

Particle Cleaning Technologies to Meet Advanced  
Semiconductor Device Process Requirements

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Dealing with nanometer-sized particulate contamination is still one of the major challenges during the manufacturing of yielding semiconductor devices. This is especially true for the increasing number of critical processing steps, where residues of particulate matter need to be removed selectively to mechanically damage sensitive device patterns.

This talk will provide an extensive overview of reasonably possible techniques to tackle the above mentioned challenge and describe the fundamental mechanisms behind these methods as far as these are already known and understood based on a decade of extensive R&D work. The presentation will conclude with the analysis and discussion of particle removal results obtained with some of the most promising technologies and an outlook for the future of this technologically as well as scientifically challenging topic.