DESCRIPTION

This volume deals with the technologies of crystal fabrication, of crystal machining, and of epilayer production and is the first book on industrial and scientific aspects of crystal and layer production.

The major industrial crystals are treated: Si, GaAs, GaP, InP, CdTe, sapphire, oxide and halide scintillator crystals, crystals for optical, piezoelectric and microwave applications and more.

Contains 29 contributions from leading crystal technologists covering the following topics:

* General aspects of crystal growth technology

* Silicon

* Compound semiconductors

* Oxides and halides

* Crystal machining

* Epitaxy and layer deposition

Scientific and technological problems of production and machining of industrial crystals are discussed by top experts, most of them from the major growth industries and crystal growth centers.
In addition, it will be useful for the users of crystals, for teachers and graduate students in materials sciences, in electronic and other functional materials, chemical and metallurgical engineering, micro-and optoelectronics including nanotechnology, mechanical engineering and precision-machining, microtechnology, and in solid-state sciences.

ABOUT THE AUTHOR

**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.

**Tsuguo Fukuda** is the editor of *Crystal Growth Technology*, published by Wiley.

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