

Buckyballs



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BUSTER**

Buckminsterfullerenes or buckyballs are the next step in finding the cure to cancerous tumors. Buckyballs are made out of nano tubes and look like a spider-web stuck together to form a ball. They were discovered on accident when scientists were trying to vaporize carbon. The unnamed atom product was appealing to the eye so they did further research. Based on their shape, buckyballs were named after an American architect Buckminster Fuller who built dome shaped buildings similar to the eye as buckyballs. Are there other uses buckyballs can be used for?

What Buckyballs Do Present Day Buckyballs (as shown above) are balls that look like empty soccer balls. The connectors are nano tubes, and are empty inside. Doctors use buckyballs now to fight tumors that carry cancers. Medicine is inserted into the hollow tubes and tumor patients consume them. Buckyballs are copying viruses. Viruses are strong enough to break through the good blood cells and overtake the body with the sickness they carry. Buckyballs do the same thing, except they break through the cells walls of cancer cells, stopping the spread of swiftly spreading cancer cells, and killing the cells.

Buckyballs have also been tested on diabetic rats to see if buckyballs could drop blood pressure, the test was successful and the rats experienced no side effects. What do Buckyballs look like? Buckyballs look like a spider web put together to form a ball, the inside is empty. A soccer ball and a Buckyball are almost exactly the same, in looks. Buckyballs are made out of nano materials, which mostly include carbon; 20 nanometers thick. Buckyballs include 60 molecules and the scientific name for buckyballs are C_{60} 's.

Past of Buckyballs Uses in the past Buckyballs were used for building. Their strength and durability was very strong, so they were commonly used to help build foundations. Although, there was a lot of research put into the discovery of buckyballs, there wasn't much use for them at that point in time. The Discovery Buckyballs were discovered in 1985, by Harold W. Kroto, Richard E. Smalley, and Robert F. Curl, Jr. What they did was, vaporize carbon by shooting a laser beam into the carbon air. The carbon vapor clouded together and made clusters of carbon.

Each molecule is referred to as an atom, and if they vaporized enough carbon they could make the clusters of carbon have at most 70 carbon atoms. They found that the carbon atoms made a shape that looks like a hollow soccer ball. After further research, scientists found that the tubes that make the shape, are hollow, and made out of nano materials. Nano materials are materials that are miniatures of miniatures, (they are tiny!!!!!!!!). Discoveries are made later, that could be the next step to stopping cancerous tumors. Present Uses now Currently, the uses of Buckyballs are medical reasons and engineering.

In medical purposes, the empty tubes are used to hold medicine for a cancer patient. The cancer patient swallows the nano ball and the buckyballs works as a virus. A virus can break through a cell wall to spread the illness it carries. Buckyballs mimic that, buckyballs attack cancer cells, breaking through the cell wall, destroying the cancer cells. In engineering, buckyballs are used for and in, circuits, lubricants, superconductors, and catalysts. When buckyballs are placed in circuits, the metal and the buckyballs react, the electric conductivity is increased by 100 times.

In lubricants buckyballs, are used as ball bearings, letting surfaces go over top each other. If you place potassium ion in buckyballs, buckyballs become superconductive, which means to make electricity easier to flow in a circle, making it a non- stop flow of electricity. If two metals are placed under a buckyball, buckyballs can become catalyst, being catalyst means to change something, without changing anything of yourself, or an item. Buckyballs haven't had to change anything to do these things, the shape and molecules have stayed the same.

The benefits of the uses of buckyballs are, better electricity, fighting illness, and making things easier to move. Buckyballs... In Space Buckyballs were never studied in space or even looked for in space until, this year, 2011. But before Buckyballs were studied in space, they have been found in meteorites. After research, stars have been found to release buckyballs into space. In stars the planetary nebula, planetary nebulas are made up of gas and plasma. A nebula is the inner layer of old stars that have shed their outer layers.

The Hubble telescope is used to take pictures of the buckyballs inside and released from the nebulas. Buckyballs contribute to space exploration. Researches have put buckyballs in rocket fuel. By putting buckyballs in rocket fuel the fuel becomes more mineral enriched, making the fuel more efficient and last longer. Better fuel for rockets can make space exploration easier and safer. The Future In the next 20 years or so of research, scientists hope buckyballs can be used for these things. Buckyballs could be used to transmit light.

They have also been thought to fight allergies, allow water systems to keep flowing, stop the spread of HIV's, and batteries. Buckyballs can be used in batteries because if you put lithium and buckyballs together, they form electricity. And can be put in rechargeable batteries. By replacing nitrogen with buckyballs (carbon), and buckyballs can be used to transmit light by placing a polyurethane film around the buckyball. The film is just thin enough that light can get through it. Allergies are the reaction of mast cells releasing histamine, the stuff that makes the reaction to allergies.

Buckyballs can break through the walls of histamine, reducing the reaction to allergies. In waterways, buckyballs can be used to clean the dirt and slime out of city water pipes. A buckyball fits right into a pocket a HIV cell has, and like as the cancer cells, the buckyball breaks through the cell wall, stopping the spread, making HIV's easier to fight. To do all these things, buckyballs have no need to change their shape or molecules inside them, the reason buckyballs might be able to do all these things are because of its shape.

Buckyballs could change our life on earth by stopping illnesses, better lighting, and batteries that last almost forever. There is a bright and fulfilling future for buckyballs. Buckyballs have many uses now, and have many more ways they can be used in the future. Hopefully, more research will begin to find out even more about buckyballs. Buckyballs are found in space, used for rocket fuel, in conductors, and so much more, buckyballs have a great future ahead of them. Buckyballs are the next in finding the cure to cancer.