

International Symposium on Fiber Science and Technology (ISF2014) Program

Plenary Lectures
(TFT WEST 9F HALL1000)

September 29th

9:40 **Opening Ceremony of ISF2014**

10:10 **Plenary-1**

“AUTEX – Network of European Textile Universities – An accelerator of success”
Dominique C. Adolphe
President of AUTEX Association
Ecole Nationale Supérieure d'Ingénieurs Sud Alsace (ENSISA), France

10:55 **Plenary-2**

“Evaluation of heat stress under extreme environments”
Kee Jong Yoon
President of the Korean Fiber Society
Dankook University, Korea

Lunch (11:40~12:50)

12:50 **Plenary-3**

“Functional hybrid fiber materials: design, fabrication and applications”
Zhu Meifang
Donghua University, China

13:35 **Plenary-4**

“Carbon fiber composite materials: developments, commercializations and applications”
Makoto Endo
Toray Industries, Inc., Japan

Break (14:20~14:40)

8 Technical Sessions

September 30th

9:20 **Plenary-5**

“Technical Textiles - Some thoughts of an academic”
William Oxenham
North Carolina State University, USA

10:05 **Plenary-6**

“Innovative technologies for functional modification of textile”
Teruo Hori
University of Fukui, Japan

Break (10:50~11:10)

8 Technical Sessions

October 1st

9:20 **Opening of Advanced Fiber Symposium**

(Organized by Japan Chemical Fiber Association)

9:30 **Plenary-7**

“Process development and engineering for high strength cellulose aerogel filaments”
Thomas Gries
RWTH Aachen University, Germany

10:10 **Plenary-8**

“Next generation fibers”
Satish Kumar
Georgia Institute of Technology, USA

Break (10:50~11:10)

8 Technical Sessions

5 General Sessions

A (TFT East, 9th Floor, Room 909)

G1 Fibers and Polymer Materials

S. Sakurai, H. Saito, K. Ogino, J. Morikawa,

T. Uchida, M. Higa, and K. Tanaka

Program Chairs

September 29th

Chairperson: Takeshi Kikutani

14:40 G1-01 **Keynote** “A hybrid processing method by nanofiber embedding to produce flexible, conductive, transparent films for Flexible Electronics Industry”
(University of Akron, USA) Miko Cakmak

15:10 G1-02 “Cost-efficient production of custom-made GI-POFs used for illumination, data transmission and sensor technology”
(RWTH Aachen University, Germany) Markus Beckers, Benjamin Glauss, Thomas Gries and Christian-Alexander Bunge

Chairperson: Miko Cakmak

15:30 G1-03 “Preparation of single-polymer composites from bicomponent fibers prepared by high-speed melt spinning process”
(Tokyo Institute of Technology, Japan) Yuanjing Zhang, Takeshi Kikutani and Wataru Takarada

15:50 G1-04 “Effect of heat sealing conditions on the heat seal properties before and after the sterilization process for coextruded multilayered polyethylene films”
(Hosokawa Yoko Co., Ltd., Japan) Toshiharu Iwasaki, Wataru Takarada and Takeshi Kikutani

16:10 G1-05 “Revisit polyester/liquid crystal blending and fiber spinning”
(Kordsa Global, Turkey) Ozlem Turkarlan, Sezen Gurdag, Emine Guven, Wataru Takarada and Takeshi Kikutani

Chairperson: Wataru Takarada

16:30 G1-06 “Spinning of PEN and PEN/PET polymer blends”
(Kordsa Global, Turkey) Aslı Ertan and Emine Guven

16:50 G1-07 "Analysis of structure formation in carbon fibers - a new method for process development" (RWTH Aachen University, Germany) Wilhelm Steinmann, Anna- Katharina Saelhoff, Gunnar Seide and Thomas Gries

September 30th

Chairperson: Kunio Kimura

11:10 G1-08 "Application of sericin on polyester DKTE'S" (Textile and Engineering Institute, India) Aravin Prince Periyasamy and Saatish Lavate

11:30 G1-09 "Growth of N-doped BiOBr nanosheets on carbon fibers for high efficient photocatalytic degradation of organic pollutants under visible light irradiation" (Zhejiang Sci Tech University, China) Guohua Jiang and Xia Li

Chairperson: TBD

11:50 G1-10 "New route to modify polyvinyl alcohol" (Deakin University, Australia) Ping'an Song, Zhiguang Xu and Qipeng Guo

12:10 G1-11 "Transport properties of charged-mosaic membranes prepared from a fabric structure of poly(vinyl alcohol)-based charged-fibers" (Yamaguchi University, Japan) Mitsuru Higa, Atsushi Jikihara, Reina Ohashi, Tetsuro Maeda, Eriko Shimizu, Megumi Nisimura, Yuriko Kakihana and Kenichi Kobayashi

Lunch (12:30~13:40)

Chairperson: Hiromu Saito

13:40 G1-12 **Keynote** "Effects of molecular weight in flow-induced polymer crystallization" (Kyoto University, Japan) Toshiji Kanaya

14:10 G1-13 "Structure analysis of ultra-high strength polyethylene fibers" (Toyobo Co., Ltd., Japan) Yasunori Fukushima, Hiroki Murase and Yoshihiko Teramoto

Chairperson: Shigeo Asai

14:30 G1-14 "Humidity-induced reversible and anisotropic structural change of 3D-oriented poly(vinyl alcohol)" (Toyota Technological Institute, Japan) Taiyo Yoshioka and Kohji Tashiro

14:50 G1-15 "Preparation of ladder-type polyimidazoproline fibers by reaction-induced crystallization during polymerization" (Okayama University, Japan) Mizuho Anabuki, Shinichi Yamazaki and Kunio Kimura

Break (15:10~15:20)

Chairperson: Keiji Tanaka

15:20 G1-16 "Reexamination of polymerization of N-carboxy amino acid 54. Consideration on the living polymerization mechanism of amino acid NCAs. (Fukushima University, Japan) Hitoshi Kanazawa, Aya Inada and Yuki Kanazawa

15:40 G1-17 "A thermally activated polymerization process of ubiquitin studied by small-angle X-ray scattering

(SAXS)" (Shinshu University, Japan) Kouichi Inano, Keiichi Yanase, Ryoichi Arai and Takaaki Sato

Chairperson: Mitsuru Higa

16:00 G1-18 "Design of water interfaces with well-defined vinyl polymers" (Kyushu University, Japan) Yukari Oda, Ayanobu Horinouchi, Toyoaki Hirata, Daisuke Kawaguchi, Norifumi L. Yamada, Shokyoku Kanaoka, Sadahito Aoshima and Keiji Tanaka

16:20 G1-19 "Enantioselectivity of chiral polymer films based on dynamic interface" (Kyushu University, Japan) Atsuomi Shundo, Koichiro Hori, Nobuo Kimizuka and Keiji Tanaka

16:40 G1-20 "Application of Xe-129 NMR spectroscopy to the characterization of gas transport properties of polymeric membranes" (Nagoya Institute of Technology, Japan) Hiraoki Yoshimizu

October 1st

Chairperson: Ken Kojio

11:10 G1-21 "Enhancement and suppress of segregation power at a constant volume fraction in a block copolymer solution by changing compositions of solvent mixtures" (Nagoya Institute of Technology, Japan) Remi Miyamachi, Akifumi Matsushita, Kengo Nomura and Shigeru Okamoto

11:30 G1-22 "Photonic polymer solutions with refractive index enhanced by selective solvents of different solvent quality" (Nagoya Institute of Technology, Japan) Shigeru Okamoto, Koji Ando, Akifumi Matsushita and Itsuki Saito

Chairperson: TBD

11:50 G1-23 "Self-assemblies of main-chain liquid crystalline ABA triblock copolymers" (Tokyo Institute of Technology, Japan) Maito Koga, Kohei Abe, Kazunori Sato, Koichi Sakajiri, Junji Watanabe and Masatoshi Tokita

