

CENTER FOR RESEARCH IN SOFT MATTER & POLYMERS

CRISP SEMINAR

Monday, Sep. 30, 2019

10:00 a.m.

366 Colburn Lab



*“From Cell Phones to Stent Grafts:
Materials Science and Innovation at
W.L. Gore & Associates”*

W.L. Gore & Associates is a materials science company focused on discovery, product innovation and rewarding careers for our associates. From medical devices implanted in the human body, to clothing worn on expeditions to Mt. Everest, to electronic cables transmitting signals from outer space, Gore products offer the superior performance and reliability that our customers expect and end users require.

Research Scientists at Gore have the opportunity to contribute to a wide range of products and applications, often cross-disciplinary and cross-functionally. This talk will share two very different examples of technology development at Gore. First, we will discuss the development of acoustic computational models of ePTFE microphone vents to optimize sound quality while providing environmental protection for personal electronics such as cell phones and wearable technologies. Second, we will outline the development of a biomimetic heparin coating to improve clinical outcomes for ePTFE vascular stent grafts, from bench level testing to the results of large clinical studies demonstrating improved patency in the treatment of Peripheral Artery Disease. Together, these examples demonstrate Gore’s commitment to leveraging deep scientific understanding to enable breakthrough products for our customers.

Theresa Koys Tonge

Research Scientist
W.L. Gore & Associates

Theresa Tonge holds a B.S. in Chemical Engineering from the University of Illinois at Urbana-Champaign, an M.S.E. in Biomedical Engineering from the Johns Hopkins University, and a Ph.D. in Mechanical Engineering also from the Johns Hopkins University. Her thesis work focused on the experimental and computational biomechanics of soft biological tissues for prosthetic and ophthalmic applications. Theresa joined W.L. Gore and Associates in 2014 and has held roles in the Performance Solutions and Core Technology divisions, where she continues to leverage constitutive model development and computational modeling to support new technology development in a variety of fields including medical and industrial applications. Theresa is also active in fostering research collaborations with local universities.

<https://sites.udel.edu/udcrisp>

