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Descrizione fisica	1 online resource (424 p.)
Collana	ISTE
Altri autori (Persone)	DefayEmmanuel
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Dielectric, piezoelectric, pyroelectric, and ferroelectric -- Thermodynamic study : a structuring approach -- Ferroelectric-paraelectric phase transition thermodynamic modelling -- Mechanical formalism -- Dielectric formalism -- Piezoelectric formalism -- Acoustic formalism -- Electrostrictive formalism -- Electric characterization -- Piezoelectric resonators and filters -- High overtone bulk acoustic resonator (HBAR) -- Electrostrictive resonators -- Thin film piezoelectric transducers.
Sommario/riassunto	This book contains four parts. The first one is dedicated to concepts. It starts with the definitions and examples of what is piezo-pyro and ferroelectricity by considering the symmetry of the material. Thereafter, these properties are described within the framework of Thermodynamics. The second part described the way to integrate these materials in Microsystems. The third part is dedicated to characterization: composition, structure and a special focused on electrical behaviors. The last part gives a survey of state of the art applications using integrated piezo or/and ferroelectric films.

