

Timeline of Purdue University's Investigation Published: February 12, 2007

March 8, 2002

Scientists led by Rusi P. Taleyarkhan, a senior scientist at Oak Ridge National Laboratory, publish a paper in the journal Science saying that a table-top experiment can create nuclear fusion. The process, called bubble fusion or sonofusion, bombards a solvent with powerful sound waves, causing bubbles to collapse and generate temperatures high enough to fuse together hydrogen.

- "Evidence for Nuclear Emissions During Acoustic Cavitation"
(Science Magazine)

Nov. 7, 2003

Purdue University announces the hiring of Dr. Taleyarkhan as a professor in its nuclear engineering school.

- News Release From Purdue

March 24, 2004

An extensive follow-up paper by Dr. Taleyarkhan's team appears in the prestigious journal Physical Review E.

- "Additional Evidence of Nuclear Emissions During Acoustic Cavitation" (Physical Review E)

July 23, 2005

Purdue issues a news release claiming independent confirmation of the fusion findings by a second team of Purdue scientists. That claim is immediately questioned as the two people - Yiban Xu, a post-doctoral researcher and Adam Butt, a graduate student - are members of Dr. Taleyarkhan's research group. However, Dr. Taleyarkhan maintains that the experiments were performed before Dr. Xu and Mr. Butt joined his group. The experiments were conducted in February 2004. Dr. Xu and Mr. Butt joined Dr. Taleyarkhan's group in summer 2004.

- [News Release From Purdue](#)

Oct. 2005

The results are presented at a conference in France in Oct. 2005 and appear in the journal Nuclear Engineering and Design. Shripad Revankar, an associate professor of nuclear engineering, is listed as an author on the conference proceedings paper but not on the journal article.

- ["Confirmatory Experiments for Nuclear Emissions During Acoustic Cavitation"](#) (Nuclear Engineering and Design)

Feb. 7, 2006

Responding to questions and concerns raised about Dr. Taleyarkhan's research, Lefteri H. Tsoukalas, head of the nuclear engineering school, forms a fact-finding committee consisting of Chan Choi, a professor, and two retired professors, Karl Ott and Franklyn Clikeman.

- [E-Mail From Dr. Tsoukalas to Dr. Choi \(PDF\)](#)

Feb. 23, 2006

The committee sends its report to Dr. Tsoukalas. It finds that Mr. Butt, the graduate student, did not make any scientific contributions to either paper. (The sign-in book for the laboratory - required because of the presence of radioactive materials - shows the comings and goings of Dr. Xu, but no sign of Mr. Butt.)

- [Report From Fact Finding Committee \(PDF\)](#)
- [Scans of Laboratory's Sign-in Book, Jan.-June 2004 \(PDF\)](#)

Feb. 23, 2006

In a statement to the committee, Mr. Butt said his name was added to the journal article a day before it was submitted. Dr. Xu told the committee that he had written only a draft of the journal article and did not answer the question of who actually wrote the paper. The committee noted similarities between the wording in the Nuclear Engineering and Design paper and earlier articles by Dr. Taleyarkhan.

- [Statement by Adam Butt \(PDF\)](#)

March 7, 2006

Purdue announces that it has opened an inquiry into Dr. Taleyarkhan's research, partly in response to the impending publication of stories by the journal Nature the next day.

March 8, 2006

The journal Nature publishes a package of news stories questioning bubble fusion. The stories report that colleagues of Dr. Taleyarkhan have raised ethical concerns raised about the fusion research.

- ["Bubble Fusion: Silencing the Hype"](#) (Nature)

June 1, 2006

Kenneth S. Suslick, a professor of chemistry at the University of Illinois at Urbana-Champaign, sends an e-mail to Peter E. Dunn, Purdue's associate vice provost for research, saying that he believes that Dr. Taleyarkhan's research might be fraudulent.

June 20, 2006

Purdue announces that the inquiry into Dr. Taleyarkhan's research has finished its work. Although it said in March that it would release the inquiry's findings, the university instead says that the findings would remain confidential, including the existence of any follow-up investigations or disciplinary action.

- [Purdue Completes Review](#)

July 2, 2006

Dr. Tsoukalas sends an e-mail to Sally Mason, Purdue's provost, expressing concern about the inquiry and the unresolved issue surrounding the papers by Dr. Xu and Mr. Butt.

- [E-mail From Dr. Tsoukalas to Dr. Mason](#)

July 9, 2006

Dr. Mason replies to Dr. Tsoukalas and says that an investigation is continuing and "we will get to the bottom of what has happened."

- [E-mail From Dr. Mason to Dr. Tsoukalas](#)

Oct. 12, 2006

Dr. Tsoukalas resigns as head of the nuclear engineering school.

Feb. 7, 2007

Purdue issues a statement that Dr. Taleyarkhan has been exonerated. It is unclear whether the exoneration is simply the previously confidential conclusion from the inquiry that ended in June 2006 or whether it comes from a subsequent investigation. Contrary to assurances he received from Dr. Mason, the provost, Dr. Tsoukalas said no one sought testimony from him for any investigation after June 2006. (He did talk with the initial inquiry committee last spring.)

- [Purdue News Release](#)