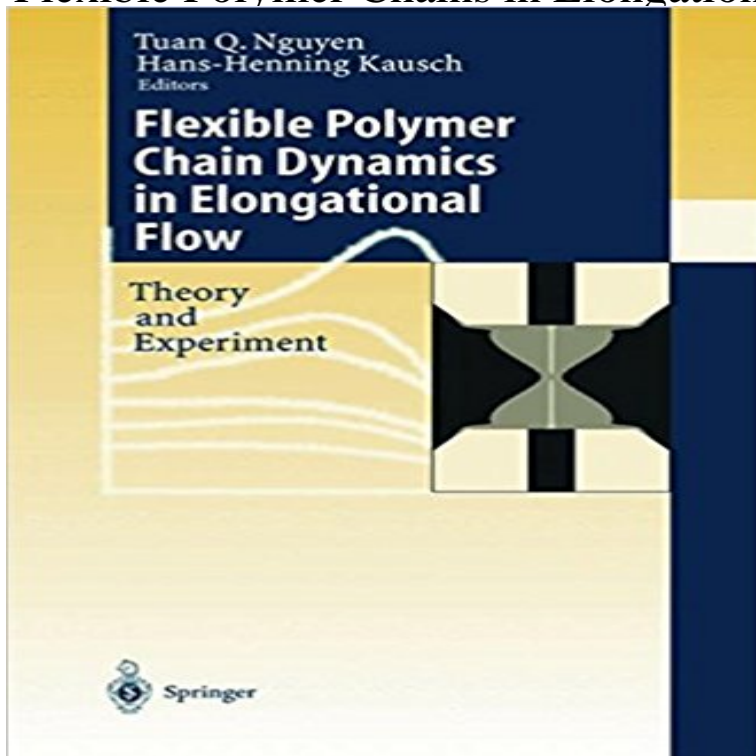


Flexible Polymer Chains in Elongational Flow: Theory and Experiment



The behavior of polymer solutions in simple shear flows has been the subject of considerable research in the past. On the other hand, reports on polymers in elongational flow have appeared comparatively recently in the literature. Elongational flow with an inherent low vorticity is known to be more effective in extending polymer chains than simple shear flow and thus is more interesting from the point of view of basic (molecular chain dynamics at high deformation) and applied polymer science (rheology, fiber extrusion, drag reduction, flow through porous media). Undoubtedly, one landmark in the field of polymer dynamics in elongational flow was the notion of critical strain-rate for chain extension, initially put forward by A. Peterlin (1966) and later refined into the coil-stretching transition by P. G. de Gennes and H. Hinch (1974). In the two decades which followed, significant progress in the understanding of chain conformation in strong flow has been accomplished through a combination of advances in instrumentation, computation techniques and theoretical studies. As a result of the multidisciplinary nature of the field, information on polymer chains in strong flow is accessible only from reviews and research papers scattered in disparate scientific journals. An important objective of this book is to remedy that situation by providing the reader with up-to-date knowledge in a single volume. The editors therefore invited leading specialists to provide both fundamental and applied information on the multiple facets of chain deformation in elongational flow.

Flexible polymer chains in elongational flow : theory and experiment Tuan Q. Nguyen - Flexible Polymer Chains in Elongational Flow: Theory and Experiment jetzt kaufen. ISBN: 9783642635151, Fremdsprachige Bucher - Chemie **Polymer Chains Under Strong Flows: Stems and Flowers - IOPscience** [(Flexible Polymer Chains in Elongational Flow : Theory and Experiment)] [Edited by Tuan Q. Nguyen] published on (October, 1999) (Englisch) Gebundene **Flexible Polymer Chains in Elongational Flow - Theory - Springer** Strain Rate for Flexible Polymer Solutions in.

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