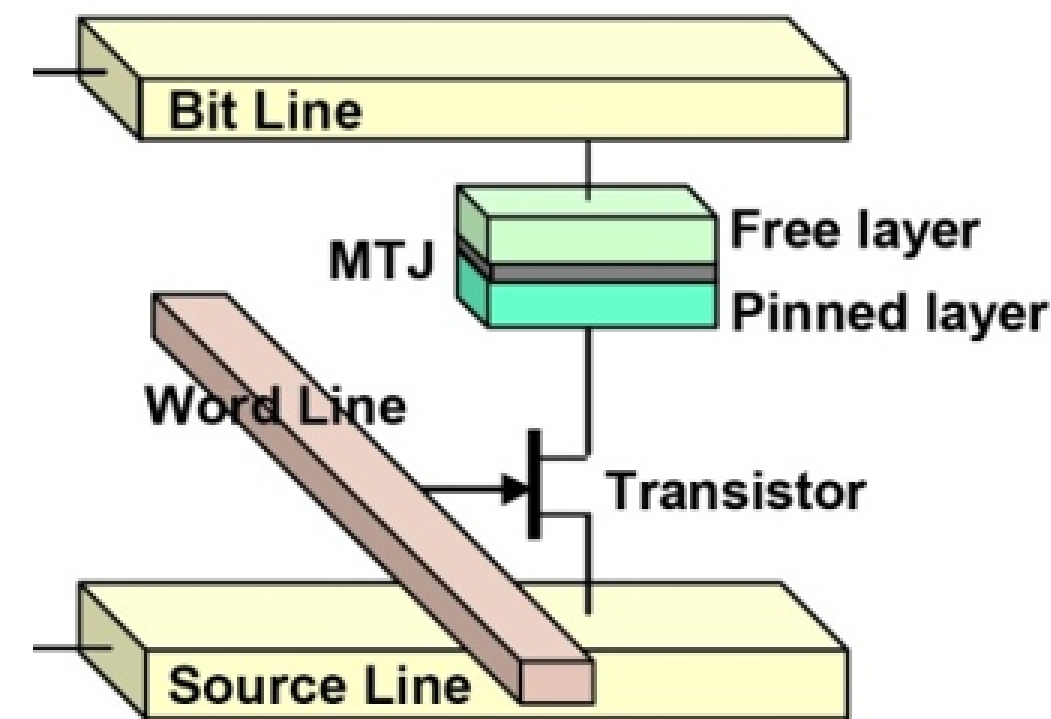
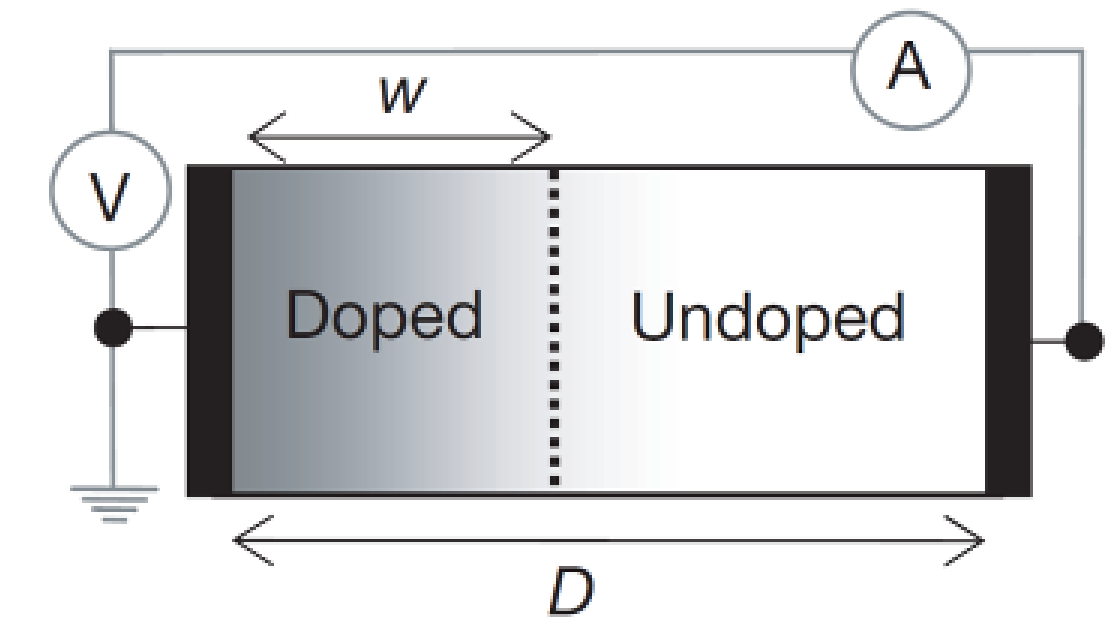




