



Applied MDLx™ Ginestra™ Simulation Software Capabilities – V3.1


GUI

- Uscope and visualization (1D, 2D, 3D)
- Optimizer and DOE
- Device templates (1D, 2D, 3D)
- Cylindrical coordinates 

Physics Solver 1-2-3D

- DC, transient, pulsed, AC
- Charge transport
 - Direct/FN tunneling
 - Defect-assisted (multi-phonon model)
 - Drift-diffusion (CB, VB, defect sub-bands)
 - Thermionic emission
- Defect models (multi-state, metastable, precursors)
- Quantization effects
- Power dissipation and temperature
- Atomic bond breakage, atomic species diffusion
- Ferroelectric PGL 

Tests

- IV (DC, pulsed)
- CV and GV
- Transient CV (hysteresis) 
- Noise

Advanced Characterization

- Parameter extraction
- Defect spectroscopy

Reliability Modules

- CVS, RVS
- BD, TDDB
- BTI

Materials Library

Memory modules can be added.

