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| Nota di contenuto       | 1. Recent Developments on the Properties of Chalcogenide Thin Films -- 2. Contribution to the Calculation of Physical Properties of BeSe Semiconductor -- 3. Thickness Dependent Spectroscopic Studies in 2D PtSe <sub>2</sub> -- 4. Functional Mimics of Glutathione Peroxidase: Spirochalcogenuranes, Mechanism and Its Antioxidant Activity -- 5. Two-Dimensional Transition Metal Dichalcogenide as Electron Transport Layer of Perovskite Solar Cells -- 6. Advanced Chalcogen Cathode Materials for Lithium-Ion Batteries -- 7. Temperature-Dependent Evaluation of Charge Carriers and Terahertz Generation in Bismuth and Antimony-Based Chalcogenides -- 8. Recording of Micro/Nanosized Elements on Thin Films of Glassy Chalcogenide Semiconductors by Optical Radiation.  |
| Sommario/riassunto      | Chalcogenides are chemical compounds that contain one or more sulfides, selenides, and tellurides (S, Se, Te) paired with an electropositive counterpart. They are developed through a strong covalent bond creating a variety of morphological structures, frequently organized by hexagonal or monoclinic geometry. The derivatives of chalcogenide materials such as binary, ternary, and quaternary are pertinent in various applications, including sensors, batteries, optoelectronics, photovoltaics, fuel cells, and photocatalysts. Chalcogenide-based materials can be developed through a variety of physical and chemical methodologies. This book provides a general overview of these methodologies and discusses the various chalcogen materials and their different applications. It includes eight chapters in three |

sections: "Chalcogen Fabrication", "Solar Cells and Batteries" and "Nanoscale Devices".

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