Inherent Selective CVD of amorphous HfO_2/TiO_2 Nanolaminate for nanoscale patterning

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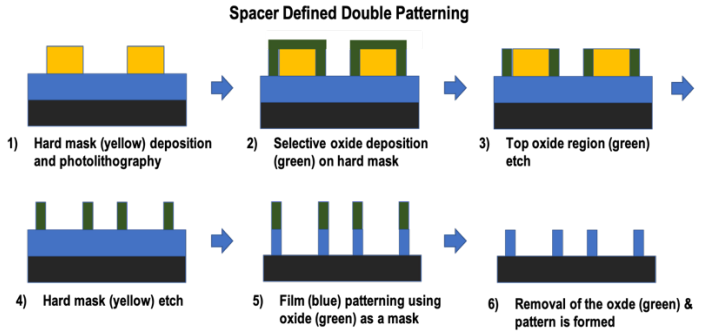

Figure 1. Schematic showing the process for double patterning (SDDP) with selective deposition

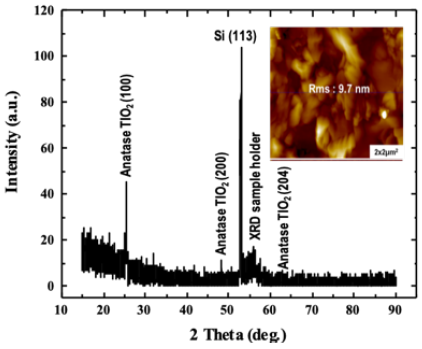

Figure 2. XRD of 40 nm TiO_2 /SiO_2 and AFM image (inset)

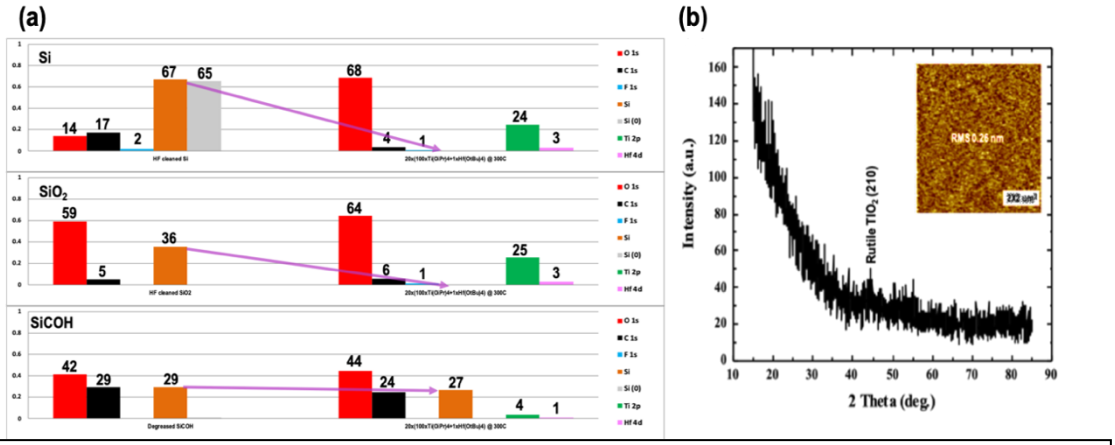

Figure 3. (a) XPS chemical composition of $Si/SiO_2/SiCOH$ before & after HfO_2/TiO_2 nanolaminate CVD. (b) XRD and AFM (inset) of HfO_2/TiO_2 nanolaminate on SiO_2

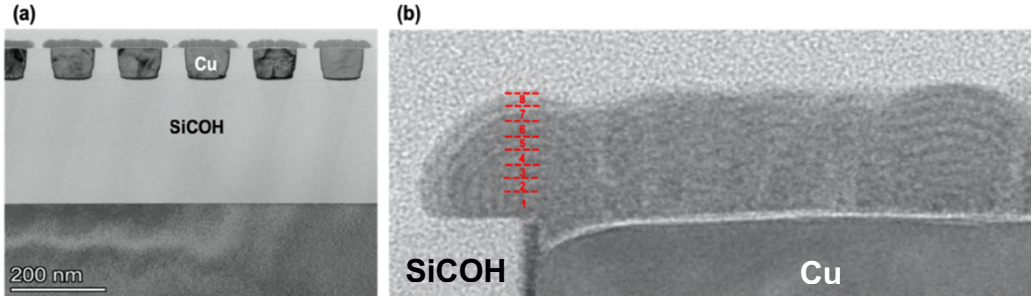

Figure 4. (a) Cross-sectional TEM image of HfO_2/TiO_2 nanolaminate film selectively deposited on Cu/SiCOH patterned sample. (b) Zoomed-in TEM image showing nanolaminate structures of HfO_2/TiO_2 nanolaminate film