



Yi Hong Ph.D.

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Date: Friday, August 28, 2026

Time: 12:00 to 1:00 PM

Location: SR2 130

Title: Elastic Biodegradable Polymers in Biomedicine: Design and Functions

Abstract: Biomaterial approaches to tissue repair & regeneration have been utilized to manage injury, damage, and diseases of soft tissues. Seeking a suitable biomaterial for soft tissue repair is complex and significant. The biomaterial properties are expected to be biosafe and mimetic to the native tissue, such as structure, mechanics, and biofunctions. Our lab aims to utilize structure-properties-function relationship to achieve suitable biomaterials for soft tissue repair, through design, development, and applications of both synthetic and natural biomaterials. To mimic softness and elasticity of the soft tissues, we design synthetic elastomeric polymers with mechanically matching with native tissues and functionalities through molecular design and rational processing. In this talk, we will introduce our works in utilizing urethane chemistry to develop series of biodegradable elastic polyurethane with tunable properties and different functions, and designing robust and elastic polymeric hydrogels for biomedical applications. These works are expected to provide some sights to inspire a new generation of biomaterials for basic and translation research.

Bio: Dr. Yi Hong is a Distinguished Research Professor in the Bioengineering Department at the University of Texas at Arlington (UTA). He achieved his PhD in Material Science and Engineering in 2005 at Zhejiang University. Before joining the UTA in 2012, Dr. Hong worked as a postdoc and later as a Research Assistant Professor in the McGowan Institute for Regenerative Medicine in the University of Pittsburgh. His research focuses on developing functional and bioactive soft biomaterials and translational research for tissue repair and regeneration applications, especially for cardiovascular disease treatment, and women and children healthcare. He has published over 120 peer-review papers in the field of biomaterials and applied/issued 14 patents as well as over 180 conference abstracts. He received many awards, such as NSF CAREER award, University's Outstanding Research Award, AHA Established Investigator Award, and COE Award for Distinguished Record of Research. He is a Fellow of AHA, AIMBE, RSC, and BMES and a Senior Member of National Academy of Inventors.