Inorganic Stamp Corner
by
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The Most Beautiful Molecule

The traditional description of the allotropes of carbon was limited for a long time to the solid-state structures, physical properties, and various applications of graphite and diamond. That changed dramatically in 1985 with the discovery of buckminsterfullerene (C_{60}), a highly symmetric cage-like molecule with 60 carbon atoms as the vertices of a truncated icosahedron. Its 20 hexagonal and 12 pentagonal faces resembled a soccer ball and, tellingly, the original communication describing the generation and detection of C_{60} (Kroto, H.W. *et al. Nature* **1985**, *318*, 162-163) included an actual picture of one!

Even though macroscopic quantities of C_{60} would not be available for another five years (Krätschmer, W. *et al. Nature* **1990**, *347*, 354-358), the new allotropic form of carbon captured the imagination of chemists and many other scientists, who envisioned a vast array of potential applications for it. Six years later, the 1996 Nobel Prize in Chemistry was awarded to Robert Curl, Harold Kroto, and Richard Smalley "for their discovery of fullerenes". Incidentally, *The Most Beautiful Molecule* is also the title of an insightful and lively book about the discovery of the buckyball, written by Hugh Aldersey-Williams (John Wiley & Sons, Inc., 1995).

The postage stamp that illustrates this note was issued in Great Britain in 2001 to commemorate the centennial of the Nobel Prizes. Interestingly, the stamp was printed with a special thermochromic ink that changes color when warmed. The image on the right shows a scan of the same stamp after holding it between two fingers for 5-10 seconds, a simple procedure that reveals the presence of a black sphere inside the molecule of C_{60}. This is presumably an atom of a noble gas or a metallic element and was meant to represent an endohedral fullerene, a remarkable bit of science displayed on a postage stamp!