

Powering the future: Alfred University adds hydrogen fuel cell capability for research, education

9/21/17



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Alfred University's Inamori School of Engineering has added equipment that will allow students and researchers in the Inamori School of Engineering to expand their knowledge of hydrogen fuel cells as part of the renewable energy engineering curriculum.

Dr. Xingwu Wang, professor of electrical engineering, explains students in the renewable energy engineering program learn about alternate sources of energy, including solar, wind, water and chemical (fuel cells). Unlike conventional batteries, which also rely on a chemical reaction to produce energy, fuel cells do not run out of power, but will continue to operate as long as hydrogen is supplied. To do that, Wang said, requires equipment that will convert water to its component elements hydrogen and water through a process called electrolysis. It is that equipment the University just acquired.

The equipment will allow students to test fuel cells they produce to determine their efficiency and effectiveness. The design and production of fuel cells rely heavily on engineered materials, something that Alfred University's engineering curricula focus on.

Wang is an experienced researcher in fuel cell technology, with previous grant funding from the U.S. Air Force, the U.S. Department of Energy and Niagara-Mohawk, now known as National Grid.