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ICIT2007

The Korean Fiber Society

Room 501 KOFST Building
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Program

INTERNATIONAL CONFERENCE ON INTELLIGENT TEXTILES 2007

ICIT2007

November 11 - 13, 2007

BK Conference Hall,
Seoul National University, Seoul, Korea

Organized by
The Intelligent Textile System Research Center
(http://itextile.snu.ac.kr)
The Korean Fiber Society (www.fiber.or.kr)
The Korean Society for Composite Materials (www.kscm.re.kr)
Department of Materials Science and Engineering, Seoul National University

▲ Tae Jin Kang, Professor

It is my great pleasure to welcome you to the International Conference on Intelligent Textiles (ICIT) 2007. This conference is organized by the Intelligent Textile System Research Center (ITRC), the Korean Fiber Society and the Korean Society for Composite Materials to highlight latest research achievements on intelligent polymers, fibers and textiles.

We are all aware that the future of the textile industry is focused on technology. The fusion among information and communication technology, nanotechnology and biotechnology is the leading trend in textile development. Especially, the intelligent textile system is a fascinating but challenging technical area which requires cutting edge sensing, processing and actuating technology to realize extreme functionality. We hope this conference will significantly enrich our understanding of this emerging area and its commercialization aspects.

The main purpose of the conference is to promote a dialogue between scientists, industry, and international organizations that are engaged in the same field and initiate international cooperation. We present you with keynote lectures delivered by eminent scholars from USA and Japan. A scientific program of cutting-edge research in intelligent textiles and smart textiles, biomimetic textiles in the form of oral presentations and posters is prepared. The essence of the conference is the single session where research achievements in the field of intelligent textiles and smart textiles can be shared in depth among the scholars. It is hoped that by gathering together a geographically and academically diverse group of researchers, all of whom are interested in this specific topic, the process of knowledge transfer from country to country can be facilitated and enhanced. Another hope is that the papers contained in the proceedings and the discussions that will take place around them, both at and after the conference, will play a substantial part in moving forward our knowledge about intelligent textiles.

On behalf of all members of the Intelligent Textile System Research Center, the Korean Fiber Society and the Korean Society for Composite Materials, I would like to take this opportunity to express my sincere gratitude to all members of the organizing committee for their dedication and care in preparing this conference. I would also like to express my deep appreciation to the authors for contributing their papers and to the sponsors for their support.

Tae Jin Kang
Professor, Seoul National University
President of the Korean Fiber Society
Chairman of the Organizing Committee, ICIT2007

Organizing Committee

Chair : Prof. Tae Jin Kang (Seoul National University, Korea)

Young Hwan Park (Seoul National University, Korea)
Chung Hee Park (Seoul National University, Korea)
Woong Ryeol Yu (Seoul National University, Korea)
Kyung Seop Han (Postech, Korea)
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Secretary General : Prof. Kwansoo Chung (Seoul National University, Korea)

Ji Ho Youk (Inha University, Korea)
Hyoung-Joon Jin (Inha University, Korea)

Information at info@icit2007.org

Conference Scope

Stimulus-responsive polymers and fibers
Electronic fibers and textiles for intelligent clothes
Biomimetic polymers and fibers
Functionalized textiles with bio- and nanotechnology
Fiber sensors and actuators for textile application
Mechanics and processings for intelligent textiles
Smart composite materials

Date	Program	Place
Sunday, November 11	Registration Welcome Reception	BK Conference Hall (39 dong, SNU)
Monday, November 12	Scientific Conference	BK Conference Hall (39 dong, SNU)
	Conference Banquet	Engineer House
Tuesday, November 13	Scientific Conference	BK Conference Hall (39 dong, SNU)

