Preface

I was inspired to write this book by developments in the field of block copolymer self-assembly in solution which have not been discussed and summarized in the form of a single convenient text. Aspects of the subject have been discussed in my previous book,[1] in that by Hadjichristidis *et al*.,[2] and in several chapters of a recent edited text.[3]

Recent advances have been stimulated in part by new synthetic methodologies (living polymerizations in particular) that have enabled the preparation of new materials with novel self-assembling structures, functionality and responsiveness. The present text covers the principles of self-assembly in both dilute and concentrated solution (micellization, mesophase formation, etc.) in Chapters 2 and 3, respectively. Chapter 4 covers polyelectrolyte block copolymers–these materials are just beginning to attract significant attention from researchers and a solid basis for understanding their physical chemistry is emerging, and this is discussed. Chapter 5 discusses adsorption of block copolymers from solution at liquid and solid interfaces. Chapter 6 concludes with a discussion of selected applications, focusing on several important new concepts rather than providing an account of commercial applications, which can be found elsewhere.

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(3) Hamley, I. W. (Ed.) *Developments in Block Copolymer Science and Technology.* John Wiley & Sons, Ltd: Chichester, 2004.