

## **What is chemistry and why is it important?**

In spite of its bad reputation chemistry is the 'central science' which is responsible for many of the benefits of modern science, medicine and technology. Although the term 'chemical' is almost a term of abuse in the nutrition industry, in science chemistry is one of the three most fundamental disciplines apart from physics and biology. In fact it is placed between these two fields in terms of the scale of complexity at which it operates and as such chemistry serves as the meeting point between the three basic sciences.

The lecture will provide an overall survey of this the most neglected and misunderstood of the basic sciences, focusing on fundamental issues as well as technological applications.

Taking a historical perspective, the lecture begins with a brief excursion into alchemy, the precursor to chemistry, moving on to the triumphs of the chemical revolution including the work of Lavoisier who is regarded as the 'father of chemistry'.

It then moves on to the discovery of the periodic system, which provides the framework and unifying backbone for modern chemistry. The development of chemistry then merges with that of modern physics and discoveries such as X-rays, radioactivity, the electron and the structure of the atom, all of which contributed to a deeper understanding of chemistry and in particular of the periodic table.