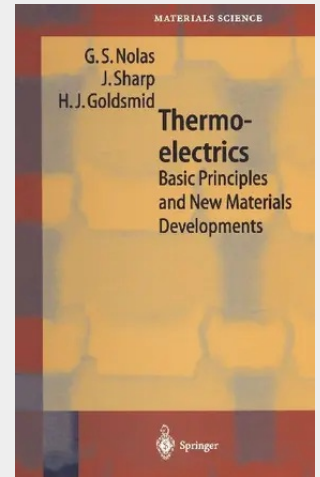


Thermoelectrics

Basic Principles and New Materials Developments

The field of thermoelectrics has grown dramatically in recent years. In particular new and novel materials research has been undertaken and device applications have increased. In spite of this resurgence of interest there are very few books available that outline the basic concepts in this field. Thus it is necessary that a book be written that encompasses the basic theory and introduces some of the recent research into improved materials for solid-state cooling and power generation. Therefore the aim of this book is threefold. First, to present the basic theory of thermoelectricity. Both theoretical concepts and experimental aspects of the field of solid-state cooling and power generation are discussed. Second, to bridge the gap between theory and application. To this end, the techniques for producing good thermoelectric materials and module design issues are reviewed. Third, to present some of the research into new and novel materials that has drawn the attention of the scientific community. The book is intended as a reference to experimentalists working in the field; however, it will also prove useful to scientists coming into the field from other areas of research. It can also serve as a useful text for graduate students.

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