

The Fiber Society's Spring 2018 Conference

Co-organized with

June 12 - June 14, 2018

Day 0		Day I, Tuesday, June 12				
Bunka Gakuen University 20th Floor, C201 3-22-1 Yoyogi, Shibuya-ku, Tokyo		FS-A	FS-B	FS-C	FS-D	
		5th Floor Small Hall	2nd Floor Tou-Gen(桃源)	2nd Floor Fuku-Jyu (福寿)	2nd Floor Hei-An (平安)	
		9:00 - Registration (2nd Floor Foyer)				
		9:30				
		9:50				
		10:30	Break			
		10:50	FS-AI-01(KN)	FS-BI-01(KN)	FS-CI-01(KN)	FS-DI-01(KN)
			FS-AI-02	FS-BI-02	FS-CI-02	FS-DI-02
			FS-AI-03	FS-BI-03	FS-CI-03	FS-DI-03
			FS-AI-04	FS-BI-04	FS-CI-04	FS-DI-04
			FS-AI-05	FS-BI-05	FS-CI-05	FS-DI-05
		12:40	Break			
		13:00		Lunch-on Seminar 1	Lunch	
		13:40	Break			
		13:50	PL-2			
		14:30	Break			
		14:50	FS-AI-06	FS-BI-06	FS-CI-06	FS-DI-06
			FS-AI-07	FS-BI-07	FS-CI-07	FS-DI-07
			FS-AI-08	FS-BI-08	FS-CI-08	FS-DI-08
			FS-AI-09	FS-BI-09	FS-CI-09	FS-DI-09
		16:10	Break			
		16:30	FS-AI-10(KN)	FS-BI-10(KN)	FS-CI-10(KN)	FS-DI-10(KN)
			FS-AI-11	FS-BI-11	FS-CI-11	FS-DI-11
			FS-AI-12	FS-BI-12	FS-CI-12	FS-DI-12
			FS-AI-13	FS-BI-13	FS-CI-13	FS-DI-13
		18:00	Break			
		18:20	Banquet (Hotel Gajoen Tokyo, 3 minutes walk from the Meguro station) All participants will be taken to the venue by bus. Meeting Time : 18:20, Meeting Point : 1st Floor, Exhibition Hall			
		19:30				
	15:00		Pre-Registration			
	17:00		Welcome Reception			

Fundamentals of Polymer Material: Synthesis, Polymerization, Characterization, and Its Physics

Fundamentals of Fiber & Textile Science, Testing, & Characterization

Fiber Manufacturing & Characterization

Dyeing & Finishing / Design & Merchandising

- Program at a Glance

The Society of Fiber Science and Technology, Japan

Tower Hall Funabori, Tokyo, Japan

Day II, Wednesday, June 13				Day III, Thursday, June 14			
	FS-B 2nd Floor Tou-Gen(桃源)	FS-C 2nd Floor Fuku-Jyu (福寿)	FS-E 3rd Floor 307		FS-B 2nd Floor Tou-Gen(桃源)	FS-E 3rd Floor 307	FS-F 2nd Floor Hou-Rai (蓬莱)
9:20	9:00 - Registration (1st Floor, Exhibition Hall)			9:20	9:00 - Registration (1st Floor, Exhibition Hall)		
	FS-BII-01	FS-CII-01	FS-EII-01		FS-BIII-01(KN)	FS-EIII-01(KN)	FS-FIII-01(KN)
	FS-BII-02	FS-CII-02	FS-EII-02		FS-BIII-02	FS-EIII-02	FS-FIII-02
10:20	FS-BII-03	FS-CII-03	FS-EII-03		FS-BIII-03	FS-EIII-03	FS-FIII-03
10:40	Break			10:30	Break		
	FS-BII-04	FS-CII-04	FS-EII-04	10:50	FS-BIII-04	FS-EIII-04	FS-FIII-04
	FS-BII-05	FS-CII-05	FS-EII-05		FS-BIII-05	FS-EIII-05	FS-FIII-05
	FS-BII-06	FS-CII-06	FS-EII-06		FS-BIII-06	FS-EIII-06	FS-FIII-06
	FS-BII-07	FS-CII-07	FS-EII-07		FS-BIII-07	FS-EIII-07	FS-FIII-07
12:00	Poster Session Room FS-P (1st Floor, Exhibition Hall) Odd Numbered: 12:00 – 12:40 Even Numbered: 12:40 – 13:20				Blocked	FS-EIII-08	FS-FIII-08
12:40				12:30	Closing Remarks (Room FS-F)		
13:20				12:50			
13:30	Lunch-on	Lunch					
14:10	Seminar 2						
	Break						
15:00	FS-BII-08	FS-CII-08	FS-EII-08				
	FS-BII-09	FS-CII-09	FS-EII-09				
	FS-BII-10	FS-CII-10	FS-EII-10				
	FS-BII-11	FS-CII-11	FS-EII-11				
16:20	Break						
16:40	FS-BII-12	FS-CII-12	FS-EII-12				
	FS-BII-13	FS-CII-13	FS-EII-13				
17:20	FS-BII-14	Preparation of Conference Party	FS-EII-14				
	FS-BII-15		FS-EII-15				
18:00	Break		Break				
18:30	Conference Party together with Annual Meeting of SFSTJ Room FS-D (2nd Floor, Hei-An)						

Smart Polymers, Fibers, and Textiles

Sustainable Polymer Materials / Advanced Cellulose Fibers & Textiles

Carbon Fibers & Advanced Composite Materials

Day I - Tuesday, June 12

9:00 Registration: 2nd Floor Foyer

Room FS-A, 5th Floor, Small Hall	
9:30	Welcome Remarks and Announcements <div style="text-align: right;"><i>Takeshi Kikutani, Conference Chair</i> <i>Jintu Fan, Fiber Society President</i></div>
9:50	Plenary Lecture: Yoshiro Tajitsu, Kansai University <i>A New Wearable Sensor in The Shape of a Braided Cord</i> <div style="text-align: right;"><i>Chair: Jintu Fan, Cornell University</i></div>

10:30 Break

Room FS-A 5th Floor, Small Hall		Room FS-B 2nd Floor, Tou-Gen (桃源)	
Session: Smart Polymers, Fibers, and Textiles <i>Chair: Jonathan Chen, University of Texas-Austin</i>		Session: Fundamentals of Fiber & Textile Science, Testing, & Characterization <i>Chair: Chureerat Prahsarn, MTEC</i>	
10:50	Keynote : <i>Recent Developments of Smart and Multi-Functional Fibrous Materials and Clothing</i> <u>Jintu Fan</u> Cornell University	10:50	Keynote : <i>Quantitative Evaluation of Odour Retention on Different Fibre Types</i> Jinfeng Wang, Xi Lu, Jing Wang, <u>Xungai Wang</u> Deakin University
11:20	FS-AI-02 <i>Improved Electrical Conductivity of PU Nanofiber-web Coated with SWCNT/AgNW and Exploration as Textile Sensors</i> <u>Eugene Lee</u> , Eunji Jang, Gilsoo Cho Yonsei University	11:20	FS-BI-02 <i>Surface Functional Textile for Healthcare Application with Rechargeable Antibacterial Activity</i> <u>Zhentan Lu</u> , Qinwen Yuan, Dong Wang Wuhan Textile University
11:40	FS-AI-03 <i>The Wearable Fiber Organic Electrochemical Transistors for Biological Sensing</i> <u>Yuedan Wang</u> , Xing Qing, Quan Zhou, Yang Wuhan Textile University	11:40	FS-BI-03 <i>Investigation of fiber-based Influences on Bacterial Adherence</i> <u>Klas-Moritz Kossel</u> ¹ , Marina Handel ² , Mathias Walter Horne ² , Uwe Klinge ² , Anja Gerhardt ² , Thomas Gries ¹ , Andreas Blaeser ¹ ¹ RWTH Aachen University, ² University Hospital RWTH Aachen
12:00	FS-AI-04 <i>Melt-spun Conductive Elastomeric Fibers for Smart Textiles, Implications for Bio-signal Recordings</i> <u>Ladan Eskandarian</u> ¹ , Milad Alizadeh Meghraz ^{1,2} , Mohammadreza Naeimirad ³ , Milad Lankarany ^{1,4} ¹ Myant Inc., ² University of Toronto, ³ Razi University, ⁴ The Hospital for Sick Children	12:00	FS-BI-04 <i>Challenges from Wearable Technologies</i> <u>Ning Pan</u> University of California-Davis
12:20	FS-AI-05	12:20	FS-BI-05 <i>Electrostatic Spinning – Spraying for Cell-Laden Hybrid Membranes Mimicking the Native Blood Barrier</i> <u>Giuseppino Fortunato</u> ¹ , A. Abrishamkar ^{1,2} , A.G. Guex ¹ , M. Brunelli ¹ , M Rottmar ¹ , K Maniura-Weber ¹ , R Rossi ¹ ¹ Empa, ² ETH Zürich

