

Room A

Wednesday, September 28

Invited Lectures

K. Takimiya, presiding

- 12:55 1A08IL Molecular and Polymeric Transistors. Synthesis, Characterization, and Device Optimization via Interface Chemistry
Yu Xia, Damien Boudinet, He Yan, Zhihua Chen, Yan Zheng, Jordan Quinn, Antonio Facchetti 2143

E. Ihara, presiding

- 13:45 1A10IL Electrochemical Epitaxial Polymerization – Assembling and Functions of Molecular Wires –
Hiroshi Sakaguchi 2146

A. Takahara, presiding

- 14:35 1A12IL Controlled Radical Copolymerization of Fluoromonomers: the Golden Tool to Achieve well-Architected Fluoropolymers. Application to the Synthesis, Functionalization and Crosslinking of Novel Elastomers based on Vinylidene fluoride and Perfluoromethyl vinyl ether
Cyrille Boyer, Georgi Kostov, Ming H. Hung, Bruno Ameduri 2149

H. Tanaka, presiding

- 15:25 1A14IL "Mechanobio-materials": design of micropatterned elastic gels to control cell mechanotaxis and motility-related functions
Satoru Kidoaki 2152

Y. Nakayama, presiding

- 16:15 1A16IL Homo- and Hetero-Stereocomplex Formation of Substituted Poly(lactic acid)s
Hidetoshi Tsuji 2155

T. Oishi, presiding

- 17:05 1A18IL Polymer Synthesis Using Flow Microreactors
Jun-ichi Yoshida 2158

Thursday, September 29

Invited Lectures

S. Yamago, presiding

- 9:10 2A01IL Precise Chemistry for the Design of Functional Nanostructured Materials
Sebastien Perrier 2161

Award Lectures

K. Kurihara, presiding

- 10:00 2A03IL** Nanomatrix Structure and Properties of Natural Rubber
Seiichi Kawahara 2164

T. Sasaki, presiding

- 10:50 2A05IL** Phase Transition of Block Copolymers in Supercritical Fluids and Fabrication of Nano-Cellular and Porous Structures
Hideaki Yokoyama 2167

M. Akashi, presiding

- 12:55 2A08IL** The Roles of Water Molecules in the Biointerface and Application of Medical Polymers
Masaru Tanaka, Tomohiro Hayashi, Shigeaki Morita 2170

	Y. Kimura, presiding	
14:10	2A11IL**	Development of Gelators and their Applications <u>Kenji Hanabusa</u> 2173
	M. Watanabe, presiding	
15:00	2A13IL**	Self-Assembled Organic and Polymer Photonic Crystals for Laser Applications <u>Seiichi Furumi</u> 2176
	Y. Shimizu, presiding	
15:50	2A15IL**	Functionalization of metal nanoparticles by control of polymer-metal interface in nanoscale <u>Tetsu Yonezawa</u> 2179

Friday, September 30

Invited Lectures

	S. Yamazaki, presiding	
9:35	3A02IL	Flow-induced crystallization of polymers <u>Toshiji Kanaya</u> 2182
	T. Yamamoto, presiding	
10:25	3A04IL	Melt elongational crystallization and nano-oriented crystals (NOCs) of polymers <u>Masamichi Hikosaka, Kiyoka Okada</u> 2185
	T. Ono, presiding	
11:15	3A06IL	Nano- and Micro-Structure and Morphology Generated by Self-Assembling of Polymers <u>Mitsuru Akashi</u> 2188
	M. Kohda, presiding	
12:55	3A08IL	Novel asymmetric aromatic polyimide and application for world's first solar powered sail [IKAROS]membrane <u>Rikio Yokota</u> 2191
	Y. Takaguchi, presiding	
13:45	3A10IL	Novel Functions of Self-Organized Columnar Structures made of Semiconductive Disk-like Molecules <u>Mutsumi Kimura</u> 2194

Room B

Wednesday, September 28

Chiral Polymers and Chiral Supramolecules

9:50	SO	Introductory Remarks Takahito Itoh 2632
	T. Oishi, presiding	
10:00	1B03	Stereocontrol by Asymmetric Anionic Polymerization of 7-Aryl-2,6-dimethylquinone Methide with Electron-Withdrawing Substituent <u>Takahiro Uno, Maho Akita, Masataka Kubo, Takahito Itoh</u> 2633
10:25	1B04	Precise synthesis and conformational change of multi-stimuli responsive chiral polymers <u>Kento Shoji, Kazuhiro Nakabayashi, Hideharu Mori</u> 2635

T. Uno, presiding		
10:50	1B05	Asymmetric Anionic Polymerization of (S)-(-)-N-Maleoyl-L-phenylalanine Methyl Ester ((S)-MPAMI) Using Amine as Initiator <u>Naoko Fujiwara</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi... 2637
11:15	1B06	Asymmetric Anionic Polymerizations of (S)-(-)-N-Methylbenzylmaleimide Using Chiral Amines as Initiator <u>Kazuhiro Zenshige</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi .. 2639
11:40	1B07	Chiral Phenolic Resin <u>Gen-ichi Konishi</u> , Yusuke Tojo 2641
T. Aoki, presiding		
12:55	1B08	Synthesis and Structural Analysis of Polyamide Consisting of Diphenylacetylene Backbone and Chiral Side Chain <u>Tatsunori Yamada</u> , Akihiro Yokoyama, Tsutomu Yokozawa 2643
13:20	1B09	Helical Sense Inversion of Polyaspartate in the Solid State <u>Koichi Sakajiri</u> , Junji Watanabe 2645
13:45	1B10	Reversible one-handed helix induction of polyacetylene by using molecular chiral rotaxane <u>Fumitaka Ishiwari</u> , Kazuko Nakazono, Yasuhito Koyama, Toshikazu Takata..... 2647
F. Sanda, presiding		
14:10	1B11	Helicity Induction in Polyacetylene Derivatives Bearing Biphenyl Pendants with Dynamic Axial Chirality and Their Dynamic Behavior <u>Kouhei Shimomura</u> , Katsuhiko Maeda, Tomoyuki Ikai, Shigeyoshi Kanoh, Eiji Yashima..... 2649
14:35	1B12	Syntheses and its precise structure analyses of poly(alkyl propiolate)s having an asymmetric carbon in the side chain by using a NMR method <u>Yoshiaki Yoshida</u> , Asahi Motoshige, Yasuteru Mawatari, Toshifumi Hiraoki, Wagner Manfred, Mullen Klaus, Masayoshi Tabata 2651
15:00	1B13	Stretched and Contracted Helix in Aromatic Polyacetylenes <u>Asahi Motoshige</u> , Yasuteru Mawatari, Yoshiaki Yoshida, Chigusa Seki, Haruo Matsuyama, Masayoshi Tabata 2653
T. Yokozawa, presiding		
15:25	1B14	Pseudo helix-sense-selective polymerization of substituted phenylacetylenes having two hydroxyl groups and a dynamic covalent bond of imino group <u>Yu Zang</u> , Tomoyuki Ohishi, Yuriko Kakihana, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki 2655
15:50	1B15	Synthesis of one-handed helical hetero-ladder polymers by ADMET postpolymerization of polyphenylacetylenes prepared by helix-sense-selective polymerization of achiral phenylacetylenes having two vinyl groups and selective degradation of the main chain of one-handed helical polyphenylacetylenes in the resulting ladder polymers <u>Hiroyuki Tanagi</u> , Kohki Era, Tomoyuki Ohishi, Yuriko Kakihana, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki 2657
16:15	1B16	Asymmetric Helical Polymer Catalysts Based on Poly(phenylacetylene)s Bearing Cinchona Alkaloid Pendants <u>Zhenglin Tang</u> , Hai-yu Hu, Garret M. Miyake, Hiroki Iida, Eiji Yashima... 2659
K. Maeda, presiding		
16:40	1B17	Syntheses of new acetylene polymer bearing L-tyrosine <u>Makoto Katashima</u> , Kenichi Mizuta, Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi 2661

17:05	1B18	Synthesis, Secondary Structure, and the Stimuli-Responsiveness of α -Propargyl Amino Acid Derived Optically Active Novel Substituted Polyacetylenes <u>Hiromitsu Sogawa</u> , Masashi Shiotsuki, Fumio Sanda..... 2663
17:30	1B19	Stabilization of the higher-order structure based on the metathesis polymerization at the side chains of conjugated helical polymers <u>Akinobu Hashimoto</u> , Hiromitsu Sogaw, Masashi Shiotsuki, Fumio Sanda.. 2665
17:55	1B20	Synthesis and Optical Properties of Poly (para-biphenylene) Derivatives Bearing Ionic Chiral Substituents in Side Chains <u>Zemeng Sun</u> , Kazuyoshi Watanabe, Kazuo Akagi..... 2667

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Chiral Polymers and Chiral Supramolecules

H. Goto, presiding

9:10	2B01	pH Responsiveness of polyacetylenes bearing tertiary amino groups in the side chain and evaluation of the polyacetylene-based polyplex <u>Kayo Terada</u> , Tsuyoshi Ando, Shiho Hirohara, Masao Tanihara..... 2669
9:35	2B02	Thin films of poly(quinoxaline-2,3-diyl)s exhibiting selective reflection in the visible region <u>Yuuya Nagata</u> , Keisuke Takagi, Syun Tanaka, Michinori Sugimoto..... 2671
10:00	2B03	Light-Emitting Properties of Helical Polyisocyanides with Stacked Aromatic Pendants <u>Tomoko Sekine</u> , Taka-aki Okamura, Kiyotaka Onitsuka..... 2673
10:25	2B04	AFM Observation and Chiral Recognition Ability of a Star Polymer Consisting of Optically Active Rigid-Rod Helical Polyisocyanide Arms <u>Toshitaka Miyabe</u> , Hiroki Iida, Motonori Banno, Tomoko Yamaguchi, Eiji Yashima..... 2675

K. Onitsuka, presiding

10:50	2B05	Synthesis of chiral conjugated polymers in thermally controllable asymmetric liquid crystal reaction field and control of the spiral morphologies <u>Yoshinori Okada</u> , Yongsoo Jeong, Keita Horie, Munju Goh, Kazuo Akagi... 2677
11:15	2B06	Optically Active Electrochromism and Optical Rotation of Polyanilines <u>Hiromasa Goto</u> 2679
11:40	2B07	Effects of Secondary Structures of the Recombinant Peptides of a Crayfish on CaCO ₃ Crystallization <u>Hiromu Kumagai</u> , Ryou Matsunaga, Tatsuya Nishimura, Kouhei Tsumoto, Hiromichi Nagasawa, Takashi Kato 2681

E. Yashima, presiding

12:55	2B08IL	Molecular Design of Chiral Polymers for Asymmetric Catalysis Application <u>Shinichi Itsuno</u> 2683
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M. Sugimoto, presiding

13:45	2B10	Induction of a chiral conformation to a polystyrene derivative using circularly polarized light <u>Shun Muraki</u> , Takeshi Sakamoto, Tamaki Nakano 2686
14:10	2B11	Induction of a chiral structure for poly(9,9-dioctylfluorene-2,7-diyl) using CPL <u>Yue Wang</u> , Takeshi Sakamoto, Tamaki Nakano 2688
14:35	2B12	Generation of Optically Active Polymers under Nonequilibrium Open System—Circularly Polarized Light Driven Recycling Frank System— <u>Michiya Fujiki</u> , Kana Yoshida, Wei Zhang..... 2690

N. Haraguchi, presiding

15:00	2B13	Chiral Induction in Phase Separated Solutions and the Concentrated Solution Structure of Optically Active Polyfluorenes <u>Yusuke Sanada</u> , Kazuo Sakurai, Takahiro Sato.....	2692
15:25	2B14	Morphology-Retaining Carbonization Method for Helical Graphites using Helical Conjugated Polymers as Precursors <u>Satoshi Matsushita</u> , Mutsumasa Kyotani, Kazuo Akagi	2694
15:50	2B15	Asymmetric catalyses using chirality-switchable helical polymer ligand PQXphos Yuuya Nagata, Yuto Akai, Takumi Adachi, Tetsuya Yamada, Takeshi Yamamoto, <u>Michinori Suginome</u>	2696

T. Nakano, presiding

16:15	2B16	Synthesis and Function of Optically Active Polymers with Flavin Skeleton as the Main-chain <u>Soichiro Iwahana</u> , Marie Miki, Hiroki Iida, Eiji Yashima	2698
16:40	2B17	Ether and thioether linked recyclable polymeric organocatalyst based on cinchona alkaloid for asymmetric synthesis of alpha-amino acid <u>Parbhej Ahamed</u> , Md. Abdus Salam, Naoki Haraguchi, Shinichi Itsuno ..	2700
17:05	2B18	Main-chain chiral polymers bearing cinchona derived quaternary ammonium salt for asymmetric reactions <u>Md. Masud Parvez</u> , Md. Abdus Salam, Naoki Haraguchi, Shinichi Itsuno ..	2702

Friday, September 30**Chiral Polymers and Chiral Supramolecules****N. Tohnai, presiding**

9:10	3B01	Supramolecular polymer formed by molecular recognition of bisporphyrin cleft <u>Takeharu Haino</u> , Takashi Fujii, Akihito Watanabe, Urara Takayanagi, Takehiro Hirao, Kanashi Kinjo, Toshiaki Ikeda	2704
9:35	3B02	Chirality organization and redox properties of oligoanilines bearing amino acid moieties <u>Satoshi Ohmura</u> , Toshiyuki Moriuchi, Kenji Morita, Toshikazu Hirao...	2706
10:00	3B03	Chirality control of a bowl-shaped pi-conjugated molecule "corannulene" with supramolecular assembly <u>Soichiro Harada</u> , Daigo Miyajima, Takuzo Aida	2708

T. Hirao, presiding

10:25	3B04	Handedness Determination of Two-fold Helical Polymers and Supramolecules Toshiyuki Sasaki, Ichiro Hisaki, Norimitsu Tohnai, <u>Mikiji Miyata</u>	2710
10:50	3B05	Control of Highly Selective Topochemical Cycloaromatization of Cis-Cisoidal Poly(substituted phenylacetylene) Membranes by Visible Light <u>Yunosuke Abe</u> , Tomoyuki Ohishi, Yuriko Kakihana, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki	2712
11:15	3B06	Double Helix Formation of <i>m</i> -Terphenyl-based Conjugated Polymer Bearing Carboxylic Acid Groups and One-handed Helix Induction with Chiral Amines <u>Wataru Makiguchi</u> , Shinzo Kobayashi, Yoshio Furusho, Eiji Yashima ..	2714
11:40	3B07	Synthesis and Control of Extension/Contraction Motion of Double Helical Boron Complexes Comprised of Oligophenol Strands <u>Kazuhiro Miwa</u> , Kaori Shimizu, Heejun Min, Yoshio Furusho, Eiji Yashima...	2716

H. Asanuma, presiding			
12:55	3B08	Stereoselective Inclusion Behavior of Amylose toward Poly(lactide)s in Vine-Twining Polymerization Koji Ueno, Keisuke Nakahara, Toshifumi Yui, <u>Jun-ichi Kadokawa</u>	2718
13:20	3B09	Design of polymers that recognize carbon nanotube chirality Kojiro Akazaki, Hiroaki Ozawa, Tsuyohiko Fujigaya, <u>Naotoshi Nakashima</u> ..	2720
13:45	3B10	Fabrication to chiral donor-nanoassembly <u>Hiroataka Ihara</u> , Hirokuni Jintoku.....	2722
J. Kadokawa, presiding			
14:10	3B11	Regulation of Molecular Arrangements and Solid-state Fluorescence Properties by Using Channel-type Inclusion Spaces of Steroidal Derivatives <u>Hirohide Yabuguchi</u> , Taketoshi Murai, Ichirou Hisaki, Norimitsu Tohnai, Mikiji Miyata	2724
14:35	3B12	Functionalization of artificial nucleic acids α TNA and SNA by the conjugation with dyes <u>Keiji Murayama</u> , Takasuke Toda, Hiromu Kashida, Hiroyuki Asanuma ..	2726
15:00	3B13	Significant Improvement of Chiral Recognition Ability of Cyclodextrins by the Change of Media from Aqueous to Nonpolar Media <u>Takuya Iwamoto</u> , Toshiyuki Kida, Mitsuru Akashi.....	2728
15:25	3B14	Chiral Recognition of Binaphthyl Derivatives by Monoclonal Antibodies and Their Specific Detection System <u>Hiroyasu Yamaguchi</u> , Tomoki Odaka, Akira Harada	2730

Room C

Wednesday, September 28

Synthesis and Functionalization of Branched Macromolecules

9:50	SO	Introductory Remarks Mitsutoshi Jikei	2796
M. Jikei, presiding			
10:00	1C03	Analysis of molecular interaction between polyglycerol dendrimers and a fluorescent molecule <u>Haejoo Lee</u> , Tooru Ooya, Toshifumi Takeuchi	2797
10:25	1C04	Design of dendrimer-gold nanoparticles hybrids with stimuli-responsive functions <u>Kenji Kono</u> , Keiji Takeda, Eiji Yuba, Atsushi Harada	2799
K. Kono, presiding			
10:50	1C05	Programming the Potential Structure of Rigid Dendritic Structures <u>Ken Albrecht</u> , Kimihisa Yamamoto	2801
11:15	1C06	Bulk properties of imidazolium cation-terminated POSS-core dendrimers <u>Kensuke Naka</u> , Ryusuke Shinke, Tomoaki Sato, Maki Yamada, Belkade Fadila.....	2803
11:40	1C07	Dimensional Control and Function Exploration of Porous Polymers <u>Donglin Jiang</u>	2805
D. Jiang, presiding			
12:55	1C08	Synthesis of three-branched star and six-branched dendritic telechelics aiming for the construction of novel single-sized multicyclic polymers <u>Takuya Suzuki</u> , Takuya Yamamoto, Yasuyuki Tezuka	2807

13:20	1C09	Structure and Lectin Recognition of Hyperbranched Polysaccharide Obtained from 1,6-Anhydrohexose <u>Toshifumi Satoh</u> , Toyoji Kakuchi 2809	2809
13:45	1C10	Synthesis of hyperbranched polymers by self-condensing vinyl polymerization of inimers <u>Satoshi Uchida</u> , Koji Ishizu 2811	2811
		T. Satoh, presiding	
14:10	1C11	Arborescent Graft Polymers via Anionic Grafting-from-Graft Approach <u>Hideki Nishimura</u> , Kaoru Adachi, Yasuhisa Tsukahara 2813	2813
14:35	1C12	Branched Macromolecular Architecture via Transition Metal-Catalyzed Simultaneous Chain- and Step-Radical Polymerization <u>Kotaro Satoh</u> , Daisuke Ito, Masato Mizutani, Masami Kamigaito 2815	2815
15:00	1C13	Synthesis and Self-Assembly of Well-Defined Hyperbranched Polyamide- <i>b</i> -Polystyrene <u>Yoshihiro Ohta</u> , Chih-feng Huang, Yi-huan Lee, Chi-an Dai, Tsutomu Yokozawa 2817	2817
15:25	1C14	Synthesis and properties of the branched polylactides with controlled branching density <u>Maki Suzuki</u> , Kazuya Matsumoto, Mitsutoshi Jikei 2819	2819
		K. Naka, presiding	
15:50	1C15	Immobilization of Poly(N-isopropylacrylamide) on Silica beads Surface Modified by Hyperbranched Polysiloxysilane <u>Bo Ra Park</u> , Yuta Nabae, Teruaki Hayakawa, Masaaki Kakimoto 2821	2821
16:15	1C16	Gas transport properties of asymmetric hyperbranched polyimide-silica hybrid membranes <u>Yasuharu Yamada</u> , Yasuyuki Ishikawa, Masaya Haraguchi, Masako Miki .. 2823	2823
16:40	1C17	Fluorous Functional Space in Fluorine-Condensed Microgel-Core Star Polymers <u>Yuta Koda</u> , Takaya Terashima, Mitsuo Sawamoto 2825	2825
		S. Uchida, presiding	
17:05	1C18	Synthesis and functionalization of ionic liquid-type star polymers by RAFT polymerization of N-vinylimidazolium salts <u>Yuki Ebina</u> , Kazuhiro Nakabayashi, Hideharu Mori 2827	2827
17:30	1C19	Precise synthesis of asymmetric star-branched polymer composed of various poly methyl methacrylate derivatives as arm-segment <u>Raita Goseki</u> , Youko Ozama, Akira Hirao 2829	2829
17:55	1C20	Star-Shaped Cyclized Poly(vinyl ether): Synthesis of Multi-Branched Polymers with High Glass Transition Temperature by Combination of Controlled Cyclopolymerization and Crosslinking Polymerization of Divinyl Ethers and Their Functionalization <u>Haruki Matsui</u> , Michio Urushisaki, Toshikazu Sakaguchi, Tamotsu Hashimoto 2831	2831

Thursday, September 29

Synthesis and Functionalization of Branched Macromolecules

		T. Fukushima, presiding	
9:10	2C01	Synthesis of Star-shaped Polystyrenes Containing a Large Cavity in Its Core <u>Kousuke Kihara</u> , Hiroto Kudo, Tadatomi Nishikubo 2833	2833
9:35	2C02	Facile One-Step Synthesis of Star-Shaped Polymers: Domino	

		Synthesis Based on Monomer Selective Polymerization <u>Mayuka Yamada</u> , Jun Ashida, Shokyoku Kanaoka, Sadahito Aoshima... 2835
10:00	2C03	Effect of Molecular Architecture of PEGylated PAMAM dendron in Protein Modification <u>Atsushi Harada</u> , Takeshi Kato, Akifumi Kawamura, Kenji Kono 2837
10:25	2C04	Synthesis and Membrane Properties of Aromatic Polymers Grafted with PEO/PDMS Block Segment <u>Kiyoshi Yamamoto</u> , Sayaka Suzuki, Yu Nagase 2839
		A. Kanazawa, presiding
10:50	2C05	Development of dense graft-type gels and their application to low-friction materials <u>Keishi Maeda</u> , Ryo Nakahara, Akihiro Nomura, Atsushi Goto, Kohji Ohno, Yoshinobu Tsujii 2841
11:15	2C06	Stimuli Responsive Soft Materials by Large-Area Hierarchical Molecular Ordering of a Polymer Brush <u>Takashi Kajitani</u> , Nobuhiko Hosono, Takanori Fukushima, Sono Sasaki, Masaki Takata, Takuzo Aida 2843
11:40	2C07	Preparation and Molecular Conformation of Rod Brushes Consisting of a Polymethacrylate Main Chain <u>Yuta Saito</u> , Atsushi Narumi, Jiro Kumaki, Seigou Kawaguchi..... 2845

Frontier Step Polymerization

12:45	SO	Introductory Remarks Akinori Takasu..... 2744
		A. Takasu, presiding
12:55	2C08IL	Converting Step-Growth to Chain-Growth Condensation Polymerization <u>Tsutomu Yokozawa</u> 2745
		H. Otsuka, presiding
13:45	2C10	Preparation of Poly(ester imide) Fibrillar Crystals having Morphological Sequence of Helical Block Takuya Ohnishi, Tetsuya Uchida, Shinichi Yamazaki, <u>Kunio Kimura</u> ... 2748
14:10	2C11	Practical Application of a Polyester Synthesis Process Using Microwaves—Approach to scaling-up and the commercial plant— <u>Ritsuko Nagahata</u> , Takashi Nakamura, Yukie Mori, Yuko Saito, Kazuhiko Takeuchi..... 2750
14:35	2C12	Acceleration and Application of Low-Temperature Dehydration Polycondensation of Dicarboxylic Acids and Diols <u>Shinji Yamada</u> , Akinori Takasu 2752
15:00	2C13	Regio- and stereoselective polycondensations via the transition metal-catalyzed allylation reactions <u>Nobuyoshi Nomura</u> , Sachiko Shimazu, Susumu Komiyama, Hiroyuki Kasugai, Ko Tsurugi, Nao Yoshida..... 2754
		K. Takagi, presiding
15:25	2C14	Synthesis and Autonomous Scrambling Reactions of Dynamic Covalent Polymers <u>Takeshi Kanehara</u> , Atsushi Irie, Keiichi Imato, Masamichi Nishihara, Atsushi Takahara, Hideyuki Otsuka..... 2756
15:50	2C15	Synthesis and structural investigation of uniform oligomers of D- and L-mandelic acids <u>Akinori Saito</u> , Makoto Fukuoka, Yusuke Hemmi, Hikaru Momose, Miyuki Oshimura, Koichi Ute 2758
16:15	2C16	Synthesis of Sequence-Regulated Vinyl Polymers by Metal-Catalyzed

		Step-Growth Radical Polymerization <u>Kenta Ishizuka</u> , Kotaro Satoh, Masami Kamigaito 2760	
16:40	2C17	Sequence-Regulated Vinyl Polymers Containing Acrylamide Units by Metal-Catalyzed Step-Growth Radical Polymerization <u>Masato Handa</u> , Kotaro Satoh, Masami Kamigaito 2762	
17:05	2C18	Precise synthesis of phenolic resin and its functionalization <u>Gen-ichi Konishi</u> , Yusuke Tojo 2764	

Friday, September 30

Frontier Step Polymerization

N. Nomura, presiding

9:10	3C01	Synthesis of Imidazole-Based Conjugated Polymer by Coupling Polymerization and Formation of Intramolecular Hydrogen Bonding <u>Koji Takagi</u> , Junya Ohta, Masanori Sakaida, Shin-ichi Matsuoka, Masato Suzuki 2766	
9:35	3C02	Synthesis of π -electron-system-layered polymers by cross-coupling reactions <u>Yasuhiro Morisaki</u> , Yoshiki Chujo 2768	
10:00	3C03	Synthesis of Conjugated Polymers by Yamamoto Coupling Polymerization of <i>N</i> -Substituted 2,3-Diiodomaleimide with Aryl Dihalide Compounds Kenjiro Onimura, <u>Munetoshi Nakamura</u> , Kazuhiro Yamabuki, Tsutomu Oishi 2770	
10:25	3C04	Versatile π -Conjugated Polymers by Three-Component Polycondensation <u>Ikuyoshi Tomita</u> , Hideki Tsukuda, Kousuke Isobe 2772	

B. Ochiai, presiding

10:50	3C05	Synthesis and Properties of Tellurium containing polymers by Simple Condensation Reaction of Tetrachlorotellurium and 1,3-Dimethoxybenzene <u>Kuniaki Hamaguchi</u> , Masashi Tomita, Hiroto Kudo, Tadatomi Nishikubo . 2774	
11:15	3C06	Polycondensation via C-H Direct Arylation of Tetrafluorobenzene for syntheses of π -conjugated polymers <u>Wei Lu</u> , Junpei Kuwabara, Takaki Kanbara 2776	
11:40	3C07	Factor of Controlling Polymerization of Grignard Pyridine Monomers <u>Yutaka Nanashima</u> , Akihiro Yokoyama, Tsutomu Yokozawa 2778	

M. Oshimura, presiding

12:55	3C08	Polyaddition using a high-yielding alkyne-TCNQ addition reaction <u>Yusuke Washino</u> , Kimie Murata, Susumu Kawauchi, Tsuyoshi Michinobu 2780	
13:20	3C09	New Chemical Ligation based on Stable Nirtile N-Oxide <u>Yasuhito Koyama</u> , Morio Yonekawa, Young-gi Lee, Kaori Miura, Tohru Matsumura, Toshikazu Takata 2782	
13:45	3C10	Synthesis of Conjugated Polymer using 1,3-Dipolar Cycloaddition Reaction of <i>N</i> -Substituted 3,6-diethynylcarbazole Derivatives Kenjiro Onimura, <u>Ryuji Yamawaki</u> , Kazuhiro Yamabuki, Tsutomu Oishi .. 2784	
14:10	3C11	Cycloaddition polymerization by Click reaction in ionic liquids <u>Masaru Yoneyama</u> , Nao Moriai, Kazunori Takahashi 2786	

Y. Koyama, presiding

14:35	3C12	Precipitation-driven cyclization of <i>m</i> -phenyleneimine linear oligomers and chain-macrocyclic mutual conversion via helical foldamer	
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		<u>Toshihiko Matsumoto</u> 2788
15:00	3C13	Application of polyhydroxyurethane (PHU) synthesized by polyaddition of bifunctional cyclic carbonates and diamine as a flexibilizing agent
		<u>Mizuho Nomura</u> ,Bungo Ochiai,Shunichi Numata,Takeshi Endo 2790
15:25	3C14	Molecular design of functional polyaniline analogs based on organometallic carbon-nitrogen bond formation
		<u>Takaki Kanbara</u> ,Junpei Kuwabara 2792
15:50	3C15	Synthesis of polyguanamines with controlled branching, and the application to the high refractive index materials
		<u>Yuji Shibasaki</u> ,Yoshiyuki Oishi..... 2794

Room D

Wednesday, September 28

Development of Inorganic Polymers

9:50	SO	Introductory Remarks <u>Kensuke Naka</u> 2434
		T. Sanji, presiding
10:00	1D03	Synthesis and Functions of π -Conjugated Polymers Containing Versatile Elements by Reactions of Organometallic Polymers Having Titanacyclopentadiene Units in the Main Chain <u>Ikuyoshi Tomita</u> ,Hiroki Nishiyama,Yoshimasa Matsumura 2435
10:25	1D04	Synthesis of Functional π -Conjugated Polymers by Three-Component Coupling Polymerization of Thioboranes, Terminal Diynes, and Aromatic Dihalides <u>Kousuke Isobe</u> ,Ikuyoshi Tomita..... 2437
		J. Ohshita, presiding
10:50	1D05	X-Shaped B/Si/P Conjugated Molecules <u>Takanobu Sanji</u> ,Akemi Fuchigami,Masato Tanaka 2439
11:15	1D06	Control of Aggregation-Induced Emission and Conjugation System through the Polymer Main-Chain Using Boron Complexation of Conjugated Polymers <u>Ryousuke Yoshii</u> ,Kazuo Tanaka,Yoshiki Chujo 2441
11:40	1D07	Synthesis of Polysilazanes Ccontaining Boron Units <u>Yuko Uchimaru</u> ,Hiroshi Yamashita,Li-biao Han 2443
		S. Watase, presiding
12:55	1D08	Controlled Solid-state Luminescence of Organoarsenic Platinum(II) Complex with Vapoluminescence <u>Takuji Kato</u> ,Kensuke Naka,Seiji Watase,Kimihiro Matsukawa 2445
13:20	1D09	Synthesis and optical properties of silicon-containing starlike compounds based on a 1,3,5-triazine core <u>Akinobu Naka</u> ,Ryuichi Fukuda,Joji Ohshita,Mitsuo Ishikawa 2447
13:45	1D10	Long-term Air- and Water-proof Blue Photoluminescence from Fluoroalkyl Si-Si Bonded Network Polymer <u>Michiya Fujiki</u> 2449
		A. Naka, presiding
14:10	1D11	Synthesis of Novel Organosilicon Polymers bearing Donor-Acceptor Unit and Applications to Organic Solar Cells

		<u>Daiki Tanaka</u> , Joji Ohshita, Yousuke Ooyama, Yutaka Harima, Yasushi Morihara, Takafumi Izawa, Takashi Sugioka	2451
14:35	1D12	Development of organic-metallic hybrid polymers toward electrochromic type e-paper <u>Masayoshi Higuchi</u>	2453
		M. Higuchi, presiding	
15:00	1D13	Emission Properties of Silsesquioxane Thin Films Linked with Metal Complex Through the Intermolecular Interaction <u>Seiji Watase</u> , Daiki Fujisaki, Kentaro Murata, Mitsuru Watanabe, Noboru Nishioka, Kimihiro Matsukawa	2455
15:25	1D14	Synthesis and Electrical Properties of Novel Silsesquioxane Polymers Containing Oligothiophenes with Well-defined Structures <u>Ichiro Imae</u> , Daisuke Tokita, Yousuke Ooyama, Kenji Komaguchi, Joji Ohshita, Yutaka Harima	2457
		I. Imae, presiding	
15:50	1D15	Surface grafting of polymers onto graphene oxides Kazuhiro Nagata, Yuusuke Yagi, Tetsuo Sumiyoshi, Kumi Shirai, <u>Kazuhiro Fujiki</u> , Takeshi Yamauchi, Norio Tsubokawa	2459
16:15	1D16	Arrangement control of inorganic giant ring-shaped polyoxomolybdates hybridized with liquid-crystalline organic molecules <u>Kenjiro Uno</u> , Makoto Muto, Sho Wakana, Osamu Tsutsumi	2461
16:40	1D17	Exfoliation of Layered Perovskite Modified by Perfluoroalcohol and Fabrication of Nanosheets / Polymer Hybrid <u>Yuta Asai</u> , Yusuke Ariake, Hitomi Saito, Kimihiro Matsukawa, Yoshiyuki Sugahara	2463
		Y. Uchimaru, presiding	
17:05	1D18	Synthesis of TiO ₂ nanoparticles by a nonhydrolytic sol-gel route and surface modification with phenylphosphonic acid <u>Manabu Kobayashi</u> , Hitomi Saito, Bruno Boury, Yoshiyuki Sugahara ..	2465
17:30	1D19	Surface Modification of TiO ₂ Nanoparticles with n-Octadecylphosphonic Acid and Their Dispersibility in Organic Solvents <u>Taichi Kaneko</u> , Yoshitaka Kamochi, Hiroyuki Yamamoto, Kimihiro Matsukawa, Yoshiyuki Sugahara	2467
17:55	1D20	Preparation of nanosheets via exfoliation of layered perovskite modified with organophosphonic acids <u>Yusuke Ariake</u> , Hitomi Saito, Hiroyuki Yamamoto, Kimihiro Matsukawa, Yoshiyuki Sugahara	2469

