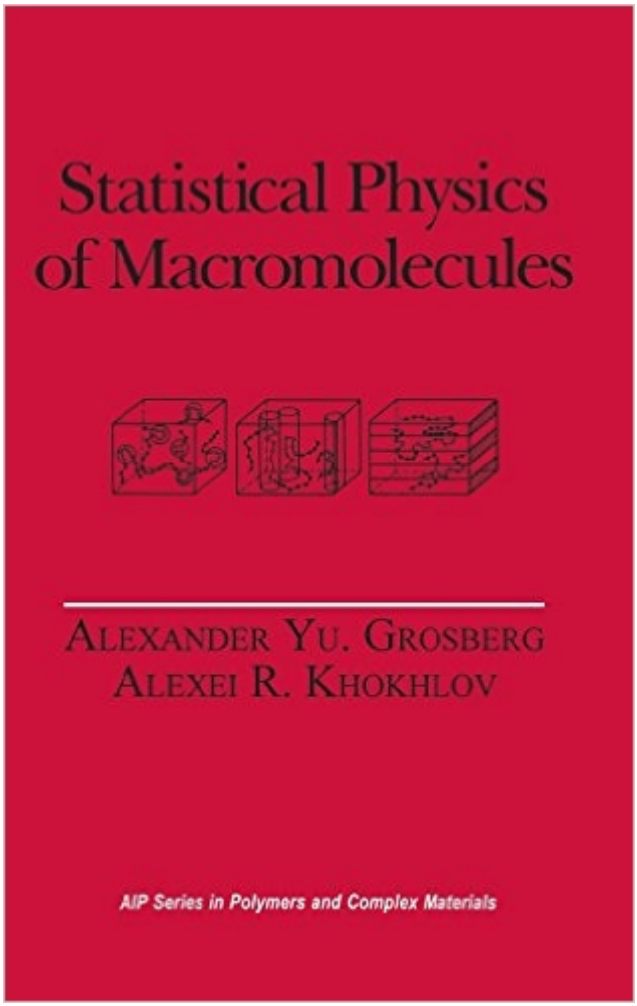
Statistical Physics Of Macromolecules (Polymers And Complex Materials)



Synopsis

Market: Specialists and graduate students in polymer physics, statistical physics, physical chemistry of polymers, materials science, molecular biophysics, and chemical engineering. This introductory volume presents in-depth descriptions of fundamental concepts as well as key industrial applications in polymer physical chemistry and molecular biophysics. Topics include statistical theories of polymer solutions, melts, polymer liquid crystals, polymer networks, and polyelectrolytes; statistics of ideal chains; the viscoelastic behavior of polymer systems; and various features of biopolymers, DNA, and proteins.

Book Information

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Average Customer Review: 4.0 out of 5 starsÂ Â See all reviewsÂ (1 customer review)

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Customer Reviews

I bought this book AFTER I bought polymer physics books by de Gennes, Doi and Edwards, and Yamakawa. I don’t recommend you do it in this order! Grosberg and Khokhlov’s book is, in my opinion, the best one to start off with. It judiciously takes a scaling-type approach to certain discussions (in a manner similar to de Gennes) and more rigorous mathematical developments in others (similar to Doi and Edwards, but never as detailed as Yamakawa).I particularly like the way the book is arranged. Each short section (they’re usually about 2 or 3 pages or so) begins with a bold face sentence which tells the main idea of the section to follow. This keeps the book coherent even when you want to skip sections.I would recommend this as your first book in polymer physics, though a reasonable background in statistical mechanics is necessary to understand the material

(although very reliable sources have told me that the new book by Rubinstein and Colby is supposed to be excellent as well, but it just came out and I haven't had a chance to read it).

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