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Advancements in AI and IoT for Chip Manufacturing and Defect Prevention

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This is essential reading for semiconductor professionals seeking to expand their knowledge on silicon processes, understand the significance of defect prevention, and explore methods for optimizing processes by reducing defects using AI and IoT technologies.

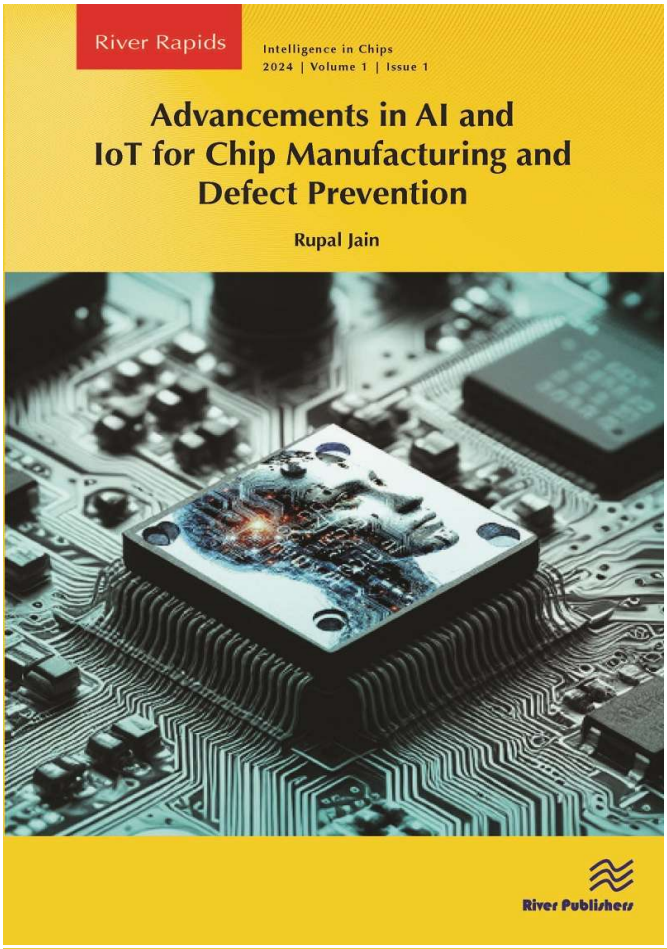
In the dynamic landscape of semiconductor manufacturing, the focus on processes and defect prevention stands paramount. Traditional approaches have yielded valuable insights, yet the emergence of artificial intelligence (AI) and Internet of Things (IoT) technologies heralds a new era in defect prevention strategies. Engineers specializing in AI and machine learning, interdisciplinary researchers, and early graduates aspiring to enter the semiconductor industry will also find this book invaluable.

Meticulously crafted, this book provides concise, yet insightful content tailored to today's fast-paced readers. It emphasizes semiconductors, manufacturing processes, and defect prevention, offering a comprehensive understanding of these critical areas. The integration of AI and IoT in chip manufacturing defect prevention represents a groundbreaking advancement.

Targeting semiconductor engineers, researchers, technology professionals, and students, this book serves as a valuable resource for understanding the interplay between semiconductors, manufacturing processes, defects, and the transformative potential of AI and IoT integration. Practical tools for failure analysis and parameter control are provided, along with hypothetical use cases and theoretical applications that inspire innovation. Through interdisciplinary insights, this book charts a course toward a future where semiconductor manufacturing defects are minimized, productivity is maximized, and innovation thrives at the intersection of technology and industry.

TABLE OF CONTENTS

1 Introduction
2 Exploring Emerging Trends in Semiconductor Manufacturing
3 Overview of Semiconductor Manufacturing
4 Inline Parameters In Semiconductor Manufacturing
5 Electrical Testing in Wafer, Die
6 Introduction to Process Optimization in Semiconductor Manufacturing Processes
7 Overview of AI and Applications in Semiconductor Manufacturing
8 Overview of IoT Technologies and Applications
9 Fundamentals of Semiconductor Defects



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