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## Hydrogen breakthrough announced

by Gary Barker,  
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A team of Texas A&M researchers have developed the technology to efficiently produce hydrogen fuel from water, the head of the research team announced in a press conference today.

The pollution-free and possibly inexpensive fuel source could be used to fuel automobiles and power plants on a mass level.

Dr. John Bockris, head of the Texas A&M Hydrogen Research Center and director of the research team that made the discovery, said extracting hydrogen from water has been possible for several years, but this discovery could make such conversion economically feasible.

Bockris stressed the discovery may not be the exact commercial process that would be used to mass-produce hydrogen fuel.

"We have not got a definite lasting process," he said. "We made a quantum leap in the direction of one."

Bockris credited two researchers — Dr. Marek Szklarczyk and Dr. A.Q. Contractor — with the physical discovery.

The two scientists discovered silicon semi-conductors can be used to

convert solar energy into an electrical current. The current then separates the hydrogen and oxygen in water and the gases are collected at the semi-conductors.

This process of extracting hydrogen from water is not new, Bockris said, but never has resulted in such a high efficiency rate of recovery.

Research at the University of Turin and at the University of California at Berkeley has produced recovery rates of 0.05 percent. The general recovery rate here has been 13 percent, but more time is needed to confirm the rates, Bockris said.

Time is the key element in the development of hydrogen as a fuel source, he said.

"So much depends on big money and politics," he said. "One could start seeing development in a low number of years ... maybe five or six or seven."

But this would require hundreds of millions of dollars, he said.

The conversion of the country to a hydrogen-based economy would be gradual, he said.

If the process consistently can bring a recovery rate above the magic 10 percent mark, it could make the production of hydrogen economically feasible and bring its cost into competition with gasoline — possibly bringing the cost of hydrogen for



staff photo by David Fisher

Dr. John O'Mara Bockris explains how hydrogen can be separated from water molecules economically to produce an alternate fuel source. Bockris said potential applications are immense for the pollution-free fuel.

automobiles well below the \$1 a gallon mark. This could make the United States less dependent on foreign sources of energy, he said. International political signifi-

cance is huge," Bockris said. "This would free us from Middle Eastern blackmail."

Only a few experimental hydrogen-powered cars exist, but Bockris said hydrogen gradually could be introduced as an automobile fuel source. Cars running on hydrogen could operate side by side with cars running on gasoline, with the goal of eventually phasing out the gasoline-powered cars, he said.

With only a few modifications, conventional automobiles can be converted to hydrogen fuel use, he said. The primary modifications would include a fuel injection system, a turbocharger and a storage tank.

The discovery that resulted in a high recovery rate first was observed three to four weeks ago, Bockris said. But he stressed the research is not over. At least two years of small-scale laboratory research and possibly one to two years of large-scale chemical engineering research will be needed, he said.

But the entire process could be a failure, Bockris said.

"There's a 25 percent chance of flopping," he said. "But that wouldn't mean the idea of using hydrogen with solar energy is out. We could use other possibilities."

Exorbitant costs and the possible

deterioration over time of elements used in the process could cause the process' failure, he said.

Bockris, who has advocated the use of hydrogen as a fuel source since 1971, said the process is pollution free. When hydrogen is burned, it is converted to water — which again could be converted to hydrogen.

"The process is circular — it repeats itself," he said. "There is nothing left over — it's a very, very clean process."

"Without a doubt, hydrogen is the cleanest fuel there is. It's permanent — (it could produce the) ultimate energy economy that never would have to be changed."

Hydrogen also can be stored for long periods, unlike solar energy,

Hydrogen also can be stored for long periods, unlike solar energy, which must be used immediately or can be stored for only short periods of time, Bockris said. Research still is underway on the best way to safely store hydrogen.

Steps already have been taken to patent the recovery process, he said.

The hydrogen-recovery process is owned by the University, Bockris said, but "the University is pretty liberal in giving people who have done the work a share of the royalties."

