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Published online 22 September 2009 | Nature | doi:10.1038/news.2009.934

News

# Research chief steps down over fake data

Peter Chen's integrity 'undamaged' by incident, says boss.

#### **Quirin Schiermeier**

The head of research at the Swiss Federal Institute of Technology in Zurich (ETH Zurich) will quit the post after an investigation concluded that data in publications from his group had been faked.

Chemist Peter Chen will leave his position as vice-president of research and corporate relations — the job's remit includes quality assurance in research — at the end of September. He says he was not personally involved in handling the data, but acknowledges his responsibility as head of the research group. Chen will, however, remain a full professor of physical-organic chemistry at ETH Zurich.

"We didn't advise Professor Chen to resign from his administrative position," says Ralf Eichler, president of ETH Zurich. "But we accept his decision, even though Chen's integrity as a researcher is in my opinion undamaged." Chen was not available for comment.

#### **Radical results**

Chen joined ETH Zurich in 1994 to work in one of Europe's leading chemistry departments. His research involved studying the properties of reactive hydrocarbon free radicals using a technique called zero kinetic-energy photoelectron spectroscopy.

But experiments conducted in 1999 and 2000 by members of Chen's group, who have since left ETH Zurich, were called into question shortly after others failed to reproduce the results.

The application of the spectroscopic technique to radicals was completely new at the time, says Klaus Müller-Dethlefs, director of the Photon Science Institute at the University of Manchester, UK, who first developed the method in 1984. "Results now known to be false could then easily slip through as being plausible," he says.

Earlier this year, Chen corrected<sup>1</sup> one paper containing the disputed work that had been published in 2000 in the *Journal of Chemical Physics* (JCP).<sup>2</sup>

At the request of Chen and the executive board of ETH Zurich, a five-strong commission involving in-house and external experts, and chaired by chemist Andreas Pfaltz of the University of Basel, then investigated whether data had been deliberately falsified in that paper, and in a second JCP publication.<sup>3</sup>

#### **Matching noise**

"It is the unequivocal conclusion of the five [investigation committee] members, the two experts [who failed to reproduce the original data] and the three authors of the papers, that some data that were reported must have been fabricated," the investigation committee concluded in its confidential report dated 15 July, which *Nature* has obtained. The commission found identical background noise in purportedly independent spectra reported in the two papers, but it could not find a key lab notebook that should have held the raw data. They also recommended a partial or full retraction of the second JCP publication. 3

All the authors of the papers, including Chen, categorically deny having been responsible for, or involved in, any unethical data manipulations. Eichler says that there is "now no legal way of finding out for sure" who was ultimately responsible for the falsifications.

"For ETH Zurich, the crucial thing is that this case has been made public," Eichler says. "The clear message for potential falsifiers is that there is absolutely nothing to gain from scientific misconduct." The fabricated data, he adds, have not damaged the field as such, and have not been used for any applications.

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