Thursday, September 29

Development of Inorganic Polymers

		K. Tanaka, presiding	
9:10	2D01	Gas adsorption property of coordination polymer film <u>Hiroki Yamagiwa</u> , Tadashi Fukawa, Mutsumi Kimura, Takashi Mihara, Tsuyoshi Ikehara	2471
9:35	2D02	Synthesis of Electroconductive Perylene Bisimide-Silica Hybrid Films with Long-Range Orientation <u>Norihiro Mizoshita</u> , Takao Tani, Shinji Inagaki	2473
10:00	2D03	Ionic conductivity of silatranes and polymerized derivatives <u>Tomonobu Mizumo</u> , Joji Ohshita	2475

		T. Gunji, presiding	
10:25	2D04	Electronic properties of organic thin-film transistors using polysilsesquioxane as a gate insulator <u>Hiroyoshi Naito</u> , Takashi Nagase, Takashi Kobayashi, Takashi Hamada, Kimihiro Matsukawa	2477
10:50	2D05	Synthesis of soluble ladder polysilsesquioxanes from ladder supramolecule as an other precursor for gas permselective membrane <u>Fumiya Kato</u> , Yuriko Kakihana, Tomoyuki Ohishi, Lijia Liu, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki	2479
		T. Mizumo, presiding	
11:15	2D06	Synthesis, structures, and properties of organic siloxanes with spiro frameworks <u>Ryoji Tanaka</u> , Eiichi Akiyama	2481
11:40	2D07	Thermodynamic study of POSS ionic liquids <u>Kazuo Tanaka</u> , Jong-hwan Jeon, Fumiyasu Ishiguro, Yoshiki Chujo	2483
		K. Naka, presiding	
12:55	2D08IL	Hierarchiral Structure Design of Siloxane Network Polymers Alternately Bearing a Silsesquioxane Cage and Siloxane Chains <u>Masashi Kunitake</u>	2485
		R. Saito, presiding	
13:45	2D10	Preparation of chiral ladder-like polysilsesquioxanes and complex formation with dye molecules <u>Hisaya Toyodome</u> , Yuhei Higo, Hisako Sato, Tei Maki, Kazuhiro Shikinaka, Yoshiro Kaneko	2488
14:10	2D11	Synthesis and application of multi-functional silsesquioxane nanoparticles having hydroxyl and polymerizable groups <u>Takuki Konno</u> , Hideharu Mori, Hiroshi Takeuchi	2490
14:35	2D12	Creation of Silica Nanomaterials via Polyethyleneimine-Programmed Sol-Gel Reaction <u>Ren-hua Jin</u>	2492
		Y. Kaneko, presiding	
15:00	2D13	Synthesis and properties of polymethylsilsesquioxane/ polymethoxysiloxane copolymers <u>Takahiro Gunji</u> , Hironori Kaburaki, Noritaka Abe, Yoshimoto Abe	2494
15:25	2D14	Nanostructure of side chain liquid crystalline diblock copolymer thin films containing siloxane units <u>Tomoe Tanaka</u> , Tomohiro Yorisue, Hiroyuki Hanahata, Motonori Komura, Hirohisa Yoshida, Sadayuki Asaoka	2496
15:50	2D15	The reaction of alicyclic epoxy group on synthesis of epoxy-silica composite derived from perhydropolysilazane <u>Yosuke Fujii</u> , Jyunichi Iida, Reiko Saito	2498
		K. Matsukawa, presiding	
16:15	2D16	Synthetic mechanism of epoxy resin-silica nanocomposites derived from perhydropolysilazane <u>Reiko Saito</u> , Jyun-ichi Iida, Yosuke Fujii	2500
16:40	2D17	Flexible, Transparent Laponite-PEG Hybrid Film with Ordered Structure—Relationship between Composition, Physical properties, and Structure of Hybrid Film— <u>Kazuhiro Shikinaka</u> , Kazuto Aizawa, Nozomu Fujii, Yoshihito Osada, Kiyotaka Shigehara	2502
17:05	2D18	Fabrication of CNT/PA6/PPS composites with high thermal conductivity and electrical insulation Takuya Morishita, Mitsumasa Matsushita, Yoshihide Katagiri, <u>Kenzo Fukumori</u>	2504

Friday, September 30

Development of Inorganic Polymers

H. Segawa, presiding

9:10	3D01	Synthesis of Dihitenogermole-Containing π -Conjugated Polymers and Applications to Thin Film Solar Cells <u>Joji Ohshita</u> , Yong-mook Hwang, Yousuke Ooyama, Tomonobu Mizumo, Yutaka Harima, Yasushi Morihara, Takafumi Izawa, Takashi Sugioka.....	2506
9:35	3D02	Refractive index Modulated Micropattern Fabricated from High Refractive Index Organogermanium Polymer <u>Akira Watanabe</u> , Fujii Ryosuke, Tokuji Miyashita.....	2508

K. Naka, presiding

10:00	3D03	Embedding of silver and copper nanoparticles in resins by a matrix sputtering process and their optical properties <u>Tetsu Yonezawa</u> , Ko Nakagawa, Satoshi Udagawa	2510
10:25	3D04	Fabrication of photosensitive thick TiO ₂ -organic hybrid films with high refractive index <u>Hiroyo Segawa</u> , Satoru Inoue	2512
10:50	3D05	Preparation of polysilsesquioxane thin film containing gold nanoparticles and their properties <u>Kimihiro Matsukawa</u> , Seiji Watase, Toshiyuki Tamai, Yuta Motohisa, Araki Masuyama	2514

Room E

Wednesday, September 28

Polymer Physics: Structure and Properties

K. Onimura, presiding

10:00	1E03	Molecular Simulation of Fracture and Healing for Self-healing Rubbers <u>Keishi Suzumura</u> , Tsuyoshi Koga, Fumihiko Tanaka	2856
10:25	1E04	Molecular Simulation of Slide-Ring Gel under Biaxial Deformation <u>Kotaro Tanahashi</u> , Tsuyoshi Koga, Fumihiko Tanaka	2858
10:50	1E05	Analysis of gelation process of Tetra-PEG gel <u>Kengo Nishi</u> , Masashi Chijiishi, Yukiteru Katsumoto, Kenta Fujii, Takamasa Sakai, Chung Ung-il, Mitsuhiro Shibayama	2860
11:15	1E06	Mechanical properties of polymer network of Tetra-PEG gel <u>Makoto Asai</u> , Asumi Sugimura, Takuro Matsunaga, Hiroshi Noguchi, Mitsuhiro Shibayama	2862
11:40	1E07	Change in molecular weight distribution by elution of polymer from PVA cast gel <u>Saori Sasaki</u> , Yumiko Hirashima, Atsushi Suzuki	2864

Y. Katsumoto, presiding

12:55	1E08	Dynamics of the liquid contact line in wetting and diffusing processes on hydrogel substrates <u>Tadashi Kajiya</u> , Adrian Daerr, Tetsuharu Narita, Laurent Royon, Francois Lequeux, Laurent Limat	2866
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13:20	1E09	Block Copolymer-Modified Epoxy Nanoalloy <u>Nobuyuki Tomioka</u> , Maki Mizuki, Keiichirou Nomura, Sadayuki Kobayashi, Shirou Honda.....	2868
13:45	1E10	Synthesis of New Superabsorbent Polymer Consisting of Acrylic Acid-grafted Pullulan Using Semi-IPN Structure <u>Shuji Kubota</u> , Kazuhiro Yamabuki, Kennjiro Onimura, Tsutomu Oishi ..	2870
T. Watanabe, presiding			
14:10	1E11	Effects of prepolymer functionalities on formation of structure network of gel <u>Yuki Akagi</u> , Shunya Ishihara, Kenta Fujii, Takuro Matsunaga, Yukiteru Katsumoto, Mitsuhiro Shibayama, Ung-il Chung, Takamasa Sakai	2872
14:35	1E12	Effects of binding defects for structure of gel <u>Masashi Chijiishi</u> , Kengo Nishi, Yuki Akagi, Kenta Hujii, Yukiteru Katsumoto, Mitsuhiro Shibayama, Chung Ung-li, Takamasa Sakai	2874
15:00	1E13	Asymmetrically-substituted sulfamides - formation of supramolecular hydrogel based on the two-dimensional hydrogen bonds <u>Shin-ichiro Kabashima</u> , Motohiro Kageyama, Tomomichi Okano, Isao Yoshikawa, Koji Araki	2876
M. Shibayama, presiding			
15:25	1E14	Evaluation of rheological properties of supergiant polysaccharide, sacran <u>Ayaka Sano</u> , Maiko Okajima, Daisaku Kaneko, Tatsuo Kaneko	2878
15:50	1E15	Network structure and photoresponse property of end cross-linking rigid polymer gel <u>Daichi Kusano</u> , Hidemitsu Furukawa, Toshiyuki Watanabe	2880
16:15	1E16	Influence of the types of plasticizers on the electrical actuation of plasticized poly(vinyl chloride) <u>Daijiro Tsurumi</u> , Takamitsu Ueki, Ali Mohammad, Toshihiro Hirai.....	2882
16:40	1E17	Influence of Plasticizer on the Electromechanical Actuation of PVC Gel <u>Mohammad Ali</u> , Takamitsu Ueki, Daijiro Tsurumi, Toshihiro Hirai.....	2884
E. Ihara, presiding			
17:05	1E18	Synthesis of a pyrrole-based monomer and its electrochemical polymerization in a liquid crystal <u>Kazuho Ishise</u> , Kohsuke Kawabata, Hiromasa Goto	2886
17:30	1E19	Asymmetric Electrosynthesis of Furan-based Intramolecular Donor-Acceptor Conjugated Polymer Films in a Liquid Crystal Medium <u>Takahiro Seino</u> , Kohsuke Kawabata, Hiromasa Goto	2888
17:55	1E20	Optical properties of PEDOT-based polymer prepared by the asymmetric electrochemical polymerization in a liquid crystal medium <u>Yusuke Nitta</u> , Kohsuke Kawabata, Hiromasa Goto	2890

Thursday, September 29

Developments in Novel Radical Polymerization Methods Towards the Synthesis of Functional Materials

10:15	SO	Introductory Remarks Shigeru Yamago	2556
M. Kamigaito, presiding			
10:25	2E04	A living radical polymerization with amines as catalysts <u>Atsushi Goto</u> , Tomohiro Suzuki, Haruki Ofuji, Yoshinobu Tsujii, Hironori Kaji.....	2557

10:50	2E05	Towards Controlled Polymerization of Main Chain Fluorinated Monomers <u>Alexandru Dragos Asandei</u> , Olumide Adebolu, Christopher Paul Simpson .	2559
11:15	2E06	Selective Living Radical Polymerizations and Radical Coupling Reactions by the Control of Radical Generation from Organotellurium Compounds <u>Yasuyuki Nakamura</u> , Takahiro Arima, Sora Tomita, Shigeru Yamago...	2561
11:40	2E07	Stereoregular control by using inclusion complex <u>Yoichi Tokubuchi</u> , Reiko Saito	2563
		A. Goto, presiding	
12:55	2E08IL	Polymer Design via Organometallic-Mediated Radical Polymerization (OMRP) <u>Antoine Debuigne</u> , Christine Jérôme, Christophe Detrembleur	2565
13:45	2E10	Direct Observation of Reactions in Radical Polymerizations of Various Monomers using Electron Spin Resonance Technique <u>Atsushi Kajiware</u> , Dujiya, Julie Ito, Makiko Kawakami, Azusa Mioki	2568
		S. Yusa, presiding	
14:10	2E11	Simultaneous Living Radical and Cationic Polymerization via Interconvertible Dual Active Species <u>Hiroshi Aoshima</u> , Kotaro Satoh, Masami Kamigaito	2570
14:35	2E12	Sequence Regulation by Controlled Single-Step Radical Addition: Orthogonal Templates with Cleavable and Recognition Sites <u>Yusuke Hibi</u> , Takahiro Arima, Makoto Ouchi, Mitsuo Sawamoto	2572
15:00	2E13	Emulsion TERP based on self-assembly (micelle) nucleation <u>Yukiya Kitayama</u> , Hirotaka Moribe, Hideto Minami, Masayoshi Okubo...	2574
15:25	2E14	Studies of Emulsion Polymerization Behavior Using Novel RAFT Agent Fuminori Nakaya, Keiichi Sakashita, <u>Tetsuya Noda</u>	2576
		M. Ouchi, presiding	
15:50	2E15	Syntheses of chiral polymers by RAFT polymerization and their aqueous solution properties <u>Shohei Nishimori</u> , Takashi Aoki	2578
16:15	2E16	Synthesis and structure control of block copolymers containing a poly(dialkyl fumarate) segment by various living radical polymerization techniques <u>Naoki Maeo</u> , Eriko Sato, Akikazu Matsumoto	2580
16:40	2E17	Synthesis and assembled structures of liner and star amphiphilic block copolymers having aromatic heterocycle moieties by RAFT polymerization <u>Kazunori Ishikawa</u> , Kazuhiro Nakabashi, Hideharu Mori, Atsuhiko Onuma, Makoto Morishima	2582
17:05	2E18	Polyion complexes formed from oppositely charged diblock copolymers with well controlled structure <u>Shin-ichi Yusa</u> , Midori Nishiuchi, Keita Nakai, Kazuhiko Ishihara	2584

Friday, September 30

Developments in Novel Radical Polymerization Methods Towards the Synthesis of Functional Materials

A. Matsumoto, presiding

9:10	3E01	Stimuli-Triggered On-Off Switching of Activated Ester Reactivity in Poly(4-acryloxyphenyl dimethylsulfonium triflate) <u>Ryohei Kakuchi</u> , Patrick Theato	2586
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9:35	3E02	CyclicPEG-Functionalized Polymers by Cationic Template-Assisted Polymerization: Synthesis and Molecular Recognition <u>Minami Kawabe</u> ,Takaya Terashima,Mitsuo Sawamoto.....	2588
10:00	3E03	Synthesis of cyclic polyolefines through ring-expansion living radical polymerization with nitroxide-based cyclic initiators <u>Ryosuke Kakuya</u> ,Michio M. Matsushita,Kunio Awaga.....	2590
10:25	3E04	Synthesis of cyclic vinyl polymer by RAFT polymerization with cyclic chain transfer agent <u>Yuuta Nakagawa</u> ,Hideaki Oike	2592
		Y. Iwasaki, presiding	
10:50	3E05	Controlled synthesis of functional block copolymers and higher-order structure formation by blending ionic liquids <u>Noriko Oida</u> ,Kohji Ohno,Takaya Sato,Yoshinobu Tsujii	2594
11:15	3E06	Surface Property Control by Radically Exchangeable Reactive Polymer Brushes Prepared by Precision Polymerization <u>Tomoya Sato</u> ,Yoshifumi Amamoto,Hiroki Yamaguchi,Atsushi Takahara,Hideyuki Otsuka	2596
11:40	3E07	Synthesis of Concentrated Polymer Brush via Surface-Initiated TERP of Ionic Liquid Monomers <u>Koji Nakanishi</u> ,Yoshikazu Yahata,Yoshinobu Tsujii,Takashi Morinaga,Takaya Sato,Shigeru Yamago.....	2598
		H. Otsuka, presiding	
12:55	3E08	Porous cross-linked polymers and carbons prepared by controlled/living radical polymerization <u>Kazuyoshi Kanamori</u> ,George Hasegawa,Kazuki Nakanishi,Shigeru Yamago	2600
13:20	3E09	Preparation of nonspherical composite polymer particles by controlled /living radical polymerization in aqueous dispersed systems Masaru Okayama,Takuya Tanaka,Yukiya Kitayama,Tomoe Yamagami, <u>Masayoshi Okubo</u>	2602
13:45	3E10	Synthesis of well-defined acrylic block copolymers and their application to dismantlable adhesion <u>Eriko Sato</u> ,Tadashi Inui,Akikazu Matsumoto.....	2604
14:10	3E11	Imparting anti-fouling properties on metal surfaces by immobilization of well-defined photo-reactive MPC block copolymers <u>Akira Matsumoto</u> ,Yasuhiko Iwasaki,Shinich Yusa	2606
		Y. Tsujii, presiding	
14:35	3E12	A Novel Lower Viscosity Dispersant for High Content Polyolefine Particle Dispersion <u>Shigeru Yao</u> ,Satoshi Ichikawa,Daisuke Tatsumi	2608
15:00	3E13	Advanced Polymer Materials Synthesized by New Living Radical Polymerization Method (TERP) <u>Takashi Kameshima</u>	2610
15:25	3E14	Development of Telechelic Polyacrylate by Atom Transfer Radical Polymerization <u>Yoshiki Nakagawa</u>	2612

Room F

Wednesday, September 28

Polymer Physics: Structure and Properties

N. Torikai, presiding

10:00	1F03	Rheological study on structure formation of block copolymer solution <u>Eiko Tamura</u> , Yurika Kawai, Tadashi Inoue, Akifumi Matsushita, Shigeru Okamoto 2892
10:25	1F04	Relationship between nonlinear rheology and hydrogen bonding structure of associative polymers <u>Azusa Shimizu</u> , Osamu Urakawa, Tadashi Inoue 2894
10:50	1F05	Molecular Origin of Rheological Properties of Hydrogen-Bonding Supramolecular Systems <u>Kotaro Takahashi</u> , Tsuyoshi Koga, Fumihiko Tanaka 2896

T. Sato, presiding

11:15	1F06	Rheology of Temperature-Sensitive PNIPAM solutions – Stress Growth and Non-Linear Rheology – <u>Tsuyoshi Koga</u> , Fumihiko Tanaka, Tomoko Maeda, Nao Yoshida, Toshiyuki Shikata, Shin-ichi Yusa, Françoise M. Winnik 2898
11:40	1F07	Rheological Behavior of Hydrophobic Fumed Silica Suspensions <u>Risako Marunaka</u> , Masami Kawaguchi 2900

I. Akiba, presiding

12:55	1F08	Analysis of orientation of fibers in polymer composites by X-ray CT images and anisotropic modulus tensor <u>Naohide Ohta</u> , Yukihiro Nishikawa, Masaaki Takahashi 2902
13:20	1F09	Phase separation behavior in aqueous solutions of the thermoresponsive diblock copolymer poly(2-isopropyl-2-oxazoline) and poly(2-ethyl-2-oxazoline) <u>Rintaro Takahashi</u> , Takahiro Sato, Xingping Qiu, Françoise Winnik 2904
13:45	1F10	Controlling the Lower Critical Solution Temperature of Thermo-sensitive Polymers by Copolymerization <u>Hiroyuki Kojima</u> , Fumihiko Tanaka 2906
14:10	1F11	Phase Behavior of Aqueous Solutions of N,N'-diisopropylfumaramide/N-isopropylacrylamide Copolymers <u>Akiko Matsumoto</u> , Akihito Hashidzume, Takahiro Sato 2908

T. Koga, presiding

14:35	1F12	Structural and rheological studies of aggregation behaviour of trimeric surfactants in aqueous solutions <u>Takumi Kusano</u> , Hiroki Iwase, Tomokazu Yoshimura, Mitsuhiro Shibayama 2910
15:00	1F13	Anomalous Small-angle X-ray Scattering Characterization of Polymer Micelle near Br Absorption Edge <u>Isamu Akiba</u> , Atsuro Takechi, Megumi Sakou, Kazuo Sakurai 2912
15:25	1F14	Formation of Aggregates from a Block Copolymer in an Organic Solvent Induced by Addition of Water <u>Tomoe Arai</u> , Akihito Hashidzume, Takahiro Sato 2914

F. Tanaka, presiding

15:50	1F15	Sedimentation Dynamics of Suspended-Microspheres with Long-range Interactions <u>Tomohisa Norisuye</u> , Yohsuke Maeyama, Teppei Yawada, Tran-cong-miyata Qui 2916
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16:15	1F16	Formation of Higher-Order Structure by Controlling Cyclic Molecule Location in Polyrotaxane <u>Shoko Takahashi</u> , Koichi Mayumi, Kazuaki Kato, Yasuhiro Sakai, Hideaki Yakoyama, Kohzo Ito 2918	2918
16:40	1F17	Structure-Property Relationships of Aromatic Polyesters: Comparison between PET, PTT, and PBT <u>Yuji Sasanuma</u> , Yusuke Wagai, Nobuaki Suzuki 2920	2920
T. Norisuye, presiding			
17:05	1F18	Aggregation Behavior of Hydrophilically Modified Poly(dimethylsiloxane) in Mixtures of Methanol and Water <u>Takashi Okuhara</u> , Akihito Hashidzume, Takahiro Sato 2922	2922
17:30	1F19	Selective Adsorption and Co-nonsolvency of Temperature-Responsive Polymers in Aqueous Mixed Solvents <u>Fumihiko Tanaka</u> , Hiroyuki Kojima, Tsuyoshi Koga 2924	2924
17:55	1F20	Interaction between an amphiphilic polymer and low molar mass surfactant in aqueous solution <u>Takahiro Sato</u> , Kai Uramoto, Takuya Shimomachi, Akihito Hashidzume .. 2926	2926

Thursday, September 29

Polymer Physics: Structure and Properties

Y. Katsumoto, presiding

9:10	2F01	Synthesis and characterization of poly(ethylene thioterephthalate) and poly(ethylene dithioterephthalate) <u>Daisuke Abe</u> , Yuji Sasanuma 2928	2928
9:35	2F02	Destruction and reconstruction of DNA studied by size exclusion chromatography <u>Keiko Tamada</u> , Takahiro Sato 2930	2930
10:00	2F03	Scattering Function of Semiflexible Ring Polymers <u>Ryutarou Tsubouchi</u> , Daichi Ida, Takenao Yoshizaki 2932	2932
10:25	2F04	Water state analysis of aqueous solution of polyvinylpyrrolidone with DSC <u>Yoshitomo Furushima</u> , Kazuhiko Ishikiriya, Hiroyuki Hosomi, Hideaki Takahashi 2934	2934

Y. Nakamura, presiding

10:50	2F05	Microenvironments of stereo-controlled acrylamide polymers in water monitored by the fluorescent label method <u>Misato Yamamoto</u> , Yukiteru Katsumoto 2936	2936
11:15	2F06	Conformation of Ring Polymer in Solution and Bulk <u>Atsushi Takano</u> , Yutaka Ohta, Yushu Matsushita 2938	2938
11:40	2F07	Conformation of Knotted Ring Polymer in Solution <u>Yutaka Ohta</u> , Masahide Nakamura, Yushu Matsushita, Atsushi Takano .. 2940	2940

T. Yoshizaki, presiding

12:55	2F08	Concentration Dependence of Excluded Volume Effects <u>Kazumi Suematsu</u> 2942	2942
13:20	2F09	Intermolecular Interaction of cycloamylose tris(phenylcarbamate) in theta solvents <u>Natsuki Asano</u> , Ken Terao, Shinichi Kitamura, Takahiro Sato 2944	2944

T. Shikata, presiding

13:45	2F10	Effects of Three-Segment Interactions on the Second Virial Coefficient of Unperturbed Semiflexible Ring Polymers <u>Daichi Ida</u> , Takenao Yoshizaki 2946	2946
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14:10	2F11	Cavitation in the Static Melt of Polymers <u>Masato Hashimoto</u> ,Susumu Fujiwara,Takashi Itoh 2948
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Emerging Development of Coordination Polymerization

14:50	SO	Introductory Remarks Kyoko Nozaki 2516
		K. Nozaki, presiding
15:00	2F13	Precision Heterogeneous Polymerization Based on Living Coordination Polymerization of Allene Derivatives <u>Ikuyoshi Tomita</u> ,Kenta Hisamura,Takahiro Ogawa,Mitsuru Kaminaga .. 2517
15:25	2F14	Reaction of polymers with bis-cyclopentane rings synthesized by double cyclopolymerization of trienes <u>Kenya Motokuni</u> ,Daisuke Takeuchi,Kohtaro Osakada 2519
15:50	2F15	Synthesis of Polynorbornenes Bearing both Cyano and Ester Functionalities by Ring-Opening Metathesis Polymerization and the Subsequent Hydrogenation <u>Yasushi Nishihara</u> 2521
		I. Tomita, presiding
16:15	2F16	Ring-opening Metathesis Polymerization of <i>N</i> -Substituted Norbornene-2,3-dicarboximides Bearing Aromatic Amino Acid <u>Yusuke Tanaka</u> ,Kazuhiro Yamabuki,Kenjiro Onimura,Tsutomu Oishi... 2523
16:40	2F17	Ring-opening Metathesis Polymerization of Optically-active Norbornenedicarboximide Having alpha-Methylbenzylamine Derivative as <i>N</i> -Substituent <u>Miki Sunamoto</u> ,Kenichi Mizuta,Kazuhiro Yamabuki,Kenjiro Onimura,Tsutomu Oishi 2525
17:05	2F18	Living Polymerization of Optically Active Phenylacetylene Derivatives, and the Effect of Molecular Weights on the Helical Structures of the Formed Polymers <u>Shohei Kumazawa</u> ,Naoya Onishi,Masashi Shiotsuki,Fumio Sanda 2527

Friday, September 30

Emerging Development of Coordination Polymerization

		M. Nishiura, presiding
9:10	3F01	Precise olefin metathesis polymerization: Unique emission properties by precise end-functionalization <u>Kenji Takamizu</u> ,Shingo Kuwabara,Kotohiro Nomura 2529
9:35	3F02	Catalytic Activity for the Polymerization of Substituted Acetylenes by Rh Catalyst Containing Functional Multidentate Ligand <u>Naoya Onishi</u> ,Masashi Shiotsuki,Fumio Sanda,Toshiki Aoki,Toshio Masuda 2531
10:00	3F03	Synthesis of End-Functionalized Poly(phenylacetylene)s Catalyzed by Well-Defined Palladium Complexes, and Their Application to Macroinitiators <u>Kei Takahashi</u> ,Jesus Rodriguez Castanon,Masashi Shiotsuki,Fumio Sanda,Toshio Masuda 2533
		K. Nomura, presiding
10:25	3F04	Random and alternating copolymerization of 1,6-heptadiene with isoprene by half-sandwich scandium catalysts <u>Masayoshi Nishiura</u> ,Fang Guo,Zhaomin Hou 2535

10:50	3F05	Homo- and copolymerization of olefins using ansa-(fluorenyl)(t-butyl amido)dimethyltitanium activated by modified methylaluminoxane treated with a hindered phenol <u>Takuya Suenaga</u> ,Zhengguo Cai,Yuushou Nakayama,Takeshi Shiono.. 2537
11:15	3F06	Synthesis of Group 4 Transition Metal Complexes Bearing an [OSSO]-type Tetradentate Ligand Fusing a Cycloalkane Ring and Isospecific Polymerization <u>Akihiko Ishii</u> ,Norio Nakata,Tomoyuki Toda,Keita Ikuma,Tsukasa Matsuo..... 2539
11:40	3F07	Synthesis of End-Functionalized Poly(2-vinylpyridine) via C-H activation by Rare Earth Metal Alkyl Complexes with Diamido Ligands <u>Hiroshi Kaneko</u> ,Haruki Nagae,Hayato Tsurugi,Kazushi Mashima 2541
		K. Nozaki, presiding
12:55	3F08IL	Recent Progress in Rare-Earth-Catalyzed Coordination Polymerization <u>Zhaomin Hou</u> 2543
13:45	3F10	Influences of alkylamido ligand in olefin copolymerization with ansa-(fluorenyl)(alkylamido)dimethyltitanium complexes <u>Yuuichi Sogou</u> ,Zhengguo Cai,Yuusyuu Nakayama,Takeshi Shiono 2546
		T. Shiono, presiding
14:10	3F11	Genesis of High-Performance Active Site Structures in Ziegler-Natta Catalysts <u>Toshiaki Taniike</u> ,Minoru Terano 2548
14:35	3F12	Development of Functional Polyolefins Prepared by Highly Active Ti-FI catalysts <u>Akihiko Iwashita</u> ,Hiroshi Terao,Haruka Saito,Haruyuki Makio 2550
15:00	3F13	Polymerization of olefins by bimetallic complexes with bis(imino)pyridine ligands in combination with various alkylaluminum cocatalyst <u>Shigenaga Takano</u> ,Daisuke Takeuchi,Kohtaro Osakada 2552
15:25	3F14	Ethylene Polymerization by Palladium/Phosphine-Sulfonate Catalysts in the Presence of Alcohol <u>Shingo Ito</u> ,Masafumi Kanazawa,Kyoko Nozaki..... 2554

Room G

Wednesday, September 28

Polymer Physics: Structure and Properties

S. Yamazaki, presiding

10:00	1G03	Memory effect and phenomenological model in enthalpy relaxation <u>Waki Sakatsuji</u> ,Takashi Konishi,Yoshihisa Miyamoto 2950
10:25	1G04	Relationship Between Spherulite Morphology and Hydrogen Bonds of Aliphatic Nylons Investigated by the 2D-FTIR Microscope Imaging Method <u>Reddy Kummetha Raghunatha</u> ,Kohji Tashiro 2952
10:50	1G05	Investigation of Crystalline Phase Transition of trans-1,4-Polyisoprene (Gutta percha) by the Vibrational Spectroscopy and X-ray Scattering Method <u>Ratri Paramita Jaya</u> ,Kohji Tashiro..... 2954

11:15	1G06	Investigation of Crystalline Phase Transition Mechanism of Poly(L-lactic Acid) on the Basis of X-ray-Analyzed Structures of the Various Crystalline Modifications <u>Kaewkan Wasanasuk</u> , Kohji Tashiro.....	2956
11:40	1G07	Crystal Structure and Crystalline Phase Transition Behaviors of Aryl Polyesters with Long Methylene Segments <u>Masafumi Tasaki</u> , Kohji Tashiro, Hiroko Yamamoto, Hak Seung Jeong, Hye Jin Jeong, Hyun Hoon Song, Moon Hor Ree	2958
T. Konishi, presiding			
12:55	1G08	Crystallization and structure of polyoxamides _I_ <u>Tomoyuki Nakagawa</u> , Shuichi Maeda, Koji Nozaki, Takashi Yamamoto ..	2960
13:20	1G09	A study of saturated primary nucleation behaviors on polymer melt crystallizations <u>Susumu Umemoto</u> , Kenichiro Usuda, Wataru Takarada, Takeshi Kikutani, Norimasa Okui.....	2962
13:45	1G10	Multistep change of crystallization behavior and melting behavior of poly(lactic acid) <u>Masachika Kurata</u> , <u>Munehisa Yasuniwa</u>	2964
M. Yasuniwa, presiding			
14:10	1G11	Crystallization process of syndiotactic polypropylene through the intermediate state <u>Takashi Konishi</u> , Waki Sakatsuji, Koji Fukao, Yoshihisa Miyamoto	2966
14:35	1G12	Crystallization of isotactic polypropylene by heating from mesomorphic phase Harutoshi Asakawa, <u>Koji Nishida</u> , Rintaro Inoue, Toshiji Kanaya	2968
15:00	1G13	Isothermal Crystallization through a mesophase under ultra-quench condition <u>Yasutoshi Tanzawa</u>	2970
K. Nishida, presiding			
15:25	1G14	Influence of entanglements on glass transition temperature in polymers <u>Yoshinori Kinugasa</u> , Keiichi Kuboyama, Toshiaki Ougizawa	2972
15:50	1G15	Effects of bulkiness of end groups closely related to disentanglement and sliding diffusion on nucleation of polymer Daisuke Hayashi, Maki Shirayanagi, <u>Shinichi Yamazaki</u> , Kunio Kimura...	2974
16:15	1G16	Temperature dependence of the spherulitic growth rate in polymer blends <u>Takayuki Ikehara</u> , Toshiyuki Kataoka	2976
16:40	1G17	Effect of evaporation rate at solvents casting on the crystal structures of PVDF films <u>Hironori Oshiro</u> , Yukari Hosokawa, Akihiko Kono, Tetuya Danno, Hideo Horibe	2978
Y. Tanzawa, presiding			
17:05	1G18	Selective sorption of organic compound in the nanopore of syndiotactic poly(p-methylstyrene) <u>Takahiko Nakaoki</u> , Kenichi Furukawa	2980
17:30	1G19	Crystal growth of helical polyacetylenes having alkyl side chain with various length <u>Takeyuki Sone</u> , Kunihiro Mitsutake, Otto Albrecht, Kaoru Ojima, Koji Yano	2982
17:55	1G20	Complexation of syndiotactic polystyrene with the compounds composed of ethylene oxide units <u>Keita Sasaki</u> , Fumitoshi Kaneko, Katsumi Imada	2984

Thursday, September 29

Polymer Physics: Structure and Properties

Y. Tajitsu, presiding

- 9:10 2G01 Fabrication of Novel Organic Nanofibers Containing Sulfonic Acid-Based Anionic Surfactants
Wei Min Zhou,Huairui Zhu,Hai Feng Yu,Takaomi Kobayashi 2986
- 9:35 2G02 The reaction field of stereoregular nano-space for template polymerization which is prepared from cross-linked *it*-PMMA / *st*-PMAA stereocomplex
Masumi Maegawa,Hiroharu Ajiro,Mitsuru Akashi 2988
- 10:00 2G03 Pyrolyzing Process of Polyaniline Studied by Solid-State ¹⁵N NMR Spectroscopy
Shigeki Kuroki 2990

