

BIOGRAPHY

SPT Tutorial 2026 2nd



최동원
TL
SK hynix

● Biography

Since 2019, he has been with the R&D Process Division at SK hynix, serving successively as Head of Advanced Thin Film Process and Head of DRAM CVD, and is currently leading efforts to identify future key technologies in the field of thin film deposition.

Previously, he worked on the development of a wide range of metal and dielectric thin film deposition and assembly processes at Intel, Applied Materials, and Lam Research.

He holds a Ph.D. in Materials Science and Engineering from the Massachusetts Institute of Technology (MIT).

● Abstract

As memory device architecture shifts toward advanced nodes and complex 3D structures, thin film deposition technology faces significant scaling hurdles.

This lecture explores the principles and applications of key deposition techniques, including PVD, CVD, and ALD, as well as the roles of metal and dielectric films.

Particular emphasis is placed on the strategic deployment of these metal and dielectric processes to mitigate structural scaling bottlenecks within contemporary DRAM and 3D NAND architectures.

메모리 소자 아키텍처가 첨단 공정 노드 및 고집적 3차원 구조로 진화함에 따라 박막 증착 기술은 심각한 기술적 도전에 직면하고 있습니다.

본 강연에서는 PVD, CVD, ALD 를 포함한 주요 박막 증착 기술의 원리와 특성, 그리고 금속 및 유전체 박막의 역할과 적용 사례를 소개합니다.

특히 최신 DRAM 및 3D NAND 소자의 구조적 스케일링 과정에서 발생하는 기술적 난제들을 극복하기 위한 금속 및 유전체 증착 공정의 전략적 접근 방안을 중점적으로 논의합니다.