ABSTRACT:

FUNCTIONAL BIOMATERIALS FOR TISSUE ENGINEERING

Research in the Jia Group lies at the interface of materials and biology. Using diverse and modular building blocks and employing highly efficient bio-orthogonal chemistries, we are developing innovative biomaterials that closely mimic the molecular composition, mechanical responsiveness and biological functions of the natural extracellular matrices. The synthetic matrices, combined with defined mechanical cues and biological factors, create a three-dimensional microenvironment for improved understanding of cell biology and tissue morphogenesis. Using biologically inspired paradigms, we are developing methodologies for the engineering of healthy, replacement tissues and physiologically relevant disease models.

BIOGRAPHY:

Xinqiao Jia is Professor of Materials Science and Engineering at the University of Delaware. She received her B.S. in Applied Chemistry from Fudan University in China in 1995 and her Ph.D. in Polymer Science and Engineering from the University of Massachusetts Amherst in 2002. She conducted her postdoctoral training with Professor Robert Langer at MIT prior to joining the University of Delaware in 2005. She received the NSF CAREER Award in 2006, the Delaware BioScience Association’s Academic Award in 2011, and the Delaware ACS Section Award in 2018. She was the Thematic Program Chair of the 244th ACS meeting and served as a program co-chair for the Division of Polymeric Materials Science and Engineering (PMSE) in 2015-2018.