Y. Saruyama, presiding

- 10:25 2G04 Equilibrium Polymerization of Alternately Bearing Silsesquioxane Cage and Siloxane Chains
Marie Yoshimatsu,Kunihiro Komori,Masashi Kunitake,Kiyoshi Sakai,Takashi Matsuo,Keiji Tanaka,Yusuke Onagamitsu 2992
- 10:50 2G05 Morphology and properties of films cast from solutions of globular DNA-surfactant complex particles
Yuka Tomimori,Hiroto Kikuno,Kazuya Furusawa,Akimasa Fukui,Naoki Sasaki 2994
- 11:15 2G06 Conformational Analysis of Imide Compounds and Polyimide Films derived from sBPDA Dianhydride using Far-Infrared Absorption Spectroscopy
Tomohiro Okada,Shinji Ando 2996
- 11:40 2G07 Structure and Mechanical Properties of Polyrotaxane Having Alkyl Side Chains
Yasuhiro Sakai,Ryojiro Gomi,Kazuaki Kato,Hideaki Yokoyama,Kohzo Ito 2998

K. Nitta, presiding

- 12:55 2G08 Photoelastic Constant of Polymer Film
Kyohei Takai,Shintaro Kuroda,Shunsuke Kinoshita,Yasuto Nakashima,Yuki Kamimura,Tetsuya Morita,Hiroyuki Kowa,Kanae Muraki,Yu Morimoto,Mitsuo Tsukiji,Yoshiro Tajitsu 3000
- 13:20 2G09 Simultaneous measurement of complex volume expansion coefficient and complex heat capacity of glassy Polystyrene using temperature modulation method
Yo Momota,Haruhiko Yao,Koji Fukao,Yasuo Saruyama 3002
- 13:45 2G10 Crystal Modulus of Polythiophene
Takashi Nishino,Tadashi Tendo,Ryo Komobuchi,Syunnsuke Tamba,Masqaru Kotera,Atsunori Mori 3004

Y. Miyamoto, presiding

- 14:10 2G11 Structural analysis of cold-drawing behavior for high density polyethylene
Mizue Kuriyagawa,Koh-hei Nitta 3006
- 14:35 2G12 Infrared spectroscopic studies on molecular orientation behavior of polypropylene films under biaxial deformations
Takayuki Sawada,Shingo Yoshida,Koh-hei Nitta 3008
- 15:00 2G13 Influence of the structural morphology on strain hardening behavior in necked isotactic polypropylene
Hitomi Nomura,Mizue Kuriyagawa,Koh-hei Nitta 3010

15:25	2G14	Structural Study of 3-Dimensionally Oriented Polymer Samples Produced by Plain-Strain Compression Method <u>Ninh Tran Hai</u> , Kohji Tashiro, Hyun Hoon Song 3012
T. Nishino, presiding		
15:50	2G15	Study of formation of nano-oriented crystals crystallized at super critical elongational field <u>Kiyoka Okada</u> , Hiroyasu Masunaga, Masamichi Hikosaka..... 3014
16:15	2G16	Change of Crystals of Poly(vinylidene fluoride) Induced by Stress <u>Yasuhiro Matsuda</u> , Yuya Ota, Shigeru Tasaka..... 3016
16:40	2G17	Viscoelasticity and stress relaxation of polyisoprene rubber <u>Yoshihisa Miyamoto</u> , Ken Taguchi, Ken Sekimoto..... 3018
17:05	2G18	Recovery of microphase-separated structure of polyurethane elastomers after deformation <u>Keisuke Matsuo</u> , Suguru Motokucho, Ken Kojio, Kohji Yoshinaga 3020

Friday, September 30

Polymer Physics: Structure and Properties

K. Kuboyama, presiding		
9:10	3G01	Morphological transitions of block copolymers in supercritical carbon dioxide at highly-swollen regime <u>Tomoaki Shinkai</u> , Hideaki Yokoyama, Kohzo Ito, Yasuhiro Sakai, Kenji Sugiyama 3022
9:35	3G02	Influence of supercritical carbon dioxide and organic solvents on the mobility of polystyrene—a study by quasielastic neutron scattering — <u>Fumitoshi Kaneko</u> , Tatsuya Kawaguchi, Osamu Yamamuro, Maiko Kofu ... 3024
10:00	3G03	Synthesis of triblock terpolymer and analysis of microphase separation by TEM <u>Takanori Ishii</u> , Hirokazu Hasegawa, Mikihiro Takenaka, Kennji Saijou ... 3026
F. Kaneko, presiding		
10:25	3G04	Dynamics of lamellae-Fddd transition of diblock copolymer melts <u>Takashi Chijiwa</u> , Mikihiro Takenaka, Kuniaki Matsuda, Myung Im Kim, Hirokazu Hasegawa..... 3028
10:50	3G05	Preparation and High-Ordered Structural Analysis of High-Strength Polypropylene Fibers by a New Drawing Method with Small Crystal Nuclei <u>Chizuru Hongo</u> , Tatsuya Kitagawa, Toshihisa Tanaka, Takaaki Hikima, Masaki Takata, Tadahisa Iwata 3030
11:15	3G06	Nanocrystal formation and crystallization behavior of press-drawn poly(L-lactic acid) <u>Keisuke Mori</u> , Keiichi Kuboyama, Toshiaki Ougizawa 3032
11:40	3G07	Study on relationship between contraction behavior induced by wet-dry change and initial structure of regenerated-fibroin-oriented-films <u>Taiyo Yoshioka</u> , Kohji Tashiro, Andreas Schaper, Yutaka Kawahara..... 3034
K. Tashiro, presiding		
12:55	3G08	Study of Stretch-induced Density Fluctuation of Polycarbonate <u>Ryuta Izumi</u> , Hirokazu Hasegawa, Mikihiro Takenaka, Shinya Yoshioka, Syoutaro Nishitsuji 3036
13:20	3G09	Defect behavior in hard-sphere crystal grown on a square pattern by Monte Carlo simulations <u>Atsushi Mori</u> , Yoshihisa Suzuki, Shigeki Matsuo 3038

13:45	3G10	The Buckling of Polymer Foam Cells under Compression Observed by X-ray CT <u>Chisato Kogita</u> ,Yukihiko Nishikawa,Masaoki Takahashi,Masahiro Ohshima 3040
A. Mori, presiding		
14:10	3G11	Dielectric relaxation behavior of aqueous solutions of polysaccharides <u>Natsuki Sugimoto</u> ,Toshiyuki Shikata..... 3042
14:35	3G12	Viscoelastic Behavior of Polymerized Ionic Liquids <u>Kenji Nakamura</u> ,Tatsuya Saiwaki,Koji Fukao 3044
15:00	3G13	Hydration and dehydration behavior of some proteins <u>Nao Yoshida</u> ,Toshiyuki Shikata 3046
15:25	3G14	Observation of Surface Layer during Drying Processes of Polymer Solution <u>Shunto Arai</u> ,Yutaka Sumino,Masao Doi 3048

Room H

Wednesday, September 28

Polymer Physics: Structure and Properties

T. Yamamoto, presiding

10:00	1H03	Morphological control and functionalization of hierarchically structured silica thin films transcribed from polyamine crystalline templates <u>Hiroyuki Matsukizono</u> ,Ren-hua Jin 3050
10:25	1H04	Two-dimensional phase separation of PMMA/PLA blend monolayer by spinodal decomposition mechanism <u>Go Satoh</u> ,Jiro Kumaki 3052
10:50	1H05	AFM investigation of vapor phase radical polymerization on a substrate Kouichiro Shibata,Ryo Nakano,Seigou Kawaguchi, <u>Jiro Kumaki</u> 3054
11:15	1H06	Nano-scale viscoelasticity evaluation of elastomer blend using force volume AFM <u>Makiko Ito</u> ,So Fujinami,Ken Nakajima,Toshio Nishi 3056
11:40	1H07	Nanorheology of polymeric surfaces [IX]—frequency dependence— <u>So Fujinami</u> ,Ken Nakajima,Toshio Nishi 3058

J. Kumaki, presiding

12:55	1H08	Surface Molecular Structure Analysis of Soluble Polyimide Membrane with Rubbing Treatment <u>Ken-ichi Izumi</u> ,Tetsuo Tominaga,Yoshiteru Takahashi 3060
13:20	1H09	Synthesis and self-assembly of 8-shaped amphiphilic copolymer consisting of hydrophilic and hydrophobic ring polymer unit <u>Fumiya Hatakeyama</u> ,Takuya Yamamoto,Yasuyuki Tezuka 3062
13:45	1H10	Synthesis and self-assembly of a cyclic amphiphilic PEO-PS block copolymer <u>Eisuke Baba</u> ,Satoshi Honda,Takuya Yamamoto,Yasuyuki Tezuka 3064

K. Hisada, presiding

14:10	1H11	Investigation of nanostructure and environmental response of monolayer of amphiphilic diblock copolymer containing betaine on the water surface <u>Yuta Yamakawa</u> ,Arjun Ghosh,Shin-ichi Yusa,Yoshiyuki Saruwatari,Hideki Matsuoka 3066
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14:35	1H12	Synthesis of amphiphilic di-block copolymers containing betaine and their self-assembly behaviour in water <u>Sivanantham Murugaboopathy</u> , Hideki Matsuoka 3068
15:00	1H13	Precise and Non-destructive Characterization by Small Angle X-ray Scattering for 'Buried' Periodic Nano-structures Fabricated with Nano-imprint Lithography <u>Takamichi Shinohara</u> , Tomoko Shirahase, Daiki Murakami, Taiki Hoshino, Moriya Kikuchi, Jun-ichiro Koike, Misao Horigome, Atsushi Takahara ... 3070
		H. Kitano, presiding
15:25	1H14	Microscopic-structure Analysis of Organic Photovoltaic Devices by Grazing-incidence Small-angle X-ray Scattering <u>Takuya Suzuki</u> , Yuko Kojima 3072
15:50	1H15	Time-resolved GISAXS/GISANS Measurements for Dewetting Process in Polymer Thin Films <u>Hiroki Ogawa</u> , Toshiji Kanaya, Hiroyasu Masunaga, Rintaro Inoue, Masaki Takata 3074
16:15	1H16	In-situ measurement system of synchrotron GISAXS applied for thin-film structure analysis of organometallic complex <u>Sono Sasaki</u> , Yasuhiro Masunaga, Hiroki Ogawa, Takaaki Hikima, Masaki Takata, Takuya Nakabayashi, Katsuhiko Kanaizuka, Masaaki Haga 3076
		S. Sasaki, presiding
16:40	1H17	Diffusion behavior of untethered polystyrene chains into polystyrene brush <u>Koji Mitamura</u> , Hiroshi Arita, Masami Terada, Motoyasu Kobayashi, Norifumi Yamada, Masahiro Hino, Hiroshi Jinnai, Atsushi Takahara ... 3078
17:05	1H18	Structure of Water in the Vicinity of Various Polymer Brushes As Examined by Sum Frequency Generation Method <u>Hiromi Kitano</u> , Takuya Kondo, Masanobu Muro, Kohji Nomura, Makoto Gemmei-ide, Hidenori Noguchi, Kohhei Uosaki, Kohji Ohno, Yoshiyuki Saruwatari 3080
17:30	1H19	Mass spectrometry of oligopeptide using anisotropic metal nanoparticles <u>Yasuro Niidome</u> , Yuki Nakamura, Masanori Fujii, Naotoshi Nakashima . 3082
17:55	1H20	Fabrication of gold nano-gaps by micro-contact printing <u>Yumi Taga</u> , Tsuyohiko Fujigaya, Yasurou Niidome, Naotoshi Nakashima ... 3084

Thursday, September 29

Polymer Physics: Structure and Properties

		H. Matsuoka, presiding
9:10	2H01	The Surface Structure Analysis of Styrene-Acrylic Acid Copolymer and Styrene-Methacrylic Acid Copolymer Emulsion Particles by Solid-State NMR <u>Taiji Kanda</u> , Toshimitsu Inoue, Tetsuya Ooshima, Fumitaka Horii 3086
9:35	2H02	Structure analysis of n-alkane thin-film by means of X-ray reflectivity measurement <u>Kazuki Ikemoto</u> , Koji Nozaki, Takashi Yamamoto 3088
10:00	2H03	In situ Observation of Phase Transition of n-alkane (C26) Thin-Film by SOR X-ray Diffraction Kazuki Ikemoto, <u>Koji Nozaki</u> , Eisuke Magome, Toshihiro Okajima, Takashi Yamamoto 3090
		H. Yajima, presiding
10:25	2H04	Preparation and functionalization of nano-fabricated surfaces by particle lithography and surface graft polymerization <u>Tamao Fukushima</u> , Sachiko Kaihara, Keiji Fujimoto 3092

10:50	2H05	Solvent annealing induced Perpendicular orientation of cylindrical microphase-separated structure in polystyrene-b-poly(4-hydroxystyrene) / hydrophilic oligomer blend thin film <u>Satoshi Ohya</u> , Taito Matsutani, Masamichi Fujikawa, Katsuhiko Yamamoto, Shinichi Sakurai, Tsukasa Miyazaki 3094
11:15	2H06	The research of non-Surface Activity and micellization of ionic amphiphilic diblock copolymers in water-organic mixed solvent <u>Hachisuka Masahiro</u> , Tomoyuki Ohnishi, Arjun Ghosh, Hideki Matsuoka.. 3096
11:40	2H07	Emerging optically active azobenzene-alt-fluorene copolymer by circularly polarized light origin <u>Kana Yoshida</u> , Wei Zhang, Michiya Fujiki..... 3098
K. Fujimoto, presiding		
12:55	2H08	Single-Molecule Imaging of Macromolecular Motor Function along a Chiral Helical pi-Conjugated Polymer Chain <u>Ken-ichi Shinohara</u> , Yuu Makida, Takashi Oohashi..... 3100
13:20	2H09	Synthesis and Property of Anionic Polymer Nanotubes with Fluorescence <u>Katsuya Imanishi</u> , Tsukasa Nakahodo, Hisashi Fujihara..... 3102
13:45	2H10	Dynamic Adsorption of Oppositely Charged Polyelectrolyte/Surfactant Mixture at the Air-Water Interface—External Reflection FTIR Spectroscopy from Poly(sodium 4-styrenesulfonate)/Dodecyl Trimethylammonium Bromide— <u>Kenji Hisada</u> , Anna Angus-smyth, Philip A. Ash, Colin D. Bain 3104
14:10	2H11	Nonlinear Behavior on Polymer Wrapping onto Carbon Nanotubes <u>Woojung Chung</u> , Michiya Fujiki, Masanobu Naito 3106
M. Fujiki, presiding		
14:35	2H12	Influence of environment on isomerization of spiropyran introduced at side chain of aqueous polymers <u>Kimio Sumaru</u> , Toshiyuki Takagi, Taku Satoh, Toshiyuki Kanamori 3108
15:00	2H13	Dispersion behavior and bioactivities of thermoresponsive [60]fullerene derivative <u>Yosuke Kaji</u> , Katumi Uchida, Kouji Tuchiya, Hirofumi Yajima 3110
15:25	2H14	Change in structural properties of polymeric micelle containing spirobenzopyran by light irradiation <u>Yu Echigo</u> , Katsumi Uchida, Koji Tsuchiya, Hirofumi Yajima 3112
15:50	2H15	Development of pH-Responsive Materials Prepared with Acid-Insoluble Carboxy Monomer <u>Hidenobu Shimizu</u> , Risei Wada, Masaru Okabe 3114
K. Nishida, presiding		
16:15	2H16	Fabrication of Polymer Brushes with Different Topological Structures and Its Characterization <u>Shinichiro Sakurai</u> , Hirohmi Watanabe, Atsushi Takahara..... 3116
16:40	2H17	Analysis of Deformed Bicontinuous Structure using X-ray CT Images : Correlation with Shear Stress <u>Hiroyasu Hatakeyama</u> , Yukihiro Nishikawa, Masaoki Takahashi..... 3118
17:05	2H18	Molecular mobility and dipolar orientation of surface and interface of poly(vinyl chloride) <u>Koichi Hirano</u> , Yasuhiro Matsuda, Shigeru Tasaka..... 3120

Friday, September 30

Polymer Physics: Structure and Properties

K. Tanaka, presiding

9:35	3H02	Analysis of skin hydration state using IR-ATR Spectroscopy <u>Terumi Sakabe</u> , Ryosuke Ozawa, Satoru Yamazaki, Takeshi Hasegawa.. 3122
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10:00	3H03	Preparation of Functional Polymer Surface with Segregated Poly(ethylene oxide)Side Chains <u>Kaya Tokuda</u> ,Miki Noda,Masaru Kotera,Takashi Nishino.....	3124
A. Fujimori, presiding			
10:25	3H04	Construction of Anti-oxidation Polymer Surface Based on Segregation Phenomenon <u>Hirofumi Tsuruta</u> ,Yoshihisa Fujii,Keiji Tanaka	3126
10:50	3H05	Preparation and estimation of novel dynamic interface by using self-oscillating polymer <u>Mio Hidaka</u> ,Yoko Murase,Kennichi Nagase,Mitsuo Okano,Ryo Yoshida .	3128
11:15	3H06	Aggregation States of Stereoregular Poly(methyl methacrylate) at the Water Interface <u>Ayanobu Horinouchi</u> ,Yoshihisa Fujii,Keiji Tanaka	3130
11:40	3H07	Thermal Molecular Motion of Poly(methyl methacrylate) at Non-solvent Interfaces <u>Koichiro Hori</u> ,Keiji Tanaka,Masato Sakaguchi	3132
T. Ougizawa, presiding			
12:55	3H08	Thermal stability and thickness of self-assembled phospholipid layer fabricated onto polymer surface by plasma assisted method <u>Takeshi Kimura</u> ,Yuka Sawama,Yasushi Sasai,Shin-ichi Kondo	3134
13:20	3H09	Measurements and analysis of adhesion between self-assembled monolayers and polymer by JKR method <u>Yoshiko Harada</u> ,Hiroshi Jinnai,Atsushi Takahara	3136
13:45	3H10	Segregation and Function of Fluorinated Polymers at Interfaces <u>Tomoyasu Hirai</u> ,Atsushi Sakai,Masayuki Haraguchi,Masahiro Ozawa,Misao Miyamoto,Keiji Tanaka.....	3138
T. Nishino, presiding			
14:10	3H11	Precise synthesis of polymers with liquid crystal side-chains and its aggregation states in thin films <u>Shota Osumi</u> ,Tomoyasu Hirai,Masahiko Asada,Jyun-ichiro Koike,Misao Horigome,Hiroki Ogawa,Hiroyasu Masunaga,Keiji Tanaka .	3140
14:35	3H12	Initial Formation Process of Interface between Different Polymer Layers Prepared by Spin-Coating Yuki Mishima,Keiichi Kuboyama, <u>Toshiaki Ougizawa</u>	3142
15:00	3H13	Effect of stirring rate on emulsion polymerization of monomers having different polarities with nonionic emulsifier <u>Nami Matsusaka</u> ,Toyoko Suzuki,Masayoshi Okubo	3144

Room I

Wednesday, September 28

Polymer Physics: Structure and Properties

H. Kato, presiding

10:00	1I03	Anisotropic thermal diffusion and two-dimensional thermal analysis in micro-scale with high-speed Infrared camera Junko Morikawa, <u>Toshimasa Hashimoto</u>	3146
10:25	1I04	Two-Dimensional Analysis of Retardation and Slow Axis Azimuth Angle of Polymeric Films with Polarization High-Speed Camera <u>Yuta Hikima</u> ,Junko Morikawa,Toshimasa Hashimoto,Takashi Oonuma..	3148

10:50	1I05	1H spin-diffusion solid state NMR study of intermolecular crystalline structure for the silk model peptide <u>Koji Yazawa</u> , Takuya Ohata, Kenta Miyazawa, Tatsuya Ogawa, Akihiro Aoki, Yusuke Nishiyama, Tetsuo Asakura 3150	3150
T. Hashimoto, presiding			
11:15	1I06	Vibrational analysis of polyoxymethylene by using density functional theory calculations <u>Ryouta Takahashi</u> , Shinichi Hirota, Takaumi Noguchi..... 3152	3152
11:40	1I07	Accurate Characterization of Polystyrene Latex Nanoparticle in Liquid Phase using Dynamic Light Scattering and Asymmetrical Field Flow Fractionation with Multi-Angle Light Scattering <u>Haruhisa Kato</u> , Shinichi Kinugasa..... 3154	3154
12:55	1I08	Thermally Aging Analysis of Cable Insulator <u>Hideto Momose</u> , Kyoko Honbo, Motoko Harada, Takanori Yamazaki, Kiyoshi Watanabe..... 3156	3156
13:20	1I09	Spin contrast variation study of silica-filled styrene-butadiene rubber <u>Yohei Noda</u> , Daisuke Yamaguchi, Takeji Hashimoto, Satoshi Koizumi, Tetsuo Tominaga, Takuo Sone, Takeshi Yuasa..... 3158	3158
Q. Tran-Cong-Miyata, presiding			
13:45	1I10	The perpendicular orientation behavior of cylindrical microdomain of PS-b-PMA diblock copolymer film using the selective-solvent casting <u>Masamichi Fujikawa</u> , Satoshi Ohya, Katsuhiko Yamamoto, Shinichi Sakurai 3160	3160
14:10	1I11	Crystallization of Homopolymer/Block Chain Blends Confined in Nanocylinders <u>Shintarou Nakagawa</u> , Shuichi Nojima, Takashi Ishizone, Takashi Shimizu, Yasuhiko Kakiuchi, Kazuo Yamaguchi, Seiichi Nakahama..... 3162	3162
14:35	1I12	Effects of Liquid-Liquid Phase Separation on Crystallization of PEG in Blends <u>Fuminori Arai</u> , Masako Dobashi, Hiroki Takeshita, Masamitsu Miya, Katsuhiko Takenaka, Tomoo Shiomi 3164	3164
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15:25	1I14	Analysis of microphase-separated structure in polystyrene- block-polyvinylpyrrolidone amphiphilic diblock copolymer <u>Naotaka Suenaga</u> , Kuniaki Matsuda, Go Sakaguchi, Kenji Saijo, Mikihiro Takenaka, Hirokazu Hasegawa, Yukie Kitada, Yasuyuki Nakamura, Shigeru Yamago 3168	3168
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17:05	1I18	Cellulose Fiber Dispersed Polymer Composite : Three-dimensional Observation and Rheology <u>Toshiaki Hamada</u> ,Yukihiro Nishikawa,Masaaki Takahashi,Masahiko Itakura.....	3176
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Thursday, September 29

Polymer Physics: Structure and Properties

H. Yoshida, presiding

9:10	2I01	2D Bicomponents self-assembled structures consisted of carbon nitride derivatives Masashi Aono, <u>Shinobu Uemura</u> ,Tamikuni Komatsu,Masashi Kunitake ..	3182
9:35	2I02	Structural Control and Interaction with Tissue-derived Biomolecules Organo-modified Layered Aluminosilicate Films Constructed by Ubiquitous Element <u>Jyun-ichi Kusaka</u> ,Syuntaro Arai,Munehiro Kubota,Keiichi Kurosaka,Atsuhiro Fujimori	3184
10:00	2I03	One-Dimensional Assembly of Spherical Silica Nanoparticles by the Effect of Polymers <u>Mizuki Okada</u> ,Shujun Zhou,Ayae Narutaki,Atsushi Shimojima,Tatsuya Okubo	3186

M. Kunitake, presiding

10:25	2I04	Control of size and orientation of gold nanoparticles using block copolymer thin film <u>Ryutarou Nakagawa</u> ,Hirohisa Yoshida.....	3188
10:50	2I05	SiO ₂ network formation using silsesquioxane polymer nanosheet <u>Kazuki Sonobe</u> ,Tatsuya Ikenuma,Yeji Kim,Masaya Mitsuishi,Tokuji Miyashita	3190
11:15	2I06	Relationship between nanostructures and gas transport properties in hyperbranched polyimide-silica hybrid membranes <u>Masako Miki</u> ,Yasuharu Yamada	3192
11:40	2I07	3D Structure Analysis of Monodisperse Silica Filled Polymer Composites by X-ray CT <u>Shota Ichikari</u> ,Yukihiro Nishikawa,Masaaki Takahashi	3194

T. Mizumo, presiding

13:45	2I10	Resonance Shear Measurement on Structuring of Ionic Liquid Confined in Nano Space <u>Yutaka Minamino</u> ,Motohiro Kasuya,Masashi Mizukami,Kazue Kurihara .	3196
14:10	2I11	Characteristic Analysis of Polyion Complex from Y-Shaped Polymer with Double Charged Segments <u>Atsushi Kobayashi</u> ,Akihiro Kishimura,Shigehiro Hiki,Kazunori Kataoka..	3198

Y. Hirokawa, presiding

14:35	2I12	Structure and Function of Multi-particle layered Organizaatin for Polymer-Nanosphere <u>Satoshi Chiba</u> ,Yoko Abe,Yuji Shibasaki,Atsuhiro Fujimori.....	3200
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15:00	2I13	Physical and chemical modifications of a hollow gel particle to enable its application as a reactor <u>Chiaki Masumura</u> , Sachiko Kaihara, Keiji Fujimoto 3202	3202
S. Kawaguchi, presiding			
15:25	2I14	Morphology of doughnut-shaped polymer microparticles fabricated by solvent exchange procedure <u>Satoshi Tanimoto</u> , Konomi Miura, Shohei Ida, Yoshitsugu Hirokawa 3204	3204
15:50	2I15	Full-visible-spectrum photoluminescent core-shell materials by solution-phase physisorption <u>Ayako Nakao</u> , Michiya Fujiki 3206	3206
M. Naito, presiding			
16:15	2I16	Dispersion state of Multi-walled Carbon Nanotubes, and Viscoelasticity and Electrical Conductivity of the Composites <u>Junya Hirata</u> , Takasuke Nezaki, Yukihiro Nishikawa, Masaoki Takahashi.. 3208	3208
16:40	2I17	Dispersion of Single-Walled Carbon Nanotubes into Polymers Utilizing Ionic Liquid : Structure, Viscoelasticity and Electrical Conductivity of the Composites <u>Takasuke Nezaki</u> , Yukihiro Nishikawa, Masaoki Takahashi 3210	3210
17:05	2I18	Microcellular Structure and Electrical Properties of Electrical Conductive Polymer Foam Filled with Nanocarbon <u>Shigeo Asai</u> , Shuichi Akasaka 3212	3212

Friday, September 30

Polymer Physics: Structure and Properties

A. Takano, presiding			
9:10	3I01	3D-TEM Study on the Grain Boundary Structures of Perforated Layer Microdomains <u>Taichi Makida</u> , Go Sakaguti, Eiji Nakamura, Kazunori Takei, Hirokazu Hasegawa 3214	3214
9:35	3I02	3D-TEM Study on the Novel Bicontinuous Microdomain Structures <u>Midori Wakabayashi</u> , Gou Sakaguchi, Hirokazu Hasegawa 3216	3216
10:00	3I03	Effect of Viscosity on Preservability of long-range order during Gelation of Microphase-Separated Structures formed in Semi-dilute Solutions <u>Hiroyuki Aoyama</u> , Shinpei Ito, Kazuhiro Sato, Shigeru Okamoto, Akihiko Ikeda, Hirokazu Hasegawa 3218	3218
10:25	3I04	Heat-resistant improvement of thermal plasticity PMMA <u>Yosuke Yamada</u> , Eisuke Nihei 3220	3220
T. Fukushima, presiding			
10:50	3I05	Dispersion state of low-melting-point alloy in polyacrylate – Effect of solvent added for sample preparation – <u>Yusuke Fukuhara</u> , Yasuhiro Matsuda, Shigeru Tasaka 3222	3222
11:15	3I06	Investigation of Diffusion and Re-orientation in Iodine/Nylon 6 Complex [VIII] – Ionic Diffusion Supported by Amphiphilicity of Polyiodide Ion – <u>Akio Kawaguchi</u> 3224	3224
11:40	3I07	Molecular Design and characterization of aromatic polythioesters and polydithioesters <u>Daisuke Abe</u> , Yuji Sasanuma 3226	3226
S. Kawaguchi, presiding			
12:55	3I08	Synthesis and structure of chiral polyfluorene derivatives as a circularly-polarized-light emitting material candidate <u>Kento Watanabe</u> , Takeshi Sakamoto, Tamaki Nakano 3228	3228

13:20	3I09	Polyacetylene derivatives bearing a branched methyl group. IV. Position dependence of the methyl group <u>Toshifumi Hiraoki</u> , Yoshiaki Yoshida, Yasuteru Mawatari, Masayoshi Tabata.....	3230
		T. Nakano, presiding	
13:45	3I10	Dynamic Conformational Behavior of Solvophobicallly Biased Nanoscale Helices <u>Shinji Ando</u> , Eisuke Ohta, Atsuko Kosaka, Takanori Fukushima, Daisuke Hashizume, Hiroyuki Koshino, Takuzo Aida.....	3232
14:10	3I11	Solution NMR Analysis about Stereoregularity of Poly(lactic acid) <u>Koto Suganuma</u> , Ken Horiuchi, Hironori Matsuda, Akihiro Aoki, H.N. Cheng, Tetsuo Asakura	3234
14:35	3I12	Ludwig-Soret effect of non-ionic surfactant in water <u>Kousaku Maeda</u> , Rio Kita, Naoki Shinyashiki, Shin Yagihara	3236

Room J

Wednesday, September 28

New Expansion of Nano- and Micro-Fabrication

9:50	SO	Introductory Remarks Teruaki Hayakawa	5557
		T. Oyama, presiding	
10:00	1J03	Development of novel resist material based on Noria derivatives with pendant adamantyl acetal moieties <u>Mayumi Jinguji</u> , Hiroto Kudo, Tadatomi Nishikubo, Hiroaki Oizumi, Toshiro Itani, Ken Maruyama, Toru Kimura, Tsutomu Shimokawa ..	5558
10:25	1J04	Synthesis of Doublecalixarene Derivative with Pendant Adamantyl Ester Group and Their Application for Resist Materials <u>Kazuki Moriyama</u> , Tadatomi Nishikubo, Hiroto Kudo, Hiroaki Oizumi, Toshiro Itani, Ken Maruyama, Tooru Kimura, Tutomu Shimokawa	5560
10:50	1J05	Synthesis and property of triplecalixresorcinarene derivatives with pendant adamantyl ester groups and their patterning property using electron beam resist system <u>Hiroyuki Seki</u> , Hiroto Kudo, Ken Maruyama, Toru Kimura, Tsutomu Shimokawa, Tadatomi Nishikubo	5562
		H. Kudo, presiding	
11:15	1J06	Improvement in properties of photosensitive polyimides based on alkaline-developable negative-tone reaction development patterning <u>Aya Kasahara</u> , Yumiko Nakamura, Akio Takahashi, Toshiyuki Oyama...	5564
12:55	1J08	Study of the decomposition reaction of resist materials by hydrogen radicals <u>Yu Arai</u> , Makoto Watanabe, Akihiko Kono, Tadaaki Yamagishi, Hideo Horibe	5566
		T. Yamashita, presiding	
13:20	1J09	New Photopatterning Materials Exhibiting Selective and Reversible Crystalline-Amorphous Phase Change by Photodimerization of an Anthracene Moiety <u>Hideyuki Kihara</u> , Masaru Yoshida	5568
13:45	1J10	Hierarchical Structure Formation in SRG Process of Azobenzene Dendrimer <u>Wenhan Li</u> , Shusaku Nagano, Takahiro Seki	5570

14:10	1J11	Direct surface micropatterning using volume change of novel photo-sensitive soft materials <u>Takashi Miyata</u> , Yuri Kojima, Tadashi Uragami 5572	
		H. Kihara, presiding	
14:35	1J12	Micropatterning liquids on tunable microwrinkles <u>Takuya Ohzono</u> , Hirosato Monobe 5574	
15:00	1J13	Application of Stimulated Property-Conversion Materials to Functional Pattern Formation by Photoirradiation <u>Takashi Yamashita</u> , Fumiaki Kodera, Motoshi Mino, Kunihiro Okano.. 5576	
15:25	1J14	Mechanism elucidation on nano-imprinting of core-shell particles and application of the imprinted surface as an atto-reactor for bio-immobilization <u>Midori Nishimura</u> , Sachiko Kaihara, Keiji Fujimoto 5578	
		T. Ohzono, presiding	
15:50	1J15	Dynamics of Cassie Baxter-Wenzel wetting transition on patterned polymer surfaces <u>Daiki Murakami</u> , Hiroshi Jinnai, Atsushi Takahara..... 5580	
16:15	1J16	Fabrication and evaluation of thermo-responsive superhydrophobic surfaces prepared by honeycomb-patterned porous films <u>Akihito Takahashi</u> , Daisuke Ishii, Hiroshi Yabu, Masatsugu Shimomura . 5582	
		M. Komura, presiding	
16:40	1J17	Synthesis and Characterization of Side-chain Polymers with Surface-active Functional Groups for Surface Patterning Materials <u>Mizuki Sato</u> , Masa-aki Kakimoto, Teruaki Hayakawa 5584	
17:05	1J18	Synthesis of Liquid Crystalline POSS-containing Block Copolymers for Control of Nanostructures in Thin Films by Thermal Annealing <u>Haruka Mikami</u> , Masa-aki Kakimoto, Teruaki Hayakawa 5586	
17:30	1J19	Microphase separated structure and photo-alignment in thin film of liquid crystalline azobenzene diblock copolymer with crystalline block <u>Tomoki Dohi</u> , Mitsuo Hara, Yuki Nimura, Shusaku Nagano, Takahiro Seki..... 5588	

