nesium, and it is thought that the process of reduction in the leaf may depend upon the characteristic properties of this element; at all events, in organic chemistry, magnesium, when employed in Grignard's reaction, is one of the most effective agents to accomplish reductions.

In like manner, hæmoglobin contains iron, and the capacity of hæmoglobin to unite with oxygen, and as oxyhæmoglobin to carry it from the lungs to the tissues is unquestionably due to the chemical behavior of that metal. Other similar metallic elements, notably copper in the class of compounds known as hæmocyanines, fulfill a similar function in lower animals.

Phosphorus in organic union is an essential constituent of a great variety of the chemical structures of living organisms, — the nucleic acids, which appear to be not less important than fats, carbohydrates, and proteids themselves in both animal and plant cells, contain phosphorus as an essential constituent. Thus phosphorus follows close upon nitrogen, after carbon, oxygen, and hydrogen, as structural material in biological chemistry. This same element also occurs in many other compounds, the simplest derivative of such bodies being glycerophosphoric acid,