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The Periodic Table: A Comprehensive Overview of Its History, Modern Insights, and Elemental Classification

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Abstract: *The periodic table, an iconic representation of the fundamental building blocks of matter, has undergone a remarkable evolution since its inception in the 19th century. This paper provides a comprehensive examination of the history of the periodic table, its modern updates, and the intricate classification of elements. From Dmitri Mendeleev's pioneering work to the synthesis of new elements in contemporary laboratories, we delve into the fascinating journey of organizing the elements. We explore how the periodic table's structure and classification systems have evolved to accommodate our expanding knowledge of the elements. This paper aims to enhance the understanding of this vital tool in chemistry and to highlight the ongoing relevance of the periodic table in current scientific research.*

Keywords: Periodic Table, Classification of Elements, Mendeleev, Modern Periodic Table, Element Synthesis

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