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CONTRIBUTION OF DMITRI IVANOVICH MENDELEEV IN SCIENCE AND TOMSK POLYTECHNIC UNIVERSITY

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Annotation: Chemistry is important part of science and human daily life. The main reform came in the chemistry due to versatile Russian scientist

Dmitri Ivanovich Mendeleev and discovered the Periodic Table. He reformed the Oil industry, Taxation, transportation in Russia and inaugurated the first Technical Institute in Serbia (Tomsk Polytechnic University). In the paper, we highlighted the incredible work of Dmitri Mendeleev in Science and his dedication to Russian Society.

History: The lifestyle of this particular extremely versatile person was actually extremely rich in activities. Dmitri Ivanovich Mendeleev was born on 8th February, 1834 in Tobolsk, Siberia, Russia. His research Mendeleev showed his tenacity, task and he showed an interest in knowledge of subject matters. In 1849, Mendeleev earned a degree from the gymnasium at the age of 15, as well as in 1855, from the Principal Institute in St.-Petersburg along with gold award for excellent work. In 1856 at St. Petersburg Imperial institution, he defended two theses: 'On Isomorphism and Specific Volumes and 'On the Structure of Silica Compounds'.

During research (idea as well as record of chemistry, as well as organic chemistry) as private teacher of the college, in 1859 Mendeleev went to Europe, where he joined to a lot of colleges, met well-known experts, such as Berthelot, Würtz, Dumas, Liebig, Bunsen, Erlenmeyer as well as Kirchhoff, developed a personal laboratory at Heidelberg, he took component in the First Chemical Meet up in Karlsruhe. During the course of his work in Heidelberg, Mendeleev designed a variety of tools (including his renowned Mendeleev's Phenomenon) as well as found a phenomenon of absolute boiling point [1]

He came back to St. Petersburg in 1861, he started to write a book 'Organic Chemistry', and he was rewarded from the Demidov Award in 1862. In 1861-1862 as the publisher of the interpretation of Wagner's 'Modern technology', Mendeleev created for this chapter added sections on Starch, Glucose, Alcohol and Glass Market. His research investigation in the technology Mendeleev served as a researcher at the Technology Chair of the Educational institute and also a professor at St. Petersburg Practical Technological Institute.

Concurrently, he involved in key issues of the physical chemistry of fluids and also solutions and also in 1865 he obtained his PhD from the Educational Institution for his Doctorate thesis "On the Compound of Alcohol and Water" and also the posture of a teacher on technological chemistry at the College. Mendeleev helped make an incredibly necessary addition to the development in October 1868 of the Russian Chemical Community, which 10 years later on was actually enhanced to the Russian Physical and Chemical society with two independent divisions- physical and also chemical. He composed the policy for the Russian Chemical Society as well as offered as the head of state of the Russian Physic-Chemical

Community in 1883-1887. Considering that 1932, the National Chemical Society possesses the name of Dimitri. I. Mendeleev.

Mendeleev acquired a new responsibility to show students along with the program of inorganic chemical, the subject matter relatively new for themselves in 1868. Surprised due to the lack of suited guides (to become suggested for pupils), he determined to write his very own course. Such a tip triggered the look of his most well-known Book 'Basic of chemistry' ('Osnovy Khimii'). This two volume handbook was printed stepwise (two issues of the very first volume in 1868-1869, et cetera in 1871), survived 13 editions (8 during the course of his life) and also was actually later converted in to German, British as well as French. Every new edition was extended and also strengthened by the writer, Focus on this book (as well as its own further irreversible renovations) was actually the primary cause for the breakthrough and also potential progression of the Periodic System.

However, Mendeleev printed initial draft of the Periodic table with all 63 known aspects on March 1869. (In that early variation the rows of halogens and also alkali steels were actually collaborated to stay away from the middle of the dining table.) On March 13, this little printout (150 duplicates in Russian and fifty in French) was delivered to his colleagues. Mendeleev investigated the improvement of nuclear quantities of factors and oxidation come in their best oxides), which he verified to be regular function of atomic body weight. Lastly, he recognized the difference in the nature of odd and as well as drew a graph (as it was eventually utilized in most books.

