SPCEET RESEARCH SEMINAR SERIES

Dr. Wenzhuo Wu

Dr. Wenzhuo Wu is the Ravi and Eleanor Talwar Rising Star Associate Professor in the School of Industrial Engineering at Purdue University. He received his Ph.D. from Georgia Institute of Technology in Materials Science and Engineering. Dr. Wu's research interests include designing, manufacturing, and integrating nanomaterials for applications in wearable sensors, clean energy, and nanoelectronics. He was a recipient of many awards, e.g., Oak Ridge Associated Universities Ralph E. Powe Junior Faculty Enhancement Award, Society of Manufacturing Engineers Barbara M. Fossum Outstanding Young Manufacturing Engineer Award, Advanced Materials Interfaces Hall of Fame , ARO Young Investigator Award, NSF Early CAREER Award, Minerals, Metals & Materials Society (TMS) Functional Materials Division (FMD) Young Leaders Professional Development Award, Purdue College of Engineering Faculty Excellence Award for Early Career Research, Advanced Materials Technologies Hall of Fame, an invited participant at the 2022 China-America Frontiers of Engineering Symposium, an invited participant in the first U.S.-Africa Frontiers of Science, Engineering, and Medicine Symposium, an invited participant in the Arab-American Frontiers of Science, Engineering, and Medicine symposium, Sensors Young Investigator Award, an elected Fellow of Royal Society of Chemistry (FRSC), and an elected Fellow of Royal Society of Arts (FRSA).

FUSING ATOMS WITH BITS THROUGH NANOMANUFACTURED WEARABLE SENSORS

The seamless and adaptive interactions between functional devices and their environment (e.g., the human body) are critical for advancing emerging technologies, e.g., wearable devices and human-machine teaming. I will discuss our recent progress in developing human-integrated sensors through the hybrid nanomanufacturing of heterostructured devices based on versatile nanomaterials (e.g., 2D semiconductors, biomass-derived materials, etc.). This new class of wearable devices is conformable to skins and can sustainably perform non-invasive monitoring of a broad spectrum of signals from the human body (e.g., mechanical, chemical, etc.). This research could have a positive impact and immediate relevance to many societally pervasive areas, e.g., telehealth, consumer electronics, and robotics.

Date:
Wednesday, March 27th

Time:
11:15 AM - 12:15 PM

Location:
Q 314