

24. Elements Module

The basic chemical and physical properties of the elements have a decisive effect on the thermochemical properties of compounds. For example, the electronegativity values of the elements have a strong effect on the chemical bonds between the elements in all chemical compounds. Therefore, the periodic system of elements sets the base for thermochemistry.

The Elements module offers an element **database** in spreadsheet format with some 56 different element properties, see **Fig. 2**. Users can easily add their own data to this table in the same way as in MS Excel applications. This data may be saved for later use by selecting **File Save**. The default name of the workbook is Element4.ele.

Diagram enables the user to draw illustrative diagrams on the basis of the selected property. Density has been selected in the example shown in **Fig. 3**.

The diagram shows at a glance the greatest and smallest values in the periodic system. The exact number values behind the spheres may be shown by clicking the element square or label in the diagram. The diameter of the sphere shows the magnitude of the value compared to the maximum value. The maximum value creates a sphere, which fits exactly in the element box in **Fig. 3**.

The **Fix Left 3 Columns** selection, **Fig. 2**, fixes the two left columns. This makes it possible to see the property headings and units for all the elements when scrolling the element sheet.

The normal copy and paste properties as well as format and printing functions are available as in other HSC modules. The workbook form may be resized by dragging the form boundaries using the mouse or from the icons at the top right corner of the form.

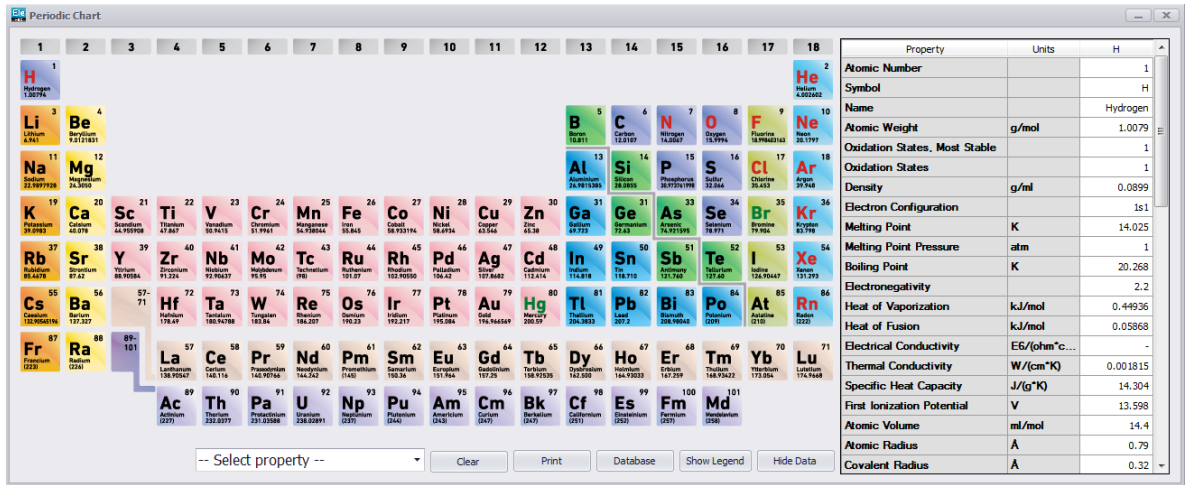


Fig. 1. Periodic chart first page.