12:40 - 13:50	Lunch - Room FS-B and FS-C 13:00 - 13:30 Lunch on Seminar, Room FS-B, by Rigaku Corporation <i>3D observation and analysis of μm fiber composites by X-ray microscopy</i> Yoshihiko Takeda X-ray Research Laboratory, Rigaku Corporation
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Room FS-A 5th Floor, Small Hall	
13:50	Plenary Lecture: Sanjay Rastogi, Maastricht University <i>Unprecedented physical and mechanical properties of solvent free processed tapes and films of Ultra High Molecular Weight Polyethylene</i> <div style="text-align: right;"><i>Chair: Takeshi Kikutani, Tokyo Institute of Technology</i></div>

14:30 Break

Morning Session

9:00 Registration: 2nd Floor Foyer

	Room FS-A, 5th Floor, Small Hall
9:30	<p>Welcome Remarks and Announcements</p> <p style="text-align: right;"><i>Takeshi Kikutani, Conference Chair</i> <i>Jintu Fan, Fiber Society President</i></p>
9:50	<p>Plenary Lecture: Yoshiro Tajitsu, Kansai University <i>A New Wearable Sensor in The Shape of a Braided Cord</i></p> <p style="text-align: right;"><i>Chair: Jintu Fan, Cornell University</i></p>

10:30 Break

	Room FS-C 2nd Floor, Fuku-Jyu (福寿)	Room FS-D 2nd Floor, Hei-An (平安)
	<p>Session: Sustainable Polymer Materials / Advanced Cellulose Fibers & Textiles <i>Chair: Tadahisa Iwata, University of Tokyo</i></p>	<p>Session: Dyeing & Finishing / Design & Merchandizing <i>Chair: Kazumasa Hirogaki, University of Fukui</i></p>
10:50	<p>Keynote : <i>Research Activities on Bio-based Fibers in Toray Industries, Inc.</i> <u>Yoshitaka Aranishi</u>, Hidekazu Kano, Yoichiro Tanaka Toray Industries, Inc.</p>	<p>Keynote : <i>Developed A Natural Dyeing Method for Obtaining Turkey Red Color</i> <u>Recep Karadag</u> Marmara University, Turkish Cultural Foundation</p>
11:20	<p>FS-CI-02 <i>Cellulose Dissolution in Ionic Liquids: A Theoretical Study</i> <u>Takuya Uto</u>, Kazuya Yamamoto, Jun-ichi Kadokawa Kagoshima University</p>	<p>FS-DI-02 <i>Structural Change and Guest Release from Cyclodextrin Inclusion Complex Treated at Ultra-high Pressure</i> <u>Kenji Hisada</u>, Sayaka Kasakawa, Kyosuke Takeshita, Chie Kato, Mikiaki Kakasawa, Toyoaki Hirata University of Fukui</p>
11:40	<p>FS-CI-03 <i>Highly Stiff Cellulose Fibers Spun from Liquid Crystalline Microcrystalline Cellulose Solutions using DMSO as Co-solvent with an Ionic Liquid</i> <u>Chenchen Zhu</u>, Anastasia F. Koutsomitopoulou, Stephen J. Eichhorn, Jeroen S. van Duijneveldt, Robert M. Richardson, Kevin D. Potter University of Bristol</p>	<p>FS-DI-03 <i>Adsorption of Acid Dye on Guanidine Groups Grafted Polyacrylonitrile Fibers</i> <u>Biao Wang</u>, Fengmei Li, Chengran Yang Donghua University</p>
12:00	<p>FS-CI-04 <i>Hierarchical Core-Sheath PPy@CNT/BC Macromolecules with High Electrochemical Performance for All-Solid-State Supercapacitors</i> <u>Jingjing Yao</u>, <u>Shiyan Chen</u>, Huapign Wang Donghua University</p>	<p>FS-DI-04 <i>Development of Multifunctional Surfaces for Advanced Textile Applications</i> <u>Mehmet Daşdemir</u>, <u>Hatice Ibili</u> Gaziantep University</p>
12:20	<p>FS-CI-05 <i>Preparation of Highly Stretchable Elastomeric Composites Reinforced with Well-defined Nanofiber Network of Bacterial Cellulose</i> <u>Keita Sakakibara</u>¹, Yoshihiko Shimizu^{1,2}, Yohei Nakanishi¹, Yoshinobu Tsujii¹ ¹Kyoto University, ²Matsumoto Yushi-Seiyaku Co., Ltd.</p>	<p>FS-DI-05 <i>Parameters Affecting the Electrospinning Process with Flame Retardant Agent</i> <u>Bilgen Kapan</u>, Cem Güneşoğlu Gaziantep University</p>

12:40 - 13:50 Lunch - Room FS-B and FS-C

13:00 - 13:30 Lunch on Seminar, Room FS-B by **Rigaku Corporation**
3D observation and analysis of μm fiber composites by X-ray microscopy
Yoshihiko Takeda
X-ray Research Laboratory, Rigaku Corporation

	Room FS-A 5th Floor, Small Hall
13:50	<p>Plenary Lecture: Sanjay Rastogi, Maastricht University <i>Unprecedented physical and mechanical properties of solvent free processed tapes and films of Ultra High Molecular Weight Polyethylene</i></p> <p style="text-align: right;"><i>Chair: Takeshi Kikutani, Tokyo Institute of Technology</i></p>

