Dramatically Accelerate the Biomolecular Simulation Process Without Losing Accuracy

Real-Time Biomolecular Simulations provides you with proven strategies for shortening the time between product research, breakthrough, and introduction into the market. Based on the author's own innovative research, this rigorous, groundbreaking guide demonstrates how the simulation process can be accelerated yet still provide accurate, dependable results.

Everything needed to perform accurate biomolecular simulations in real-time:

- Algorithms, novel cluster, and grid computing paradigms that enable accurate real-time simulation of biological systems
- Computational methods for calculating energies and forces
- Various techniques for sampling, calculating, and performing simulations

INSIDE

Real-Time Biomolecular Simulations

- **Introduction to the Dynamics of Biomolecular Systems**
- **Classical and Statistical Mechanics of Biomolecular Systems**
- **Multiple Time Scale Analysis**
- **Protein Dynamics**
- **DNA and RNA Dynamics**
- **Towards Whole Cell Dynamics**

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