12:10 G1-24 "Microdomain structures of thermoplastic elastomers after mechanical deformation based on small-angle x-ray scattering" (Nagasaki University, Japan) Ken Kojio, Genichiro Kawajiri, Takuya Komatsu, Suguru Motokucho and Kohji Yoshinaga

Lunch (12:30~13:40)

Chairperson: Masatoshi Tokita

13:40 G1-25 "Could hydrogel fibers replace lycra?" (Hong Kong Polytechnic University, Chin) Xinkun Lu, Ching Ying Chan, Ka I Lee, Pui Fai Ng and Bin Fei

14:00 G1-26 "Controlled synthesis of tetra-arm star-block copolymers and fabrication of gel with homogeneous network structure" (Kyoto University, Japan) Ryohei Ishige, Katsuya Kida, Keita Sakakibara, Kohji Ohno and Yoshinobu Tsujii

14:20 G1-27 “Robust hydrogel reinforced by an addition of imogolite which shows strain-induced reversible isotropic-anisotropic structural transition imogolite hydrogels”
(Tokyo University of Agriculture and Technology, Japan) Kazuhiro Shikinaka, Tomomi Yokoi, Keisuke Kaneda, Yoshihito Osada, Hiroyasu Masunaga and Kiyotaka Shigehara

Chairperson: Kazuhiro Shikinaka

14:40 G1-28 “Swelling of poly(vinyl alcohol) hydrogels accompanying the dye sorption in congo red aqueous solution”
(Ochanomizu University, Japan) Endang Katmiwati and Tadashi Nakanishi

15:00 G1-29 “Development of novelty functional gelator”
(Shinshu University, Japan) Zhong Wang, Masahiro Suzuki and Kenji Hanabusa

Chairperson: TBD

15:20 G1-30 “Temperature-induced structural modifications and cooperative dynamics of aqueous Poly(N-isopropylacrylamide) solution”
(Shinshu University, Japan) Keiichi Yanase, Takuya Miyashita, Daisuke Suzuki, Richard Buchner and Takaaki Sato

15:40 G1-31 “Static structure of copolymer microgels comprising poly(N-isopropylacrylamide) and Poly(N-isopropylmethacrylamide) studied by small- and wide-angle X-ray scattering”
(Shinshu University, Japan) Kenshi Amano, Takuma Kureha, Takuya Miyasita, Daisuke Suzuki and Takaaki Sato

16:00 G1-32 “Hydration state analysis of polyethylene glycol in a variety of systems using small angle X-ray scattering and dielectric relaxation Spectroscopy”
(Shinshu University, Japan) Takeshi Akahane, Takaaki Sato, Lok Shrestha and Hiromi Sakai

Chairperson: Tetsuya Uchida

16:20 G1-33 “Control of viscosity coefficient in polymer solution by light irradiation”
(Tokyo University of Agriculture and Technology, Japan) Toshiyuki Watanabe, Ryo Shiraishi and Toshiyuki Shikata

16:40 G1-34 “Design of photoresonant polymer network for fast response photomechanical soft actuator”
(Tokyo University of Agriculture and Technology, Japan) Toshiyuki Watanabe and Ryota Ohshima

G (TFT East, 9th Floor, Room 9F)

G1 Fibers and Polymer Materials

**S. Sakurai, H. Saito, K. Ogino, J. Morikawa,
T. Uchida, M. Higa, and K. Tanaka**

Program Chairs

October 1st

Chairperson: Kenji Ogino

11:10 G1-35 “Miscibility and optical property of cellulose alkyl ester blends with poly(N-vinyl pyrrolidone-co-methyl methacrylate)”
(Kyoto University, Japan) Kazuki Sugimura, Yoshikuni Teramoto and Yoshiyuki Nishio

11:30 G1-36 “Chemical modification of cellulose for melt spinning process”
(Toray Industries, Inc., Japan) Hidekazu Kano, Yoshitaka Aranishi, Yuhei Maeda and Yoshiyuki Nishio

Chairperson: Yoshiyuki Nishio

11:50 G1-37 “Polyamide/MQ-resin nanocomposites: synthesis and characterization”
(DWI an der RWTH Aachen, Germany) Yongliang Zhao

12:10 G1-38 “Quantitative analysis of phase separation structure and mechanical properties of acrylics copolymer / epoxy thermo setting resin compositions”
(LINTEC Corporation, Japan) Isao Ichikawa, Kazuhiro Takahashi, Shuichi Akasaka and Shigeo Asai

Lunch (12:30~13:40)

Chairperson: Shinichi Sakurai

13:40 G1-39 “The study of the natural weeds in the raw material used to prepare a friendly composite material between Wade hyacinth and Natural Shellac”
(Pathumwan Institute of Technology, Thailand) Pitak Panawan and Manus Srisawade

14:00 G1-40 “Preparation of green composite from rubber tree leaves and poly(lactic acid)”
(Pathumwan Institute of Technology, Thailand) Jedsada Wongon and Prayoon Surin

14:20 G1-41 “High performance technology of BIOFRONT[®] and recent tendency”
(Teijin Limited, Japan) Masahiro Iwai, Tomoyoshi Yamamoto and Akihiko Uchiyama

Chairperson: Junko Morikawa

14:40 G1-42 “On the way to high-strength poly(3-hydroxybutyrate) (PHB) fibers”
(EMPA, Switzerland) Rudolf Hufenus, Felix A. Reifler and Urs J. Haenggi

Break (15:00~15:10)

15:10 G1-43 “The study feasibility in production roof tile from bagasse fiber mixed maize husk fiber”
(Pathumwan Institute of Technology, Thailand) Prayoon Surin and Jedsada Wongon

15:30 G1-44 “Study on efficiency of natural fiber insulation”
(Pathumwan Institute of Technology, Thailand) Chaiyapruk Apravate and Pitak Panawan

Chairperson: Shinichi Sakurai

- 15:50 G1-45 “The insulation board performance of coir fibers with cement and entrapped bubbles additives” (Pathumwan Institute of Technology, Thailand) Manus Srisawade and Pitak Panawan
- 16:10 G1-46 “Design and development of coir based adsorbent system for removal of ionic dyes from dye wastewater” (Delhi Technological University, India) Anshul Singhal, Shashank Gupta, Pulkit Aggarwal and Roli Purwar
- 16:30 G1-47 “Effect of acetylation and alkali treatment on the oil sorption behavior of Vietnamese kapok fibres” (Ho Chi Minh City University of Technology, Vietnam) Huong Mai Bui and Thi Kim Hue Trinh

B (TFT East, 9th Floor, Room 908)

G2 Fiber and Textile Processing

H. Ito, S. Tanoue, K. Nakane, and M. Sugimoto

Program Chairs

September 29th

Chairperson: Hiroshi Ito

- 14:40 G2-01 **Keynote** “Multicomponent synthetic fibers for innovative textile applications” (EMPA, Switzerland) Rudolph Hufenus, G. Fortunato, L. Gottardo, and F.A. Reifler
- 15:10 G2-02 **Keynote** “Twist-gel spinning for rapid production of ultra-strong polymer fibers” (Georgia Institute of Technology, USA) Donggang Yao
- 15:40 G2-03 “Effect of blend ratio on properties of poly(lactic acid)/polyoxymethylene blend fiber” (Rajamangala University of Technology, Thailand) Thanyaburi Natee Srisawat, Supaphorn Thumsorn, Sorapong Pavasupree, Weraporn Pivsa-Art, Sommai Pivsa-Art, Toshikazu Umemura and Hiroyuki Hamada

Chairperson: TBD

- 16:00 G2-04 “Preparation of ultra-fine fiber of drug-loaded poly lactide by laser-heated electrospinning for controlled release of drug” (Miyagi University of Education, Japan) Midori Takasaki, Miku Yoshizawa, Natsumi Fukushi, Sayoko Hoshi, Yuka Yamaguchi, Yutaka Ohkoshi, Toshihiro Hirai and Ikuo Omura
- 16:20 G2-05 “Influence of chemical bond state of silver and wool fiber on antibacterial effect” (The Japan Wool Textile Co.,Ltd., Japan) Takayuki Okabe, Kouki Jibu and Hideki Omori
- 16:40 G2-06 “Insitu synthesis and application of cerium oxide nanoparticles on cotton fabric for UV protection and antibacterial properties” (Institute of Chemical Technology, India) Mangesh Teli and Parag Bhavsar

