The Connecticut Agricultural Experiment Station

123 HUNTINGTON STREET, P.O. BOX 1106, NEW HAVEN, CONNECTICUT 06504

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LOCKWOOD LECTURE

"Advanced Bactericides/Fungicides for Crop Protection"

Prof. Swadeshmukul Santra

Professor of Chemistry and Nanoscience
University of Central Florida

Wednesday, October 27, 2021

Tea: 10:30 a.m., Lecture: 11:00 a.m.

Jones Auditorium, The Connecticut Agricultural Experiment Station
123 Huntington Street, New Haven, CT

Abstract: Copper (Cu) bactericides/fungicides are aggressively used in the agriculture industry in the U.S. and worldwide on many crops. There is an increasing concern of Cu accumulation in field soil, Cu leaching potential into the surrounding ecosystem and development of bacterial resistance. Using nanotechnology, it is possible to reduce Cu amount per application without compromising overall efficacy. Moreover, Zn and Mg based nanomaterials can be developed for potential use as an alternative to Cu bactericides/fungicides. This presentation will focus on laboratory, greenhouse and field efficacy outcome of several nanoparticle composites, challenges towards developing industrially viable formulations and approaches to minimize regulatory challenges.

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Biosketch: Dr. Santra is a Professor at the University of Central Florida (UCF) holding a joint appointment with the NanoScience Technology Center (NSTC) and the Department of Chemistry. He is affiliated with Material Science and Engineering (MSE) and Burnett School of Biomedical Sciences (BSBS) of UCF. He is the Director of UCF's Materials Innovation for Sustainable Agriculture (MISA) Center. He has been actively working in the field of Nanoscience and Nanotechnology for over 20 years. He has published 93 peer-reviewed research articles, 7 review articles, 11 book chapters, and delivered 96 invited talks. He has been awarded 34 patents including 26 U.S. patents. His research has been funded by NSF, USDA, Citrus Research and Development Foundation, Environmental Research and Education Foundation, and several industries with a portfolio of over $5.6M research funding.