

Journal Abbreviations

THE purpose of abbreviations of journal titles, like the use of symbols for the chemical elements and symbols for physical constants, is primarily to provide the technical worker with a means of saving time and effort in his own writing, as well as secondarily to save some printing space in technical journals. It should be as obvious as in the use of element symbols or technical terms that the abbreviation of journal citations should be uniform in character and intelligible to all who read them.

No uniform system of journal abbreviations has been proposed which has proven completely satisfactory and it would appear that the best system would be one which evolves from the gradual acceptance by usage, experiment and need. A movement in the direction of a more nearly universal or standard system has recently been made by the agreement between representatives of the American Institute of Physics and the American Chemical Society to use a common system of journal citations. Such a "combine" may, to those who are not fully aware of the "fluid" character of the agreement, appear to be one in "restraint of trade" in the scientific technical writing field. Indeed, in a discussion prior to the release of the details of this combination a distinguished librarian indicated,

"The norms (standards or abbreviations) accepted by the international organizations are practically unknown in the United States, where professional groups are likely to adopt norms with sole regard to their own convenience. Indeed, I understand that two strong professional groups are now negotiating an agreement among themselves—an agreement which is likely, by assuming the subjects involved and by the consequent omission of subject words from abbreviations of titles, to cause considerable confusion among the libraries who will be called upon to produce the periodicals to be designated by these abbreviations."

The "two strong professional groups" referred to are the American Institute of Physics and the American Chemical Society. The inference is that the "new" system might make life somewhat more difficult for the librarian and implies that titles of journals should be selected to aid those who file, on a par with those who use and read the journals.

In justice to the author of the above quotation, one should note that this statement was made prior to the release of the new American Institute of Physics Style Manual. Upon receipt of the Style Manual this same individual was much more favorably inclined and commented at length on the appropriateness of the manual, its obvious usefulness to scientists in preparation of manuscripts, the movement toward a more consistent and uniform system of journal citation and the innovation of "colloquial" expressions as a part of the evolution of nomenclature. We trust that others who have heard of the new American Institute of Physics Style Manual will not form an opinion in advance of examination and that the changes will be as acceptable upon examination.

Unlike the "international" organization such as the ISO, the groups sponsoring this "nomenclature system" are in fact very large producing groups and the system represents years of evolution and usage; and since the greater portion of the present available scientific literature has already been published, it would seem logical that any journal abbreviation system should consider the previous notation as well as future requirements.

Chemical Abstracts has for over forty years published a list of journals, which has become the standard of style for citation abbreviation in chemical publications. This list of periodicals as published every five years by Chemical Abstracts includes: (1) The full title of the journal, arranged alphabetically according to the citation abbreviation, and with abbreviated portion of the name in bold face. (2) Cross references, if reader is likely to look under a society or location rather than name as listed on cover. (3) Frequency of publication, number of volumes per year, number of the first volume published in year of listing and issue number if No. 1. (4) Price. (5) Publishing house or publisher and address. (6) Libraries in the United States or Canada with the described publication, including availability on loan, photo copy, or microfilm.

This 209-page list, while available separately from the Chemical Abstracts, is also published as an integral part of Chemical Abstracts and hence is widely available for reference. The list is revised every five years to introduce new journals, changes in titles, and to provide other up-to-date information. While the evolution

of the abbreviation system has led to some changes from time to time, these changes have been comparatively rare.

In the agreement, which is technically between the Publication Board of the American Institute of Physics, representing the principal physical journals in this country, and the Chemical Abstracts, representing the chemical journals, there is no written contract but rather a "technical or scientific" agreement in which the wishes and requirements of the physical journals have been considered by Chemical Abstracts. Its List of Periodicals, which is now in process of revision, has been submitted to the American Institute of Physics representatives for discussion and approval.

In arriving at a common system for this American Chemical Society-American Institute of Physics notation, there are some changes from the present Chemical Abstracts which have been indicated as desirable from the physics viewpoint and have been accepted by Chemical Abstracts. These are being incorporated in the new Chemical Abstracts list.

