

U.S. funds hydrogen experiment

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The U.S. Energy Department has awarded a U.S. researcher a \$3 million grant for a project that focuses on harnessing photoactive material from the sun.

University of Nevada-Reno professor Manoranjan Misra's project uses the sun to generate hydrogen -- one of the cleanest forms of energy that is 33 percent more efficient than liquid fuels. Northern Nevada, with more than 300 sunny days per year could become the perfect hub to generate hydrogen energy, said Misra.

Misra and colleagues have created a hydrogen material that has more than a billion nanotubes, giving it excellent potential to produce hydrogen from another abundant resource -- water. Misra's small-scale hydrogen generation system at the university produces the gas through an electrochemical process from applied ultrasonic waves.

"We are currently using simulated solar light in the lab," Misra said, "and we are finding our system to be a good and robust way to facilitate the movement of electrons by the incident light to produce hydrogen from water."

Misra estimates by the end of this decade the system could grow to a more industrial size scale, allowing power companies to produce hydrogen that might power automobiles or homes.

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