

Preface

Membranes are among the most multifunctional and diverse organelles in the cell. This makes the task of writing a textbook that encompasses all scientific, biomedical, and technological aspects of membranes quite promethean. I decided to pursue this effort because of the diversity of biological and chemical phenomena associated with, or occurring upon, membranes, and the exciting therapeutic possibilities that go hand in hand with gaining a better understanding of membrane properties and processes. Indeed, researching the diverse aspects of membrane science for this textbook has been a highly rewarding experience.

This textbook is designed to serve students and researchers who have already made their first steps in molecular sciences (chemistry, biology, materials science, and related fields), and who possess basic knowledge of the nature of lipids, proteins, sugars, and other building blocks of "life". I hope this textbook will provide the reader with an overview of the important properties, processes, and applications related to membranes, with particular emphasis on current state-of-the-art of membrane research.