

## Preface

This book can serve as an introduction to students interested in learning the techniques used in developing mathematical models of physical phenomenon; or it can furnish the background information to the experienced professional desiring to broaden his/her knowledge of polymers.

The senior author presented material in this book to students interested in learning the fundamental mathematics underlying many areas of polymer physics and in lectures to audiences with varying backgrounds in polymer physics.

The material in this book should prove helpful to readers who have knowledge of introductory mathematics, chemistry and physics.

The text emphasizes the derivation of many equations used in Polymer Physics. The assumptions used in modeling, and in making the mathematical apparatus solvable in closed form, are presented in detail. Too many times, the basic equations are presented in final form in journal articles and books from either lack of space or the assumption that the derivation is widely disseminated and does not require repetition.

The fundamentals of any discipline have to be constantly tested against new findings. This book presents the assumptions and simplifications of the fundamentals of many areas of Polymer Physics so that the testing process can be expedited.

The authors have discussed this material with many colleagues and in return received many pertinent suggestions for improvement. These include Philip Wilson, Mohan Srinivasaro, Hiromichi Kawai, Shigeharu Onogi, Garth Wilkes, Takeji Hashimoto and Marion Rhodes, James J. Burke and many others who attended courses or collaborated with Professor Stein in research projects.

The improvements belong to our colleagues. The residual factual errors, typos and other problems belong to the authors.

For supplementary material, corrections and communications with us, please visit <http://web.mac.com/rsstein1/iWeb>