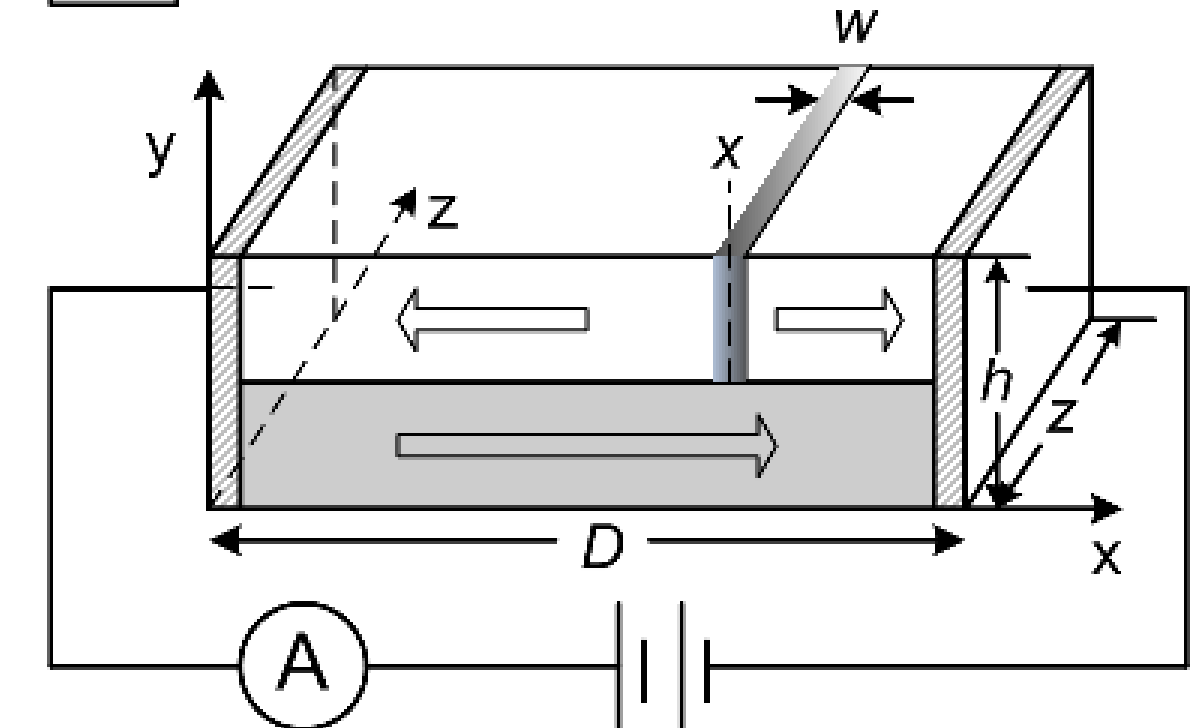
Phase-change RAM (**PCRAM**)



Magnetic RAM (**MRAM**)