Sunday, November 11, 2007

Time	Conference Program
16:00 ~	Registration
18:00 ~ 20:30	Welcome Reception

Monday, November 12, 2007

Time	Conference Program	Chairperson
08:00 ~	Registration	
09:30 ~ 09:40	Opening Ceremony	Prof. Y. H. Park
09:40 ~ 10:20	Invited Lecture by Prof. T.-W. Chou	
10:20 ~ 10:45	Oral Presentation by Prof. T. J. Kang	Prof. K. Chung
10:45 ~ 11:10	Oral Presentation by Prof. J. W. Cho	
11:10 ~ 11:35	Oral Presentation by Prof. B. C. Chun	
11:35 ~ 13:00	Lunch	
13:00 ~ 13:40	Invited Lecture by Prof. Y. Dzenis	Prof. Y. S. Seo
13:40 ~ 14:05	Oral Presentation by Dr. Y. Yamashita	
14:05 ~ 14:30	Oral Presentation by Prof. H. J. Kim	
14:30 ~ 14:55	Oral Presentation by Prof. C. H. Park	
14:55 ~ 15:15	Coffee Break	
15:15 ~ 15:55	Invited Lecture by Prof. A. Tonelli	Prof. J. S. Park
15:55 ~ 16:20	Oral Presentation by Prof. H. Yamane	
16:20 ~ 16:45	Oral Presentation by Dr. M. Mirjalili	
16:45 ~ 17:10	Oral Presentation by Prof. H. S. Whang	
18:00 ~	Banquet	Prof. J. S. Park

Tuesday, November 13, 2007

Time	Conference Program	Chairperson
08:30 ~	Registration	
09:30 ~ 10:10	Invited Lecture by Prof. J. Cao	Prof. B. C. Chun
10:10 ~ 10:35	Oral Presentation by Prof. A. Netravali	Prof. B. C. Chun
10:35 ~ 11:00	Oral Presentation by Prof. K. Chung	Prof. B. C. Chun
11:00 ~ 11:25	Oral Presentation by Prof. Y. S. Seo	Prof. B. C. Chun
11:25 ~ 12:30	Lunch	
12:30 ~ 14:00	Poster Presentation	Prof. J. H. Youk
14:00 ~ 14:40	Invited Lecture by Prof. J. Hinestroza	Prof. J. W. Cho
14:40 ~ 15:05	Oral Presentation by Prof. K. J. Kim	Prof. J. W. Cho
15:05 ~ 15:30	Oral Presentation by Dr. G. S. Chung	Prof. J. W. Cho
15:30 ~ 15:55	Oral Presentation by Dr. J. Cho	Prof. J. W. Cho
15:55 ~ 16:20	Coffee Break	
16:20 ~ 16:45	Oral Presentation by Prof. J. S. Park	Prof. K. J. Kim
16:45 ~ 17:10	Oral Presentation by Dr. A. Prabu	Prof. K. J. Kim
17:10 ~ 17:35	Oral Presentation by Dr. R. N. Jana	Prof. K. J. Kim

Invited Lecture

Chairperson: Young Hwan Park *(Seoul National University, Korea)*

09:40 ~ 10:20	Multi-scale hybrid nanotube/fiber composites: processing, characterization and modeling
	Tsu-Wei Chou, Erik T. Thostenson, and Chunyu Li, *Center for Composite Materials and Department of Mechanical Engineering, University of Delaware, Newark, USA*

Chairperson: Kwansoo Chung *(Seoul National University, Korea)*

10:20 ~ 10:45	Protective energy absorption mechanism in intelligent textiles
	Tae Jin Kang, *Intelligent Textile System Research Center and School of Materials Science and Engineering, Seoul National University, Seoul, Korea*
10:45 ~ 11:10	Intelligent polymer wire of shape memory polyurethane for orthodontic application
	Jae Whan Cho and Yong Chae Jung, *Department of Textile Engineering, Konkuk University, Seoul, Korea*
11:10 ~ 11:35	Cross-linking of polyurethane by dextrin and the impact on shape memory effect
	Byoung Chul Chun, Hoon Jung Choi, and Yong-Chan Chung, *Department of Polymer Engineering, The University of Suwon, Kyonggido, Korea, Department of Polymer Engineering, The University of Suwon, Kyonggido, Korea*

