凝聚态物理-北京大学论坛

Multiscale Modeling of Nanoscale Si/SiGe Device Fabrication

Prof. Scott Dunham

Abstract: Density function theory calculations provide the foundation for hierarchical modeling of the processes controlling fabrication of nanoscale devices based on strained Si/SiGe. The roles of atomistic methods in nanotechnology modeling are described and examples of their application given. The resulting physical models provide both deeper insight into the processes controlling device fabrication, as well as tools for technology development and optimization

About speaker: Scott Dunham is Professor of Electrical Engineering, Adjunct Professor of Physics, and Adjunct Professor of Materials Science and Engineering at the University of Washington in Seattle. Prof. Dunham received his B.S. from Cornell University (1979), and his Master (1980) and Ph.D. (1985) from Stanford University, all in Electrical Engineering. Prof. Dunham's research is primarily focused on the understanding and modeling of micro- and nano-fabrication processes and resulting impact on the behavior of electronic and photovoltaic devices. This work involves a hierarchy of modeling approaches including ab-initio, molecular dynamics, kinetic lattice Monte Carlo and continuum reaction-diffusion equations.

时间：7月9日（星期二）下午15:00—16:30

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