

Introduction to Polymer Viscoelasticity, 3rd **Edition**

By Montgomery T. Shaw, William J. MacKnight



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A revised molecular approach to a classic on viscoelastic behavior

Because viscoelasticity affects the properties, appearance, processing, and performance of polymers such as rubber, plastic, and adhesives, a proper utilization of such polymers requires a clear understanding of viscoelastic behavior.

Now in its third edition, Introduction to Polymer Viscoelasticity remains a classic in the literature of molecular viscoelasticity, bridging the gap between primers on polymer science and advanced research-level monographs. Assuming a molecular, rather than a mechanical approach, the text provides a strong grounding in the fundamental concepts, detailed derivations, and particular attention to assumptions, simplifications, and limitations.

This Third Edition has been entirely revised and updated to reflect recent developments in the field. New chapters include:

- * Phenomenological Treatment of Viscoelasticity
- * Viscoelastic Models
- * Time-Temperature Correspondence
- * Transitions and Relaxation in Polymers
- * Elasticity of Rubbery Networks
- * Dielectric and NMR Methods

With detailed explanations, corresponding equations, and experimental methods, supported by real-life applications (as well as the inclusion of a CD-ROM with data to support the exercises), this Third Edition provides today's students and professionals with the tools they need to create polymers with more desirable qualities than ever.

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Editorial Review

Review

"The book will provide the reader with a very good understanding of viscoelastic behavior on a molecular scale and details the latest techniques..." (*IEEE Electrical Insulation Magazine*, July/August 2006)

"The book is clear written and...[is] appropriate for students in introductory undergraduate courses and for others wanting introduction to the fundamentals of the subject." (*CHOICE*, December 2005)

"This book is invariably well written, logically organized and easy to follow...I highly recommend this book to anyone studying polymer viscoelasticity." (*Polymer News*, December 2005)

From the Back Cover

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Users Review

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