September 30th

Chairperson: Naoki Shimada

- 11:10 G2-08 “Effect of melt blowing die assembly on fiber formation behavior and web properties” (Tokyo Institute of Technology, Japan) Renukarn Ruamsuk, Wataru Takarada and Takeshi Kikutani
- 11:30 G2-09 “Multi-scale simulation for analysis of melt spinning process” (Asahi Kasei Fibers Corporation, Japan) Keiichi Toyoda, Junichi Kojima, Tomoki Ishikawa, Takeshi Aoyagi, Wataru Takarada and Takeshi Kikutani
- 11:50 G2-10 “Effect of airway angle of swirl nozzle on the performance of ring spun yarn” (Jiangnan University, China) Ge Mingqiao, Qiu Hua and Fu Yuye
- 12:10 G2-11 “Airflow state in the nozzle for an air-jet spinning machine by numerical simulation” (University of Fukui, Japan) Thi Viet Bac Phung, Akihiro Yoshida, Hideyuki Uematsu, Yoshiyuki Iemoto and Shuichi Tanoue

Lunch (12:30~13:40)

Chairperson: Shuichi Tanoue

- 13:40 G2-12 **Keynote** “Vortex spins future of spinning-A history of the machine development -” (Murata Machinery, Ltd., Japan) Tatsumori Matsumoto
- 14:10 G2-13 **Keynote** “Silk/Cellulose-based biocomposite materials: Utilization of natural fiber wastes” (Zhejiang Sci-Tech University, China) Juming Yao
- 14:40 G2-14 “Poly(butylene terephthalate) fibers produced by Laser melt-electrospinning” (University of Fukui, Japan) Naoki Shimada, Nobuo Ogata and Koji Nakane
- 15:00 G2-15 “Effect of Cross-sectional Configuration on Fiber Formation Behavior in Bicomponent Melt Spinning Process” (Tokyo Institute of Technology, Japan) Yiwen Chen, Wataru Takarada and Takeshi Kikutani

Chairperson: Masataka Sugimoto

- 15:40 G2-16 “Specific kinetic pathway from mesophase to single crystal of isotactic polypropylene” (Kyoto University, Japan) Koji Nishida, Harutoshi Asakawa, Tatsumasa Hirano, Rintaro Inoue and Toshiji Kanaya
- 16:00 G2-17 “Mutual interaction of two components with different stereo regularity in crystallization of polypropylene blend fibers” (Tokyo Institute of Technology, Japan) Kouya Kawai, Wataru Takarada, Takeshi Kikutani, Tomoaki Takebe, Yohei Koori and Toshitaka Kanai
- 16:20 G2-18 “Structure and properties of Poly(ethylene terephthalate) and polyamide 6 bicomponent fiber for textile application” (Rajamangala University of Technology Thanyaburi, Thailand) Suaphorn Thumsorn, Pachara Wanma, Supasit Isan, Siwawat Chanmanee and Natee Srisawat

16:40 G2-19 "Control of polyester fiber orientation at melt spinning line"
(Toray Co. Ltd., Japan) Yoshitsugu Funatsu

October 1st

Chairperson: Wataru Takarada

- 11:10 G2-20 "Demolding of nanostructured-surface on UV-cured film in Roll-to-Roll UV nanoimprint process"
(Yamagata University, Japan) Kentaro Taki, Shunsuke Kondo, Tetsuo Takayama and Hiroshi Ito
- 11:30 G2-21 "Effect of polytetrafluoroethylene and carbon nanotube on the film processability of polystyrene"
(Fukui University, Japan) Hideyuki Uematsu, Masahiro Mori, Yoshiyuki Iemoto and Shuichi Tanoue
- 11:50 G2-22 "Poly(vinyl alcohol)/zinc oxide nanoparticle hybrid electrospun fiber mats for antibacterial dressings"
(Yamagata University, Japan) Tongsai Jamnongkan, Sathish K. Sukumaran, Masataka Sugimoto, Tomijiro Hara, Yumiko Takatsuka and Kiyohito Koyama
- 12:10 G2-23 "Nobel type nanofiber mat consisting of Tetra-PEG network"
(University of Fukui, Japan) Hanako Asai, Muhammad Haziq bin Miswan, Naoki Shimada, Koji Nakane, Takamasa Sakai and Nobuo Ogata

Lunch (12:30~13:40)

Chairperson: Kentaro Taki

- 13:40 G2-24 "Thermal conductivity and properties of polypropylene/magnesium oxide/vapor-grown carbon fiber composites"
(University of Fukui, Japan) Emilie Oconel, Chihiro Azuma, Hideyuki Uematsu, Yoshiyuki Iemoto and Shuichi Tanoue
- 14:00 G2-25 "Formation of alumina nanofibers and development of thermal conductive polymer composites using the nanofibers"
(University of Fukui, Japan) Koji Nakane and Nobuo Ogata
- 14:20 G2-26 "A study on complex shapes of CFRTP by using commingled yarn fabric"
(Kanazawa Institute of Technology, Japan) Patcharat Wongsriraksa, Hiroyuki Hasebe, Wataru Okumura, Mitsugu Kimizu, Kiyoshi Uzawa and Isao Kimpara
- 14:40 G2-27 "Flame retardant nonwovens of shaped PP fibers containing modified-Thai bentonite"
(National Metal and Materials Technology Center, Thailand) Chureerat Praharn, Nanjaporn Roungpaisan, Natthapong Suwannamek and Wattana Klinsukhon
- 15:00 G2-28 "Relationship of crystallization and morphology of polypropylene mono-filament foam"
(King Mongkut's Institute of Technology Ladkrabang, Thailand) Natthapong Chuapon, Peerapot Pataypanakit, Hiroshi Ito and Surat Areerat

C (TFT East 9F Room: TBD)

G3 Dyeing, Finishing, Coating and Laminating

K. Hisada, A. Tsuchida, and Y. Tsujii

Program Chairs

September 30th

Chairperson: Akira Tsuchida

- 13:40 G3-01 **Keynote** "Fibers for the regenerative medicine"
(Kyoto University, Japan) Yoshito Ikada
- 14:10 G3-02 "Upgrading of synthetic fiber materials by nano-scale processing"
(Toray Industries, Inc., Japan) Yuki Ninomiya, Keiji Takeda and Atsushi Kuwabara
- Chairperson: Yoshinobu Tsujii*
- 14:30 G3-03 **Keynote** "Electron-beam irradiation technique for textile finishing"
(Kyoto Institute of Technology, Japan) Satoko Okubayashi
- 15:00 G3-04 "The effect of sericin on dyeing and ultraviolet protection properties of natural dyes on polyester fabrics"
(National Metal and Material Technology Center, Thailand) Monthon Nakpathom, Nootsara Narumol and Buppha Somboon

Chairperson: Akira Tsuchida

- 15:20 G3-05 "Dyeing of silk fabric with garcinia dulcis (Roxb.) kurz bark by using post-mordant and pad-dry processes: Studies on metal mordants concentration parameter"
(Kasetsart University, Thailand) Nattadon Rungruangkitkrai, Rattanaphol Mongkholrattanasit, Nattaya Punrattanasin, Kamolkan Sriharuksa, Monthon Nakpathom and Nuanchan Klaijoy
- 15:40 G3-06 "Fastness properties of artocarpus lakoocha dyed wool yarn with mordant combinations"
(Assam Agricultural University, India) Ava Phukan, Rajashree Phukan and Swapna Choudhury Choudhury