Thursday, September 29

New Expansion of Nano- and Micro-Fabrication

		T. Hayakawa, presiding	
9:10	2J01IL	Patterned Media and Block Copolymers: A Challenge to the Limits <u>Hirokazu Hasegawa</u> 5590	
		K. Asakawa, presiding	
10:00	2J03	Synthesis and Characterization of Fluorine-containing Block Copolymers for Top-down and Bottom-up Combined Lithographic Technology <u>Rina Maeda</u> , Teruaki Hayakawa, Christopher K. Ober 5593	
10:25	2J04	Size-Tunability of PEO Microdomains in Liquid Crystalline PEO _m - <i>b</i> -PMA(Az) _n Thin Films under Systematically Controlled Volume Fraction <u>Hideaki Komiyama</u> , Ryohei Sakai, Kaori Kamata, Tomokazu Iyoda, Motonori Komura..... 5595	
10:50	2J05	Directed self-assembly of amphiphilic liquid crystalline block copolymers with chemically pre-patterned templates <u>Hiroshi Yoshida</u> , Yasuhiko Tada, Motonori Komura, Tomokazu Iyoda .. 5597	

T. Hayakawa, presiding		
11:15	2J06	Development of new patterning process in the block copolymer lithography <u>Harumi Hayakawa</u> , Shigenori Fujikawa, Takahiro Senzaki, Ken Miyagi, Katsumi Ohmori, Kazufumi Sato 5599
11:40	2J07	Large scale fabrication of the metal nanoparticle array by block copolymer lithography and its optical properties <u>Mari Koizumi</u> , Shigenori Fujikawa 5601
H. Matsumoto, presiding		
12:55	2J08	Structure and Property of Titanium Dioxide Nanosheet <u>Daisuke Yamaguchi</u> , Satoshi Koizumi, Yoshio Hasegawa, Yukio Hishinuma, Masashi Suzuki, Hiroto Kodama, Masato Ohnuma, Yojiro Oba 5603
13:20	2J09	Micro-patterning based on the photocatalytic function of titania and its application <u>Seung-woo Lee</u> 5605
13:45	2J10	Spectra Tunable Emission Device with Polymer Nanosheet / CdSe Nanoparticle Hybrid Assembly <u>Shimpei Morita</u> , Masaya Mitsuiishi, Tokuji Miyashita, Keiko Tawa, Junji Hishii 5607
H. Yoshida, presiding		
14:10	2J11	Fabrication of noble metal mesh structures by reactive-monolayer-assisted thermal nanoimprint lithography and their application to transparent conductive films <u>Shoichi Kubo</u> , Koichi Nagase, Tomoyuki Ohtake, Eui-chul Kang, Hiroshi Kataoka, Tadashi Yamada, Masaru Nakagawa 5609
14:35	2J12	Novel light-transmitting nano-meshed metal electrode fabricated by self-assembled method Eishi Tsutsumi, Akira Fujimoto, Ryota Kitagawa, Kumi Masunaga, Tsutomu Nakanishi, <u>Koji Asakawa</u> 5611
15:00	2J13	Fabrication and Control of Multi-Functional Nano-hydrogel <u>Hiromi Marui</u> , Atsushi Asano, Masaaki Omichi, Yuta Maeyoshi, Satoshi Tsukuda, Masaki Sugimoto, Katsuyoshi Takano, Shu Seki 5613
M. Ebara, presiding		
15:25	2J14	Fabrication of acetylene-functionalized polystyrene nanowires by the single particle nano-fabrication technique <u>Atsushi Asano</u> , Yuta Maeyoshi, Satoshi Tsukuda, Masaki Sugimoto, Akinori Saeki, Shu Seki 5615
15:50	2J15	Fabrication of Two-Dimensional Structures and their Transformation by External Stimuli <u>Yoshihiro Kikkawa</u> , Masatoshi Kaneshato 5617
Y. Kikkawa, presiding		
16:15	2J16	Creation of 3-D patterns by irradiation of quantum beam to polymerizable ionic liquid <u>Susumu Kuwabata</u> , Hiro Minamimoto, Kosuke Inoue, Tetsuya Tsuda, Akihito Imanishi, Ken Hosoya, Hiroshi Uyama, Shu Seki 5619
16:40	2J17	Preparation of Rodlike Microparticles of Liquid Crystal Elastomer by Electrospinning and Laser Patterning <u>Hidetoshi Matsumoto</u> , Keita Nakashima, Ryohei Ishige, Kazuma Tsuboi, Masatoshi Tokita, Junji Watanabe, Akihiko Tanioka 5621
17:05	2J18	Smart surface shape-memory with tunable nano patterns for cell culture <u>Mitsuhiro Ebara</u> , Koichiro Uto, Naokazu Idota, Takao Aoyagi 5623

Friday, September 30

Polymer Physics: Structure and Properties

T. Sato, presiding

9:10	3J01	Preparation and photoresponsive behavior of crosslinked azobenzene liquid-crystalline polymers with a chiral moiety <u>Keiji Ogawa</u> , Jun-ichi Mamiya, Motoi Kinoshita, Atsushi Shishido, Tomiki Ikeda.....	3238
9:35	3J02	Photoresponsive Behavior of Crosslinked Liquid-Crystalline Polymer Films with Different Spacer Length of Azobenzene Crosslinkers <u>Ryuta Sasaki</u> , Jun-ichi Mamiya, Motoi Kinoshita, Atsushi Shishido, Tomiki Ikeda.....	3240
10:00	3J03	Development and photomobile property of liquid-crystalline polymers including diarylethene <u>Yuya Watanabe</u> , Noriyuki Takase, Jun-ichi Mamiya, Motoi Kinoshita, Atsushi Shishido, Tomiki Ikeda	3242
10:25	3J04	Liquid crystalline conjugated oligomers – Mesomorphic properties of phenyleneethynylene-based oligomers with lateral and terminal alkyl chains – <u>Tetsuo Yatabe</u> , Yuji Kawanishi	3244

A. Shishido, presiding

10:50	3J05	Fabrication of hydrogen bonded anthracene liquid-crystalline polymer complex fiber and application for photomechanical materials <u>Masahiko Takemoto</u> , Mizuho Kondo, Ryohei Fukae, Nobuhiro Kawatsuki ..	3246
11:15	3J06	Lyotropic liquid crystal of amylose alkylcarbamates – Cholesteric and smectic phase in tetrahydrofuran and ethyl lactates – <u>Keiko Oyamada</u> , Ken Terao, Shinichi Kitamura, Takahiro Sato.....	3248
11:40	3J07	Evaluation of liquid-crystal behavior of supergiant polysaccharide, sacran, by regulation of molecular weight and solvent composition <u>Risa Tsuji</u> , Maiko Okajima, Seiji Tateyama, Tatsuo Kaneko	3250

H. Kikuchi, presiding

12:55	3J08	Swelling Properties of Liquid Crystal Polyelectrolyte Gels <u>Yusuke Nishikori</u> , Kazuya Iseda, Kenta Kokado, Kazuki Sada	3252
13:20	3J09	Effect of adding salts on liquid crystalline properties of zwitterion having long alkyl chains <u>Satomi Taguchi</u> , Takahiro Ichikawa, Takashi Kato, Hiroyuki Ohno.....	3254
13:45	3J10	Stereospecific Assembly of Liquid Crystalline Peptidic Macrocycles <u>Kohei Sato</u> , Yoshimitsu Itoh, Takuzo Aida	3256

Y. Tezuka, presiding

14:10	3J11	Large electrooptic effects in aqueous dispersions of non-organic nanoparticles with high-aspect ratio <u>Aya Jinnouchi</u> , Yasushi Okumura, Nobuyoshi Miyamoto, Sunao Yamada, Hiroki Higuchi, Hirotsugu Kikuchi.....	3258
14:35	3J12	Preparation of holographic materials based on liquid crystals doped with an oligothiophene derivative <u>Kenta Matsuura</u> , Motoi Kinoshita, Priimagi Arri, Jun-ichi Mamiya, Atsushi Shishido.....	3260
15:00	3J13	Synthesis and Assembly Behavior of Novel Liquid Crystal Dendrimer <u>Keisuke Azuma</u> , Takane Imaoka, Kimihisa Yamamoto.....	3262

Room K

Wednesday, September 28

Frontier of Development of Networked Polymers: Elaborate Designs of Monomers, Cross-linking Systems, and Supramolecular Systems

9:50	SO	Introductory Remarks Atsushi Sudo, Itaru Hamachi	5474
		T. Ogoshi, presiding	
10:00	1K03	Synthesis of Reactive Phenolic Resins <u>Gen-ichi Konishi</u> , Yusuke Tojo	5475
10:25	1K04	Synthesis of networked polymer based on ring-opening addition reaction of 1,3-benzoxazine with resorcinol <u>Hiroaki Oie</u> , Atsushi Mori, Atsushi Sudo, Takeshi Endo	5477
		H. Mori, presiding	
10:50	1K05	Synthesis of Trisiloxane-containing Alicyclic Dianhydrides and the Characterization of Polyimides Derived from thereof <u>Tohru Kikuchi</u> , Hayato Kotani	5479
11:15	1K06	Synthesis of Phenolic Polymers with Regular Structure from Precursors <u>Yuki Takayama</u> , Chihiro Kato, Tomoki Ogoshi, Tada-aki Yamagishi	5481
11:40	1K07	Molecular Designs of Monomers with Non-Shrinkage Upon Polymerization and Their Applications to Networked Polymers <u>Takeshi Endo</u> , Atsushi Sudo	5483
		G. Konishi, presiding	
12:55	1K08	Synthesis of a Nobel Crystalline Epoxy Polymer and Its Thermal and Physical Properties <u>Masashi Kaji</u> , Koichiro Ogami, Tomomi Kai	5485
13:20	1K09	Thermal Conductivity of Liquid Crystalline Epoxy/BN composites ordered by Magnetic Field <u>Miyuki Harada</u> , Junichiro Ando, Mitsukazu Ochi	5487
13:45	1K10	Phase Structure and Thermo-mechanical Properties of Twin Mesogenic Epoxy Thermosets with Different Length of Siloxane Spacers Miyuki Harada, <u>Mio Hirotani</u> , Mitsukazu Ochi	5489
		T. Oyama, presiding	
14:10	1K11	Thermal Conductivity and Higher Order Structure of Liquid Crystalline Asymmetric Epoxy Thermosets <u>Akihiro Nakamura</u> , Rina Maeda, Masatoshi Tokita, Masa-aki Kakimoto, Teruaki Hayakawa, Shinya Tokizaki, Kenji Mimura, Yasushi Uehara, Kazumasa Kawase, Hiroaki Urushibata, Hideharu Nobutoki	5491
14:35	1K12	Synthesis of liquid crystalline polymers with epoxy termini in the side chains and preparation of its resins <u>Masaya Sugiyama</u> , Rina Maeda, Masatoshi Tokita, Hiroaki Urushibata, Masa-aki Kakimoto, Teruaki Hayakawa, Shinya Tokizaki, Kenji Mimura, Hideharu Nobutoki	5493
15:00	1K13	The relationship between higher order structure and thermal conductivity of the mesogen-containing epoxy composite <u>Yuka Yoshida</u> , Yasuhiro Yagi, Shingo Tanaka, Yoshitaka Takezawa	5495

A. Sudo, presiding			
15:25	1K14	Formative process of nano-phase structure of epoxy / acrylic block copolymer blends <u>Hajime Kishi</u> , Yasuaki Nakashima, Takuma Abe, Yumi Kunimitsu, Mitsunori Asada, Shinya Oshita, Yoshihiro Morishita	5497
15:50	1K15	Preparation of novel organic-inorganic networks having sulfonic acids based on RAFT polymerization <u>Yosuke Saito</u> , Kazuhiro Nakabayashi, Hideharu Mori, Atsuhiko Oonuma, Makoto Morishima	5499
16:15	1K16	Preparation of high refractive index optical materials containing ZrO ₂ nanoparticles <u>Mutsumi Matsumoto</u> , Yusuke Ichijo, Atsushi Narumi, Seigou Kawaguchi ..	5501
T. Hayakawa, presiding			
16:40	1K17	Hierarchical Construction of Fluorescent Porous Structures from Supramolecular Assemblies of Ammonium Sulfonates by Using Non-covalent Interactions <u>Atsushi Yamamoto</u> , Norimitsu Tohnai, Ichiro Hisaki, Mikiji Miyata	5503
17:05	1K18	Construction of 2-D Well-ordered Nanostructures by means of Equilibrium polymerization at Solid-liquid Interface <u>Ryota Tanoue</u> , Rintaro Higuchi, Shinobu Uemura, Masashi Kunitake ..	5505
H. Kishi, presiding			
17:30	1K19	Improvement of curability and toughness for high thermal stable cyanate ester resin <u>Manabu Isono</u> , Toshiyuki Oyama, Akio Takahashi	5507
17:55	1K20	Development of Networked Polymers Based on Cyclotrimerization of Isocyanates – Control of Crosslinking Degree by Addition of Monoisocyanates and Its Effect on Polymer Properties – <u>Masaki Moritsugu</u> , Atsushi Sudo, Takeshi Endo	5509

Thursday, September 29

Frontier of Development of Networked Polymers: Elaborate Designs of Monomers, Cross-linking Systems, and Supramolecular Systems

M. Nishihara, presiding			
9:10	2K01	Self-mendable abilities of crystalline polymers functionalized with hydrogen bonding units at room temperature <u>Nobuhiro Oya</u> , Naoko Yoshie	5511
9:35	2K02	Development of heat driven supramolecular network structure based on retro-Diels-Alder reaction <u>Rika Ochi</u> , Yushi Kurita, Masato Ikeda, Itaru Hamachi	5513
K. Arimitsu, presiding			
10:00	2K03	Reworkable UV curing resin using thiol-ene reaction <u>Haruyuki Okamura</u> , Masamitsu Shirai	5515
10:25	2K04	Synthesis and characterization of self-healing cross-linked polymers with dynamic covalent bonds that can work at room temperature <u>Keiichi Imato</u> , Takeshi Kanehara, Yoshifumi Amamoto, Masamichi Nishihara, Atsushi Takahara, Hideyuki Otsuka	5517
H. Okamura, presiding			
10:50	2K05	Development of functional network polymer materials using cross-linking and de-cross-linking <u>Eriko Sato</u> , Sayoko Nagai, Hiroshi Tamura, Akikazu Matsumoto	5519

11:15	2K06	Application of autocatalytic generation of organic strong bases to photoreactive materials <u>Tomohito Hata</u> , Koji Arimitsu 5521	5521
11:40	2K07	Properties of water repellent anionic UV-curing materials containing base generators to form perfluoroalkyl amines <u>Tadashi Misumi</u> , Koji Arimitsu, Kimihiro Matsukawa 5523	5523
		N. Yoshie, presiding	
12:55	2K08	Preparation and Property of Thermo-Responsive Gel with Movable Cross-Linking <u>Masataka Kubo</u> , Kazuhiro Ishida, Takahiro Uno, Takahito Itoh 5525	5525
13:20	2K09	Synthesis and Property of Polyrotaxane Networks using γ -CD/macromonomer complexed Supramolecular Cross-linker <u>Keum Hee Jang</u> , Takayuki Arai, Yasuhito Koyama, Toshikazu Takata .. 5527	5527
13:45	2K10	Viscoelastic relaxation and a novel elasticity attributed to slidable cross-links <u>Kazuaki Kato</u> , Kohzo Ito 5529	5529
		M. Kubo, presiding	
14:10	2K11	Construction of 3D network polymers by utilizing Metal-Organic Framework as a template <u>Takumi Ishiwata</u> , Yuki Furukawa, Kouta Sugikawa, Kenta Kokado, Kazuki Sada 5531	5531
14:35	2K12	Precision Control of Polymer Alignment via Host-Guest Copolymerization <u>Takashi Uemura</u> , Gaetano Di Stefano, Hirohito Suzuki, Susumu Kitagawa 5533	5533
15:00	2K13	Time-limited hydrogel from three-armed collagen-mimetic peptides <u>Yuji Nikaido</u> , Tomoyuki Koga, Nobuyuki Higashi 5535	5535
		I. Hamachi, presiding	
15:25	2K14	Synthesis of ionic-liquid-containing networked polymers by copolymerization of monofunctional / difunctional (meth)acrylates in ionic liquids and their properties <u>Kozo Matsumoto</u> , Shota Sogabe, Takeshi Endo 5537	5537
15:50	2K15	Hierarchical self-assembly based on doubly thermo-sensitive ABC-triblock copolymer and preparation of thermo-reversible ion-gel <u>Yuzo Kitazawa</u> , Takeshi Ueki, Satoru Imaizumi, Lucas McIntosh, T. P. Lodge, Masayoshi Watanabe 5539	5539
16:15	2K16	Supramolecular approach to high-water-content hydrogels with enhanced mechanical property <u>Shingo Tamesue</u> , Yasuhiro Ishida, Hawker Craig J., Takuzo Aida 5541	5541
		K. Matsumoto, presiding	
16:40	2K17	Fabrication and Functionalization of Self-organized Hydrogels Using Boronate Esterification <u>Ryuhei Nishiyabu</u> , Katsunori Ito, Hiroyasu Kobayashi, Yuji Kubo 5543	5543
17:05	2K18	A Creation of New Low-Molecular-Weight Gelators Consisting of Squaric Acid Derivatives <u>Yutaka Ohseido</u> , Misao Miyamoto, Akihiro Tanaka, Kazuaki Shikii, Masashi Ohno 5545	5545

Friday, September 30

**Frontier of Development of Networked Polymers: Elaborate Designs of Monomers,
Cross-linking Systems, and Supramolecular Systems**

K. Takagi, presiding

- 9:10 3K01 Formation of the inclusion complex of C60-end-capped polysiloxane and syndiotactic PMMA
Takehiro Kawauchi, Keita Onishi, Mariko Kawauchi, Tsutomu Takeichi... 5547
- 9:35 3K02 Synthesis of polyolefins containing barbiturate moieties and formation of network via hydrogen bond
Daisuke Takeuchi, Kohtaro Osakada..... 5549

T. Kawauchi, presiding

- 10:00 3K03 Thermal and Orientational Properties of Ionic Network Materials
Seiji Ujiie, Hinako Suematsu, Msanori Nata 5551
- 10:25 3K04 Development of Novel Synthetic Method for Regularly Networked Polyesters - Solid-State Polycondensation of Ionic Molecular Crystals Composed of Benzylpyridinium Carboxylates
Kazuhisa Yamoto, Masayuki Nagata, Motohiro Aiba, Hiroe Tsuchida, Shin-ichi Matsuoka, Koji Takagi, Masato Suzuki..... 5553
- 10:50 3K05 Hydrogen-bonding network in amphiphilic silsesquioxanes for nanostructure formation
Jun Matsui, Asuman Kucuk, Tokuji Miyashita..... 5555

Polymer Industry and Technology: Processes and Products

Y. Nakayama, presiding

- 11:15 3K06 The reaction mechanism of laccase enzymatic polymerization
Ryo Takei, Takayuki Honda, Rong Lu, Tetsuo Miyakoshi..... 5440
- 11:40 3K07 Laccase-catalyzed dehydrogenative polymerization using glycosyl ferulate
Kyohei Tsutano, Rong Lu, Tetsuo Miyakoshi 5442

H. Yajima, presiding

- 12:55 3K08 Degradation analysis of plastic window glass through long term weathering
Mikiya Ito, Yoshihiro Masuda, Daigo Sato, Yasuhiro Yugeta, Tomoya Kousaka..... 5444
- 13:20 3K09 Thermal expansion behavior of rubber sealing materials for high-pressure hydrogen vessels – Rubber materials for O-ring of high-pressure hydrogen vessels (8) –
Shin Nishimura, Junichiro Yamabe, Yoshinori Izumi 5446
- 13:45 3K10 Evaluation of hydrogen dissolved in rubber material by NMR – Rubber materials for O-ring of high-pressure hydrogen vessels (9) –
Hirofumi Fujiwara, Junichiro Yamabe, Shin Nishimura..... 5448

S. Nishimura, presiding

- 14:10 3K11 Improvement in Function and Antioxidation Effect of Natural Rubber containing Multi-Walled Carbon Nanotubes
Tomoya Nagaoka, Koji Tsuchiya, Masayoshi Ito, Takeo Furukawa, Hirofumi Yajima 5450
- 14:35 3K12 Structure and properties of the fibers of thermoplastic liquid crystalline polymer prepared by sheath-core bicomponent spinning
Yoshiki Fujii, Wataru Takarada, Yuji Ogino, Ryohei Endo, Takeshi Kikutani.. 5452

15:00	3K13	Flow analysis of silica-filled SBR by using new processing aid <u>Hiroaki Sakaue</u> , Junpei Miyake, Junji Watanabe, Yoshiyuki Ikeda, Shyouiti Tutui 5454
15:25	3K14	Chromatic dispersion control of alicyclic polyurethane by introduced fluorene ring structure <u>Yoshimi Itoh</u> , Takeshi Maeda, Keigo Ehara 5456

Room L

Wednesday, September 28

Science and Technology of Molecular Singularity for Polymer

9:50	SO	Introductory Remarks Seiichi Kawahara 3548
		K. Satoh, presiding
10:00	1L03	Design of Cross-linked Polymeric Materials Using Alkoxyamine Units as Molecular Singularity <u>Hideyuki Otsuka</u> , Jing Su, Yoshifumi Amamoto, Masamichi Nishihara, Atsushi Takahara 3549
10:25	1L04	Copolymerization of Epoxide with Carbon Dioxide: Development of Copolymerization Catalysts and Control of the Copolymer Properties <u>Koji Nakano</u> , Shinichi Hashimoto, Mitsuru Nakamura, Toshihiro Kamada, Kyoko Nozaki 3551
		H. Otsuka, presiding
10:50	1L05	Living Cationic RAFT Polymerization via Reversible Activation of Terminal C-S Bonds <u>Mineto Uchiyama</u> , Kotaro Satoh, Masami Kamigaito 3553
11:15	1L06	Novel Functions of Polymers Characterized by Rotaxane Bonding Keumhee Jang, Yasuhiro Kohsaka, Yasuhito Koyama, Kazuko Nakazono, <u>Toshikazu Takata</u> 3555
11:40	1L07	Spontaneous formation of polymer brush by segregation of block copolymer <u>Manabu Inutsuka</u> , Norifumi Yamada, Kohzo Ito, Hideaki Yokoyama 3557
		K. Nakano, presiding
12:55	1L08	Precise Synthesis and Characterization of Imidazolium Salt Type Polymer Immobilized on Silica Nanoparticle <u>Tatsuya Ishikawa</u> , Moriya Kikuchi, Motoyasu Kobayashi, Atsushi Takahara . 3559
13:20	1L09	Hybridization of amphiphilic block copolymer surface micelle film with Metal nanoparticles <u>Katsuaki Goto</u> , Shusaku Nagano, Takahiro Seki 3561
13:45	1L10	Design and construction of hydrogels composed of filamentous viruses <u>Toshiki Sawada</u> , Takeshi Serizawa 3563
		T. Sawada, presiding
14:10	1L11	Controlled drug release by the cationization of poly(N-vinylamide) gel and polyion complex <u>Hiroharu Ajiro</u> , Kazuya Takemura, Mitsuru Akashi 3565
14:35	1L12	Precise fabrication of thermosensitive slide-ring gels by ATRP and click chemistry <u>Atsushi Yasumoto</u> , Hiroaki Goto, Yoshie Goto, Imran Abu Bin, Yukikazu Takeoka, Takahiro Seki, Kozo Ito, Yasuhiro Sakai 3567

15:00	1L13	Regulation of gene transcription with polymer-peptide conjugate Shujiro Shiosaki, Yuko Sato, Takeshi Mori, Takuro Niidome, <u>Yoshiki Katayama</u>	3569
15:25	1L14	Synthesis and Smart Properties of Stimuli-Responsive Gel Particles Having Molecular Complexes as Crosslinks <u>Akifumi Kawamura</u> , Yuta Hata, Takashi Miyata, Tadashi Uragami.....	3571
K. Tanaka, presiding			
15:50	1L15	Dynamic Viscoelasticity of Elastomers Having Dangling Chains with Controlled Chain Length <u>Masanao Takeda</u> , Nao Fujita, Yoshiyuki Kohno, Kenichi Kitano, Yasunaka Katoh, Hiroshi Andoh, Yoshiki Nakagawa, Haruna Yamazaki, Kenji Urayama, Toshikazu Takigawa	3573
16:15	1L16	Analysis of Inhomogeneity in elastomers by nano-palpaton technique <u>Ken Nakajima</u> , Hitoshi Iwabuki, Masashi Urabe, So Fujinami, Toshio Nishi	3575
16:40	1L17	Inhomogeneous Structure of Cross-linked Polymers <u>Ken Kojio</u> , Junpei Arata, Suguru Motokucho, Kohji Yoshinaga.....	3577
H. Jinnai, presiding			
17:05	1L18	Conformation of Single Polymer Chain Studied by Three-Dimensional Super-Resolution Optical Imaging <u>Hiroyuki Aoki</u> , Kazuki Mori, Shinzaburo Ito.....	3579
17:30	1L19	Self-Organized Imaging of CaCO ₃ Thin Films by Photoreactive Polymer Matrices <u>Hajime Noguchi</u> , Takeshi Sakamoto, Tatsuya Nishimura, Takashi Kato..	3581
17:55	1L20	The role of surface activation for the polymer adhesion investigated by scanning electron microscopy—Mechanism of low-temperature bonding of cycl-olefin polymers by vacuum ultraviolet-induced surface activation— <u>Shin Horiuchi</u> , Hideki Hakukawa, Takayuki Miyamae, Hideya Nagata, Hiroyuki Sugimura.....	3583

Thursday, September 29

Science and Technology of Molecular Singularity for Polymer

S. Kawaguchi, presiding			
9:10	2L01	Functional Development of Hybrid Brain Surface with Peculiar Wrinkle Structure <u>Hiroshi Endo</u> , Masahiro Tamura, Izumi Maeda, Takayuki Ijima, Takeshi Kawai	3585
9:35	2L02	The self-assembled structure of the thin film of polar oligomer formed by hydrogen bonding <u>Yuko Ishikuma</u> , Tunetami Ichinose, Suguru Motokucho, Ken Kojio, Kohji Yoshinaga.....	3587
10:00	2L03	Reversible Adhesion at The Interfaces of Ionic Polymer Brushes <u>Motoyasu Kobayashi</u> , Masami Tedara, Atsushi Takahara	3589
10:25	2L04	Enantiospecific Surface Properties in Films of Polymer with Induced Chirality Based on Side-Chain Ordering Takuya Ikeda, <u>Atsuomi Shundo</u> , Yoshihisa Fujii, Hiroki Uno, Jun-ichiro Koike, Masahiko Asada, Misao Horigome, Hiroki Ogawa, Hiroyasu Masunaga, Nobuo Kimizuka, Keiji Tanaka	3591
M. Kobayashi, presiding			
10:50	2L05	Effects of Grafting Density on Main Chain Stiffness of Rod Brushes Ryo Nakano, Naoya Mashiko, Atsushi Narumi, Jiro Kumaki, <u>Seigou Kawaguchi</u>	3593

11:15	2L06	Crystallization Behavior and Crystal Orientation of Homopolymers Confined in Nanocylinders – Effects of Nanocylinder Dimension – <u>Shuichi Nojima</u> , Shintarou Nakagawa, Ken-ichi Kadena, Takashi Ishizone, Takashi Shimizu, Kazuo Yamaguchi, Seiichi Nakahama	3595
11:40	2L07	Gas Transport Properties and Molecular Singularity for Polymer <u>Hiroaki Yoshimizu</u>	3597
		K. Nakajima, presiding	
12:55	2L08IL	Structure and dynamics of the physical singular point in the interface between soft and hard materials <u>Hiroshi Morita</u>	3599
13:45	2L10	Coarse-grained MD analysis of effects of singular molecular on elongated filled rubber <u>Katsumi Hagita</u> , Hiroshi Takano, Masao Doi, Hiroshi Morita	3602
		H. Morita, presiding	
14:10	2L11	Entanglement around branch point in multi-chain sliplink simulation <u>Yuichi Masubuchi</u>	3604
14:35	2L12	Quantification of intermolecular forces for dynamic structural analysis of molecular assembly <u>Hirohiko Houjou</u>	3606
		H. Yoshimizu, presiding	
15:00	2L13	Solid State NMR Studies of Curing Process and Dynamics for Polymers <u>Atsushi Asano</u> , Mitsutaka Matsumoto, Yuko Miwa, Katsuya Hioka, Tetsuo Asakura	3608
15:25	2L14	Pulsed field gradient NMR analysis of polylactide with derivatized end-groups <u>Keisuke Sogabe</u> , Koichi Ute	3610
15:50	2L15	Primary Structural Analysis of Hyperbranched Copolymers by Multivariate Analysis of ¹³ C NMR Spectra <u>Hikaru Momose</u> , Ryota Kamiike, Tomohiro Hirano, Koichi Ute	3612
		K. Ute, presiding	
16:15	2L16	Cross-linked structure of boric acid doped in poly(vinyl alcohol) <u>Kazuhiko Yamada</u> , Shinji Ando, Tadashi Shimizu, Kenzo Deguchi, Hideki Kamada, Toshiaki Kobayashi	3614
16:40	2L17	Effect of crosslinking junctions as a molecular singularity point <u>Oraphin Chaikumpollert</u> , Yamamoto Yoshimasa, Kawahara Seiichi	3616
17:05	2L18	Physical Properties of Rubber Materials Characterized by Solid-State NMR <u>Atsushi Asano</u> , Masashi Kitamura, Shunsuke Hori, Chikako T. Nakazawa, Takuzo Kurotsu	3618

Friday, September 30

Science and Technology of Molecular Singularity for Polymer

K. Kojio, presiding

9:10	3L01IL	Singular Point Fabrication Using Polymer Nano-assembly for Functional Materials <u>Jun Matsui</u>	3620
10:00	3L03	Molecular Singularity for Emission in Single Conjugated Polymer Chains <u>Sadahiro Masuo</u> , Shinjiro Machida, Akira Itaya	3623
10:25	3L04	Development of neuromorphic devices by pi-conjugated polymers <u>Naoki Asakawa</u> , Koichiro Umemura, Shiori Yoshikawa	3625

		M. Kohri, presiding	
10:50	3L05	Nanoscale patterning of polymer blends by crystallization of solvents <u>Naoko Yoshie</u> , Shunsuke Kodama	3627
11:15	3L06	Cellulose Nanocrystal as a Hydrolytic Catalyst <u>Takeshi Serizawa</u> , Toshiki Sawada, Masahisa Wada	3629
11:40	3L07	Profiling of compositional and structural heterogeneous biomass <u>Jun Kikuchi</u>	3631
		T. Serizawa, presiding	
12:55	3L08	Self-assembled M12L24 spherical complexes three-dimensionally allocating functional groups as "molecular singularity" <u>Sota Sato</u> , Makoto Fujita	3633
13:20	3L09	Control of Microphase Separation Structures in Spherically Confined Systems <u>Hiroshi Yabu</u> , Tatsuya Jinno, Shunsuke Sato, Takeshi Higuchi, Hiroshi Jinnai, Masatsugu Shimomura	3635
13:45	3L10	Clarification of the phase transformation mechanism in block copolymer nanoparticles with transmission electron microtomography <u>Takeshi Higuchi</u> , Hiroshi Yabu, Masatsugu Shimomura, Hiroshi Jinnai...	3637
14:10	3L11	Structure and Properties of Natural Rubber <u>Seiichi Kawahara</u> , Keiichi Akabori, Yoshimasa Yamamoto	3639

Room M

Wednesday, September 28

Fusion of Fundamental Physics and Frontier Technology in Soft Matter

9:50	SO	Introductory Remarks Takashi Taniguchi.....	3641
		T. Murashima, presiding	
10:00	1M03	Molecular Dynamics Simulation of Micelle Formation and Micellar Shape Change in Amphiphilic Solution <u>Susumu Fujiwara</u> , Masato Hashimoto, Takashi Itoh	3642
10:25	1M04	Decision of the Position of Bromine Compound in a Polymer micelle by anomalous small-angle X-ray scattering <u>Yusuke Sanada</u> , Kouichi Shiraishi, Masayuki Yokoyama, Kazuo Sakurai ...	3644
		S. Fujiwara, presiding	
10:50	1M05	Polymer effects on dynamics of thin liquid layer between surfactant bilayer films studied with Film Interference Flow Imaging <u>Ruri Hidema</u> , Naoya Yamada, Shingo Harada, Hideharu Ushiki, Hidemitsu Furukawa	3646
11:15	1M06	Shape selection of twist nematic elastomer ribbons Yoshiki Sawa, <u>Kenji Urayama</u> , Toshikazu Takigawa, Ye Fangfu, Gimenez-pinto Vianney, Selinger Robin, Selinger Jonathan	3648
11:40	1M07	Photoresponsibility of Microdomains in Liquid Crystalline Block Copolymers with Azobenzene Moiety <u>Hiroki Takeshita</u> , Tomoya Fujise, Kazuhiro Haginoya, Masamitsu Miya, Katsuhiko Takenaka, Tomoo Shiomi	3650
		M. Tosaka, presiding	
12:55	1M08	Chain Dimensions of Ring Polymers in Dilute Solutions <u>Jiro Suzuki</u> , Atsushi Takano, Yushu Matsushita	3652

