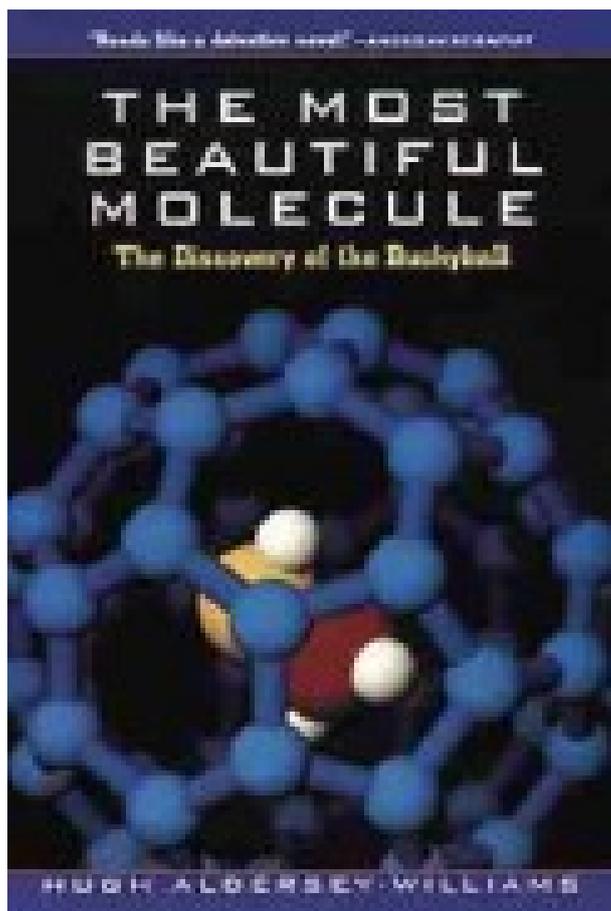


The Most Beautiful Molecule



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The Most Beautiful Molecule "The molecule, buckminsterfullerene, is beautiful physically and intellectually. Its qualities, and even some of its properties, can be appreciated instantly and intuitively by nonscientists. Its uniqueness is bound to lead to novel applications-superconductivity is the leading contender at the moment." "The commercial potential of buckminsterfullerene has heightened the excitement and controversy in recent years, while the exact nature of the discovery process in 1985 has been the subject of a heated feud between the British and American scientists involved."-Hugh Aldersey-Williams Ten years ago, the discovery of buckminsterfullerene, a previously unknown form of carbon, stunned the scientific community, as much for the discovery itself as for the manner in which it came about. In the words of author Hugh Aldersey-Williams, it was an example of "classic bootleg science". The work was done on the back of other, funded projects, and when time would allow. Yet its commercial implications are probably immense.

Now, with objectivity and insight, The Most Beautiful Molecule recounts the events leading up to this momentous discovery and chronicles the ongoing, often frenzied aftermath. Hugh Aldersey-Williams leads us on a thrilling expedition to the very forefront of modern chemistry research. Houston, Texas, 1985. Two industrious chemists discover a previously unknown form of carbon and christen it buckminsterfullerene, for

its striking resemblance to American architect Richard Buckminster Fuller's geodesic domes. This unusual molecule-also known as the buckyball-is composed of 60 carbon atoms arranged in a hollow sphere, with hexagonal and pentagonal configurations similar to those found on a soccer ball. Its near-perfect symmetry is just one reason why scientists have since dubbed it "the most beautiful molecule." The discovery of buckminsterfullerene-by American physicist and chemist Richard Smalley and British physical chemist Harry Kroto-rocked the scientific community. After all, generations believed graphite and diamond to be the only pure forms of carbon. How had this third form gone undetected?

In fact, the actual discovery was merely the beginning of an intense-and ongoing-quest to master this newest form of the most basic of elements. Confirmation would take five years and launch an unprecedented flood of investigation and investment. The unique physical structure of buckminsterfullerene-a "cage" into which atoms of other materials may be inserted-had huge commercial potential and inspired scientists, industrial laboratories, and corporations alike. Backed by such giants as AT&T, DuPont, Exxon, and IBM, a highly competitive search for practical applications began-and continues. Possibilities range from the creation of a revolutionary rocket fuel to nanotechnology-the construction of microscopic "molecular machines"-to developments in the fight against AIDS. Here, then, is a fascinating, multilayered look at one of the most important scientific findings of our time. *The Most Beautiful Molecule* is a brain-teasing detective story, a marvelously detailed, inside look at the workings of the scientific community, and an exciting contemplation of what lies ahead.

From the forefront of research in modern chemistry, author Hugh Aldersey-Williams offers, in his own words, "a celebration of the intimate world of physical science and its practitioners."

Denne bloggen finnes ikke lenger! Hei, denne bloggen ble lagt ned april 2017. Takk for følget!