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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction: Towards Multi-functionality -- Nanoparticles -- Processing -- Microstructural Characterization -- Interfaces -- Mechanical Properties -- Thermal Properties -- Flame Retardancy -- Wear/Scratch Damage -- Functional Properties -- Ecological Issues with Polymeric Materials -- Applications and Outlook. .
Sommario/riassunto	This highlights ongoing research efforts on different aspects of polymer nanocomposites and explores their potentials to exhibit multi-functional properties. In this context, it addresses both fundamental and advanced concepts, while delineating the parameters and mechanisms responsible for these potentials. Aspects considered include embrittlement/toughness; wear/scratch behaviour; thermal stability and flame retardancy; barrier, electrical and thermal conductivity; and optical and magnetic properties. Further, the book was written as a coherent unit rather than a collection of chapters on different topics. As such, the results, analyses and discussions presented herein provide a guide for the development of a new class of multi-functional nanocomposites. Offering an invaluable resource for

materials researchers and postgraduate students in the polymer composites field, they will also greatly benefit materials.

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