13:20	1M09	Preparation of Graft-Type Supramacromolecules via Ionic Interaction and its Morphology <u>Koji Ishihara</u> , Atsushi Noro, Yushu Matsushita 3654
13:45	1M10	Nanoscale phase separation of polymer solution driven by crystallization of solvent molecules <u>Sadaki Samitsu</u> , Izumi Ichinose 3656
		T. Taniguchi, presiding
14:10	1M11IL	Novel effects of an interfacial dead layer on structures and dynamics of nanoconfined polymers <u>Tadanori Koga</u> 3658
15:00	1M13	Morphology and Swelling Ratio of Fluorinated block Copolymers in Supercritical Carbon Dioxide <u>Masateru Ito</u> , Yasuhiro Sakai, Kohzo Ito, Kenji Sugiyama, Hideaki Yokayma 3661
		T. Koga, presiding
15:25	1M14	Grain Formation Mechanism of Diblock Copolymer Studied by SAXS and Rheology 2 – Investigation Based on Observation of Sub-grains – <u>Akifumi Matsushita</u> , Shigeru Okamoto, Eiko Tamura, Tadashi Inoue ... 3663
15:50	1M15	Structure formation in cross-linked rubber under large deformation within a short period <u>Masatoshi Tosaka</u> , Kazunobu Senoo, Kenta Sato, Miki Noda, Noboru Ohta 3665
16:15	1M16	Strain-induced crystallization and mechanical properties of sulfur cross-linked isoprene rubber composed of the controlled inhomogeneous network structures <u>Takumi Ohashi</u> , Yuko Ikeda 3667
		Y. Masubuchi, presiding
16:40	1M17	Rheological properties of fiber suspension with various network structure <u>Yudai Yabe</u> , Daisuke Tatsumi 3669
17:05	1M18	Molecular weight dependence of viscoelastic properties for symmetric poly(styrene-block-2-vinylpyridine) <u>Long Fang</u> , Yoshiaki Takahashi, Atsushi Noro, Atsushi Takano, Yushu Matsushita 3671
17:30	1M19	Flow-induced crystallization and structural changes by large deformation – Investigation by molecular dynamics simulation – <u>Takashi Yamamoto</u> 3673
17:55	1M20	Shear thickening of ion-polymer complex solution <u>Kyoichi Tsurusaki</u> , Takeshi Honda, Shogo Wakatsuki, Rika Takeda 3675

Thursday, September 29

Fusion of Fundamental Physics and Frontier Technology in Soft Matter

H. Morita, presiding

9:10	2M01	Effects of the Nano Carbon Additives on the Phase Separation Dynamics in Polymer Blends Studied by X-ray CT <u>Hiroyuki Taniyama</u> , Yukihiro Nishikawa, Masaaki Takahashi 3677
9:35	2M02	How can X-ray CT contribute to Soft-material Science? <u>Yukihiro Nishikawa</u> , Shogo Kojima, Shungo Iizuka, Hiroyuki Taniyama, Masaaki Takahashi 3679
10:00	2M03	Modeling of Gas Permeation through Membranes and Applications to H ₂ and O ₂ in Polyelectrolyte Membrane for Fuel Cell <u>Kei Morohoshi</u> , Masaaki Konishi 3681

10:25	2M04	Simulation of the phase separation strongly depends on the inhomogeneous mobility <u>You Iida</u> , Hiroshi Sasaki.....	3683
Y. Nishikawa, presiding			
10:50	2M05	The First Successful Development of Simultaneous Measurement System of Synchrotron Small-angle and Wide-angle X-ray Scatterings and Infrared Transmission Spectra and Its Application to the Structural Study of Soft Materials <u>Kohji Tashiro</u> , Taiyo Yoshioka, Hiroko Yamamoto, Tran Hai Ninh, Shigeru Shimada, Takeshi Nakatani, Hiroyuki Iwamoto, Noboru Ohta, Hiroyasu Masunaga.....	3685
11:15	2M06	Synchrotron X-ray Diffraction Study of Liquid Crystal Thin Film Confined between Solid Surfaces <u>Shinya Nakano</u> , Masashi Mizukami, Noboru Ohta, Naoto Yagi, Ichiro Hatta, Kazue Kurihara	3687
11:40	2M07	Pattern Formation in Reaction-Diffusion System Using Heterostructure Gel as a Medium <u>Tomonaga Ueno</u> , Nagahiro Saito, Ryo Yoshida.....	3689

Water-Soluble Polymers as Materials

12:45	SO	Introductory Remarks Yo Nakamura	3495
S. Sakurai, presiding			
12:55	2M08	Structures and Functionalities of a Variety of Cationic Network Polymer Precursors Based on Crosslinking Diallyl Dimethyl Ammonium Chloride/Multiallyl Ammonium Chloride Copolymerizations <u>Norikazu Izumi</u> , Tadashi Kageyama, Tsutomu Sunada, Akira Matsumoto ..	3496
13:20	2M09	Functionalization of water-soluble polymers in water medium <u>Susumu Harashima</u> , Toshihiko Matsumoto.....	3498
13:45	2M10	Structural formation of an optically active polymer in aqueous milieu and its thermo-sensitivity <u>Takashi Aoki</u> , Shouhei Nishimori, Sachiko Tsuda.....	3500
14:10	2M11	Synthesis and characteristics of nanocomposite hydrogels with ultra-high absorption and mechanical properties <u>Akira Ohbayashi</u> , Kazutoshi Haraguchi	3502
S. Tasaka, presiding			
14:35	2M12	Change of Lamellar Structure of Poly(ethylene glycol) in the Blend with Poly(D,L-lactic acid) by Changing Temperature <u>Tien Nguyen Dung</u> , Hoa Ta Phuong, Go Kimura, Masatsugu Mochizuki, Sono Sasaki, Shinichi Sakurai	3504
15:00	2M13	Directional Crystallization of Poly(ethylene glycol) Melt in a Horizontal Temperature Gradient Go Kimura, Akiyoshi Yasuda, Tien Nguyen Dung, Sono Sasaki, <u>Shinichi Sakurai</u>	3506
15:25	2M14	Association behavior of amphiphilic polypeptides in aqueous solution Sho Kanada, Shuko Ikei, Toshihiro Hayakawa, <u>Katsuhiro Inomata</u> , Hideki Sugimoto, Eiji Nakanishi	3508
15:50	2M15	Dimension of Polymacromonomer with Sodium Polystyrenesulfonate Side Chains in Aqueous Solution <u>Yo Nakamura</u> , Yusuke Hasegawa	3510
K. Inomata, presiding			
16:15	2M16	Synthesis of pH-responsive particle with a hollow core <u>Shin-ichi Yusa</u> , Shouta Kousaka, Kazuki Osawa	3512

16:40	2M17	Effects of added sucrose stearate on rheological properties of HEUR aqueous solution <u>Isamu Kaneda</u> , Yumeka Shimokawa, Saori Takahashi	3514
17:05	2M18	Salt concentration dependence of the polyion-complex formation in aqueous media <u>Hitomi Ueno</u> , Takahiro Sato	3516

Friday, September 30

Water-Soluble Polymers as Materials

K. Nishida, presiding

9:10	3M01	An analysis of a polyelectrolyte in the water <u>Hiroshi Sasaki</u> , You Iida, Kazushi Hujimoto, Susumu Okazaki.....	3518
9:35	3M02	Multilayer Hydration and Molecular Origin of Cooperativity in Aqueous Solutions of Temperature-Sensitive Polymers 2 - Theory <u>Asako Matsuo</u> , Tsuyoshi Koga, Fumihiko Tanaka.....	3520
10:00	3M03	Structure and dynamics of hydrogen bonds in aqueous solutions of thermoresponsive polymer <u>Yoshinori Tamai</u>	3522

T. Shikata, presiding

10:25	3M04	Vibrational spectroscopic study on interactions between water and polymers <u>Yasushi Maeda</u>	3524
10:50	3M05	Tacticity effects on the interaction between poly(<i>N</i> -substituted acrylamide)s and water—Focused on Poly(<i>N</i> -ethylacrylamide)— <u>Yukiteru Katsumoto</u> , Naotsugu Shimoda.....	3526
11:15	3M06	Analysis of freezing behaviors of polyampholytes possessing cryoprotective properties by solid-state NMR <u>Kazuaki Matsumura</u> , Fumiaki Hayashi, Toshio Nagashima, Suong Hyu Hyon.....	3528
11:40	3M07	Ludwig-Soret effect for aqueous solutions of polymers studied under temperature gradient <u>Rio Kita</u>	3530

R. Kita, presiding

12:55	3M08	Hydration properties of cationic polymers analyzed by dielectric relaxation spectroscopy <u>Nobuyuki Morimoto</u> , Tsubasa Ogawa, George Mogami, Makoto Suzuki ..	3532
13:20	3M09	Analysis of Rheological Behavior of Hydrogen Bonding Polymers <u>Osamu Urakawa</u> , Azusa Shimizu, Miho Fujita, Tadashi Inoue.....	3534
13:45	3M10	Hydration, dehydration, and phase separation behavior of aqueous solutions of poly(2-alkyl-2-oxazoline)s <u>Toshiyuki Shikata</u> , Tomoko Maeda, Ryuta Hasegawa, Megumi Minamoto, Yukiteru Katsumoto, Francoise M. Winnik.....	3536
14:10	3M11	Control of phase separation of water-soluble polymers Yutaka Katayama, Daishi Yajima, Hideyuki Morita, Kentaro Tanaka, <u>Koji Nishida</u> , Rintaro Inoue, Toshiji Kanaya	3538

Y. Katsumoto, presiding

14:35	3M12	UCST behavior of polymers having ureido group under physiological condition <u>Naohiko Shimada</u> , Miki Nakayama, Arihiro Kano, Atsushi Maruyama ..	3540
15:00	3M13	Conformation of a π -conjugated polyelectrolyte in water Yasuko Nakamura, <u>Ken Terao</u> , Takahiro Sato	3542

15:25	3M14	Dynamics of multi-domain protein as studied by neutron spin echo <u>Rintaro Inoue</u> , Ralf Biehl, Tobias Rosenkranz, Joerg Fitter, Michael Monkenbusch, Aurel Radulescu, Bela Farago, Dieter Richter 3544
15:50	3M15	Structure of Aggregates Formed by Poly(2-ethyl-2-oxazoline) and Poly(methacrylic acid) in Aqueous Solution and Precipitate <u>Yasuhiro Matsuda</u> , Kazumasa Takatsuji, Shigeru Tasaka, Atsushi Takahara, Takahiro Sato 3546

Room N

Wednesday, September 28

New Development of Design for Functional Polymer Particles

9:50	SO	Introductory Remarks Hideto Minami, Tsutomu Ono 4403
		T. Taniguchi, presiding
10:00	1N03	Kinetics of Controlled/Living Radical Polymerization in Emulsified Systems <u>Hidetaka Tobita</u> 4404
10:25	1N04	Experimental Study on Kinetics of RAFT Miniemulsion Polymerization <u>Kiyoshi Suzuki</u> , Yuko Nishimura, Yuta Kanematsu, Yoshie Masuda, Shuzaemon Satoh, Hidetaka Tobita 4406
10:50	1N05	Preparation of Polymer Particles using RAFT agent <u>Yusaku Suenaga</u> 4408
		H. Tobita, presiding
11:15	1N06	Microspheres with gradual structure and their preparation <u>Yukihiko Naka</u> , Ooshima Takeshi, Shibata Keigo, Miyamoto Hiroshi 4410
11:40	1N07	Kinetics of miniemulsion polymerization investigated by small-angle neutron scattering technique <u>Tatsuo Taniguchi</u> , Michinari Kohri, Takayuki Nakahira, Ryuhei Motokawa.. 4412
		Y. Suenaga, presiding
12:55	1N08	Synthesis of core-corona type nanospheres via atom transfer radical dispersion polymerization from thermoresponsive macroinitiator <u>Hiroyuki Hayashi</u> , Takuya Matsuyama, Taka-aki Asoh, Akihiko Kikuchi.. 4414
13:20	1N09	Synthesis of Superhydrophobic and Superlipophobic Polymer Particles Based on Living Coordination Dispersion Polymerization of Fluorous-substituted Allene Derivatives <u>Kenta Hisamura</u> , Ikuyoshi Tomita 4416
13:45	1N10	Mechanism of surface modification of polymer particles prepared by dispersion polymerization with well-defined peptide block copolymer <u>Tomomichi Itoh</u> , Izumi Abe, Seiji Komada, Eiji Ihara, Kenzo Inoue 4418
		K. Suzuki, presiding
14:10	1N11	Synthesis of core-shell type conductive nanoparticles by self-assembly of amphiphilic block copolymers and coupling reaction <u>Hiroshi Oya</u> , Kazuhiro Nakabayashi, Hideharu Mori 4420
14:35	1N12	Preparation of Functional Polymer Particles by Enzymatic Polymerization <u>Michinari Kohri</u> , Ayaka Kobayashi, Haruka Fukushima, Tatsuo Taniguchi, Takayuki Nakahira 4422

15:00	1N13	Preparation of monodisperse polymer particles in aqueous polymerization with the co-addition of polyelectrolyte and ionic surfactant <u>Jun Kawanobe</u> , Haruyuki Ishii, Daisuke Nagao, Mikio Konno 4424
15:25	1N14	Effect of Electrolytes on Structures of Hydrogel Particles Synthesized by Precipitation Polymerization in Aqueous Media <u>Takeshi Kobayashi</u> , Takaaki Sato, Daisuke Suzuki..... 4426
		D. Suzuki, presiding
15:50	1N15	Morphology Control of Oil-contained Polymer Particles by Shell Buckling at the Surface of Oil Droplets <u>Tatsuya Ota</u> , Haruyuki Ishii, Daisuke Nagao, Mikio Konno..... 4428
16:15	1N16	Preparation of microcapsules using poly(succinimide) particles <u>Takashi Kato</u> , Yukitaka Kimura, Tsutomu Ono 4430
16:40	1N17	Preparation of hollow microcapsules using microbubbles <u>Akihiro Seki</u> , Tsutomu Ono, Yukitaka Kimura..... 4432
		S. Kuroda, presiding
17:05	1N18	Preparation of hollow polydivinylbenzene particles with multiple holes in the shell <u>Toyoko Suzuki</u> , Yuko Hata, Hideto Minami, Masayoshi Okubo 4434
17:30	1N19	Preparation of jingle-bell-shaped particles using hydrogel core <u>Masahiko Tani</u> , Masahiro Yasukawa, Tsutomu Ono, Yukitaka Kimura... 4436
17:55	1N20	Application of capsule particles including ionic liquid <u>Hideto Minami</u> , Masaya Nakai, Hiroki Fukuami, Toyoko Suzuki, Masayoshi Okubo..... 4438

Thursday, September 29

New Development of Design for Functional Polymer Particles

D. Nagao, presiding

9:10	2N01	Preparation and controlling interior phase separated structures of block-copolymer / homopolymer blended nanoparticles <u>Shunsuke Sato</u> , Tatsuya Jinno, Hiroshi Yabu, Masatsugu Shimomura .. 4440
9:35	2N02	Fabrication method of multilayered core-shell particles <u>Tsuyoshi Morisaki</u> , Takeshi Wakiya, Makoto Takafuji, Hirotaka Ihara .. 4442
10:00	2N03	Anomalous Polymer Particles Formed in Two-stage Seeded Polymerization <u>Shin-ichi Kuroda</u> , Shan Shi..... 4444
10:25	2N04	Arrangements of Au Nanoparticles in Micro-phase Separation Structures of Block Copolymers confined in Inverse Opals <u>Tatsuya Jinno</u> , Hiroshi Yabu, Masatsugu Shimomura..... 4446

H. Yabu, presiding

10:50	2N05	Preparation and Characterization of Polymer Gel Capsules Containing Single-walled Carbon Nanotubes <u>Yusuke Tsutsumi</u> , Tsuyohiko Fujigaya, Naotoshi Nakashima 4448
11:15	2N06	Preparation of photoresponsive core-shell microspheres with silica core <u>Tomoya Iizuka</u> , Jun-ichi Mamiya, Motoi Kinoshita, Atsushi Shishido ... 4450
11:40	2N07	Structure designing and functionalization of inorganic nanoparticle-containing microgel <u>Haruma Kawaguchi</u> , Hiroki Suwa, Hiromasa Oiwa, Tohi Kin, Makoto Miyasaka, Atsushi Kameyama..... 4452

		T. Ono, presiding	
12:55	2N08IL	Clean Process Approach to the Synthesis of Functional Polymer Particles <u>Mikio Konno</u>	4454
13:45	2N10	Precise Syntheses of Charged Color Particles Applicable to Full-Color Electronic Paper <u>Ayano Hirai</u> ,Chikara Takeda,Atsushi Narumi,Seigou Kawaguchi	4457
		K. Ohno, presiding	
14:10	2N11	Preparation of Novel Fluorinated Cooliomic Nanoparticles-encapsulated Rose Bengal Possessing Thermochromism Behavior Shunsuke Izumi,Masato Yoshida, <u>Hideo Sawada</u>	4459
14:35	2N12	Preparation of FLuoroalkyl End-capped Sulfobetaine-type Oligomeric Nanoparticles-encapsulated a Variety of Substrates Tetsushi Kizima,Masato Yoshida, <u>Hideo Sawada</u>	4461
15:00	2N13	Self-assembly of PEG-b-Py block copolymers <u>Yusuke Ikenaga</u> ,Koji Ueno,Hidenori Otuka.....	4463
15:25	2N14	Preparation of acid-amplifying polymer particles by photoinduced dispersion polymerization and their application to water-borne photoreactive materials <u>Keita Kawanami</u> ,Koji Arimitsu,Yasuyuki Yamada,Takeshi Wakiya	4465
		A. Kikuchi, presiding	
15:50	2N15	Studies on the effect of structural factors of polymer brush-afforded hybrid particles on protein adsorption <u>Junichi Nakagawa</u> ,Kohji Ohno,Yoshinobu Tsujii	4467
16:15	2N16	Development of surface modification techniques by core-shell particles to produce biocompatible surfaces composed of organic-inorganic nanohybrids <u>Yu Mizuno</u> ,Sachiko Kaihara,Keiji Fujimoto.....	4469
16:40	2N17	Precise control of brush structures and induced function of peptide nanospheres with high density PEG brush <u>Masahiro Matsumoto</u> ,Michiya Matsusaki,Mitsuru Akashi	4471
17:05	2N18	Influence of Ionic Liquid on the Preparation of Organic/Inorganic Composite Particles by Seeded Dispersion Sol-Gel Process Hideto Minami, <u>Keigo Kinoshita</u> ,Tomoki Tsuji,Hiroshi Yanagimoto	4473

Friday, September 30

New Development of Design for Functional Polymer Particles

		H. Ihara, presiding	
9:10	3N01	Inorganic nanoparticle-amored polymer microspheres fabricated via Pickering emulsion route <u>Syuji Fujii</u> ,Masahiro Okada,Yoshinobu Nakamura,Tsutomu Furuzono..	4475
9:35	3N02	Effects of interparticle flocculation on rheological properties of Pickering emulsions prepared by colloidal silica particles <u>Takeshi Fuma</u> ,Masami Kawaguchi	4477
10:00	3N03	Formation and functionalization of particulate supra-structures by assembly of core-shell nanoparticles <u>Yasuhiro Isogai</u> ,Sachiko Kaihara,Keiji Fujimoto.....	4479
		S. Fujii, presiding	
10:25	3N04	Functional Accumulation of Free-Standing Colloid Particle Film and Graphene toward High-Performance Bubble Battery <u>Hiroshi Endo</u> ,Kazumasa Kono,Fumihiko Kono,Takahiro Mizuno,Takeshi Kawai	4481

10:50	3N05	Facile preparation of core-shell hybrid microspheres with self-assembled nanoparticle shell <u>Hirotaka Ihara</u> , Makoto Takafuji.....	4483
11:15	3N06	Soft colloidal glasses with structural color consisting of polymer-grafted silica nanoparticles and various ionic liquids <u>Toshimichi Fukai</u> , Tomomi Nagatuka, Yuta Sano, Tomohiro Yasuda, Kazuhide Ueno, Masayoshi Watanabe.....	4485
11:40	3N07	Change in aggregation form and structural color of stimuli-responsive gel particles <u>Daiki Kondo</u> , Yukikazu Takeoka, Takahiro Seki	4487
K. Fujimoto, presiding			
12:55	3N08	Structure Formation in Aqueous Dispersion of Poly(N-isopropylacrylamide) Microgels <u>Hiroki Takeshita</u> , Kenta Kimura, Shouta Nakano, Masamitsu Miya, Katsuhiko Takenaka, Tomoo Shiomi	4489
13:20	3N09	Colloidal Crystals of pNIPAm hydrogel particles <u>Daisuke Suzuki</u> , Koji Horigome, Tomoyo Yamagata, Kiyoshi Shibata, Akira Tsuchida, Tsuneo Okubo	4491
13:45	3N10	Drying dissipative structure of Poly(N-isopropylacrylamide) hydrogels <u>Tsuneo Okubo</u> , Daisuke Suzuki, Tomoyo Yamagata, Koji Horigome, Akira Tsuchida	4493
14:10	3N11	Controlled Colloidal Stability of Stimuli-Responsive Hydrogel Particles <u>Koji Horigome</u> , Daisuke Suzuki	4495
H. Minami, presiding			
14:35	3N12	Effect of electric field on dispersion state of colloidal particles in liquid Hirokazu Ogura, Akihiro Katsuno, <u>Hiroshi Kimura</u> , Shinya Takahashi, Akira Tsuchida, Tomoyo Yamagata, Daisuke Suzuki	4497
15:00	3N13	Directed Orientation and Assembling of Asymmetric Composite Dumbbells with an External Electric Field <u>Daisuke Nagao</u> , Maki Sugimoto, Haruyuki Ishii, Mikio Konno	4499
15:25	3N14	Electrorheology of Terminal Oxidized Poly(Ethylene Glycol) Particle Suspensions <u>Yuji Hirose</u> , Yasufumi Otsubo	4501

Room O

Materials and Processes for Organic Electronics

Wednesday, September 28

9:50	SO	Introductory Remarks Kazuo Takimiya, Itaru Osaka	4138
K. Takimiya, presiding			
10:00	1O03IL	Organic single-crystal transistors <u>Jun Takeya</u>	4139
I. Osaka, presiding			
10:50	1O05	Fabrication of Stretch-Oriented Conjugation Polymer Film and Its Application to Organic Thin-Film Transistors <u>Takeshi Yasuda</u> , Liyuan Han	4142
11:15	1O06	Synthesis and Semiconducting Property of Furan-fused Heteroacenes <u>Koji Nakano</u> , Natsuko Chayama, Minh Anh Truong, Keiko Kawaguchi, Kyoko Nozaki	4144

11:40	1007	Development of solution processible pentacene compounds as organic electronic materials <u>Hiroko Yamada</u> , Shuhei Katsuta, Tatsuya Aotake, Yoshimasa Oikawa, Chika Ohashi, Ken-ichi Nakayama 4146	
		K. Takimiya, presiding	
14:10	1011IL	Device Physics of Organic Transistors <u>Tatsuo Hasegawa</u> 4148	
		Y. Ie, presiding	
15:00	1013	Depth profiling electronic structure of organic semiconductor thin films using X-ray photoemission spectroscopy <u>Hiroyuki Yoshida</u> , Eisuke Ito, Shusaku Nagano, Masahiko Hara, Naoki Sato, Whee Won Chin, Jin Wook Han, Michael G. Ramsey 4151	
15:25	1014	Development of Single-Molecular Motion Switching Device <u>Masateru Taniguchi</u> 4153	
15:50	1015	Light emitting transistors with optical resonator <u>Taishi Takenobu</u> , Satria Bisri, Kosuke Sawabe, Takeshi Yamao, Shu Hotta, Yoshihiro Iwasa 4155	
16:15	1016	Fabrication of Organic Light-Emitting Field-Effect Transistors Using Thiophene/Phenylene Co-Oligomers Crystals <u>Yoshihide Fukaya</u> , Takeshi Yamao, Shu Hotta 4157	
		K. Nakano, presiding	
16:40	1017	Fabrication of high-performance n-channel OTFTs by wet-processes; New materials, New process <u>Hyeon-gu Jeon</u> , Yoichiro Yokota, Jinya Hattori, Naomi Oguma, Naoki Hirata, Takeshi Suzuki, Musubu Ichikawa 4159	
17:05	1018	n-type Organic Thin-Film Transistors with Long-Term Air-Stability <u>Shuichi Nagamatsu</u> , Tetsuji Moriguchi, Wataru Takashima, Tatsuo Okauchi, Katsuhiko Mizoguchi, Shuzi Hayase, Keiichi Kaneto 4161	
17:30	1019	Molecular orientation control of fullerene derivatives for high performance organic thin-film transistors <u>Masayuki Chikamatsu</u> , Yoshinori Horii, Reiko Azumi 4163	
17:55	1020	Development of pi-conjugated systems containing annelated electron-withdrawing units and their application to solution-processable organic semiconducting materials <u>Yutaka Ie</u> , Jianming Huang, Masashi Nitani, Makoto Karakawa, Yoshio Aso 4165	

Thursday, September 29

Materials and Processes for Organic Electronics

		A. Wakamiya, presiding	
9:10	2001	Energy level change of polythiophene derivatives by postfunctionalization <u>Tsuyoshi Michinobu</u> , Yuping Yuan 4167	
9:35	2002	Design of Fused-based Liquid Crystalline Semiconductors (1): Homeotropically Oriented Liquid Crystals from meso-Alkyl Derivatives <u>Tsuneaki Sakurai</u> , Yoshiyuki Kobayashi, Akinori Saeki, Shu Seki, Atsuhiko Osuka, Takuzo Aida 4169	
10:00	2003	Synthesis and Photophysical Properties of Giant Porphyrin Arrays <u>Naoki Aratani</u> , Jianxin Song, Hiroshi Shinokubo, Atsuhiko Osuka 4171	
		T. Michinobu, presiding	

10:25	2004	Design and synthesis of near-infrared absorbing phthalocyanine analogues <u>Atsuya Muranaka</u> , Asami Saito, Shino Ohira, Machiko Hirayama, Fumiko Kyotani, Masanobu Uchiyama 4173	4173
10:50	2005	Development of Functional Materials Using Quasi-Planar Triarylamine as a Key Skeleton <u>Atsushi Wakamiya</u> , Hidetaka Nishimura, Yasujiro Murata, Tatsuya Fukushima, Hironori Kaji 4175	4175
11:15	2006	Syntheses of Thermally Cross-Linkable Hole-Transporting Materials for Solution-Processed Organic Light Emitting Devices <u>Satoshi Inayama</u> , Yong-jin Pu, Takayuki Chiba, Naoya Aizawa, Hisahiro Sasabe, Junji Kido 4177	4177
11:40	2007	Impact of molecular weight on quantum efficiency in film of MEH-PPV/fluorene copolymer <u>Masaru Nagai</u> 4179	4179
		T. Yasuda, presiding	
12:55	2008	Synthesis and Photoluminescence of Novel π -Conjugated Oligomers with the Dinaphthothiophene Structure <u>Yoko Nambu</u> , Yukihiko Tada, Tadatomu Nishikubo 4181	4181
13:20	2009	Synthesis and Properties of Liquid-Crystalline Perylene Tetracarboxylic Bisimide Bearing Oligosiloxane Moieties <u>Masahiro Funahashi</u> 4183	4183
13:45	2010	Phase structures and charge transport properties of liquid crystalline semiconductor mixtures <u>Yo Shimizu</u> , Koji Miyamoto, Yukimasa Matsuda, Yasuo Miyake, Hirosato Monobe, Testuro Hori, Hiroyuki Yoshida, Akihiko Fujii, Masanori Ozaki, Fabien Nekelson 4185	4185
14:10	2011	Syntheses of macromolecular wires and their application for photoenergy conversion systems <u>Hiroyuki Aota</u> , Yuki Uchida, Hiroaki Ejiri, Dai Takaya, Shouta Nishimura, Yutaro Maki, Akira Matsumoto 4187	4187
		I. Imae, presiding	
14:35	2012	Controlled electron transfer by a electronic gradient along a dendritic architecture <u>Takane Imaoka</u> , Kimihisa Yamamoto 4189	4189
15:00	2013	Self-Organization and Charge-Transport Properties of π -Conjugated Columnar Liquid-Crystalline Molecules <u>Takuma Yasuda</u> , Tomohiro Shimizu, Goran Ungar, Takashi Kato 4191	4191
15:25	2014	Design and Precise Synthesis of Photo and π -Electronic Two-Dimensional Macromolecules <u>Donglin Jiang</u> 4193	4193
15:50	2015	Molecular Design of Nano-Electrical Junctions for Single-Electron Tunneling Devices <u>Shoji Tanaka</u> 4195	4195
		T. Imaoka, presiding	
16:15	2016	Solid-State Polymerization of CT Complexes Composed of Pyrenylbutadiyne Derivatives and Their Optical and Electrical Properties <u>Yoko Tatewaki</u> , Shoya Ito, Masato Imai, Shuji Okada 4197	4197
16:40	2017	Electrolytic Synthesis and Properties of Polythiophene Having Partially 3,4-Ethylenedioxythiophene <u>Ichiro Imae</u> , Saki Imabayashi, Keisuke Korai, Takahiro Mashima, Yousuke Ooyama, Kenji Komaguchi, Yutaka Harima 4199	4199

17:05	2018	Synthesis of fluoro-substituted phenyleneethynylenes and their application to n-type semiconductor <u>Akihiro Orita</u> , Daisuke Matsuo, Yoshinori Suzuma, Feng Xu, Junzo Otera, Akiko Hamada, Kyo Morimoto, Takuji Kato, Masayuki Yahiro, Chihaya Adachi.....	4201
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Friday, September 30

Materials and Processes for Organic Electronics

H. Ohkita, presiding

9:10	3O01	Morphology and Crystal Control of Organic Thin Films for Photovoltaic Applications <u>Tetsuya Taima</u> , Ying Zhou, Yosei Shibata, Tetsuhiko Miyadera, Toshihiro Yamanari, Yuji Yoshida	4203
9:35	3O02	Ellipsometry analysis of molecular orientation in OLEDs – Molecular orientation in amorphous organic semiconductor films and its effects on device characteristics – <u>Daisuke Yokoyama</u>	4205
10:00	3O03	Degradation of Polymer-based Organic Solar Cells by Light Irradiations <u>Toshihiro Yamanari</u> , Tetsuya Taima, Tetsuhiko Miyadera, Yuji Yoshida .	4207
10:25	3O04	Evaluation of Microscopic Properties of Organic Solar Cells by Light-Induced Electron Spin Resonance <u>Kazuhiro Marumoto</u> , Tatsuya Nagamori	4209

I. Osaka, presiding

10:50	3O05	Doping Effects of Liquid Crystalline Phthalocyanine in Polymer Bulk Heterojunction Organic Thin-Film Solar Cell <u>Tetsuro Hori</u> , Tetsuya Masuda, Naoki Fukuoka, Yasuo Miyake, Duy Dao Quang, Takeshi Hayashi, Toshiya Kamikado, Hiroyuki Yoshida, Akihiko Fujii, Yo Shimizu, Masanori Ozaki.....	4211
11:15	3O06	Near-infrared absorbing dibenzopyrromethene dyes serving as sensitizers in bulk heterojunction solar cells <u>Yuji Kubo</u> , Kazuki Watanabe, Ryuhei Nishiyabu, Rieko Hata, Akinori Murakami, Takayuki Shoda, Hiroshi Ota	4213
11:40	3O07	Interfacial Assembly of Dye Molecules in Polymer/Fullerene Solar Cells <u>Hideo Ohkita</u> , Satoshi Honda, Hiroaki Benten, Shinzaburo Ito	4215

K. Tajima, presiding

12:55	3O08	Vapor-phase Polymerized Polythiophene/Redox Polymer Composites for Opto-electronic Applications <u>Takeo Suga</u> , Kaoru Minagawa, Erina Minami, Bjorn Winther-jensen, Hiroyuki Nishide.....	4217
13:20	3O09	Photovoltaic Application of Oriented Poy(3-alkylthiophene) Thin Films Prepared by Friciton Transfer Method <u>Yukiyasu Okamoto</u> , Toshiko Mizokuro, Claire Heck, <u>Nobutaka Tanigaki</u> , Hiroyuki Aota, Akira Matsumoto	4219
13:45	3O10	Electrode-less evaluation of optoelectronic performance of P3HT:PCBM films by time-resolved microwave conductivity (TRMC) <u>Akinori Saeki</u> , Masashi Tsuji, Shu Seki	4221
14:10	3O11	Photoelectrochemical Properties of Nanocarbon Materials <u>Tomokazu Umeyama</u> , Hiroshi Imahori.....	4223

A. Saeki, presiding

14:35	3O12	Synthesis of New Block Copolymers with Poly(3-hexylthiophene) Segments and Their Application to Organic Photovoltaics <u>Tomoya Higashihara</u> , Mitsuru Ueda, Yi-cang Lai, Wen-chang Chen.....	4225
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15:00	3O13	Synthesis and Design of Fullerene-based Electron Acceptors for Organic Photovoltaic Cells <u>Yutaka Matsuo</u> 4227
15:25	3O14	Control of Interfacial Structures in Organic Electronic Devices <u>Keisuke Tajima</u> ,Akira Tada,Yanfang Geng,Qingshuo Wei,Kazuhito Hashimoto 4229
15:50	3O15	Novel semiconducting polymer based on naphthobisthiadiazole for organic field-effect transistors and solar cells <u>Masafumi Shimawaki</u> ,Hiroki Mori,Iori Doi,Eigo Miyazaki,Itaru Osaka,Kazuo Takimiya..... 4231

