

Stuttgart, January 30, 2008  
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## **AFFIDAVIT OF DR. GÜNTER LOHNERT**

This confidential affidavit of Guenter Lohnert is made in connection with the investigation currently in process at Purdue University. I, Guenter Lohnert, being first duly sworn on oath, state that if called upon as a witness, I would be competent to testify as to the following:

1. I am making this affidavit of my own personal knowledge. All of the facts contained in this affidavit are true.
  
2. For the past eight years, I have been the Principal Editor of the Nuclear Engineering & Design ("NED") journal published by Elsevier. I served as Principal Editor and as Guest editor at the time of the publication of the Yiban Xu, et al. journal paper entitled "Confirmatory Experiments for Nuclear Emissions During Acoustic Cavitation," 235 *Nuclear Engineering and Design* 1317-1324 (2005).
  
3. I have known Dr. Rusi P. Taleyarkhan ("Taleyarkhan") for over four years [17.10.2003] from the time he came to me about a Festschrift edition of NED to commemorate the contributions to the field of nuclear engineering by Dr. Richard T. Lahey for his 65<sup>th</sup> birthday. I invited and appointed Taleyarkhan as a co-editor for that Festschrift [23.10.2003].
  
4. I reside in Stuttgart, Germany and serve as Full Professor and as Head of the Institute of Nuclear Technology and Energy Systems of the University of Stuttgart.

5. As a professional deeply interested in nuclear energy options, I have followed the discovery of bubble (sono) fusion since the time it was first announced during March, 2002 when it was published in *Science* and the news story was carried throughout the world. It was quite obvious that many people, including myself, were awaiting confirmation of the discovery by someone other than the original group.

6. In January 2005, I was contacted by Taleyarkhan about the confirmatory experiments of Xu and Adam Butt ("Butt"). At that time, I wholeheartedly welcomed the opportunity to publish such a paper on confirmatory experiments given its significance to nuclear engineering science.

7. The letter I received in January 2005 from Taleyarkhan (who I knew was working at Purdue University) stated:

"Dear Prof. Lohnert:

I've been made aware of a rather important piece of work from a nuclear engineering group here in the US in relation to confirmatory work related to bubble nuclear fusion (thermal hydraulics and nuclear emission measurements). The work relates to confirming the ability. . ."

I then wrote back on Jan. 25, 2005,

"Dear Prof. Taleyarkhan:

This is an extremely exciting, breathtaking idea!!!!!!

Do whatever you can to get hold of this work. It would be a fantastic new topic for NED! We could easily incorporate it into Lahey's Festschrift. The idea sounds really exciting, heart throbbing!

Best regards

Guenter"

8. Apparently, the fact that Dr. Taleyarkhan used the words in his email "I have been made aware of. . ." somehow indicates that he was trying to distance himself from the paper and make it appear he was not connected with it. While I guess I can understand the argument someone is trying to make in this regard, from my point of view, nothing could have been further from the truth. I was fully aware of Dr. Taleyarkhan's potential involvement with several such groups worldwide. There was nothing surprising in this. I made the decision to accept the paper. Taleyarkhan was serving as a co-editor on the same paper and I understand, just as well, the possibility that that fact (his editorship) could have caused a feeling in me that Dr. Taleyarkhan would have been trying to influence me to have the paper published if he had come to me and said "I have this paper" or "I have this student who has a paper" or "I would like to get this paper published" or something to that effect. I believe using the language he did in his email to me was completely professional and had the effect of making me more neutral on the topic. I chose to publish the paper because of the merits of the paper; not because of, or in spite of, Taleyarkhan's involvement.

9. I am aware that Taleyarkhan is being investigated, though I do not know the details or why. I regret that I am unable to attend the February 1-3, 2008 hearing at Purdue University in person.

10. As I noted earlier, I am aware there is some question about whether I was influenced by Taleyarkhan in any way to somehow accept this publication, without vetting it scientifically or through peer review. The answer is *absolutely "no."* Nothing could be further from the truth.

