

This book provides a concise and comprehensive introduction of polymer membranes' preparation, functionalization and applications in biotechniques including affinity membrane chromatography, membrane-based biosensor and membrane-based bioreactor.

Following an introduction to the general concept of membrane separation in Chapter 1, preparation of polymeric membranes is discussed in Chapter 2. The book then describes in Chapter 3 membrane surface activation, which is a key step in ligand immobilizations. Chapter 4 focuses on ligand immobilization techniques and the organic chemistries behind them. Chapter 5 introduces the application of affinity membrane chromatography. Finally, in Chapter 6, membranes used in biosensors and gas sensors, enzymatic membranes used as biosensor, and membrane biosensor for waste water treatment will be discussed.

A novel filter medium, i.e. nonwoven nanofiber membrane, and its preparation method, i.e. electrospinning technique, are also introduced in this book.

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Preparation,
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