



# Crystal Structure Analysis: Principles and Practice (International Union of Crystallography Texts on Crystallography)

By Alexander J Blake, Jacqueline M Cole, John S O Evans, Peter Main, Simon Parsons, David J Watkin

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This text focuses on the practical aspects of crystal structure analysis, and provides the necessary conceptual framework for understanding and applying the technique. By choosing an approach that does not put too much emphasis on the mathematics involved, the book gives practical advice on topics such as growing crystals, solving and refining structures, and understanding and using the results. The technique described is a core experimental method in modern structural chemistry, and plays an ever more important role in the careers of graduate students, postdoctoral and academic staff in chemistry, and final-year undergraduates.

Much of the material of the first edition has been significantly updated and expanded, and some new topics have been added. The approach to several of the topics has changed, reflecting the book's new authorship, and recent developments in the subject.

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# **Crystal Structure Analysis: Principles and Practice (International Union of Crystallography Texts on Crystallography)**

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## **Editorial Review**

### **Review**

Review from previous edition: "Graduate students, lecturers, and professionals in crystallography, solid state chemistry, condensed matter physics, structural biology, and materials science, will find the thrust of this book exciting ... Professionals in the field would be morally and professionally remiss if they failed to read, consult and discuss this volume with students and colleagues. Amongst several features contributing towards making the book an important acquisition are: comprehensive and up-to-date character; emphasis on practical aspects of the topic; inclusion of many worked examples and problems; and an abundance of illustrative material throughout."

--Current Engineering Practice

"... perhaps the most comprehensive and easy to use introduction to fundamental theory and techniques of structure analysis by X-ray diffraction, to appear from the world's scientific and technical publishing to date. It will be an invaluable reference to X-ray crystallographers, practitioners of X-ray analysis and all those involved in materials characterization."

--Current Engineering Practice

"This textbook should definitely be considered for use in introductory courses in X-ray structure determination as it provides a good framework for course organization. The concise treatment of the material (all of small-molecule X-ray crystallography in 265 pages) will work well when supplemented with lectures and additional class discussions."

--Acta Crystallographica

"The book is very well written, has an excellent organization of material and is filled with many illustrative examples of the subject matter."

--Acta Crystallographica

### **About the Author**

#### **William Clegg:**

Formerly Wissenschaftlicher Assistant at the University of Göttingen in Germany, two Joint Appointments at Daresbury Laboratory, Founding Joint Editor of *Acta Crystallographica Section E*, BCA Council Member, RSC Corday-Morgan Medal 1985.

#### **Alexander J Blake:**

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**John S O Evans:**

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**Peter Main:**

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**Simon Parsons:**

Formerly Research Fellow at the University of Oxford and staff crystallographer at the University of Edinburgh, previous Chairman of the BCA Chemical Crystallography Group.

**David J Watkin:**

Coordinator for the program system CRYSTALS, founder of the BCA Intensive Schools, former chairman of the IUCr Computing Commission.

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**Mellisa White:**

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