1. Record Nr. UNINA9911019400903321

Titolo	Bulk crystal growth of electronic, optical & optoelectronic materials / / edited by Peter Capper
Pubbl/distr/stampa	Chichester ; ; Hoboken, NJ, : John Wiley & Sons, c2005
ISBN	9786610241699 9781280241697 1280241691 9780470012086 0470012080 9780470012079 0470012072
Descrizione fisica	1 online resource (579 p.)
Collana	Wiley series in materials for electronic and optoelectronic applications
Classificazione	51.12
Altri autori (Persone)	CapperPeter
Disciplina	621.3815/2
Soggetti	Semiconductors - Materials Optoelectronics - Materials Crystal growth
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
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 GaAs2.7 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 Turbulence3.5 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 structure4.5 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 diamondsInternational group of contributors from academia and industry provide a balanced treatmentIncludes global interest with particular relevance to: USA, Canada, UK, France, Germany, Netherlands, Belgium, Italy, Spain, Switzerland, Japan, Korea, Taiwan, China, Australia and South Africa</ul

2. Record Nr. UNINA9910969158603321

Autore	Krebs Harald <1955->
Titolo	Fantasy pieces : metrical dissonance in the music of Robert Schumann / / Harald Krebs
Pubbl/distr/stampa	New York, : Oxford University Press, 1999
ISBN	9780195353815 0195353811
Edizione	[1st ed.]
Descrizione fisica	xiv, 290 p. : music
Disciplina	781.2/26/092
Soggetti	Musical meter and rhythm
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references (p. 275-281), glossary, list of cited works, and index.
Nota di contenuto	Nineteenth- and twentieth-century theories of metrical conflict -- Metrical consonance and dissonance : definitions and taxonomy -- Intermezzo I: Influences on Schumann's metrical style -- Metrical progressions and processes -- Intermezzo II: Metrical revisions -- Interactions of metrical dissonance with pitch structure, form, nd extramusical elements -- Intermezzo III: Performing metrical dissonances -- Carnaval des analyses -- Epilogue: Morning song.
Sommario/riassunto	This book presents a theory of metrical conflict and applies it to the music of Schumann, thereby placing the composer's distinctive metrical style in full focus. It describes the various categories of metrical conflict that characterize Schumann's work, investigates how states of conflict are introduced and then manipulated and resolved in his compositions, and studies the interaction of such metrical conflict with form, pitch structure, and text. Throughout the text, Krebs intersperses his own theoretical assertions with Schumannesque dialogues between Florestan and Eusebius, who comment on the theory at hand while also discussing and illustrating relevant aspects of "their" metrical practices.