Invited Lecture

Chairperson: Yongsok Seo *(Seoul National University, Korea)*

13:00 ~ 13:40	Advanced continuous nanofibers, assemblies, and products
	Yuris Dzenis, *Engineering Mechanics, University of Nebraska-Lincoln, NE, USA*

Chairperson: Yongsok Seo *(Seoul National University, Korea)*

13:40 ~ 14:05	Nanofiber manufacturing from electro-spinning technology
	Yoshihiro Yamashita, Hajime Miyake, Akio Higashiyama, *The University of Shiga Prefecture, 2500 Hassaka, Hikone, 522-8533 Japan, North Eastern Industrial Research Center of Shiga Prefecture, Nagahama, 526-0024 Japan*
14:05 ~ 14:30	Development of 3-D nanofibrous fibroin scaffold with high porosity by electrospinning: An implication for bone regeneration
	Hyun Jeong Kim, Chang Seok Ki, Sook Young Park, Hong-Moon Jung, Kyung Mi Woo, and Young Hwan Park, *Department of Dental Anesthesiology, School of Dentistry, Seoul National University, Seoul.*
14:30 ~ 14:55	Development of polyurethane vascular prostheses using solvent electrospinning methods
	Chung Hee Park, Yun Kyung Kang, Kyung Won Minn, Hak Chang, and Chan Young Park, *Department of Clothing, Seoul National University, Seoul, Korea*

Invited Lecture

Chairperson: Chung Hee Park *(Seoul National University, Korea)*

15:15 ~ 15:55	Nanostructuring and functionalizing polymers and textiles with cyclodextrins
	Alan Tonelli, *Fiber & Polymer Science Program, North Carolina State University, North Carolina, USA*

Chairperson: Jongshin Park *(Seoul National University, Korea)*

15:55 ~ 16:20	Preparation and properties of poly(L-lactic acid)/poly(D-lactic acid) blend thermal Resistant Fibers
	Hideki Yamane, Daisuke Masaki, Yoko Fukui[1], Kiyotsuna Toyohara, Midori Ikegame, and Bunso Nagasawa, *[1]Kyoto Institute of Technology, Kyoto 606-8585 Japan, [1]Teijin Ltd., Yamaguchi 740-8511 Japan*
16:20 ~ 16:45	Investigation of antibacterial activity on cotton fabrics with cold plasma in the presence of a magnetic field
	Mohammad Mirjalili, Sheila Shahidi, Mahmood bGhoranneviss, Bahareh Moazzenchi, and Abosaeed Rashidi, *Textile Department, Islamic Azad University, Yazd Branch, Yazd, Iran*
16:45 ~ 17:10	Cyclodextrin inclusion complexes for delivery of controlled release in polymeric substances
	H. S. Whang, *Fiber & Polymer Science Program, College of Textiles, North Carolina State University, Raleigh, NC, USA*

Invited Lecture

Chairperson: Byoung Chul Chun *(The University of Suwon, Korea)*

09:30 ~ 10:10	Characterization of woven composites forming from macro to micro
	Jian Cao and Wonoh Lee, *Department of Mechanical Engineering, Northwestern University, Evanston, IL, USA.*

Chairperson: Byoung Chul Chun *(The University of Suwon, Korea)*

10:10 ~ 10:35	Green hybrid composites using modified soy protein Resin with Kenaf Fibers and Fibrillated Bamboo
	Anil N. Netravali and Yuzo Yamamoto, *Department of Fiber Science and Apparel Design Cornell University, Ithaca, NY, USA, Bosch Corporation, Abashiri-gun, Hokkaido 099-2371, Japan*
10:35 ~ 11:00	Mechanical analysis for laminated woven composites considering asymmetric/anisotropic, rate dependent and nonlinear Behavior
	Hansun Ryou, *Kwansoo Chung,* and Woong-Ryeol Yu, *Intelligent Textile System Research Center and School of Materials Science and Engineering, Seoul National University, Seoul, Korea*
11:00 ~ 11:25	In-situ compatibilizer reinforced interface
	Yongsok Seo, *Intelligent Textile System Research Center and School of Materials Science and Engineering, Seoul National University, Seoul, Korea*

