

The Fiber Society's Spring 2015 Conference

Functional Fibers and Textiles

In Conjunction with the 2015 International Conference on
Advanced Fibers and Polymer Materials

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24 - 27 May 2015

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Sunday, May 24

12:00 PM–6:00 PM
3:00 PM–5:00 PM
6:30 PM–9:30 PM

Registration: No. 2 Teaching Bldg., Entrance Hall, Songjiang Campus, Donghua University
111 Project Annual Meeting (Jing-Gang-Shan Room, 12F, Neo-Sunshine Hotel)
Governing Council Meeting (Jing-Gang-Shan Room, 12F, Neo-Sunshine Hotel)

Donghua University *Songjiang Campus*

Monday, May 25

Morning

8:00 Registration Desk Opens, No. 2 Teaching Building, Entrance Hall

Opening Ceremony

No. 2 Teaching Building, Room 2137

8:30 Welcoming Remarks, Business, and Announcements

Plenary Lectures

No. 2 Teaching Building, Room 2137

Session Chair: Ton Peijs

9:00 *The Development of High-Performance Fibers at Donghua University* – Yimin Wang, Donghua University...2

9:30 *Future Textiles: From Functional to Smart* – Jinlian Hu, Hong Kong Polytechnic University...3

10:00 Photo Session

10:10 Coffee Break

Session Chair: Meifang Zhu

10:30 *Application of High-Speed Melt Spinning Process for Enhanced Fiber Structure Formation of PHBH* – Takeshi Kikutani, Tokyo Institute of Technology...5

11:00 *3D Scaffolds of Short Electrospun Nanofibers* – Andreas Greiner, University of Bayreuth...7

11:30 *Carbon Fibre Microelectrodes for Neuroscience Applications* – Xungai Wang, Deakin University...8

12:00–1:00 Lunch: Donghua Restaurant II (3F)

Afternoon

Poster Session

No. 2 Teaching Building, Hallway

1:00–3:30 Poster Presentations and Break

Oral Sessions

No. 2 Teaching Building, Room 2118

Session: Nanofibrous Materials

Session Chair: René Rossi

- 3:30 *Electrospun Nanofiber-Assembled Cellular Aerogels with Superelasticity and Multifunctionality* – Bin Ding, Donghua University...16
- 4:00 *Artificial Muscles from Carbon Nanotube and Nylon Fibres* – Javad Foroughi, University of Wollongong...18
- 4:20 *Functional Nonwovens by Green Electrospinning* – Seema Agarwal, University of Bayreuth...20
- 4:40 *Nanofibrous Membranes with One-Way Oil Transport Ability and Advanced Oil-Water Separation Performance* – Tong Lin, Deakin University...21
- 5:00 *Controlled Release of Active Agents from Electrospun Fibers* – René Rossi, Empa...23

No. 2 Teaching Building, Room 2109

Session: Functional Textiles and Clothing

Session Chair: Dominique Adolphe

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- 4:00 *Textile Heart Valve: Fabric Construction Parameter and In Vivo Results* – Antoine Vaesken, ENSISA...28
- 4:20 *Thermal Comfort of Professional Sportswear with Physiological and Psychophysical Measurements During High-Intensity Exercise* – Tsung-lin Liu, Taiwan Textile Research Institute...29
- 4:40 *Parameters Impact on Pressure Comfort in System “Female Body-Dress”* – Victor Kuzmichev, Ivanovo State Polytechnic University (presented by Dominique Adolphe)...31
- 5:00 *Open*

No. 2 Teaching Building, Room 2105

Session: Fiber Applications in Medical, Transportation, and Energy

Session Chair: Jintu Fan

- 3:30 *Regenerated Keratin Fibers and Their Potential Applications in Textile and Biomedical Industries* – Yiqi Yang, University of Nebraska-Lincoln...34
- 4:00 *Geometry Modeling of a Tubular Weft-Knitted Intestinal Stent* – Gang Li, Soochow University...36
- 4:20 *Fabrication of Multiscale Elastic Electrospun Fibrous Scaffolds for Repairing Augmentation of Rotator Cuff* – Wenguo Cui, Soochow University...38
- 4:40 *Hyaluronic Acid-Functionalized Electrospun Random and Aligned PLA Nanofibers for Cancer Cell Capture* – Yili Zhao, Donghua University...39
- 5:00 *Cellulose/Chitosan Composites Prepared in Ethylene Diamine/Potassium Thiocyanate for Adsorption of Cu^{2+}* – Min Xiao, Guangzhou Testing and Research Institute...41

