

The Ames Tribune

07/14/2007

Improving biodiesel

By: William Dillon/The Tribune

Iowa State University professor Victor Lin is taking his research to market in the hope of reinventing the way biodiesel is produced.

Lin and his researchers have created a new type of biodiesel catalyst, the ingredient that creates the reaction between methanol and oils to create the renewable fuel biodiesel. It's a catalyst that makes the overall production of biodiesel cheaper, faster and less toxic, Lin said.

One of the most prominent feature of Lin's catalyst is that it replaces the need for the toxic and corrosive chemical sodium methoxide. This cuts down on both time and money, he said, as it eliminates the need for several steps in the production process, including acid neutralization and water washes.

"Overall, that makes our catalyst more attractive and more environmentally friendly," he said.

Lin has joined forces with Mohr Davidow Ventures, an early stage venture capital firm located in California's Silicon Valley, to build a business around the catalyst. The business, Catilin, officially opened for business earlier this month.

The initial goal in the first 18 months of the company is to take the technology out of the lab to see how it will react in the real world, Lin said.

"Victor's team has proved it works already in the lab multiple, multiple times, but the big question is whether we can produce a good portion of biodiesel using this technology," said Larry Lenhart, Catilin's president and chief executive officer.

Lin and his Catilin team have high hopes for the future of Catilin as the market for biodiesel - according to recent trends - is not going away anytime soon. The United States has gone from producing 75 million gallons of the alternate diesel in 2005 to producing an estimated 250 million gallons in 2006, according to the National Biodiesel Board.

Still, the cost of producing biodiesel is generally more than the cost of producing diesel from fossil fuels, but the Catilin team hopes to help level the playing field with its catalyst.

Lenhart said Catilin already has received calls from several companies interested in trying the new catalyst, but his answer thus far has been that they will need to wait.

"We want to make sure we have a good sense of how our technology operates," he said. "Then, they can have it."

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By Nirmalendu Majumdar/The Tribune
Carla K. Wilkinson, research scientist and co-founder; Jennifer Nieweg, project manager and co-founder; Yang Cai, research scientist and co-founder; and Victor Lin, ISU Professor of Chemistry and founder, from left, take methanol from a solvent purification system July 9 in Lin's lab at Gilman Hal.

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