

JOE CHAMPION

In 1992, I heard from a Joe Champion who was an electronics technician with no formal degrees in chemistry or physics. He called me and asked to send over some witnesses to his lab in Tennessee because he could show that the experiment which had taken so long to wait for happenings in our experiments he claimed to be able to demonstrate a nuclear reaction more quickly and quoted figures.

1991
I took two of my post docs, paid for the fares out of the grant from Mr. T (a wealthy man who said he inherited from his mother's restaurant chain), to witness Mr. Champion's work.

Champion said he had performed experiments in a University in Mexico which proved that he could get nuclear reactions in the cold and one of the things that he claimed was that he could get gold from cheaper metals. I called the man whom Champion said he had worked with in Mexico and he admitted doing tests on before and after some samples given him by Champion but had nothing to do with the prior experiments.

We were able to get tritium and he understood that this involved a nuclear reaction and I supposed that the Backer, Mr. T, thought we were an appropriate group in which to test Champion's claim.

Champion at first worked in his own laboratory at Texas A&M, registered as an assistant scientist and in our group, more or less, a post doc. He had a lab to himself and could have shut the door and done what he liked.

In the first few weeks, there were some claims that he made but which we could not verify. Let me explain what he was trying to do.

The idea was that in order to get fusion, he thought that one had to increase the nuclear frequency of certain atom, impurity atoms, above their normal values. This he proposed to do by radiating solutions containing silver nitrate salts with electrical and magnetic field. He tried these on various frequencies and intensities. The solutions were held in beakers inside the apparatus surrounded by coils which provided the radiation. In so far the new radiation would be absorbed, Champion proposed to pump up the absorbing atoms with radiation until they would be sufficiently energized to fuse.

It was a risky and exciting time. It went on for about six weeks. I then told Champion that it doesn't work, he had done it too many times, better just give up. Of course, to Champion, this was not an option as he depended upon Mr. T for the maintenance of the work (and his employment).

Champion then revealed the nature of the experiments he had done in Mexico. He mixed cheaper metals near to Gold in the Periodic table with a mixture of explosives involving nitrates. He set off a minor explosion in the laboratory's fume hood. The mixture lost about half its

weight during the explosion and then was expected to contain small but quite definite amounts of gold (hundreds of parts per million, ppm) though only after an interval of three days.

I was always looking for fraud and deception but as Mr. T seemed willing to try anything and had plenty of money to invest in far out projects, I agreed that we should take it on Champion's so called explosive method. I asked my physicist, Dr. Guaig Lin, to take part in the tests accompanied by my chemist, Dr. Ramesch Bardwaj. Both these men were experienced professionals with experience gained in employment before they came to me. In particular, Dr. Lin had competed in a competition set by the Chinese Government and had scored No. 44 out of the 1000 competitors. They were instructed by Champion as to the technique of his Mexican experiments where he had claimed up to 500 ppm of gold as a result of the procedures.

We took elementary precautions. At first, I mailed the before and after samples to the Analytical organizations myself. Later, I let my two post docs look after them. I chose the Analytical Organizations as far away from the others as possible.

My attitude personally as the group director was skeptical indeed. I was happy to get an infusion of \$200,000 into my group from Mr. T. I thought that the likelihood that we would see any gold was remote. I told him this but he seemed to want us to try anyway.

The two post docs working with us at the time when the second kind of experiment had been done using Champion's mixtures and setting off an explosion in the beaker, had come back from analysis with positive results.

I had my eye on Mr. T and was still skeptical. I thought he might not be past tempting the analysis people to favor the desired result, so I decided to it would be more scientific send the before and after samples to several analysis organizations for independent results.

In those days, we used four analyses. We used an organization in Colorado which was used to looking at trace elements and we used a Canadian organization which did analysis of minerals. We used Texas A&M and its nuclear reactor which was able to analyze the contents present by neutron bombardment. Lastly, we used the South African Bureau of Mines where I had a contact.

They all readily agreed to look at our samples to see if there was any gold there.

I also proceeded by using my contacts with the CSIRO organization of the Australian Government. I won't give any details here. In spite of my opinion that Australia was a Minerals country, their services in Analysis did not bring any results.

The South Africans used mass spectroscopy, chemical spectroscopy and chemical analysis. The Canadian and the people in Colorado used chemical analysis. But some samples we had done in house using the teaching reactor at Texas AUM. Dr. Bardwaj, later looked for gold and not a series of noble metals, he found spectroscopic methods in the University which he could operate himself and so we did not have to wait 7-10 days for the results.

The results have been published. Each run was examined by the Canadian and Colleredian Organizations. We used the nuclear reactor in the University sporadically, and the South Africans did one run. Here is a fairly general statement of the results.

