SemiGuide: Insights into Si, SiC, and GaN Properties and Devices

Radomir Lenhard

SemiGuide is a comprehensive, online simulation and analytical tool designed to enrich semiconductor education, research, and manufacturing. It consolidates key concepts, enabling users to explore the properties of Si, SiC, and GaN while gaining expertise in fundamental physical properties such as energy bandgaps, mobility, and resistivity.

With features like real-time parameter adjustment and interactive exploration of device characteristics, SemiGuide facilitates active learning by visualizing outcomes for essential expressions, including built-in voltage, breakdown voltage, and on-resistance.

Tailored for students, educators, engineers, and researchers, SemiGuide is a versatile platform that bridges theoretical understanding with practical applications, empowering users to grasp semiconductor fundamentals with ease.