LETTERS TO THE EDITOR

About Shock Electrolysis

I received several comments about our article "Shock Electrolysis" (*IE* #145) and would like to make the start of an answer.

Let's look at experiments on Gatchina's "plasmoids" (ball lightning) made by our Russian friends[1]:

1) When a "plasmoid" passes around a cotton wire, it does not burn. (But it is scorched, because the flame touched it for a few fractions of a second.) This is because the flame is very thin; the film separates two cold gases, and it moves very quickly.

2) Then if the "plasmoid" passes around metal wires, they melt! The paper does not burn and the metal melts. How to explain this paradoxical observation? The reason for this is simply the Langmuir effect. Part of the hydrogen is produced in the form of atomic hydrogen. The metal is a catalyst for the $2H \rightarrow H_2$ reaction, but not the cellulose of the cotton. This reaction is very exothermic, which explains why the wires melt. And in this case, the atomic hydrogen is present throughout the hydrogen bubble; the contact with the wire is much longer than the contact with the thin oxidation flame film.

3) In the same way, atomic hydrogen is formed during the electrolysis of water with metal electrodes, and during the degassing of palladium electrodes. We have demonstrated this effect.[2] The Langmuir effect may therefore complicate the measurement of the Fleischman-Pons effect by calorimetry, and it must be borne in mind that the experimental devices are well designed.

4) On the videos posted on YouTube,[3] look at the ripple that runs through the water; it is clear that it does not start from the central cathode, but starts on the wall of the container. This wave is not produced by a vibration of the electrodes as the Russians propose. In our devices, the electrodes are sealed, and they cannot move, yet we also see this wave. This is caused by the meniscus falling down the wall of the container after being sucked up by the electric field of the gaseous virtual cathode.

5) If we illuminate the "plasmoid" or luminous object with a powerful light, like a camera flash, we see the object in the form of a whitish globe. Of course, in this case, we no longer distinguish its intrinsic brightness. In my opinion, it is a thin film of mist (microscopic drops of water) formed by water vapor in contact with cold air. This film of mist is invisible in the dark.

6) To observe the deviation of a laser beam, it is essential to observe the movement of the "spot" of the laser by placing the screen very far—at least ten meters. Otherwise, nothing is seen because the refractive index of hydrogen is not very different from that of air. (With a sufficiently sensitive optical system, it should also be possible to observe the diffraction of the laser by the water droplets of the film of fog.)

I must encourage all those who would like to repeat these experiments to use the utmost caution. High voltage can kill!

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Microplasmoid Phenomena: Detection, Shielding and Control

The purpose of this letter is to describe methods to detect, shield and control plasmoids. It concerns the following kinds of microplasmoids:

- Those that fly like ball lightning
- Plasmoid state atomic patches that may stay on or in materials

Both kinds act like natural ball lightning and can cause transmutation phenomena.[1,2] They form and cause transmuted and metamorphically transformed residues where there are suitable conditions such as electrical discharge, cavitation, physical stress such as fracture[1] and Ohmasa-type flames.[3] Plasmoid state atomic patches may exist for extended periods of time, move around in samples or equipment and cause damage. The plasmoid atomic state was previously unknown, and such atoms have anomalous properties and behave very differently than atoms in the normal states of solid, liquid, gas and plasma. Both kinds of microplasmoids are difficult to detect, shield and control, and they exist in black, white and perhaps a variety of grey states.

Evidence for the Plasmoid State Atom Hypothesis

For background about the plasmoid state hypothesis and how I define various terms such as "black state," see my earlier articles[2,3] and an earlier plasmoid health warning Letter to the Editor in *Infinite Energy*.[4]

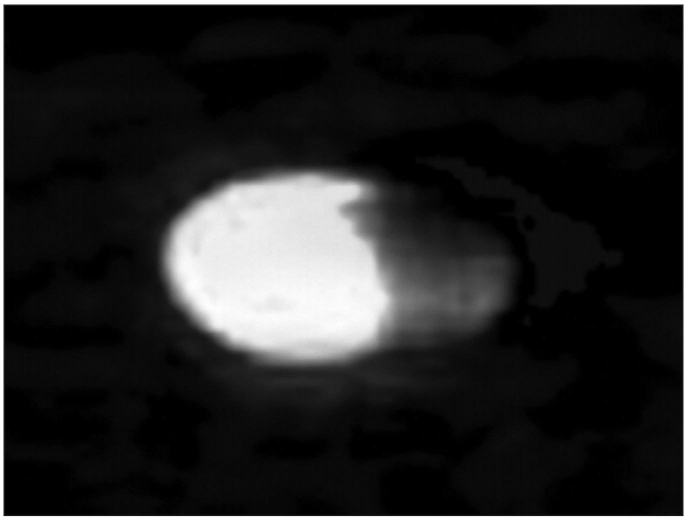

Figure 1. Using cameras, Bogdanovich[6] detected this microplasmoid. It was about 50 micrometers wide, moved at a speed of about 10 micrometers per second across a surface and existed for at least tens of seconds.

