



New dimensions for design and synthesis of high-pressure materials

By Kurakevych, Oleksandr

Condition: New. Publisher/Verlag: Éditions universitaires européennes | Beyond diamonds: Toward new applications for high-pressure materials | Carbon-, boron- and silicon based materials have recently found a renaissance due to the possibility to incredibly diversify their crystal structures and compositions under high pressure. The book describe the last-decade experience of the author in high-pressure synthesis of such materials and is focused on the promising methodological approaches to expand the domains of possible materials for new applications. The book presents the "high pressure" materials from the thermodynamic and alternative points of view, and discuss possible mechanisms of their formation. The formalized description of both "design" and recent advances in high pressure synthesis is given. After that, principal directions of modern high-pressure materials design are described, i.e. (i) advanced superhard materials - boron-rich solids, and (ii) new axis - recently proposed by the author and its collaborators - optoelectronic silicon materials that cover a wide range of possible applications. The book may be interesting to materials scientists of diverse fields, i.e. physicists and chemists working with high pressure, superhard and photovoltaic materials, as well as to carbon, boron, and silicon communities. | Format: Paperback | Language/Sprache: english | 174 gr | 220x150x6 mm...



READ ONLINE
[9.37 MB]

Reviews

A superior quality ebook and also the font used was interesting to read through. This is for all who statte there was not a well worth reading. I discovered this publication from my dad and i encouraged this pdf to learn.

-- Felix Lehner Jr.

It in one of the most popular publication. It is actually writter in easy words instead of confusing. You will like how the author create this book.

-- Art Gislason