Invited Lecture

Chairperson: Chung Hee Park *(Seoul National University, Seoul)*

14:00 ~ 14:40	Probing charge degradation in electret Fibers via electrostatic Force microscopy
	Juan P. Hinestroza[1]*, Warren Jasper, and Jooyoun Kim, Department of Fiber Science and Apparel Design, Cornell University, Ithaca, NY USA, [2]Department of Textile Engineering, NC State University, Raleigh, NC USA

Chairperson: Chung Hee Park (*Seoul National University, Korea*)

14:40 ~ 15:05 Novel tactile sensor for smart apparels using electro-spun PVDF nanofiber web

Kap Jin Kim, Sun Yoon, and S. Ramasundaram, *Department of Advanced Polymer & Fiber Materials, College of Environment and Applied Chemistry, Kyung Hee University, Gyeonggi-do, Korea*

15:05 ~ 15:30 Digital garment with capacity for high-speed data transmission

Gi Soo Chung*, Ji Yoon Park, and Hanna Yoon, *Smart Textile Team, Korea Institute of Industrial Technology, Ansan, Korea*

15:30 ~ 15:55 Comparing Signals of Textile-based ECG Electrodes with Signal of AgCl Electrode

Moonsoo Sung[1], Yoonjung Yang[1], Jayoung Cho[1], Keesam Jeong[2], and Gilsoo Cho[1], [1]*Department of Clothing and Textiles, Yonsei University, Seoul 120-749, Korea*, [2]*Department of Medical Information System, Yongin Songdam College, Yongin 449-710, Korea*

Chairperson: Kap Jin Kim (*Kyung Hee University, Korea*)

16:20 ~ 16:45 Preparation of water-absorbing polyurethane foams for wound dressing using sodium alginate, and their toxicity for fibroblast cells

Jongshin Park, Oh-Jin Kwon, Seung-Taek Oh, Na-Ri Lee, Sang-Do Lee, and Hyun-Ju Hwang, *Department of Biosystems and Biomaterials Science and Engineering, Seoul National University, Seoul, Korea*

16:45 ~ 17:10 Ferroelectric behavior of P(VDF/TrFE)(72/28) copolymer nanoscale films for non-volatile memory device applications

A. Anand Prabu, Chang Woo Choi, and Kap Jin Kim, *Department of Advanced Polymer & Fiber Materials, College of Environment and Applied Chemistry, Kyung Hee University, Gyeonggi-do, Korea*

17:10 ~ 17:35 Thermal stability of poly(ε-caprolactone)-g-multi-walled carbon nanotubes/polyurethane Composites

R. N. Jana[1], Jae Whan Cho[2],*, [1]*Artificial Muscle Research Center, Konkuk University, Seoul, 143-701, Korea*, [2]*Department of Textile Engineering, Konkuk University, Seoul, 143-701, Korea*

Applications of carbon nanotubes in textile materials via melt spinning and electrospinning processes

Sung-Won Byun, Yeon-Sang Kim, and Ki-Young Kim*, *Technical Textile Department, Korea Institute of Industrial Technology, Ansan-si, Kyoungi-do, Korea*

Biocompatibility improvement of ePTFE membrane

Min Sun Kim*, Ho Seung Cheon, and Sung Weon Byun, *Textile Materials Division, Korea Institute of Industrial Technology, Chonan, Chungnam, Korea*

Changes of physical properties according to fabric densities in electronic industry applicable mono-filament yarn fabrics

Choon Gil Lee*, *Department of Textile and Fashion Technology, Kyungil University, Kyungsan, Korea*

Characterization of ceria or silica coated silica nanoparticles and PET/silica nanocomposites

Ji Sun Choi[1,2], Jeong-Hwan Jeong[1], Dong-Jin Lee[1],*, Hyung Mi Lim[1], Seung-Ho Lee[1], Seong-Geun Oh[2], Jae-Sung Han[3], and Dae-Hyun Cho[3], [1]*Composite Materials Team, Korea Institute of Ceramic Eng. & Tech., Seoul, Korea*, [2]*Department of Chemical Engineering, Hanyang University, Seoul, Korea*, [3]*R&D Team, Korea Textile Development Institute, Daegu, Korea*

