(1.58 g, 13.5 mmol). The solution was allowed to stand (under N_2) at 0° for 24 hr. A tlc (10% EtOH-$CHCl_3$, silica gel) of this reaction mixture showed the presence of a new spot with a lower R_f, but still indicated the presence of starting material. Therefore, 1.0 ml of additional concentrated HCl was added, followed by the dropwise addition of 1.58 g of *n*-amyl nitrite (13.5 mmol). The reaction mixture was maintained at 0–4° for an additional 24 hr after which 10 ml of H_2O was added and the aqueous solution extracted thoroughly with Et_2O. The Et_2O solution was washed with 5% NaOH; the NaOH solution was filtered and then acidified with 5% HCl. The acidic solution was washed with $CHCl_3$ and the $CHCl_3$ solution dried ($MgSO_4$), and the solvent was removed under reduced pressure to yield ~0.5 g (31%) of the desired product. This solid was sublimed (1.5 mm, 70–90° bath temperature) to give pale yellow crystal, mp 178.5–179.5° (lit.[13e] mp 178–179.5°).

Enzyme Purification and Assay. COMT was purified from rat liver (male, Sprague–Dawley, 180–200 g) and assayed using the substrates SAM-$^{14}CH_3$ and 3,4-dihydroxybenzoic acid or *l*-norepinephrine as previously described.[5,6,9,10] Processing of the kinetic data was achieved by plotting reciprocal velocities against reciprocals of the substrate concentrations. Inhibition constants were calculated using Cleland's equations[14] as described in earlier publications from this laboratory.[5,6,9,10]

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Book Reviews

The Hydrophobic Effect: Formation of Micelles and Biological Membranes. By Charles Tanford. Wiley-Interscience, New York, N.Y. 1973. viii + 200 pp. 16 × 24 cm. $12.50.

Hydrophobic "bonding" has been one of the most widely used concepts in biophysical chemistry. Much of the original interest can be attributed to the very clear description of the forces holding proteins together written by Kauzmann in 1959. Since that time researchers have sought and found ample evidence for a large number of entropy driven association phenomena of biological import. Dr. Tanford has had a major role in the development of the quantitative thermodynamics of hydrophobic interactions, and he here explores a number of interesting systems. The book contains 19 short chapters. The first four focus on the underlying thermodynamic results that form the main framework for a systematic treatment of hydrophobic effects. There follows a brief summary of current views on the structure of water and then a moderately detailed treatment of micelles (six chapters). The remainder of the book is primarily devoted to protein–lipid interactions of various types with the final two chapters specifically dealing with biological membranes.

The book is well written. The thermodynamic material is neatly and concisely developed and should be of use to a wide range of readers. The relationships between experimental results and idealized models are clearly set out. The unified viewpoint is one of the main strengths of the book. The discussion of micelles is particularly nice. Some general principles for micelle shape are summarized and the long debated question of whether micelle formation should be treated, formally, as a phase change is resolved.

My main criticism of the book is its length. It is too short to present anything approaching a "comprehensive" treatment of the complex topics that are taken up. Some important areas given too brief a discussion are: X-ray diffraction results, the general question of mobility (although the spin resonance work of McConnell and collaborators is described), and perturbations of hydrophobic interactions in the presence of electrolytes. Specialists in various areas will almost certainly be disappointed in the depth of treatment compared with, for example, Tanford's articles on protein denaturation. References are highly selected, providing good contact with major review articles through 1972.

In sum, this book offers an interesting overview. It certainly provides a provocative starting point for students and active researchers alike.

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