1. Record Nr. UNINA9910831193003321 **Autore** Lee HoSung Titolo Thermoelectrics: design and materials / / HoSung Lee Chichester, UK;; Hoboken, NJ:,: John Wiley & Sons,, 2017 Pubbl/distr/stampa **ISBN** 1-118-84893-4 1-118-84892-6 1-118-84894-2 Descrizione fisica 1 online resource (437 p.) Disciplina 621.31/243 Soggetti Thermoelectric apparatus and appliances - Design and construction Thermoelectric materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Thermoelectrics: Design and Materials; Contents; Preface; 1: Introduction: 1.1 Introduction: 1.2 Thermoelectric Effect: 1.2.1 Seebeck Effect; 1.2.2 Peltier Effect; 1.2.3 Thomson Effect; 1.2.4 Thomson (or Kelvin) Relationships; 1.3 The Figure of Merit; 1.3.1 New-Generation Thermoelectrics; Problems; References; 2: Thermoelectric Generators; 2.1 Ideal Equations: 2.2 Performance Parameters of a Thermoelectric Module; 2.3 Maximum Parameters for a Thermoelectric Module; 2.4 Normalized Parameters; Example 2.1 Exhaust Waste Heat Recovery; 2.5 **Effective Material Properties** 2.6 Comparison of Calculations with a Commercial ProductProblems; Computer Assignment; References: 3: Thermoelectric Coolers; 3.1 Ideal Equations; 3.2 Maximum Parameters; 3.3 Normalized Parameters; Example 3.1 Thermoelectric Air Conditioner; 3.4 Effective Material Properties: 3.4.1 Comparison of Calculations with a Commercial Product: Problems: Reference: 4: Optimal Design: 4.1 Introduction: 4.2 Optimal Design for Thermoelectric Generators; Example 4.1 Exhaust Thermoelectric Generators: 4.3 Optimal Design of Thermoelectric Coolers: Example 4.2 Automotive Thermoelectric Air Conditioner

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