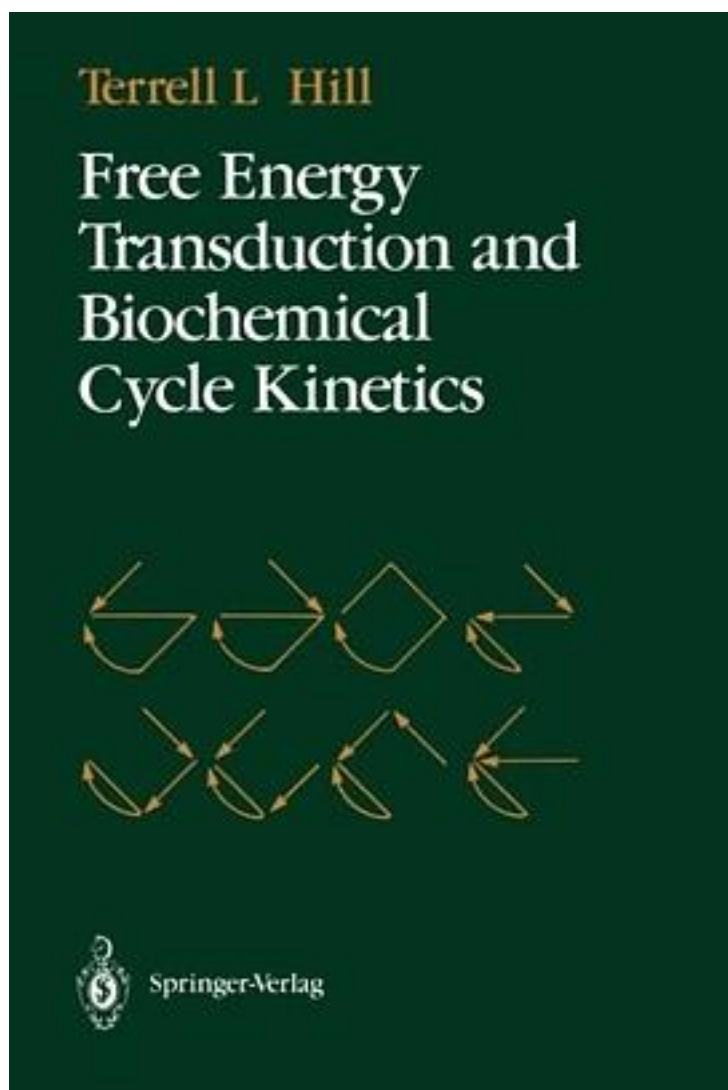


Free Energy Transduction and Biochemical Cycle Kinetics



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With this brief and updated textbook, Dr. Hill wants to explain in much simpler language than possible in his prior research monographs the theory of free energy transfer in biology, and finally make it accessible to students and investigators entering this field. It is designed for an upper-level class in biochemistry or biophysics. It can also be used for self-study.

The first chapter gives a self-contained and elementary discussion of the principles of free energy transduction in biology. Section 5 includes materials newly developed in the past 10 years on Onsager coefficients for systems near equilibrium.

The second chapter is a little more sophisticated, and deals with the so-called diagram method for calculating steady-state probabilities and cycle fluxes. Section 8 summarizes quite recent new results.

The third chapter is again a step more sophisticated. Free energy levels of the states in a kinetic diagram are introduced. Primarily of conceptual interest, it is also essential in understanding muscle contraction and related systems at the molecular level.

作者介绍:

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