

- **Emerging Logic Materials/Devices (< 15 yr.). Evolutionary.**
  - To achieve moderate reduction in  $V_{DD}$  and power consumption.
  - Innovative application of new materials in FinFET/Nanowire.
  - Strain engineering and  $R_{SD}$  reduction to achieve sub 0.8 V  $V_{DD}$ .
  - Alternative channels (III-V, GeSn, CNT...) to achieve sub 0.5 V  $V_{DD}$ .
  
- **Emerging Logic Materials/Devices (> 15 yr.). Revolutionary.**
  - Target aggressive reduction in power consumption, e.g. sub 0.25 V  $V_{DD}$ .
  - Require novel materials and device designs.
  - I-MOS: Poor reliability. Difficult to resolve.
  - T-FET: Low  $I_{on}$ . Can possibly be enhanced with innovative designs.  
New materials, combinations of materials very important.
  - Energy Filtered FET: Could achieve high  $I_{on}$  and steep S.  
New materials, combinations of materials very important.
  - NEMS Switch: Poor speed, scalability, reliability.