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Wenzhong Shen
Junhao Chu
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Introduction

In recent years, thin film science has grown world-wide into a major research area. The importance of synthesizing new materials for industry has resulted in a tremendous increase of innovative thin film processing technologies. Currently, this development goes hand-in-hand with the explosion of scientific and technological breakthroughs in nanotechnology, microelectronics, and optics. The rapidly changing needs for thin film materials and devices are creating new opportunities for the development of new materials, processes, and technologies.

This conference (TFPA2007) follows the strong tradition of five previous conferences and focuses on the recent advances in the fundamental and applied aspects of thin films from the growth, characterization, and physics to the device performance and reliability. The main objective of the conference is to provide a joint forum for both the thin film physics researchers and the thin film application community to exchange their knowledge by presenting their latest results and by carrying out in-depth technical discussions. A series of thin film materials, technologies and applications, such as nanostructure films, ferroelectric and piezoelectric films, magnetic films, superconductor films, organic and polymer films, micro/nano-fabrications and characterizations, photonics and MEMS devices, solar cells, and others, are the concern of their investigations. A close combination of the experimental and theoretical investigations is a prevalent feature of these investigations.

A total of 138 papers were accepted for publication in these proceedings, which were selected from the 162 presentations on the conference. The content of the invited and contributed papers is a reflection of advanced research on thin film physics and applications. We believe that the publication of this proceedings volume will promote future research activities that will increase knowledge and understanding of thin films in various fields.

Wenzhong Shen
Junhao Chu

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