

Ultra-thin ZrO₂ (or Silicate) with high thermal stability for CMOS Gate Applications

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In this study, we report on the electrical and physical properties of ultra-thin Zr Silicate/ZrO₂ films deposited by the Jet-Vapor-Deposition (JVD) process [3]. Both MOS Capacitors and NMOSFETs were successfully fabricated. It is shown that films with equivalent oxide thickness (EOT) of 1 nm possess high thermal stability, low leakage, high reliability, good electron mobility and other good electrical properties