14:30 Break

Day I - Tuesday, June 12

Room FS-A 5th Floor, Small Hall		Room FS-B 2nd Floor, Tou-Gen (桃源)	
Session: Smart Polymers, Fibers, and Textiles <i>Chair: Bipin Kumar, Indian Institute of Technology Deli</i>		Session: Fiber Manufacturing & Characterization <i>Chair: Thomas Gries, RWTH Aachen University</i>	
14:50	FS-AI-06 <i>Acoustoelectric Conversion Properties of Electrospun Nanofiber Webs</i> Jian Fang, Chenhong Lang, Hao Shao, <u>Tong Lin</u> Deakin University	FS-BI-06 <i>Comparison of Solution Spinning Setups for PLA Monofilaments</i> <u>Georg-Philipp Paar</u> ¹ , E. Wistuba ¹ , C. Molano-López ² , A. Blaeser ¹ , A. Pich ² , T. Gries ¹ , Stefan Jockenhoevel ³ ¹ RWTH Aachen University, ² DWI-Leibniz Institute for interactive materials, ³ AME-Helmholtz Institute for Biobased Materials	
15:10	FS-AI-07 <i>Characterization of Hybrid Smart Yarns Engineered for Versatile Applications in Sportswear, Medical and Multifunctional Textiles</i> <u>Amir Shahzad</u> , Abher Rasheed, Zulfiqar Ali, Bilal Qadir National Textile University	FS-BI-07 <i>Stereocomplexation of the Melt-spun Fibers of the Blends of Segmented PLLA/PDLA with a Low Optical Purity</i> <u>Masaki Yamamoto</u> , Miho Sakai, Kazunari Masutani, Yoshiharu Kimura, Hideki Yamane Kyoto Institute of Technology	
15:30	FS-AI-08 <i>Application of Carbon Nanomaterial to Biodevice for Biofuel Cell with Carbon Binding Peptide Fused Enzyme</i> <u>Shin-ichiro Suye</u> , Aina Tonooka, Hiroaki Sakamoto, Takenori Satomura University of Fukui	FS-BI-08 <i>Study on High-Resolution On-Line Diameter Measurement of PET Fiber in High-Speed Melt-Spinning Process</i> <u>Young Chan Choi</u> ¹ , Hyun Ju Oh ¹ , Do-Kun Kim ¹ , Takeshi Kikutani ² , Wan-Gyu Hahm ¹ ¹ Korea Institute of Industrial Technology, ² Tokyo Institute of Technology	
15:50	FS-AI-09 <i>Electro-Conductivity of the Staple Polyester Fibres Coated by Ag in Vacuum</i> Hristo Hadjiev, <u>Ivelin Rahnev</u> , Philip Philippov Technical University of Sofia	FS-BI-09 <i>High Modulus Nylon 66 Yarn for Tire Cord Fabric Development</i> <u>N. Uğur Kaya</u> , Tuğba Elele, Emine Güven Kordsa Teknik Tekstil A.Ş.	
16:10 Break			
Session: Smart Polymers, Fibers, and Textiles <i>Chair: Jintu Fan, Cornell University</i>		Session: Fiber Manufacturing & Characterization <i>Chair: Takeshi Kikutani, Tokyo Institute of Technology</i>	
16:30	FS-AI-10 Keynote : <i>Carbon-based Yarn Supercapacitor for Energy Storage</i> Yuxiang Huang ^{1,2} , <u>Jonathan Y. Chen</u> ¹ , Guangjie Zhao ² ¹ University of Texas at Austin, ² Beijing Forestry University	FS-BI-10 Keynote : <i>Auxetic Structures from 3D Printed Hybrid Textiles</i> David Schmelzeisen ¹ , Daniel Buecher ¹ , Subin Shajoo ³ , Julian Haller ¹ , Christopher Pastore ² , <u>Thomas Gries</u> ¹ ¹ RWTH Aachen University, ² Thomas Jefferson University, ³ Karunya University	
17:00	FS-AI-11 <i>Smart Textile Actuator Using Stress Memory Polymer</i> <u>Bipin Kumar</u> Indian Institute of Technology Deli	FS-BI-11 <i>Properties and applications of new heat resistant polyamide fiber</i> <u>Satoshi Koizumi</u> , Ryohei Endo, Jirou Tanaka Kuraray Co., Ltd.	
17:20	FS-AI-12 <i>Development of Superhydrophobic Energy Harvesting Textile via Plasma Treatment of Poly(vinylidene fluoride) Nanoweb</i> <u>Beomjun Ju</u> ¹ , Changsang Yun ² , Chung Hee Park ¹ ¹ Seoul National University, ² Ewha Womans University	FS-BI-12 <i>Three-component Composite Anti-counterfeiting Fiber Based on Cross-section Patterned</i> <u>Ronggen Zhang</u> ¹ , P. Feng ¹ , F. Li ¹ , Q. Fei ¹ , C. Yang ^{1,2} ¹ Donghua University, ² Engineering Research Center of Advanced Textile Machinery	
17:40	FS-AI-13	FS-BI-13	
18:20 Room FS-P (1st Floor, Exhibition Hall) : Buses Load from Tower Hall Funabori to Banquet Venue			
19:30 - 21:30 Banquet (Hotel Gajoen Tokyo, 3 minutes walk from the Meguro Station)			
Buses Lord from Banquet Venue to Conference Venue or Major Stations (The scheduled arrival time is 22:10)			

Afternoon Session

	Room FS-C 2nd Floor, Fuku-Jyu (福寿)	Room FS-D 2nd Floor, Hei-An (平安)
	Session: Sustainable Polymer Materials / Advanced Cellulose Fibers & Textiles <i>Chair: Yutaka Kawahara, Gunma University</i>	Session: Dyeing & Finishing / Design & Merchandizing <i>Chair: Recep Karadag, Marmara University</i>
14:50	FS-CI-06 <i>Effects of a Biobased Filler on the Crystallization Behaviors of Poly (L-Lactic Acid)</i> <u>Amit Kumar Pandey</u> ¹ , Rahul Patwa ² , Vimal Katiyar ² , Sono Sasaki ¹ , Shinichi Sakurai ¹ ¹ Kyoto Institute of Technology, ² Indian Institute of Technology Guwahati	FS-DI-06 <i>Structural Coloration of Textile Controlling Structure of Colloidal Crystal Array on Fiber and Textile</i> <u>Kazumasa Hirogaki</u> , Kazushi Sekiguchi, Daichi Nakamura, Isao Tabata, Teruo Hori University of Fukui
15:10	FS-CI-07 <i>Forcibly Spinning of Bombyx mori Silkworm Silk Ended in a Complete Failure</i> <u>Yutaka Kawahara</u> Gunma University	FS-DI-07 <i>Development of a New Outdoor Sport Shirt Using a Thermal Manikin under Different Climatic Conditions</i> <u>Maria José Abreu</u> ¹ , Andre Catarino ¹ , Derya Tama ² ¹ University of Minho, ² Ege University
15:30	FS-CI-08 <i>Fabrication and Characterization of Transparent, Flexible and Water-insoluble, Non-mulberry Silk Fibroin Films</i> <u>Kelvin O. Moseti</u> ^{1,2,3} , T. Yoshioka ³ , T. Kameda ³ , Y. Nakazawa ¹ ¹ Tokyo University of Agriculture and Technology, ² Kenya Agricultural and Livestock Research Organization, ³ National Agriculture and Food Research Organization	FS-DI-08 <i>Colorful Fluorine-free Superhydrophobic Polyester fabric Developed via Disperse Dyeing process</i> <u>Ji-Hyun Oh</u> , Chung Hee Park Seoul National University
15:50	FS-CI-09 <i>Structural Change and its Effect on the Mechanical Property of Silk Induced by Tensile Deformation</i> <u>Taiyo Yoshioka</u> ¹ , Tsunenori Kameda ¹ , Kohji Tashiro ² ¹ National Agriculture and Food Research Organization, ² Toyota Technological Institute	FS-DI-09 <i>Safer Hair Dyeing by Using Biobased Materials - Techniques, Dyeability and Protection Effect -</i> <u>Hidekazu Yasunaga</u> ¹ , A. Takahashi ¹ , K. Ito ⁰ , M. Ueda ¹ , S. Taniguchi ¹ , A. Yano ¹ , C. Seki ¹ , H. Osaki ¹ , T. Kida ¹ , A. Shomura ¹ , T. Matsubara ² ¹ Kyoto Institute of Technology, ² College of Industrial Technology
16:10	Break	
	Session: Sustainable Polymer Materials / Advanced Cellulose Fibers & Textiles <i>Chair: Anastasia F. Koutsomitopoulou, University of Bristol</i>	Session: Carbon Fibers and Advanced Composite Materials <i>Chair: Dong Wang, Wuhan Textile University</i>
16:30	FS-CI-10 Keynote : <i>High Performance Bio-based Plastics Synthesized from Natural and Unnatural Polysaccharides</i> <u>Tadahisa Iwata</u> University of Tokyo	FS-DI-10 Keynote : <i>Consideration of the Impregnation Process of Polymer Melt to Carbon Fiber Bundle by Steady-State Viscoelastic Flow Simulation</i> <u>Shuichi Tanoue</u> , Hayato Otake, Hideyuki Uematsu University of Fukui
17:00	FS-CI-11 <i>Development of Thermostable Polymers from Plant-Derived Aromatic Hydroxy Acids</i> <u>Daisuke Ishii</u> ^{1,2} , Tatsuya Goto ¹ , Kotaro Ino ¹ , Yukiko Enomoto ¹ , Tadahisa Iwata ¹ ¹ University of Tokyo, ² Tokyo University of Agriculture	FS-DI-11 <i>Improvements in Determination of Carbon Fibre Strength Distribution using Automation and Statistical Data Analysis</i> <u>Faisal Islam</u> ¹ , Steve Bucknell ² , Yann Leray ² , Anthony Bunsell ¹ , Lucien Laiarinandrasana ¹ , Sébastien Joannès ¹ ¹ MINES ParisTech, ² Dia-Stron, Ltd.
17:20	FS-CI-12 <i>Utilization of Plant Biomass as Valuable Materials via Sustainable Process</i> <u>Kazuhiro Shikinaka</u> ¹ , Y. Otsuka ² , H. Sotome ³ , Y. Tominaga ³ ¹ Natl Institute of Advanced Industrial Science & Technology, ² Forestry and Forest Products Research Institute, ³ Tokyo University of Agriculture and Technology	FS-DI-12 <i>Strength Reduction in Liquids and Its Application to Defect Analysis for Carbon Fibers</i> <u>Masatoshi Shioya</u> ¹ , Masayoshi Ido ¹ , Yoshiki Sugimoto ² ¹ Tokyo Institute of Technology, ² National Institute of Advanced Industrial Science and Technology
17:40	FS-CI-13	FS-DI-13 <i>Influence of Chemical Pretreatments on Processing, Structure and Properties of Rayon-Based Carbon Fibers</i> <u>Gajanan Bhat</u> ¹ , K. Akato ² , W. Hoffman ³ , F. Mohammadi ⁴ ¹ University of Georgia, ² Oak Ridge National Laboratory, ³ Edwards Air Force Base, ⁴ Advanced Cerametrics
18:20	Room FS-P (1st Floor, Exhibition Hall) : Buses Load from Tower Hall Funabori to Banquet Venue	
19:30 - 21:30	Banquet (Hotel Gajoen Tokyo, 3 minutes walk from the Meguro Station)	
	Buses Lord from Banquet Venue to Conference Venue or Major Stations (The scheduled arrival time is 22:10)	