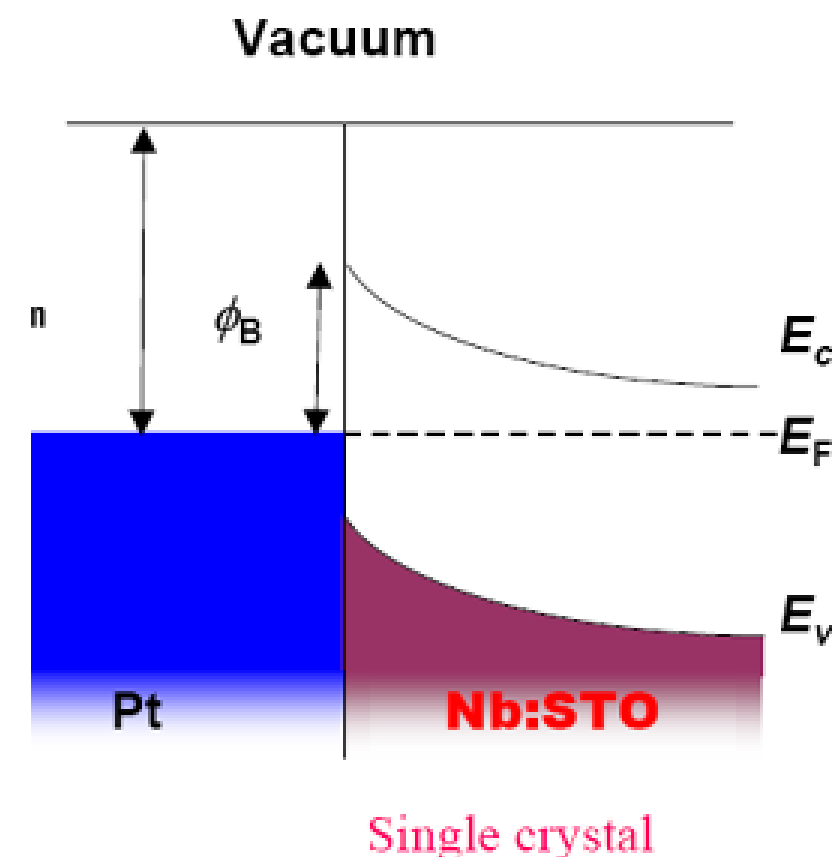
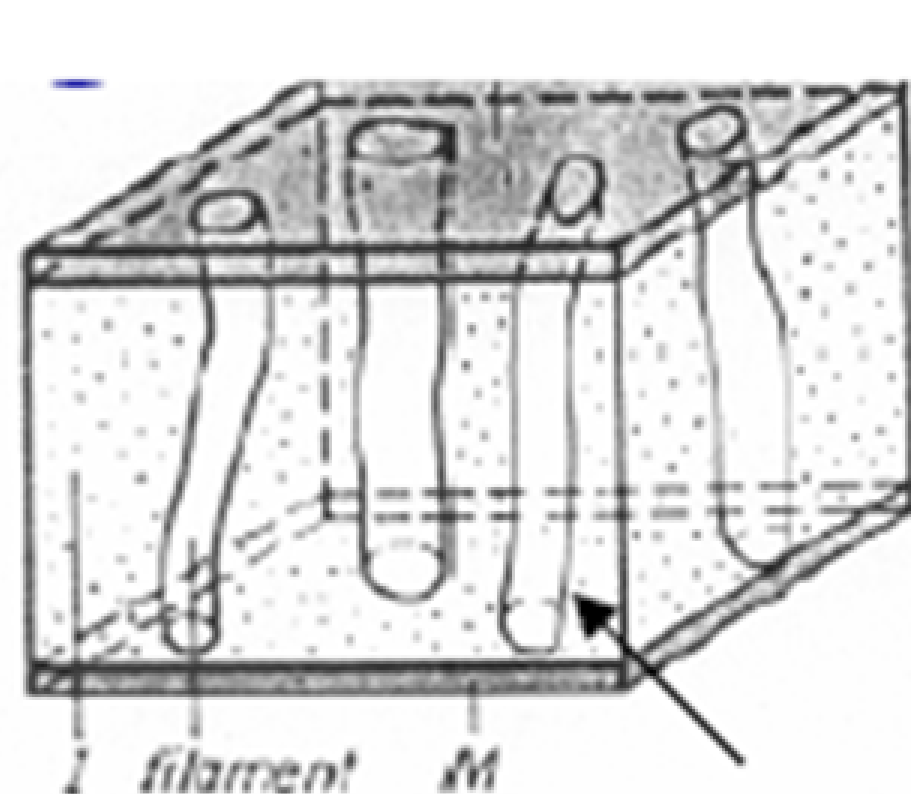


