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Presentation Title:

Partnering with Semiconductor Innovation at every step

Presenter: **Dr. Letian Li**
Sr. Product Specialist Semiconductors EMEA
Materials & Structural Analysis
Thermo Fisher Scientific

Abstract:

In the past decade, semiconductor technologies have significantly evolved, transforming the way we work and live. With these advancements, there is an increasing demand for rigorous failure analysis and quality control across multiple dimensions. This presentation will provide an overview of advanced failure analysis techniques in semiconductor technology, emphasizing the integration of electrical and physical failure analysis workflows. It will highlight the importance of automation, connectivity, and ease-of-use to enhance efficiency. The talk will delve into various cutting-edge tools and methodologies, such as lock-in thermography techniques for non-destructive fault isolation and atomic resolution element mapping with Transmission Electron Microscopy (TEM). Additionally, it will cover the necessity of precise localization and consistent sample preparation for effective failure analysis across different device types. Examples will be provided to illustrate these concepts, showcasing how these advanced techniques contribute to the reliability and performance of semiconductor devices.