

CHEMICAL TITLES AS AN AID TO CURRENT CHEMICAL LITERATURE

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A knowledge of current chemical literature is important. Current literature is defined as that body of original articles published in any given month. Published literature is the most widely used source of scientific communication. Communication is a complex and difficult problem. Dr. L. P. Hammett¹ in the 1961 Priestley Medal Address to the American Chemical Society pointed out many of the problems in the area of communication. The vast amount of literature and the little time given to the study of it has caused some scientists to resort to two "unorthodox" techniques, according to Hammett: (1) to rely on oral communication only; (2) to read only the papers of a limited number of competent scientists in the reader's field.

If a scientist does not rely on these techniques then he must select some other method of studying the literature. The purpose of this paper is to examine Chemical Titles (CT) as a possible aid in the selection process referred to by Hammett. CT is a recent publication of the American Chemical Society and is designed to cultivate "current awareness," to fill the gap between primary publication and the abstract, and to reduce the probability of overlooking any given article.

Many libraries are subscribing to CT. However, research personnel are not fully utilizing CT. Individual prejudice toward established methods of searching the literature may in part be responsible for an apparent reluctance to utilize CT.

FACTS ABOUT CHEMICAL TITLES. -- CT is published twice a month and the first issue appeared in January, 1961. There are approximately 2500 titles per issue taken from more than 300 journals (20% of which are Russian). The issues appear within two weeks after receipt of the journals. The rapid publication of a large number of titles is possible by the use of an IBM 704 computer.

Each issue is divided into three parts: Part I. Keyword Index: keywords in each title are aligned alphabetically down the center of each column. A code appears opposite each title. Part II. Bibliography: alphabetical listing of code (Part I) and first author's name in addition to other authors, the full title of the

article, and the journal reference. Part III. Author Index: an alphabetical listing of all authors cross-referenced to the Bibliography (Part II).

The Keyword Index contains, in addition to the keyword, as much of the remainder of the title as permitted by the computer. The remainder of the title gives a good clue as to the nature of the article. The complete title will appear if it is short.

Consider a specific example. There is a paper entitled "Rate of the reaction of gases and solid carbons." In the Keyword Index, the title will be indexed under each of the keywords: Carbon, Gases, Rate, Reaction, Solid. The title will be coded TESN--PA60--RRG each of the five times it appears. The code designation consists of four parts:

1. TESN--first four letters of first author's name.
2. PA--first two initials of first author.
3. 60--last two digits of year of original article.
4. RRG--first letters of the first three significant title words (Rate, Reaction, Gases).

Looking alphabetically under TESN--PA60--RRG in the Bibliography, one would find
TESN--PA60--RRG Tesner, PA

Rate of reaction of gases
and solid carbons
Gazovaya Prom., 5, No.
2, 45-52 (1960)

Two further points bear mention. Titles in foreign languages are translated into English. The language of an article, if different from that of the journal, is indicated in the Bibliography.

A SUGGESTED APPROACH TO THE USE OF CHEMICAL TITLES. -- The following procedure has been found helpful in using CT: (1) Set up an alphabetical listing of keywords which are of interest. (2) Scan the Keyword Index and jot down in approximately alphabetical order the first four letters of the code. Experience has shown that in most cases this abbreviated code is satisfactory in locating the desired article. (3) After scanning the Keyword Index completely, look up the code in the Bibliography and record.

RESULTS OBTAINED USING THE TECHNIQUE OUTLINED. -- The results listed in Table I perforce reflect an individualized point of view, but some generalizations can be made.

TABLE I
RESULTS USING CHEMICAL TITLES

Average time (minutes) per issue to scan Keyword Index, jot down code and check Bibliography	30
Average number of codes taken per issue	26
Average number of titles taken per issue	18
Average number of titles retained per issue after reading original articles	14

A relatively small amount of time is required per issue. The decrease in the number of codes and titles taken is evidence for the fact that partial titles in the Keyword Index can be misleading. The decrease in the number of titles taken and retained after reading the original articles is evidence for the fact that even complete titles of articles can be misleading. Hammett points out that more attention should be given to the titling of published papers.

"I have long argued that the title of each scientific paper should indicate words that would suggest to the potential reader every major subject discussed in the paper."²

CRITICISMS OF CHEMICAL TITLES. -- CT is criticized both destructively and constructively. A. Destructive: (1) A limited number of words are in too long a series of keywords, e.g., reaction. (2) Titles can be misleading in that they may tell too much or not enough about a particular article. (3) The titling problem in the nomenclature of new compounds is peculiar to organic chemistry.

B. Constructive: (1) CT is truly current. The most recent issue of CT contained approximately 15% of titles which are in journals not yet received by the Chemistry and Physics Library at the Pennsylvania State University. (2) CT is a tremendous time saver. The arrangement of the Keyword Index and Bibliography are conducive to rapid survey and selection. The Keyword Index limits the temptation to get sidetracked on "interesting" subjects as is often the case with Chemical Abstracts (CA). (3) CT reduces the probability of missing any given article by (a) not being sectionalized as in CA or Current Chemical Papers (CCP), (b) having a built-in check system, e.g., in the example given, the title would appear five times in the Keyword Index and (c) covering more than twice the number of journals per issue as CCP.

In summary, CT is not the final answer to the problem of rapid and thorough communication. On the other hand, CT is by far the best approach yet to truly current literature, requiring a minimum of time and giving a maximum probability of not missing any given article.

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REFERENCES

(1) L. P. Hammett, Chemical Engineering News, April 10, 1961, pp. 94-97.

(2) L. P. Hammett, Chemical and Engineering News, No. 15, Vol. 39, page 94.

TRANSLITERATION OF RUSSIAN

The adoption of a single, uniform transliteration system for translation of Russian (Cyrillic) characters into the Latin alphabet was recommended at a recent meeting in Washington, D. C., called by the American Association for the Advancement of Science at the request of the National Science Foundation. A compromise

system known as the "AAAS transliteration system" combines features of various systems now in use so that character transliteration may be standardized. An important aspect of the system is that it may be typewritten with the minimum use of diacritical marks.