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| Nota di contenuto | 1. An introduction to the metal oxides -- 2. Optical and electrical switching of thermochromic metal oxide nanostructures -- 3. Optical properties of metal oxide-based perovskite structures -- 4. Optical behavior of metal oxide-based Nanofluids -- 5. Nonlinear optical properties of metal oxide nanostructures. |
| Sommario/riassunto | This book highlights the optical properties of metal oxides at both the fundamental and applied level and their use in various applications. The book offers a basic understanding of the optical properties and related spectroscopic techniques essential for anyone interested in learning about metal oxide nanostructures. This is partly due to the fact that optical properties are closely associated with other properties and functionalities (e.g., electronic, magnetic, and thermal), which are |

of essential significance to many technological applications, such as optical data communications, imaging, lighting, and displays, life sciences, health care, security, and safety. The book also highlights the fundamentals and systematic developments in various optical techniques to achieve better characterization, cost-effective, user-friendly approaches, and most importantly, state-of-the-art developing methodologies for various scientific and technological applications. It provides an adequate understanding of the imposed limitations and highlights the prospects and challenges associated with optical analytical methods to achieve the desired performance in targeted applications.
