



Synthetic dyes could increase energy

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BUFFALO, N.Y., Dec. 31 (UPI) -- U.S. chemists say newly developed photosensitizing dyes could greatly increase the efficiency of light-driven systems that produce green energy.

Chemists at the University at Buffalo in New York who've synthesized a new class of the dyes say the advancement could form the basis of cost-effective technologies to power everything from household appliances to hydrogen vehicles, a university release said Friday.

The researchers say the synthetic dyes, when used in solar cells and hydrogen fuel cells, absorb light more intensely and transfer their electrons more efficiently than conventional dyes.

The work could lead to the development of better commercial technologies for producing solar electricity and hydrogen on demand, one researcher said.

"Sunlight in 1 hour could power the world for a year but we don't

tap into it for either electricity or for making solar fuels," UB professor Michael Detty said.

"Plants use sunlight to make their own fuels. Humans don't. We use oil. So if we want to have energy independence it will come from solar."

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