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Nota di contenuto	Crystal Growth Technology: Semiconductors and Dielectrics; Foreword; Contents; Preface; List of Contributors; Part I: Basic Concepts in Crystal Growth Technology; 1: Thermodynamic Modeling of Crystal-Growth Processes; 1.1 Introduction; 1.2 General Approach of Thermodynamic Modeling; 1.2.1 Basics; 1.2.1.1 State Variables for the Description of Equilibrium Conditions; 1.2.1.2 The ChemSage Software Package; 1.3 Crystal Growth in the System Si-C-O-Ar (Example 1); 1.3.1 Selection of Species; 1.3.2 Test Calculation, Check of Consistency; 1.3.3 Calculation of Gibbs Free Energy for Selected Reactions 1.3.4 Minimization of Gibbs Free Energy of Complex Systems1.3.5 The Thermodynamic-Technological Model of the Edge-Defined Film-Fed Growth of Silicon; 1.4 Crystal Growth of Carbon-Doped GaAs (Example 2); 1.4.1 Components and Species in the System; 1.4.2 Results; 1.4.3 Extended Model; 1.5 Summary and Conclusions; Acknowledgments; References; 2: Modeling of Vapor-Phase Growth of SiC and AlN Bulk Crystals; 2.1 Introduction; 2.2 Model Description; 2.2.1 Quasi-

Thermodynamic Model of AlN and AlGaN HVPE; 2.2.2 Modeling of Gas-Phase Nucleation in SiC CVD and HTCVD; 2.3 Results and Discussions 2.3.1 GaN, AlN, and AlGaN HVPE 2.3.2 SiC HTCVD; 2.4 Conclusions; References; 3: Advanced Technologies of Crystal Growth from Melt Using Vibrational Influence; 3.1 Introduction; 3.2 Axial Vibrational Control in Crystal Growth; 3.3 AVC-Assisted Czochralski Method; 3.4 AVC-Assisted Bridgman Method; 3.5 AVC-Assisted Floating Zone Method; 3.6 Conclusions; Acknowledgments; References; Part II: Semiconductors; 4: Numerical Analysis of Selected Processes in Directional Solidification of Silicon for Photovoltaics; 4.1 Introduction; 4.2 Directional Solidification Method; 4.3 Crystallization Process 4.4 Impurity Incorporation in Crystals 4.5 Summary; Acknowledgment; References; 5: Characterization and Control of Defects in VCz GaAs Crystals Grown without B<sub>2</sub>O<sub>3</sub> Encapsulant; 5.1 Introduction; 5.2 Retrospection; 5.3 Crystal Growth without B<sub>2</sub>O<sub>3</sub> Encapsulant; 5.4 Inclusions, Precipitates and Dislocations; 5.5 Residual Impurities and Special Defect Studies; 5.6 Electrical and Optical Properties in SI GaAs; 5.7 Boron in SC GaAs; 5.8 Outlook on TMF-VCz; 5.9 Conclusions; Acknowledgments; References; 6: The Growth of Semiconductor Crystals (Ge, GaAs) by the Combined Heater Magnet Technology 6.1 Introduction 6.2 Selected Fundamentals; 6.2.1 Convection-Driven Forces; 6.2.2 The Features of Traveling Magnetic Fields; 6.3 TMF Generation in Heater-Magnet Modules; 6.4 The HMM Design; 6.5 Numerical Modeling; 6.6 Dummy Measurements; 6.7 Growth Results under TMF; 6.7.1 LEC of GaAs; 6.7.2 VGF of Ge; 6.8 Conclusions and Outlook; Acknowledgment; References; 7: Manufacturing of Bulk AlN Substrates; 7.1 Introduction; 7.1.1 Substrates for Group III Nitride Devices; 7.1.2 Growth of Bulk Group III Nitride Crystals; 7.1.3 Sublimation Growth of AlN Crystals; 7.2 Modeling; 7.3 Experiment 7.3.1 Pregrowth Processing

## Sommario/riassunto

Semiconductors and dielectrics are two essential materials found in cell phones and computers, for example, and both are manufactured by growing crystals. Edited by the organizers of the International Workshop on Crystal Growth Technology, this ready reference is essential reading for materials scientists, chemists, physicists, computer hardware manufacturers, engineers, and those working in the chemical and semiconductor industries. They have assembled an international team of experts who present the current challenges, latest methods and new applications for producing these materials nece

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Nota di contenuto	Frontmatter -- Inhalt -- 1. Einleitung -- 2. Wissenswertes über Korea -- 3. Was ist Kultur? -- 4. Konfuzius und Konfuzianismus in Korea -- 5. Das Koreanische Wertesystem -- 6. Kommunikation -- 7. Koreanische Werte im beruflichen Alltag -- 8. Wissenswertes -- Wichtige und hilfreiche Webseiten -- Literatur -- Index
Sommario/riassunto	Korea ist ein faszinierendes Land: Während im Norden ein totalitäres Regime herrscht, hat sich der Süden in einem halben Jahrhundert zu einer prosperierenden und wichtigen Volkswirtschaft entwickelt. Deutschland und Südkorea pflegen seit vielen Jahren intensive Handelsbeziehungen. Aus diesem Grund zieht es auch Deutsche beruflich oft auf die Halbinsel zwischen dem Gelben und dem Japanischen Meer. Dieser Knigge verrät Geschäftsreisenden und Expatriates, was Sie über dieses Land wissen sollten. Es gibt einen kompakten und dennoch fundierten Einblick in die Geschichte, Wirtschaft und Religion Südkoreas. Auch die Wurzeln des gesellschaftlichen Umgangs und die Wertvorstellungen der Südkoreaner werden gekonnt offenbart. Die koreanische Autorin schärft damit das Bewusstsein für die kulturellen Besonderheiten dieses Landes und gibt hilfreiche Tipps, die die konfliktfreie Zusammenarbeit im Arbeitsalltag erleichtern.

