1. Record Nr. UNINA9910583328603321

Autore	Zohuri Bahman
Titolo	Physics of cryogenics : an ultralow temperature phenomenon / / Bahman Zohuri
Pubbl/distr/stampa	Amsterdam, Netherlands : , : Elsevier, , 2018 ©2018
ISBN	0-12-814520-X
Descrizione fisica	1 online resource (711 pages) : illustrations, tables, graphs
Disciplina	536.56
Soggetti	Low temperature research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	Physics of Cryogenics: An Ultralow Temperature Phenomenon discusses the significant number of advances that have been made during the last few years in a variety of cryocoolers, such as Brayton, Joule-Thomson, Stirling, pulse tube, Gifford-McMahon and magnetic refrigerators. The book reviews various approaches taken to improve reliability, a major driving force for new research areas. The advantages and disadvantages of different cycles are compared, and the latest improvements in each of these cryocoolers is discussed. The book starts with the thermodynamic fundamentals, followed by the definition of cryogenic and the associated science behind low temperature phenomena and properties. This book is an ideal resource for scientists, engineers and graduate and senior undergraduate students who need a better understanding of the science of cryogenics and related thermodynamics.--