Day II - Wednesday, June 13

9:00 Registration: 1st Floor, Exhibition Hall

Room FS-B 2nd Floor, Tou-Gen (桃源)		Room FS-C 2nd Floor, Fuku-Jyu (福寿)	
Session: Smart Polymers, Fibers, and Textiles <i>Chair: Mari Inoue, Kobe University</i>		Session: Fundamentals of Fiber & Textile Science, Testing, & Characterization <i>Charir: Sachiko Sukigara, Kyoto Institute of Technology</i>	
9:20	FS-BII-01 <i>Mechanical and Electrical Properties of Graphene Coated Polyurethane Nanofiber Webs as a Strain Gauge</i> <u>Eunji Jang</u> , Eugene Lee, Gilsoo Cho Yonsei University	FS-CII-01 <i>Effect of Vapor Permeability and Aperture of Outdoor Parka and Environmental Velocity on Evaporative Heat Transfer and Ventilation Rate Using Sweating Thermal Manikin and Tracer Gas Methods</i> <u>Yayoi Satsumoto</u> ¹ , T. Aoyagi ¹ , A. Dempoya ² , T. Koshiba ² , T. Tamura ² ¹ Yokohama National University, ² Bunka Gakuen University	
9:40	FS-BII-02 <i>Proton Conductive Polymer Nanofiber Framework: Fabrication and Application to Polymer Electrolyte Fuel Cells</i> <u>Manabu Tanaka</u> ^{1,2} , Hiroyoshi Kawakami ^{1,2} ¹ Tokyo Metropolitan University, ² Research Center for Hydrogen Energy-based Society	FS-CII-02 <i>Determination of Total Comfort of Sport Caps Using Wear Trials</i> Rosimeiri N. Nagamatsu ^{1,2} , <u>Maria Abreu</u> ² , Cosmo Damião Santiago ¹ , Derya Tama ^{2,3} , ¹ Federal University Technology of Paraná, ² University of Minho, ³ Ege University	
10:00	FS-BII-03 <i>Waterborne Fabrication of Fluoride-free, Magnetic, Superhydrophobic Fabrics</i> <u>Sida Fu</u> , Hua Zhou, Hongxia Wang, Tong Lin Deakin University	FS-CII-03 <i>Evaluation Parameters for Friction Properties of Woven Fabrics by Rotational Dragging with Tactile Sensor</i> <u>Toshiyasu Kinari</u> , Hiroshi Tachiya, Lina Wakako, Shinnosuke Yoneda, Takumi Kyoda Kanazawa University	

10:20 Break

<i>Chair: Christophe Daniel, Università Degli Studi di Salerno</i>		<i>Charir: Xungai Wang, Deakin University</i>	
10:40	FS-BII-04 <i>Highly Air-permeable, Directional Water-transport Cotton Fabrics</i> <u>Hongxia Wang</u> , Hua Zhou, Tong Lin Deakin University	FS-CII-04 <i>Effect of Different Processing Technique and Softener Treatments on the Surface Friction of Cotton Fabric</i> <u>Ateeq ur Rehman</u> , Abher Rasheed, Tanveer Hussain, Munir Ashraf, Sheraz Ahmad National Textile University	
11:00	FS-BII-05 <i>Melt Spinning of Novel Luminescent Polypropylene Shaped Fibers</i> <u>Chureerat Prahsarn</u> ¹ , T. Sooksrimuang ¹ , S. Sahasithiwat ¹ , N. Roungpaisan ² , S. Kamtonwong ¹ , W. Panchan ¹ , W. Klinsukhon ¹ , N. Suwannamek ¹ ¹ MTEC, ² Rajamangala University of Technology Thanyaburi	FS-CII-05 <i>Optical Properties of Cashmere Fabrics</i> Narantogtokh Davaajav, <u>Sachiko Sukigara</u> Kyoto Institute of Technology	
11:20	FS-BII-06 <i>Clothing Pressure of the Elastic Socks: Measurement and Prediction Calculation</i> <u>Mari Inoue</u> , Terumi Yoshida Kobe University	FS-CII-06 <i>Unique Multiple Melting Behavior of High-Speed Melt Spun Polylactide Fibers</i> <u>Midori Takasaki</u> ¹ , N. Fukushi ² , M. Yoshizawa ² , S. Onosato ³ , M. Hanada ³ , W. Takarada ⁴ , Y. Kawahara ³ , T. Kikutani ⁴ , H. Kobayashi ¹ , K. Tanaka ¹ ¹ Kyoto Institute of Technology, ² Miyagi University of Education, ³ Gunma University, ⁴ Tokyo Institute of Technology	
11:40	FS-BII-07	FS-CII-07 <i>Fabrication of Gradient Structure in Melt Spun Polymer Blend Fibers</i> <u>Long Chen</u> , Dan Pan, Junfen Sun, Zongyi Qin Donghua University	

Room FS-P (1st Floor, Exhibition Hall)

12:00 Poster Session
-13:20 Obligation Time: Odd Numbered 12:00 - 12:40, Even Numbered 12:40 - 13:20

13:20 Lunch
-15:00 13:30 - 14:00 Lunch on Seminar, Room FS-B, by **JASCO Corporation**.
Investigation of residual stress distribution by Laser Raman Microscopy in fiber materials with various production conditions
Wataru Takarada, Tokyo Institute of Technology

Morning Session

9:00 Registration: 1st Floor, Exhibition Hall

Room FS-E 3rd Floor, 308	
Session: Fundamentals of Polymer Material: Synthesis, Polymerization, Characterization, and Its Physics <i>Chair: Toyoaki Hirata, University of Fukui</i>	
9:20	<p style="text-align: center;">FS-EII-01</p> <p><i>Syntheses and Wettability of Poly(fluoroalkyl (Meth)acrylate)s with Carbamate Linker</i> <u>Yi Liu</u>^{1,2}, Yuji Higaki², Atsushi Takahara² ¹Guizhou Normal College, ²Kyusyu University</p>
9:40	<p style="text-align: center;">FS-EII-02</p> <p><i>Polymer Hybrid Membranes for CO₂ Capture</i> <u>Shinji Kanehashi</u>^{1,2}, Kenji Ogino³, Sandra Kentish² ¹Tokyo University of Agriculture and Technology, ²University of Melbourne</p>
10:00	<p style="text-align: center;">FS-EII-03</p> <p><i>Facile Fabrication of Poly(glycidyl methacrylate)-b-Polystyrene Functional Nanofibers under Shearing Field</i> Deli Xu, <u>Wenwen Wang</u>, Zhifeng Zhang, Dong Wang Wuhan Textile University</p>

