self—a potential concern since its sting causes an intense reaction among swimmers.

The fourth option, favored by Harbison and others, is to find a *Mnemiopsis* predator they can introduce into the Black and Azov Seas. Off the coastal waters of the Americas, the ctenophore is apparently kept in check by a few specialized predators, but the diversity-poor seas—the Black Sea contains only 47 families of fish—have nothing that preys on the ctenophore. That's why it's difficult to imagine the problem will naturally cure itself, says Harbison. As a result, in work funded by the National Science Foundation and the Seaver Institute in Florida, he is looking at ctenophore predators in *Mnemiopsis*' Atlantic habitats. He would like to find a fish that is commercially useful, for instance. Then, he says, "even if they can't check the ctenophore completely, at least they might create a new fishery.

Others are searching the Mediterranean, into which *Mnemiopsis* has recently emigrated from the Black Sea and where new fisheries may be threatened. There, Stanislav Volovik, a fishery expert in Russia and Harbison's co-worker, likes a different predator, members of another ctenophore family, the *Beroe*. A crucial unanswered question, however, is whether the *Beroe* can survive in the lower salinity of the Black and Azov Seas.

Still, ecologists worry that introducing one exotic marine species to control another could open a Pandora's box. An introduced predator may harm other fishing stocks, for instance. "We're dealing here with a discipline that doesn't exist: marine biocontrol. I'm always hesitant about releasing a novel species into an environment," warns Carlton.

Harbison agrees that such wariness is warranted, but responds that the decision to introduce a predator can come later. Meanwhile, let's be prepared with a good candidate. "Even if we don't do anything, we should do the research. These fishermen are bringing up empty nets. Let's get moving now," he challenges.

–John Travis

CHEMISTRY

Alchemy Altercation at Texas A&M

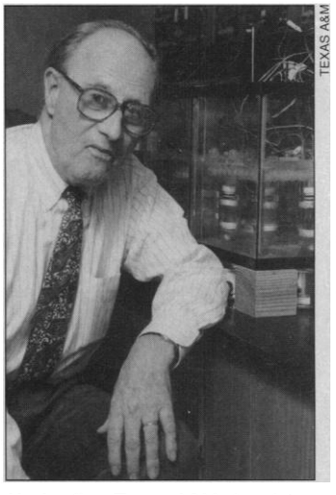
Four years ago it was cold fusion, now it's alchemy, and members of the Texas A&M chemistry department say enough is enough. In a letter released last week, 11 full professors called on their colleague John Bockris to resign and remove the "shadow" he has cast over the department. Bockris, however, claims his research into transmuting various elements into gold is serious, potentially very valuable science.

Bockris, an electrochemist with a reputation for important but often unconventional research over the past several decades, was one of the most ardent supporters of cold fusion after Stanley Pons and Martin Fleischmann—an old friend of Bockris'—announced their fusion-in-a-test-tube results in March 1989. Teams working under Bockris claimed not only to have reproduced the excess heat production that Pons and Fleischmann reported in cells of heavy water but also to have generated large amounts of tritium in some of the cells—evidence that fusion or some other sort of nuclear reaction was taking place.

But as the tide of scientific evidence turned against cold fusion, other researchers at Texas A&M began to question Bockris' results. A few even wondered if someone had intentionally spiked some of his cold fusion cells with tritium (*Science*, 15 June 1990, p. 1300). Later, an internal review at Texas A&M concluded that the tritium was most likely due to an impurity, not spiking, but criticized what they concluded was a "breakdown of scientific objectivity" that affected a number of cold fusion researchers at Texas A&M, including Bockris (*Science*, 14 December 1990, p. 1507).

Now that lack of objectivity has struck again, say many of Bockris' colleagues. According to newspaper reports and interviews with Texas A&M faculty and staff, including Bockris, the story began in spring 1992. That's when Bockris got a call from Joe Champion, a self-described researcher and inventor from Tennessee who said he had a method of turning silver into gold. Most scientists might have hung up the phone, but Bockris had a good impression of Champion from an earlier incident—Champion had proposed a method of producing cold fusion with radio waves, a claim that Bockris had looked into—and he decided to investigate Champion's new idea. It didn't hurt that Champion produced an investor who offered a $200,000 gift to Texas A&M to support Bockris' efforts to reproduce this transmutation.

For the next several months, Champion was in and out of Bockris' lab, instructing Bockris and his assistants in the finer points of the alchemical process. During this time, Bockris says, Champion instructed Bockris' postdocs in two transmutation techniques, one of which was a "total failure." But the second, which involved mixing potassium nitrate (a constituent of gunpowder), carbon, and various salts and then igniting the volatile mixture, produced measurable amounts of gold, Bockris claims. Once Champion left, however, Bockris' group could no longer get the technique to work.


TEXAS A&M

Under fire. Texas A&M chemistry professor John Bockris.

Bockris' colleagues were uncomfortable with this project, which flies in the face of conventional nuclear chemistry. But that discomfort turned to alarm, says chemistry professor Albert Cotton, as details emerged about the other participants in the alchemy scheme. Late last year, according to newspaper reports, Champion was jailed in Phoenix, Arizona, on criminal fraud charges in an unrelated case. Then in May, chemistry department head Michael Hall discovered through a newspaper article that Bockris' benefactor, William Telander of San Diego, had been charged by the Securities and Exchange Commission with selling $7.8 million in fraudulent and unregistered securities to 380 investors. The university then froze the remaining funds, about $32,000, in the account that held Telander's contribution to Bockris; university officials are waiting to find out if the money belonged to investors in Telander's securities scheme.

For his part, Bockris says he believes chemical transmutation of elements may indeed be possible, but he says he never thought commercial production of gold by these methods would be feasible. Bockris told a local newspaper that he had been "working on carbon to iron" and told another reporter that such transmutation could be "the greatest advance in modern science."

The chemistry department is divided over what should be done, says Hall. Cotton and the other 10 signers of the letter (out of the department's 38 full professors) are pushing Bockris to leave because of the "allegations regarding the integrity of your research and, in this case, the source of your funding." Others, Hall says, defend Bockris' right to pursue any kind of research he wants as long as he obeys university regulations. The university has begun an inquiry into the whole affair to see if those regulations were obeyed and, in particular, to understand how a well-respected research university came to accept a $200,000 gift for an investigation into alchemy.

–Robert Pool