EDITORIAL REPORT ON NOMENCLATURE, 1955.*

PHYSICAL

Unit of Wave Number.—The use of the symbol κ (Kayser) for cm.$^{-1}$ is optional (cf. Lecomte, *J. Opt. Soc. Amer.*, 1953, **43**, 410), though rare in Chemical Society publications (cf. *J.*, 1955, 3163; *Ann. Reports*, 1954, **51**, 12).

Phase Diagrams.—Space can sometimes be saved by abbreviating phase diagrams, as in Figs. *A* and *B* (*J.*, 1955, 363, 3056: cf. also *J.*, 1954, 30).

FIG. *A*.

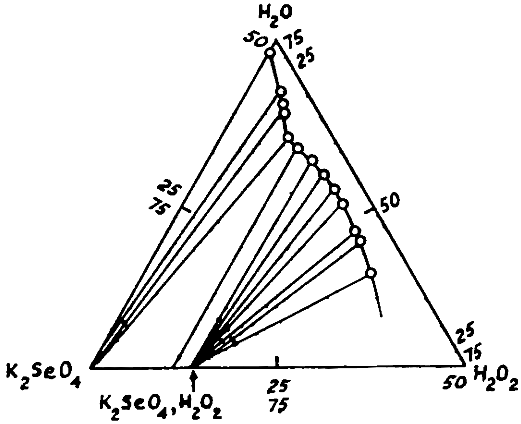
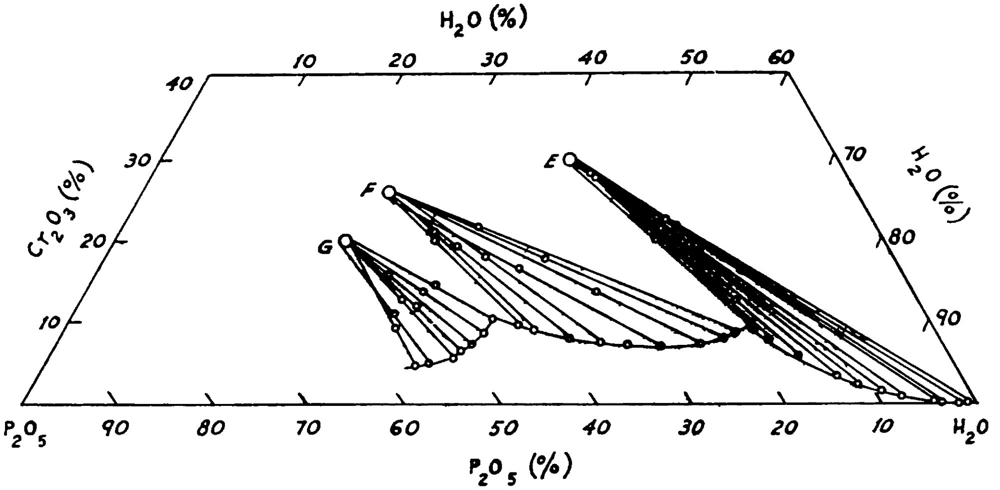


FIG. *B*.



Clarity in Figures.—Detail concerning curves is best printed in the legends and not on the Figures themselves, since too much lettering reduces clarity and spoils the appearance of the curves. An example of the labelling and recording of maxima in infrared spectra is given in *J.*, 1955, 4178.

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* Reprints of this Report, and of those for each of the years 1950—54, may be obtained from the General Secretary, The Chemical Society, price 1*s*. each (post free).

Symbol for Molality.—Some confusion has arisen from certain of the Royal Society's recommendations (see *J.*, 1951, 1677). The following modifications will be adopted in the Chemical Society's publications :

Units :	molal	m *or* g./kg. of solvent
	molar	M *or* g./l. of solution
Symbols :	concentration (any units)	c or C
	concentration (any units) of a substance X	c_X or C_X
	concentration (molar only) of a substance X	[X]

The only changes involved are : (i) the symbol m for molality is abandoned; (ii) c and C may refer to molar, molal, or other units instead of only to the first.

Whenever c, C, c_X, or C_X is used, it must be made clear in the text what units are involved. If several units are involved in one paper, c and C may be used for, *e.g.*, molal and molar units respectively, or *vice versa*, provided that the practice used is clarified in the text.