Chitosan properties of photocrosslinkable chitosan/tencel composite nonwoven fabrics

C. W. Lou[1],*, C. T. Wu[2], Y. C. Lee[2], C. W. Lin[2], C. H. Lei[2], and J. H. Lin[2], [1]*Center for General Education/Institute of Biomedical Engineering and Material Science, Central Taiwan University of Science and Technology, Taichung, Taiwan (R.O.C.)*, [2]*Laboratory of Fiber Application and Manufacturing, Graduated Institute of Textile Engineering, Feng Chia University, Taichung, Taiwan(R.O.C.)*

Coating process analysis in intelligent silicone knife coating for ultraviolet blocking and proofing fire fabrics

Choon Gil Lee*, *Department of Textile and Fashion Technology, Kyungil University, Kyungsan, Korea*

Design of smart knitting apparel and products with pressure concerns

Li Li[1], Au Wai-man[1],*, Wong Kwok Shing[2], and Li Yi[1], [1]*Institute of Textiles and Clothing, the Hong Kong Polytechnic University, Hong Kong, China*, [2]*Faculty of Health and Social Sciences, the Hong Kong Polytechnic University, Hong Kong, China*

Development, microstructure and mechanical properties of Al-alloy reinforced with nano-ZrO_2 SMMCs

Joel. Hemanth, *Department of Mechanical Engineering, Siddaganga Institute of Technology (S.I.T.), TUMKUR, Karnataka, INDIA*

Effect of biological treatment of fibers on polyurethane biocomposites reinforced with hemp and jute fibers

Nari Lee, Oh-Jin Kwon, Seung-Taek Oh, Sang-Do Lee, Hyun-Ju Hwang, and Jong Shin Park*, *Department of Biosystems & Biomaterials Science and Engineering, Seoul National University, Seoul, Korea*

Effects of Lipid removing by lipase on physical properties of cotton fabrics

Mohammad Mirjalili*[1], Ramin Khajavi[2], Ali Reza Dashti[1], [1]*Islamic Azad University, Yazd Branch, Faculty of Textile Engineering, Yazd, Iran*, [2]*Postgraduate Faculty, Tehran South Branch, Islamic Azad University, Tehran, Iran*

Electrospinning of poly(vinyl alcohol) (PVA)/gelatin nanofiber membrane and the evaluation of biocompatibility

Tina Cu Huang[1,*], S. H. Huang[1], C. H. Lee[2], C. W. Lou[2], and J. H. Lin[1], [1]*Laboratory of Fiber Application and Manufacturing, Graduated Institute of Textile Engineering, Feng Chia University, Taiwan, R.O.C.,* [2]*Center for General Education/ Institute of Biomedical Engineering and Material Science, Central Taiwan University of Science and Technology, Taiwan, R.O.C.*

Fabrication and characterization of PLGA nanofiber/microfiber scaffolds by conjugate electrospinning

Sung Jin Kim[1], Byung-Moo Min[2], Seong Jin Lee[3], and Won Ho Park[1,*], [1]*Department of Advanced Organic Materials and Textile System engineering, Chungnam National University, Daejeon, South Korea,* [2]*Department of Oral Biochemistry, College of Dentistry, Seoul University, Seoul, South Korea,* [3]*College of Pharmacy, Ehwa Woman University, Seoul, South Korea*

Fabrication and characterization of the melt blown web of shape-memory thermoplastic polyurethane fibers

Song-Jun Doh[1*], Ki-Young Kim[1], and Dae-Young Lim[2], [1]*Technical Textile Team, Korea Institute of Industrial Technology, Ansan, Korea,* [2]*Fusion Textile Team, Korea Institute of Industrial Technology, Ansan, Korea*

Ferroelectric crystalline phase of poly(vinylidene fluoride) by heat assisted spin coating