10:20 Break

<i>Chair: Shinji Kanehashi, Tokyo University of Agriculture and Technology</i>	
10:40	<p style="text-align: center;">FS-EII-04</p> <p><i>Photonic Films of Block Copolymers: Comprising a Main-Chain Liquid Crystalline Central Segment Connected to Amorphous Segments at Both Ends</i> Junpei Kuribayashi, Maito Koga, <u>Masatoshi Tokita</u> Tokyo Institute of Technology</p>
11:00	<p style="text-align: center;">FS-EII-05</p> <p><i>Regularity of Spherical Microdomain Ordering in a Triblock Copolymer Ultrathin Film</i> <u>Rasha A. H. Bayomi</u>, Sono Sasaki, Shinichi Sakurai Kyoto Institute of Technology</p>
11:20	<p style="text-align: center;">FS-EII-06</p> <p><i>Effect of Alkyl Chain Length of Fatty Acids on Adsorbed Layer Formation of the Acids and Local Viscosity at Metal/fluid Interface</i> <u>Toyoaki Hirata</u>, Hina Takamura, Shinya Ozawa, Kenji Hisada University of Fukui</p>
11:40	<p style="text-align: center;">FS-EII-07</p> <p><i>Fully Return-to-Nature Polymer Research for Sustainability of Resources</i> <u>Seong Hun Kim</u> Hanyang University</p>

Room FS-P (1st Floor, Exhibition Hall)	
12:00 -13:20	Poster Session Obligation Time: Odd Numbered 12:00 - 12:40, Even Numbered 12:40 - 13:20
13:20 -15:00	Lunch 13:30 - 14:00 Lunch on Seminar, Room FS-B, by JASCO Corporation . <i>Investigation of residual stress distribution by Laser Raman Microscopy in fiber materials with various production conditions</i> Wataru Takarada, Tokyo Institute of Technology

Day II - Wednesday, June 13

Room FS-B 2nd Floor, Tou-Gen (桃源)		Room FS-C 2nd Floor, Fuku-Jyu (福寿)	
Session: Smart Polymers, Fibers, and Textiles <i>Chair: Rudolf Hufenus, Empa</i>		Session: Fundamentals of Fiber & Textile Science, Testing, & Characterization <i>Chair: Konstantin Kornev, Clemson University</i>	
15:00	FS-BII-08 <i>Syndiotactic Polystyrene Fibers with Nanoporous Crystalline Phases: An Efficient Material for Sorption of Volatile Organic Pollutants</i> <u>Christophe Daniel</u> , Gaetano Guerra Università Degli Studi di Salerno	FS-CII-08 <i>Will Polyolefin and Polytetrafluoroethylene Filaments Become the Next Generation Filter Materials?</i> <u>Kyung-Ju Choi</u> Clean & Science	
15:20	FS-BII-09 <i>Optical and Mechanical Properties of PA/PET Blend Fibers for Artificial Hair with Different Major Components</i> Shunsuke Sato ¹ , Yuki Kato ¹ , Masatoshi Seki ¹ , Fumitaka Sugawara ¹ , Yutaka Shirakashi ¹ , Takeshi Kikutani ² ¹ Aderans Co., LTD, ² Tokyo Institute of Technology	FS-CII-09 <i>Influence of Polymer Grade, Process Parameters and Capillary Modification on the Shape Factor of Noncircular Cross-section Fibers</i> <u>Inga Noll</u> ¹ , Amrei Becker ¹ , Gunnar Seide ² , Thomas Gries ¹ ¹ RWTH Aachen University, ² Maastricht University	
15:40	FS-BII-10 <i>Improvement of Aerosol Oil-mist Filtration Performance through Superoleophobic Treatment of Fibrous Filters</i> <u>Xin Wei</u> , Hongxia Wang, Hua Zhou, Tong Lin Deakin University	FS-CII-10 <i>Effect of Curvature on Wetting and Dewetting of Complexly Shaped Fibers</i> Chengqi Zhang ¹ , Mars Alimov ² , <u>Konstantin G. Kornev</u> ¹ ¹ Clemson University, ² Kazan Federal University	
16:00	FS-BII-11 <i>Anti-Tuberculosis Nanofibrous Membrane</i> Nakarin Subjalearndee, Chutima Vanichvattanadecha, Autchara Pangon, <u>Varol Intasanta</u> NANOTEC	FS-CII-11 <i>Numerical Simulation of Melt Spinning Process Incorporating Crystallization Characteristic of Polypropylene in Super Cooling Conditions</i> <u>Yasuhiko Otsuki</u> ¹ , Yutaka Kobayashi ¹ , Kouya Kawai ² , Wataru Takarada ² , Takeshi Kikutani ² ¹ Prime Polymer Co., Ltd., ² Tokyo Institute of Technology	
16:20 Break			
<i>Chair: Varol Intasanta, NANOTEC</i>		<i>Chair: Jinlian Hu, Hong Kong Polytechnic</i>	
16:40	FS-BII-12 <i>Multifunctional Liquid-core Fibers</i> <u>Rudolf Hufenus</u> , Sabyasachi Gaan Empa	FS-CII-12 <i>Smart and Safe Chemical Protective Clothing</i> <u>Eugenija Strazdiene</u> ¹ , Inga Dabolina ² , Daivute Krisciuniene ³ ¹ Vilnius University of Applied Science, ² Riga Technical University, ³ JSC Ansell Protective Solutions	
17:00	FS-BII-13 <i>Irradiated Hydrogel Fibers Responsive to Moisture</i> Jiachuan Hua, Wai Yi Cheung, Pui Fai Ng, <u>Bin Fei</u> Hong Kong Polytechnic University	FS-CII-13 <i>Washing and Wearing Processes Effects on Soldiers Uniforms Friction Sound Characterization</i> <u>Floriane Leclince</u> ^{1,2} , D. Adolphe ¹ , E. Drean ¹ , L. Schacher ¹ , V. Zimpfer ² ¹ Université de Haute-Alsace, ² Institut franco-allemand de recherches de Saint Louis	
17:20	FS-BII-14 <i>Preparation and Thermoresponsive Properties of Temperature-Sensitive-Gel(TSG)/Polymer Functional Films</i> <u>Jin Gong</u> ¹ , E. Hosaka ¹ , H. Ito ¹ , Y. Shibata ² , D. Nakanishi ² , S. Ishihara ² ¹ Yamagata University, ² KOHJIN Film & Chemicals Co., Ltd	FS-CII-14 <i>Blocked</i> <i>(Preparation of Conference Party)</i>	
17:40	FS-BII-15	FS-CII-15 <i>Blocked</i> <i>(Preparation of Conference Party)</i>	
Room FS-D (2nd Floor, Hei-An)			
18:30 - 20:30	Conference Party together with Annual Meeting of SFSTJ		

