

1937

A Descriptive Glossary of Physics

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Coe College

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Recommended Citation

Weld, Le Roy D. (1937) "A Descriptive Glossary of Physics," *Proceedings of the Iowa Academy of Science*, 44(1), 145-146.

Available at: <https://scholarworks.uni.edu/pias/vol44/iss1/43>

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A DESCRIPTIVE GLOSSARY OF PHYSICS

LE ROY D. WELD

In 1933 I exhibited to the Physics Section of the Academy a crude collection of about 3,500 definitions of physical terms in card-index form, compiled for and used by the physics students of Coe College. The hope was then expressed that means might be found to promote the extension and eventual publication of this glossary.

In the fall of that same year the Executive Council of the American Physical Society recommended the matter to the attention of the Division of Physical Sciences of the National Research Council; whereupon the Executive Committee of the Division appointed a committee of five to consider the publication of a glossary of physical terms. This special committee, composed of A. W. Hull, L. W. McKeehan, F. K. Richtmyer, G. W. Stewart, and L. D. Weld, with the last named as chairman, met in Washington in May, 1934; and upon its recommendation the Division appropriated the sum of five hundred dollars toward the expenses of compilation, appointed the chairman of the Glossary Committee to act as compiler, and directed the committee to select a suitable editor. This selection was made shortly thereafter in the person of Dr. G. S. Fulcher. The chairman was authorized to enlist the coöperation of specialists in the various fields of physics to act as consultants or advisers in the compilation; and a group of physicists, including such men as P. W. Bridgman, C. J. Davisson, W. E. Forsythe, A. F. Kovarik, L. B. Loeb, R. S. Mulliken, Leigh Page, H. N. Russell, J. H. Van Vleck, Anthony Zeleny, and about fifty others of like standing, kindly consented to give their assistance.

With the help of these men, the collection grew to something over 5,000 terms. When the work had progressed for about a year, the editor, Dr. Fulcher, found it necessary to resign, and the compiler was asked to take over his work. In 1936 the Executive Committee of the Division asked the compiler-editor to assume the further responsibility of obtaining a publisher for the Glossary; and with the assistance of members of that committee, a very satisfactory arrangement was finally made with the McGraw-Hill

Book Company of New York. In March of the present year (1937) the manuscript was turned over to McGraw-Hill, and the work of publication is now under way.

The material for the printed glossary has been abridged to include definitions of about 3,250 terms, many items relating to fields closely allied to physics having been eliminated to reduce the cost. The larger original collection is still maintained in card-index form and is easily available for the information of all who care to make inquiry. This flexible index will be kept up to date as the basis of future editions of the published Glossary.

The book stands alone in its field. While some committee reports on definitions in specialized areas, such as electrotechnology, meteorology, and acoustics, have been printed or mimeographed for limited distribution, no general glossary of physics of anything like this scope has ever been published in the English language. Its range extends all the way from the fundamentals of physics, with terms such as *specific heat* or *dielectric constant*, to the most recently developed areas, where are found such terms as *cyclotron* or *Majorana interaction*. An outstanding feature is the extensive use of references to books and periodicals in which the terms are discussed more at length. The definitions include many important laws and formulae, and the values of many physical constants, easily accessible by alphabetical arrangement; for example, the *Klein-Nishina* (scattering) *formula*, the *Boltzmann constant*, etc.

It is hoped that the physicists of Iowa and students, teachers, and research workers in the physical sciences everywhere will find this contribution to the literature of physics, made possible through the generous cooperation of so many, of material value in their respective fields.

DEPARTMENT OF PHYSICS,
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