ORGANIC

Configuration and Conformation.—The qualitative distinction between these two concepts is well known to organic chemists. Braude and Timmons (*J.*, 1955, 3766) have given a semi-quantitative distinction by using the terms " configuration " and " conformation " in connexion with stereoisomerism involving energy barriers greater and smaller, respectively, than *ca.* 20 kcal./mole.

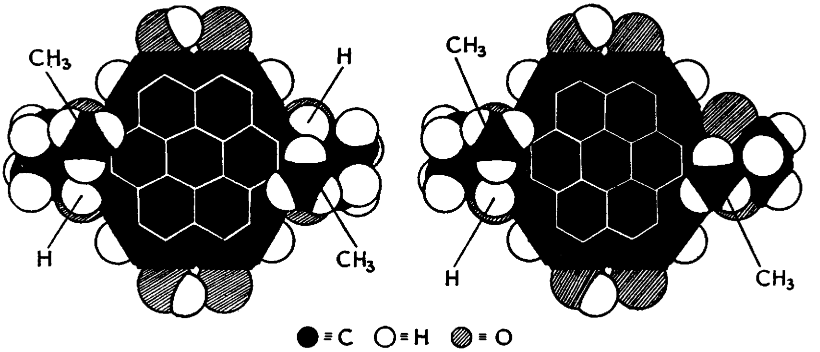
Mixed Polymers.—Prefix numerals have been used to denote molar proportions of the components in mixed polymers, as in the name, poly-[1-(*O*-acetyl-L-tyrosine) : 3-(γ-benzyl-L-glutamate)] (*J.*, 1955, 232).

Chondro-.—In 1935, on expert botanical advice, Dr. H. King drew attention to mis-spelling of the generic name *Chondrodendron* and used the correct prefix chondro- in the names of several derivatives of curare alkaloids; the mis-spelling subsequently spread to the chemical names. Attention has again been drawn to the correct rendering (Sandwith, *Kew Bull.*, 1955, No. 1, 58), and names such as chondrodendrine, etc., will be used henceforth.

Tropane.—Methods of designating stereoisomerism on carbon (by α, β) and on nitrogen (by *a*, *b*) in the tropane series have been devised which may have more general use (for details see *J.*, 1953, 721; 1955, 3504).

Steric Formulae.—It is often difficult, particularly for complex molecules, to show steric relations by perspective drawings or by photographs of models. A clear and cheap method is illustrated by Fig. *C* (*J.*, 1955, 1145).

FIG. *C*.



GENERAL

I.U.P.A.C.—The (tentative) rules for nomenclature of inorganic compounds published in *Comptes rendus* of the 17th (Stockholm) Congress of the International Union of Pure and Applied Chemistry, 1953, pp. 98—119, were discussed by the Commission of Nomenclature of Inorganic Chemistry at Zürich in 1955. Comments received on these proposals made further consideration desirable, and the 1953 rules were *not* made definitive at the 1955 meeting.

Extensive revision of older rules for organic nomenclature is in progress, and 100 new rules are due for publication, in tentative form, in the *Comptes rendus* of the Zürich meeting.

I.U.P.A.C. have made available to the organisations adherent to the Union certain proposals, known as the Dyson–Taylor–Patterson system, for the nomenclature of polycyclic compounds. These were unfortunately received too late for inclusion here, but copies may be obtained on application to the Editor, The Chemical Society. Meanwhile we give below the covering letter from the Organic Commission and the Introduction to the system supplied by the Commission :

October 25, 1955.

To Organizations Adherent to the International Union of Pure and Applied Chemistry.

Gentlemen :

You will find enclosed proposals for a new system for naming condensed ring compounds and an introduction to this system. This is known as the Dyson–Taylor–Patterson System and is now being made available, on an experimental basis, to the organizations adherent to the Union. The I.U.P.A.C. Commission on Nomenclature of Organic Chemistry is of the opinion that this system may be of particular value in naming complex structures which cannot be named readily by systems already in use. The proposals in question and the introduction may be published in national journals if so desired by the national organizations. It is requested that any suggestions or comments be sent to Dr. G. M. Dyson, 1 Burton Walks, Loughborough (Leicestershire), England.

