

Volume 9 Number 3 March 2017

#### Newsletter At-A-Glance:

- New! WinTest® 8.0 and DMA 7.1
- New! DuraPulse SGT Product Video
- Customer Highlight Fatigue Life Behavior of Carbon Fiber Reinforced Polymers
- Customer Highlight Understanding Cartilage Surface Wear Mechanisms After an Injury
- Promotions and Events

### New! WinTest® 8.0 and DMA 7.1

Improved data acquisition, increased sampling rate, and TRIOS

Introducing WinTest 8.0 and DMA 7.1! Operating on Windows 10, WinTest 8.0 includes simplified data acquisition set-up and an increased maximum sampling rate of 10 kHz. In addition, we are introducing TunelQ for torsion motors along with an increased range of rotation up to ±20 turns. DMA 7.1 now utilizes TRIOS, a powerful analysis software application, for plotting DMA results. TRIOS also provides the ability to perform plotting overlays, user-calculations, and advanced analysis including Time-Temperature Superposition (TTS).



Click here to learn more about what's new in WinTest 8.0 and DMA 7.1.

## New! DuraPulse SGT Product Video

Trusted for pulsatile fatigue testing over billions of cycles

We are excited to unveil a new product video for the DuraPulse Stent/Graft Test (SGT) instrument. Launched last fall, the DuraPulse SGT incorporates a modular manifold design and accommodates stented devices ranging from 2 to 50 mm in diameter. In addition, a new user interface makes it even easier to set-up and run long-term pulsatile fatigue tests.



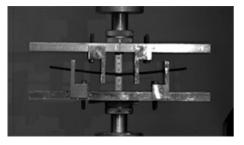
To watch the video, click here.

To visit the DuraPulse SGT webpage, click here.

# Customer Highlight Fatigue Life Behavior of Carbon Fiber Reinforced Polymers

Exploring the impact of fully-reversed bending on changes in flexural modulus

Carbon fiber reinforced polymers (CFRP) are finding their way into an increasing number of engineering applications in a broad spectrum of industries. CFRPs are often used for products in which a high strength-to-weight ratio is desired. In many structural applications, CFRPs undergo repeated loading and unloading cycles that cause fatigue damage over time. In order to better predict the complex nature of CFRP fatigue, Ali Amiri and colleagues at North Dakota State University and the University of North



Dakota have recently published research that proposes a new model for flexural modulus loss of CFRP samples in bending.

To access the publication abstract from the Journal of Composite Materials, click here.

# Customer Highlight Understanding Cartilage Surface Wear Mechanisms After an Injury

Research aims to improve long-term outcomes for post-traumatic osteoarthritis

Approximately 12% of the US population (5.6 million people) suffers from post-traumatic osteoarthritis; osteoarthritis that typically results from an injury to one of the joints in the body. The injury leads to tissue damage and changing body mechanics which can leads to increased wear of the cartilage surfaces within the joint. Dr. Gregory Jay and collaborators at Brown



Univ ersity, Univ ersity of Calgary, Univ ersity of Vermont, and Chapman Univ ersity explore the role of lubricin (PRG4), a lubricating protein, on the friction coefficient of cartilage in the presence of an inflammation inducing protein in new research published in the Journal of Orthopaedic Research.

To access the publication abstract from the Journal of Orthopaedic Research website, click

# **Promotions**

# Rubber Testing Buy One, Get One 2017 AMG Program



For a limited time, when you purchase an RPA <u>elite</u> or <u>RPA flex</u> rubber process analyzer, you can choose either a <u>Discovery DSC</u> or <u>Discovery TGA</u> for FREE! Contact us for more details on this exciting offer.



TA will add \$20,000 to the value of any grant for the purchase of select load frame systems, tissue engineering instruments, or material and tissue characterization instruments.

# **Upcoming Events**

# MedTec Europe

April 4 5 Stuttgart, Germany Booth 1D29



# SFB Society for Biomaterials

April 5 8 Minneapolis, MN Booth 32



www.tainstruments.com

Testing solutions for Medical Devices • Engineered Materials • Biomaterials