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One of the basic EDA tools for process development as the Process Simulator. The tool is for Physics or engineers how develop the process and need to simulate

Victory -3D Process Simulator

Victory Process is a general purpose layout driven 1D, 2D and 3D process and stress simulator including etching, deposition, implantation, diffusion, oxidation and stress simulation capabilities.

Fast 3D structure prototyping capability enables the in-depth physical analysis of specific processing issues

- **Supports double side wafer processing simulation**
- **Comprehensive simulation support for compound materials, including variable compositions**
- **Comprehensive set of diffusion models: Fermi, twodim, single-pair, and five-stream**
- **Comprehensive full flow stress analysis , including stress induced by lattice mismatch, thermal mismatch, deposition and physical oxidation**
- **Extremely accurate and fast Monte Carlo implant simulation**
- **Efficient multi-threading of time critical operations of implantation, diffusion, oxidation, and physical etching and deposition**
- **Multi-particle flux models for physical deposition and etching with substrate material redeposition**
- **Open architecture allows easy introduction and modification of customer specific physical models for etching, deposition and annealing**
- **Seamless link to 3D device simulators including structure mirroring, adaptive doping refinement and electrode specification**
- **Parametrized layout specification as part of the simulation flow**
- **Convenient mesh specification based on layout features as well as manual mesh adaptation within the simulation flow**
- **Easy to learn, powerful debug mode and user friendly SUPREM-like syntax**

(Athena compatibility)

- **Convenient calibration platform and fast process testing with 2D mode (no need to run 3D for calibration)**
- **Automatic switching from 1D, 2D and 3D mode as well as structure mirroring during process simulation to optimize simulation time**

Victory Process has two modes of operation:

- The **Advanced structure editor** mode, also called cell mode, is for fast proto-typing of 3D structures, such as image sensors, SRAM cells or FinFETs, where structure output meshing algorithms are optimized for loading into 3D device simulators for subsequent electrical characterization.
- **Process simulator mode**, is a full feature, level set based 1D, 2D and 3D process and stress simulator, more suited to process based analysis, such as complex ion beam milling experiments and stress dependent oxidation analysis etc.

This brochure first shows examples and features that are common to both modes of operation, such as implantation, diffusion, epitaxy and stress analysis and then describes features that are exclusive only to the advanced structure editor mode or to the advanced process simulator mode.

Contact us for more information

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