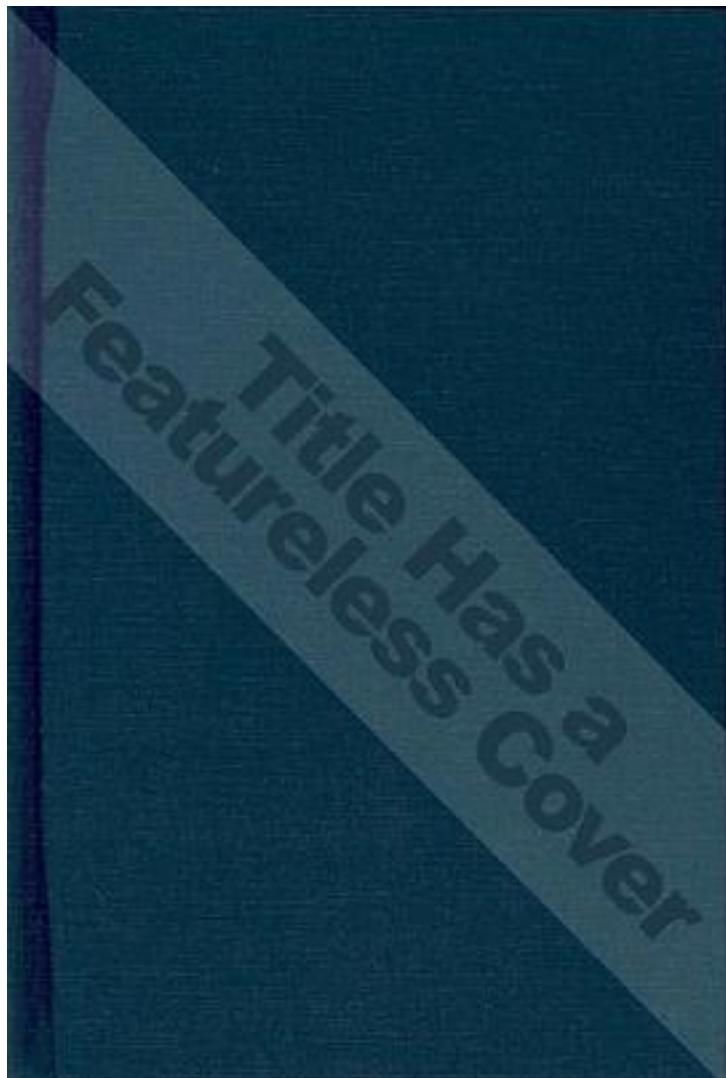


Space Groups for Solid State Scientists



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This comprehensively revised - essentially rewritten - new edition of the 1990 edition (described as 'extremely useful' by Mathematical Reviews and as 'understandable and comprehensive' by Scitech) guides readers through the dense array of mathematical information in the International Tables Volume A. Thus most scientists seeking to understand a crystal structure publication can do this from this book without necessarily having to consult the International Tables itself. This remains the only book aimed at non-crystallographers that is devoted to teaching them about crystallographic space groups. Researchers within the solid state frequently need to understand publications that use space group information and are invariably disappointed when they turn, necessarily, to the mammoth eight volume set "International Tables of Crystallography" - so complete and at the same time so closely written that those not trained explicitly in crystallography cannot understand the explanations given. Huge sections of the Tables are given over to extremely careful and elaborate explanations and definitions that may be of interest to those crystallographers specialising in symmetry, but tend to obscure the meanings for those who are not so inclined. Five editions have now published since the first compilation in 1983, incorporating a diverse panorama of new content, and even introducing new symmetry elements that had not been considered earlier. In addition, the International Union has recently brought out whole new tranches of content: Volume A1 (on subgroups) and Volume E (on frieze, rod and layer groups - important for the study of 1 and 2 dimensional systems, such as domain walls). Reflecting the bewildering array of recent changes to the International Tables, this new edition brings the standard of science well up-to-date, reorganizes the logical order of chapters, improves diagrams and presents clearer explanations to aid understanding. It clarifies, condenses and simplifies the meaning of the deeply written, complete Tables of Crystallography into manageable chunks. It provides a detailed, multi-factor, interdisciplinary explanation of how to use the International Tables for a number of possible, hitherto unexplored uses. It presents essential knowledge to those needing the necessary but missing pedagogical support and detailed advice - useful for instance in symmetry of domain walls in solids.

作者介绍:

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标签

群论

晶体学, 材料科学

凝聚态物理

自然科学

空间群

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评论

非常好的晶体学入门教材，适合初学者。必须有一定的线性代数作为基础。

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书评

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