

1. Record Nr.	UNINA9910566477803321
Autore	Mele Paolo
Titolo	Recent Advances in Thermoelectric Materials for High Efficiency Energy Conversion and Refrigeration
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 online resource (100 p.)
Soggetti	History of engineering and technology Materials science Technology: general issues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Thermoelectricity is a well-known phenomenon that enables the conversion of heat into electric energy without moving parts. Its exploitation has been widely considered to contribute to the increasing need for energy along with the concerns about the environmental impact of traditional fossil energy sources. In the last few years, significant improvements in the performance of thermoelectric materials have been achieved through chemical doping, solid solution formation, and nanoengineering approaches. Furthermore, the feasibility of flexible, stretchable, and conformable thermoelectric harvesters has been demonstrated and has attracted the interest of an audience from many different fields. However, the path for practical applications of thermoelectrics is still a long one. This Special Issue of Materials intends to bridge the gap between materials science and applications of thermoelectric materials. Many topics are welcome: new thermoelectric compounds; the correlation between material structure and thermoelectric properties; bulk thermoelectric ceramics, oxides, and chalcogenides; bulk thermoelectric alloys and intermetallics; organic and polymeric thermoelectrics; thermoelectric thin films, multilayers, and nanocomposites; theory and modeling; thermal transport and thermal conductivity; applications and devices based on</p>

thermoelectric materials; standardization and metrology; and more.