Chairperson: Kenji Hisada

- 16:00 G3-07 "The role of ozone micro-bubbles in cotton bleaching"
(Tokyo Metropolitan Industrial Technology research Institute, Japan) Ichiro Enomoto, Shin Soeda, Fumi Masuko and Chizuru Mitani
- 16:20 G3-08 "Flame retardancy of cotton fabric treated by hybrid phosphorus-silica films"
(Italian Association of Textile Chemists and Colorists (AICTC), Italy) Alessandro Gigli, Jenny Alongi, Claudio Colleoni, Emanuela Guido, Giulio Malucelli and Giuseppe Rosace
- 16:40 G3-09 "Multifunctional silica sol-gel finishing for textile fabrics"
(University of Bergamo, Italy) Giuseppe Rosace, Claudio Colleoni, Ilaria Donelli, Emanuela Guido and Giuliano Freddi

October 1st*Chairperson: TBD*

- 11:10 G3-10 “Lubrication of polyion complex film prepared from cationic polyelectrolyte and anionic surfactant - Effect of linear and branched polyethylenimine with various molecular weights –”
(University of Fukui, Japan) Yoshiaki Hirano, Masaki Goto and Kenji Hisada
- 11:30 G3-11 “Pilling resistance of lyocell: - Effect of alkali pretreatments with polyfunctional reactive dyes”
(Textile and Engineering Institute, India) Aravin Prince Periyasamy and Saatish Lavate
- 11:50 G3-12 “The role of laccifer lacca kerr. in the UV-protection of silk fabric by using post-mordant and pad-dry processes: Focus on metal mordant concentration property”
(Rajamangala University of Technology Phra Nakhon, Thailand) Rattanaphol Mongkholrattanasit, Charoon Klaichoi, Nattadon Rungruangkitkrai, Nattaya Punrattanasin, Kamolkan Sriharuksa and Monthon Nakpathom

D (TFT East, 9th Floor, Room 9A)

G4 Textile Science and Engineering

M. Inoue, L. Bao, and A. Yokoyama

Program Chairs

October 1st*Chairperson: Mitsuo Matsudaira*

- 11:10 G4-01 **Keynote** “Wool meets modern consumers' expectations”
(Senior Scientist, Apparel & Functional Textiles, New Zealand) Surinder Tandon
- 11:40 G4-02 “The actual condition and the approach of care for the damage by the wearing”
(Lion Corporation, Japan) Shoko Shogase, Ayumi Niikura, Naoya Tamura, Hiroaki Shindo and Takahiro Okamoto

Chairperson: Mari Inoue

- 12:00 G4-03 “The cooling effect of perspiration evaporation in microclimate system on human cutaneous comfort”
(Damietta University, Egypt) Ahmad Tahan
- 12:20 G4-04 “A study of physiological effects of compression garments made of new fabric ‘Elaction PRO[®]’
(Asahi-Kasei Fibers Corporation, Japan) Junko Deguchi, Shoichi Akita and Kota Tsutsui

Lunch (12:40~13:40)

Chairperson: Mari Inoue

- 13:40 G4-05 **Keynote** “Trends of recent research activities in the field of textile science and engineering”
(SCI-TEX, Japan) Tatsuki Matsuo

Chairperson: Morihiko Yoneda

- 14:10 G4-06 “Thermally comfortable car seat using random coil fiber structure”
(Toyobo Co., Ltd., Japan) Hirotaka Harada

- 14:30 G4-07 “Thermal convection studies on aerogel treated fabrics”
(Technical University of Liberec, Czech Republic) Mohanapriya Venkataraman, Rajesh Mishra and Jiri Militky

- 14:50 G4-08 “The quest for continual growth in fibers & textiles: Innovation diversity and organizational resiliency”
(The Swedish School of Textiles, University of Borås, Sweden) Arun Aneja and Rudrajeet Pal

Chairperson: Atsushi Yokoyama

- 15:10 G4-09 “Surface structure and torsion property of cotton-rayon blended vortex yarns”
(Kyoto Institute of Technology, Japan) Jian Kang, Akihiro Okamoto, Satoru Hirose, Sayaka Oda and Sachiko Sukigara
- 15:30 G4-10 “Investigation on objective evaluation of fabric warm/cool feeling by finger sensor method”
(Nara Women's University, Japan) Morihiko Yoneda and Asako Sumi

- 15:50 G4-11 “Prediction of textile structures thermal insulation”
(Technical University of Liberec, Czech Republic) Jiri Militky, Dana Kremenakova and Zu Guocheng

Chairperson: Sachiko Sukigara

- 16:10 G4-12 “New designed abrasion resistance friction multilayer woven fabric”
(Toray Industries, Inc., Japan) Keiichi Tonomori, Kenko Yamada, Hiroshi Tsuchikura and Atsushi Kuwabara
- 16:30 G4-13 **Keynote** “3 D woven structural composites and applications”
(Indian Institute of Technology, India) B. K. Behera

C (TFT East, 9th Floor, Room 9E)

G5 Textile Science and Engineering

S. Ishimaru and C. Sawatari

Program Chairs

October 1st*Chairperson: Sonoko Ishimaru*

- 13:40 G5-01 **Keynote** “The science of fashion”
(The Hong Kong Polytechnic University, China) Yi Li
- 14:10 G5-02 “Investigation of the tensile behaviour of Takashima cotton crepe yarn and fabrics under different relative humidity”
(Kyoto Institute of Technology, Japan) Htet Htet Htike, Tsuyoshi Sugimoto, Hiroko Yokura and Sachiko Sukigara

Chairperson: Yayoi Satsumoto

- 14:30 G5-03 “Shape factor of flared skirts compared with that of circular fabrics”
(Kanazawa University, Japan) Mitsuo Matsudaira, Hiroko Yokura and Tomoe Masuda

14:50 G5-04 "A study on auto-generation color image for fabric based on FFT"
(Jiangnan University, China) Hongxia Jiang, Jihong Liu and Hongfu Wang

Chairperson: Chie Sawatari

15:10 G5-05 **Keynote** "Evaluation and informatization of textiles for fashion clothing"
(Shinshu University, Japan) Masayuki Takatera

15:40 G5-06 "A framework for imbibing sustainability in fashion: Indian perspective"
(BPS Women University, India) Harinder Pal

Chairperson: Harindar Pal

16:00 G5-07 "Solving algorithm of vehicle routing problem for apparel logistics with time windows"
(Xi'an Polytechnic University, China) Wang Zan and Liang Jian Fang

16:20 G5-08 "The fashion design and the theory of fractal pattern art"
(Damietta University, Egypt) Nashwa Nabeel

16:40 G5-09 "Based on the consumption behavior of the clothing store display research"
(Xi'an Polytechnic University, China) Siyao Cheng

9 Special Sessions

(TFT West, HALL1000)

S1 Advanced Fiber Symposium

A. Oomatsuzawa, M. Fukui, Y. Maeda
H. Yamada, H. Yamada, and H. Hayashi

Program Chairs

Organized by Japan Chemical Fiber Association

C (TFT East, 9th Floor, Room 9E)

S2 Symposium on Dyeing and Finishing of Textiles

K. Hamada and S. Okubayashi

Program Chairs

Supported by the 120th Committee on Functionalization of Textiles and Polymers, Japan Society for the Promotion of Science (JSPS)

September 29th

Chairperson: Teruo Hori

14:40 S2-01 **Keynote** "Thermal behavior and flame retardancy of cotton fabric treated by phosphorus-silica hybrid films"
(Italian Association of Textile Chemists and Colorists, Italy) Alessandro Gigli

Chairperson: Norihiro Inagaki

15:10 S2-02 **Keynote** "High-speed low-cost plasma activation of textile materials"
(Masaryk University, Czech Republic) Mirko Cernak

Chairperson: Satoko Okubayashi

15:40 S2-03 "Preparation of cesium and strontium ions

absorbable non-woven fabric by using electron beam grafting"
(University of Fukui, Japan) Teruo Hori, Tatsuhiro Nishiguchi, Koji Miyazaki and Sumito Kiyooka

