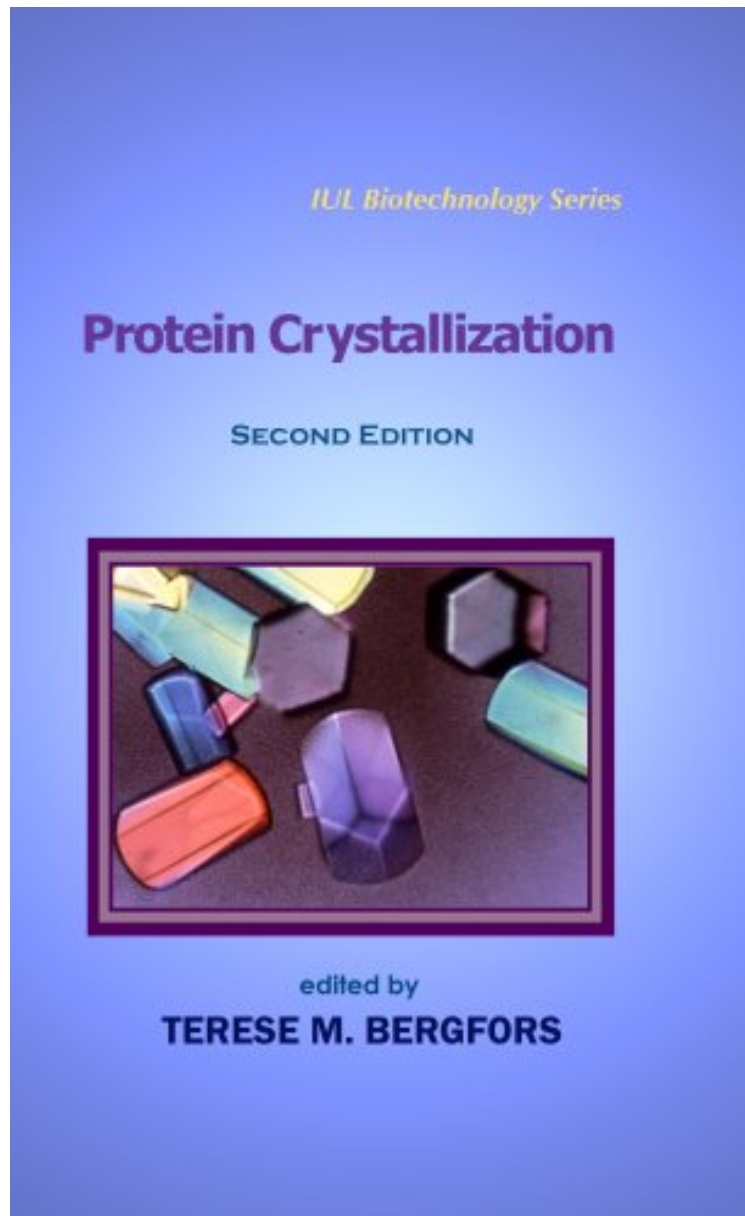


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Completely revised and updated, Protein Crystallization, 2nd Edition is a greatly expanded follow-up to the best-selling 1st edition. Completely new chapters on high-throughput methods, mass spectrometry, microcalorimetry, counterdiffusion, heavy-atom derivatization, selenomethionine-labeling, rational strategies for crystallization, and protein modification to improve crystallization. Updated chapters on formulation of the protein before crystallization, characterization of the protein by dynamic light scattering, classic methods and the phase diagram, seeding, and cryoprotection of the crystals. Laboratory exercises are included which can be used for teaching purposes in protein crystallization or crystallography courses. The exercises have been tested in the Practical Protein Crystallization courses that have been running since 1994 at Uppsala University (Sweden), as well as courses elsewhere. The book is divided into four separate sections: Methods, Tools and Strategies, Laboratory Exercises, and an A-Z Glossary. There are 30 color plates for identifying phenomena found in crystallization drops. As in the first edition, the emphasis of the book is on practical problems and questions encountered at the lab bench.

"This is an essential handbook for anyone engaged in crystallization of macromolecules. It is exceptionally well organized and illustrated and has contributions from all the leaders in what continues to be a challenging and critically important field." --Dr. William L. Duax, American Crystallographic Association, Executive Officer

"Why is crystallization important? At different times, different aspects of protein crystallography have assumed the role of bottleneck. Thus at one time the bottleneck consisted of the lack of a methodology for structure determination, even if a sufficient number of diffraction intensities were available for structure solution. With the advent of powerful methods for structure solution, the bottleneck shifted to the difficulty in obtaining crystals in sufficient number and of suitable quality to do the diffraction experiment. The present book is dedicated to the problem of describing current methods for protein crystallization and describing them as clear laboratory protocols." --Dr. Herbert A. Hauptman, 1985 Nobel Laureate in Chemistry

"I used the first edition as a graduate student. It was a perfect guide for protein crystallizers at all stages of their careers, providing methodical, clear explanations in lay terminology." --Dr. Lata Govada, Imperial College London

From the Back Cover

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About the Author

Terese Bergfors is one of the most known scientists in the field of protein crystallization. She is in the Department of Cell and Molecular Biology at Uppsala University, Sweden.