# Mercury C-V(MCV)Measurement Systems
汞CV测试系统

The MCV automatic mapping system provide a mercury C-V measurement for non-patterned wafers used in epitaxial and front-end semiconductor processing.汞CV测试系统，用于对外延或前道工艺中的non-patterned晶片做汞C-V测试；
MCV-530L can measure wafers up to maximum 200mm size; MCV-530L可测最大200mm的样品。

Capability:

- Epi layer characterization
  - Dopant Profile-N(x)
  - Resistivity Profile-ρ(x)
- Gate metrology
  - Oxide thickness-EOT
  - Flatland, threshold voltage-V_{FB},V_T
  - Effective oxide charge-Q_{EFF}
    - Dielectric constant-k
    - Interface state density-Dit

- IV measurements of low-k dielectrics
  - Stepped voltage, stepped current,
  - Constant current modes
  - Leakage current-I_L
  - V_{BD} for HMET
  - Field-to-breakdown-F_{BD}
  - K_{SB}, t_{sb}, Q_{BD}, V_{max}
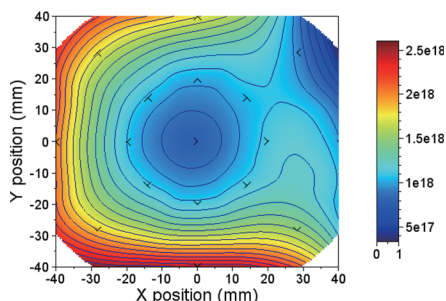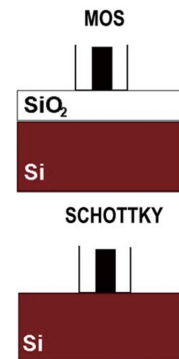
Average carrier density contour map and measurement results

Depth Profile of Carrier Concentration on SiC by MCV
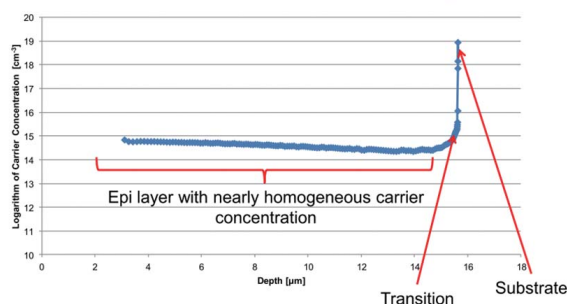
Easy, automatic measurement of carrier density profile in multiple points per wafer.

Non Contact CV Metrology System CV-1500
非接触CV测试系统

CV-1500，Manual Sample loading Laboratory platform with Advanced Measurement Interface and Dielectrics ，Non contact C-V/I-V based on Semilab SDI patented Corona-Kelvin Methods.
CV-1500，用于测试界面和介电层的科研平台，基于SDI专利Corona-Kelvin技术，可以进行非接触C-V/I-V测试。

Capability:

- Semiconductor Surface Barrier- V_{sb} 表面势垒
- Oxide Total Charge -Q_{tot} 氧化物总电荷
- Interface Trapped Charge –Q_{it} 界面电荷
- Interface Trap Density –D_{it} 界面态密度
- D_{it} Spectrum: D_{it} vs. V_{sb}
- Dielectric Capacitance -C_D and thickness –CET 介电层电容和电学总厚度
- Dielectric Leakage 介电层漏电