PREFACE

Unfortunately, thermodynamics is commonly either poorly taught or not at all in graduate or undergraduate departments of chemistry, biochemistry, etc. My first exposure to thermodynamics was a graduate level physics department course where all of thermodynamics was covered in a single lecture. Steam engines come to mind when I think of my first chemistry department thermodynamics course. Such courses have caused a large fraction of biochemical researchers have the impression that thermodynamic approaches are archaic and, at best, ancillary to the central issues of biochemistry. Sadly, thermodynamics has seldom been fused with developments in molecular biology, structural analysis, or computational chemistry. Another reason for this narrow and insular perception is that thermodynamics is frequently equated with a single experimental technique (i.e., calorimetry). However, all of these perceptions are far from accurate.

The importance of thermodynamics is its use as a "logic tool." One of many quintessential examples of such a use of thermodynamics is Wyman's theory of linked functions. This volume is the second in a continuing series which foster and develop this vision of how thermodynamics can be an important tool for the study of biological systems.

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