16:00 S2-04 "Preparation of polyester fabric having thermo-responsive wettability through electron beam graft polymerization with N-isopropyl acrylamide"
(University of Fukui, Japan) Kazumasa Hirogaki, Kazuki Shimada, Isao Tabata, Kenji Hisada and Teruo Hori

Chairperson: Akihiko Ouchi

16:20 S2-05 "Safer Hair Dyeing by Using Biobased Materials"
(Kyoto Institute of Technology, Japan) Hidekazu Yasunaga, Takanori Matsubara, Shota Morimoto, Takanori Hagino, Isao Wataoka and Hiroshi Urakawa

16:40 S2-06 "Catechinone hair dyestuff preparation by chemical oxidation technique - condition for highly-efficient production and reaction mechanism--"
(Kyoto Institute of Technology, Japan) Takanori Matsubara, Isao Wataoka, Hiroshi Urakawa and Hidekazu Yasunaga

Chairperson: Kazumasa Hirogaki

17:00 S2-07 "Facile bifunctional dyeing of synthetic fabrics under supercritical carbon dioxide medium. Part (I): Dyeing polyester fabrics with new antibacterial hydrazonopropanenitrile dyes"
(Damietta University, Egypt) Tarek Abou Elmaaty, Jaehyuk Ma, Fathy El-Taweel, Eman Abd El-Aziz and Satoko Okubayashi

September 30th

Chairperson: Kunihiro Hamada

11:10 S2-08 **Keynote** "Design and preparation of dye chemosensors and related properties"
(Chungnam National University, South Korea) Younga Son

Chairperson: Satoko Okubayashi

11:40 S2-09 "Novel surface-dyeing agent with a molecular sieve structure for simplified denim dyeing production"
(The Hong Kong Polytechnic University, China) Songmin Shang, Ka-lok Chiu, Marcus Chun Wah Yuen and Shouxiang Jiang

12:00 S2-10 "Photochemical treatment for the improvement of dyeability of polyester fabrics"
(National Institute of Advanced Industrial Science and Technology (AIST), Japan) Akihiko Ouchi

12:20 S2-11 "Novel Indoline Dyes for Dye-Sensitized Solar Cell"
(Gifu University) Masaki Matsui

D (TFT East, 9th Floor, Room 9A)

S3: Flow & Deformation Induced Polymer Crystallization

T. Kanaya, H. Murase, K. Nishida, and Y. Ohkoshi
Program Chairs

Supported by Institute for Chemical Research,
Kyoto University

September 29th

Chairperson: Toshiji Kanaya

14:40 S3-01 **Keynote** "Precise analysis for shish-kebab structure in uniaxial drawing"
(Yamagata University, Japan) Go Matsuba

15:10 S3-02 **Keynote** "New scenario of shish-kebab formation in entangled ultrahigh molecular weight polyethylene solutions"
(Toyobo Co.,Ltd., Japan) Hiroki Murase

15:40 S3-03 **Keynote** "Synchrotron X-ray study of extensional flow-induced crystallization in isotactic polypropylene"
(Stony Brook University, USA) Benjamin Hsiao

Chairperson: Hiroki Murase

16:10 S3-04 "Precursor in flow-induced polymer crystallization"
(Kyoto University, Japan) Toshiji Kanaya, Tomohiko Matsuura, Inga Polec, Tetsuaki Fujiwara, Rintaro Inoue, Koji Nishida, Hiroki Ogawa and Noboru Ohta

16:30 S3-05 **Keynote** "To Be Announced"
(Materials Science Center, DSM Ahead, Netherlands) Luigi Balzano

17:00 S3-06 **Keynote** "Shish kebab formation under deformation - Role of long chains, matrix chains and chain structure-"
(Sumitomo Chemical Co., Japan) Yoshinobu Nozue

September 30th

Chairperson: Sono Sasaki

11:10 S3-07 "Formation mechanism of kebab formed at above nominal melting temperature after applying shear flow"
(Kyoto University, Japan) Nobuaki Takahashi, Toshiji Kanaya, Tomohiko Matsuura, Tadahiko Maede, Momoko Murakami, Rintaro Inoue, Koji Nishida, Yasuhiro Hanamoto and Osamu Bandoh

11:30 S3-08 **Keynote** "Molecular simulations of shear-induced polymer crystal nucleation"
(Nanjing University, China) Wenbing Hu

12:00 S3-09 **Keynote** "Spin-enhanced polymer crystallization in a polymer blend during spin coating"
(National Synchrotron Radiation Research Center, Hsinchu Science Park, Taiwan) U-Ser Jeng

Bruker Luncheon Seminar (12:30~13:40)

Chairperson: Yutaka Ohkoshi

13:40 S3-10 **Keynote** "Influence of shearing on composition of copolyesters prepared by phase separation during

polymerization"
(Okayama University, Japan) Kunio Kimura

14:10 S3-11 "Crystallization behaviors of polymers in spin-coating film-forming processes investigated by grazing-incidence X-ray scattering using synchrotron radiation"
(Kyoto Institute of Technology, Japan) Sono Sasaki, Ryosuke Hata, Yuki Tsuji, Jiro Hoshiba, Shinichi Sakurai, Takaaki Hikima, Hiroyasu Masunaga, Hiroki Ogawa, Kohji Tashiro and Masaki Takata

Chairperson: Wenbing Hu

14:30 S3-12 "Insight into the origin of irreversible deformation for olefin block copolymers under uniaxial stretching"
(Fudan University, China) Qinglong Zhang and Jiachun Feng

14:50 S3-13 "Kinetics of crystallization and stress relaxation in strained natural rubber network"
(Kyoto University, Japan) Masatoshi Tosaka

15:10 S3-14 **Keynote** "Deformation induced crystallization of polyester materials: studies on the structural evolution mechanisms of PEN, PET and PET nanocomposites under uniaxial deformation"
(University of Minho, Portugal) Carla I. Martins

Chairperson: U-Ser Jeng

15:40 S3-15 **Keynote** "Structure development in the continuous fiber drawing process"
(Shinshu University, Japan) Yutaka Ohkoshi

16:10 S3-16 "Fiber structure development in laser-heated drawing of nylon 6 fiber"
(Shinshu University, Japan) KyoungHou Kim, Yutaka Ohkoshi and Akira Wakasugi

E (TFT East 9Fth Floor, Room 901)

S4: Smart Textiles / Nanofibers

M. Kotaki, M. Kimura, and I. S. Kim
Program Chairs

September 29th

Chairperson: Mutsumi Kimura

14:40 S4-01 **Keynote** "Teaching Cotton New Tricks: molecular strategies for making smart cotton"
(Cornell University, USA) Juan P. Hinestroza

15:10 S4-02 **Keynote** "Silk fibroin nanofibers for bio-medical application"
(Seoul National University, South Korea) Ki Hoon Lee

Chairperson: Hidetoshi Matsumoto

15:40 S4-03 "Production scale-up and commercial applications of nanofibers"
(Elmarco Ltd., Czech Republic) Cagri Tekmen

16:00 S4-04 "The development of the nano filaments "Nanofront[®]" and nanofiber products"
(Teijin Limited, Japan) Noritaka Ban

- 16:20 S4-05 “Preparation and characterization of thermo-plastic polymer nanofibers and membranes”
(Donghua University, China) Dandan Xu, Keying Zhu and Ru Xiao
- 16:40 S4-06 “High-throughput fabrications, functionalizations and applications of thermoplastic nano-fibers and nanofibrous membranes”
(University of California, Davis, USA) Gang Sun, Jing Zhu and Dong Wang
- 17:00 S4-07 “Bulky quaternary alkyl ammoniums with high degrees of dissociation enhance the dispersibility of charged nanocellulose in solvents”
(University of Tokyo, Japan) Michiko Shimizu, Tsuguyuki Saito, Hayaka Fukuzumi and Akira Isogai

