DESCRIPTION

In this book top experts treat general thermodynamic aspects of crystal fabrication; numerical simulation of industrial growth processes; commercial production of bulk silicon, compound semiconductors, scintillation and oxide crystals; X-ray characterization; and crystal machining. Also, the role of crystal technology for renewable energy and for saving energy is discussed. It will be useful for scientists and engineers involved in crystal and epilayer fabrication as well as for teachers and graduate students in material science, chemical and metallurgical engineering, and micro- and optoelectronics, including nanotechnology.

ABOUT THE AUTHOR

Professor Hans J. Scheel started the Scheel Consulting company in 2001 after retiring from the Swiss Federal Institute of Technology. Starting out with a chemical background, he has more than 40 years of experience with crystal growth and epitaxy in university as well as industry. For his achievements in bulk crystal growth and epitaxy technologies, he received awards from IBM and from Swiss, British, Korean Crystal Growth Associations, was elected member of the Russian Academy of Engineering Sciences, and received his D.Sc. from Tohoku University, Japan. He is co-author and editor of 6 books, author of more than 100 publications and patents, has organized international workshops on crystal technology and has been visiting professor at Osaka and Tohoku Universities, Japan, as well as Shandong University, China.
Dr. Peter Capper is a Materials Team Leader at SELEX Sensors and Airborne Systems Infrared Ltd (formerly BAE Systems), and has over 30 years of experience in the infrared material Cadmium Mercury Telluride (CMT). He holds the patent for the application of the accelerated crucible rotation technique to CMT growth and is recognised as a world authority on CMT. He has written and edited 6 books on electronic materials and devices. He has served on several International Advisory boards to conferences, acted as co-Chair at an E-MRS Symposium and a SPIE Symposium and has edited several conference proceedings for J. Crystal Growth and J. Materials Science. He is also currently on the editorial board of the Journal of Materials Science: Materials in Electronics.

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