The background and also further development of the Periodic Table is actually popular. The stringent rule found by Mendeleev needed not merely improvements of some known atomic weights, more importantly, the existence of some yet undiscovered aspects along with specific atomic weight as well as properties. Mendeleev have been actually found out during the course of his lifestyle through European chemists.

His scientific authority had actually grown not simply in Europe (particularly after the remarkable story along with gallium in 1875) but in Russia. He was chosen to the St. Petersburg Academy of Sciences as a participant member in 1876. He regularly got in touch with the authorities as well as exclusive company, and also one of the subjects was actually oil industry. After 1871, Mendeleev's rate of interests also transformed to the complications of much higher education as well as alright crafts.

In 1880 (right after the discovery of scandium as well as the proof of its identity to eka-boron), Meyer initiated a disput on the concern of the top priority on the exploration of the Periodic Table, and also Mendeleev needed to create a logical respond. In Nov 1880, Mendeleev made an effort to tally to

the complete member of the National Institute of Sciences without excellence (he got 9 ballots against 10 for F. Beilstein).

The scientific neighborhood definitely objected versus the decision of the Institute, and also numerous overseas establishments and also cultures chosen Mendeleev as their full or even honorary participant. The Royal Society awarded him a Davy award (though jointly with Meyer).. His very early tips on exact as well as indefinite compounds (from his magisterial as well as doctorate theses) right now developed to the chemical concept of remedies, summed up in the discourse "The Research of Densities of Aqueous Solutions" (1887).

Mendeleev made pair of journeys to Caucasus for the assessment of oil sector in Baku and recommended new techniques of massive oil utilization in 1886. In 1888, he checked out the coalmines as well as plants in Donbass as well as recommended some vital financial decisions (brand-new credit report as well as rent out policies, canceling any kind of tax for a many years, advantageous transport tariff and so on). Due to the fact that 1889, as the member of the Government Authorities of Trades and also Production, Mendeleev attempted to arrange all achievable tariffs in a kind of body. This result (understood as the Mendeleev tariff) was actually published as a 700 pages book.

He went to the Urals and wrote a book about strategy of its own industrialization. He completely elaborated a program of reforms in learning with recommendations to cancel assessments. He teamed up with Russian Navy and supported to open the first ship-testing basin, although the ministry rejected another his job an icebreaker of his personal concept to check out Arctic. He wrote chapters to the well-known Encyclopedia by Brockhaus and Efron.

Notably, initially Dmitri Mendeleev was opposed to the idea of independent technological institute in Tomsk. He thought that the foundation of technical education in Siberia would be laid by a separate faculty of industrial knowledge within Tomsk State University. According to Mendeleev, «combining philosophical and industrial knowledge under one roof presents beneficial conditions not only for the purposes of higher enlightenment, but also for a new university in a remote region, such as Siberia ». Moreover, Mendeleev thought that the Institute would experience issues with student recruitment and academic staff, since the University would be located far away from the capitals.

Ministry of Public Education deemed Mendeleev's suggestion too daring. It contradicted the popular belief at the time that classic university education should not be combined with applied knowledge taught in

institutes. Hence the decision to establish a separate Tomsk Technological University.

The position of the first Director of Tomsk Technological University was offered to Dmitri Mendeleev, which he had to decline due to health issues, suggesting his former student Efim Zubashev as an alternative candidate. However, Mendeleev actively participated in the establishing process: he helped to fit the laboratories and rooms with the most advanced equipment, selected academic personnel.

In gratitude for Mendeleev's invaluable help and recognition of his merits in development of higher education in Siberia, the Council of Tomsk Technological University selected Dmitri Mendeleev as a First Honorary Member. The voting took place on January, 22, 1904, shortly before Mendeleev's 70th anniversary.

Result: Dmitri Ivanovich Mendeleev is a Great Russian scientist who has manifested himself in many areas of natural science and industry. His most significant contribution to world science is the periodic law of chemical elements, systematizing the existing knowledge about the properties of elements, allowing predicting the discovery of new elements and becoming a significant step towards understanding the structure of the atom.

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