September 30th

Chairperson: Midori Takasaki

- 11:10 S4-08 **Keynote** “Grand challenge towards industrialization of “QMONOS” synthetic spider silk”
(Spiber Inc., Japan) Junichi Sugahara
**Supported by the Strategic Research Committee for Nanofiber Technology, the Society of Fiber Science and Technology, Japan*
- 11:40 S4-09 “Stress induced structure change of electrospun poly (butylene terephthalate) fibers under uni-axial stretching”
(Kyushu University, Japan) Hirofumi Kabayama, Yuji Higaki and Atsushi Takahara
- 12:00 S4-10 “pH-sensitive nanofibres based on the electrospinning of polycaprolactone and polycaprolactone/chitosan blends”
(Ghent University, Belgium) Karen De Clerck and Iline Steyaert
- 12:20 S4-11 “Novel nanofiber membrane sensor with the coordinate function of destroy and detect the bacterium designed by the template printing”
(Wuhan Textile University, China) Mufang Li, Qinghua Zhao, Ying Lu and Dong Wang

Chairperson: Ick Soo Kim

- 13:40 S4-12 **Keynote** “Innovation and up-scaling of smart, green and customized fibers for functionalized textiles: success stories of IFTH”
(Institut Français Textile Habillement, France) Pascal Rumeau
- 14:10 S4-13 **Keynote** “Actuators and energy harvesters based on polymers”
(National Institute for Applied Sciences, Lyon, France) Daniel Guyomar
- 14:40 S4-14 “In-situ polymerization of conductive PANI/PET electrode for flexible and wearable energy storage device”
(Wuhan Textile University, China) Qiongzhen Liu, Ming Xia, Zhou Zhou, Yifei Tao, Mufang Li, Ke Liu and Dong Wang
- 15:00 S4-15 “A novel textile spherical solar cell array”
(Industrial Technology Center of Fukui Prefecture, Japan) Atuji Masuda, Tetsuhiko Murakami, Norio Sasaguchi, Takahiro Tsuji, Josuke Nakata, Hidetoshi Nakamura, Soichiro Ohtani, Ikuo Inagaki, Kenich

Taira, Norifumi Nagatomo, Ryuichi Yoshioka, Tomoaki Harii and Yoshihiro Iwasaki

Chairperson: Cagri Tekmen

- 15:20 S4-16 “Electrical function of dielectric PVC gel -electro-optical function-”
(Shinshu University, Japan) Hiromu Sato and Toshihiro Hirai
- 15:40 S4-17 “Percolation in transparent and conducting two-dimensional nanowire networks”
(Tokyo Institute of Technology, Japan) Keisuke Azuma, Koichi Sakajiri, Hidetoshi Matsumoto, Sungmin Kang, Junji Watanabe and Masatoshi Tokita
- 16:00 S4-18 “Analysis of sound absorption characteristics of silica nanofiber sheet”
(Tokyo Institute of Technology, Japan) Shuichi Akasaka, Takahisa Kato, Hidetoshi Matsumoto and Shigeo Asai
- 16:20 S4-19 “Microwave absorption behavior of poly(vinyl alcohol)/multiwall carbon nanotube composite thin film and nanofiber layers”
(Islamic Azad University, Iran) Aminoddin Haji, Golestan Salimbeygi, Ahmad Mousavi Shoushtari and Komeil Nasouri
- 16:40 S4-20 “Preparation of nanocomposite fibers based on cellulose and graphene nanoplatelets using ionic liquids”
(Islamic Azad University, Iran) Shaya Mahmoudian, Muhammad Imran and Moham

F (TFT East, 9th Floor, Room 902)
S5 Bio-Based and Biomedical Materials
*T. Iwata, H. Yamane, K. Ohkawa,
T. Yamamoka, M. Kunioka, and T. Kitaoka*
Program Chairs

September 29th

Chairperson: Takuya Kitaoka

- 14:40 S5-01 **Keynote** “New cellulosic architectures: from 3D to 2D material”
(Aalto University, Finland) Eero Kontturi
- 15:10 S5-02 “Surface reactivity in an aqueous system of bio-nanofibers prepared by the aqueous counter collision method”
(Kyushu University, Japan) Shingo Yokota and Tetsuo Kondo
- 15:30 S5-03 “Nanocellulose is a bio-based reinforcement for biocomposites”
(Hanyang University, Korea) Seong Hun Kim and Sang Ho Park
- 15:50 S5-04 “Structural stability of the isolated molecular chain sheets composing the crystal structures of cellulose allomorphs: a DFT study.”
(Miyazaki University, Japan) Takuya Uto and Toshifumi Yui

Chairperson: Eero Kontturi

- 16:10 S5-05 “A novel strategy for the synthesis of glycolipid-based building blocks used in carbohydrate materials”
(Tohoku University, Japan) Gefei Li, Masato Noguchi, Masaki Ishihara and Shin-ichiro Shoda
- 16:30 S5-06 “Superior reinforcement effect of cellulose nanofibrils in regenerated cellulose matrix”
(The University of Tokyo, Japan) Quanling Yang, Tsuguyuki Saito and Akira Isogai
- 16:50 S5-07 “Development of the preliminary treatment for cellulose fiber”
(Yamagata University, Japan) Ryoichiro Shimura, Akihiro Nishioka, Ichiro Kano, Tomonori Koda, Ken Miyata and Taichi Nishio

September 30th

Chairperson: Kousaku Ohkawa

- 11:10 S5-08 **Keynote** “Functional fibrous materials based on silkworm silk”
(Soochow University, China) Zhang Ke-Qin
- 11:40 S5-09 “NMR study of Ti binding peptides for the Ti implant surface modification”
(University of Fukui, Japan) Yu Suzuki and Tetsuo Asakura
- 12:00 S5-10 “Cellular immune responses via TLR-mediated signaling on glyco-decorated biointerfaces”
(Kyushu University, Japan) Fumi Uemura and Takuya Kitaoka
- 12:20 S5-11 “Oriented immobilization of enzyme on the electrode for efficient electron transfer and its application for biofuel cell”
(University of Fukui, Japan) Shin-Ichiro Suye, Toshiki Uchii, Ayako Koutou, Takenori Satomura, Haruhiko Sakuraba and Toshihisa Ohshima

Lunch (12:40~13:40)

Chairperson: Hideki Yamane

- 13:40 S5-12 **Keynote** “Stimuli-responsive biomaterials for local drug and gene delivery”
(University of Memphis, USA) Tomoko Fujiwara
- 14:10 S5-13 “Crystal structures and phase transition behaviors of Poly(Lactic Acid) and its stereocomplex”
(Toyota Technological Institute, Japan) Kohji Tashiro, Kaewkan Wasanasuk, Naoto Kouno and Hideto Tsuji
- 14:30 S5-14 “Fabrication of thermoplastic flexible films of chitin butyrate/poly(ϵ -caprolactone) blends and improvement of cytocompatibility by alkaline treatment”
(Gifu University, Japan) Hiroki Hashiwaki, Yoshikuni Teramoto and Yoshiyuki Nishio

Chairperson: Zhang Ke-Qin

- 14:50 S5-15 “Positioning Biopolymers in the Textile Process Chain”
(Institut für Textiltechnik der RWTH Aachen, Germany) Benjamin Glauß, Pavan Kumar Manvi, Gunnar Seide and Thomas Gries

- 15:10 S5-16 “High performance fibers from microbial polyesters and polysaccharide derivatives”
(The University of Tokyo, Japan) Tadahisa Iwata

- 15:30 S5-17 “Structural modifications of poly(butylene succinate) a biobased and biodegradable polymer for the preparation of melt-spun fibers”
(INSA-Lyon, France) Marie Vandesteene, Françoise Fenouillot, Alain Rousseau and Nadège Boucard

Chairperson: Tomoko Fujiwara

- 15:50 S5-18 “Crystallization behavior, mechanical properties and highly ordered structure of P(3HB)/ UHMW-P(3HB) blend fiber: effect of the addition of UHMW-P(3HB)”
(The University of Tokyo, Japan) Taizo Kabe, Takeharu Tsuge, Takaaki Hikima, Masaki Takata and Tadahisa Iwata

