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Titolo	Tailoring of nanocomposite dielectrics : from fundamentals to devices and applications // edited by Toshikatsu Tanaka, Alun S. Vaughan
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Descrizione fisica	1 online resource (441 pages)
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Soggetti	Polymeric composites Nanostructured materials
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	part 1. Preparation -- part 2. Characterization and computer simulation -- part 3. Properties for dielectric applications -- part 4. Devices and applications.
Sommario/riassunto	This book illustrates interfacial properties, preparation, characterization, devices, and applications from the standpoint of nano-interfacial tailoring. Since the primary focus of the book is on the use of nanocomposite dielectrics in electrical applications, chapters are devoted to directly relevant topics, such as surface and bulk breakdown processes. However, the mechanisms that underpin such behavior are not unique. Therefore, the book also addresses related topics that range from the chemistry of polymer and nanocomposite degradation to the simulation of charge transport dynamics in disordered materials, thereby presenting a multi- and interdisciplinary approach to the area. It will serve as a practical handbook or graduate textbook and is supplemented by ample number of illustrations, case studies, practical examples, and historical perspectives.