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Titolo	Applications of Chalcogenides: S, Se, and Te // edited by Gurinder Kaur Ahluwalia
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ISBN	9783319411903
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XIII, 461 p. 328 illus., 213 illus. in color.)
Disciplina	620.11295 620.11297
Soggetti	Optical materials Electronics - Materials Semiconductors Nanotechnology Chemistry, Inorganic Optical and Electronic Materials Inorganic Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Part I: Introduction -- Fundamentals of Chalcogenides in Crystalline, Amorphous and Nanocrystalline Forms -- Techniques for Structural Investigations (Theory and Experimental) -- Nanostructured Chalcogenides -- Part II: Sulfur -- Optical Fibers -- Part III: Selenium -- Imaging and Detection -- Electrochemical Sensors -- Biomedical Applications -- Selenide Glass Fibers for Bio-Chemical Infrared Sensing -- Part IV: Tellurium -- Data Storage Devices -- Photovoltaics -- Infrared Detectors.
Sommario/riassunto	This book introduces readers to a wide range of applications for elements in Group 16 of the periodic table, such as, optical fibers for communication and sensing, X-ray imaging, electrochemical sensors, data storage devices, biomedical applications, photovoltaics and IR detectors, the rationale for these uses, the future scope of their applications, and expected improvements to existing technologies.

Following an introductory section, the book is broadly divided into three parts—dealing with Sulfur, Selenium, and Tellurium. The sections cover the basic structure of the elements and their compounds in bulk and nanostructured forms; properties that make these useful for various applications, followed by applications and commercial products. As the global technology revolution necessitates the search for new materials and more efficient devices in the electronics and semiconductor industry, *Applications of Chalcogenides: S, Se, and Te* is an ideal book for a wide range of readers in industry, government and academic research facilities looking beyond silicon for materials used in the electronic and optoelectronic industry as well as biomedical applications.
