Synthetic Approaches to Soft and Elastic Materials in Biomedicine

State Key Laboratory of Chemical Resource Engineering

报告人：Yi Hong (University of Texas at Arlington)

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个人简介：

Dr. Yi Hong is an Associate Professor in the Bioengineering Department at the University of Texas at Arlington. He achieved his PhD in Material Science and Engineering in 2005 at Zhejiang University. And then 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 from 2006 to 2012. After joined UTA in 2012, his research focuses on developing functional and bioactive soft biomaterials and translational research for tissue repair and regeneration, drug delivery and bio-imaging applications with emphasis on cardiovascular disease treatment. He has published over 70 peer-review papers in the field of biomaterials, and applied/issued 11 patents as well as over 100 conference abstracts. He received many awards, such as AHA Beginning Grant-in-Aid award in 2014, NSF CAREER award in 2016, College of Engineering Outstanding Early Career Award (UTA) in 2018, and Junior Investigator Award from BMES ABioM-SIG (2018). He was elected as a Fellow of American Heart Association in 2017.

报告摘要：

Biomaterial approaches to tissue repair & regeneration have been utilized to manage injury, damage and diseases of soft tissues, such as muscle and blood vessel. Seeking a suitable biomaterial for such use is very complex and highly significant. It is expected that the biomaterial is compatible and mimetic to the native tissue, liking harmony between artificialization and nature. Our lab aims to utilize structure-properties-function relationship to seek suitable biomaterials for soft tissue repair through design, development and applications of synthetic biomaterials. Due to softness and elasticity of the soft tissues, we focus on a synthetic elastic biodegradable polymer, polyurethane, with controlled degradation, tunable mechanical properties, blood compatibility and conductivity. The development of these materials may provide some hints for inspiring new generation of biomaterials.

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