

TEXT A. D.I. MENDELEYEV — PRIDE OF RUSSIAN SCIENCE

The list of spheres of knowledge which Mendeleyev's genius touched upon is enormous. Chemistry, physics, earth sciences, metrology, economics, metallurgy and much else.¹ Mendeleyev's legacy comprises 25 volumes, a third of them devoted to chemistry.

D.I. Mendeleyev, the outstanding Russian scientist, was born in Tobolsk in 1834. In 1850 at the age of 16 he entered the Pedagogical Institute in St. Petersburg to study chemistry. Five years later he graduated from it with a gold medal and was invited to lecture on theoretical and organic chemistry at St. Petersburg University. To continue his studies and research Mendeleyev was sent to Germany in 1859. While living abroad he made a number of² important investigations.

The year 1868 was the beginning of his highly important work "Fundamentals of Chemistry". When working at the subject Mendeleyev analysed an enormous amount of literature, made thousands of experiments and calculations. This tremendous work resulted in the Table of Elements consisting of vertical groups and horizontal periods. Mendeleyev was the first to suggest a system of classification in which the elements are arranged in the order of increasing atomic weights. The main idea of the Periodic System is the idea of periodic repetition of properties with the increase of the atomic weights.

Arranging all the existing elements in the Table Mendeleyev had to overcome great difficulties, as a consider-



able number of elements were unknown at that time and the atomic weights of 9 elements (out of 63) were wrongly determined. Thanks to his investigations Mendeleev was able to predict not only the existence of a few unknown elements but their properties as well. Later the elements predicted were discovered.

More than 350 works created by Mendeleev deal with a great many subjects. Combining theory with practical activities he carried out enormous research in coal, iron and steel industries in Russia. He died in 1907 at the age of 73.

The achievements in chemistry and physics at the end of the 19th and the beginning of the 20th century made it necessary to reconstruct the Periodic Table taking into account³ new discoveries.

Time is the severest judge in science. After more than 100 years of its existence, the Periodic Law has preserved its full value and is being constantly developed with each new discovery.

Notes on the Text

1. **and much else** — и многое другое
2. **a number of** — некоторое количество, ряд
3. **to take into account** — принимать во внимание

Words to Be Learnt

achieve *v* — достигать
achievement *n* — достижение
amount *n* — количество, величина
arrange *v* — располагать
coal *n* — уголь
combine *v* — соединять
consist (of) *v* — состоять (из)
create *v* — создавать, творить
deal with (dealt) *v* — иметь дело с
determine *v* — определять
enter *v* — поступать
graduate *v* — заканчивать

investigate *v* — исследовать
investigation *n* — исследование
law *n* — закон
order *n* — порядок
overcome (overcame; overcome)
v — преодолевать
predict *v* — предсказывать
repetition *n* — повторение
result in *v* — кончаться, иметь
результатом, приводить к
suggest *v* — предлагать