Yours very truly,
H. S. Nutting,
Secretary, I.U.P.A.C. Commission on Nomenclature of Organic Chemistry.

Introduction to the Dyson–Taylor–Patterson System

The nomenclature of compounds having condensed ring systems poses two distinct problems : the naming of the structures and the numbering of the positions of the various atoms.

There are several systems of nomenclature now in use for naming and numbering such compounds.

(1) Generally accepted trivial names such as " naphthalene," " phenanthrene," " pyrene," etc., are used for more common compounds. In certain cases, such as anthracene, the traditional numbering does not conform to the more generally accepted rules.

(2) The " fusion method " has been developed and used for a large group of compounds in two ways :

(2.1) The " genetic system," developed by Stelzner.[1]

(2.2) The " skeletal system," developed by Patterson.[2]

(3) A third method, proposed by von Baeyer, is used for compounds not readily named by the fusion system.

In naming very complex ring systems, the results often leave much to be desired in the way of simplicity and clarity.

In 1946 Dr. G. M. Dyson[3] proposed a new system for enumerating cyclic ring structures and in 1948 Dr. F. L. Taylor[4] independently suggested another method by which such structures could be both enumerated and named. Dr. A. M. Patterson[5] modified Dr. Taylor's system in certain respects and suggested that some form of alignment of the two systems would be desirable. Accordingly, the system has been further modified by Dr. G. M. Dyson to its present form. This system, with its new vocabulary and method of enumeration, is so distinctive that it is recognisable wherever it may be used.

The Commission believes that the Dyson–Taylor–Patterson System has real merit and that it probably has outstanding advantages in naming systems which are extremely difficult to name by other methods now available.

On the other hand, there is no evidence before the Commission as yet that this system

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[1] R. Stelzner and H. Kuh, *Literatur-Register der Organischen Chemie,* band 3, p. 48 (Berlin–Leipzig, 1921).

[2] A. M. Patterson, *J. Amer. Chem. Soc.,* **50**, 3080—4 (1928).

[3] G. M. Dyson, Lecture published by the Royal Institute of Chemistry, October 21, 1946.

[4] F. L. Taylor, *Ind. Eng. Chem.,* **40**, 734—8 (1948).

[5] Personal communication.

will prove generally useful to chemists. Until such evidence is forthcoming, the system cannot be officially recommended by I.U.P.A.C.

Accordingly, the Commission has urged Dr. Dyson to publish this system in its present form, with the hope that chemists will use it in naming unusually complex structures and that they will report back to Dr. Dyson their comments or suggestions. These should be sent to the following address : Dr. G. M. Dyson, 1 Burton Walks, Loughborough, Leicestershire, England.

Infrared Spectra.—On the advice of the Infrared Absorption Data Joint Committee and of the Publication Committee, Council has agreed to discontinue the deposition of copies of infrared spectra with the Society (see *Proceedings,* 1952, 164; *J.,* 1952, 5063) The arrangements for deposition and photocopying were initiated as a temporary expedient, until a more permanent scheme should come into operation. The Chemical Society (and certain other scientific societies) have agreed to support the Anglo-German organisation for the issue of spectra and spectral data on punched cards; the British publishers of these cards are Butterworths Scientific Publications Ltd., 88 Kingsway, London, W.C.2. A description of this punched-card scheme follows this Nomenclature Report; further particulars of it may be obtained from the publishers.

The conditions for publication of infrared spectra in papers published in the *Journal* remain as before (for details see *Proceedings,* 1952, 164), except that spectra which would have been deposited with the Chemical Society will in future be forwarded to the publishers for consideration for the punched-card scheme. Spectra for issue on punched cards need *not* be drawn on the forms obtainable from the Chemical Society, but spectra for publication in the *Journal* must still conform to the requirements given in *Proceedings* (*loc. cit.*).

Spectra already deposited with the Society have been made available for the punched-card scheme. The Society's obligations to supply individual photocopies of these spectra have been taken over by Butterworths Scientific Publications Ltd., to whom application should be made (price 5*s.* per photocopy per spectrum). Individual copies of a spectrum will not be obtainable once that spectrum has been issued on a punched card, for the purpose of the obligation was to make the material available to the scientific public.