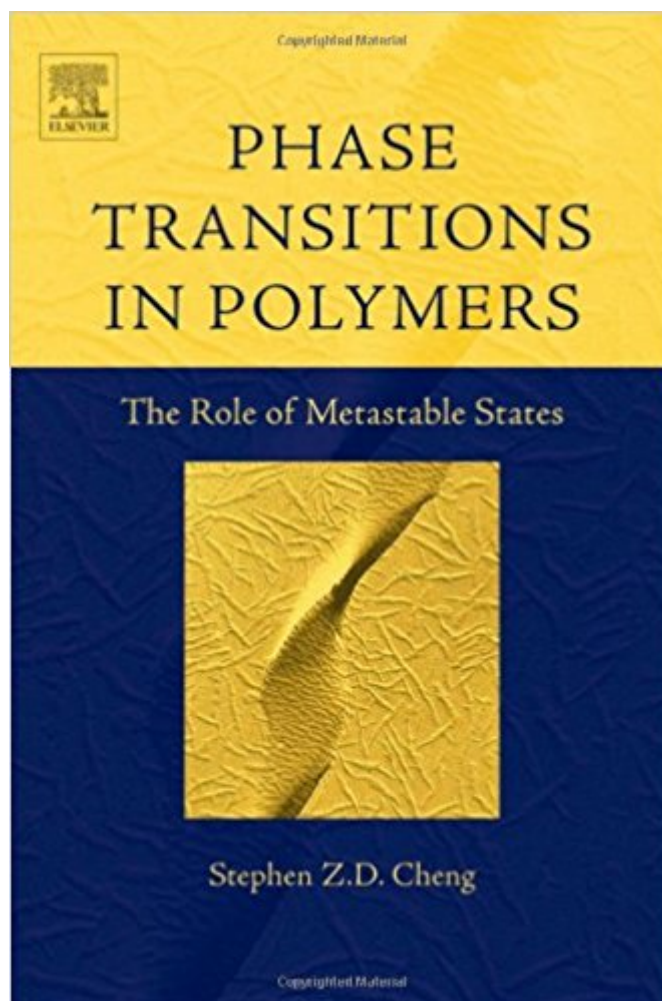


The book was found

# Phase Transitions In Polymers: The Role Of Metastable States



## Synopsis

A classical metastable state possesses a local free energy minimum at infinite sizes, but not a global one. This concept is phase size independent. We have studied a number of experimental results and proposed a new concept that there exists a wide range of metastable states in polymers on different length scales where their metastability is critically determined by the phase size and dimensionality. Metastable states are also observed in phase transformations that are kinetically impeded on the pathway to thermodynamic equilibrium. This was illustrated in structural and morphological investigations of crystallization and mesophase transitions, liquid-liquid phase separation, vitrification and gel formation, as well as combinations of these transformation processes. The phase behaviours in polymers are thus dominated by interlinks of metastable states on different length scales. This concept successfully explains many experimental observations and provides a new way to connect different aspects of polymer physics. \* Written by a leading scholar and industry expert\* Presents new and cutting edge material encouraging innovation and future research\* Connects hot topics and leading research in one concise volume

## Book Information

Hardcover: 324 pages

Publisher: Elsevier Science; 1 edition (September 24, 2008)

Language: English

ISBN-10: 0444519114

ISBN-13: 978-0444519115

Product Dimensions: 6.1 x 0.8 x 9.2 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #896,537 in Books (See Top 100 in Books) #131 in Books > Science & Math > Physics > Molecular Physics #222 in Books > Engineering & Transportation > Engineering > Materials & Material Science > Polymers & Textiles #571 in Books > Textbooks > Engineering > Chemical Engineering

[Download to continue reading...](#)

Phase Transitions in Polymers: The Role of Metastable States Biodegradable Polymers and Plastics (World Conference on Biodegradable Polymers and Plastics (7th) PeriAnesthesia Nursing Core Curriculum: Preprocedure, Phase I and Phase II PACU Nursing, 2e PeriAnesthesia Nursing Core Curriculum: Preoperative, Phase I and Phase II PACU Nursing, 1e PeriAnesthesia Nursing

Core Curriculum: Preprocedure, Phase I and Phase II PACU Nursing, 3e Landau Theory Of Phase Transitions, The: Application To Structural, Incommensurate, Magnetic And Liquid Crystal Systems (World Scientific Lecture Notes in Physics) Phase Transitions and Critical Phenomena, Volume 8 Liquid Crystals: Experimental Study of Physical Properties and Phase Transitions Structural Phase Transitions in Layered Transition Metal Compounds (Physics and Chemistry of Materials with A) Metastable Liquids LPN to RN Transitions: Achieving Success in Your New Role The South China Sea (SCS) Territorial Disputes: Catalyst for a United States - Vietnamese Security Partnership - Strategy, Policy, Provocations and Challenges, Role of Philippines, Malaysia, Brunei The Organization of American States as the Advocate and Guardian of Democracy: An Insider's Critical Assessment of its Role in Promoting and Defending Democracy Compounding Materials for the Polymer Industries: A Concise Guide to Polymers, Rubbers, Adhesives, and Coatings Introduction to Synthetic Polymers Self-Healing Polymers and Polymer Composites Materials Science of Polymers for Engineers 3E Antimicrobial Polymers Extrusion of Polymers 2E: Theory and Practice Polymers From the Inside Out: An Introduction to Macromolecules

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)