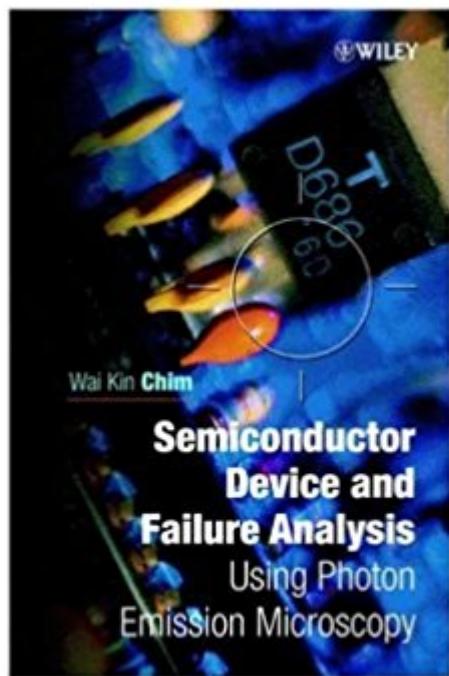


The book was found

# Semiconductor Device And Failure Analysis : Using Photon Emission Microscopy



## Synopsis

The diminishing size and greater complexity of modern semiconductor integrated circuits poses new challenges in fault detection. Photon Emission Microscopy (PEM) is a physical fault localisation technique used for analysing IC failures. Detailing the PEM technique and its application to semiconductor device analysis, this unique reference: \* Illustrates the application of the PEM technique in various areas of device reliability, in particular hot-carrier, oxide and ESD reliability. \* Presents the principles of design and calibration for a spectroscopic emission microscope system along with coverage of the three main operation modes: frontside, backside and spectroscopic PEM \* Provides an analysis of light emission in semiconductors under hot-carrier and high-field impulse stressing in MOS transistors and photon emission from biased MOS capacitors. Not only an essential reference for researchers and students in the field, the numerous practical examples throughout the text also make this an indispensable guide for failure analysis engineers and microelectronics industry professionals.

## Book Information

Hardcover: 288 pages

Publisher: Wiley; 1 edition (December 13, 2000)

Language: English

ISBN-10: 047149240X

ISBN-13: 978-0471492405

Product Dimensions: 6.3 x 0.8 x 9.3 inches

Shipping Weight: 1.3 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #3,341,161 in Books (See Top 100 in Books) #129 in Books > Science & Math > Experiments, Instruments & Measurement > Electron Microscopes & Microscopy #637 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Semiconductors #876 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Microelectronics

[Download to continue reading...](#)

Semiconductor Device and Failure Analysis : Using Photon Emission Microscopy Role Microscopy In Semiconductor Failure Analysis (Royal Microscopical Society Microscopy Handbooks) Scanning Electron Microscopy, X-Ray Microanalysis, and Analytical Electron Microscopy: A Laboratory Workbook Flourescence Microscopy of Living Cells in Culture, Part A, Volume 29: Fluorescent

Analogs, Labeling Cells, and Basic Microscopy (Methods in Cell Biology, Vol) (Vol 29)  
Semiconductor Material and Device Characterization Introductory Semiconductor Device Physics  
Semiconductor Device Modeling with Spice Introduction to Semiconductor Device Yield Modeling  
(Artech House Materials Science Library) Chromecast: Chromecast Easy Guide: Master Your  
Chromecast Device and Enjoy TV Entertainment With Low-Cost Media Streamer (Chromecast,  
Chromecast User Guide, Chromecast books, Chromecast Device) How to Add A Device To My  
Account: How to Add a Device IEC 60605-6 Ed. 2.0 b:1997, Equipment reliability testing - Part 6:  
Tests for the validity of the constant failure rate or constant failure intensity assumptions Acoustic  
Emission in Friction, Volume 53 (Tribology and Interface Engineering) Positron Emission  
Tomography with Computed Tomography (PET/CT) Emission Computed Tomography: Current  
Trends Towards Solid-State Quantum Repeaters: Ultrafast, Coherent Optical Control and  
Spin-Photon Entanglement in Charged InAs Quantum Dots (Springer Theses) Getting Started with  
the Photon: Making Things with the Affordable, Compact, Hackable WiFi Module Dynamic Light  
Scattering: Applications of Photon Correlation Spectroscopy Time-Correlated Single Photon  
Counting Electron Microprobe Analysis and Scanning Electron Microscopy in Geology Electron  
Microscopy and Analysis, Third Edition

[Dmca](#)