2014 PROCEEDINGS OF AATCC INTERNATIONAL CONFERENCE

April 1-3, 2014
Crowne Plaza Resort
Asheville, N.C., USA

SPEAKER PRESENTATIONS

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OLNEY MEDAL ADDRESS

Textile Education in Coloration and Textile Wet Processing Technology
John Richard Aspland, Emeritus Professor, Clemson University
CHEMICAL APPLICATIONS TRACK

► Session: Herman and Myrtle Goldstein Student Paper Competition
Moderator: Renzo Shamey, North Carolina State University

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Yi Ding, North Carolina State University

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Kendrea Connell and Thomas Poston, Daikin-America Inc.

What Couldn’t Be Done: Industrial CO2 Dyeing
Geert F. Woerlee, DyeCoo Textile Dyeing Systems BV, Netherlands

► SESSION: Advances in Application Technology
Moderator: Kanti A. Jasani, Performance & Technical Textile Consulting

An Imaging-Based Mote Counting Method
Min Li, North Carolina State University

Advancing the Forensic Analysis of Dyed Fibers by Time-of-Flight Mass Spectrometry
Chuanzhen Zhou, Keith R. Beck, and David Hinks
North Carolina State University

Incorporation and Performance of Molecular Polyoxometalates in Fibrous Substrates
N. Elizabeth Allen, Cornell University

Ultrasound-Enhanced Bioscouring of Greige Cotton: Regression Analysis of Process Factors
Michael W. Easson, USDA-ARS-SRRC

Caging Antimicrobial Silver Nanoparticles Inside Cotton
Sunghyun Nam, USDA-ARS-SRRC

► SESSION: Coloration
Moderator: Nelson E. Houser, M. Dohmen USA

Molecular Engineering of Sustainable Synthetic Colorants
Harold S. Freeman, North Carolina State University

Cationic Cotton—What Good is it and Where is it Going?
Matthew J. Farrell, Cotton Incorporated

Dyeing Cellulosic Knitwear, Woven Fabrics and Apparel by Exhaustion with Novel Reactive Indigo Dye
Jaime I. N. R. Gomes, Ecofoot SA and University of Minho, Portugal
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Rachel H. McQueen, University of Alberta, Canada

Purchase Activated Manufacturing, A New Era of Technology that Triples Profits
Bill Grier, AM4U Inc.

Taking the Hand Out of Fabric Hand
John Crocker, SDL Atlas LLC

Customers Speak: Are You Listening?
Kim Kitchings, Cotton Incorporated

Expanding the Market for Responsibly-Made Products
Beth Stewart, Redress Raleigh

Transforming Textile Printing
Ron Gilboa, InfoTrends

MATERIALS TRACK

SESSION: Protective Textiles
Moderator: Seshadri S. Ramkumar, Texas Tech University

Cooling Effect of Sweat Evaporation from Different Clothing Layers
Emiel A. DenHartog, North Carolina State University

Evaluation of High Strength Fibers Extracted from Field Aged Armor
Amanda L. Forster, National Institute of Standards and Technology

Impact of Firefighter Protective Equipment and Firefighting Activity on Physiology and Biomechanics of Movement
Gavin Horn, University of Illinois at Urbana

Advantages of Using Systems-Level Test Methods to Evaluate the Performance of Fire/Flame Resistant Protective Clothing
Alex Hummel, North Carolina State University
SESSION: Innovative Technologies
   Moderator: Haskell W. Beckham, Exponent Inc.

The Impact of Cellulose Nanocrystal Orientation on the Enhanced Mechanical Properties and Structural Color of Bio-Nanocomposites
   Christopher Kitchens, Clemson University

Submicron Meltblown Filter Media for Enhanced Efficiency
   Seshadri S. Ramkumar, Texas Tech University

   Maqbool Hussain, North Carolina State University

SESSION: Medical Textiles
   Moderator: Philip J. Brown, Clemson University

Nanofibrous Platforms for Wound Healing and Tissue Engineering Applications
   Elizabeth G. Loboa, University of North Carolina at Chapel Hill and North Carolina State University

Effects of Antimicrobial Activities of Peppermint and Rosemary Oils Incorporated into Textiles
   Suraj Sharma, University of Georgia

Materials Science of Surgical Meshes: Polypropylene for Soft Tissue Repair
   Maureen T. F. Reitman, Exponent Inc.

A New Strategy for the Woven Tubular Taper: Improvements in Weaving Vascular Grafts
   Seth Winner, Secant Medical Inc.

Medical Materials Development Opportunities—Ecolab
   Tamara L. Mace, Ecolab Inc.
SESSION: Innovative Technologies
Moderator: Donald B. Thompson, North Carolina State University

New Approaches Towards a Sustainable Textile Industry of Tomorrow
Anja Gerhardt, Hohenstein Institute for Textile Innovation GmbH, Germany

Process-Property Relationships of Synthetic Polymers Exposed to Organometallic Vapors
Jesse S. Jur, North Carolina State University

Single PPTA Fiber Tensile Test under High Strain Rate
Jae Hyun Kim, National Institute of Standards and Technology