Room Q

Wednesday, September 28

Fusion Materials: Creative Development of Materials and Exploration of Their Function through Molecular Control

9:50	SO	Introductory Remarks Takashi Kato,Kiyofumi Katagiri 4271
		T. Kato, presiding
10:00	1Q03	Design of carbon nanotube hybrid materials <u>Naotoshi Nakashima</u> 4272
10:25	1Q04	Photosensitized Hydrogen Evolution from Water Using SWNT/Fullerodendron Supramolecular Nanocomposite <u>Yutaka Takaguchi</u> ,Wakako Sakata,Tomoyuki Tajima 4274
		Y. Takaguchi, presiding
10:50	1Q05	Role of copolymerized photosensitizer in hydrogen-generating gel systems for higher quantum efficiency <u>Kosuke Okeyoshi</u> ,Ryo Yoshida..... 4276
11:15	1Q06	Development of pH Responsive Supramolecular Hydrogel <u>Masamichi Yamanaka</u> ,Nana Haraya 4278
11:40	1Q07	Preparation and function of polymer hydrogel incorporating cross-linking mechanism of mussel adhesive protein <u>Jin Nishida</u> ,Motoyasu Kobayashi,Atsushi Takahara 4280
		T. Nishimura, presiding
12:55	1Q08	Electrochemical Control of Helical Structure in Chiral Lyotropic Liquid Crystal <u>Hiroki Higuchi</u> ,Tomohiro Horinouchi,Yusuke Ishigaki,Yasushi Okumura,Takanori Suzuki,Hirotsugu Kikuchi 4282
13:20	1Q09	Fabrication of functional polymer materials with liquid crystalline clay colloids <u>Nobuyoshi Miyamoto</u> 4284
13:45	1Q10	Organization of Fusion Materials from Liquid Crystalline Inorganic Nanosheets <u>Teruyuki Nakato</u> 4286
14:10	1Q11	Orientational control of layered double hydroxide nanocrystals precipitated by hot water treatment <u>Kiyoharu Tadanaga</u> ,Ryoya Suezawa,Masahiro Tatsumisago 4288
		T. Nakato, presiding
14:35	1Q12	Self-healing in nanocomposite hydrogels <u>Kazutoshi Haraguchi</u> 4290

15:00	1Q13	Gelatin- and Calcium Phosphate-Coated PET for Guided Bone Regeneration Membrane <u>Hidero Unuma</u> 4292	4292
15:25	1Q14	Development of Hydroxyapatite/Polymer Thin-film Hybrids through Cooperative Effects of Polymers <u>Takeshi Sakamoto</u> , <u>Hirofumi Imai</u> , <u>Tatsuya Nishimura</u> , <u>Takashi Kato</u> ... 4294	4294
M. Hashizume, presiding			
15:50	1Q15	Development of biodegradable polymer/calcium carbonate composite materials for bone reconstruction <u>Akiko Obata</u> , <u>Toshihiro Kasuga</u> 4296	4296
16:15	1Q16	Synthesis of calcium carbonate composites with anionic rigid polymers <u>Takashi Nishio</u> , <u>Yuka Tanaka</u> , <u>Kensuke Naka</u> 4298	4298
16:40	1Q17	Preparation of silk-apatite hybrids via aqueous process and effect of surface modification <u>Toshiki Miyazaki</u> , <u>Hajime Ishii</u> , <u>Eiichi Ishida</u> 4300	4300
T. Miyazaki, presiding			
17:05	1Q18	Biomedical applications of chitosan-silicate hybrids <u>Yuki Shirotsuki</u> , <u>Satoshi Hayakawa</u> , <u>Akiyoshi Osaka</u> 4302	4302
17:30	1Q19	Mineralization Induced by Biomolecules as Nucleation Sites that Dispersed in Simulated Body Fluids <u>Mineo Hashizume</u> , <u>Yuki Uchida</u> , <u>Noriaki Kamaya</u> , <u>Yuki Koyama</u> , <u>Noritaka Kako</u> , <u>Kosuke Takeda</u> 4304	4304
17:55	1Q20	Effects of organic polymer addition on calcification behavior of hydrogels in a simulated body fluid <u>Chikara Ohtsuki</u> , <u>Yuichi Wako</u> , <u>Tomoyo Goto</u> , <u>Taishi Yokoi</u> , <u>Ill Yong Kim</u> , <u>Masakazu Kawashita</u> 4306	4306

Thursday, September 29

Fusion Materials: Creative Development of Materials and Exploration of Their Function through Molecular Control

T. Nakashima, presiding			
9:10	2Q01	Role of the stabilizers of nanoparticles prepared by plasma in liquid <u>Tetsu Yonezawa</u> , <u>Susumu Sato</u> , <u>Hirofumi Takahashi</u> , <u>Shota Arai</u> , <u>Takashi Narushima</u> , <u>Kunihiko Mori</u> , <u>Osamu Ariyada</u> 4308	4308
9:35	2Q02	Construction of nano-organized structures using divalent DNA-gold nanoparticle hybrids <u>Yuichi Ohya</u> , <u>Mirai Hashizume</u> , <u>Nozomi Miyoshi</u> , <u>Takuya Tamaki</u> , <u>Takeaki Uehara</u> , <u>Shoso Shingubara</u> , <u>Akinori Kuzuya</u> 4310	4310
10:00	2Q03	Reversible Dimensional Tuning of Metal Nanoparticle Network with Photochromic Capped Layer for SERS Enhancement <u>Hiroshi Endo</u> , <u>Nobuhiko Ikenoya</u> , <u>Masaya Mitsuishi</u> , <u>Tokuji Miyashita</u> , <u>Takeshi Kawai</u> 4312	4312
10:25	2Q04	DNA-mediated photoconversion of AgCl to functional nanocrystals <u>Guoqing Wang</u> , <u>Yasutaka Matsuo</u> , <u>Kenichi Niikura</u> , <u>Kuniharu Ijima</u> 4314	4314
T. Yonezawa, presiding			
10:50	2Q05	Preparation of Nanocomposites Based on Ionic Liquids <u>Takuya Nakashima</u> , <u>Yu Hayakawa</u> , <u>Tsuyoshi Kawai</u> 4316	4316
11:15	2Q06	Synthesis of titanium dioxide with unique morphology using water-soluble titanium complexes coordinated by organic acids <u>Makoto Kobayashi</u> , <u>Hideki Kato</u> , <u>Masato Kakihana</u> 4318	4318
11:40	2Q07	Design of Stimuli-Responsive Organic-Inorganic Fusion	

		Nanoparticles with Molecular Recognition Ability <u>Tomoya Katoh</u> , Takashi Miyata, Tadashi Uragami	4320
		A. Narutaki, presiding	
12:55	2Q08	Metal-Containing Macromolecular Architecture via Controlled/Living Radical Polymerization <u>Kotaro Satoh</u> , Yasutaka Tsujimoto, Masami Kamigaito	4322
13:20	2Q09	Synthesis of Polypyrrole Based on Hierarchical Structures of Biominerals <u>Misako Kijima</u> , Yuya Oaki, Hiroaki Imai	4324
13:45	2Q10	Photoconductive Single Polymer Chains Accommodated in Coordination Nanochannels <u>Noriyuki Uchida</u> , Takashi Uemura, Susumu Kitagawa, Atsushi Asano, Akinori Saeki, Shu Seki	4326
		R. Kawano, presiding	
14:10	2Q11	Fabrication of metal-polymer hybrid porous material and its application to catalyst for organic synthesis <u>Takanao Shimamura</u> , Hiroshi Uyama	4328
14:35	2Q12	Development of cellulose nanofiber/metal nanohybrid catalyst <u>Hiroataka Koga</u> , Takuya Kitaoka, Akira Isogai	4330
15:00	2Q13	Supramolecular Self-Assembly of Heteropolyacids with Nucleotides <u>Takao Noguchi</u> , Nobuo Kimizuka	4332
15:25	2Q14	Preparation of nanoporous glasses for host materials <u>Yusuke Daiko</u> , Shinji Sumida, Atsushi Mineshige, Tetsuo Yazawa	4334
		A. Arakaki, presiding	
15:50	2Q15	Binding Conformation of Antifreeze Protein at Ice Interface and Molecular-Scale Mechanism of Ice Growth Inhibition <u>Hiroki Nada</u> , Yoshinori Furukawa	4336
16:15	2Q16	In vitro selection of peptides with photoresponsive binding ability to streptavidin <u>Seiichi Tada</u> , Mingzhe Liu, Yoshihiro Ito	4338
16:40	2Q17	Development of biosensing systems using a membrane protein array by MEMS technology <u>Ryuji Kawano</u> , Toshihisa Osaki, Hiroataka Sasaki, Koki Kamiya, Shoji Takeuchi	4340
17:05	2Q18	Formation of Anisotropic Particles by Elastin-Derived Block Polypeptide <u>Ayae Sugawara-narutaki</u> , Duc H. T. Le, Tatsuya Okubo	4342

Friday, September 30

Fusion Materials: Creative Development of Materials and Exploration of Their Function through Molecular Control

		Y. Oaki, presiding	
9:10	3Q01	Nanoelectronic device fabrication by the Bio Nano Process – Wet nanotechnology & green process – <u>Ichiro Yamashita</u>	4344
9:35	3Q02	Synthesis of iron oxide magnetic particles using biomineralization function of protein <u>Atsushi Arakaki</u> , Mayumi Oda, Tadashi Matsunaga	4346
10:00	3Q03	Polymer@silica hybrid nanotube synthesized by biomimetic silica mineralization on the self-assembled polyamine aggregates <u>Jian-jun Yuan</u> , Ren-hua Jin	4348
10:25	3Q04	Synthesis of photo-functional fusion materials <u>Koji Tomita</u>	4350
		T. Nagasaki, presiding	

10:50	3Q05	Stimuli-responsive ordered micro structures on oxide-polymer hybrid coatings <u>Masahide Takahashi</u> 4352
11:15	3Q06	Water droplet manipulation on a biomimetic superhydrophobic surface consisting metal-polymer hybrid structures <u>Daisuke Ishii, Hiroshi Yabu, Masatsugu Shimomura</u> 4354
11:40	3Q07	A novel sol-gel technique for realizing transparent conductive oxide layers on plastics <u>Hiromitsu Kozuka, Akihiro Yamano, Takafumi Fukui, Hiroaki Uchiyama, Mitsuru Takahashi</u> 4356
		K. Nakamura, presiding
12:55	3Q08	Preparation and characterization of hybrid nanoparticles consisting of polysaccharide nanogels with iron oxide for biomedical applications <u>Keiko Ohta, Kiyofumi Katagiri, Kunihiro Koumoto, Yoshihiro Sasaki, Kei Kurosu, Kazunari Akiyoshi, Koichiro Hayashi</u> 4358
13:20	3Q09	Tumor accumulation and antitumor effect of a novel nano-particle containing BSH-fused polyamine <u>Takeshi Nagasaki, Yuxiang Zhu, Masayuki Umano, Mitsunori Kirihata, Hironobu Yanagie, Shin-ichiro Masunaga, Koji Ono, Hideki Azuma</u> 4360
13:45	3Q10	Rare Earth Doped Ceramics Nanophosphors for OTN Near Infrared Bioimaging – Development of Next Generation Bioimaging System Based on Hybrid Material between Ceramics Nanoparticles and Biofunctional Polymers – <u>Kohei Soga, Hiroshi Hyodo, Hidehiro Kishimoto</u> 4362
		K. Katagiri, presiding
14:10	3Q11	Emission and coloration control of polymer thin film containing luminescent lanthanide complex and thermochromic molecule – toward application of emissive/reflective dual mode display – <u>Kazuki Nakamura, Yukino Kobayashi, Kenji Kanazawa, Norihisa Kobayashi</u> .. 4364
14:35	3Q12	Preparation and Characterization of Layered Inorganic-Organic Hybrid Solid Materials for Molecular Detection by Luminous Change <u>Ryo Sasai, Fumitaka Aoto, Koichi Morita, Hiroki Kusumoto</u> 4366
15:00	3Q13	Photofunctional double-decker shaped silsesquioxanes for organic-inorganic hybrid materials <u>Takahiro Ogawa, Jun Matsui, Masaya Mitsuishi, Tokuji Miyashita</u> 4368
15:25	3Q14	Mechanochromic and Thermochromic Luminescence Behaviors of 1-(3',4',5'-tris(<i>n</i> -alkoxybenzoyl))-2-(1"-pyrenyl)hydrazines. (TABH- <i>n</i> -pyrene) <u>Yuya Ueda, Yutaro Taguchi, Koichi Sakajiri, Shoichi Kutsumizu</u> 4370

Room R

Wednesday, September 28

Polymer Materials for New Batteries

9:50	SO	Introductory Remarks Kenji Miyatake 4610
		M. Higa, presiding
10:00	1R03	Control of Water Uptake for Poly(phenylene) Based Polyelectrolytes (III) – Effect of Alkyl Groups – <u>Satoru Obayashi, Miru Yoshida, Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa</u> 4611
10:25	1R04	Synthesis and properties of poly(phenylene) – poly(ether ketone) block

		copolymers (VI) – PEFC operation at elevated temperature and low humidity conditions –	
10:50	1R05	<u>Miru Yoshida</u> , Takahiro Okubo, Yue Zhao, Masahiro Fujita, Akihiro Ohira, Yuko Takeoka, Satoshi Koizumi, Masahiro Rikukawa Synthesis of Poly(phenylene) Block Copolymers and Evaluation as Electrolyte Membranes (VII) – Effect of Morphology and Ion Cluster Structure –	4613
11:15	1R06	<u>Azusa Osawa</u> , Masahiro Fujita, Akihiro Ohira, Yuko Takeoka, Masahiro Rikukawa Polymeric Electrolytes Based on Facile Synthetic Methods of Wholly Aromatic Polymers	4615
		<u>Ikuyoshi Tomita</u> , Shoichi Kawamitsu, Hideki Tsukuda T. Yamaki, presiding	4617
11:40	1R07	Synthesis and properties of novel aromatic block ionomers containing imide and imidazole groups in hydrophobic blocks <u>Jumpei Saito</u> , Feifei Ng, Byungchan Bae, Kenji Miyatake, Masahiro Watanabe	4619
12:55	1R08	Fuel cell performance and membrane morphology of block copolymers based on poly(sulfonated phenylenes) Kangcheng Chen, Ryosuke Hara, Nobutaka Endo, Mitsuru Higa, <u>Ken-ichi Okamoto</u>	4621
13:20	1R09	PEFC performances of sulfonated mesoporous silica/polyimide hybrid membranes Miyuki Shimauchi, Nobutaka Endo, Hidetoshi Kita, Mitsuru Higa, <u>Ken-ichi Okamoto</u>	4623
13:45	1R10	DMFC performances of ZrO ₂ /sulfonated polyimide hybrid membranes <u>Nobutaka Endo</u> , Ryosuke Hara, Hidetoshi Kita, Mitsuru Higa, Ken-ichi Okamoto	4625
		M. Rikukawa, presiding	
14:10	1R11	Synthesis of block/graft sulfonated polyimides and their characterization as polymer electrolyte membranes <u>Manabu Tanaka</u> , Kota Yamazaki, Hiroyoshi Kawakami	4627
14:35	1R12	Preparation and characterizations of the high proton conductive phosphoric acid-doped polymer electrolyte blend membranes <u>Yusuke Iiduka</u> , Taku Ibaraki, Manabu Tanaka, Hiroyoshi Kawakami ...	4629
15:00	1R13	Properties and non-humidifying fuel cell performance of composite membranes including protic ionic liquid <u>Tomohiro Yasuda</u> , Yoshiyuki Honda, Shin-ichiro Nakamura, Kei Kinugawa, Masayoshi Watanabe	4631
		H. Kawakami, presiding	
15:25	1R14	Synthesis of Sulfonated Mesoporous Silica by One-pot Method and Measurement of Proton Conductivity of the EVOH composites <u>Yuta Chiba</u> , Yoichi Tominaga	4633
15:50	1R15	Improvement of water uptake of Nafion membrane with metal oxide nanoparticles prepared by the liquid phase deposition <u>Minoru Mizuhata</u> , Takashi Hasegawa	4635
16:15	1R16	Research on Perfluorinated Polymer Electrolyte Materials for High Temperature PEFCs <u>Atsushi Watakabe</u>	4637
16:40	1R17	R&D for Improvement on Polymer Electrolyte Membrane and Ionomer Dispersion <u>Akihiro Kato</u> , Yuto Iizuka, Masatoshi Honda, Naoto Miyake, Takashi Yoshimura, Tadashi Ino, Masahiro Kondou	4639
		M. Mizuhata, presiding	

17:05	1R18	Mass Transport Analysis of Polymer Electrolyte Membranes by Isotope Tracer Technique – Comparison between Tritiated Water and Heavy-Oxygen Water – <u>Tetsuya Yamaki</u> , Toshihiko Sekine, Shin-ichi Sawada, Masaharu Asano, Yasunari Maekawa, Akihiro Suzuki, Takayuki Terai 4641
17:30	1R19	Buckling phenomenon of polymer electrolyte membrane with swelling <u>Tomoaki Uchiyama</u> , Manabu Kato, Toshihiko Yoshida 4643
17:55	1R20	Gas permeation behavior of polymer electrolyte membrane for polymer electrolyte fuel cell – The relationship between thickness and gas permeation – <u>Akihiro Ohira</u> , Surasak Seesukphron, Hamdy Mohamed, Seiti Kuroda... 4645

Thursday, September 29

Polymer Materials for New Batteries

A. Ohira, presiding

9:10	2R01	Aromatic Anion Exchange Membranes for Precious Metal Free Hydrazine Fuel Cells <u>Eriko Nishino</u> , Keita Fukasawa, Byungchan Bae, Kenji Miyatake, Masahiro Watanabe, Susumu Yamaguchi, Koji Yamada, Hirohisa Tanaka 4647
9:35	2R02	Fuel cell performance of anion exchange polymer electrolyte membranes prepared by radiation-induced grafting <u>Yasunari Maekawa</u> , Warapon Sinnananchi, Hiroshi Koshikawa, Tetsuya Yamaki, Masaharu Asano, Kazuya Yamamoto, Fumihiko Sanpei, Koichiro Asazawa, Susumu Yamaguchi, Hirohisa Tanaka 4649
10:00	2R03	Multi-scale observation on hierarchical structures appeared in MEA – Combined Method of SANS, SEM and Computer Simulation – <u>Satoshi Koizumi</u> , Ananda Putra, Yohei Noda, Daisuke Yamaguchi, Yue Zhao, Takashi Tokumasu, Toshihiro Kawakatsu, Yukihiro Nishikawa.. 4651

K. Miyatake, presiding

10:25	2R04	Small Angle Neutron Scattering Study on Morphology and Water Distribution in Block-copolymer Electrolyte Membranes <u>Yue Zhao</u> , Satoshi Koizumi, Miru Yoshida, Masahiro Rikukawa 4653
10:50	2R05	Effect of preparation method on surface structure of the ionomer thin film <u>Seiichi Kuroda</u> , Hamdy Mohamed, Akihiro Ohira..... 4655
11:15	2R06	Preparation of carbon-based catalysts for PEFC cathodes from nitrogen containing aromatic polymer <u>Masayuki Chokai</u> , Yuta Nabae, Shigeki Kuroki, Teruaki Hayakawa, Masa-aki Kakimoto, Seizo Miyata 4657
11:40	2R07	Solid-state NMR and XPS characterization of ORR active carbon alloy catalysts prepared from polyanilines <u>Shigeki Kuroki</u> , Yuta Nabae, Masa-aki Kakimoto, Seizo Miyata 4659

M. Watanabe, presiding

12:55	2R08	Structure and performance of the fuel cell electrocatalyst based on polybenzimidazole-wrapped carbon nanotubes <u>Tsuyohiko Fujigaya</u> , Berber Mohamed, Naotoshi Nakashima..... 4661
13:20	2R09	Synthesis and characterization of triphenylamine block copolymers for polymer solar cells <u>Takashi Sakakura</u> , Kousuke Tsuchiya, Kenji Ogino..... 4663
13:45	2R10	Bulk heterojunction solar cells using self-organized columnar

		structure made of organic semiconductors <u>Keisuke Takemoto</u> , Tadashi Fukawa, Mutsumi Kimura, Hirofusa Shirai .. 4665
14:10	2R11	Synthesis of Novel Semiconducting Polymers for Application to Organic Solar Cells <u>Keisuke Tajima</u> , Shoji Miyaniishi, Erjun Zhou, Chunhe Yang, Luozheng Zhang, Kazuhito Hashimoto..... 4667
		N. Endo, presiding
14:35	2R12	Synthesis of Borole-containing Oligomer and Application to Organic Solar Cells <u>Masahiro Hayashizaki</u> , Keisuke Tajima, Kazuhito Hashimoto 4669
15:00	2R13	Synthesis of Diketopyrrolopyrrole-oligothiophene/Fullerene Dyads and Application for Organic Solar Cells <u>Seiichiro Izawa</u> , Keisuke Tajima, Kazuhito Hashimoto 4671
15:25	2R14	Low Bandgap Polymers Based on Regioregular Oligothiophenes Linked with Electron Accepting Units <u>Luozheng Zhang</u> , Yue Zhang, Keisuke Tajima, Kazuhito Hashimoto 4673
		Y. Tominaga, presiding
15:50	2R15	Dependence of surface morphology on photovoltaic characteristics of electrodeposited polythiophene films <u>Tatsuya Yamamoto</u> , Yousuke Kamikado, Yoshihiko Tezuka, Hitoshi Tanaka..... 4675
16:15	2R16	Fabrication of D-A heterojunction interface in π -conjugated block copolymer thin films <u>Hiroki Higashiura</u> , Akihiro Mori, Motonori Komura, John Miller, Sadayuki Asaoka..... 4677
16:40	2R17	Energy Conversion into Hydrogen Using Organic Thin Film Solar Cells <u>Atsushi Aoki</u> , Tomoaki Hori, Mitsuru Naruse, Takayuki Abe 4679
17:05	2R18	Development of dye-sensitized solar cell using membrane of self-assembled nanoparticles with polymer brushes <u>Yohei Nakanishi</u> , Yuko Kawano, Kohji Ohno, Takashi Morinaga, Takaya Sato, Takashi Sagawa, Susumu Yoshikawa, Yoshinobu Tsujii.. 4681

Friday, September 30

Polymer Materials for New Batteries

		N. Toshima, presiding
9:10	3R01	Transparent conductive oxide less-dye sensitized solar cells consisting of flexible porous titania sheets <u>Yuhei Ogomi</u> , Pandey Shyam, Shuzi Hayase..... 4683
9:35	3R02	PEDOT-based Solid State Dye-Sensitized Solar Cells with Carbazol Dyes <u>Yu Uemura</u> , Lei Tong, Dillip K. Panda, Attila J. Mozer, Sanjeev Gambhir, Nagatoshi Koumura..... 4685
10:00	3R03	Electropolymerization of Viologen/Indoline Dye-Coupled Molecules and Their Photovoltaic Performance <u>Naoki Sano</u> , Miu Suzuki, Wataru Tomita, Kenichi Oyaizu, Hiroyuki Nishide .. 4687
		K. Tajima, presiding
10:25	3R04	Preparation of TEMPO-substituted polymer Layer-by-Layer film via amide bond formation and their photoelectrochemical properties <u>Natsuru Chikushi</u> , Hiroshi Yamada, Kenichi Oyaizu, Hiroyuki Nishide... 4689
10:50	3R05	Electrode-Active Material Properties of Nitroxide Radical-substituted

		Polymers Synthesized via Living Polymerization <u>Takashi Sukegawa</u> , Hajime Omata, Kenichi Oyaizu, Hiroyuki Nishide .. 4691
11:15	3R06	Nanocomposites of Polyaniline for Thermoelectric Conversion – Size Effect of Inorganic Nanoparticles – <u>Naoki Toshima</u> , Shoko Ichikawa, Masahiro Imai..... 4693
11:40	3R07	Synthesis of Carbon Dioxide/Epoxide Copolymers Having Short Oxyethylene Side Chains and Evaluation of Electrochemical Properties as Novel Electrolyte Materials <u>Tomoki Shimomura</u> , Yoichi Tominaga 4695
		T. Itoh, presiding
12:55	3R08	Anisotropic ionic conduction in solid polymer electrolyte/clay nanocomposites by strong magnetic field <u>Masahiro Matsuda</u> , Masafumi Yamato, Yoichi Tominaga 4697
13:20	3R09	Creation of High Ion-Conductive Solid Polymer Electrolytes by Carbon Dioxide Utilization <u>Yoichi Tominaga</u> 4699
13:45	3R10	Structure and conduction properties of PVB type polymer gel electrolytes <u>Yuria Saito</u> , Miki Okano, Tetsuo Sakai, Junji Fujioka, Tomohiro Kawakami .. 4701
		T. Suga, presiding
14:10	3R11	Synthesis of Polystyrene-Branched Polyether Triblock Copolymer and Application to the Electrolyte for Lithium Secondary Battery <u>Hisashi Kokubo</u> , Eiji Nakazawa, Kaoru Dokko, Masayoshi Watanabe ... 4703
14:35	3R12	Lithium Polymer Secondary Battery Using Crosslinked Solid Polymer Electrolyte <u>Takahito Itoh</u> , Takahiro Sakakibara, Mitsuru Kitamura, Masashi Matsumoto, Takahiro Uno, Masataka Kubo, Kazuma Hanai, Nobuyuki Imanishi, Yasuo Takeda 4705
15:00	3R13	Development of lithium salts with plastic crystallinity and ionic conductive property <u>Daiki Kato</u> , Makoto Moriya, Wataru Sakamoto, Toshinobu Yogo..... 4707

Room S

Wednesday, September 28

New Development in Controlled Synthesis of Gel Materials

9:50	SO	Introductory Remarks Shokyoku Kanaoka 4503
		Y. Takashima, presiding
10:00	1S03	Crosslinking Reaction Mechanism of Epoxy Resins. 4. – Pursuit of Extreme Network-Polymer-Precursor Formation and Construction of Crosslink-System-Materials – Yujiro Kaneda, Hiroyuki Aota, <u>Akira Matsumoto</u> 4504
10:25	1S04	Ultrasonic Irradiation on Vinyl-Type Network Polymers – Degradation of Crosslink-System-Materials and Their Precursors Consisting of Network Polymer Precursors – <u>Kota Himeji</u> , Hiroyuki Aota, Akira Matsumoto 4506
10:50	1S05	Design and function of gel materials using polysaccharide nanogel

		as a building block <u>Satoshi Kosuge</u> , Asako Shimoda, Shin-ichi Sawada, Yoshihiro Sasaki, Nobuhiko Yui, Kazunari Akiyoshi.....	4508
		Y. Sasaki, presiding	
11:15	1S06	Preparation of Redox-responsive Supramolecular Hydrogel through Molecular Recognition and Its Self-healing Property <u>Masaki Nakahata</u> , Yoshinori Takashima, Hiroyasu Yamaguchi, Akira Harada.....	4510
11:40	1S07	Construction of Self-Oscillating Polymer Systems by using Reversible Complex Formation of Terpyridine-Terminated Poly(ethylene glycol) <u>Kaori Bundo</u> , Tomonaga Ueno, Yuki Akagi, Takamasa Sakai, Ryo Yoshida..	4512
		S. Ida, presiding	
12:55	1S08	Synthesis of multiple stimuli-responsive gels using biomolecular complexes and their biomolecule-responsive behavior <u>Mayuko Morota</u> , Takashi Miyata, Tadashi Uragami	4514
13:20	1S09	Synthesis of Non-spherical Morphologies from Cross-Linked Biomimetic Diblock Copolymers Using RAFT Aqueous Dispersion Polymerization <u>Shinji Sugihara</u> , Steven P. Armes, Andrew L. Lewis	4516
13:45	1S10	Structural design of graft- and block-types biodegradable polymers exhibiting temperature responsive sol-to-gel transition <u>Yuichi Ohya</u> , Masaya Umezaki, Hiroyuki Suzuki, Hidetoshi Yamamoto, Yuichiro Imai, Koji Nagahama, Tatsuro Ouchi.....	4518
		S. Sugihara, presiding	
14:10	1S11	Visible-light response of a PAG-modified polymer gel <u>Taku Satoh</u> , Kimio Sumaru, Toshiyuki Takagi, Toshiyuki Kanamori	4520
14:35	1S12	The Volume Phase Transition in Sulfonated Slide-Ring Gels <u>Akinori Bando</u> , Kazuaki Kato, Yasuhiro Sakai, Hideaki Yokoyama, Kohzo Ito	4522
15:00	1S13	The Effect of Cross-linking Structures on Swelling Behavior of N-isopropylacrylamide Gel <u>Yoshitsugu Hirokawa</u> , Keiko Tominaga, Yuki Fujita, Shohei Ida, Satoshi Tanimoto	4524
		Y. Sakai, presiding	
15:25	1S14	Synthesis and Network Formation Mechanism of Nanocomposite (NC) Gel prepared by in-situ photopolymerization in initiator-free aqueous system <u>Tetsuo Takada</u> , Kazutoshi Haraguchi	4526
15:50	1S15	The redox active nano-gel shuttle between ionic liquid and water phase <u>Shota Sawamura</u> , Yuzo Kitazawa, Yutaro Nakamura, Takeshi Ueki, Hisashi Kokubo, Masayoshi Watanabe	4528
16:15	1S16	Photo-induced self-assembly of multi-stimuli responsive diblock copolymers in ionic liquids <u>Yutaro Nakamura</u> , Takeshi Ueki, Hisashi Kokubo, Timothy Lodge, Masayoshi Watanabe.....	4530
16:40	1S17	Control of Swelling Ability of Stimuli-Responsive Gels through Complexation Anion Receptors in Organic Solvents <u>Kazuya Iseda</u> , Yohei Haketa, Kenta Kokado, Hiromitsu Maeda, Hiroyuki Furuta, Kazuki Sada.....	4532
		K. Sada, presiding	
17:05	1S18	Solvent Permeation Behavior of Polyrotaxane Gel Membranes under	

		Pressure Gradient	
		Chikara Katsuno, Akihiro Konda, <u>Kenji Urayama</u> , Toshikazu	
		Takigawa, Masatoshi Kidowaki, Kohzo Ito	4534
17:30	1S19	DN gel coating on solid surface and peel strength	
		<u>Hirokazu Shimano</u> , Jian Hu, Kenta Hiwatashi, Takayuki	
		Murosaki, Takayuki Kurokawa, Jianping Gong	4536
17:55	1S20	The interfacial stabilization of stimuli-responsive hydrogels	
		adhered by electrophoresis	
		<u>Eri Kawamura</u> , Taka-aki Asoh, Akihiko Kikuchi	4538

Thursday, September 29

New Development in Controlled Synthesis of Gel Materials

T. Sakai, presiding

9:10	2S01	Development of fluorescence gelators as TNT chemical sensors	
		<u>Kazuki Harano</u> , Masahiro Suzuki, Kenji Hanabusa	4540
9:35	2S02	Microtubule hydrogel: toward macroscopic motility	
		<u>Ryuzo Kawamura</u> , Ken-ichi Sano, Taiki Tominaga, Naoko	
		Oda, Kuniharu Ijiro, Yoshihito Osada	4542
10:00	2S03	Control of the mechanical properties of the gel by porous inorganic	
		particles	
		<u>Hideyuki Mitomo</u> , Ken-ichi Sano, Kuniharu Ijiro, Yoshihito Osada	4544

H. Furukawa, presiding

10:25	2S04	Structure and Properties of Tetra-PEG Hydrogel and Ion-gels	
		<u>Mitsuhiro Shibayama</u> , Hanako Asai, Kenta Fujii, Takeshi	
		Ueki, Takamasa Sakai, Masayoshi Watanabe	4546
10:50	2S05	The analysis of the rubber elasticity of Tetra-PEG gel using the	
		molecular models	
		<u>Takuya Katashima</u> , Chung Ung-il, Takamasa Sakai	4548

T. Ueki, presiding

11:15	2S06	Scaling relationship between elasticity and swelling ratio of polymer gels	
		<u>Takamasa Sakai</u> , Manami Kurakazu, Mitsuhiro Shibayama, Ung-il	
		Chung	4550
11:40	2S07	Inter-Crosslinking Network Gels	
		<u>Yoshitaka Amano</u> , Go Takada, Ruri Hidema, Hidemitsu Furukawa	4552

Food Gels and Polymers

12:45	SO	Introductory Remarks	
		Shingo Matsukawa	4562
		T. Suzuki, presiding	
12:55	2S08	Molecular Simulation of Milk Allergen Protein (β -lactoglobulin)	
		Adsorbed onto a solid surface	
		<u>Tomoaki Hagiwara</u> , Takaharu Sakiyama	4563
13:20	2S09	The property control of the food protein gel by the amyloid aggregation	
		<u>Yumi Morimoto</u> , Yuki Kawachi, Nobuyuki Takahashi, Takashi	
		Morii, Tomonori Waku, Shigeru Kunugi, Naoki Tanaka	4565
13:45	2S10	Effects of added succinoglycan on mechanical properties of	
		caseinate acid gel	
		<u>Isamu Kaneda</u> , Asami Sato, Kana Ohsugi	4567
14:10	2S11	Formation and physical properties of amyloid fibrils precursors by	
		beta-lactoglobulin	