 Domain wall motion in free layer
 Pinned reference layer

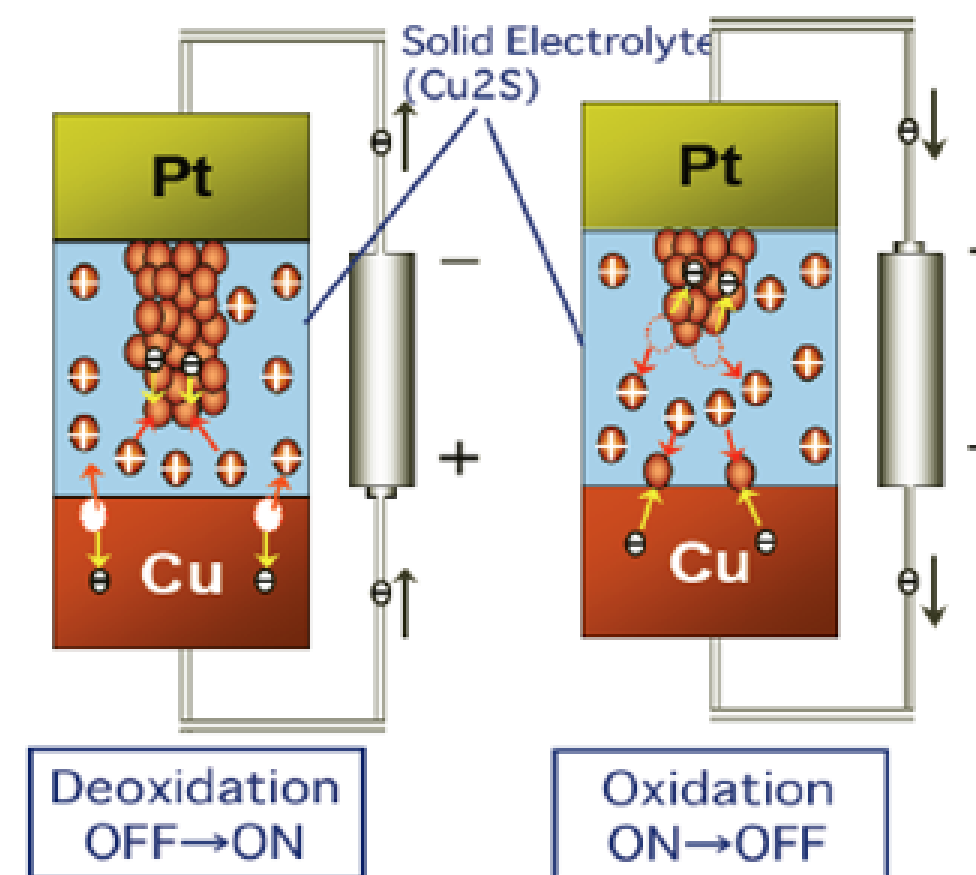


Memristor

Top: thin-film device
 Bottom: Spintronic material



Resistive RAM (**RRAM**)



Deoxidation
OFF → ON

Oxidation
ON → OFF

From left to right: Filament-based, Interface-based and PMC

Emerging Non-volatile Memory (NVM) Technologies