Subramaniyan Ramasundaram[1], Sun Yoon[1], Jong Joon Lee[2], Chang Woo Choi[1], Arun Anand Prabu[1], and Kap Jin Kim[1,*], [1]*Department of Advanced Polymers and Fiber Materials, Kyung Hee University, Yongin-si, Gyeonggi-do, Korea,* [2]*Analytical Research Centre, Hyosung Corporation, Anyang-si, Gyeonggi-do, Korea*

Functional improvement of clothing materials for the disabled patients(Ⅱ) : Change of structural characteristic and hand value

Hyun Sook Bae[*], Hye Won Park, Eun Jeong Ryou, and Kyoung Mi Jeong, *Department of Clothing & Textiles, Changwon National University, Gyeongnam, Korea*

Horizontal semi-circle body finishing mechanism for high sensory fabrics in continuous rope dyeing system

Choon Gil Lee, *Department of Textile and Fashion Technology, Kyungil University, Kyungsan, Korea*

Luminescence enhancement of stilbene derivatives in LB film by molecular aggregation

Chung Yeon Cho and Yong Sok Seo[*], *Intellectual Textile System Research Center (ITRC) and School of Materials Science and Engineering, College of Engineering, Seoul National University, Seoul, Korea*

Magnetic levitation spindle twisting for intelligent yarns

Choon Gil Lee[*] and Kyoung Tai Son, *Department of Textile and Fashion Technology, Kyungil University, Kyungsan, Korea*

Manufacturing and properties of carbon nanotube actuator as artificial muscle

Hye Jin Yoo, Hyang Hwa So, and Jae Whan Cho[*], *Department of Textile Engineering, Konkuk University, Seoul, Korea*

Manufacturing and properties of Loose-filled thermal Insulation

C. W. Lou[1,*], I. J. Tsai[2], P. Chen[2], Y. C. Lee[2] and J. H. Lin[2], [1]*Center for General Education/Institute of Biomedical Engineering and Material Science, Central Taiwan University of Science and Technology, Taiwan, R.O.C.,* [2]*Laboratory of Fiber Application and Manufacturing, Graduated Institute of Textile Engineering, Feng Chia University, Taichung 407, Taiwan, R.O.C.*

OLEDs with 2D polymer/SiNx photonic crystals directly fabricated by room temperature nanoimprint lithography

So Hee Jeon[1], Jun-ho Jeong[2], Jae-Wook Kang[1], Jongyoup Shim[2], Hyung-Dol Park[1], Jang- Joo Kim[1], and Jae R. Youn[1,*], [1]*Department of Materials Science and Engineering, Seoul National University, Seoul, Korea,* [2]*Nano-Mechanical Systems Research Center, Korea Institute of Machinery & Materials, Daejeon, Korea*

Osteoblast adhesion on KRSR immobilized SF nanofiber

Jong Wook Kim, Chang Seok Ki, Jun Sik Im, Eun Hee Gang, and Young Hwan Park[*], *Department of Biosystems and Biomaterials Science and Engineering, Seoul National University, Seoul, Korea*

Physical properties of carbon nanotubes coated silk fiber reinforced polymer composites

Hun-Sik Kim, Don-Young Kim, Soon-Min Kwon, Yeseul Kim, and Hyoung-Joon Jin[*], *Department of Polymer Science and Engineering, Inha University, Incheon, Korea*

Polymer/clay nanocomposite fibers and laminates for automotive fender application

Ki-Young Kim[*], Jae-Ki Park, and Yoeng-Og Choi, *Technical Textile Department, Korea Institute of Industrial Technology, Ansan-si, Kyoungi-do, Korea*

Preparation and characterization of new photofunctional digital yarn

Han Na yoon, Ji Yoon Park, and Gi-soo Jung[*], *Smart Textile Team, Korea Institute of Industrial Technology, Ansan, Korea*

