BUCKMINSTERFULLERENE

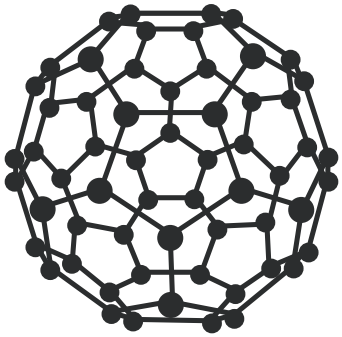
Sir Harry Kroto, one of the winners of the 1996 Nobel prize in chemistry, passed away recently. Here, we take a look at the molecule that won him his Nobel prize, C_{60}, or Buckminsterfullerene.

C_{60} – 'BUCKYBALLS'

Football-shaped form of carbon

Truncated icosahedron
12 pentagonal faces, 20 hexagonal faces

Nobel Prize: 1996

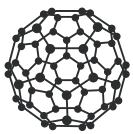


C_{60} occurs naturally, and is found in soot in small quantities. It's also been observed in space. It's named after Buckminster Fuller, an architect whose geosedic domes it resembles. The first of the fullerenes to be discovered, there are now a number of recognised types, including carbon nanotubes.

A BRIEF HISTORY OF BUCKMINSTERFULLERENE

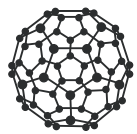
1970 – Existence of the C_{60} molecule proposed by the Japanese scientist Eiji Osawa.

1985 – C_{60} discovered during work investigating carbon clusters formed in conditions similar to those in red giant stars.



1990 – Astrophysicists Wolfgang Krätschmer and Donald Huffman develop a method to make C60 in larger quantities.

1996 – Nobel prize in chemistry awarded to Harry Kroto, Robert Curl, and Richard Smalley, for discovery of fullerenes (including C_{60})



2010 – Buckyballs detected in space; they could be responsible for mystery interstellar absorptions.