		<u>Naoki Sasaki</u> , Shunsuke Suma, Yuichi Kawai, Yuna Saitoh, Kazuya Furusawa, Akimasa Fukui	4569
		M. Tokita, presiding	
14:35	2S12	Formation and Characterization of Films and Tubes from Silk Protein Hydrogels <u>Tsunenori Kameda</u>	4571
15:00	2S13	ice crystallization and glass transition in polymer gels <u>Norio Murase</u> , Tatsuya Sakamoto, Noriyuki Ijima	4573
15:25	2S14	Effect of structure relaxation in amorphous phase on physical property of food materials <u>Toru Suzuki</u> , Mayumi Anzai	4575
15:50	2S15	Relationship between glass transition temperature of disaccharides and dynamical behavior of water molecules – A molecular dynamics study – <u>Tetsuo Suzuki</u>	4577
		N. Murase, presiding	
16:15	2S16	Dielectric Relaxation of Water in Food and Related Materials <u>Shin Yagihara</u>	4579
16:40	2S17	Phase Behaviors of Gelatin Gel <u>Yutaro Yamashita</u> , Miho Yanagisawa, Sada-atsu Mukai, Masahiko Annaka, Masayuki Tokita	4581
17:05	2S18	Liesegang Phenomena in Polysaccharide Gel <u>Kana Okamura</u> , Takayuki Narita, Isamu Onishi, Masayuki Tokita	4583

Friday, September 30

Food Gels and Polymers

		S. Takigami, presiding	
9:10	3S01	Agrose gel network structure studied by NMR diffusion experiments <u>Qihua Zhao</u> , Bona Dai, Shingo Matsukawa	4585
9:35	3S02	Evaluation of Gel Property by Viscoelastic Measurements and Elucidation of Gelation Mechanism by NMR for Miscible System of Gellan Gum <u>Ayaka Shinsho</u> , Shingo Matsukawa	4587
10:00	3S03	Network Structure and Water Permeability in Polysaccharide gels <u>Shingo Matsukawa</u> , Narumi Ueno, Kanako Hayashi	4589
10:25	3S04	Structural characterization of gelation of beta-1,4-linked glucan chain induced by small molecules <u>Yoshiaki Yuguchi</u> , Masanori Kawabata, Koichi Ishida, Yukihiro Nishikawa ...	4591
		Y. Yuguchi, presiding	
10:50	3S05	Single molecular analysis of polysaccharides using a nanopore <u>Makoto Takemasa</u> , Masahiro Fujita, Mizuo Maeda	4593
11:15	3S06	Preparation and Properties of Low Molar Mass Konjac Glucomannan <u>Shoji Takigami</u> , Rheo Takahashi, Machiko Takigami	4595
11:40	3S07	Thermoreversible Gel Formation of Water Soluble Extract from Mushroom Sparassis crispa <u>Yoko Nitta</u> , Shoko Fujiwara, Taïdo Fujimoto	4597
		K. Kohyama, presiding	
12:55	3S08IL	Foods, polymers and gels <u>Katsuyoshi Nishinari</u>	4599
		M. Takemasa, presiding	
13:45	3S10	Texture evaluation of rice cake containing curdlan	

		<u>Yoshihiro Kakehashi</u> ,Takao Kida,Tomoko Sasaki,Fumiyo Hayakawa,Kaoru Kohyama	4602
14:10	3S11	Texture evaluation of solid foods during mastication <u>Kaoru Kohyama</u>	4604
14:35	3S12	Rheological and Swallowing Properties of Edible Gel <u>Hatsue Moritaka</u>	4606
15:00	3S13	Mastication Characteristics of Processed Cheeses Evaluated by Electromyography <u>Miki Konno</u>	4608

Room T

Wednesday, September 28

Biopolymers and Biorelated Polymers

N. Tanaka, presiding

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10:50	1T05	Controllable Assemblies of Robust Bionanotubes by Metal Coordination <u>Satoshi Abe</u> ,Hiroshi Inaba,Adam Stieg,Nusrat Sanghamitra,James Gimzewski,Susumu Kitagawa,Takafumi Ueno	4713

T. Ueno, presiding

11:15	1T06	Functional analysis of the interaction between peptide nanofibers and abnormal protein aggregates <u>Sayuri Fukuhara</u> ,Tatsutoshi Nishigaki,Tomonori Waku,Shigeru Kunugi,Naoki Tanaka.....	4715
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S. Kimura, presiding

12:55	1T08	Specific protein recognition ability of self-organized protein-induced glycopeptide cluster Mao Arai,Kenji Nagata, <u>Masahiro Higuchi</u>	4719
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M. Higuchi, presiding

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Formation, Structure Control, and Function of Supramolecular Aggregate

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15:50	1T15	Preparation and Properties of Vesicles Made of Ternary Fullerene Amphiphiles <u>Koji Harano</u> , Tatsuya Homma, Shinichiro Mizuno, Eiichi Nakamura	4045
16:15	1T16	Functional Supramolecular Structures with Anthracene Rings <u>Michito Yoshizawa</u>	4047
		M. Yoshizawa, presiding	
16:40	1T17	Guest-induced assembly formation of PEG-modified Semiconductor Clusters <u>Katsuaki Konishi</u> , Naoto Fukunaga	4049
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17:30	1T19	Self-assembly of fluorinated thiol capped nanoparticles <u>Kenich Niikura</u> , Naoki Iyo, Takashi Nishio, Kuniharu Ijiro	4053
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Thursday, September 29

Formation, Structure Control, and Function of Supramolecular Aggregate

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10:00	2T03	Control of High Order Structure of Polymer by Structural Change of the Side Chain Rotaxane Moiety <u>Sakiko Suzuki</u> , Fumitaka Ishiwari, Kazuko Nakazono, Toshikazu Takata ...	4061
		J. Kuwabara, presiding	
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10:50	2T05	Supramolecular Structure and Fluorescence Property of a Hydrogen-bonded Star-shaped Phenylethynylbenzene Derivative <u>Koichi Sakajiri</u>	4065
11:15	2T06	Construction of Fluorescent Nanorings <u>Shiki Yagai</u> , Yusaku Goto	4067
11:40	2T07	Structural Control and Remarkable Fluorescence Enhancement of Phthalocyanine Aggregates by Cyclodextrins <u>Shun Ueda</u> , Masanobu Naito, Yasuhisa Kuroda, Mitsuhiko Morisue	4069

T. Takata, presiding		
12:55	2T08IL	Macromolecular Recognition: Application for Preparation and Functions <u>Akira Harada</u> 4071
S. Yagai, presiding		
13:45	2T10	Polyrotaxanes Constructed from Pillar[5]arenes as Ring Components <u>Yuko Hasegawa</u> ,Tomoki Ogoshi,Tada-aki Yamagishi 4074
14:10	2T11	Construction of Double Helices Based on Oligophenols and Control of Their Supramolecular Structures <u>Yoshio Furusho</u> ,Eiji Yashima 4076
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Y. Furusho, presiding		
15:00	2T13	Simple Precision Syntheses and Ordered Nanoarchitectures of Cleavable Block Copolymers via Two Living Polymerizations <u>Akito Konishi</u> ,Makoto Ouchi,Midori Wakabayashi,Mikihito Takenaka,Mitsuo Sawamoto..... 4080
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15:50	2T15	Self-assembly of discrete metal complexes with block copolypeptide amphiphiles and their functionalization Yoshitaka Masaki,Satoru Nakahara,Yuko Koga, <u>Keita Kuroiwa</u> 4084
T. Ogoshi, presiding		
16:15	2T16	Chaperonebionanotube (1): One-dimensional Assembly of Chemically Designed Molecular Chaperone for Stimuli-responsive Advanced DDS <u>Shuvendu Biswas</u> ,Kazushi Kinbara,Noriyuki Ishii,Hideki Taguchi,Takuzo Aida..... 4086
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17:05	2T18	Photosensitized Hydrogen Evolution from Water Using SWNT/Fullerodendron/Pt Nanohybrids <u>Takaaki Wada</u> ,Tomoyuki Tajima,Tetsuya Uchida,Yutaka Takaguchi.. 4090

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M. Higuchi, presiding		
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9:35	3T02	Control of stir-induced chirality in ionic polyaramide solution <u>Kunihiko Okano</u> ,Masahiko Shigaki,Takashi Yamashita..... 4094
10:00	3T03	Hydrogen-bond-directed two-dimensional supramolecular polymers: Molecular design, controlled assembly and their functions <u>Isao Yoshikawa</u> ,Shin-ichiro Kabashima,Jun Sawayama,Jun Li,Koji Araki..... 4096
K. Okano, presiding		
10:25	3T04	Thermo-sensitive polymers by utilization of weak interaction with small organic molecules <u>Shogo Amemori</u> ,Kenta Kokado,Kazuki Sada 4098

10:50	3T05	Synthesis of polyphenylene-based polymer electrolytes by catalyst transfer polycondensation (IV) – Effect of block structures – <u>Tatsuya Oshima</u> , Kensuke Umezawa, Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa.....	4100
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11:40	3T07	Conformation and Functions of Alternating Amphiphilic Compounds in Liposomal Membranes <u>Tatsuya Shima</u> , Takahiro Muraoka, Tsutomu Hamada, Masamune Morita, Masahiro Takagi, Kazushi Kinbara	4104
	Y. Ishida, presiding		
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13:20	3T09	Smart Windows with Organic-Metallic Hybrid Polymers <u>Masayoshi Higuchi</u>	4108
13:45	3T10	Size control and catalytic function of metal-complexed organic nanotubes <u>Masaru Mukai</u> , Masaki Kogiso, Masaru Aoyagi, Hiroyuki Minamikawa, Masumi Asakawa, Toshimi Shimizu	4110
	T. Uemura, presiding		
14:10	3T11	Polymer organogelators with polycaprolactone <u>Takeshi Suzuki</u> , Masahiro Suzuki, Kenji Hanabusa.....	4112
14:35	3T12	Development of polyamine sensor by hybridization of supramolecular hydrogel and montmorillonite <u>Tatsuyuki Yoshii</u> , Masato Ikeda, Itaru Hamachi	4114
15:00	3T13	Development of Mechano-Responsive Photoluminescent Liquid Crystals <u>Kazuki Yachi</u> , Yoshimitsu Sagara, Shogo Yamane, Masafumi Yoshio, Takashi Kato.....	4116
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Room U

Wednesday, September 28

Biopolymers and Biorelated Polymers

N. Kobayashi, presiding

10:00	1U03	Connecting DNA duplexes mediated by cluster formation of azobenzene derivatives <u>Tetsuya Doi</u> , Takamitsu Hayashi, Taiga Fujii, Hiromu Kashida, Hiroyuki Asanuma.....	4729
10:25	1U04	Design of azobenzene derivatives for the photoregulation of DNA hybridization by visible light in reversed mode <u>Teruchika Ishikawa</u> , Hidenori Nishioka, Kyoichi Sawabe, Xingguo Liang, Hiroyuki Asanuma.....	4731

10:50	1U05	Synthesis and Interaction Behavior of Peptide Ribonucleic Acid (PRNA)-PNA-DNA Chimeras and Application to Expression Control of Genetic Information-3 <u>Takehiko Wada</u> , Tatsuya Mizutani, Ryohei Uematsu, Seiji Sakamoto, Yasuyuki Araki, Asako Yamayoshi, Akira Murakami 4733	
		H. Asanuma, presiding	
11:15	1U06	Interaction between DNA/CTMA complex and Lanthanide(III) chelate and its effect on photophysical properties <u>Amika Sagara</u> , Mayu Fukabori, Kazuki Nakamura, Norihisa Kobayashi 4735	
11:40	1U07	Optical and electronic properties of DNA/functional molecule complexes toward application for novel OLED materials <u>Mayu Fukabori</u> , Amika Sagara, Kazuki Nakamura, Norihisa Kobayashi ... 4737	
		T. Wada, presiding	
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13:20	1U09	Function of Amphiphilic Highly Branched Polysaccharide Nanogels <u>Kimiko Okazaki</u> , Haruko Takahashi, Yoshihiro Sasaki, Nobuhiko Yui, Shin-ichi Sawada, Kazunari Akiyoshi 4741	
		M. Akashi, presiding	
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14:10	1U11	Control of Nanostructure of Calcium Phosphate using Soft Nanoparticles <u>Kei Kurosu</u> , Yoshihiro Sasaki, Setuko Yamane, Shinichi Sawada, Nobuhiko Yui, Kazunari Akiyoshi 4745	
		K. Akiyoshi, presiding	
14:35	1U12	Functional nano polyampholyte gels prepared by cationized poly (γ -glutamic acid) <u>Heyun Shen</u> , Takami Akagi, Mitsuru Akashi 4747	
15:00	1U13	Preparation of porous particles composed of amphiphilic poly(amino acid) and their formation mechanism <u>Ryota Fukumoto</u> , Takami Akagi, Mitsuru Akashi 4749	
15:25	1U14	Synthesis of molecular probes using functionalized nanoparticles for assessing biological environments <u>Narufumi Kitamura</u> , Kazuo Tanaka, Yoshiki Chujo 4751	
		T. Asoh, presiding	
15:50	1U15	Functionalization of biodegradable temperature-responsive injectable polymer systems by polymeric additives <u>Hiroyuki Suzuki</u> , Hirotaka Jodo, Yuichi Ohya 4753	
16:15	1U16	Synthesis and characterization of novel CLICK monomers and polymers using isopropylacrylamide-derivatives <u>Shogo Yasuda</u> , John Hoffman, Mitsuhiro Ebara, Takao Aoyagi 4755	
16:40	1U17	Synthesis of Diol Monomer Containing Phospholipid Moiety and the Development of Biocompatible Polyurethane <u>Yuhki Sakagami</u> , Yusuke Narita, Yu Nagase 4757	
		Y. Ohya, presiding	
17:05	1U18	Preparation of thermoresponsive soft interfaces and their property as chromatographic matrices <u>Akihiko Kikuchi</u> , Taka-aki Asoh 4759	

17:30	1U19	Preparation of thermoresponsive immobilized metal ion affinity column having iminodiacetic acid side groups <u>Masayuki Seo</u> ,Taka-aki Asoh,Akihiko Kikuchi..... 4761
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Thursday, September 29

Biopolymers and Biorelated Polymers

T. Nishikawa, presiding

9:10	2U01	Sensitive detection of a marker protein on a ZnO-coated plasmonic chip <u>Keiko Tawa</u> ,Mitsuo Umetsu,Izumi Kumagai..... 4765
9:35	2U02	Terahertz Electromagnetic Response of Metallic Microcoils fabricated through Bio-Templating Process <u>Soichiro Suzuki</u> ,Kaori Kamata,Tomokazu Iyoda..... 4767
10:00	2U03	Molecular design and action of membrane-interacting antimicrobial polymers <u>Kazuma Yasuhara</u> ,Manami Tsukamoto,Jun-ichi Kikuchi 4769

J. Kikuchi, presiding

10:25	2U04	Facile Preparation of Lipid Nanotubes for Construction of Micro Bio Device <u>Yurina Sekine</u> ,Yoshitaka Ito,Yoshihiro Sasaki,Nobuhiko Yui,Shin-ichi Sawada,Kazunari Akiyoshi..... 4771
10:50	2U05	Quantitative Analysis of Gene Screening System using Unilamellar Liposomes and Fluorescence Activated Cell Sorter <u>Takehiro Nishikawa</u> ,Takeshi Sunami,Tomoaki Matsuura,Norikazu Ichihashi,Tetsuya Yomo 4773

H. Kawakami, presiding

11:15	2U06	Gene suppression using ODN introduced by high hydrostatic pressurized lipoplex <u>Tsuyoshi Kimura</u> ,Asami Sano,Kwangwoo Nam,Yoshihiro Sasaki,Kazunari Akiyoshi,Akio Kishida 4775
11:40	2U07	Amphiphilic sugar-grafted polylysine nanogel for nucleic acid delivery system <u>Yoshitaka Ito</u> ,Sayaka Toita,Shin-ichi Sawada,Yoshihiro Sasaki,Nobuhiko Yui,Kazunari Akiyoshi..... 4777

N. Yui, presiding

12:55	2U08	Design of polymeric gene carriers for non-viral gene delivery Ran Namgung,Sejin Son,Kaushik Singha, <u>Won Jong Kim</u> 4779
13:20	2U09	Epigenetics engineering for novel gene manipulation <u>Yutaro Asaba</u> ,Shoichiro Asayama,Hirofumi Koyama,Takahiko Shimizu,Hiro Yoshi Kawakami..... 4781

Y. Nagasaki, presiding

13:45	2U10	Precise analysis of drug encapsulated polymeric micelles and the interactions of polymer with drugs <u>Koichi Shiraishi</u> ,Yusuke Sanada,Kazuo Sakurai,Masayuki Yokoyama ... 4783
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		K. Osada, presiding	
15:00	2U13	Analysis of the Protein Interaction with the Core-polymerized and Boron-conjugated Micelles using Asymmetrical Flow Field-Flow-Fractionation <u>Shogo Sumitani</u> , Alexandre Moquin, Francoise Winnik, Yukio Nagasaki...	4789
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15:50	2U15	Development of bioabsorbable gel by using chain-extending poly(lactic acid)-poly(ethylene glycol) copolymers <u>Yui Hsu</u> , Kazunari Masutani, Tetsuji Yamaoka, Yoshiharu Kimura	4793
		K. Shiraishi, presiding	
16:15	2U16	Characterization and in vivo evaluation of nano-sized polyion complex vesicle (Nano-PICsome) with varying cross-linking ratio <u>Yasutaka Anraku</u> , Akihiro Kishimura, Mitsunobu Kano, Yukiteru Katsumoto, Kensuke Osada, Kazunori Kataoka.....	4795
16:40	2U17	Analysis of immunization mechanism of nanoparticle vaccines by evaluating intracellular behavior and biodistribution of antigen-encapsulated nanoparticles <u>Fumiaki Shima</u> , Tomofumi Uto, Takami Akagi, Masanori Baba, Mitsuru Akashi	4797
17:05	2U18	Surface Functionalization of HVJ-E with hyaluronic acid by LBL for CD44-targeting <u>Takaharu Okada</u> , Koichiro Uto, Masao Sasai, Chunman Lee, Mitsuhiro Ebara, Takao Aoyagi	4799

Friday, September 30

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		M. Rikukawa, presiding	
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9:35	3U02	Novel strategy for suppression of blood activation and coagulation by nitroxide radicals-containing polymer possessing reactive oxygen species scavenging activity <u>Toru Yoshitomi</u> , Yu Yamaguchi, Akihiko Kikuchi, Yukio Nagasaki.....	4803
10:00	3U03	Development of silk based small diameter artificial vascular grafts with various coatings <u>Yu Suzuki</u> , Derya Aytemiz, Yuki Hatori, Yasuyuki Abe, Takahito Yagi, Keisuke Takagi, Ryo Tanaka, Hiroyuki Okamoto, Tetsuo Asakura ..	4805
		Y. Akiyama, presiding	
10:25	3U04	Preparation of PCL-b-PLLA fibers by electrospinning method (II) – Effect of solvents – <u>Kazusei Yoshida</u> , Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa ..	4807
10:50	3U05	Fabrication of Layer-by-Layer Nanofilms like a Basal Lamina for 3D-Human Skin Equivalents <u>Kumiko Fujimoto</u> , Akihiro Nishiguchi, Michiya Matsusaki, Yuji Shirakata, Koji Hashimoto, Mitsuru Akashi.....	4809

T. Fujigaya, presiding			
11:15	3U06	Survival and Structural Evaluations of 3D-Fibroblast Tissues Prepared by Hierarchical Cell Manipulation Technique <u>Paninee Chetprayoon</u> , Kohji Kadowaki, Michiya Matsusaki, Mitsuru Akashi.....	4811
11:40	3U07	Development of stretchable temperature-responsive cell culture surfaces <u>Yoshikatsu Akiyama</u> , Masayuki Yamato, Teruo Okano	4813
T. Aoyagi, presiding			
12:55	3U08	Preparation of gelatin hydrogel scaffolds with the property of sugar-responsive water-solubilization to construct cell aggregates <u>Kanako Inoo</u> , Masaya Yamamoto, Yasuhiko Tabata	4815
13:20	3U09	Preparation of hydrogel culture substrates with elasticity changeable by alkaline phosphatase <u>Hiroyuki Toda</u> , Masaya Yamamoto, Yasuhiko Tabata	4817
13:45	3U10	Study for single cell analysis using optical responsive carbon nanotube cell cultured substrate <u>Takao Sada</u> , Tsuyohiko Fujigaya, Naotoshi Nakashima	4819
S. Kakinoki, presiding			
14:10	3U11	Development and Structural Control of Endothelial Tube Networks by Nanofilm Fabrication on Cell Surface Akihiro Nishiguchi, <u>Michiya Matsusaki</u> , Mitsuru Akashi.....	4821
14:35	3U12	The role of clay for cell culture in nanocomposite gels <u>Noriko Kotobuki</u> , Kazutoshi Haraguchi.....	4823
M. Yamamoto, presiding			
15:00	3U13	Sequence Structural Effects of Sugar-Bearing Thermoresponsive Copolymer Brushes on Cell Adhesion <u>Naokazu Idota</u> , Mitsuhiro Ebara, Yohei Kotsuchibashi, Ravin Narain, Takao Aoyagi	4825
15:25	3U14	Functionalization of PLA nanofibrous nerve conduits with thermoresponsible elastin-like artificial protein containing bioactive sequences <u>Sachiro Kakinoki</u> , Tetsuji Yamaoka	4827

Room V

Wednesday, September 28

Self-Assembled Biopolymers

9:50	SO	Introductory Remarks Jun Sumaoka	5139
K. Matsuura, presiding			
10:00	1V03	Nano fibril formation of amyloigogenic polymerization of ovalbumin Morimoto Yumi, Kawachi Yuki, Tomonori Waku, Kawachi Yuki, Takahashi Nobuyuki, <u>Naoki Tanaka</u>	5140
10:25	1V04	Thermodynamics of Trichocyte Intermediate Filament Protein Supramolecular Assembly Daisuke Ishii, Ryota Abe, Masato Kiyoshi, Shun-ichi Watanabe, Masaru Tsuchiya, Bernd Noecker, <u>Kouhei Tsumoto</u>	5142
10:50	1V05	Solution additives to improve physical and chemical stability of proteins <u>Shunsuke Tomita</u> , Yukio Nagasaki, Kentaro Shiraki.....	5144

K. Tsumoto, presiding		
11:15	1V06	Self-assembly of peptide nano-capsules from beta-annulus peptide and their complexation with proteins <u>Kazunori Matsuura</u> , Tomohiro Nakamura, Tomoki Shimata, Yuusuke Minami, Nobuo Kimizuka 5146
11:40	1V07	Design of artificial spider silk based on peptide-polymer hybrids <u>Tomoyuki Koga</u> , Shogo Kajioka, Satomi Ebara, Hiroshi Kubo, Nobuyuki Higashi 5148
12:55	1V08	Self-assembly β -strand peptides based biomaterials <u>Yoshiaki Hirano</u> , Hiroshi Hatano, Nobuto Hayashi, Masanobu Wada.... 5150
N. Tanaka, presiding		
13:20	1V09	Development and application of biological-substance responsive supramolecular hydrogel based on peptides <u>Tastuya Tanida</u> , Masato Ikeda, Itaru Hamachi 5152
13:45	1V10	Supramolecular Enantiodifferentiating Photocyclodimerization of 2-Anthracenecarboxylate with Phage Display Technique-3 <u>Takehiko Wada</u> , Yui Sugawara, Ayumi Miyachi, Sakie Minato, Seiji Sakamoto, Makoto Nakakido, Mihoko Ui, Yasuyuki Araki, Masaki Nishijima, Kohei Tsumoto, Kazushi Kinnbara, Yoshihisa Inoue 5154
14:10	1V11	Cancer Imaging Agent by using polyer/peptide conjugate— Fluorescence probe for prostate cancer-specific protease— Masanori Kuramoto, Riki Toita, Shujiro Shiosaki, Takeshi Mori, Takuro Niidome, <u>Yoshiki Katayama</u> 5156
T. Wada, presiding		
14:35	1V12	Influence of multivalency of sugar-mimicking peptide on virus infection <u>Teruhiko Matsubara</u> , Shoko Chiba, Shunsuke Arami, Toshinori Sato .. 5158
15:00	1V13	Hierarchical self-assembly of biopolymers:supramolecular spinning of polysaccharide nanofibers by microfluidic devices <u>Munenori Numata</u> , Yusuke Takigami, Momoko Takayama 5160
15:25	1V14	Observation of a hyaluronan synthase in lipid bilayer by using high-speed atomic force microscopy <u>Atsushi Hirose</u> , Yoshimitsu Kakuta, Kouji Kimata, Toshiaki Mori, Yoshio Okahata..... 5162
T. Mori, presiding		
15:50	1V15	Characterization of polymer assemblies formed with DNA and ionic polysaccharide and their application to DDS <u>Toshinori Sato</u> , Kenji Hagiwara, Mitsuhiro Nakata, Yoshiyuki Koyama, Satoko Kishimoto, Masayuki Ishihara 5164
16:15	1V16	The important role of noncanonical structures of nucleic acids in their transcription and translation <u>Naoki Sugimoto</u> , Noburu Isono, Yu Kawasaki, Ryoya Ono, Tamaki Endoh, Satoru Nagatoishi, Hisae Tateishi-karimata 5166
16:40	1V17	Development of the Self Activated Cross-linking Agents for the Gene Regulation in Cells <u>Fumi Nagatsugi</u> , Shinya Hagihara, Shuhei Kusano, Xiao Guang Chao, Takuma Moki 5168
N. Sugimoto, presiding		
17:05	1V18	Polycation/DNA complex elucidated by flow-stretching assay <u>Naotaka Sonda</u> , Masanori Hirano, Ryo Honda, Naohiko Shimada, Arihiro Kano, Satoru Kidoaki, Masatoshi Maeki, Masaya Miyazaki, Atsushi Maruyama 5170
17:30	1V19	Development of cationic poly(amino acid)s for polyion complex-based nucleic acid delivery <u>Kanjiro Miyata</u> , Hirokuni Uchida, Tomoya Suma, Takehiko Ishii, Makoto Oba, Nobuhiro Nishiyama, Kazunori Kataoka..... 5172

17:55	1V20	The design of super-sensitive in-stem molecular beacon with cationic graft copolymer <u>Takuya Osawa</u> , Taiga Fujii, Xingguo Liang, Hiromu Kashida, Yasuko Yoshida, Naohiko Shimada, Atsushi Maruyama, Hiroyuki Asanuma	5174
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Thursday, September 29

Self-Assembled Biopolymers

K. Niikura, presiding

9:10	2V01	Development of new DNA probe detecting three-base deletion by introducing perylene derivatives into DNA <u>Nobuyo Kondo</u> , Koji Sekiguchi, Hiromu Kashida, Hiroyuki Asanuma ...	5176
9:35	2V02	Luminescent DNA detection with convergently hybridized DNA probes <u>Toshihiro Ihara</u> , Yusuke Kitamura, Yusuke Tsujimura, Akinori Jyo	5178
10:00	2V03	Synthesis of DNA oligo-catenanes using self-assembly of DNA <u>Masami Hamano</u> , Takayuki Nishi, Koji Ohta, Kenta Jozuka, Takeaki Uehara, Akinori Kuzuya, Yuichi Ohya	5180

S. Sato, presiding

10:25	2V04	Development of DNA-brush tissue culture substrate for damage-free cell ablation <u>Asumi Eguchi</u> , Yasutaka Matsuo, Kenichi Niikura, Kuniharu Ijio	5182
10:50	2V05	Measurements of DNA hydrolysis reaction and characterization of physical property of DNAs using the RfS-QCM <u>Kensuke Uemura</u> , Takayoshi Kawasaki, Yoshio Okahata	5184
11:15	2V06	The Pulsed-vibration Effects on Protease Reactions on a Piezoelectric Element <u>Takayoshi Kawasaki</u> , Yoshio Okahata	5186

Y. Ohya, presiding

11:40	2V07	Self-assembly of DNA duplex fragments anchored by naphthalene diimide derivatives <u>Shinobu Sato</u> , Hiromitsu Ogata, Shigeori Takenaka	5188
12:55	2V08	Preparation of nanoporous materials based on polylactide <u>Naoki Nishikawa</u> , Daisuke Kawato, Toyoji Kakuchi, Toshifumi Satoh ...	5190
13:20	2V09	Bio-function of self-assembled hydrogel based on chemical reaction <u>Masato Ikeda</u> , Itaru Hamachi	5192

J. Sumaoka, presiding

13:45	2V10	Refolding and Activity Stabilization of Proteins by Self-Organized Bionanotubes <u>Naohiro Kameta</u> , Mitsutoshi Masuda, Toshimi Shimizu	5194
14:10	2V11IL	Detection of viscoelasticity of Biomolecules <u>Yoshio Okahata</u> , Hiroyuki Furusawa	5196

H. Kashida, presiding

15:00	2V13	Proteoliposome engineering: liposome chaperone in cell-free protein synthesis system <u>Jun-ichi Yasuoka</u> , Shin-ichi Sawada, Yoshihiro Sasaki, Nobuhiko Yui, Kazunari Akiyoshi	5199
15:25	2V14	Observation of reactions of disulfide-bond formation proteins from E.coli for analyses of the reaction mechanism <u>Hiroyuki Furusawa</u> , Kenjiro Yazawa, Yoshio Okahata	5201
15:50	2V15	Observation of reactions of disulfide-bond formation proteins from E.coli for mechanisms of a pH robustness <u>Kenjiro Yazawa</u> , Hiroyuki Furusawa, Yoshio Okahata	5203

K. Akiyoshi, presiding

16:15	2V16	Dynamics of cell-sized liposome and signal transduction <u>Masahiro Takagi</u> , Tsutomu Hamada.....	5205
16:40	2V17	Formation of Lipid Domains Induced by Molecular Signals and Followed Membrane Fission Behavior <u>Jun-ichi Kikuchi</u> , Kazuma Yasuhara, Keishiro Tahara, Hikaru Shiraiwa ..	5207
17:05	2V18	Structural Analysis of Micelles constituted from Cationic Lipid with Sugar Alcohol <u>Takuma Matsuo</u> , Shouta Fujii, Yusuke Sanada, Kazuo Sakurai	5209

Friday, September 30**Biopolymers and Biorelated Polymers****A. Kobayashi, presiding**

9:10	3V01	Thermostable phosphorylase-catalyzed transfer reaction of glucuronic acid residue and its application to anionic saccharide materials <u>Yuta Umegatani</u> , Mariko Takamiya, Kazuya Yamamoto, Jun-ichi Kadokawa	4829
9:35	3V02	Chemoenzymatic Synthesis of Amylose-grafted Xanthan Gum and Production of its Hydrogel Material <u>Takuya Arimura</u> , Kazuya Yamamoto, Jun-ichi Kadokawa.....	4831

A. Isogai, presiding

10:00	3V03	Preparation of locust bean gum-based materials through the gelation with an ionic liquid <u>Takeshi Kato</u> , Kazuya Yamamoto, Jun-ichi Kadokawa.....	4833
10:25	3V04	Synthesis of chitin macroinitiator in ionic liquid and graft polymerization of styrene by ATRP <u>Kazuya Yamamoto</u> , Sho Yoshida, Shozaburo Mine, Jun-ichi Kadokawa .	4835

J. Kadokawa, presiding

10:50	3V05	Preparation and Physicochemical Properties of the Complexation of Chitosan-g-PEG Copolymer with Iodine <u>Shintaro Ueda</u> , Koji Tsuchiya, Hirofumi Yajima	4837
11:15	3V06	Strategy for enhancement of the Amadori rearrangement to synthesize neo-glycoprotein <u>Atsushi Kobayashi</u> , Yu-shi Kumagai, Kenta Aizawa, Shin-ichiro Shoda ..	4839
11:40	3V07	TEMPO-mediated oxidation of (1→3)-β-glucan <u>Naoyuki Tamura</u> , Erika Watanabe, Tsuguyuki Saito, Akira Isogai	4841

T. Yoshida, presiding

12:55	3V08	Preparation of Polysaccharide Composite Films Utilizing Hot Press Technique and Characterization Thereof <u>Masafumi Ohashi</u> , Mineo Hashizume	4843
13:20	3V09	Design and preparation of polymeric particles with biological function using oligosaccharide-conjugated amphiphilic styrene-type monomer <u>Daichi Togashi</u> , Atsushi Narumi, Seigou Kawaguchi.....	4845
13:45	3V10	Supramolecular Complex of Lipopolysaccharide and Cationic Micelles to Control Cytokine Response <u>Wenjing Li</u> , Tomoki Nisimura, Shinichi Mochizuki, Kazuo Sakurai	4847

K. Sakurai, presiding

14:10	3V11	Mechanistic Studies on Saccharide Sensing by a Curdlan-Polythiophene Hybrid in Aqueous Media Mami Imai, <u>Gaku Fukuhara</u> , Cheng Yang, Tadashi Mori, Yoshihisa Inoue...	4849
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14:35	3V12	Elucidation of the interaction between sulfated polysaccharides and polylysine by SPR <u>Takahisa Ishimura</u> , Takashi Yoshida.....	4851
15:00	3V13	Ultra-Sensitive Screening of Cellulose Degradors by Using Nanofibrous Cellulose <u>Mikiko Tsudome</u> , Shigeru Deguchi, Ryusuke Nabata, Susumu Ito, Koki Horikoshi	4853

