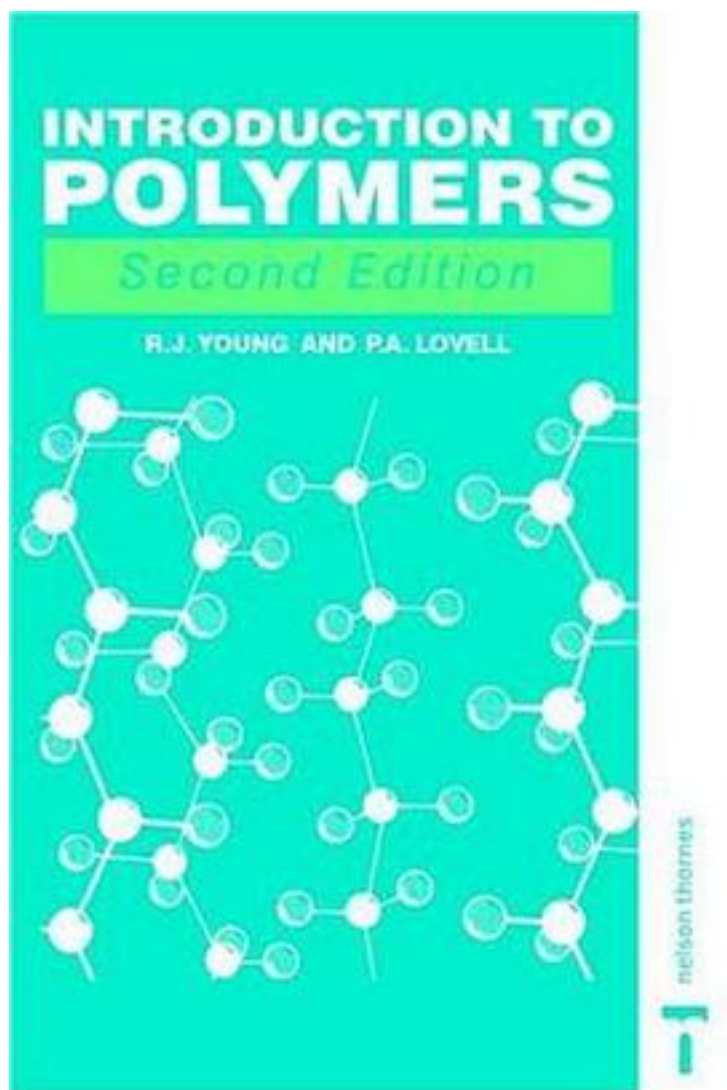


# Introduction to Polymers



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Thoroughly updated, Introduction to Polymers, Third Edition presents the science underpinning the synthesis, characterization and properties of polymers. The material has been completely reorganized and expanded to include important new topics and provide a coherent platform for teaching and learning the fundamental aspects of contemporary polymer science. New to the Third Edition Part I This first part covers newer developments in polymer synthesis, including 'living' radical polymerization, catalytic chain transfer and free-radical ring-opening polymerization, along with strategies for the synthesis of conducting polymers, dendrimers, hyperbranched polymers and block copolymers. Polymerization mechanisms have been made more explicit by showing electron movements. Part II In this part, the authors have added new topics on diffusion, solution behaviour of polyelectrolytes and field-flow fractionation methods. They also greatly expand coverage of spectroscopy, including UV visible, Raman, infrared, NMR and mass spectroscopy. In addition, the Flory-Huggins theory for polymer solutions and their phase separation is treated more rigorously. Part III A completely new, major topic in this section is multicomponent polymer systems. The book also incorporates new material on macromolecular dynamics and reptation, liquid crystalline polymers and thermal analysis. Many of the diagrams and micrographs have been updated to more clearly highlight features of polymer morphology. Part IV The last part of the book contains major new sections on polymer composites, such as nanocomposites, and electrical properties of polymers. Other new topics include effects of chain entanglements, swelling of elastomers, polymer fibres, impact behaviour and ductile fracture. Coverage of rubber-toughening of brittle plastics has also been revised and expanded. While this edition adds many new concepts, the philosophy of the book remains unchanged. Largely self-contained, the text fully derives most equations and cross-references topics between chapters where appropriate. Each chapter not only includes a list of further reading to help readers expand their knowledge of the subject but also provides problem sets to test understanding, particularly of numerical aspects.

作者介绍:

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标签

评论

其实挺基础的，在我看来作为本科生的教材还不如浙大的高分子化学说得明白。这本书的好处在于涉及面很宽，对最近的新东西提的比较多。

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这本书的特点是：涵盖面广、语言流畅读起来很舒服。是一本入门书，也是一本工具书  
---有什么概念忘了查一查。

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## 书评

By Lian Hutchings18 April 2012 Introduction to polymers (3rd edition) Robert Young and Peter Lovell CRC Press 2011 | 688pp | £37.99 (PB) ISBN 9780849339295 Reviewed by Lian Hutchings The publication of the third edition of Introduction to polymers is an ...

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