

Comparative Analysis of Terms Related to Chemical Technologies in English and Uzbek

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Abstract: This article highlights such problems as the study of modern chemical terminology, which is a large, branched, well-organized system, including terminological units that are very heterogeneous in terms of typological features.

Keywords: Chemical terminology, term, linguistics, phenomenon, quantum chemistry, thermochemistry, geochemistry, locants, organic compounds.

INTRODUCTION

Modern chemistry is such a vast area of natural science that many of its sections are essentially independent, albeit closely interrelated, scientific disciplines. On the basis of the substances, objects and phenomena under study, chemistry is subdivided into inorganic and organic. Physical chemistry, including quantum chemistry, thermochemistry, electrochemistry, chemical thermodynamics, and chemical kinetics, deals with the explanation of the essence of chemical phenomena and the establishment of their general laws on the basis of physical principles and experimental data. Analytical and colloidal chemistry are also independent sections. The technological foundations of modern industries are set forth in chemical technology - the science of economical methods and means of industrial chemical processing of finished natural materials and the artificial production of chemical products that are not found in the surrounding nature¹.

MATERIALS AND METHODS

The combination of chemistry with other related natural sciences is biochemistry, cosmochemistry, geochemistry, crystal chemistry, radiochemistry, photochemistry, medicinal chemistry, pharmacology: and many others. Within the framework of this study, terms from all sections of chemistry were studied, as well as terms that are often found in ecology, in industrial and agricultural production and in everyday life².

RESULTS AND DISCUSSION

The chemical language, partially using mathematical symbols and general physical terminology, has one striking feature - the nomenclature. No other branch of natural science has such a system that has been created in chemistry, where only several million organic compounds are known, each of them must have its own nomenclature designation.

Chemical nomenclature is seen as a kind of artificial language. The elementary and indivisible particles of this language are chemical morphemes, service signs and locants. In total, there are several thousand different morphemes, including trivial (i.e. non-systematic, although recognized

¹ Berkutov V.M. Development of mathematical education of the Tatar people: author. dis. Dr. ped. Sciences / V.M. Berkutov. Kazan, 2013. -- 35 p.

² Vinokur G.O. On some phenomena of word formation in Russian technical terminology / G.O. Vinokur // Proceedings of the Moscow Institute of History, Philosophy and Literature. T. 5. -M., 2019.

within the framework of this nomenclature). There are much fewer service characters: hyphen, comma, period, apostrophe, parentheses, square brackets and angle brackets.

Locants are numbers, as well as some Latin and Greek symbols that perform the function of address pointers to a particular fragment of the structure of a chemical compound (i.e., they represent indices of operations that must be performed on morphemes by components of a chemical structure).

So, modern chemical terminology is a large, branched, clearly organized system, including terminological units that are very heterogeneous in terms of typological features.

... At present, when chemistry in Uzbekistan is one of the leading industries, the Uzbek language, along with Russian, can serve as the language of scientific research and innovative technologies in the field of chemistry. The rapid development of the language of chemistry, the emergence of a large number of new terms provide a basis for the study of a very complex terminology system in the Uzbek language, which requires definition of boundaries, systematization, and standardization of terms. Such opportunities made it necessary to streamline and comprehensively unify chemical terms in the Uzbek language. However, an effective unification of the terminology system should be based on preliminary linguistic research³.

The monographic study of chemical terms in the Uzbek language helps to identify the features of lexical-semantic groups, structural-word-formation models, genetic layers, problems of the formation, development and improvement of chemical terms as part of the lexical system of the Uzbek language. Speaking about the formation of terms as a process of creating special names, it is necessary to see the difference that is essential for chemical terminology, when terms are created from ready-made standard parts, i.e. term elements, and when they are created by means of morphological word formation - by suffixing - according to existing models. The term elements are morphemes of Greek-Latin origin, which have become an international fund and have been fully mastered by all national languages. But with all the variety of sources for the formation of terms, the main source of creation and replenishment of resources of terminological vocabulary is the Uzbek national language itself, its word-formation system.

Most of the complex chemical terms arose through complete and incomplete tracing of terms in the Russian language. In the formation of such terms, ready-made international term elements are most often used: anti-, macro-, micro-aqua, etc.

A small group is made up of complex terms with a compositional meaning of components, i.e. paired words. They are formed according to the models "noun + noun", "adjective + noun", "adjective + adjective", etc⁴.

CONCLUSION

Based on the studied material, it can be stated that the chemical terminology in the Uzbek language is one of the richest and most diverse terminological systems of the Uzbek language, it was formed over many centuries. This terminology is a fairly informative lexical and semantic system for studying the processes and patterns of etymology, nomination, word formation! Chemical terminology in the Uzbek language is also characterized by a strict internal consistency of terms,

³ Vozdvizhensky G.S. Pages from the history of the Kazan chemical school / G.S. Vozdvizhensky. Kazan, 1960. -- 64 p.

⁴ Akhmetov NS Inorganic chemistry: textbook for students 8 - 9 grades. schools with in-depth study of chemistry: 2 hours / N.S. Akhmetov. H: 1.2 ed. -M.: Education, 2010. -- 208 p.

which in turn is consistent with the system of the general literary language and modern trends in its development.

It is impossible to cover the terminology of all branches of chemistry in one work, which determines further prospects for the study of chemical terminology in the future.

REFERENCES

1. Arbuzov A.E. Selected works on the history of chemistry / AE Arbuzov. - M.: Nauka, 2015.- 268 p.
2. Akhmetov NS Inorganic chemistry: textbook for students 8 - 9 grades. schools with in-depth study of chemistry: 2 hours / N.S. Akhmetov. H: 1.2 ed. -M.: Education, 2010. -- 208 p.
3. Berkutov V.M. Development of mathematical education of the Tatar people: author. dis. Dr. ped. Sciences / V.M. Berkutov. Kazan, 2013. -- 35 p.
4. Biographies of great chemists / ed. K. Heinig. M., 2011. -- 412 p.
5. Vinogradov V.V. Problems of literary languages and the patterns of their formation and development / V.V. Vinogradov. -M.: Nauka, 1967. 134 p.
6. Vinokur G.O. On some phenomena of word formation in Russian technical terminology / G.O. Vinokur // Proceedings of the Moscow Institute of History, Philosophy and Literature. T. 5. - M., 2019.
7. Vozdvizhensky G.S. Pages from the history of the Kazan chemical school / G.S. Vozdvizhensky. Kazan, 1960. -- 64 p.
8. The emergence and development of chemistry from ancient times to the 17th century. General history of chemistry. Moscow: Nauka, 1980. -- 399 p.