there is, therefore, no reversal of phases. The work of the x-ray investigators, Sponsler,[5] Astbury,[6] *et al.*, should be sufficient to convince one that gels and jellies are not emulsions.

Much confusion and erroneous instruction will be avoided if the word "emulsoid" is discarded. It was based on a misconception and is no longer used by well-informed chemists in its original sense.

So with Lady Macbeth, I cry, "Out, damned *emulsoidal* spot! out, I say!"

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THE EFFECT OF SPECTRAL REGIONS ON THE CHLOROPHYLL "A" TO "B" RATIO

IN an investigation of the photochemical responses of the wheat plant to spectral regions, Lease and Tottingham[1] found the chlorophyll content to be affected. This effect was in the direction of increased chlorophyll content and greener tissues when the blue-violet was added to the red-yellow region of the spectrum. The implications of these results and the related investigations of Guthrie[2] concerning the chlorophyll "a" to "b" ratio have been followed and somewhat confirmed. Substituting for their colorimetric methods, a spectrophotometric method, a small but consistent lowering of the proportion of chlorophyll "a" to "b" has been found in wheat plants grown under a filter which absorbs the blue end of the spectrum. In agreement with work of other investigators, the absorption curves of the pure components, isolated by the procedure of Zscheile,[3] show that the ratio of the absorption coefficients of chlorophyll "a" to "b" is higher in the red than in the blue region of the spectrum. It is to be expected that the higher activation of chlorophyll "a" in red light would lead to a lowering of the "a" to "b" ratio. Apparently the almost universal proportion of three to one in normal green plants may be dependent upon the relatively constant quality of sunlight.

The lowering of the "a" to "b" ratio is increased (if it is assumed that the absorption spectrum of a chlorophyll is a sufficient criterion of its presence and amount) by irradiating with monochromatic light of such wave-length as will be largely absorbed by chlorophyll "a". Subsequent comparison of the absorption curve of an acetone extract of the irradiated leaves with that of an unirradiated sample shows an increase in maxima corresponding to chlorophyll "b" and an attendant decrease in chlorophyll "a" maxima, in both the red and blue regions. The presence of carotenoids in this extract was found to offer no significant interference. In so far as the absorption curve may be considered indicative, there is no change in total chlorophyll. An attempt is now being made to determine if the process may be reversed and chlorophyll "b," or substances absorbing in that region, be reduced to chlorophyll "a" through selective activation with monochromatic light.

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THE "DANA" AND THE "RESEARCH"

IN an article under the heading "The Danish Nonmagnetic Research Ship," in SCIENCE (January 21, 1938, pp. 59–60) there was some confusion regarding the Danish vessel *Dana* and the *Research* of the British Admiralty. It is felt this matter should be set right in order that mistaken impressions may not persist.

The Danish Meteorological Institute advises that the *Dana* is an iron vessel, recently constructed in Denmark for oceanographical and fishery researches; it is unsuitable for magnetic observations at sea.

The *Research*, on the other hand—now under construction—is a non-magnetic vessel especially designed for magnetic observations at sea to continue the oceanic work of the *Carnegie* which was so unfortunately lost in 1929 at Apia, Western Samoa. The need of such a vessel is clear from a consideration of the lacunae in the magnetic data required for the construction of magnetic charts. These gaps would have been filled had the *Carnegie* completed her last cruise, but, taken in connection with the recent rapid changes in secular variation and shifts of isoporic foci—notably in the Indian Ocean—they make for considerable uncertainty and possibly serious errors in extrapolated values of the magnetic elements over large areas.

The Carnegie Institution of Washington cooperated with the British Admiralty in the design and equipment of the *Research* by supplying plans, specifications and descriptions of the *Carnegie* and of her equipment. W. J. Peters, the first commander of the *Carnegie* and designer of many of the special instruments required for increased precision of observations at sea, spent a year in England as a consultant to the Admiralty on the construction and instrumental outfit of the *Research*.

J. A. FLEMING

THE IDENTIFICATION OF VITAMIN C

PRIORITY questions are not of primary importance to science and should be left to posteriority. If, however, such problems are discussed it is desirable that statements made should be correct and complete.

The chronological list of events given by G. C. Cox[1]

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[5] *Jour. Gen. Physiol.*, 9: 221, 1925.

[6] "Fundamentals of Fibre Structure," Oxford, 1933.

[1] E. J. Lease and W. E. Tottingham, *Jour. Am. Chem. Soc.*, 57: 2613, 1935.

[2] John D. Guthrie, *Am. Jour. Bot.*, 16: 716, 1929.

[3] Paul F. Zscheile, *Bot. Gaz.*, 95: 529, 1934.

[1] SCIENCE, December 10, 1937, p. 540.

should be completed with reference to my lecture delivered before the Hungarian Medical Association on March 18, 1932. In this lecture the identity of Vitamin C and the "hexuronic acid," described by myself in 1928, was definitely stated and experimental evidence given. This lecture was reported by all journals publishing the proceedings of that society.[2] The text of this lecture was published unchanged in the *Deutsche Med. Wochenschrift* (No. 22, 1932). This paper was followed by the note of King and Waugh in SCIENCE of April 1, and the two notes of Svirbely and Szent-Györgyi in *Nature* of April 16 and May 7.

