

# Professor Martyn Poliakoff, CBe FRS, Research Professor in Chemistry, University of Nottingham, UK



## Area of expertise: Green Chemistry

**Speciality:** seeking to create cleaner and more sustainable processes for making, using and disposing of chemicals, minimising the use and generation of hazardous substances.

**Main area:** chemical applications of supercritical fluids, particularly supercritical CO<sub>2</sub>, [compressed Carbon Dioxide] until it is almost as dense as a liquid. it is used as a commercial and industrial solvent due to its non-toxicity and low environmental impact.

**Passion:** Martyn has stated, "I have become increasingly involved in the practical applications of green Chemistry, which has led to an interest in Chemical engineering". Aware of the pitfalls around the world in making medicines and plastics readily available, Professor Poliakoff and his colleagues are working with researchers in developing countries to make a change. From part of this research has developed 'Driving innovation in Chemistry & Engineering'.

**Video practicals** were designed to share the research between the various bodies and at the same time improve public perception of young people in Chemistry and Engineering. Working with video journalist Brady Haran, Professor Poliakoff and his colleagues have become what are arguably Chemistry's first internet stars.

Here is a small selection available from [periodic videos](http://www.periodicvideos.com/). The following videos can also be seen on [YouTube](https://www.youtube.com/) as can many others.



<http://www.periodicvideos.com/>

Tables listing the chemical elements have been around since the 19th century – this version has a short video illustrating each element.



[http://www.periodicvideos.com/videos/feature\\_sydney\\_harbour\\_bridge.htm](http://www.periodicvideos.com/videos/feature_sydney_harbour_bridge.htm)

One from a series of videos covering Martyn's visit to Australia. Here he explains the construction of Sydney Harbour Bridge – the metal used and the properties of the metal that had to encompass expansion and contraction caused by temperature change.

Links to others from the Australian series will be displayed to the right once video is downloaded.



[http://www.periodicvideos.com/videos/feature\\_chemical\\_reactions.htm](http://www.periodicvideos.com/videos/feature_chemical_reactions.htm)

A compilation of chemical reactions that the group has performed over the last few years.



[http://www.periodicvideos.com/videos/feature\\_brazil\\_bioethanol.htm](http://www.periodicvideos.com/videos/feature_brazil_bioethanol.htm)

The Professor discusses bioethanol and fuel in Brazil.



[http://www.periodicvideos.com/videos/feature\\_professor\\_questions2.htm](http://www.periodicvideos.com/videos/feature_professor_questions2.htm)

The Hindenburg and pet toads come up as students at a US middle school quiz The Professor.



<http://www.sixtysymbols.com/videos/emc2.htm>

Probably the most famous equation in science.