Afternoon Session

Room FS-E 3rd Floor, 308	
Session: Carbon Fibers and Advanced Composite Materials <i>Chair: Gajanan Bhat, The University of Georgia</i>	
15:00	<p>FS-EII-08 <i>The Effects of Interfacial Adhesion for Mechanical Properties of CFRTPs Made with Polyamide 6</i> <u>Toshihira Irisawa</u>, Kento Ujihara, Sarasa Kobayashi, Yasuhiro Tanabe Nagoya University</p>
15:20	<p>FS-EII-09 <i>Highly Transparent PVA-co-PE Nanofiber/Epoxy Film</i> <u>Dong Wang</u>, Mufang Li, Weibing Zhong Wuhan Textile University</p>
15:40	<p>FS-EII-10 <i>Ionic Liquid-Based Electrolytes Containing Inorganic Nanofibers for Quasisolid Energy Devices</i> <u>Hidetoshi Matsumoto</u>, Takahiro Yuuki, Yuki Takano, Minoru Ashizawa, Hajime Matsumoto Tokyo Institute of Technology</p>
16:00	<p>FS-EII-11 <i>Preparation of Few-Layer Graphene Using Ionic Liquid as Green Media and Its Application in Polymer Composite and Fibers</i> <u>Ye Chen</u>, Chenyu Wang, Fuyou Ke, Peng Ji, Huaping Wang Donghua University</p>
16:20 Break	
<i>Chair: Shuichi Tanoue, University of Fukui</i>	
16:40	<p>FS-EII-12 <i>On the Development of Sustainable Composites Reinforced with High Performance Regenerated Cellulose Fibers</i> <u>Anastasia F. Koutsomitopoulou</u>, Chenchen Zhu, Marco Longana, Stephen J. Eichhorn, Kevin D. Potter University of Bristol</p>
17:00	<p>FS-EII-13 <i>Inducing the Crystallization in Cotton Cellulose Ion Gel Films for Enhanced Mechanical Properties</i> <u>Muhammad Abdul Haq</u>^{1,2}, Y. Habu¹, K. Yamamoto¹, A. Takada³, J. Kadokawa¹ ¹Kagoshima University, ²University of Karachi, ³Kyushu University</p>
17:20	<p>FS-EII-14 <i>Antibacterial Nano-crystalline Cellulose modified with N-halamine/Quaternary Ammonium Salts</i> <u>Xuehong Ren</u>¹, Ying Liu¹, Yan Zhang¹, Tung-Shi Huang² ¹Jiangnan University, ²Auburn University</p>
17:40	<p>FS-EII-15 <i>Hydrogel Surface Functionalization of Cotton to Improve Wound Dressing Applicability</i> Eva Pinho, <u>Graça Soares</u> University of Minho</p>
Room FS-D (2nd Floor, Hei-An)	
18:30 - 20:30	Conference Party together with Annual Meeting of SFSTJ

Day III - Thursday, June 14

9:00 Registration: 1st Floor, Exhibition Hall

Room FS-B 2nd Floor, Tou-Gen (桃源)		Room FS-E 3rd Floor, 308
Session: Fiber Manufacturing & Characterization <i>Chair: Caroline L. Schauer, Drexel University</i>		Session: Fundamentals of Polymer Material: Synthesis, Polymerization, Characterization, and Its Physics <i>Chair: Dominique Adlpe, Université de Haute-Alsace</i>
9:20	FS-BIII-01 Keynote : <i>Can Fibers Lead the 4th Industrial Revolution?</i> <u>Moon W. Suh</u> North Carolina State University	FS-EIII-01 Keynote : <i>Continuous Supernanofibers for the Next Generation Tough Structural Composites</i> <u>Yuris Dzenis</u> University of Nebraska-Lincoln
9:50	FS-BIII-02 <i>Yarn and Fabric Performances in a Modified Ring Spinning System</i> <u>Rong Yin</u> , Xiao-ming Tao, Bin-gang Xu Hong Kong Polytechnic University	FS-EIII-02 <i>Derivation of Statistical Principle ($dQ=const.$) Explaining the Heating Rate Dependence of Degradation Temperature (T_d) of Ziegler-Natta Poly(styrene)</i> <u>Masatomo Minagawa</u> ¹ , Toshiki Taira ² , Yoshiaki Fujikura ² , ¹ NPO, Cream-Create-Laboratories, ² Yamagata University
10:10	FS-BIII-03 <i>Fabric Defect Detection and Classification by Applying Convolutional Neural Networks</i> <u>Maximilian Kemper</u> , Sven Windau, Thomas Gries RWTH Aachen University	FS-EIII-03 <i>Preparation and Characterization of Modified Polyesters with Flame Retardancy and Anti-droplet Properties by Copolymerization</i> <u>Peng Ji</u> , Zhenling Jiang, Chaosheng Wang, Fuyou Ke, Ye Chen, Huaping Wang Donghua University
10:30	FS-BIII-04 <i>Electrospinning vs. Centrifugally Spinning – Processing and Applications</i> Mahmut, Dirican, Pei Zhu, Chaoyi Yan, <u>Xiangwu Zhang</u> North Carolina State University	FS-EIII-04 <i>Dye Decomposition and Cr(VI) Reduction under Visible light by a Cellulose Acetate Fiber Cross-Linked with Amorphous TiO₂</i> <u>Hanako Asai</u> , Shinya Kato, Koji Nakane University of Fukui

10:50 Break

<i>Chair: Moon W. Suh, North Carolina State University</i>		<i>Chair: Yuris Dzenis, University of Nebraska-Lincoln</i>
11:10	FS-BIII-05 <i>Control of Structure and Mechanical Behavior of Continuous Nanofibers through Addition of Small Amounts of Nano-inclusions</i> <u>Dimitry Papkov</u> , Mohammad Nahid Andalib, Yuris Dzenis University of Nebraska-Lincoln	FS-EIII-05 <i>Isothermal Crystallization Experiments for Poly (L-Lactic Acid) Containing a Liquid-Type Nucleation Agent by Small- and Wide-Angle X-ray Scattering</i> <u>Thi Ngoc Diep Pham</u> ¹ , Masatsugu Mochizuki ² , Mikio Doi ² , Hideaki Takagi ³ , Nobutaka Shimizu ³ , Noriyuki Igarashi ³ , Sono Sasaki ¹ , Shinichi Sakurai ¹ ¹ Kyoto Institute of Technology, ² Taiyo Kagaku Co., Ltd., ³ High energy Acceleration Research Organization
11:30	FS-BIII-06 <i>Polymer Nanofiber-based Filter Media with Tailored Three-dimensional Structure for High-efficient Air Filtration Through Suspension Drying Techniques</i> <u>Ke Liu</u> , Pan Cheng, Zhibing Yi, Xu Wang, Ying Liu, Dong Wang Wuhan Textile University	FS-EIII-06 <i>Microspheres with Dimple Morphology of Poly(p-oxyferuloyl) Prepared by Reaction-induced Phase Separation</i> <u>Hironori Atarashi</u> , Masahaya Sugimoto, Shinichi Yamazaki, Kunio Kimura Okayama University
11:50	FS-BIII-07 <i>Electrospinning PAN of Increasing Isotacticity</i> Reva M. Street ¹ , Masatomo Minagawa ² , <u>Caroline L. Schauer</u> ¹ ¹ Drexel University, ² NPO, Cream-Create-Laboratories	FS-EIII-07 <i>New Method to Investigate the Interfacial Tension of Polymer Melts</i> <u>Yurong Yan</u> ^{1,2} , Youim Chang ² , Rudolf Hufenus ³ ¹ South China University of Technology, ² Tunghai University, ³ Empa
12:10	<i>Blocked</i>	FS-EIII-08 <i>Preparation of Poly(1,4-phenylene terephthalamide) from Poly(ethylene terephthalate) by means of Reaction-induced Crystallization</i> Tatsuya Kohara, Hironori Atarashi, Shinichi Yamazaki, Tetsuya Uchida, <u>Kunio Kimura</u> Okayama University

Room FS-F (2nd Floor, Hou-Rai)

