THE PYRIMIDINES

SUPPLEMENT I

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WITH A CHAPTER BY

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The Chemistry of Heterocyclic Compounds

The chemistry of heterocyclic compounds is one of the most complex branches of organic chemistry. It is equally interesting for its theoretical implications, for the diversity of its synthetic procedures, and for the physiological and industrial significance of heterocyclic compounds.

A field of such importance and intrinsic difficulty should be made as readily accessible as possible, and the lack of a modern detailed and comprehensive presentation of heterocyclic chemistry is therefore keenly felt. It is the intention of the present series to fill this gap by expert presentations of the various branches of heterocyclic chemistry. The subdivisions have been designed to cover the field in its entirety by monographs which reflect the importance and the interrelations of the various compounds, and accommodate the specific interests of the authors.

In order to continue to make heterocyclic chemistry "as readily accessible as possible", new editions are planned for those areas where the respective volumes in the first edition have become obsolete by overwhelming progress. If, however, the changes are not too great so that the first editions can be brought up-to-date by supplementary volumes, supplements to the respective volumes will be published in the first edition.

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Preface

Although published in 1962, *The Pyrimidines* completely covered the literature only until the end of 1957. The phenomenal advances in pyrimidine chemistry since that year have necessitated the present "Supplement I," which completes the reviewing process until the end of 1967 and covers some important aspects of the 1968 literature. As before, emphasis is placed on practical rather than on theoretical aspects of the subject.

Like any *Ergänzungswerk* volume of *Beilstein*, the present supplement is in no sense a new edition of *The Pyrimidines*, and it must be used in conjunction with the original volume. To facilitate such use each chapter, section, or table heading in the supplement is followed by a reference to the corresponding part of the original volume in the form of a page number preceded by the conventional *H* for *Hauptwerk*; the headings for sections and tables without counterparts in the original volume are followed by *New* in parentheses. The letter *H* after an individual entry in a table indicates that earlier data for the same pyrimidine will be found in the original volume. Access may be gained to the literature and melting point of any simple pyrimidine described to mid-1967 by consulting the appropriate appendix table both in the original volume and in the supplement; the scope and conventions of such tables have been defined (*H* 501 et seq.). To reduce costs and the time-lag in publication the appendix tables (paginated T 1 et seq.) and the single list of references (paginated R 1 et seq.) are reproduced photographically from the typescript; early references (1–2169) are listed only in the original volume (*H* 624). Throughout the supplement the original nomenclature (*H* 3) and general presentation (*H* 501) are retained except that formulas are indicated now by boldface Arabic instead of Roman Numerals.

The origin of recent papers on pyrimidine chemistry is indicated below. Some interesting differences are evident in comparing the list with that given previously (*H* IX): although the United States still occupies first place, its contribution and, more particularly, that of Germany have decreased in favour of those from Russia and Eastern Europe; the British and Japanese percentages remain almost unchanged.

United States of America	31.4%
British Commonwealth	20.2%
Germany (East and West)	13.6%

Japan	8.7%
Russia	6.9%
Eastern Europe	6.0%
France and Switzerland	4.1%
Netherlands and Belgium	2.5%
Austria	2.1%
Italy and Spain	2.0%
Scandinavia	0.9%
Others including Israel	1.2%

The tasks involved in preparing this supplement have been shared by many kind friends. Dr R. F. Evans and Dr T. J. Batterham willingly put their expertise at my disposal by writing the chapter on reduced pyrimidines and the section on nuclear magnetic resonance spectra, respectively. Professor Adrien Albert made innumerable valuable suggestions; his unfailing encouragement ultimately proved decisive in my completing this work. Dr D. D. Perrin, Dr E. Spinner, Dr W. L. F. Armarego. Dr G. B. Barlin, and Dr J. E. Fildes provided welcome expert advice; Dr T.-C. Lee, Dr H. Yamamoto, and Mr T. Sugimoto translated Chinese or Japanese papers; Mrs D. McLeod solved problems in the library; Mr B. T. England, Mr B. W. Arantz, Mr D. A. Maguire, Mrs P. J. English, and Mrs H. E. Jones assisted in various ways; and Mrs S. M. Schenk cheerfully performed the miracle of producing neat typescript and perfect camera copy from an appalling manuscript. To all these good people, and to my wife and family for their kindly forbearance and practical help, I offer my sincere thanks.

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September, 1969

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