Preparation and characterization of polypropylene fibers by electrospinning

S. H. Oh[*], D. R. Chang, E. Y. Jeong, H. S. Kim, T. W. Kim, G. S. Heo, C. H. Jeong, S. J. Boo, and J. H. Lee, *Energy & Applied Optics Team, Gwangju Research Center, Korea Institute of Industrial Technology, Gwangju, Korea*

Preparation and characterization of thermosensitive composite hydrogels of poly(*N*-isopropylacrylamide) and surface modified silica

Myong Jo Ham and Young Ho Kim[*], *Department of Textile Engineering, Soongsil University, Seoul, Korea*

Preparation and properties of electrospun poly(vinyl alcohol) nanofibers coated with chitosan as wound dressing

Yun-Ok Kang[1], Seong Jin Lee[2], Dae-Duk Kim[3], and Won Ho Park[1,*], [1]*Department of Advanced Organic Materials and Textile System Engineering, Chungnam National University, Daejeon, Korea,* [2]*College of Pharmacy, Ewha Womans University, Seoul, Korea,* [3]*College of Pharmacy and Research Institute of Pharmaceutical Sciences, Seoul National University, Seoul, Korea*

Preparation of biodegradable poly(ε-caprolactone)-based polyurethane nanofibers containing silver nanoparticles

Hyun Jeong Jeon, Jin Sook Kim, Tae Gon Kim, and Ji Ho Youk[*], *Department of Advanced Fiber Engineering, Division of Nano-Systems, Inha University, Korea*

Preparation of chitosan/poly(vinyl alcohol) (PVA) fiber membranes via electrospinning and the evaluation of biocompatibility

S. H. Huang[1,*], Tina Cu Huang[1], Y. C. Lee[1], C. W. Lou[2], and J. H. Lin[1], *Laboratory of Fiber Application and Manufacturing, Graduated Institute of Textile Engineering, Feng Chia University, Taiwan, R.O.C., [2]Center for General Education/Institute of Biomedical Engineering and Material Science, Central Taiwan University of Science and Technology, Taiwan, R.O.C.*

Preparation of neat SWNT fibers by wet spinning

Myung Hyun Kwon[1], and Mikhail Kozlov[2], Ray Baughman[2], Duck Joo Yang[2], and Doo Hyun Baik[1,*], *[1]Department of Organic Materials and Textile System, Chungnam National University, Daejeon, Korea, [2]NanoTech Institute, Department of Chemistry, University of Texas at Dallas, USA*

Preparation of surface-hydrolyzed cellulose acetate fibers and their application as a rubbing cloth for LCD panel

Hyun Sun Kim[1], Jong Soo Ahn[2], and Young Ho Kim[1,*], *[1]Department of Textile Engineering, Soongsil University, Seoul, Korea, [2]Research and Development Center, Youngdo Velvet Co. Ltd., Kumi, Korea*

Preparation of water-oil separation surface using low temperature plasma process

Min Sun Kim*, Dae Young Lim, Sung Jun Doh, *Textile Materials Division, Korea Institute of Industrial Technology, Chonan, Korea*

Process analysis in high sensory fabric dyeing by liquid-fluid and air-flow dyeing machines

Choon Gil Lee*, *Department of Textile and Fashion Technology, Kyungil University, Kyungsan, Korea*

Process analysis of intelligent coolday fabric weaving and warp and filling yarn preparation process

Choon Gil Lee*, *Department of Textile and Fashion Technology, Kyungil University, Kyungsan, Korea*

Properties estimating of thermal insulation prepared from hollow PET fiber and far infrared ray PET fiber

C. W. Lou[1], P. Chen[2], Y. C. Lee[2], I. J. Tsai[2], and J. H. Lin[2], *[1]Center for General Education/Institute of Biomedical Engineering and Material Science, Central Taiwan University of Science and Technology, Taiwan R.O.C., [2]Laboratory of Fiber Application and Manufacturing, Graduated Institute of Textile Engineering, Feng Chia University, Taiwan R.O.C.*

Reactions of carboxyl-ended poly(*N*-isopropylacrylamide) with chitosan and *N*-(2-hydroxy)propyl-3-trimethylammonium chitosan chloride