No. 2 Teaching Building, Room 2106

Session: Nonwovens; Green Textile Manufacturing

Session Chair: Richard Kotek

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- 4:00 *Evolution of Chain Entanglements of Ultrahigh Molecular Weight Polyethylene in Dilute Solution Blends During Thermal Annealing and Its Influence on Crystallization* – Wei Li, Ningbo University...46
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- 4:40 *Investigation of Hydrostatic Pressure and Blood Penetration of a Nonwovens Material* – Peter Tsai, University of Tennessee-Knoxville...48
- 5:00 *Open*

6:00–8:30 Banquet: Neo-Sunshine Hotel Shanghai

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No. 2 Teaching Building, Room 2118

Session: Nanofibrous Materials; High-Performance Fibers and Composites

Session Chair: Sanjay Rastogi

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9:00 *Gel Spinning of Nylon 6 and PVA* – Richard Kotek, North Carolina State University...52

9:20 *Modeling PA-6 Nanofiber Properties Produced by Needleless Electrospinning: Effect of Solution Concentration and Voltage* – Nabyl Khenoussi, ENSISA...54

9:40 *Effect of Reaction Solvents on Morphology and Properties of Interfacial Polymerized Polyaniline Nanofibers* – Tao Li, Donghua University...56

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Session Chair: Yingfeng Tu

10:20 *Production of Ultra-Strong Polymer Fibers from Extended Chains* – Donggang Yao, Georgia Institute of Technology...58

10:50 *Morphology and Structure Development of Aromatic Polysulfonamide Fibers During Spinning Process* – Yumei Zhang, Donghua University...60

11:20 *Study on the Silane Modification of PPTA Fibers* – Junrong Yu, Donghua University...62

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No. 2 Teaching Building, Room 2109

Session: Functional Textiles and Clothing

Session Chair: Laurence Schacher

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9:20 *Flame-Resistant Protective Clothing in Industries* – Zina Zhu, Milliken & Company...68

9:40 *Fully-Printed Flexible Temperature Sensors on Textile Substrates for Textronic Applications* – Zbigniew Stempień, Lodz University of Technology...70

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Session Chair: Yimin Wang

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11:50 Lunch: Donghua Restaurant II (3F)

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Session: Fiber Applications in Medical, Transportation, and Energy

Session Chair: Janice Gerde

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9:20 *Nanofibrous Scaffolds from Polycaprolactone as Wound Dressings* – Kateřina Pilařová, Technical University of Liberec...85

- 9:40 *Development of Poly(L-lactide-co-caprolactone) Multichannel Nerve Conduit with Aligned Electrospun Nanofibers for Schwann Cell Proliferation* – Muhammad Aqeel Bhutto, Donghua University...87
- 10:00 Break

Session Chair: Xuming Xie

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Session Chair: Yusuf Ulcay

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- 9:20 *Nanocellulose Hierarchical Structures and Functional Materials* – You-Lo Hsieh, University of California-Davis...97
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No. 2 Teaching Building, Room 2118

Session: Nanofibrous Materials; High-Performance Fibers and Composites

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- 1:50 *Polydopamine-Derived Porous Carbon Fiber Embedded with CoO Nanoparticles for Efficient Oxygen Reduction Reaction* – Jiajie Yan, Fudan University...112
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Session: Functional Textiles and Clothing; Functional Finishing and Dyeing

Session Chair: Xiangwu Zhang

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1:50 *Fabrication of ZnO & SiO₂ with Eliminated Photocatalytic Activity for Preventing Wool Photoyellowing* – Lu Sun, Deakin University...129
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2:50 *Break*

Session Chair: Guang Li

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4:20 *Open*
4:40 *Open*

No. 2 Teaching Building, Room 2105

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2:50 *Break*

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4:40 *Open*

5:00–6:30 Dinner: Donghua Restaurant II (3F)

Wednesday, May 27

Morning

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No. 2 Teaching Building, Room 2137

Session Chair: Yiqi Yang

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9:30 *Crystal Networks in Fibrous Soft Materials: From Hierarchical Structure to Ultra-Performance* – Xiang Yang Liu, National University of Singapore...12
10:00 *Break*

Session Chair: Rudolf Hufenus

- 10:20 *Wearable Fiber-Shaped Energy Harvesting and Storage Devices* – Huisheng Peng, Fudan University...13
10:50 *Exploring the Nature of Cellulose Microfibrils* – Benjamin Hsiao, Stony Brook University...14

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12:00–1:00 Lunch: Donghua Restaurant II (3F)

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