

The Periodic Table of the Chemical Elements

Its historical development, its significance, its applications, the way it is featured in popular culture, by artists etc. There has been a veritable explosion of interest in the periodic table and the elements in popular science and popular culture generally. For example, major advertising campaigns by clothes outlets, J. Crew and The Gap. The highly successful TV series, *Breaking Bad*, which ran to four seasons. All of them have used the periodic table and the symbols of elements to good effect.

I am the leading expert on the science behind the periodic table and have written the definitive book on the subject for Oxford University Press. The book especially focuses on the historical development of the periodic table and the status of this knowledge in modern science. I have also written “A Very Short Introduction to the Periodic Table”, a more popular and condensed version of the initial book. In addition I am the author of “A Tale of Seven Elements”, and “30-second Elements”, two books written for a general audience.

My first book has been reviewed positively in over 60 scientific journal and magazine articles and a number of websites. Please see my own website for references.

I have spent the past few years travelling to many places around the world to lecture on this subject. See my website for a list of public lectures. My lecture begins with a brief survey of how the ancient Greek philosophers thought about the elements, moving on to the chemical revolution of Lavoisier at which time a new understanding of the concept of ‘element’ was reached. John Dalton’s atomic theory and the assignment of atomic weights to reach of the elements was the first step in attempts to compare the elements and to order them into a coherent framework, namely the periodic table.

The discovery of the periodic table took place in the 1860s and was carried out independently by at least six individuals in different countries around the world. The development of physics led to an understanding of the structure of the atom and an explanation of why the periodic table has the particular form that it has. This knowledge continues to develop as does the discovery of new elements with ever higher atomic numbers. I recently had an article published in *Scientific American* on the topic of the ‘Superheavy Elements’.