Department of Biomedical Engineering
香港城市大學
City University of Hong Kong

BME Seminar Series 02

1 May 2023 (Monday), 10:30 - 12:00 noon
B6605 College Conference Room, 6/F, YEUNG

https://www.cityu.edu.hk/bme/

(organized by Dr. Xinge Yu)

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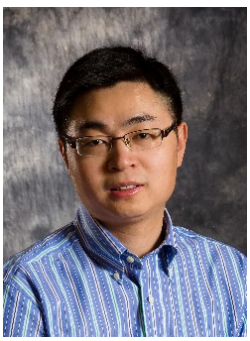
Biomimetic Rubbery Synaptic Electronics and Integrated Systems

Abstract

Synapses are unique and critical biological structures that allow for the transmission of electrical or chemical signals thus to enable neurons to communicate with each other. Embodied within human or animals, the synapse is usually soft and able to accommodate various forms of mechanical deformations. Artificial synapse electronics that can be stretched similar to those appearing in human or animals could be seamlessly integrated other soft functional systems towards enabled neurological functions. This presentation will show our recent efforts on developing stretchable synaptic electronics fully made out of rubbery electronic materials. Rubbery synaptic devices are enablers for various soft systems with implemented neurologic functions. Examples including soft neurorobots, cognitive smart skins, neuromorphic imaging devices will be introduced.

Biosketch



Dr. Cunjiang Yu is the Dorothy Quiggle Career Development Associate Professor of Engineering Science and Mechanics, Biomedical Engineering, and Materials Science and Engineering at Pennsylvania State University. His recent research concerns the fundamentals and applications of soft-/bio-electronics. He has published ~100 journal articles, among them 25 appear on PNAS and Nature/Science Sister journals. His work has been recognized by numerous awards, including the CAB Mid-Career Award, ASME Thomas J. R. Hughes Young Investigator Award, the Society of Engineering Science Young Investigator Medal Award, NIH Trailblazer Award, NSF CAREER Award, ONR Young Investigator Award, MIT Technology Review TR35 Top Innovator of China, AVS Young Investigator Award, etc.