## Philadelphia poisoning may be Tylenol-linked

United Press International  
CHICAGO — The head of the 130-member force investigating cyanide-laced Extra-Strength Tylenol capsules says it is too early to link a cyanide death in Philadelphia six months ago with the fatal poisonings of seven Chicago area residents.

State Attorney General Tyrone Fahner said Wednesday his team had further trimmed its list of suspects but refused to specify how many.

"The list of suspects has been narrowed," he said. "I've been advised by investigators not to play a numbers game."

After starting the week with 24 prime suspects, Fahner said Tuesday there were "eight or nine" primary suspects. He said

"that number is still a good number."

Relatives of poison victims Stanley and Theresa Janus filed two suits seeking \$10 million each from the manufacturer of Tylenol and a grocery chain that sold the capsules.

The poisonings case took a mysterious twist when Philadelphia police said the death of William Pascual, 26, a graduate student at the University of Pennsylvania, originally was ruled a suicide but now was considered "Tylenol-cyanide related." Pascual's case was reopened when cyanide was discovered in an Extra-Strength Tylenol bottle found in his home.

Frank Scafidi, chief of detectives in the Philadelphia Police

Department, said Pascual's April 3 death "links Tylenol and cyanide" and raises "more unanswered questions than answers."

Fahner told reporters, "We don't know enough about that (Pascual's death) now" to tell if there is a link. Caution is in order.

"Our best leads are still focused in the northern geographical area of Chicago."

Pascual's wife, Kathleen, told UPI she and her husband had never visited Chicago and had no friends in the city. Even though police said Pascual had emptied his bank accounts and left a note, Mrs. Pascual doubts he committed suicide.

## Parsons to retire; reflects on career

by Hope E. Paasch  
Battalion Staff

Thomas R. Parsons, former Corps Commandant and director of security and traffic at Texas A&M University, will resign from his position Jan. 31.

"I'm leaving this job because my wife and I decided years ago that if we could afford it, I would retire before I was 55," Parsons, who will be 54 on Oct. 19, said. "There's just too many other things we want to do."

Parsons, class of 1949, served as Corps Commandant from June 1971 to July 1977 — longer than any regular Army officer has held the position. For his efforts in 1973 to help organize a cavalry unit, cadets honored him by naming the unit after him. Parsons' Mounted Cavalry is a volunteer organization for junior and senior cadets.

A Parsons' Mounted Cavalry guidon hangs over his desk at University Police headquarters.

"Sometimes a student will walk into my office and see the guidon," he said. "They ask if I have anything to do with the cavalry and I say, 'Yeah, it's named after me.' They usually say, 'Oh, I thought the guy was dead.'"

Another milestone in Parsons' term as commandant came when the first female was admitted to the Corps in 1974.

"Despite some of the letters (The Battalion) gets, women have a place in the Corps," he said. "Particularly at that time (1974), the military services needed women. The Corps does turn out some good women's officers and it's a good program."

"I'm also satisfied that we held the Corps together through some rough times. In the early seventies, it wasn't very popular to wear a uniform, have short hair or be in the military. But we maintained enrollment in the Corps even then."

During his term as commandant,



staff photo by David Fisher

Thomas R. Parsons, director of security and traffic

Parsons received the Association of Former Students Distinguished Faculty Award for Student Relations. The Friends of the Corps also created two scholarships in his name.

"I enjoyed the Corps," he said. "It's filled with positive things. Becoming Corps Commandant is the climax of a career for any Aggie officer. Unless he plans on making general — then he probably wouldn't take the position. I would rather be Corps Commandant than a general in the Army."

Parsons was chairman of the Bonfire and Yell Leader Committee, until he requested the committee be dissolved.

"It seemed like all we did was listen to complaints, and I thought it would work better if each group had an

adviser instead," he said. "I am still the adviser for the yell leaders."