Eun Ju Lee[2] and Young Ho Kim[1,*], *[1]Department of Textile Engineering, Soongsil University, Seoul, Korea, [2]Intelligent Textile System Research Center, Seoul National University, Seoul, Korea*

Shape memory effect of polyurethane reinforced by celite

Sang-Do Lee[1], Jong-Shin Park[1], Yong-Chan Chung[3], and Byoung Chul Chun[2], *[1]Department of Biosystems & Biomaterials Science and Engineering, Seoul National University, Seoul, Korea, [2]Department of Polymer Engineering, [3]Department of Chemistry, The University of Suwon, Intelligent Textile Research Center, Seoul, Korea*

Shrinkage mechanism analysis in the newly developed treatment machine for high sensory fabrics in jet nozzle spray system

Choon Gil Lee*, *Department of Textile and Fashion Technology, Kyungil University, Kyungsan, Korea*

Study on characteristics of digital yarn

Gi-Soo Chung, Ji-Yoon Park, and Hanna Yoon, *Korea Institute of Industrial Technology, Ansan, Korea*

Study on the gold coating on polymer substrates and its application to plastic optical fiber

Eun Ju Park[1] and Moo Sung Lee[2,*], *[1]Department of Photonic Engineering, Chonnam National University, Gwangju, Korea, [2]Faculty of Applied chemical Engineering and Center for Functional Nano Fine Chemicals, Chonnam National University, Gwangju, Korea*

Superhydrophobicity of electrospun PHBV nanofibers

Young Il Yoon[1], Young Sik Nam[2], Hyun Sik Moon[3], and Won Ho Park[1,*], *[1]Department of Advanced Organic Materials and Textile System engineering, Chungnam National University, Daejeon, South Korea, [2]BK21 Education Programs of Fusion Technology for Industrial Textiles, Chungnam National University, Daejeon, South Korea, [3]Reserach Institute of Advanced Materials Chungnam National University, Deajeon, Korea*

Synthesis and characterization of polyurethane-functionalized carbon nanotubes with shape memory effect using click chemistry

Sravendra Rana and Jae Whan Cho*, *Department of Textile Engineering, Konkuk University, Seoul, Korea*

Synthesis and properties of polyurethane-crosslinked carbon nanotube nanocomposites

Sun Young Lee[1], Yong Chae Jung[2], and Jae Whan Cho[1,*], *[1]Department of Textile Engineering, Konkuk University, Seoul, Korea, [2]BK21 U-Science, Konkuk University, Seoul, Korea*

The effect of the bentonite concentration on the swelling, mechanical, releasing properties of alginate hydrogels

Seung-Taek Oh, Oh-Jin Kwon, Sang-Do Lee, Na-Ri Lee, Hyun-Ju Hwang, and Jong Shin Park*, *Department of Biosystems & Biomaterials Science and Engineering, Seoul National University, Seoul, Korea*

The electrospinning of poly(dimethyl siloxane)/TEOS nanofibers combined with sol-gel process

Y. B. Kim and W. H. Park*, *Department of Advance Organic Materials and Textile System Engineering, Chungnam National University, Daejeon, Korea*

The mechatronics design process in the newly developed tilting body dyeing machine for intelligent textiles

Choon Gil Lee*, *Department of Textile and Fashion Technology, Kyungil University, Kyungsan, Korea*

Twisting performance of adaptive wings embedded piezocomposite actuators

Young Ho Na and Ji Hwan Kim*, *Department of Mechanical and Aerospace Engineering, Seoul National University, Seoul, Korea*

The Influence of bending and abrasion on the electrical properties of textile-based transmission Line Made of Teflon-coated Stainless Steel Yarns

Yoonjung Yang[1], Moonsoo Sung[1], Jayoung Cho[1], Keesam Jeong[2], and Gilsoo Cho[1,*], *[1]Department of Clothing and Textiles, Yonsei University, Seoul 120-749, Korea [2]Department of Medical Information System, Yongin Songdam College, Yongin 449-710, Korea*