

FORD AWARD HONORS CARBON CYCLE PIONEER

Dr. Taro Takahashi, Lamont-Doherty Earth Observatory of Columbia University

In the spirit of the Scientific American 50, Ford Motor Company presents the Ford Award in recognition of Dr. Taro Takahashi's contribution to understanding what happens to industrial CO₂

Ford Motor Company believes that sustainability performance is not just a requirement, but a tremendous business opportunity. It values the work of scientists who are playing an active role in bringing about the transition to greater economic, social, and environmental sustainability. For that reason, Ford is proud to present the Ford Award to Dr. Taro Takahashi. The Ford Award will be presented at the SCIENTIFIC AMERICAN 50 reception for original thinking and innovative work that has far-reaching implications for society. Dr. Takahashi has devoted his life to discovering how carbon cycles through oceans, land, and atmosphere, and his work is the foundation upon which all current carbon-cycle research is built.

"I salute Dr. Takahashi, who has been a leading contributor to the scientific community's understanding of the ocean's role in the global carbon cycle and its relationship to climate," says Bill Ford, Chairman and CEO. "For the past three years we have supported Dr. Takahashi's work through Ford research grants. The Ford Award recognizes his achievement in his field."

A geochemist, Dr. Takahashi's research focuses on understanding what happens to industrial CO₂ released in the air and how it is affected by the complex interactions between ocean circulation, marine ecosystems, and land-sea-air processes. A Fellow of the American Geophysical Union and a Doherty Senior Scholar at Lamont-Doherty Earth Observatory, Dr. Takahashi is highly respected by his peers.

Born in Japan where he received a Bachelor of Engineering from the University of Tokyo, Dr. Takahashi earned a Ph.D. in Geology from Columbia University in 1957 and went to work at the Lamont Observatory. His first assignment was to study the Atlantic Ocean's absorption of CO₂, and he found himself on a research vessel, embarking on a 10-month journey. Fascinated by what he found, Dr. Takahashi made ocean research his passion.

Dr. Takahashi found that the lion's share of global CO₂ resided in the ocean, which holds 50 times as much CO₂ as the earth's atmosphere. He also observed that oceanic absorption varies widely depending on the water temperature and season. He saw that colder water soaks up more CO₂ than warmer water, and that deep water holds more CO₂ than surface water – except in winter, when surface water becomes colder and heavier, and forces deep water to the surface where it releases CO₂ into the atmosphere. The data he has collected in his years of worldwide research play a crucial role in developing computer models of future ocean changes.

Now, Dr. Takahashi is concerned that global warming will raise ocean temperatures and reduce the ocean sink. "We have to keep a close eye on industrial emissions and develop new technologies such as hybrid cars and high efficiency electrical generation. We must promote energy conservation as well," he says. He is studying how climate change may alter interactions between lands and oceans and what can be done. "I'm trying to understand what kinds of processes, either man-made or natural, will stem the rapid increase of the atmospheric CO₂ level," he says.

In the past several years, Ford has developed new technology that offers customers solutions to concerns about fuel prices and greenhouse gases, such as the Escape Hybrid. Ford will continue to develop technologies to balance energy needs with world economic growth, and support the work of outstanding scientists such as Dr. Takahashi.

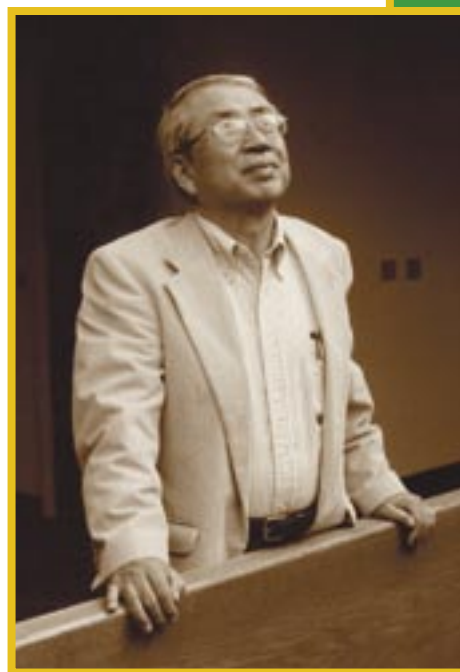


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