This year's Bonfire Barbeque will honor Parsons.

"I used to spend a lot more time with Bonfire," Parsons said. "I would pitch a pup tent and spend a few nights out there at the cutting site. I don't do that anymore because I'm not that young any more."

When Parsons ended his term as commandant, he immediately filled the director of security and traffic position that had just been created.

"(Vice President for Student Services John J.) Koldus created the position because the University Police needed someone to be an administrator," Parsons said. "They offered me

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## Lebanese troops continue clean-up in west Beirut

United Press International  
For a second consecutive day, Lebanese troops Wednesday swept through west Beirut in a clean-up effort that already has yielded tons of military supplies and led to the arrest of 143 people, four months after Israel invaded Lebanon.

In Tel Aviv, Israel pressed for U.S. assurance that Palestinian guerrillas will leave Lebanon along with Israeli and Syrian troops, but warned the pullout also depends on the release of captured Israeli soldiers.

On the second day of the Beirut crackdown, which came as the Israeli invasion that began June 6 entered its

fifth month, Italian troops today manned roadblocks as Lebanese soldiers combed the area for arms caches and illegal residents.

An army source said the ambassadors to Lebanon of the United States, Italy and France — the nations in the 3,400-man peace-keeping force — all agreed to the crackdown after being consulted by President Amin Gemayel.

But in Washington, the Washington Post reported the three ambassadors complained to Gemayel on Saturday about charges of poor treatment of hundreds of Palestinians who had been arrested since he took office Sept. 23.

Gemayel, in an interview with Al Yamama newspaper, said he ordered the searches because he was concerned by the large number of Palestinians without residence permits in west Beirut.

The Palestinians who do not have proper papers must leave the country because Lebanon cannot carry the burden of the Palestinian problem by itself, the president said.

The independent An Nahar newspaper said 453 people were detained Tuesday. But army sources said only 143 had been arrested for having expired residence permits, or for having entered the country illegally.

## Quorum to OK election results

The results of the Class of '86 elections will not be available until tonight at 9.

The results are tabulated, but they must be reviewed and approved by a quorum of the judicial board before they can be released. The quorum will meet tonight at 8:30 and the results will be posted outside the Student Programs Office, 216 MSC at 9 p.m.

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## forecast

Cloudy, chance of thunderstorms. High 88, low 74.

## Court overturns life sentence

United Press International  
AUSTIN — The Texas Court of Criminal Appeals Wednesday overturned a life sentence given to a Tyler man accused of fatally assaulting his girlfriend in retaliation for her testimony against him on a tire-slashing charge.

The appeals court ruled that a sheriff's deputy in Colorado County did not have probable cause to stop and detain 31-year-old Paul Woodward as a suspect in the death of his former girlfriend. The case was remanded for a new trial.

Woodward was arrested approximately two hours after the death of his former girlfriend, Patricia Dohnalik. He originally was charged with capital murder in Dohnalik's death, but the charge later was reduced to deadly assault.

According to court documents, police surmised that Woodward attacked Dohnalik in retaliation for

her testimony against him in a criminal mischief trial in Tyler. He had been charged with slashing Dohnalik's tires.

Shortly after she died from gunshot wounds on March 15, 1980, Dohnalik's roommate testified that Woodward had been making threatening calls to their residence.

Although she did not witness the attack, police issued a statewide bulletin for Woodward and he was arrested a short time later in Columbus, Texas. A subsequent search of his car revealed the murder weapon.

The high court ruled that Woodward's constitutional rights were violated because there was not sufficient evidence against him to justify his arrest. The appeals court also ruled that the gun found in his car was illegally discovered and should not have been admitted as evidence at his trial.



staff photo by David Fisher

Patiently waiting

The rain that came Wednesday separated people in a hurry from people who didn't think it was worth fighting the rain to get

somewhere. These waited under an overhang outside Harrington for the rain to slow down or quit to go to class.