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Autore	Morkoc Hadis
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2.3 Effect of Strain on the Band Structure of GaN; 2.4 k-p Theory and the Quasi-Cubic Model; 2.5 Quasi-Cubic Approximation; 2.6 Temperature Dependence of Wurtzite GaN Bandgap; 2.7 Sphalerite (Zinc blende) GaN; 2.8 AlN; 2.8.1 Wurtzite AlN; 2.8.2 Zinc Blende AlN; 2.9 InN; 2.9.1 Wurtzitic InN; 2.9.2 Zinc Blende InN; 2.10 Band Parameters for Dilute Nitrides; 2.10.1 GaAsN; 2.10.2 InAsN; 2.10.3 InPN; 2.10.4 InSbN; 2.10.5 GaPN; 2.10.6 GaInAsN; 2.10.7 GaInPN; 2.10.8 GaAsSbN; 2.11 Confined States; 2.11.1 Conduction Band; 2.11.2 Valence Band; 2.11.3 Exciton Binding Energy in Quantum Wells
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2.12.7 Thermal Mismatch Induced Strain; References;
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Sommario/riassunto

The three volumes of this handbook treat the fundamentals, technology and nanotechnology of nitride semiconductors with an extraordinary clarity and depth. They present all the necessary basics of semiconductor and device physics and engineering together with an extensive reference section. Volume 1 deals with the properties and growth of GaN. The deposition methods considered are: hydride VPE, organometallic CVD, MBE, and liquid/high pressure growth. Additionally, extended defects and their electrical nature, point defects, and doping are reviewed.