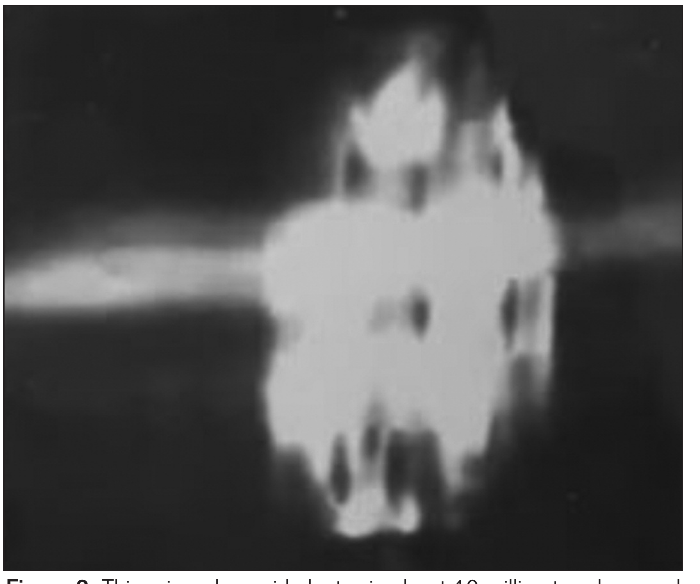

Figure 2. This microplasmoid cluster is about 10 millimeters long and 5 millimeters wide. By Bogdanovich.[6]

In 1992, I proposed that atoms could exist in a state like that of ball lightning and behave like ball lightning,[1] and in the mid-1990s in various articles, I explained how patches of atoms in such a plasmoid state exhibit superfluidity, superconductivity and transmutation. Plasmoids such as natural ball lightning may transform to tornadoes and vice versa,[5] and in 2019, Bogdanovich explained how clusters of plasmoids (see Figure 2) were seen to transform to micro tornadoes.[6]

In 1994, Dash described how filaments of material on a sample removed from an experiment continued to grow, transform in shape and transmute over several weeks.[7] This was early confirmation. Savvatimova and Rodionov in the decade of the 2000s also reported that patches of materials transformed, transmuted, and moved around in and on materials long after they ended their experiments.

Plasmoid Detection

A simple way to detect for microplasmoids is to use various kinds of witness plates, nuclear emulsions and X-ray or photographic films, as dozens of researchers have shown how to do from Winston Bostick to Shoulders, Matsumoto, myself in 1996,[8] Urutskoev, Savvatimova and many others. You can microscopically examine equipment for the characteristic plasmoid markings or active patches as I did on George Miley's lexan casings.[8]

Video cameras and photodetectors can be used to detect luminescent moving plasmoid patches and the bright spark-like white state microplasmoids when they fly off. They are visible to the naked eyes if they are big, slow, bright and long-lived enough.

People could design electronic array detectors that will record the passage of these objects via their emissions, electricity, or magnetism as they pass by or through them or impinge on them.

Plasmoid Shielding

Ken Shoulders[9] and I explained that conventional shielding such as lead or steel sheets used to stop electrons, particles, or white state plasmoids will not stop the dark state flying plasmoids. Black state atomic patches might pass through undetected in the same way. So I suggest using energetic fields or electrically charged mesh or sheets. I'm thinking of an electrified grid like the bug-killing rackets powered by batteries. These might be used to try to cause the plasmoids to change state and stop them.

Passive shielding such as thick steel sheets might work to shield for white state plasmoids. Conductors generally work better than insulators. For example, there is a report of a ball lightning going through the cockpit window of an airliner and then going down the aisle of the plane.

Plasmoid Dangers to Shield From

As explained in my Letter to the Editor in this magazine[3] and in private messages to plasmoid researchers since late 2018, plasmoid dangers are not clear. Their effects depend on their kind and state and what they contain.

Until people become familiar with their dangers and learn to shield from them, it is probably best to keep a distance from experiments during operation and limit your exposure to samples that have state shifted. How far microplasmoids can travel in the air should be tested. They might travel tens of meters or kilometers. Patches of plasmoid atoms vary in how long it takes for them to revert back to the dormant atomic states. For example, around the year 2000, Urutskoev reported that a sample from an experiment continued to emit microplasmoids for a long time after the experiment was over.[10]

Be aware that plasmoids are produced in many ways, and recently Greenyer[11] and Stankovic[12] have shown that simple torches fueled with Ohmasa gas or HHO will transmute atoms. Though the flames are cool, around 100°Celsius, they produce plasmoids and make atoms change state.

Plasmoid Control

To control their travel, people could try using magnets though I don't know whether magnets work on dark state flying plasmoids. Electron guns and the old style of TV screens show that magnets can be used to control the direction of electrons, and this method might work for white state plasmoids since they have an electric field. To make them change state, people could try energetically stimulating them as I suggested above.

For More Information

Please see my site http://www.scientificrevolutions.com. On there, a book is available with a short section that describes the history of plasmoid and anomaly research in the 1970s to 1990s period. The book is mainly about the history, cause and economic effects of paradigm shifts in physics.

I am excited about the finding of the copious plasmoid markings on planets, moons and asteroids and about some of the recent research in Russia. There are many pictures in a recent video interview in 2019.[13]

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