This section of the text discusses the periodic table of elements, focusing on the atomic number, mass, and the elemental properties such as stability and isotopic composition. It highlights the importance of these elements in various scientific fields and the ongoing efforts to discover new elements.

The periodic table is a fundamental tool in chemistry and physics, providing a structured overview of the known elements. Each element is represented by a symbol, and its atomic number determines its position in the table. The atomic mass is also indicated, which is crucial for understanding the element's isotopes and their applications.

The text references Table 4.1, which provides detailed information about the elements, including their atomic numbers, masses, and other relevant properties. This table is an essential resource for researchers and students alike, offering a comprehensive view of the periodic table.

The atomic mass is defined as exactly 12 unified atomic mass units (u), which is the mass of a carbon-12 nucleus. This standardization ensures consistency in scientific measurements and calculations.

The text also mentions the periodic table is now complete, indicating a significant milestone in the field of chemistry. The periodic table's evolution is a testament to the ongoing scientific journey, driven by curiosity and the desire to understand the universe at a fundamental level.

In summary, the periodic table is a cornerstone of modern science, providing a framework for understanding the properties and behaviors of elements. Its completeness is a testament to the achievements of scientists and their dedication to uncovering the secrets of the universe.