- 16:10 S5-19 “EcoLASTANE: A novel technology for producing bio-based synthetic textile fibres from biomass-derived furanic monomers”
(Techtera, France) Bruno Mougin

- 16:30 S5-20 “Effect of processing conditions on crystallization behavior of PHBH in high-speed melt spinning process”
(Tokyo Institute of Technology, Japan) Qing Qin, Wataru Takarada and Takeshi Kikutani

October 1st

Chairperson: Masao Kunioka

- 11:10 S5-21 “Synthesis and characterization of fully biomass-based liquid crystalline copolyesters”
(Tokyo University of Agriculture and Technology, Japan) Hong Sun and Kenji Ogino
- 11:30 S5-22 “Molecular and thermal properties of heat-resistant polyesters prepared from plant-derived aromatic hydroxy acids”
(The University of Tokyo, Japan) Daisuke Ishii and Tadahisa Iwata
- 11:50 S5-23 “Local delivery of sustained aspirin via novel hybrid stent/biodegradable nanofibers”
(Chang Gung University, China) Cheng-Hung Lee
- 12:10 S5-24 “Sol-gel transition of the mixed aqueous dispersions consisting of polylactide-poly(ethylene glycol) diblock and triblock copolymers: Tuning of gel properties by chain-extension and improved applicability as cell-injectable scaffolds”
(Kyoto Institute of Technology, Japan) Yu-I Hsu, Kazunari Masutani, Takashi Aoki, Tetsuji Yamaoka and Yoshiharu Kimura

Lunch (12:30~13:40)

Chairperson: Tadahisa Iwata

- 13:40 S5-25 “Study of amorphosization mechanism for rice starch as bio-based material by original milling system”
(Yamagata University, Japan) Seigo Murakami, Ken Miyata, Tomonori Kouda, Taichi Nishio and Akihiro Nishioka

14:00 S5-26 “Controlled chain-configurations of polylactides based on different terminal-coupling methods”
(Kyoto Institute of Technology, Japan) Hyun Jung-yub and Kimura Yoshiharu

14:20 S5-27 “Biomimetic alignment and responses of myoblast cells on glyco-clustered biointerfaces with micropatterned geometries”
(Kyushu University, Japan) Pornthida Poosala and Takuya Kitaoka

Chairperson: Kazuya Sawada

14:40 S5-28 **Keynote** “An offensive strategy for establishing the antithrombogenic property of small-diameter blood vessels”
(National Cerebral and Cardiovascular Center Research Institute (NCVC), Japan) Tetsuji Yamaoka

15:10 S5-29 “Development of porous nanofibrous poly-L-lactide scaffolds in supercritical CO₂”
(Huaqiao University, China) Ai-Zheng Chen, Ai-Hua Deng and Shi-Bin Wang

15:30 S5-30 “Capacity of polyurethane elastomers fibers as a drug delivery system”
(University of Fukui, Japan) Onon Batnyam, Satoshi Fujita, Chih-Wei Chou and Shin-Ichiro Suye

15:50 S5-31 “Protein-protein interaction in human hemoglobin solution and its implication for functionality of artificial red cells (hemoglobin vesicles)”
(Shinshu University, Japan) Takaaki Sato, Otto Glatter and Hiromi Sakai

Chairperson: Tetsuji Yamaoka

16:10 S5-32 “AFM observation of polyurethane nanofibers prepared by electrospinning”
(University of Fukui, Japan) Hiroaki Sakamoto, Hitoshi Asakawa, Takeshi Fukuma, Satoshi Fujita and Shin-ichiro Suye

16:30 S5-33 “Electrospun gelatin nanofibrous scaffolds for corneal keratocyte cultivation”
(Chang Gung University, Taiwan) Jui-Yang Lai

16:50 S5-34 “Cell culture on the wool-derived keratin scaffold”
(Osaka Seikei College, Japan) Kazuya Sawada, Hiroki Goto and Toshiya Fujisato

G (TFT East, 9th Floor, Room 9F)
S6 Composites and Industrial Textiles

M. Shioya, A. Nakai, and S. Asai
Program Chairs

September 30th

Chairperson: Masatoshi Shioya

16:10 S6-01 “The control of pore sizes in porous carbon fiber and its microwave absorption as an absorbent in epoxy composite”
(Donghua University, China) Guang Li, Shenglin Yang, Junhong Jin and Jianming Jiang

16:30 S6-02 **Keynote** “Gas barrier properties improvement by aligning Fe₃O₄ / graphite nanoplatelets through a low magnetic field”
(Harbin Institute of Technology, China) Weicheng Jiao

G (TFT East, 9th Floor, Room 9F)
S6 Composites and Industrial Textiles
M. Shioya, A. Nakai, and S. Asai
Program Chairs

October 1st

Chairperson: Masatoshi Shioya

11:10 S6-03 “Fabrication of CFRP pipe with noncrimp fiber structure for higher productivity”
(Gifu University, Japan) Tadashi Uozumi, Motohiro Tanigawa, Tatsuhiko Miura, Akio Ohtani and Asami Nakai

Chairperson: Akio Ohtani

11:30 S6-04 “Effects of press molding conditions on mechanical properties of carbon fiber fabric Reinforced polycarbonate sheets”
(Kanazawa Institute of Technology, Japan) Osuke Ishida, Mitsugu Kimizu, Wataru Okumura and Kiyoshi Uzawa

11:50 S6-05 “Effects of content of maleic acid on mechanical properties of carbon fiber fabric reinforced polypropylene sheets”
(Industrial Research Institute of Ishikawa, Japan) Wataru Okumura, Hiroyuki Hasebe, Mitsugu Kimizu, Ohsuke Ishida and Hiroshi Saito

12:10 S6-06 “Mechanical properties of steel fibres knitted fabric”
(KU Leuven, Belgium) Marcin Barburski and Stepan V. Lomov

Lunch (12:30~13:40)

Chairperson: Asami Nakai

13:40 S6-07 “Facile prepared PVA-co-PE nanofiber net membrane for high efficiency air filtration”
(Wuhan Textile University, China) Ke Liu, Zuan Xiao, Pengfei Ma, Mufang Li, Qiongzhen Liu and Dong Wang

14:00 S6-08 “Effects of needling parameters and weight per unit area on the puncture resistance of geotextile nonwoven fabrics”
(Yazd University, Iran) Hossein Rahimi, Saeid Fattahi and Hasan Mashroteh

14:20 S6-09 **Keynote** “Effect of various fiber densities on mechanical properties of biaxial warp knitted textile composites” (Ondokuz Mayıs University, Turkey) Özgür Demircan

Chairperson: Shigeo Asai

14:50 S6-10 **Keynote** “Filler network formation induced by electric field and its physical properties of nanodiamond composites”
(Tokyo Institute of Technology, Japan) Shuichi Akasaka

15:20 S6-11 “Cellulose nanofiber reinforced resin composite materials by using novel polymer dispersants” (Kyoto University, Japan) Keita Sakakibara and Yoshinobu Tsujii

15:40 S6-12 “Preparation of biodegradable composite from water hyacinth reinforced poly(lactic acid)” (Pathumwan Institute of Technology, Thailand) Jessada Wong On, Prayoon Surin and Supaphorn Thumsorn

Chairperson: Keita Sakakibara

16:00 S6-13 “Utilization of textile waste in green composites” (Technical University of Liberec, Czech Republic) Rajesh Mishra, Bijoy kumar Behera and Jiri Militky

16:20 S6-14 “High performance polyetherimide (PEI) fiber & composite materials” (Kurarau Co.,Ltd., Japan) Munenori Kumagai, Akihiro Uehata, Ryokei Endo and Yosuke Washitake

16:40 S6-15 “Mechanical properties of multi-layer 3D woven composites” (Gifu University, Japan) Akio Ohtani, Hitomi Kitamura, Masayuki Kitamura and Asami Nakai

G (TFT East, 9th Floor, Room 9F)

