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Nota di contenuto	Contents; Series Preface; Preface; Acknowledgements; List of Contributors; Abbreviations; 1 Silicon; 1.1 Introduction; 1.2 Crystal-growth method and technology; 1.2.1 High-purity polycrystalline silicon; 1.2.2 CZ-Si growth apparatus and related furnace parts; 1.2.3 CZ-Si crystal growth; 1.2.4 FZ (float-zone) Si crystal growth; 1.2.5 Wafer processing; 1.3 Melt process; 1.3.1 Analysis of heat- and mass-transfer processes; 1.3.2 Oxygen transportation process and mechanism; 1.3.3 Control of oxygen concentration by application of cusp magnetic field; 1.4 Defect and wafer quality 1.4.1 Oxygen precipitation and gettering1.4.2 Grown-in defects; 1.5 Concluding remarks; References; 2 Growth of Gallium Arsenide; 2.1 Introduction; 2.2 Doping considerations; 2.3 Growth techniques; 2.3.1 Horizontal Bridgman and horizontal gradient freeze techniques; 2.3.2 Liquid encapsulated Czochralski (LEC) technique; 2.3.3 Vertical gradient freeze (VGF) technique; 2.4 Crystalline defects in GaAs; 2.4.1 Defects in melt-grown, semi-insulating GaAs; 2.5 Impurity and defect analysis of GaAs (chemical); 2.6 Impurity and defect analysis of GaAs (electrical)

2.6.1 Introduction to the electrical analysis of defects in GaAs; 2.7 Impurity and defect analysis of GaAs (optical); 2.7.1 Optical analysis of defects in GaAs; 2.8 Conclusions; Acknowledgments; References; 3 Computer Modelling of Bulk Crystal Growth; 3.1 Introduction; 3.2 Present state of bulk crystal growth modelling; 3.3 Bulk crystal growth processes; 3.4 Transport modelling in bulk crystal growth; 3.4.1 Governing equations; 3.4.2 Boundary conditions; 3.4.3 Continuum interface representation; 3.4.4 Radiation heat-transfer modelling; 3.4.5 Noninertial reference frames; 3.4.6 Magnetic fields; 3.4.7 Turbulence; 3.5 Computer-aided analysis; 3.5.1 Discretization; 3.5.2 Numerical interface representation; 3.5.3 Deforming grids and ALE methods; 3.5.4 A simple fixed-grid method; 3.5.5 Quasi-steady-state models; 3.6 Modelling examples; 3.6.1 Float-zone refinement of silicon sheets; 3.6.2 Bridgman growth of CZT: axisymmetric analysis; 3.6.3 Bridgman growth of CZT: three-dimensional analysis; 3.6.4 Morphological stability in solution growth of KTP; 3.7 Summary and outlook; Acknowledgments; References; 4 Indium Phosphide Crystal Growth; 4.1 Introduction; 4.2 Material properties; 4.3 Hazards; 4.4 Crystal structure; 4.5 Synthesis; 4.6 Single-crystal growth; 4.7 Defects; 4.7.1 Twins; 4.7.2 Dislocations; 4.8 Dislocation reduction; 4.9 VGF growth; 4.10 Crystal-growth modelling; 4.11 Dopants; 4.11.1 N-type InP; 4.11.2 P-type InP; 4.11.3 Semi-insulating InP; 4.12 Conclusion; Acknowledgements; References; 5 Bulk Growth of InSb and Related Ternary Alloys; 5.1 Introduction-a little history; 5.2 Why the interest?; 5.3 Key properties; 5.3.1 Crystallography; 5.3.2 Growth-critical material parameters; 5.3.3 Common growth conditions; 5.3.4 Impurities and dopants; 5.4 Czochralski growth; 5.4.1 Challenges

Sommario/riassunto

A valuable, timely book for the crystal growth community, edited by one of the most respected members in the field. Contents cover all the important materials from silicon through the III-V and II-IV compounds to oxides, nitrides, fluorides, carbides and diamonds. International group of contributors from academia and industry provide a balanced treatment. Includes global interest with particular relevance to: USA, Canada, UK, France, Germany, Netherlands, Belgium, Italy, Spain, Switzerland, Japan, Korea, Taiwan, China, Australia and South Africa.

2. Record Nr.	UNINA9910808131203321
Autore	Abdelghany Ahmed A
Titolo	The Art of Pterygium Surgery : Mastering Techniques and Optimizing Results / / by: Gulani, Arun C.
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Nota di contenuto	<p>Pterygium : history and overview / Arun C. Gulani and Parth G. Patel -- Classic signs, symptoms, classification, and differential diagnosis of pterygium / Sotiria Palioura and Eduardo Alfonso -- Current concepts in treatments of pterygium : an evidence-based review / Nathan Rock, Ming Wang, Nancy Argano, and Ilan Cohen -- Evolution of the medical and surgical treatments for pterygium / Ahmed A. Abdelghany and Jorge L. Alio -- Ocular surface and tear film management in pterygium surgery / Alanna S. Nattis, Henry D. Perry, and Eric D. Donnenfeld -- Amniotic membrane and umbilical cord as platform technology to promote regenerative healing / Anny M.S. Cheng and Scheffer C.G. Tseng -- Conjunctival autograft for primary and recurrent pterygium : past, present, and future / Minas T. Coroneo -- Amniotic graft surgery in ocular surface pathologies besides pterygium / Arun C. Gulani -- Mitomycin C, glues, sealants, and ancillaries in pterygium surgery / Arun C. Gulani, and Sonal Tuli -- Nonsurgical management of irregular astigmatism associated with pterygium / Melissa Barnett, Thomas P. Arnold, Nathan Schramm, Andrew Morgenstein, Christine Sindt, and Tracy Schroeder Swartz -- Stem cell applications in pterygium / Abhinav Loomba and Virender Singh Sangwan -- Surgical approach to isolated and associated presentations of pterygium / Alan N. Carlson -- Complications of pterygium surgery / Dhivya Ashok Kumar, Soosan Jacob, Ashvin Agarwal, and Amar Agarwal -- Complex pterygium surgery and complication management to cosmetic endpoints / Arun C.</p>

Gulani and Aaishwariya A. Gulani -- Pterygium and pinguecula surgery
: next-day cosmetic outcomes / Arun C. Gulani and Aaishwariya A.
Gulani -- Kerato-refractive and premium cataract surgery with
pterygium / Arun C. Gulani.
