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# Dover HS Senior Takes Part in Hydrogen Storage Study

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While most high school students looked forward to the summer out of school as a three-month opportunity for fun or to make some employment money, it can be said that George G. Gallo, a Dover High School senior, was looking for the same.

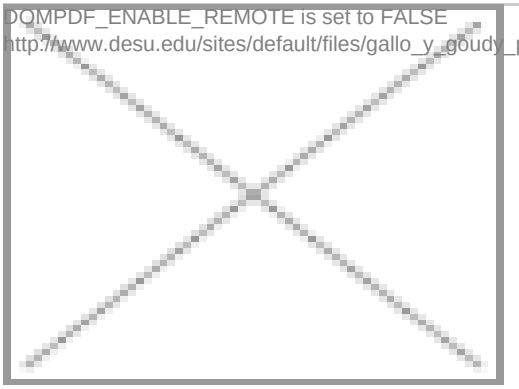
However, the fun he was seeking had nothing to do with sports, music or teenage girls. Instead, it revolved around his passion for science.

After reading a local newspaper article about Delaware State University?s ongoing hydrogen storage research project, George decided to offer his curiosity and desire to learn about research toward the cause.

Although Dr. Andrew Goudy, the director of the DSU Hydrogen Research Center, did not have the involvement of any high school student programmed in his research program, when young George asked if he could participate in the studies, his sincerity and earnestness won over the chemistry professor.

After receiving strong recommendations from George?s Dover High School teachers, Dr. Goudy brought George on board and began teaching him about the hydrogen storage research and its alternative energy ramifications.

Established in 2005 through federal funding, the DSU Hydrogen Storage Research Center has been earnestly seeking ways in which to store and release hydrogen ? thought to be a promising alternative fuel and energy resource ? in greater quantity than is currently possible. The center was recently awarded $1.4 million in additional Congressional funding to continue seeking suitable hydrogen storage material.



**George Gallo (right), who has previously distinguished himself by earning awards from the Delaware Science Olympiad for his science projects, convinced Dr. Andrew Goudy (left) to allow him to become a part of DSU's Hydrogen Storage Research project.**

Once Dr. Goudy sufficiently oriented George on the fundamental challenges presented by hydrogen storage, he began involving the Dover High School senior in the actual research work and guided him through tests on magnesium hydride.

As a storage material, magnesium hydride can hold a lot of hydrogen, but needs a high temperature to release it. Because fuel cells need low temperatures to work effectively, George and DSU doctoral chemistry student Saidi Sabitu have been mixing additives to the magnesium hydride in an attempt to come up with a lower storage temperature capability.

?They have been having some success and we are planning on publishing the findings by the end of the summer,? said Dr. Goudy, who is also the chair of the DSU Department of Chemistry.

George said the hydrogen storage research work has been a valuable and thrilling experience for him. ?This is groundbreaking stuff,? George said. ?It is exciting in that what we find out here, we know before anyone else does.?

For George ? who says chemistry and physics interest him the most ? it has been an exciting summer in which he has not only been able to feed his voracious appetite to attain science knowledge, but also learn about some of the challenges of research.

?I?ve learned that research is all about patience, because it takes a lot of time,? George said. ?Tests need to be done a number of times and sometimes you can run into problems.?

Dr. Goudy said that George possesses the requisite characteristics of scientific curiosity and enthusiasm. ?He likes to ask a lot of questions. He always wants to know what?s going on and why.?

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