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REPORTS

FULL TEXT OF THE NEW ORGANIC NOMENCLATURE RULES

IN 1930 the International Committee on the Reform of the Nomenclature of Organic Chemistry adopted a Definitive Report, which was published in various journals.[1] In that report Rules 34 and 49 merely stated that the topics to which they referred would be considered later. A translation of the new official French text of these rules as adopted tentatively by the committee at Lucerne in 1936 is here given. Any one having criticisms should communicate with me as early as possible in order that these may be considered by the American committee before the meeting of the International Union of Chemistry in Rome next May. Other organic nomenclature matters that may come up at the Rome meeting are: cyclic compounds with side chains containing functional groups; deuterium compounds; radical names; numbering of ring systems. Proposals regarding any of these topics should also be made soon.

RULE 34

a. Derivatives of hydrogen arsenide, AsH_3, will be named like the amines and their derivatives, with the ending *arsine*. The univalent radical $-AsH_2$ will be designated by the prefix *arsino*.

Examples: CH_3AsH_2, methylarsine; $(CH_3)_3As$, trimethylarsine; $(CH_3)_2AsCl$, chlorodimethylarsine; $(CH_3)_3AsO$, trimethylarsine oxide; $H_2AsCH_2CH_2AsH_2$, 1, 2-diarsinoethane or ethane-1, 2-diarsine; $(C_2H_5)_4AsOH$, tetraethylarsonium hydroxide; $(CH_3)_2AsAs(CH_3)_2$, tetramethylbiarsine.

b. Acids of the types $RHAs(:O)OH$ and $RR'As(:O)OH$ will be named *arsinic* acids; those of the type $RAs(:O)(OH)_2$ will be named *arsonic acids.* The radical $> AsO_2H$ will be designated by the prefix *arsinico,* the radical $-AsO_3H_2$ by the prefix *arsono.*

Examples: $(CH_3)_2AsO_2H$, dimethylarsinic acid; $C_6H_5AsO_3H_2$, benzenearsonic acid.

c. Rules *a* and *b* are applicable to the analogous compounds of phosphorus and antimony, the syllable ''ars'' being replaced respectively by *phosph* or *stib.*

d. The following list includes the prefixes and suffixes applicable to the most common compounds of phosphorus, arsenic and antimony:

Radical	*Prefix*	*Suffix*
$-AsH_2$	arsino	arsine
$-AsO$	arsenoso	
$-AsO_2$	arso	
$>As(:O)OH$	arsinico	arsinic
$-As(:O)(OH)_2$	arsono	arsonic
$-As=As-$	arseno	
$-PH_2$	phosphino	phosphine
$-PO$	phosphoroso	
$-PO_2$	phospho	
$>P(:O)OH$	phosphinico	phosphinic
$-P(:O)(OH)_2$	phosphono	phosphonic
$-P=P-$	phosphoro	
$-P=N-$	phosphazo	
$-P=As-$	phospharseno	
$-SbH_2$	stibino	stibine
$-SbO$	stiboso	
$-SbO_2$	stibo	
$>Sb(:O)OH$	stibinico	stibinic
$-Sb(:O)(OH)_2$	stibono	stibonic
$-Sb=Sb-$	antimono	
$-Sb=As-$	stibarseno	

e. Derivatives of bismuthine, BiH_3, will be named like the arsines.

f. Compounds of arsenic, phosphorus, antimony and bismuth which can not be named clearly by the preceding rules will be named as derivatives of arsines, phosphines, stibines or bismuthines or (if possible) as organometallic derivatives (rule 48).

Examples: CH_3BiO, methylbismuth oxide; CH_3SbCl_4, methylantimony tetrachloride; $(C_6H_5)_2AsOC_2H_5$, ethoxydiphenylarsine; $(CH_3)_2AsOH$, hydroxydimethylarsine or dimethylarsenic hydroxide; CH_3SbS, methylantimony sulfide; $[(CH_3)_2As]_2O$, bis(dimethylarsenic) oxide or cacodyl oxide.

RULE 49*a*

I. Cyclic hydrocarbons with aliphatic side chains are to be named according to one of the two following methods: (α) The radical names denoting the side chains are prefixed to the name of the cyclic hydrocarbon. (β) The cyclic hydrocarbon residue, if it can be named as a radical, is considered a substituent of the aliphatic chain.

Naming according to (α) is in general preferable when the side chain is short or when several side chains are present. Naming according to (β) is more convenient when the side chain is long, and particularly when the cyclic hydrocarbon residue is not at the end of this chain.

Examples: (α) $C_6H_5C_2H_5$, ethylbenzene; $CH_3C_6H_4C_2H_5$, methylethylbenzene; $C_{10}H_7CH:CH_2$, ethenylnaphthalene.

(β) $CH_3CH(C_6H_5)(CH_2)_5CH_3$, 2-phenyloctane;

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[2] *Vide, e.g., Orvosi Hetilap,* 76: 259, 12, from March 26, or *Monatshefte Ungarisher Mediziner,* etc.

[1] See, for example, *Jour. Am. Chem. Soc.,* 55: 3905–25, 1933.