An innovation in the revision of the Chemical Abstracts list is the recognition of "colloquial" abbreviations as acceptable to the specific area indicated. Examples of such would be *Ber. deut. chem. Ges.* (*colloq. chem.: Ber.*) indicating that in chemical journals "*Ber.*" would be used but elsewhere the extended abbreviation. The use of colloquial expressions may be limited to either (a) a specific journal or (b) the scientific field of publication. Examples would be *Chem. Abstracts* (*colloq. Chem. Abstracts: C.A.*) *Proc. Inst. Radio Engrs.* (*colloq. eng.: Proc. IRE*). Chemical Abstracts refers to itself in its own journal as *C.A.* and the *Proc. Inst. Radio Engrs.* is referred to in engineering journals as *Proc. IRE*. Other similar engineering colloquial abbreviations would include NBS, NACA, AIEE, ASME, IES, IRE, AICHE, etc.

The Chemical Abstracts list as published in 1946 (*Chem. Abstracts* 40, 9093 (*seq*) 1946) will be followed in reference citations in the publications of the American Institute of Physics with certain deviations which are indicated in part in the list given in the new Style Manual and which will be incorporated in future Chemical Abstracts lists.

The adoption of this system of journal citations will not be very noticeable in the physical journals since it involves little or no change from our previous practice. The combined usage represents probably the majority of technical literature as measured by the some 75,000 society members and the approximately 10⁸ subscriber-pages printed annually. The International Union of Chemistry has indicated its adherence to this list (as have a number of separate societies and journals) so that it is the nearest approach to an accepted international agreement by the actual producers and users.

The system used involves only a few simple rules.

1. The order of words and capitalization are the same as in the original title.

2. Prepositions and conjunctions are omitted except where required for separation or identity.
3. Abbreviations, with the exception of J. (Journal) and Z. (Zeitschrift), are of sufficient length to enable recognition of the word.
4. Only words in the *principal* technical languages are abbreviated with some exceptions for minor languages such as Dutch, Finnish, Celtic, Czech, etc. where the word is of the same generic origin.
5. In general journals with a single word titles are not abbreviated.
6. Colloquial expressions are permitted where no confusion would arise. Exceptions to the general rules are obvious as they occur; for instance "Ind." is used for "Industrial or Industry;" hence neither India nor Indiana is abbreviated. To differentiate between possible titles such as J. Chem. Phys. and J. Chem. and Physics, the "and" is required, i.e. *J. Chem. Phys.* and *J. Chem. and Phys.*

The above system makes it possible for the technical reader to recognize the journal title with ease and to be able to insert journal references in his manuscript with a minimum of reference to citation lists. The system as adopted is not rigid and can be modified to meet requirements as they occur.

It is recognized that the list is not fully acceptable to librarians and to "standards enthusiasts." The former would in some cases prefer citations headed by the city, country, or society publishing the journal, even though not included in the title, or requiring an inversion of word order. The latter group of standards workers would, in the interest of codification, give equal recognition to all languages, resulting in such abbreviations as the following which were taken at random from the ISO/TC 46 journal abbreviation list, "aarsb., chl., god., o.s., vs., chyt., and etr." These abbreviations violate the general principles of "self evident" recognition, especially when in minor languages. The inclusion of such a large number of abbreviations of this type in the available present day "international lists" is some evidence of a tendency of professional "abbreviators" to indulge in inventions rather than to conform to the influence of the needs and requirements of the profession as they develop. It is also unfortunate that on some occasions the "international" lists have been adopted by resolution as the "international standard" without reference to the principal users and without the voting delegates having seen the proposed list. A statement to the effect that "when the list is published by the standards organization, it shall be the international standard" leaves little opportunity for study or change. Failure to conform to such "advanced International Agreements" can hardly be considered as showing an indifference to the advancement of science. Ultimately it would appear that reason and science cannot be legislated and that the accepted practice eventually is that of the majority of technical workers involved.

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