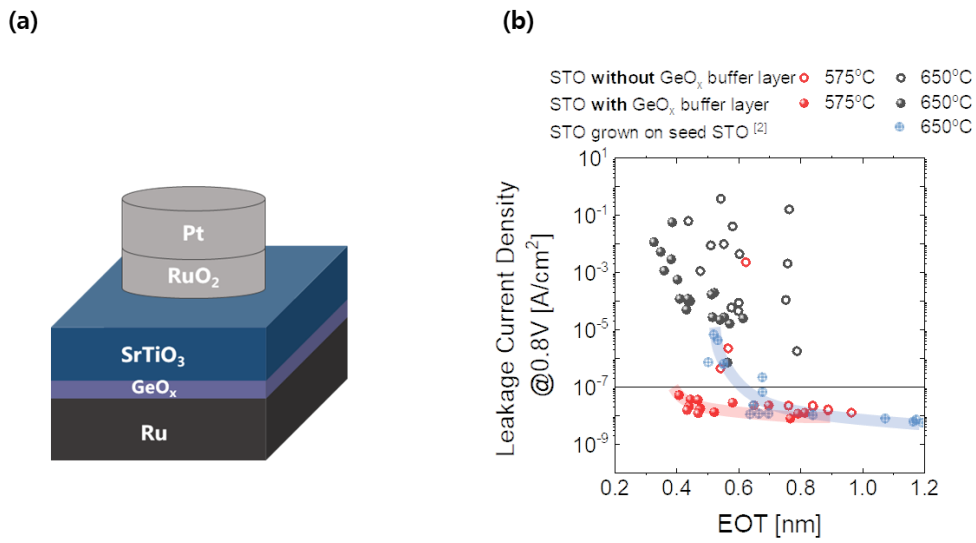


# Supporting Information

## Enhanced Crystallization of SrTiO<sub>3</sub> Thin Film for DRAM Capacitor by Inserting GeO<sub>x</sub> Buffer Layer in Ru/SrTiO<sub>3</sub>/RuO<sub>2</sub> Capacitor

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**Figure 1** (a) Schematic of b-Ge-STO based capacitor (b) J-EOT plot of STO and b-Ge-STO annealed at 575°C and 650°C