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Titolo	Ferroic Functional Materials : Experiment, Modeling and Simulation / / edited by Jörg Schröder, Doru C. Lupascu
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Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (VII, 285 p. 99 illus., 49 illus. in color.)
Collana	CISM International Centre for Mechanical Sciences, Courses and Lectures, , 0254-1971 ; ; 581
Disciplina	537.2448
Soggetti	Engineering—Materials Magnetism Magnetic materials Metals Materials Engineering Magnetism, Magnetic Materials Metallic Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Fundamentals of magneto-electro-mechanical couplings: continuum formulations and invariant requirements -- Ferroelectric and ferromagnetic phase field modeling -- Semiconductor effects in ferroelectrics -- Electromechanical models of ferroelectric materials -- An FE2-scheme for magneto-electro-mechanically coupled boundary value problems -- Multiscale modeling of electroactive polymer composites.
Sommario/riassunto	The book covers experiments and theory in the fields of ferroelectrics, ferromagnets, ferroelastics, and multiferroics. Topics include experimental preparation and characterization of magnetoelectric multiferroics, the modeling of ferroelectric and ferromagnetic materials, the formation of ferroic microstructures and their continuum-mechanical modeling, computational homogenization, and the algorithmic treatment in the framework of numerical solution strategies.

