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Sommario/riassunto

Professionals recognize entropy-enthalpy compensation as an important factor in molecular recognition, lead design, water networks, and protein engineering. It can be experimentally studied by proper combinations of diverse spectroscopic approaches with isothermal titration calorimetry and is clearly related to molecular dynamics. So, how should we treat entropy-enthalpy compensation? Is it a stubborn hindrance that solely complicates the predictability of phenomena otherwise laid on the line by Mother Nature? How should we then deal with it? This book dwells on these posers. It combines two chapters written by globally recognized specialists. Chapter 1 deals with general issues and suggests a definite approach to how we may answer the posers. Chapter 2 shows how the approach outlined might be successfully applied in a rational design of enzymes. This might provide other interesting strategic perspectives in the general theoretical physical chemistry field.