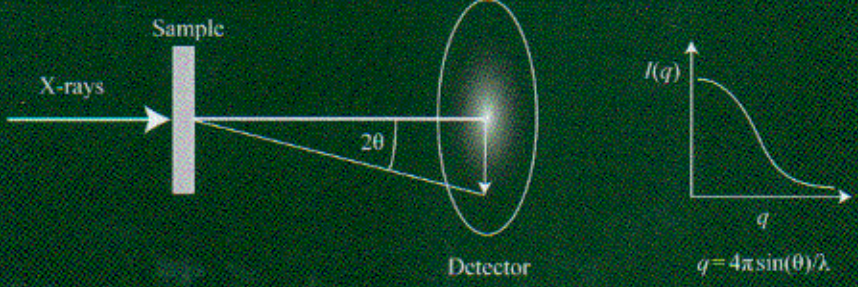


Small angle solution scattering (SAS) is increasingly being applied to biological problems. It is a complementary technique that, when applied in appropriate circumstances with carefully structured questions, can provide unique information not available from other techniques. While small angle solution scattering has been around for some time, a confluence of recent developments has dramatically enhanced its power. Intense third generation X-ray sources, low noise detectors, development of new algorithms and the computational power to take advantage of these have all matured, and use of free-electron x-ray laser sources is on the horizon. These have led to whole new classes of experiments and analyses. These include the generation of molecular envelopes, the ability to do time-resolved studies, and the ability to account for structural changes using modelling based on the SAS data. These technical improvements have also reduced the amount of time and material needed to carry out an experiment. Beamtime at synchrotron sources is in demand, workshops on the subject are popular and researchers adopting the technique as part of their repertoire are growing. With these in mind, the authors have written this book to guide structural biologists who may wish to adopt the technique, understand its strengths and weaknesses, or just have a general interest in its potential.

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"Small angle scattering from soup to nuts. This comprehensive volume contains essential information for beginners, experts and everyone in between."

Lois Pollack, Professor and Director,
School of Applied and Engineering Physics, Cornell University

"I am delighted that the authors have completed this title. It combines the theory and practice of structure analysis by SAXS in both a comprehensive and a comprehensible manner. This book will serve as a very sound introduction for those new to the field and at the same time will be an invaluable reference work for those already engaged in such studies. The book includes a review of the application of neutrons to small angle scattering studies and how such work can provide information not available with other techniques."

Jon Cooper, Emeritus Professor of Structural Biology, University College London

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