S7 International Conference on Advanced
Fiber/Textile Materials

K. Hamada

Program Chair

*Supported by Shinshu University Advanced Leading
Graduate Program*

September 29th

Chairperson: Shigeru Inui

14:40 S7-01 “Quantitative evaluation method of fabric surface fittability” (Shinshu University, Japan) Tomoya Suzuki, KyoungOk Kim and Masayuki Takatera

15:00 S7-02 “Quantitative analysis of textile products using infrared spectroscopy and moving window partial least squares regression analysis” (Shinshu University, Japan) Shogo Tomii, Hiroaki Ishizawa, Kyoko Katayama, Shouhei Koyama and Mika Morishima

15:20 S7-03 “Evaluation of tactile sensation by skin of the knitted fabric with polypropylene blended yarn” (Shinshu University, Japan) Hideaki Mizuhashi, Hiroaki Yoshida, Masayoshi Kamijo and Masahiko Kubo

15:40 S7-04 “Estimation of fabric bending rigidities in any directions based on yarn properties” (Shinshu University, Japan) Julie Peiffer, KyoungOk Kim and Masayuki Takatera

Break (16:00~16:20)

Chairperson: Hiroaki Ishizawa

16:20 S7-05 “Relationship between physical properties and hand of denim” (Shinshu University, Japan) Atsushi Kawamura

16:40 S7-06 “Measurement of poisson’s ratio of yarn” (Shinshu University, Japan) Tamotsu Arichi, KyoungOk Kim and Masayuki Takatera

17:00 S7-07 “Computer aided pattern making of jacket taken into account ease allowance and silhouette for individual” (Shinshu University, Japan) Noriaki Innami, KyoungOk Kim and Masayuki Takatera

September 30th

Chairperson: Hiroyuki Kanai

11:10 S7-08 “The influence of shape memory alloy wires and elastomeric yarns in tubular structures” (Universidade Federal do Rio Grande do Norte, Brazil) Jose Ivan Medeiros, Raul Figueiro, Juliana Cruz, Jose Heriberto Nascimento, Fernando Oliveira and Nilson Casimiro Pereira

11:30 S7-09 “Study on improvement of compression performance of UHMWPE fiber reinforced plastic” (Shinshu University, Japan) Fangtao Ruan, Limin Bao and Yukinari Okuyama

11:50 S7-10 “Basis study on systolic blood pressure measurement by using FBG sensors” (Shinshu University, Japan) Tsubasa Takagi, Hiroaki Ishizawa, Masaaki Niimura, Shouhei Koyama, Yuki Miyauchi and Yui Katsuragawa

12:10 S7-11 “Smart gel materials applicable to the intraocular lenses” (Yamagata University, Japan) Jin Gong

Lunch (12:30~13:40)

Chairperson: Masayuki Takatera

13:40 S7-12 **Keynote** “Engineering the transport properties of fibrous materials” (Cornell University, USA) Jintu Fan

Chairperson: Hideaki Morikawa

14:10 S7-13 **Keynote** “Structural functionalization of woven fabrics” (University of Ljubljana, Slovenia) Krste Dimitrovski

Chairperson: Koji Abe

14:40 S7-14 **Keynote** “Bio-directed synthesis and stabilization of silver nanoparticles using pomegranate towards functionalization of wool” (University of Twente, Netherlands) Victoria Dutschk

Chairperson: Mikihiko Miura

15:10 S7-15 **Keynote** “Characterization of side emitting polymeric optical fibres” (Technical University of Liberec, Czech Republic) Jiri Militky

Chairperson: Toshihiro Hirai

15:40 S7-16 **Keynote** “Functionalized fibers used as sensors and actuators” (ENSAIT, France) Vladan Koncar

H (TFT East, 9th Floor, Room 910)

S8 Functional Textiles

Y. Kawahara and A. Takeno

Program Chairs

Supported by Kanto Branch, The Textile Machinery Society of Japan

September 29th

Chairperson: Yasushi Tamada

14:40 S8-01 “New developments of the Dyneema[®] ultra high molecular weight polyethylene fiber”
(DSM Dyneema, Netherland) Harm van der Werff

15:00 S8-02 “Influence of ambient conditions on deodorant property of activated carbon fiber”
(Otsuna Women’s University, Japan) Chiyomi Mizutani

Chairperson: Yutaka Kawahara

15:20 S8-03 **Keynote** “Fibers for Nonwoven Fabrics”
(Philipps University of Marburg, Germany) Andreas K. Schaper

15:50 S8-04 “Effect of weak acidic polyester on skin condition”
(Teijin Frontier Co., LTD., Japan) Naoki Horikawa

Chairperson: Chiyomi Mizutani

16:10 S8-05 “The outermost surface analysis of silk fibroin films and electrospun fibers treated under different ethanol-treatment conditions used in biomaterial preparation”
(Toyama Industrial Technology Center, Japan) Dohiko Terada, Shinya Hattori, Hisatoshi Kobayashi and Yasushi Tamada

16:30 S8-06 “Modification of polylactic acid fibres surface with ferulic acid”
(Lodz University of Technology, Poland) Dorota Wojciechowska

16:50 S8-07 “Plasma treatment: A versatile means for surface modification of polymers and textiles”
(Islamic Azad University, Birjand Branch, Iran) Aminoddin Haji

H (TFT East, 9th Floor, Room 910)

S9: Neo Fiber Technology

T. Aoki

Program Chair

Supported by Kyoto Institute of Technology

September 30th

Chairperson: Yoshiharu Kimura

11:10 S9-01 **Keynote** “Synthesis and characterization of copolyester containing isosorbide”
(Hanyang University, Korea) Seung Soon Im, Won Jae Yoon, Sung Yeon Hwang and Jun Mo Koo

11:40 S9-02 **Keynote** “Natural fibres for structural composite applications-concepts and opportunities”
(University of Boras, Sweden) Mikael Skrifvars

Chairperson: Isao Wataoka

12:10 S9-03 “Flow behavior for composites of hydroxypropyl cellulose and nano-fibers”
(Kyoto Institute of Technology, Japan) Katsufumi Tanaka and Haruki Kobayashi

Lunch (12:30~13:40)

Chairperson: Hiroshi Urakawa

13:40 S9-04 **Keynote** “Silk graft copolymerization regulated by tailor-made radicals released from chain transfer agent”
(Zhejiang Sci-Tech University, China) Lei Yang, Wen-wen Liu, Yi-fen Shen and Jian Han

14:10 S9-05 **Keynote** “Neo-PLA based composite technologies for engineering applications”
(Indian Institute of Technology Guwahati, India) Vimal Katiyar

Chairperson: Katsufumi Tanaka

14:40 S9-06 “Fiber formation of the terminal modified poly (lactide)s via Diels-Alder reaction”
(Kyoto Institute of Technology, Japan) Kazunari Masutani and Yoshiharu Kimura

15:00 S9-07 “Die drawing of poly(lactic acid) fibers”
(Kyoto Institute of Technology, Japan) Hideki Yamane, Shin Sasaki and Jae-Chang Lee

Chairperson: Takashi Aoki

15:20 S9-08 **Keynote** “Electrospinning principles and its possibilities in various applications”
(University of Malaya, Malaysia) Amalina M.A., Sepehr Talebian, Umma Habiba, Ang Bee Chin, Hossein M Khanlou

15:50 S9-09 **Keynote** “Development of bio-ethanol manufacturing technique with energy saving from cellulosic fiber waste” (Hyogo Prefectural Institute of Technology, Japan) Shigeyuki Nakano and Tadashi Uragami

Chairperson: Hideki Yamane

16:20 S9-10 “Study on the structure of celluloses dissolved in ionic liquids”
(University of Natural Resources and Life Sciences, Vienna, Austria) Mitsuharu Koide, Ute Henniges, Antje Potthast, Thomas Rosenau, Shiori Shono, Isao Wataoka and Hiroshi Urakawa

16:40 S9-11 “Characteristics of DNA-based polyion complexes”

(Kyoto Institute of Technology, Japan) Takashi Aoki and Daiki Isobe