1. Record Nr. UNINA9910350328303321

Titolo	Bismuth-Containing Alloys and Nanostructures / / edited by Shumin Wang, Pengfei Lu
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-8078-3
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XIII, 399 p. 194 illus., 164 illus. in color.)
Collana	Springer Series in Materials Science, , 0933-033X ; ; 285
Disciplina	620.11295 620.11297
Soggetti	Optical materials Electronics - Materials Nanotechnology Semiconductors Nanochemistry Nanoscience Nanostructures Optical and Electronic Materials Nanotechnology and Microengineering Nanoscale Science and Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Theoretical simulations of dilute bismides -- Epitaxial growth of dilute bismides -- III-As-Bi alloys -- III-P-Bi, III-Sb-Bi and other III-Bi alloys -- Influence of bismuth on nanostructures -- Surface and structural properties, surfactant effect -- Electric, transport and optical properties -- Device applications of dilute bismides -- Bismuth-containing 2D materials -- Epitaxial growth of Bi2X3 (X=Se and Te) -- Thermoelectric properties of Bi2X3 (X=Se and Te) -- Bi2X3 (X=Se and Te) as topological insulators -- Dilute bismuth optical fibers -- Bismuth containing superconductors.
Sommario/riassunto	This book focuses on novel bismuth-containing alloys and nanostructures, covering a wide range of materials from semiconductors, topological insulators, silica optical fibers and to

multiferroic materials. It provides a timely overview of bismuth alloys and nanostructures, from material synthesis and physical properties to device applications and also includes the latest research findings. Bismuth is considered to be a sustainable and environmentally friendly element, and has received increasing attention in a variety of innovative research areas in recent years. The book is intended as a reference resource and textbook for graduate students and researchers working in these fields. .