



Semiconductor Manufacturer's View and Entreaty to Future Dry Etching Technologies **Masayuki Tomoyasu, Sr. VP, Samsung Electronics**

There are continuously many technical challenges in dry etching process for Semiconductor device manufacturing such as High Aspect Ratio Structure Etching, Precise control of depth loading, Highly selective etching, LER/LWR minimization, Etching damage reduction and so forth. Various technologies such as ALE (Atomic Layer Etching) are introduced and those technologies could relax a part of burden of such challenges.

Furthermore, mechanism analysis of ALE will also help understanding conventional etching processes. That will enlighten or emphasis necessity of even deeper understanding of plasma physics/chemistry and demand more precise design and control of plasma etching equipment as well. Several expectations from industry to academy to address future demands will be discussed.