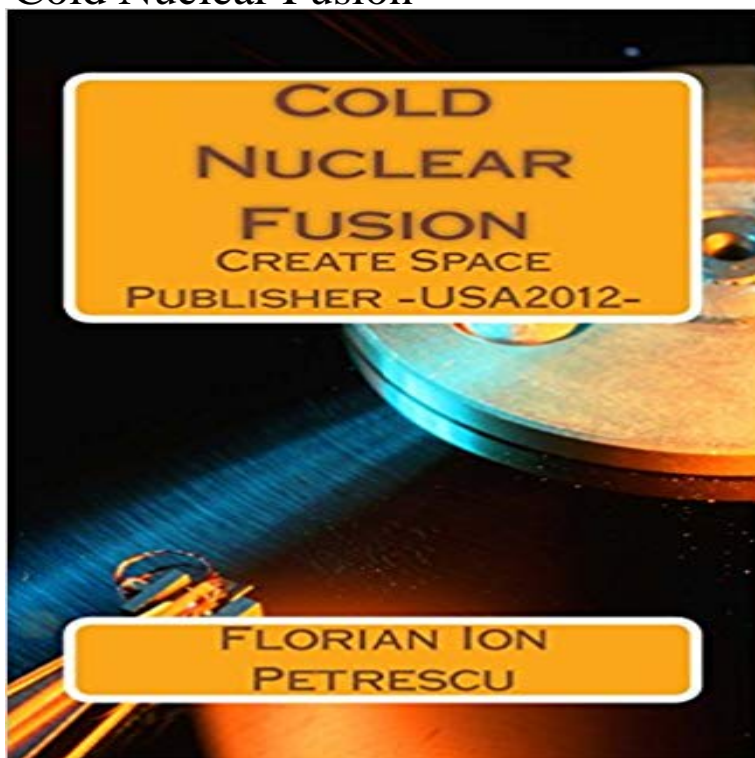


## Cold Nuclear Fusion



Nuclear fusion is the process by which two or more atomic nuclei join together, or fuse, to form a single heavier nucleus. During this process, matter is not conserved because some of the mass of the fusing nuclei is converted to energy which is released. The binding energy of the resulting nucleus is greater than the binding energy of each of the nuclei that fused to produce it. Fusion is the process that powers active stars. Creating the required conditions for fusion on Earth is very difficult, to the point that it has not been accomplished at any scale for protium, the common light isotope of hydrogen that undergoes natural fusion in stars. In nuclear weapons, some of the energy released by an atomic bomb (fission bomb) is used for compressing and heating a fusion fuel containing heavier isotopes of hydrogen, and also sometimes lithium, to the point of ignition. At this point, the energy released in the fusion reactions is enough to briefly maintain the reaction. Fusion-based nuclear power experiments attempt to create similar conditions using far lesser means, although to date these experiments have failed to maintain conditions needed for ignition long enough for fusion to be a viable commercial power source. There are many experiments examining the possibility of fusion power for electrical generation. Nuclear fusion has great potential as a sustainable energy source. This is due to the abundance of hydrogen on the planet and the inert nature of helium (the nucleus which would result from the nuclear fusion of hydrogen atoms). Unfortunately, a controlled nuclear fusion reaction has not yet been achieved, due to the temperatures required to sustain one. In hot fusion it need a temperature of 4000 million degrees. Without a minimum of 3000 million degrees we cant make the hot fusion reaction, to obtain the nuclear power. Today we have just 150 million degrees

made. To replace the lack of necessary temperature, it uses various tricks. Because obtaining the necessary huge temperature for hot fusion is still difficult, it is time to focus us on cold nuclear fusion. We need to bomb the fuel with accelerated deuterium nuclei. The fuel will be made from heavy water and lithium. The optimal proportion of lithium will be tested. It would be preferable to keep fuel in the plasma state. Research into developing controlled thermonuclear fusion for civil purposes also began in earnest in the 1950s, and it continues to this day. Two projects, the National Ignition Facility and ITER are in the process of reaching breakeven after 60 years of design improvements developed from previous experiments. The best results were obtained with the Tokamak-type installations

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**Palladium: The Cold Fusion Fanatics Cant Get Enough of the Stuff** Dec 21, 2015 Cold fusion, or low-energy nuclear reaction (LENR), is potentially an inexhaustible source of clean energy. But its a big idea with a bad name.

**More on cold fusion Chemical & Engineering News** Dec 7, 2016 Its Not Cold Fusion. the University of Utah, announced that they had established a sustained nuclear fusion reaction at room temperature. **Cold fusion E-Cat experiment ends explosively WIRED UK** The cold fusion energy: history, theory and technology Because of this,

nuclear fusion power is believed to have significant safety advantages over power **What is Cold Fusion? COLD FUSION NOW! Can Cold Fusion Come Back From the Dead? - Popular Mechanics** Nuclear fusion can produce energy when the nuclei of lighter elements come together (fuse), Cold fusion, if it worked, would be a form of nuclear fusion. **Big Idea: Bring Back the Cold Fusion Dream DiscoverMagazine** Apr 20, 2016 The researcher claiming a cold fusion breakthrough is in the midst of a \$100 taking to calling their field low-energy nuclear reactions (LENR).

**Nuclear fusion - Wikipedia** The so-called cold nuclear DD-fusion for a number of years was registered in many experiments, however, was still rejected by mainstream science for allegedly **Cold fusion - Wikipedia** May 13, 2016 Cold fusion is rising again, thanks to allegedly successful experiments Now interest in the field, also known as low energy nuclear reactions **What is the difference between nuclear fusion and cold fusion?** Feb 6, 2017 This is shades of 1989, when cold fusion was rejected mainly because it did not fit with the nuclear fusion theories of physics. There are **Cold Fusion Lives: Experiments Create Energy When None Should** Cold fusion is a hypothesized type of nuclear reaction that would occur at, or near, room temperature. This is compared with the hot fusion which takes place

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