PURDUE UNIVERSITY

Birck Nanotechnology Center

Trisha L. Andrew is an Assistant Professor of Chemistry and Materials Engineering at the University of Massachusetts Amherst. She started her independent career in 2012 at the University of Wisconsin-Madison, where she was an Assistant Professor of Chemistry and Electrical Engineering.

She received her education at the University of Wisconsin (B.S.) and at the Massachusetts Institute of Tehcnology (Ph.D).

Trisha is the Director of the Wearable Electronics Lab at the University of Massachusetts Amherst. The WELab strives to produce emergent electronic technologies on unconventional substrates by using organic materials to achieve unmatched control over processing conditions, device dimensions and the spin of charge carriers. Trisha is a David and Lucille Packard Foundation Fellow, and an Air Force Young Investigator and 3M Nontenured Faculty Award winner.

Garment-Integrated Technologies Created Using Reactive Vapor Deposition

Trisha L. Andrew

Wednesday, December 19th, 2018
9:00am – 10:00am
BRK 1001

Off-the-shelf garments, textiles and threads/yarns, can be nondestructively transformed into electronic circuit components using reactive vapor deposition. Selected technologies created using vapor-coated fibers and textiles will be described, including: (1) smart elbow braces for movement sensing; (2) textile triboelectric generators that convert small body motions into stored energy; (3) thread/yarn supercapacitors that can be sewed or knitted into garments for wearable and portable energy storage; (4) fabric electrodes for bioimpedance spectroscopy; (5) wear-, wash- and ironing-resistant active heating garments; and (6) thermoelectric wristbands that convert stray body heat into stored power.

PURDUE UNIVERSITY Discovery Park