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| Descrizione fisica | 1 online resource (XIII, 215 p. 54 illus., 38 illus. in color.) |
| Collana | Advanced Structured Materials, , 1869-8441 ; ; 182 |
| Disciplina | 531.7 |
| Soggetti | Continuum mechanics Electronics - Materials Geometrical optics Wave theory of light Acoustics Continuum Mechanics Electronic Materials Classical Optics, Geometric and Wave optics |
| Lingua di pubblicazione | Inglese |
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| Nota di contenuto | Chapter 1: Mathematical boundary value problem of linear electro elasticity -- Chapter 2: Coupled electroactive stress-strain states in piezoelectric textures -- Chapter 3: 2D Multi-Component Electro Acoustic Waves in the Piezoelectric Layer. Localization of Wave Energy -- Chapter 4: Hybrid of normal electroacoustic waves in layered inhomogeneous piezoelectric waveguides. Formulation of some problem -- Chapter 5: Controllability of Electroacoustic Wave Process. . |
| Sommario/riassunto | This book deals concisely and coherently with various issues related to electroacoustic waves in piezoelectric layered composites. Starting with the basic linear equations and relations of electromagnet elasticity of homogeneous anisotropic piezoelectric media, the book considers the conditions for possible field or partial conjugation of physical and mechanical fields at the junction of two homogeneous media with geometrically homogeneous surfaces. The variety of electromechanical boundary conditions and the separation of plane and anti-plane fields |

of elastic deformation in homogeneous piezoelectric crystals are discussed. Then, the statements of the electroacoustic problem in piezo textures are studied and a layered piecewise-homogeneous piezoelectric waveguide is introduced, with non-acoustic contact between different piezoelectric layers. Non-acoustic contact between different piezoelectric layers can lead to the propagation of a hybrid of electroactive waves of plane and anti-plane elastic deformations. In the last part of the book, the problem of controlling electroacoustic waves in a waveguide is formulated. A method for solving problems of control of electroacoustic waves by non-contact surface action is proposed. .
