

The Protein Primer – Volume 2

Volume 1 includes topics accumulated between 1990 and 2000 but is not inclusive since some of the most interesting items have been reported in conventional journals notably Biophysical Chemistry as parts of festschriften for John Schellman and Walter Kauzmann. Some versions of the latter and additional old and new material are given in the Utilities folder on this the Protein Primer web site. Material for volume 2 is being collected in the Fall of 2004.

Chapter topics for volume 1

1. Errors and misconceptions in protein research.
2. Dependence of B factors on temperature and physiological function.
3. Similar features found in knot B-factor palindromes.
4. Convergence in enzyme evolution-the nut cracker
5. Maintaining stability and function in extremophiles (Dr. C-H. Chen)
6. Protein classes- strong and fragile free-energy surfaces.
7. Benzinger revisited-dominance of the second law.
8. The two macrostates of water explain the Hofmeister series.
10. Hydration of proteins up to date.
- 11/ Formal enzyme kinetics-steady state but not equilibrium.
12. Linear response and mean-field theories in biology.
13. Why free-energy considerations play a minor role in the biosphere
14. The role of belief in science.