



The Connecticut Agricultural Experiment Station

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*Putting Science to Work for Society
Protecting Agriculture, Public Health, and the Environment*

Founded 1875

FOR IMMEDIATE RELEASE

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The Connecticut Agricultural Experiment Station (CAES), along with 10 Universities and one National Laboratory, is funded as part of The Center for Sustainability Nanotechnology (CSN)

New Haven, CT - Tiny particles known as nanomaterials can wreak havoc on biological systems but may also be used to help support them, depending on chemical composition and the environment's ability to handle each substance.

“Naturally occurring nanomaterials, like sand, are things to which our bodies and the environment have adapted,” says University of Wisconsin-Madison professor of chemistry and NSF Center for Sustainable Nanotechnology (CSN) Director Robert Hamers, Ph.D. “Engineered nanomaterials have not been in the environment for a long time, so biological systems have not adapted to challenges they present, leaving the potential for greater environmental impacts.”

The CSN focuses on fundamental science and involves collaboration between researchers at UW-Madison, 10 other universities, and two government laboratories, including CAES, who apply what is learned, work to mitigate problems associated with nanomaterials, such as lithium ion batteries and other electronic waste, and they design and synthesize nanomaterials which may offer benefits to the environment, such as those that improve crop health and reduce the need for pesticides and fungicides.

The National Science Foundation (NSF) Division of Chemistry will fund CSN research for another five years with a \$20 million grant. “CAES research in the next 5 years will continue to investigate the safe use of novel Center-produced nanoscale nutrients to improve agricultural productivity and advance efforts to combat global food insecurity,” notes CAES Director and CSN investigator Jason C. White, Ph.D.

“The NSF Centers for Chemical Innovation (CCIs) are transforming the way we do science by engaging interdisciplinary, multi-institutional teams to take on grand challenges in the field,” said David Berkowitz,

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Division Director of Chemistry. “The Center for Sustainable Nanotechnology, one of the CCIs, is performing important research that will guide the development of sustainable nanotechnologies, a key element of the industries of the future.”

The center is focused on science, outreach, and workforce development, serving as a strong professional development program for training graduate students and post-doctoral researchers, and with a focus on improving diversity in higher education. CAES investigators in the CSN include Dr. Jason C. White (CAES Director), Dr. Wade Elmer (CAES Vice Director and Chief Scientist of the Department of Plant Pathology and Ecology), and Dr. Yu Shen (Post-doctoral Associate in the Department of Analytical Chemistry).

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