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Nota di contenuto	1. Discovery and design of new thermoelectric materials / Eric S. Toberer, Prashun Gorai, and Vladan Stevanovic -- 2. Tetradymites : Bi2Te3-related materials / Joseph P. Heremans and Bartlomiej Wiendlocha -- 3. Growth and transport properties of tetradymite thin films / Hang Chi, Wei Liu, and Ctirad Uher -- 4. All-scale hierarchical PbTe : from nanostructuring to a panoscopic material / Gangjian Tan and Mercouri G. Kanatzidis -- 5. Thermoelectric properties of magnesium silicide : based solid solutions and higher manganese silicides / Johannes de Boor, Titas Dasgupta, and Eckhard Muller -- 6. Clathrate-based thermoelectrics / Toshiro Takabatake and Koichiro Suekuni -- 7. Advances in nanostructured half-heusler alloys for thermoelectric applications / Pierre F.P. Poudeu, Ruiming Lu, Yuanfeng Liu, Pranati Sahoo, and Alexander Page -- 8. Thermoelectric properties of Cu2-pX (X = S, Se, and Te) / Pengfei Qiu, Xun Shi, and Lidong Chen -- 9. BiCuSeO : a promising thermoelectric material / Li-Dong Zhao and Jing-Feng Li -- 10. Phase diagram study in n-CoSb3 Skutterudites

/ Yinglu Tang, Chris Wolverton, and G. Jeffrey Snyder -- 11. Chain-forming A3MPn3 and A5M2Pn6 Zintl phases / Alex Zevalkink, Umut Aydemir, and G. Jeffrey Snyder -- 12. Thallium-based chalcogenides as thermoelectrics / Quansheng Guo, Abdeljalil Assoud, and Holger Kleinke -- 13. Higher manganese silicides / Yuzuru Miyazaki -- 14. Boron-based materials / Takao Mori -- 15. Complex chalcogenides : pseudo-hollandites, structures and properties / Franck Gascoin -- 16. Tetrahedrites : earth-abundant thermoelectric materials with intrinsically low thermal conductivity / Xu Lu and Donald T. Morelli -- 17. Organic thermoelectric materials / Gun-Ho Kim and Kevin P. Pipe -- 18. Inorganic/organic hybrid superlattice materials / Kunihito Koumoto, Ruoming Tian, Ronggui Yang, and Chunlei Wan -- 19. Recent progress in Skutterudites / G. Jeffrey Snyder, Yinglu Tang, Caitlin M. Crawford, and Eric S. Toberer -- 20. SHS-processed thermoelectric materials / Xinfeng Tang, Xianli Su, Qingjie Zhang, and Ctirad Uher -- 21. Prospective thermoelectrics among topological insulators / Jihui Yang.

Sommario/riassunto

In recent years, novel families of materials have been discovered and significant improvements in classical thermoelectric materials have been made. Thermoelectric generators are now being used to harvest industrial heat waste and convert it into electricity. This is being utilized in communal incinerators, large smelters, and cement plants. Leading car and truck companies are developing thermoelectric power generators to collect heat from the exhaust systems of gasoline and diesel engines. Additionally, thermoelectric coolers are being used in a variety of picnic boxes, vessels used to transport transplant organs, and in air-conditioned seats of mid-size cars. Consisting of twenty-one chapters written by top researchers in the field, this book explores the major advancements being made in the material aspects of thermoelectricity and provides a critical assessment in regards to the broadening of application opportunities for thermoelectric energy conversion.