1. Record Nr. UNINA9910633981303321

Titolo	Thermoelectricity : Recent Advances, New Perspectives and Applications / / edited by Guangzhao Qin
Pubbl/distr/stampa	London : , : IntechOpen, , 2022 ©2022
ISBN	1-83962-610-0
Descrizione fisica	1 online resource (150 pages)
Disciplina	537.65
Soggetti	Thermoelectricity
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Introductory Chapter: Thermoelectricity - Recent Advances, New Perspectives, and Applications -- 2. Optimization of Thermoelectric Properties Based on Rashba Spin Splitting -- 3. Processing Techniques with Heating Conditions for Multiferroic Systems of BiFeO3, BaTiO3, PbTiO3, CaTiO3 Thin Films -- 4. Research Progress of Ionic Thermoelectric Materials for Energy Harvesting -- 5. Challenges in Improving Performance of Oxide Thermoelectrics Using Defect Engineering -- 6. Thermoelectricity Properties of Tl10-x ATe6 (A = Pb) in Chalcogenide System -- 7. Thermoelectric Elements with Negative Temperature Factor of Resistance -- 8. Quantum Physical Interpretation of Thermoelectric Properties of Ruthenate Pyrochlores.
Sommario/riassunto	Next-generation energy sources are crucial for combating the world's energy crisis. One such alternative energy source is thermoelectricity, which is cost-efficient and environmentally friendly. This book presents a comprehensive overview of the progress made in thermoelectrics over the past few years with a focus on charge and heat carrier transport from both theoretical and experimental viewpoints. It also presents new strategies to improve thermoelectricity and discusses device physics and applications to guide the research community.