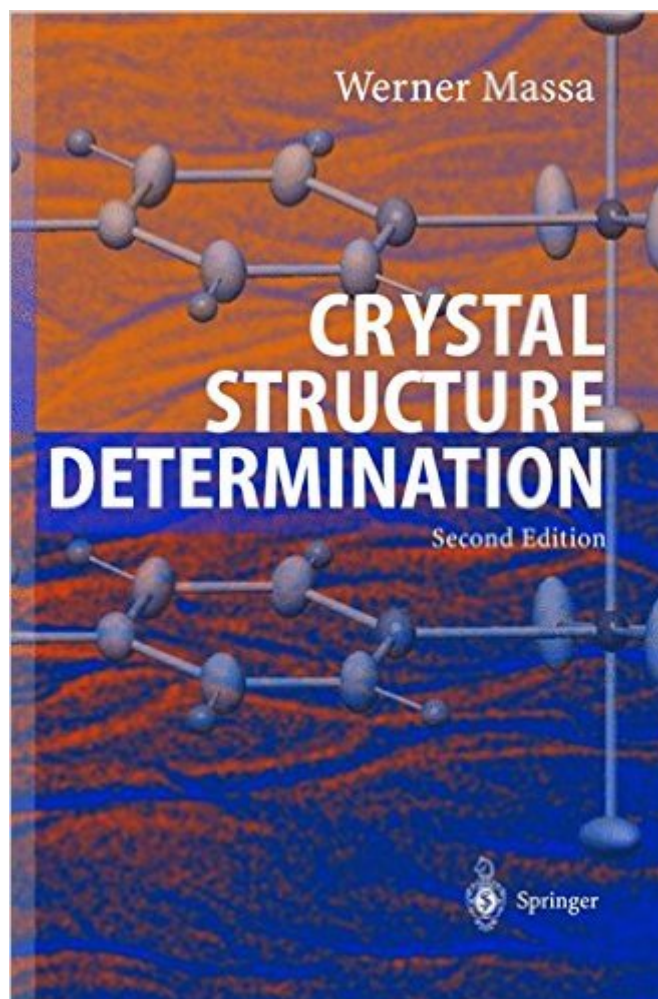


The book was found

Crystal Structure Determination



Synopsis

This textbook gives a concise introduction to modern crystal structure determination, emphasising both its theoretical background and the way it is actually carried out. The theoretical sections are supported by many illustrations, and lay emphasis on a good understanding rather than rigorous mathematics. The most important data collection techniques, and the methods of data reduction, structure solution and refinement are discussed from a practical point of view. Many tips and insights help readers to recognise and avoid possible errors and traps, and to judge the quality of results. The second edition has been considerably updated, especially the chapter on experimental methods, which is now mainly concerned with modern data collection using area-detectors.

Book Information

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Customer Reviews

This is the ideal book for the beginner and in my opinion a must-read. In the excellent translation by Robert O. Gould, "Crystal Structure Determination" by Werner Massa explains all the basics from symmetry in real and reciprocal space, over generation of X-rays and other practical aspects, all the way to structure solution and refinement. Massa keeps the book simple and understandable and uses mathematical formulae carefully and only when helpful or necessary. I learned the basics of crystallography from the German original of "the Massa". Now that I am a teacher of crystallography myself, this is the book I recommend to my students.

I am currently using the library's copy of this text and am buying it since it has been such a good resource. The chapters are in evening-sized portions, it's highly readable, and while there are

pieces I would organize differently, sections are presented in an order that flows and makes good sense. Some information about the instrumentation may be out of date (not the theory behind it, of course, but details of its execution) and this is worth keeping in mind. I tend to read this text as my first dive into any topic and supplement with multiple other resources. My class also uses Stout and Jensen for assigned readings and I also go online and pull up all sorts of diagrams, tables, PDFs and powerpoints that give me a better understanding of, for example, the Ewald construction than Massa's very short description gave me. In other words, Massa's text is a really excellent way to get comfortable with a topic, but it must be supplemented. I do find it easier to read the same chapters of other texts after getting an introduction from Massa, and for me, at least, that acclimation process saves a lot of time.

I found this book good for reference or to review concepts in crystallography. You need at least to have previous knowledge in the basic concepts to understand it. The book goes right to the point, explanations are short but clear. It is an excellent summary of the theoretical details to remember when solving an structure.

I like this textbook, it is nice introduction to the field (background, theory and practice), although it could be more up to date. There is a good and comprehensive discussion of twinning.

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