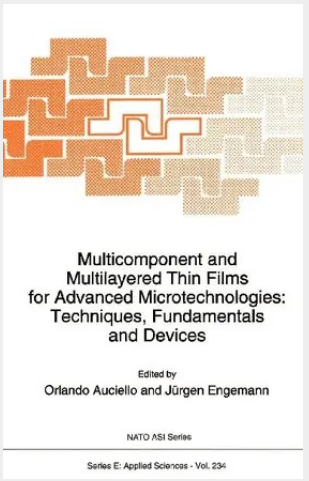
Auciello / Engemann

Multicomponent and Multilayered Thin Films for Advanced Microtechnologies: Techniques, Fundamentals and Devices



The synthesis of multicomponent/multilayered superconducting, conducting, semiconducting and insulating thin films has become the subject of an intensive, worldwide, interdisciplinary research effort. The development of deposition-characterization techniques and the science and technology related to the synthesis of these films are critical for the successful evolution of this interdisciplinary field of research and the implementation of the new materials in a whole new generation of advanced microdevices.
This book contains the lectures and contributed papers on various scientific and technological aspects of multicomponent and multilayered thin films presented at a NATO/ASI. Compared to other recent books on thin films, the distinctive character of this book is the interdisciplinary treatment of the various fields of research related to the different thin film materials mentioned above. The wide range of topics discussed in this book include vacuum-deposition techniques, synthesis-processing, characterization, and devices of multicomponent/multilayered oxide high temperature superconducting, ferroelectric, electro-optic, optical, metallic, silicide, and compound semiconductor thin films.
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