In the Summer of 1992, Lin and Bardwaj worked together with a graduate student, Minevski, helping, and an Italian colleague, Roberto Monti, from an Italian Institute who Mr. T hired to help us because he (Monti) had written me claiming he had contributed some novel features to nuclear structure which showed transmutation to be possible. We got several (3-4) runs which were successful. The reader must not think we saw glinting pieces of gold but the analysts in their various ways (but with no better than $\pm 50\%$ agreement) showed us there was gold present in at least 3 runs (why we did not continue, see below). The amount varies between 200 and 500 ppm of gold.

A Dr. Cou, a French colleague wrote a letter to an Ottawa Clean Energy organization saying that he had replicated the Champion explosive method.

I had a peculiar and brief relation with the research director of the most well known precious metals organization in the USA. In 1992, after what they regarded as their triumphant verification of Champion's claims, had visited the research branch of this company with the objective of selling what they thought was a mighty secret – how to make gold cheaply.

It seems that they were accepted in a reasonable way, the expected demand was made that they, the scientists of this company, should be told the procedure and see if they too could get gold from cheaper metals. (We had seen radioactivity in an earlier experiment and the $\frac{1}{2}$ life coincided with the intermediate Pt. 197).

I knew of their visit. Of course, I was very interested in whether the result would be similar to those we had got. I was in New Zealand at the time to give a lecture but I had time in my hotel room to make a call to New Jersey and speak with this man, the Research Director. He was happy about the news. His workers had not only found gold, but they had used mass spectroscopy and found a platinum intermediate which Champion told us should be there. He encouraged me to not say anything yet.

When I got back to College Station Texas, I was indiscrete and in conversation with the Research Director of a related organization. I mentioned this achievement of synthesis of traces of gold indicating low level transmutation and its verification in Dr. X's big company. It seems that this set off a reaction. The two industry men spoke. The one who had told me the great news in the meantime had undergone a transformation. He berated me for telling a colleague what his team had done. Now, however, he said it was pure nonsense. He denied everything he had said, including finding the intermediate. "Pure Fraud!" he now said.

In the last Cold Fusion meeting in Vancouver, there was a paper organized by two Russians who claimed that used an explosive method similar to that of Champion, they had brought about some isotopic (i.e. nuclear) changes.

Mr. T was most unimpressed by our 500 ppm concentration of gold (much less, other noble metals.) He was not skeptical of what we reported but took the attitude that tiny amounts was useless and if we could not produce commercial amounts of gold, he was no longer interested. He withdrew Champion from my laboratory at Texas A&M University, in September 1992, and hired a commercial lab in Chicago in which the experiments continued.

TAMU's connection with the work was soon broken by the intervention of the FBI! We found the Security and Exchange Commission in California had told the University that the money we had been using for the experiments might be tainted. The University abruptly interrupted the flow of funds from the Grant. I had to hurry to replace the missing money with other funds and employment for the coworkers supported by the Champion-Mr. T work.

AFTER CHAMPION

We ended the work being done with Mr. T's funds, tainted or not, and I decided that transmutation involving gold was all too dangerous a field to dabble in and that ^{we} should try to see if transmutation was possible with other reactions.

CARBON TO IRON

Dr. Monti, hired from an Italian Institute by Mr. T, turned out to be a serious studious academic person and I continued exchanging letters with him for 2-3 years. One of the reactions which he asked me to examine was novel enough and did not involve gold. He mentioned that his atomic structure theory indicated that arcs struck between spectroscopically pure carbon rods and kept going with interruption, for 12 hours would produce at least iron and perhaps cobalt and nickel.

A Dr. Sundarsen from the Bhabha Atomic Research Center in India had come to work with me for a year and he seemed a very suitable coworker in so much as he had been head of the analytical laboratory there.

Sundersen did the kind of thing Monti had suggested. We found the key point was keeping oxygen out of the apparatus. If we did this, we could indeed find iron, spectroscopically proven, but also quite visible on the bottom of the beaker..

We got five confirmed experiments. The question now became were the amounts of iron proportional to the current passed in the arc? There was indeed a correspondence but it was not a nice straight line we had wanted.

SEVERAL NEW NUCLEI FOUND IN PALLADIUM

At this point in 1993, the Texas A&M work could claim time-originality in tritium production in the electrode, solution and gas phase; Helium (and tritium) in the electrode by 1992; some tentative indication of conditions on iron from carbon; and finally one more thing which later became verified by two recognized nuclear physicists, Mituno at the University of Hokkaido in Japan and Miley at the University of Illinois, Urbana Champaign.

