Impact of Zirconia addition for ALD Hafina in HKMG Device Fabricated GF vs. GL

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Abstract

Hf-based dielectrics suffer from mobility degradation, charge trapping and poor reliability [1]. Doped high-k with rare-earth element via dielectric cappings (LaO, DyO, etc.) has been demonstrated as a practical solution to achieve low VT nMOSFETs [2-3] for advanced technologies.

Keyword：Hafina (HfO2),Zirconia (ZrO2), Zr concentration ratio (Zr%)