonite (MMT) nanocomposites -- CER-based nano- and sub nanocomposites with silica units introduced by a sol-gel method -- Other CER-based nanocomposites -- Phthalonitrile composites with POSS nanoparticles -- Phthalonitrile /Montmorillonite nanocomposites -- Phthalonitrile /metal oxide nanocomposites -- Other types of Phthalonitrile nanocomposites.
Sommario/riassunto	This book presents an overview of polymer nanocomposites for use in various high-temperature applications. Specifically, it focuses on the structure and physical properties of nanocomposites based on

heterocyclic matrices derived from nitrile monomers such as cyanate esters or phthalonitriles. Due to increasing interest in new heat-resistant, lightweight materials for use in extreme conditions, such as in aeronautics, microelectronics, and various industrial machinery, the high thermal stability of heterocyclic polymer networks, in particular, has attracted much attention from materials researchers and engineers. Featuring a comprehensive review of the most recent advances in research on the structure and physical properties of these promising high-temperature polymer nanocomposites, this book will be of particular interest to materials scientists and engineers working throughout the fields of aeronautical and microelectronic engineering. In general, this book is intended for use by researchers of composite materials and specialists engaged in material selection for work in extreme conditions; for students specializing in materials science; for polymer physicists, and for university libraries.