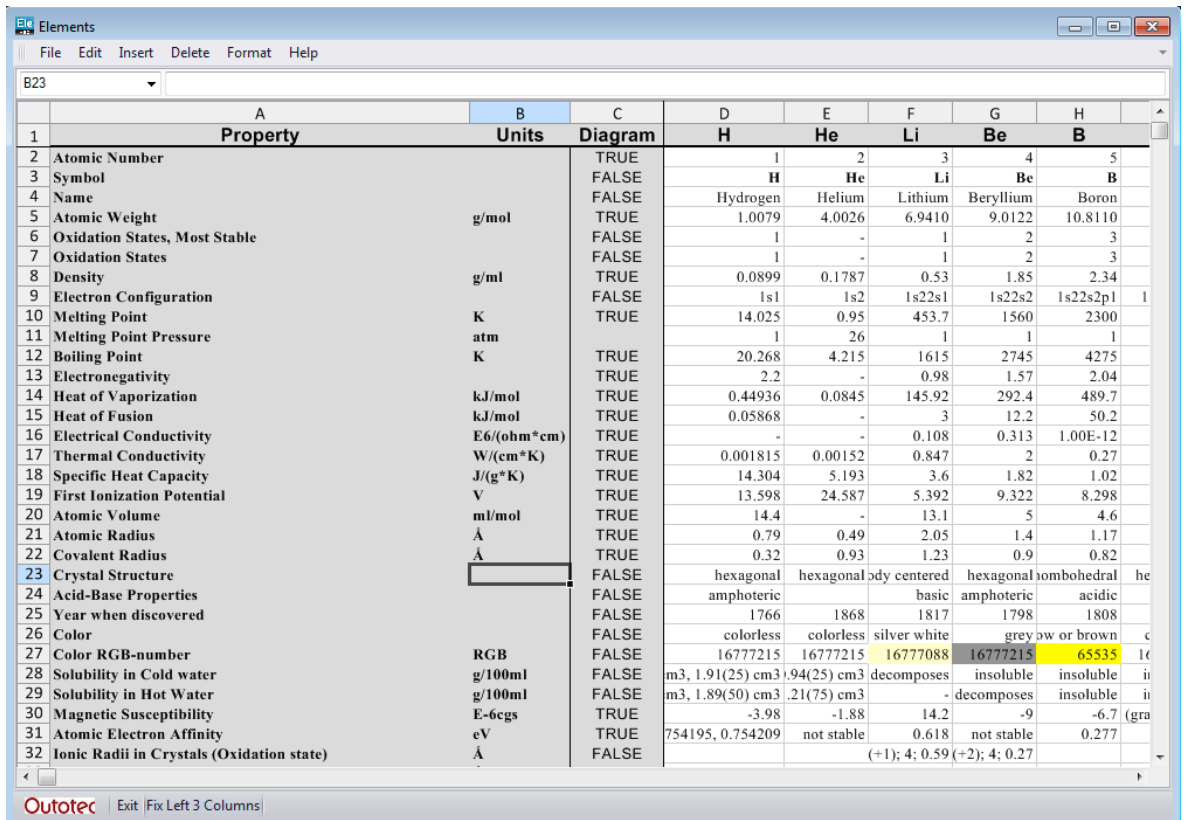


Fig. 2. The Elements module contains several basic element properties. The selected property can be illustrated in graphical format by pressing **Database**.

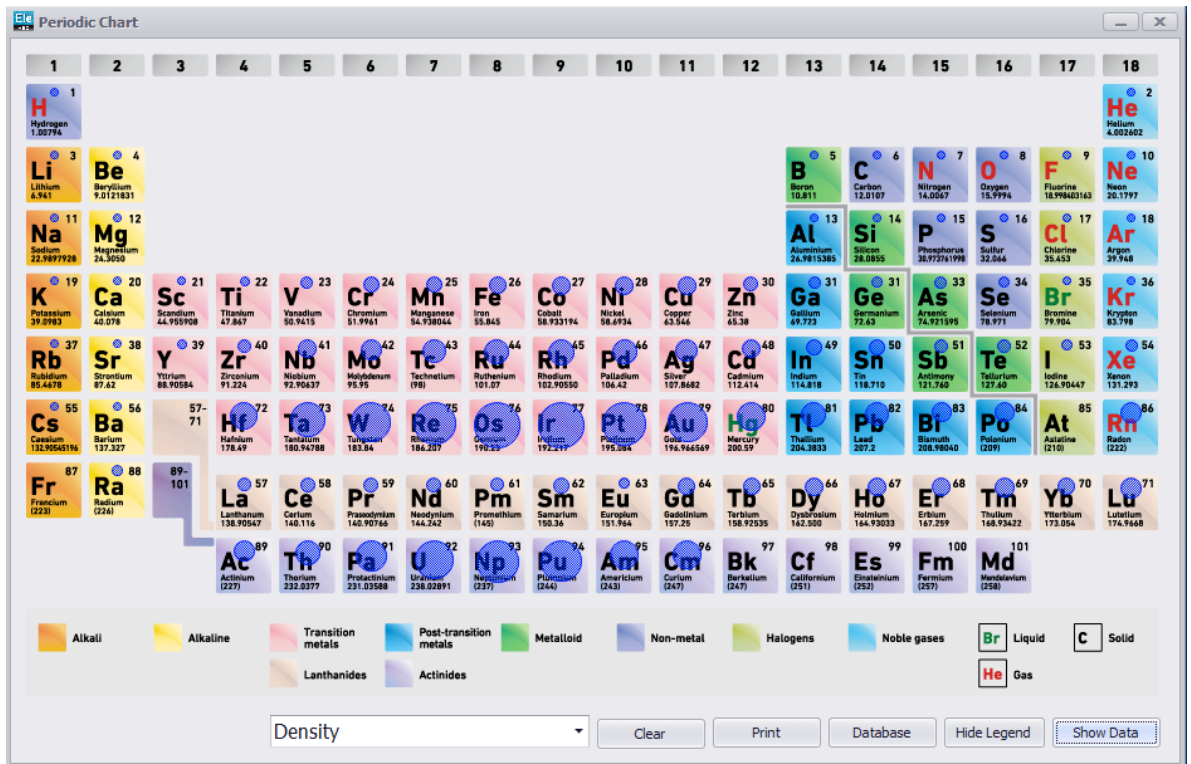


Fig. 3. The properties of the elements may be illustrated in graphical format. The values of the properties can be shown by double-clicking the element. Show Legend is activated as well as Hide Data.