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Autore	Topolov Vitaly Yu
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Soggetti	Optical materials Electronic materials Microwaves Optical engineering Semiconductors Ceramics Glass Composites (Materials) Composite materials Energy harvesting Optical and Electronic Materials Microwaves, RF and Optical Engineering Ceramics, Glass, Composites, Natural Materials Energy Harvesting
Lingua di pubblicazione	Inglese
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Nota di contenuto	Preface -- Piezoelectric Medium and Piezoelectric Sensitivity -- Effective Piezoelectric Coefficients $d_{ij}^*$ : From Microgeometry to Anisotropy -- Microgeometry of Composites and Their Piezoelectric Coefficients $g_{ij}^*$ -- Piezoelectric Coefficients $e_{ij}^*$ and $d_{ij}^*$ : Combination of Properties at Specific Microgeometry -- Piezoelectric Coefficients $e_{ij}^*$ and $h_{ij}^*$ : Other Combination of Properties -- Ways to Improve Piezoelectric Sensitivity of Modern Piezo-active Composites. .
Sommario/riassunto	This book is devoted to the systematic description of the role of

microgeometry of modern piezo-active composites in the formation of their piezoelectric sensitivity. In five chapters, the authors analyse kinds of piezoelectric sensitivity for piezo-active composites with specific connectivity patterns and links between the microgeometric feature and piezoelectric response. Among connectivity elements to be discussed, of interest are 2-2, 1-3, 1-1, and 0-3. The role of components and microgeometric factors is discussed in the context of the piezoelectric properties and their anisotropy in the composites. Interrelations between different types of the piezoelectric coefficients are highlighted. The monograph fills a gap in piezoelectric materials science and provides readers with data on the piezoelectric performance of novel composite materials that are suitable for sensor, transducer, hydroacoustic, energy-harvesting, and other applications.

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