



Grad Student Receives Prestigious Department of Energy Graduate Research Award

Chemistry Ph.D. candidate Charles Wilson funded to study at Brookhaven National Lab

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(HTTPS://WWW.UNH.EDU/
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STUDENT-RECEIVES-
PRESTIGIOUS-DEPARTMENT-
ENERGY-GRADUATE-RESEARCH-
AWARD)



CHARLES WILSON, PH.D. CANDIDATE IN CHEMISTRY AND RECIPIENT OF THE OFFICE OF SCIENCE GRADUATE RESEARCH AWARD

Charles Wilson, a Ph.D. candidate in chemistry, is among the 86 outstanding graduate students selected by the Department of Energy (DOE) Office of Science to receive supplemental funds to conduct research onsite at a DOE national laboratory or facility.

Wilson works with associate professor of chemistry Christine Caputo to study inorganic chemistry emphasizing chemical synthesis and solar fuel catalysis. His work aims to help us turn sunlight into clean fuel.

“The field of solar fuels catalysis deals with the production of chemicals and materials (the catalysts) that can capture the essentially infinite energy from the sun (solar) and store that energy in chemical bonds (the fuels),” Wilson says.

Reel Research

Watch (<https://youtube.com/shorts/GJMrOxiVQZ0?si=CH0sbAGNPDQOod-r>) Charles "C.J." Wilson talk about how his research could turn sunlight into clean energy.

Wilson will continue his research at the DOE’s Brookhaven National Lab in Upton, N.Y. There, he will use several unique instruments housed at the lab to enhance the understanding of electron transfer in multi-component photocatalytic systems.

Wilson says the award will have a “massively” positive impact on his research, as it requires the type of high-level spectroscopic characterization that can be provided by Brookhaven, and accompanying those instruments are scientists who are experts in using them.

Wilson’s research helps in the strive for combatting climate change, as other methods of generating green energy suffer from transience, or the state of lasting only for a short time. Capturing energy from the sun in the form of chemical bonds of a liquid or gaseous fuel allows for energy that is both storable and transportable, and results in fuels that are “carbon neutral at worst and entirely carbon-free at best,” he says.

Wilson says receiving this award has been an unbelievable and humbling experience; “The impact on my research will be huge, but this will also give me an opportunity to grow as a scientist. Winning this award has given me confidence in myself and confidence in my research.”

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