11. As I noted above, Taleyarkhan was at that time acting as a guest editor of this special Festschrift edition of the NED journal. In that regard, he mentioned this paper to me and I was thrilled with the possibility of it, even without seeing a copy, because of the nature of the confirmatory science involved. My willingness to see the manuscript, and eventually publish the manuscript, was my decision, and my decision alone. Taleyarkhan was not involved

in approving the manuscript, nor did he attempt to influence my decision in any way.

12. The topic of the manuscript was sufficient to pique any editor's interest. I could read for myself in the "Acknowledgments" the level and type of assistance Xu received from Taleyarkhan and other individuals. I was aware Taleyarkhan was a Professor at Xu's school, Purdue University. I assumed that he was involved as stated in the "Acknowledgment" of the article itself. I was fully aware of the importance of the information and Taleyarkhan's connection with it. I do not subscribe to the comments in the Press by well-known detractors of Taleyarkhan that he deliberately left his name off from the author list. Based on what I now know, Taleyarkhan's name being in the acknowledgment section was indeed correct instead of being a co-author if he did not participate in the technical aspects of experiment design, experiment conduct, data checks and transfer, data processing, and drawing conclusions. I have no reason to doubt the statements already made by the authors (Xu/Butt) in this regard. We all act as referees and at times, provide extensive suggestions on manuscripts. Merely providing review comments [see also in the article's Acknowledgement mentioning my "useful comments"], advice on how to correct for formatting for a specific journal, or providing composition assistance in the form of review feedback for language usage simply does not rise to the level of significance for consideration of co-authorship based on the standards we employ for NED. If that were the case, then every English or German language technical assistance writer would become a co-author and that is not the norm for scientific journal writing.

13. I myself - being a Plasma/Fusion physicist - handled the review of the manuscript. I followed the same, normal process that has been followed for most every other journal publication with which I have been involved. I made editorial suggestions and worked with Xu/Butt (not Taleyarkhan) to create a final publishable copy. I discussed the work and consulted with a number of experts.

14. Taleyarkhan's email to me in January 2005 was appropriate, and I am grateful that he came to NED with the idea of the paper. The Festschrift edition was being prepared to honor Richard Lahey, Jr. who was part of the original team with Taleyarkhan on bubble fusion, and it was left to me to decide if the inclusion of this paper by Xu/Butt was appropriate. I decided that it indeed was a perfect fit.

15. I saw, and continue to see, nothing wrong, unethical, or unusual about Taleyarkhan's actions in bringing the paper to me, nor in his assistance to me in putting the overall Festschrift edition together.

16. Because of the nature of the engineering science involved, I assumed Taleyarkhan had to have involvement, and the fact that he provided the test cell and operating direction or review comments for improving readability of the manuscript does not affect this in any way. The primary importance of the paper is that another scientist (Xu) looked for the same type of data that Taleyarkhan's group had found, and he (Xu) confirmed that he saw the same thing. He conducted the experiment without interference from Taleyarkhan, he observed it and analyzed it, and he confirmed what he saw.

17. I was interested in the topic itself, which appealed to me as a scientist (and reader) searching for the truth behind sonofusion. I was fully aware, as I have also communicated to the Press (see Haiko Leitz's article of July, 2005 published in Telepolis) of the importance of a confirmatory study, and in fact I have been accurately quoted as saying the following:

"For the principal editor of the journal Nuclear Engineering and Design in which the paper has been published, Bubble Fusion is finally demonstrated. Professor Guenter Lohnert, head of the Institute of Nuclear Technology and Energy Systems for the University of Stuttgart, has conducted the review himself and consulted many experts. . ."

Lohnert calls it a "sensation." We did our experiments and data analysis "independently," says Xu. For Guenter Lohnert independence is given by the much simpler experimental setup."

18. Taleyarkhan in no way influenced the editorial review-acceptance process for the paper. I reviewed it and edited it completely independent of his involvement. I provided no favors or special treatment for this paper, other than having it reviewed and edited on an expedited basis given the timing of the special Festschrift edition. My job was to do this and to do anything less would have been a violation of my own ethical standards.

19. I have known Taleyarkhan for a long time. I believe his ethics and academic scholarship are at the top of his field.



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Prof. GUENTER LOHNERT, Ph.D.