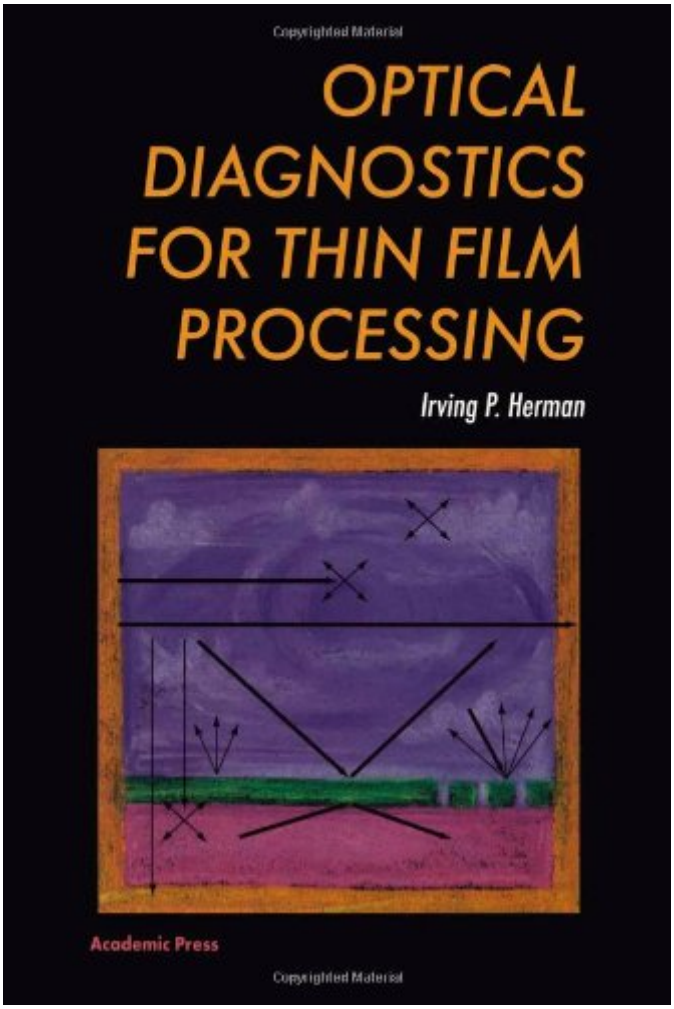
Optical Diagnostics for Thin Film Processing PDF



Optical Diagnostics for Thin Film Processing by Irving P. Herman Ph.D. Massachusetts Institute of Technology ISBN 0123420709

This volume describes the increasing role of *in situ* optical diagnostics in thin film processing for applications ranging from fundamental science studies to process development to control during manufacturing. The key advantage of optical diagnostics in these applications is that they are usually noninvasive and nonintrusive. Optical probes of the surface, film, wafer, and gas above the wafer are described for many processes, including plasma etching, MBE, MOCVD, and rapid thermal processing. For each optical technique, the underlying principles are presented, modes of experimental implementation are described, and applications of the diagnostic in thin film processing are analyzed, with examples drawn from microelectronics and optoelectronics. Special attention is paid to real-time probing of the surface, to the noninvasive measurement of

temperature, and to the use of optical probes for process control.

Optical Diagnostics for Thin Film Processing is unique. No other volume explores the real-time application of optical techniques in all modes of thin film processing. The text can be used by students and those new to the topic as an introduction and review of the subject. It also serves as a comprehensive resource for engineers, technicians, researchers, and scientists already working in the field.

Key Features
* The only volume that comprehensively explores *in situ*, real-time, optical probes for all types of thin film processing
* Useful as an introduction to the subject or as a resource handbook
* Covers a wide range of thin film processes including plasma etching, MBE, MOCVD, and rapid thermal processing
* Examples emphasize applications in microelectronics and optoelectronics
* Introductory chapter serves as a guide to all optical diagnostics and their applications
* Each chapter presents the underlying principles, experimental implementation, and applications for a specific optical diagnostic

Optical Diagnostics for Thin Film Processing Review

This Optical Diagnostics for Thin Film Processing book is not really ordinary book, you have it then the world is in your hands. The benefit you get by reading this book is actually information inside this reserve incredible fresh, you will get information which is getting deeper an individual read a lot of information you will get. This kind of Optical Diagnostics for Thin Film Processing without we recognize teach the one who looking at it become critical in imagining and analyzing. Don’t be worry Optical Diagnostics for Thin Film Processing can bring any time you are and not make your tote space or bookshelves’ grow to be full because you can have it inside your lovely laptop even cell phone. This Optical Diagnostics for Thin Film Processing having great arrangement in word and layout, so you will not really feel uninterested in reading.