12:30 Poster Award Ceremony and Closing Remarks

12:50 End of Conference

Morning Session

9:00 Registration: 1st Floor, Exhibition Hall

Room FS-F 2nd Floor, Hou-Rai (蓬莱)	
Session: Fundamentals of Fiber & Textile Science, Testing, & Characterization <i>Chair: Guowen Song, Iowa State University</i>	
9:20	Keynote : <i>Fundamentals for Memory Fibers and Their Potential</i> <u>Jinlian Hu</u> , Harishkumar Narayana, Shanshan Zhu Hong Kong Polytechnic
9:50	<i>Fabric Drape Model Considering Shear and Bending</i> <u>Liu Yang</u> , KyoungOk Kim, Masayuki Takatera Shinshu University
10:10	<i>Effect of Drying Temperature on Shrinkage Ratio of Knitted Clothing</i> <u>Yurika Hashimoto</u> ¹ , KyoungOk Kim ¹ , Masayuki Takatera ¹ , Kazuhiko Hashimoto ² ¹ Shinshu University, ² Panasonic Co. Ltd.
10:30	<i>Evaluation of Nanoscale Structure and Mechanical Properties of Fibers Using FIB-Notch Techniques</i> <u>Taylor Stockdale</u> , Yuris Dzenis University of Nebraska-Lincoln

10:50 Break

<i>Chair: Laurence Schacher, Université de Haute-Alsace</i>	
11:10	<i>A Novel Approach to Evaluate Thermal Protective Performance of Clothing Subjected to Stretching Forces</i> <u>Yun Su</u> ^{1,2} , Rui Li ² , Jie Yang ² , <u>Guowen Song</u> ² , Chunhui Xiang ² , Jun Li ¹ ¹ Donghua University, ² Iowa State University
11:30	<i>Testing Method for the Evaluation of Flammability of Meta-aramid Blended Yarns</i> <u>Jie Feng</u> , Tao Hua, Min Zhang, Ka Hei Chan, Wong Man Ching Hong Kong Polytechnic University
11:50	<i>Beyond Fibers and Ropes – Best Practices</i> <u>Rafael Chou</u> , David S. Tseng Samson Rope Technologies
12:10	<i>On-Line Appearance Inspection System of DTY Packages</i> <u>Fei Li</u> , Pei Feng, Ronggen Zhang, Qiang Fei, Chongchang Yang Donghua University

Room FS-F (2nd Floor, Hou-Rai)	
12:30	Poster Award Celemony and Closing Remarks

12:50 End of Conference

Poster Presentations

June 13, Room FS-P, Exhibition Hall, 1st Floor

Obligation Time Odd number: 12:00 – 12:40, Even number: 12:40 – 13:20

Fundamentals of Polymer Material: Synthesis, Polymerization, Characterization, and Its Physics

- FS-P11-01** Ultra Small-angle X-ray Scattering Analysis of Block Copolymer-grafted Silica Nanoparticle Hybrid Films Under Mechanical Deformation
Chao-Hung Cheng, Shuhei Nozaki, Chigusa Nagano, Shiori Masuda¹, Tomoyasu Hirai, Yuji Higaki, Ken Kojio, Atsushi Takahara
Kyushu University
- FS-P11-02** Effect of Spacer Geometry on Reverse Electrodialysis (RED) Resistance
Soroush Mehdizadeh, Takakazu Abo, Masahiro Yasukawa, Yuriko Kakihana, Mitsuru Higa
Yamaguchi University
- FS-P11-03** Electric Heating Performance and Superhydrophobicity of Cotton Fabric In-situ Polymerized with Pyrrole Using Binary Oxidants
Suhyun Lee, Chung Hee Park
Seoul National University
- FS-P11-04** Performance and Efficiency Comparison between Pressure-retarded Osmosis and Reverse Electrodialysis
Masahiro Yasukawa, T. Sakurada, R. Horie, M. Kuno, Y. Kakihana, M. Higa
Yamaguchi University
- FS-P11-05** Characterization of Charge Mosaic Membranes Prepared by Ion-track Graft Polymerization
M. Omori¹, T. Yamaki², H. Koshikawa², S. Sawada³, Y. Kakihana¹, M. Yasukawa¹, Mitsuru Higa¹
¹Yamaguchi University, ²National Institutes for Quantum and Radiological Sciences and Technology, ³Japan Atomic Energy Agency
- FS-P11-06** Characterization of Cation-exchange Membranes Prepared by Ion-track Graft Polymerization
Saeko Harada¹, M. Goto¹, T. Yamaki², S. Sawada³, H. Koshikawa², A. Kitamura³, M. Yasukawa¹, M. Higa¹
¹Yamaguchi University, ²National Institutes for Quantum and Radiological Sciences and Technology, ³Japan Atomic Energy Agency
- FS-P11-07** Preparation and Characterization of PVA-based Charge Mosaic Membranes Prepared by Polymer Coating Method
Tsuyoshi Saito, Yuriko Kakihana, Masashiro Yasukawa, Mitsuru Higa
Yamaguchi University

Fundamentals of Fiber & Textile Science, Testing, & Characterization

- FS-P11-08** Polymer Alloy of Polybutylene Terephthalate and Polyrotaxan, and Its Physical Properties
Fumiya Sakakibara, Akira Ishigami, Takashi Kurose, Hiroshi Ito
Yamagata University

- FS-P11-09** Industry 4.0 and the Future of Textile Production in High-wage Countries
Maximilian Kemper, Thomas Gries
RWTH Aachen University
- FS-P11-10** Fabric Movement and Washing Performance in the New Front-loading Washer with Built-in Pulsator
Hyewon Kim¹, Changsang Yun², Sungmin Kim¹, Chunghee Park¹
¹Seoul National University, ²Ewha Womans University
- FS-P11-11** Textile Production Theory for Digital Applications in Fiber Production and Processing
Daniel Buecher, Bernhard Schmenk, Thomas Gries
RWTH Aachen University
- FS-P11-12** Analysis of Tactile Sensation of Synthetic Leather using Logistic Regression Analysis
Tsuyoshi Chiba, Shota Kuroda, Masaki Yamaguchi
Shinshu University
- FS-P11-13** Structure Analysis of a Colorful Woven Fabric Based on Colored Weft Yarn Mixing
Tao Hua, Lau Yiu Tang, Xiao Tian, Nga Sze Sea Yeung, Hai Bo Hu
Hong Kong Polytechnic University
- FS-P11-14** Cleaning Liquid of Dilute Emulsion System Containing Fatty Alcohol for Removing Non-polar Oil from Fabrics
Masaki Tanaka, Masaru Oya
Yokohama National University
- FS-P11-15** New Method for Estimating Synergic Effect or Offsetting Effect in Removal Process of Soils and Dyes from Fabrics
Yosuke Taniguchi, Masaru Oya
Yokohama National University
- FS-P11-16** Preparation and Characterization of Kapok Nonwoven for Oil-separation Filter
Seung Woo Han, Jung Yeon Kim, Yeong Og Choi
Korea Institute of Industrial Technology
- FS-P11-17** Study of Comfort of Japanese Traditional Uniforms: Shinto Priest Costumes
Mariko Sato, Yuko Matsui, Shinko Kumagai
Bunka Gakuen University
- FS-P11-18** Relationship Between Fabric Surface Texture and Friction Using Tri-axial Force Plate
Davaajav Narantogtokh, Sachiko Sukigara
Kyoto Institute of Technology
- FS-P11-19** Sensory Evaluation of Female Jeans Using the CALM Scale to Assess the Total Comfort
Iara Braga^{1,2}, Maria José Abreu², Madalena Oliveir²
¹Federal University of Piauí, ²University of Minho
- FS-P11-20** Preparation and Characterization of Gelatin/Arabic Gum Microcapsules containing Methyl Salicylate Deposited onto a Cotton Fabric
Samira Mendes¹, Andrea Zille², Fabricio M. Bezerra¹, Nádia R. M. F. Camargo³, André P. A. W. Catarino²
¹Federal Technological University of Paraná, ²University of Minho, ³State University of Maringá

