

Light of dark matter

In search of energy - at the crossroads of quantum physics and catalytic chemistry

Ivan Rogozhkin, Energovektor, Number 8 (60), August 2016

In a series of posts about scientific breakthroughs in the energy sector (real and fictitious) appeared this—from our point of view—remarkable information. In the middle of July 2016, Brilliant Light Power (BrLP) of New Jersey said that it managed to get a stable generation of radiant energy at the megawatt level, which continued as long as the ignition electrodes did not evaporate from overheating.

After discussing the "energy catalysis analyzer" (see article "Ghosts of alchemy" in Energovektor, № 7, 2015, p. 8) and the bubble fusion (the article "Too local phase synthesis" in № 2/2016, p. 5) our readers are probably not surprised that American innovators have done it all. While the scientific community of physicists and astronomers continue to discuss what dark matter is, if it exists at all, experts from BrLP claim that they have recovered dark matter!

We remind readers that the hypothesis of the existence of a dark matter arose as a result of observations of stars. Astronomy has long recorded strong gravitational bending of light from distant stars and galaxies. Their visible position in the sky is in some places shifted so much that it cannot be explained by the visible mass of neighboring star clusters. This naturally led to the idea of the existence of some kind of dark mass—invisible to telescopes. And calculations showed that the dark mass exceeds the sum of the mass of all visible objects in the Universe!

When an atom is "thinner"

In 1999 the scientific and business community was stirred up by reports that a scientist, Randell Mills, of the United States opened a new, virtually inexhaustible source of cheap energy associated with the transfer of hydrogen to a new, previously unknown, low-energy state called "hydrino". The Financial Times described the news: "The atomic bomb split the scientific world." It still does! - Randell Mills' theory does not only impact the energy sector, offering a very cheap way to produce energy, but also the very foundations of modern physics and quantum mechanics.

According to Mills, the energy is released when hydrogen atoms go to a newly discovered state—are transformed into hydrino. When their electrons transfer to lower energy levels they, put simply, have much smaller radii than in the ground state. Randell Mills and predicted the existence of these new levels and properties of electrons after studying chemistry, electrical engineering and medicine, and then worked in theoretical physics.

According to Mills, hydrino atoms are much more stable than hydrogen atoms, and in a hydrino state the electron occupies a fractional orbit, which contradicts classical quantum mechanics. The hydrino concept explains how solar perturbations collect more energy than it is able to transmit as light, but in its depths, according to Mills, are still thermonuclear reactions.

Since the scientific community at large denied the existence of hydrinos and the reaction from ordinary to dark matter, there is no consensus on the classification of these reactions, that is, whether it is a nuclear, chemical or other process. Perhaps not wanting to compete with well-known scientists and research institutes, which are managing multi-billion dollar budgets for tokamaks, BrLP refers to the

process as chemical transformations, using catalysts. According BrLP, during catalyzed hydrino reactions powerful radiation is emitted, concentrated in the 20 and 170 nm wave range, which are also widely present in the universe.

Solar cell power plant

The name SunCell® that BrLP gave to its power source is justified by the spherical shape of its reaction chamber. The reaction of "dark matter" in a pulsed mode takes place in his heart. Injectors feed hydrogen, molten silver and an unnamed "stable source of oxygen" that reacts with hydrogen to form catalyst for the conversion of hydrogen into "hydrino". It has an induction coil for heating silver to 962°C and then injects it with an electro-magnetic pump. Silver that flows back down is collected for recycling.

Ignition is provided by supercapacitors, which create a current through a pair of electrodes to the molten metal and fuel for the reaction. The spherical radiator made of refractory material is heated inside with hot, white light. Surrounding multi-junction PV cells with heat sinks are illuminated with intense light, 2000 times the intensity of sunlight at the earth. The blue component of the spectrum is converted into electric current using an InGaP layer, green with the help of InGaAs, and red with a Ge layer. A system of liquid cooling cools the solar cells.

The main fuel for the reaction is ordinary water. Hydrinos, being lighter than air, rise to the upper layers of the atmosphere and from there to outer space. (The nuclear industry will be jealous. I wonder, if the system will work and will be widely implemented, will there be taxes on emissions of dark matter into space?)

According to the company BrLP, available components and systems with minimal moving parts will be used in the majority of components.

In the black

Unlike tokamak and laser thermal nuclear installations, SunCell system company BrLP today promises high energy efficiency. Firstly, in the experiments (without photovoltaic modules) the test setup developed radiant power 100 times greater than the power that had been spent on starting the reaction. Secondly, according to the company, the conversion of a kilogram of hydrogen into hydrino formed 200 times more energy than combustion of a kilogram of hydrogen with oxygen. This means that the specific power consumption of the fuel supply systems and the catalyst must be small. Taking into account the 30% efficiency of energy converter, consisting of red-hot spherical radiator and photovoltaic cells, as well as the inevitable energy consumption for removal of the remaining 70% of the energy as heat, you can expect a very a good performance.

According to the results of experiments BrLP, confirmed by external observers, the generation of radiant energy in the megawatt range required only 8 kW power.

Is the ignition!

The experiments conducted have established that the reactor can work from seconds to several minutes (according to the company and independent verification specialists). There appear to be basically no insurmountable obstacles for continuous operation.

Randell Mills, in his PDF presentation, reports that the SunCell® power source can be scaled from 10 kW to 10 MW, and that the illumination of photocells could be increased from 2,000 to 10,000 suns. We will not entertain reader's expectations about imminent decommissioning of traditional coal, gas and nuclear energy. Note that, according to technical and economic calculations of the company, the principal costs of mass-produced systems SunCell main cost will be assembly of the photovoltaic receiver. Testing with potential customers is planned in the first half of 2017, and start-up of production in the second half. Capital costs for installation are estimated to range from 50 to 100 dollars per kilowatt electric capacity.

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Disturbances in science. [text box]

The first reports about the discoveries of Randell Mills were met by physicists with insults. This is understandable—prestigious scientist who built their scientific school and careers in the traditional mainstream were uncomfortable. Admitting a radically new concept is difficult, they should recognize in an amicable way the flaws in their theories that have long been glossed over, and then take up the laborious process of revision over a decade. No wonder they say that theories follow on each other only with the change in generation of scientists.

You can guess what a stir will arise if with the pressure of facts once Randy Mills' theory starts to be widely confirmed! So do not be surprised, reader, if you see extremely negative reviews about hydrinos on television, in print media or on the Internet. But while the scientific community reconsiders the theory, Randell Mills' is already available on the Internet.