One noticeable omission from the book is a discussion of synthetic work on the phosphoinositides themselves. The discovery of these inositol-containing lipids in brain by J. Folch some fifty years ago was responsible for the creation of this field of research. The current burgeoning biological interest in phosphatidylinositol 3-kinase and in the 'lipid anchor' of membrane-associated proteins is providing new objectives for the synthetic organic chemist and syntheses in this area should feature more prominently in future editions.

There are a few errors and misconceptions which should be corrected in a future edition. For example, there are reasons other than "the severe problems associated with efficient phosphorylation of polyols" that delayed the publication by our group of the phosphorylation of intermediates described on page 69. The priority for this type of phosphorylation had been established by the Russian group using dianilidophosphochloridate and the method was repeated by Ozaki in his publication in 1986. We were more concerned with an efficient optical resolution of the intermediates. Likewise there is a misconception about our work reported on page 45. The author is in error concerning the methods we used for phosphorylation and deprotection.

I can recommend this useful and readable book to any synthetic organic chemist who is interested in browsing in a new field or is contemplating entering the field. However, I would strongly advise the latter to consult the primary literature, associated with the names of those appearing in the lists of references, from the latter half of 1991 before designing his first experiment.

The overall impression gained from the book is that, for such a compact molecule, *myo*-inositol and its phosphates have stimulated the application of some fascinating chemistry which has been gleaned from many areas of synthetic organic chemistry. This fast moving field of organic synthesis is still accelerating because of the rapidly broadening base of the biological studies and there is still room for new ideas and methods, particularly those concerning the preparation of membrane-permeable derivatives of these highly polar compounds.

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Advances in Natural Product Chemistry, Proceedings of the 5th International Symposium and Pakistan-US Binational Workshop on Natural Products Chemistry, Karachi, Pakistan, 4–9 January 1992. Edited by Atta-ur-Rahman, Harwood Academic Publishers, Chur, Switzerland, 1992, ISBN 3-7186-5319-2, xii + 498 pages, $140.

I must admit at the outset that I am not an aficionado of conference proceedings. They are mostly a hotch-potch of disparate contributions, vastly overpriced, and of little lasting value. I propose the creation of "The Journal of Conference

Proceedings" which would introduce peer review to this genre and cull out those diehard participants who repeatedly contribute the same material. Despite this ideological stance, I found "Advances in Natural Product Chemistry " to be an interesting cross section of contempory organic chemistry with a good balance between, synthesis, biosynthesis, and structural elucidation.

The keynote lecture by Derek Barton describes work on the "Gif family" of hydrocarbon oxidising systems. This is hardly natural product chemistry in the normal sense, but it may provide an insight into the chemistry of cytochrome P_{450} and methane mono-oxygenase. Amongst the remaining 28 chapters there are half a dozen that will be of particular interest to the carbohydrate community. Trost gives a virtuoso demonstration of the application of asymmetric allylic displacement in a synthesis of allosamizoline. This was coupled to a diallosamine derivative using trichloroimidate technology to give the chitinase inhibitor; allosamidin. Schmidt describes some extraordinarily demanding syntheses of glycosphingolipids culminating in the synthesis of the dimeric Le^X-antigen (an octasaccharide). Trichloroimidate couplings were used extensively and the best yields were obtained by an "inverse" procedure in which the donor was added to an acceptor/catalyst mixture. In one memorable case, two trisaccharides were coupled, with boron trifluoride etherate as catalyst in 81% yield.

Chemists with an inclination to wield the chemical scalpel (or hatchet) on carbohydrates are served by papers from Voetler and Malik who have discovered some surprises along well trodden paths. Voetler has found that if D-glucal is treated with sodium hydride and *N-p*-toluenesulfonyl imidazole, 4-*O*-tosyl 3,6-anhydroglucal is formed. Presumably the oxa-bridge is formed by nucleophilic displacement of a 6-*O*-tosylate group. Excision of the double bond with ozone gives a tetrahydrofuran with three differentiated hydroxy groups. The tremendous nucleofugacity of the triflate group enables even secondary triflates to be displaced by comparatively modest nucleophiles. This is exploited in sequential displacements of vicinal triflate epoxides by lithio acetonitrile and diethyl sodiomalonate to give cyano cyclopropanes and γ-butyrolactones respectively. Essentially identical triflate epoxides are described by Malik, except that tetrabutylammonium dihydrogen phosphate is used as the nucleophile in the synthesis of trisugar phosphates. Ugi describes the development of some fascinating phosphorylating reagents for nucleotide synthesis aided by IGOR (a computer program for the Interactive Generation of Organic Reactions). The synthetic efforts of humans are clearly no match for the computer, because although IGOR proposed 278 candidate structures, only six were actually synthesised!

This price of this book ($140) probably precludes it from personal purchase, but it is a worthwhile acquisition for company and institutional libraries.

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