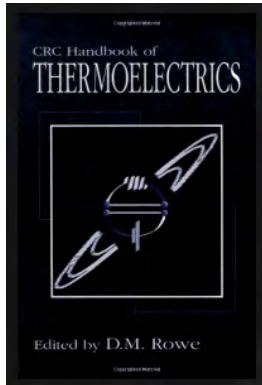


CRC Handbook of Thermoelectrics

D. M. Rowe (Editor)



Description:

Thermoelectrics is the science and technology associated with thermoelectric converters, that is, the generation of electrical power by the Seebeck effect and refrigeration by the Peltier effect. Thermoelectric generators are being used in increasing numbers to provide electrical power in medical, military, and deep space applications where combinations of their desirable properties outweigh their relatively high cost and low generating efficiency. In recent years there also has been an increase in the requirement for thermoelectric coolers (Peltier devices) for use in infrared detectors and in optical communications. Information on thermoelectrics is not readily available as it is widely scattered throughout the literature. The Handbook centralizes this information in a convenient format under a single cover.

Sixty of the world's foremost authorities on thermoelectrics have contributed to this Handbook. It is comprised of fifty-five chapters, a number of which contain previously unpublished material. The contents are arranged in eight sections: general principles and theoretical considerations, material preparation, measurement of thermoelectric properties, thermoelectric materials, thermoelectric generation, generator applications, thermoelectric refrigeration, and applications of thermoelectric cooling.

The CRC Handbook of Thermoelectrics has a broad-based scope. It will interest researchers, technologists, and manufacturers, as well as students and the well-informed, non-specialist reader.

Table of Contents:

- 1 Introduction
- 2 Thermoelectric Phenomena
- 3 Conversion Efficiency and Figure-of-Merit
- 4 Thermoelectric Transport Theory
- 5 Optimization of Carrier Concentration
- 6 Minimizing the Thermal Conductivity
- 7 Selective Carrier Scattering in Thermoelectric Materials
- 8 Thermomagnetic Phenomena
- 9 Preparation of Thermoelectric Materials from Melts
- 10 Powder Metallurgy Techniques
- 11 PIES Method of Preparing Bismuth Alloys



- 12 Preparation of Thermoelectric Materials by Mechanical Alloying
- 13 Preparation of Thermoelectric Films
- 14 Calculation of Peltier Device Performance
- 15 Measurements of Electrical Properties
- 16 Measurement of Thermal Properties
- 17 Z-Meters
- 18 Methodology for Testing Thermoelectric Materials and Devices
- 19 Bismuth Telluride, Antimony Telluride, and Their Solid Solutions
- 20 Valence Band Structure and the Thermoelectric Figure-of-Merit of [actual symbol not reproducible] Te_3 Crystals
- 21 Lead Telluride and Its Alloys
- 22 Properties of the General TAGS System
- 23 Thermoelectric Properties of Silicides
- 24 Polycrystalline Iron Disilicide as a Thermoelectric Generator Material
- 25 Thermoelectric Properties of Anisotropic $\text{MnSi}_{1.75}$
- 26 Low Carrier Mobility Materials for Thermoelectric Applications
- 27 Semimetals as Materials for Thermoelectric Generators
- 28 Silicon Germanium
- 29 Rare Earth Compounds
- 30 Thermoelectric Properties of High-Temperature Superconductors
- 31 Boron Carbides
- 32 Thermoelectric Properties of Metallic Materials
- 33 Neutron Irradiation Damage in SiGe Alloys
- 34 New Materials and Performance Limits for Thermoelectric Cooling
- 35 Miniature Semiconductor Thermoelectric Devices
- 36 Commercially Available Generators
- 37 Modular RTG Technology
- 38 Peltier Devices as Generators
- 39 Calculations of Generator Performance
- 40 Terrestrial Applications of Thermoelectric Generators
- 41 Space Applications
- 42 SP-100 Space Subsystems
- 43 Safety Aspects of Thermoelectrics in Space
- 44 Low-Temperature Heat Conversion
- 45 Thermoelectric Refrigeration: Introduction
- 46 Module Design and Fabrication
- 47 Cooling Thermoelements with Superconducting Leg
- 48 Applications of Thermoelectric Cooling: Introduction
- 49 Commercial Peltier Modules
- 50 Thermoelectrically Cooled Radiation Detectors
- 51 Reliability of Peltier Coolers in Fiber-Optic Laser Packages
- 52 Laboratory Equipment
- 53 Large-Scale Cooling: Integrated Thermoelectric Element Technology
- 54 Medium-Scale Cooling: Thermoelectric Module Technology



55 Modeling of Thermoelectric Cooling Systems
Index

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Other recommended literature:

[Thermoelectrics and its Energy Harvesting, 2-Volume Set: Modules, Systems, and Applications in Thermoelectrics by David Michael Rowe \(Editor -2012\)](#)

[Introduction to Thermoelectricity by H. Julian Goldsmid \(2009\)](#)

[Thermoelectricity: An Introduction to the Principles by D. K. C. MacDonald \(2006\)](#)

[Rethinking Thermoelectric Effects In Seebeck And Peltier Elements: Toward A Unifying Paradigm by Michael Spry \(2013\)](#)

[New Materials for Thermoelectric Applications: Theory and Experiment \(2012\) by Veljko Zlatic \(Editor\), Alex Hewson \(Editor\)](#)

[Thermoelectric Power of Metals by J. Blatt \(2013\)](#)

[Thermoelectric Nanomaterials: 182 \[Kindle Edition\] \(2013\) Kunihito Koumoto \(Author, Editor\), Takao Mori \(Author, Editor\)](#)

[Thermoelectric Materials 2010-Growth, Properties, Novel Characterization Methods and Applications: Volume 1267 \(MRS Proceedings\) \(2014\) edited by John D. Baniecki, G. Jeffrey Snyder, Jonathan A. Malen](#)

[Thermal & thermoelectric properties of low-dimensional semiconductors by Madhvendra Nath Tripathi \(2013\)](#)

[Thermoelectric Materials: Advances and Applications by Enrique Maciá \(2015\)](#)

[Thermal Design: Heat Sinks, Thermoelectrics, Heat Pipes, Compact Heat Exchangers, and Solar Cells by H. S. Lee \(2010\)](#)

[Thermoelectrics Handbook: Macro to Nano by D.M. Rowe \(Editor - 2005\)](#)

[Thermoelectric Refrigeration by H. Goldsmid \(2013 reprint of the 1964 Classic\)](#)