- FS-P11-21** Evaluation of Performance Such as Hygroscopic Exothermic Property and Heat of Vaporization of Clothing Materials
Maika Tamari¹, Atsumi Takezawa¹, Chihiro Suzuki¹, Kaname Katsuraya¹, Masami Asano²
¹Wayo Women's University, ²Asano Nenshi Co., Ltd.
- FS-P11-22** New Experimental Device for Measuring Force Required to Put on Compression Stockings
R. Le Floch, A. Rullière, E. Van Verre, E. Drean, L. Schacher, Dominique Adolphe
ENSISA
- FS-P11-23** Effect of Wearing Cloche Hat on Comfort Sensation of Young Women Mountain Walking in Summer in Shiga Highlands
Noriko Fukuda
Shinshu University
- FS-P11-24** Effect of Homologous Modeling of Three-dimensional Human Body Shape Data on Body Types Analysis
Ayumi Takemoto, Michiko Ohtsuka
Japan Women's University
- FS-P11-31** Computational Fluid Dynamics Analysis on Capillary Flow Through Cross-section Profiled Fibers
Eunjin Park¹, Giwon La², Jongkwang Lee², Eunae Kim¹
¹Yonsei University, ²Hanbat National University
- FS-P11-32** Preparation and Characterization of PSA/Cellulose Alloy Fibers with N-methylmorpholine-N-oxide Monohydrate as Solvent
Tong Cheng, Kaijian Wu, Yumei Zhang, Huaping Wang
Donghua University
- FS-P11-33** Polyurethane Nanofibrous Membranes Prepared via Suspension Electrospinning
Youjung Song, Seungsin Lee
Yonsei University
- FS-P11-34** Preparation of Islands (High Molecular Weight PET) in the Sea (PP)-type Bicomponent Fibers by Using High-speed Melt Spinning
Hyung Joo An^{1,2}, Young Chan Choi¹, In-Woo Nam¹, Ho-dong Kim², Wan-Gyu Hahm¹
¹Korea Institute of Industrial Technology, ²Dankook University

Fiber Manufacturing & Characterization

- FS-P11-25** Crystalline Structure in High-speed Melt Spun Fibers of Blend of Poly(L-lactic acid) and Poly(D-lactic acid)
Nanjaporn Roungpaisan, Wataru Takarada, Takeshi Kikutani
Tokyo Institute of Technology
- FS-P11-26** Separation of Oil-in-Water Emulsions Stabilized by Different Types of Surfactants Using Electrospun Fiber Membranes
Yi-Min Lin, Gregory C. Rutledge
Massachusetts Institute of Technology
- FS-P11-27** Preparation and Characterization of High Tenacity PTFE Filament using Melt Spinning Process
Seung Jin Lee, Do Kun Kim, Ju Seok Hong, Byeong Jin Yeang
Korea Institute of Industrial Technology
- FS-P11-28** Structure and Properties of Poly(ethylene terephthalate) Fiber Webs Prepared Through Laser-Heated Electrospinning and Biaxial Stretching Processes
Tomoki Tokuda¹, Takuya Hara¹, Atsuya Otake¹, Wataru Kita¹, Midori Takasaki¹, Haruki Kobayashi¹, Katsufumi Tanaka¹, Wataru Takarada², Takeshi Kikutani²
¹Kyoto Institute of Technology, ²Tokyo Institute of Technology
- FS-P11-29** Preparation of Amorphous Super-engineering Plastic Fibers by Melt-spinning
Moosung Kim, Hyunjung Choi, Damiro Ahn, Sang Young Yeo
Korea Institute of Industrial Technology
- FS-P11-30** PET Fiber Formation through Continuous Cold Drawing Process with Infusion of Organic Solvent
Dongwoo Go¹, Wataru Takarada¹, Arun Aneja², Takeshi Kikutani¹
¹Tokyo Institute of Technology, ²East Carolina University
- FS-P11-35** The Impact of Pre-orientation on the Crystallization of Poly(ethylene terephthalate) Fiber during Uniaxial Tension
Jiaxiong Zou, Kang Chen, Hong ji, Yumei Zhang, Huaping Wang
Donghua University
- FS-P11-36** Innovative Conjugate Spinning Technology "NANODESIGN®"
Masato Masuda, Tomohiko Matsuura, Hirofumi Yamanaka, Yoshitaka Aranishi
Toray Industries, Inc.

Dyeing & Finishing / Design & Merchandizing

- FS-P11-37** Dyeing Wool Fibre in a Lower Temperature Condition
Chi-wai Kan
Hong Kong Polytechnic University
- FS-P11-38** Preparation of Colored Antibacterial Functional Acrylic Fibers by Gel Adsorption Method
Dejun Feng, Kaijian Wu, Jinchao Yu, Yumei Zhang, Huaping Wang
Donghua University
- FS-P11-39** A Consciousness Survey on Kurashiki Canvas and Design Proposal
Manami Fukumura^{1,2}, Ikuko Turo¹, Kunio Kimura²
¹Kurashiki City College, ²Okayama University

Smart Polymers, Fibers, and Textiles

- FS-P11-40** Fabrication of High-resolution Conductive Patterns on the Thermal Imprinted Polyetherimide film by Capillary Flow of Conductive Ink
Takashi Kurose, Keita Shishido, Akihiko Nemoto, Hiroshi Ito
Yamagata University
- FS-P11-41** Fabrication of Piezoelectric PLLA/BaTiO₃ Filaments for Smart Sensors and Their Applications
Do-Kun Kim, Hyun Ju Oh, Bo-Seok Song, Byeong Jin Yeang
Korea Institute of Industrial Technology

- FS-P11-42** Electrical Percolation Behavior of Carbon Black/
Polymer Composites
*Hyunjung Choi, Moo Sung Kim, Damiro Ahn, Sang
Young Yeo*
Korea Institute of Industrial Technology

Sustainable Polymer Materials / Advanced Cellulose Fibers & Textiles

- FS-P11-43** Influence of Electrolyte on the Self-organization of
Liquid Silk
Yutaka Kawahara, Ayumi Sato
Gunma University
- FS-P11-44** An Accelerated Evaluation Method to Test the
Biodegradation of Polylactic Acid Nonwoven
*Xiaoshan Lin, Zhicheng Zhan, Yi Zhang, Yurong
Yan*
South China University of Technology
- FS-P11-45** Fabrication and Characterization of Anti-yellowing
Silk with TiO₂ Coating on Zirconium Phosphate
Undercoat
Meguru Yokoyama, Hisanao Usami
Shinshu University
- FS-P11-46** Construction of a Cell Adhesive Silk Fibroin
Material by Mixing with Peptides
*Chikako T. Nakazawa, Ryoichi Takahashi, Momoko
Sonoda, Atsushi Asano*
National Defense Academy
- FS-P11-47** Characteristics of the Cellulose Nanofiber Coatings
on TEMPO-treated Fabrics
*Natsuki Shirai, Nao Kamatsuka, Haruka Kijima,
Miki Nakano, Hitomi Hamada*
Tokyo Kasei University
- FS-P11-48** Production of Cellulose Nanofibers from Oil Palm
Residue
*Yoko Okahisa¹, Yuma Furukawa¹, Kiyooki
Ishimoto², Kamthorn Intharapichai¹*
¹Kyoto Institute of Technology, ²Rajamangala University
of Technology Thanyaburi
- FS-P11-49** Preparation of Porous Cellulose Acetate-Titanium
Dioxide Composite Fiber and Its Characterization
Kosuke Iriyama, Hanako Asai, Koji Nakane
University of Fukui

Carbon Fibers and Advanced Composite Materials

- FS-P11-50** Design and Characterization of Micro- and Nano-
Hybrid Mats with a High-filtration Efficiency
*Lingli Deng¹, Ruitian Zhu², Peng Zhang², Zhiming
Qiu¹, Yurong Yan¹*
¹South China University of Technology, ²Guangzhou
Inspection Testing and Certification Group Co., Ltd.
- FS-P11-51** Reactive Fibers for Air Filtration in Wastewater
Treatment Plants
*Lukasz Debicki¹, Inga Noll¹, Thomas Gries¹,
Andreas Obermayer², Frank Magdeburg²*
¹RWTH Aachen University, ²UNITECHNICS KG
- FS-P11-52** Influence of Non-cellulosic Components' Removal
on the Wet-Dry Cycling Durability of Flax Textile-
reinforced Cement Composites
*Laura González, Heura Ventura, Josep Claramunt,
Mònica Ardanuy*
Universitat Politècnica de Catalunya