Room W

Wednesday, September 28

Contribution of Polymer Science to Nanomedicine

9:50	SO	Introductory Remarks Kazuhiko Ishihara, Tetsuji Yamaoka	4990
		T. Yamaoka, presiding	
10:00	1W03	What is nanomedicine for developing new medical future?— Organization of newly principal of medicine— <u>Kazuhiko Ishihara</u> , Tetsuji Yamaoka	4991
		A. Mahara, presiding	
10:25	1W04	Water Structure Dominating Protein Adsorption around Polymer Brush Surface <u>Yuuki Inoue</u> , Kazuomi Inoue, Kazuhiko Ishihara	4993
10:50	1W05	Design of novel supramolecular block copolymers for development of mobile bio-interfaces <u>Ji-hun Seo</u> , Nobuhiko Yui	4995
		Y. Inoue, presiding	
11:15	1W06	Application of ligand-immobilized sulfobetaine surface to the cell separation column <u>Atsushi Mahara</u> , Carlos Agudero, Hiromi Kitano, Tetsuji Yamaoka.....	4997
11:40	1W07	Optimization of Photo-Responsive Gelatin Gel for Application to Pinpoint Cell Separation System <u>Chie Kojima</u> , Naoki Mishima, Naoya Oeda, Hironori Hattori, Kohei Yamamoto, Takuya Iida.....	4999
		S. Sawada, presiding	
12:55	1W08	Specific Crosslinking of Collagen Fibers Using Supramolecular Nanoparticles with Triple-helices and Their Application for Corneal Tissue Engineering <u>Michiya Matsusaki</u> , Masahiro Matsumoto, Takeshi Soma, Kohji Nishida, Mitsuru Akashi.....	5001
13:20	1W09	Redox Polymer Drug for Cerebral Diseases <u>Yukio Nagasaki</u>	5003
13:45	1W10	Design of cell specific nucleic delivery system and treatment of inflammation using polysaccharide <u>Shinichi Mochizuki</u> , Kazuo Sakurai.....	5005
		T. Yamaoka, presiding	
14:10	1W11IL	R&D on Coronary Stent Made in Japan Kazuaki Kataoka, Shuzo Yamashita	5007
		Y. Miura, presiding	
15:00	1W13	Functional Analysis of Spheroid Induction Peptides <u>Yoshiaki Hirano</u> , Tomoki Ito, Kouji Inai, Masahito Oka.....	5010

15:25	1W14	Surface modification of living cells bearing methacryloyl-functionalized carbohydrates <u>Yasuhiko Iwasaki</u> , Hiroshi Matsuno, Tatsuya Ota 5012
15:50	1W15	Development of novel functional peptides that induce ubiquitin-dependent proteolysis of virulence protein <u>Asako Yamayoshi</u> , Mikimasa Yoshikawa, Mariko Yasuhara, Sanjeev Galande, Akio Kobori, Akira Murakami 5014
		Y. Hirano, presiding
16:15	1W16	Novel Antigenic Peptide Delivery System by beta-sheet Peptide Nanofibers <u>Tomonori Waku</u> , Yuichi Kitagawa, Shigeru Kunugi, Naoki Tanaka 5016
16:40	1W17	Functional cycloamylose nanogel for Intracellular nucleic acid delivery <u>Shin-ichi Sawada</u> , Sayaka Toita, Kazunari Akiyoshi 5018
		Y. Iwasaki, presiding
17:05	1W18	Protein Regulation by Sulfonated Glyco-Cluster <u>Yoshiko Miura</u> , Yuri Nishimura, Yu Hoshino 5020
17:30	1W19	Preparation and function of nanostructures composed of amphiphilic poly(amino acid) <u>Takami Akagi</u> , Masanori Baba, Mitsuru Akashi 5022
17:55	1W20	Antigen delivery and induction of antitumor immune responses mediated by pH-sensitive hyperbranched poly(glycidol)-modified liposomes <u>Eiji Yuba</u> , Atsushi Harada, Yuichi Sakanishi, Shinobu Watarai, Kenji Kono 5024

Thursday, September 29

Contribution of Polymer Science to Nanomedicine

		K. Shiraishi, presiding
9:10	2W01	Small particulation of polymeric micelle, "Lactosome", and its effect on ABC phenomenon relief <u>Akira Makino</u> , Eri Takeuchi, Eiichi Ozeki, Shunsaku Kimura 5026
9:35	2W02	Preparation and function of poly(vinylpyrrolidone-co-methacrylic acid)-coated magnetite nanoparticles to target HER2-overexpressing gastric cancer cells Kaname Tsutsumiuchi, <u>Mai Yamashiro</u> , Toshihide Sugimura, Hayao Nakanishi, Takeshi Kobayashi 5028
		K. Morigaki, presiding
10:00	2W03	Preparation of thermoresponsive polymer-immobilized microarrays for cytoscreening and cell recovery Akinori Imajo, Kazuo Sugiyama, <u>Kohei Shiraishi</u> , Yasue Yamada, Hirofumi Kawazumi, Tatsuyuki Nakatani, Keishi Okamoto, Yuki Nitta 5030
10:25	2W04	Synthesis of liquid crystalline polymer exhibiting phase transition at room temperature and their applications as smart biomaterials <u>Takashi Miyata</u> , Hiroki Kotegawa, Tadashi Uragami 5032
		T. Miyata, presiding
10:50	2W05	Stem cell transplantation therapy based on in vivo MRI cell tracking <u>Tetsuji Yamaoka</u> , Carlos Agudelo, Yoichi Tachibana, Atsushi Mahara .. 5034
11:15	2W06	Preparation of adrenergic receptor -reconstituted giant liposome array <u>Koki Kamiya</u> , Toshihisa Osaki, Kanta Tsumoto, Ryuji Kawano, Hirotaka Sasaki, Shoji Takeuchi 5036

11:40	2W07	Functional model biological membranes based on polymeric lipid bilayers <u>Kenichi Morigaki</u> , Kazuyuki Mizutani, Makoto Saito, Hiromasa Imaishi..	5038
		K. Ishihara, presiding	
12:55	2W08IL	Development of Neural Network Device – Motivation Based on Nanomedicine – <u>Tsuneo Urisu</u>	5040
		A. Kikuchi, presiding	
13:45	2W10	Detection of ATP molecule by nanoconformational switching of hairpin DNA aptamer <u>Tatsuro Goda</u> , Yuji Miyahara.....	5043
14:10	2W11	Imaging molecular processes in living cells <u>Moritoshi Sato</u>	5045
		S. Kakinoki, presiding	
14:35	2W12	Surfaces design of thermoresponsive core-corona type nanosphere with controlled chain lengths <u>Takuya Matsuyama</u> , Taka-aki Asoh, Akihiko Kikuchi.....	5047
15:00	2W13	Surface organization of phenylboronic acid polymer for specific affinity with sialic acid <u>Yousuke Takahashi</u> , Akira Matsumoto, Kazunori Kataoka, Yuji Miyahara, Hidenori Otsuka	5049
		T. Goda, presiding	
15:25	2W14	Design of Smart Biomaterials for DDS using Stimuli-Responsive Block Copolymers Yohei Kotsuchibashi, Mitsuhiro Ebara, <u>Takao Aoyagi</u>	5051
15:50	2W15	Mechanism of rapid nuclear import of oligosaccharide-displaying nanoparticles <u>Kenichi Niikura</u> , Shota Sekiguchi, Shigehiro Yoshimura, Kuniharu Ijro...	5053
16:15	2W16	Improvement of gene expression by suppression of reaction oxygen species <u>Yutaka Ikeda</u> , Kazuko Toh, Toru Yoshitomi, Yukio Nagasaki	5055
		T. Aoyagi, presiding	
16:40	2W17	Design of Molecular Glue for Non-covalent Adhesion to Biomacromolecules and Application for Protein and Nucleic Acid Delivery <u>Kou Okuro</u> , Harei Nemoto, Kazushi Kinbara, Makoto Oba, Nobuhiro Nishiyama, Kazunori Kataoka, Takuzo Aida	5057
17:05	2W18	Assessment of Anti-Fouling Properties of Biomedical Polymers by Computational Chemistry <u>Ryo Nagumo</u> , Ryuji Miura, Ai Suzuki, Hideyuki Tsuboi, Nozomu Hatakeyama, Hiromitsu Takaba, Akira Miyamoto.....	5059

Friday, September 30

Contribution of Polymer Science to Nanomedicine

		A. Maruyama, presiding	
9:10	3W01	Estimation of PEG density on PEG-PLys based polyplex micelles <u>Kensuke Osada</u> , Theofilus Tockary, Satoshi Uchida, Keiji Itaka, Kazunori Kataoka.....	5061
9:35	3W02	Effect of PEGylation to head-tail type polycation vector <u>Atsushi Harada</u> , Yuka Kimura, Eiji Yuba, Kenji Kono	5063
		A. Harada, presiding	
10:00	3W03	Dramatic Improvement of Photodynamic Activity by Control of Location of Fullerenes Incorporated in Lipid Membrane <u>Atsushi Ikeda</u> , Motofusa Akiyama, Naotake Maekubo, Kazuya	

10:25	3W04	Kiguchi,Jun-ichi Kikuchi,Takuya Ogawa,Tatsuo Takeya 5065 Control of function and structure of amphiphilic peptide by cationic comb-type copolymers
10:50	3W05	Shuichi Tokunaga,Arihiro Kano,Naohiko Shimada, <u>Atsushi Maruyama</u> .. 5067 Relationship between intermedeate water in biocompatible polymers and cell adhesion <u>Masaru Tanaka</u> 5069
		M. Takai, presiding
11:15	3W06	Mechanical Properties of Elastomeric Honeycomb-Patterned Porous Films as cellular scaffold <u>Takahito Kawano</u> ,Madoka Sato,Yuki Nakamichi,So Fujinami,Ken Nakajima,Hiroshi Yabu,Masatsugu Shiomura 5071
11:40	3W07	Thermoresponsive polymer brushes for functionalization of cell sheets <u>Hironobu Takahashi</u> ,Masamichi Nakayama,Teruo Okano..... 5073
		M. Tanaka, presiding
12:55	3W08	Modulation of Cell Behavior on Thermo-Responsive Polymeric Surface with Hydrophilic Patterns <u>Yoshikazu Kumashiro</u> ,Teruyuki Matsunaga,Kazuyoshi Itoga,Jun Kobayashi,Iwao Hashimoto,Masayuki Yamato,Teruo Okano 5075
13:20	3W09	Global analysis of altered genes expression resulting from inflammation to implanted polymeric porous materials <u>Sachiro Kakinoki</u> ,Yusuke Sakai,Taro Takemura,Nobutaka Hanagata,Toshiya Fujisato,Kazuhiko Ishihara,Nobuhiko Yui,Tetsuji Yamaoka 5077
		Y. Kumashiro, presiding
13:45	3W10	Initial cell adhesion behavior on polymer brush surface; dynamic evaluation by QCM-D <u>Madoka Takai</u> ,Tomomi Kitagawa,Kazuhiko Ishihara..... 5079
14:10	3W11	Interfacial property of cytocompatible polymer for control on stem cell function <u>Tomohiro Konno</u> ,Masashi Abe,Haruka Oda,Kazuhiko Ishihara..... 5081
		T. Konno, presiding
14:35	3W12	Development of Dynamically Responsive Substrates with Spatio-temporal Controllable Stiffness for Regulating Cell Functions <u>Koichiro Uto</u> ,Giancarlo Forte,Mitsuhiro Ebara,Takao Aoyagi 5083
15:00	3W13	Aggregation Structure and Cell Adhesion Properties of Polymer Blend Films at Water Interface <u>Toyoaki Hirata</u> ,Hisao Matsuno,Masaru Tanaka,Keiji Tanaka 5085
15:25	3W14	Modification of Engineering Plastic Surfaces with Specific Binding Peptides to Resist Protein Fouling <u>Takaaki Date</u> ,Takeshi Serizawa 5087

Room X

Wednesday, September 28

New Technologies for Carbon-Neutralization

9:50	SO	Introductory Remarks Hisayuki Nakatani 5292
		H. Nakatani, presiding

10:00	1X03	Catalytic activity of metal oxides for microwave-solvolysis of PET Kazutoshi Ikenaga, <u>Kohei Maehara</u> ,Syogo Ikeda,Masahiro Yamamoto,Tsuyoshi Degura,Takehiko Kameyama.....	5293
10:25	1X04	Microwave degradation of FRP by using mixed solvent Kazutoshi Ikenaga, <u>Masahiro Baba</u> ,Tomomitsu Ueno,Keitaro Kitano ..	5295
10:50	1X05	Synthesis of end-reactive polypropylene with high molecular weight by controlled thermal degradation <u>Daisuke Sasaki</u> ,Yoshihiro Suzuki,Toru Hoshi,Toshiki Hagiwara,Takashi Sawaguchi.....	5297
M. Yoshida, presiding			
11:15	1X06	development of mechanical recycling technology for waste polyolefin composites based on high speed cenrifugal beating technology <u>Takashi Yamawaki</u> ,Yoshimi Ozaki,Tamio Yamato	5299
M. Funaoka, presiding			
12:55	1X08IL	Biopolymers and biofuels from cellulosic biomass <u>Takashi Yoshida</u>	5301
H. Nishida, presiding			
13:45	1X10	Successive structural conversion of lignin for chemical feedstock <u>Masamitsu Funaoka</u> ,Keigo Mikame,Mitsuru Aoyagi.....	5304
14:10	1X11	Controlled/Living Radical Copolymerization of Various Cinnamic Acid Derivatives <u>Yuya Terao</u> ,Kotaro Satoh,Masami Kamigaito	5306
14:35	1X12	Low Temperature Depolymerization of Poly(lactic acid) to Lactide <u>Masaaki Yoshida</u> ,Yasutaka Tanaka	5308
15:00	1X13	Glycolysis of polyurethane at a high temperature <u>Fusao Hojo</u> ,Hiroyuki Kagawa,Yuri Nakazawa,Toshiharu Goto,Takashi Iseki,Kuninari Araki.....	5310
T. Sawaguchi, presiding			
15:25	1X14	Shrinking effect on acyclic monoterpenes in tree essential oils for waste-expanded polystyrene <u>Yasutaka Shimotori</u> ,Hisayuki Nakatani,Masakazu Aoyama	5312
15:50	1X15	Synthesis of Cross-linked Polyurethane Having Thiourethane Cross-linking point and Its Properties Under UV Irradiation <u>Suguru Motokucho</u> ,Takeshi Matsumoto,Ken Kojio,Kohji Yoshinaga ..	5314
16:15	1X16	Catalytic Degradation of Polyethylene: Influence of Coexisting Polymers <u>Yoshio Uemichi</u> ,Nobuhito Yamada,Yoshimi Ochiai,Sachie Ta,Kazunori Nara,Yutarou Tani,Yasuharu Kanda.....	5316
16:40	1X17	Microwave-alkali decomposition of PET using glycol derivatives as solvents Kazutoshi Ikenaga, <u>Yuji Ueda</u> ,Masahiro Yamamoto,Tsuyoshi Degura,Takehiko Kameyama	5318
T. Hayata, presiding			
17:05	1X18	Development of precise identification based on Raman scattering for waste plastic recycling <u>Tsuchida Yasuo</u> ,Kawazumi Hirofumi,Tsuchida Akihiro,Arikata Kazuyoshi,Ohsaki Tetsuro,Hasuo Haruumi.....	5320
17:30	1X19	High-speed and High Purity Plastics Separation Technology from Shredded Plastic Mixture of Wasted Home Appliances <u>Yasuto Iseki</u> ,Kazunari Tsutsui,Masami Kogiso.....	5322
17:55	1X20	technology for high-speed and high-precise material discrimination of mixed plastic wastes Takuya Aoki,Takashi Aono, <u>Masato Oonishi</u>	5324

Thursday, September 29

New Technologies for Carbon-Neutralization

K. Ikenaga, presiding

- 9:10 2X01 Preparation of oxo-biodegradable polypropylene/cellulose composites by simulated enzyme system
Kensuke Miyazaki, Kazuto Shibata, Hisayuki Nakatani 5326
- 9:35 2X02 Development of syndiotactic polypropylene/micro fibrillar cellulose composites
Keisuke Iwakura, Masato Hamadate, Kensuke Miyazaki, Minoru Terano, Hisayuki Nakatani 5328
- 10:00 2X03 Enzymatic synthesis and properties of novel thermoplastic elastomers
Tsukuru Yagihara, Shuichi Matsumura 5330
- 10:25 2X04 Novel mechanical recycling methods of poly(lactic acid)
Haruo Nishida, Nobuyuki Ishimaru, Takayuki Tsukegi, Yoshihito Shirai .. 5332

N. Kihara, presiding

- 10:50 2X05 Development of convenience synthesis method for polytetramethylglycolide from lactic acid
Kohtaro Watanabe, Takaaki Maeda, Yoshito Andou, Yoshihito Shirai, Haruo Nishida 5334
- 11:15 2X06 Synthesis of Polytetramethylglycolide (PTMG) and Its Properties
Yoshito Andou, Kohtaro Watanabe, Takaaki Maeda, Yoshihito Shirai, Haruo Nishida 5336
- 11:40 2X07 Artificial production of spider silk fibers
Junichi Sugahara, Yoshiharu Yokoo, Kaori Shimizu, Kazuko Otomo, Mizuki Igarashi, Hiroaki Suzumura, Ryota Sato, Shinya Murata, Hiroyuki Nakamura, Chikako Sato, Kazuhide Sekiyama 5338
- 12:55 2X08 Preparation of Bio Diesel Fuel under non-heating reaction condition
Kazutoshi Ikenaga, Yasuto Ogata, Daiki Hokamuro, Nariyuki Sakita 5340

T. Yamawaki, presiding

- 13:20 2X09 Study on Formative Factor and Optimal Scale of Sound Material-cycle Blocks on Containers and Packaging
Atsushi Fujiyama, Toru Matsumoto 5342
- 13:45 2X10 Carbon Neutral Expandable Polystyrene Beads
Michihiro Takeda 5344

H. Nakatani, presiding

- 14:10 2X11 Development of Oxidatively Degradable Polymer Using Hydrazine
Nobuhiro Kihara 5346
- 14:35 2X12 Enhancement of Recyclability of Polyethylene by using Chemical Modification—Development of New Recyclable Polymers—
Takaharu Nomura, Shinichi Yamazaki, Tetsuya Uchida, Kunio Kimura . 5348
- 15:00 2X13 Degradable Alternating Copolymers from Plant-derived Conjugated Aldehydes and Vinyl Ethers—Novel Chemically Recyclable Polymers—
Yasushi Ishido, Shokyoku Kanaoka, Sadahito Aoshima 5350
- 15:25 2X14 Synthesis of Degradable and Chemically Recyclable Epoxy Resins Containing Acetal Linkages
Hiroyuki Meiji, Michio Urushisaki, Toshikazu Sakaguchi, Tamotsu Hashimoto 5352

Polymers and Environment

D. Ishii, presiding

- 15:50 2X15 Study on the reresinification of components derived by alcoholysis of FRP
Hirofumi Kuroda, Daisuke Kanayama, Masahiko Takahiro, Katsuji Shibata . 5219

16:15	2X16	Properties of polyester derived from vanillin <u>Ryota Hirakawa</u> , Kanade Tanaka, Namiko Nakamura, Takanori Miyoshi..	5221
16:40	2X17	Preparation of the novel high CO ₂ separation membrane consisted of nano-space <u>Shoichi Hasebe</u> , Dai Masui, Hiroyoshi Kawakami	5223
17:05	2X18	Development of New Type Eco-material Soft Actuator Takaaki Nakai, Yuki Higashino, Yusuke Inuduka, Katsuki Onisi, Shuhei Ito, Takuya Kataoka, Takahiro Fukumoto, Masataka Inoue, <u>Yoshiro Tajitsu</u>	5225

Friday, September 30

Polymers and Environment

H. Abe, presiding

9:10	3X01	Property changes of lignin by the steam explosions treatment <u>Yoshiaki Okabe</u> , Hiroyuki Kagawa, Yoshitoshi Nakamura, Chizuru Sasaki	5227
9:35	3X02	Synthesis and Structural Analysis of Poly(caffeic acid) <u>Hiroki Maeda</u> , Daisuke Ishii, Hisao Hayashi	5229
10:00	3X03	Sequential depolymerization of native lignin through solvolysis control <u>Hiroki Tamura</u> , Masamitsu Funaoka	5231
10:25	3X04	Structural control of native lignin using condensation reactions <u>Yuki Tsukamoto</u> , Masamitsu Funaoka	5233

T. Iwata, presiding

10:50	3X05	Synthesis of bio-based branched polymer and the application as an additive for bio-based plastics <u>Nao Hosoda</u> , Eun-hye Lee, Takashi Tsujimoto, Hiroshi Uyama	5235
11:15	3X06	Improvements of poly(lactic acid), PLA, by a bio-based multi-functional additive <u>Masatsugu Mochizuki</u> , Takuma Goto, Naoki Kondo, Yoshihiko Takase, Yuya Kuroda, Hiroshi Fujita	5237
11:40	3X07	Crystallization and stereocomplex formation in polylactide monolayers studied by AFM <u>Kenji Watanabe</u> , Jiro Kumaki	5239

H. Uyama, presiding

12:55	3X08	Effect of sequential structure on physical properties of copolymers of 3-hydroxybutyric acid and lactic acid <u>Yuta Tabata</u> , Hideki Abe	5241
13:20	3X09	Effect of side-chain substitution on the properties of periodic copolymers of 3-hydroxybutyrate and aspartate <u>Hideki Abe</u>	5243
13:45	3X10	Microbial production of novel types of polyhydroxyalkanoates with long-main-chain-length units <u>Miwa Yamada</u> , Yoshiharu Doi, Keiji Numata	5245
14:10	3X11	Degradable Baroplastics – Interplay Between Chemical Structure and Low Temperature Processability – <u>Ikuo Taniguchi</u> , Shingo Kazama	5247
14:35	3X12	Synthesis and properties of triblockcopolymers composed of poly(L-lactide) and poly(epsilon-caprolactone-co-D,L-lactide) segments <u>Kazuki Aihara</u> , Zhengguo Cai, Yuusyo Nakayama, Takeshi Shiono	5249

Room Y

Wednesday, September 28

New Development for Biomass-Based Plastics

9:50	SO	Introductory Remarks Masao Kunioka, Atsuyoshi Nakayama.....	5354
		R. Nagahata, presiding	
10:00	1Y03	Synthesis and properties of ABCBA type pentablock copolymers consisting of poly(L-lactide) (A) / poly(D-lactide) (B) / poly(propylene succinate) (C) <u>Yasumasa Nishiwaki</u> , Chan Woo Lee, Yoshiharu Kimura.....	5355
10:25	1Y04	Controlling the thermal properties of polylactide copolymers <u>Ayao Nishimura</u> , Chan-woo Lee, Yoshiharu Kimura	5357
10:50	1Y05	Effect on the crystallization of poly(lactic acid) by the addition of bio-based branched polymer with castor oil core <u>Shumpei Nishio</u> , Takashi Tsujimoto, Hiroshi Uyama	5359
		Y. Tachibana, presiding	
11:15	1Y06	Preparation of plasticizer with comparatively high MW and properties of its PLLA blend <u>Yasuyuki Agari</u> , Takahiro Yamamoto, Yoshinobu Nakamura, Hiroshi Hirano, Joji Kadota	5361
11:40	1Y07	Microwave-assisted Facile Synthesis of Biomass Plastics <u>Ritsuko Nagahata</u> , Takashi Nakamura, Yukie Mori, Yuko Saito, Yoshiko Doi, Hiroshi Iida, Kazuhiko Takeuchi	5363
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17:05	1Y18	Synthesis and properties of bio-based polymers derived from isosorbide Chi-han Lee, <u>Makoto Mouri</u> , Hideki Takagi, Makoto Kato 5385
17:30	1Y19	Synthesis of xylan ester derivatives and their effects as nucleating agents <u>Tadahisa Iwata</u> , Noreen Fundador 5387
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Thursday, September 29

New Development for Biomass-Based Plastics

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14:10	2Y11	Role of weak hydrogen bonding in crystal structure formation of Polyhydroxyalkanoates <u>Harumi Sato</u> ,Yukihiro Ozaki.....	5410
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Friday, September 30

New Development for Biomass-Based Plastics

M. Ashiuchi, presiding			
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Room ESA

Wednesday, September 28

Polymer Chemistry: Synthesis and Reactions *“English Session”*

F. Sanda, presiding

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J. Terao, presiding

11:15	1ESA06	Well-Characterized Pd Catalysts for the End-Functionalization of Polar Group Substituted Polyacetylenes <u>Jesus Rodriguez Castanon</u> , Masashi Shiotsuki, Fumio Sanda	2203
11:40	1ESA07	Scandium-Catalyzed Regio-, and Stereoselective Chain-Shuttling Copolymerization of Styrene and Isoprene <u>Li Pan</u> , Kunyu Zhang, Masayoshi Nishiura, Zhaomin Hou	2205
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13:20	1ESA09	Artificial Molecular Clamp: A Novel Device for Synthetic Polymerases <u>Yoshinori Takashima</u> , Motofumi Osaki, Hiroyasu Yamaguchi, Akira Harada	2209

A. Harada, presiding

13:45	1ESA10	Development of Direct Aldol Polymerization <u>Shuhei Kusumoto</u> , Shingo Ito, Yusuke Murata, Hiroyuki Ogi, Kyoko Nozaki	2211
14:10	1ESA11	Efficient interpolymer excimer formation of 9,9-dialkylfluorene-based alternating copolymers <u>Shotaro Hayashi</u> , Toshio Koizumi	2213
14:35	1ESA12	Synthesis of insulated functional molecular wire and its application toward molecular electronics <u>Yohei Konoshima</u> , Hiroshi Masai, Jun Terao, Tetsuaki Fujihara, Yasushi Tsuji	2215

I. Tomita, presiding

15:00	1ESA13	Syntheses of insulated monomers and development of molecular wiring method by their polymerizations <u>Kyohei Homma</u> , Hiroshi Masai, Jun Terao, Tetsuaki Fujihara, Yasushi Tsuji .	2217
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15:25	1ESA14	Synthesis of Fluorine-Containing Star and Graft Copolymers by Living Cationic Polymerization and Unique Thermosensitive Behavior in Various Solvents <u>Hiroaki Shimomoto</u> , Dai Fukami, Hirotoshi Yoshida, Shokyoku Kanaoka, Sadahito Aoshima.....	2219
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16:15	1ESA16	Synthesis, Characterization and Properties of Cu & Pt-based Organic- Metallic Hybrid polymers <u>Md. Delwar Hossain</u> , Masayoshi Higuchi.....	2223
16:40	1ESA17	Long-range Electronic Communication through a Heterojunction in Organic Graphite-like Nanotube <u>Wei Zhang</u> , Wusong Jin, Takanori Fukushima, Akinori Saeki, Shu Seki, Takuzo Aida.....	2225
17:05	1ESA18	Application of π -Conjugated Polymers Containing Versatile Heteroatoms Synthesized by The Reaction of Organometallic Polymers Having Titanacyclopentadiene Units Fluorescent Chemosensors <u>Hiroki Nishiyama</u> , Ikuyoshi Tomita	2227

Polymer Physics: Structure and Properties *“English Session”*

M. Nishiura, presiding

17:30	1ESA19	Preparation and Characterization of Graphene Oxide Reinforced Poly (vinyl alcohol) Nanocomposites <u>Seira Morimune</u> , Takashi Nishino, Takuya Goto	3264
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Thursday, September 29

Polymer Physics: Structure and Properties *“English Session”*

Y. Ikeda, presiding

9:10	2ESA01	Swelling induced ordered structure formation in the semi-rigid polyelectrolyte complex hydrogel <u>Md. Arifuzzaman</u> , Zi Liang Wu, Takayuki Kurokawa, Akira Kakugo, Jian Ping Gong	3266
9:35	2ESA02	The Mechanical Behavior of Tough Double-Network Gels: Effect of Composition on the Tensile and Tearing Behavior Tasuku Nakajima, Takayuki Kurokawa, <u>Saika Ahmed</u> , Hidemitsu Furukawa, Jian Ping Gong	3268
10:00	2ESA03	Dynamic structure change of novel viscoelastic ion-complex gel based on physical interaction <u>Abu Bin Ihsan</u> , Tao Lin Sun, Md. Anamul Haque, Shinya Kuroda, Takayuki Kurokawa, Jian Ping Gong	3270
10:25	2ESA04	Multifunctional Anisotropic Hydrogel Based on Uni-axial Lamellar Bilayer Structure <u>Md. Anamul Haque</u> , Takayuki Kurokawa, Gen Kamita, Jian Ping Gong..	3272

J. Gong, presiding

10:50	2ESA05	Strain-induced crystallization of in situ silica filled green nanocomposite prepared from natural rubber latex <u>Atitaya Tohsan</u> , Yuko Ikeda.....	3274
11:15	2ESA06	Supramolecular approach to high-water-content hydrogels with enhanced mechanical property: cross-linking of clay nanosheets with in-situ generated poly(acrylamide)s bearing guanidinium pendants <u>Linlin Wu</u> , Masataka Ohtani, Yasuhiro Ishida, Takuzo Aida	3276

11:40	2ESA07	Nanostructure of Nafion thin films studied by slow positron beams <u>Hamdy F. M. Mohamed</u> , S. Kuroda, Y. Kobayashi, R. Suzuki, A. Ohira..	3278
	Y. Tsujii, presiding		
12:55	2ESA08	Temperature Responsive Micelles Formation by Polyion Complex and Their Self-assembly Studies in Aqueous Solution <u>Arjun Ghosh</u> , Shin-ichi Yusa, Hideki Matsuoka, Yoshiyuki Saruwatari ..	3280
13:20	2ESA09	Fabrication of the oriented metal coordinated peptide monolayers as novel nano-reactor <u>Xinxin Wang</u> , Masahiro Higuchi	3282
	S. Sasaki, presiding		
13:45	2ESA10	Fabrication of semi-soft colloidal crystals with high stability <u>Yun Huang</u> , Kohji Ohno, Yoshinobu Tsujii	3284
14:10	2ESA11	Fabrication of Oriented Polydiacetylene-Nanofibers Thin Films by Convective Assembly Method and Their Properties <u>Yuki Iimori</u> , Tsunenobu Onodera, Hitoshi Kasai, Hidetoshi Oikawa.....	3286
	K. Fukao, presiding		
14:35	2ESA12	Stress-induced Structural Changes of Surface and Core Parts of Carbon Fiber Mono-filament as Observed by Synchrotron X-ray Microbeam <u>Takayuki Kobayashi</u> , Kazunori Sumiya, Yasyuki Fujii, Masaki Fujie, Takayuki Takahagi, Kohji Tashiro	3288
15:25	2ESA14	Effect of shear temperature and annealing time on iPP crystallisation under shear flow <u>I. A. Polec</u> , T. Fujiwara, T. Kanaya, R. Inoue, D. Cong, K. Nishida, N. Ohta..	3290
	K. Tashiro, presiding		
15:50	2ESA15	Characterization of Deformation Process Driven by a Reversible Photo-Crosslink Reaction Using Mach-Zehnder Interferometry <u>Van-pham Dan-thuy</u> , Tomohisa Norisuye, Qui Tran-cong-miyata.....	3292
16:15	2ESA16	Deformation Behavior of Extruded Sheet of Polypropylene with Anomalous Molecular Orientation <u>Panitha Phulkerd</u> , Hiroki Hagihara, Yohei Uchiyama, Shogo Nobukawa, Masayuki Yamaguchi	3294
16:40	2ESA17	Effect of thickness and substrate surface on phase transitions and structure of organic thin film Junhyoek Jang, Kana Emoto, Masayuki Iwasa, <u>Hirohisa Yoshida</u>	3296
17:05	2ESA18	Orientation control and formation process of cylinder structure of liquid crystalline block copolymer <u>Motonori Komura</u> , Shigeyuki Ohtake, Tomokazu Iyoda, Mitufumi Nodono, Hiroshi Niino	3298

Friday, September 30

Biopolymers and Biorelated Polymers *“English Session”*

	A. Takasu, presiding		
10:00	3ESA03	Characterization of new hot press moulded sheets based on alginic acid and chitosan blends <u>Vincent Jauzein</u> , Minato Wakisaka, Takayuki Tsukegi, Haruo Nishida .	4855
10:25	3ESA04	Gelation properties of the polysaccharides extracted from Aphanothece Stagnina <u>Quyen Thi Le Nguyen</u> , Maiko Okajima, Tatsuo Kaneko.....	4857
	V. Jauzein, presiding		
10:50	3ESA05	Design of plastic antibodies for major mediators of death in sepsis <u>Yu Hoshino</u> , Hiroyuki Koide, Dai Oyama, Yusuke Yonamine, Lee Shih-hui, Yoshiko Miura, Naoto Oku, Kenneth Shea	4859

11:15	3ESA06	Preparation of silk fibroin based small-diameter vascular graft and in vivo patency evaluation <u>Derya Aytemiz</u> , Yu Suzuki, Haruki Hayashi, Naoki Nakazumi, Keisuke Takagi, Ryou Tanaka, Satoshi Yamamoto, Hiroyuki Okamoto, Tetsuo Asakura 4861
		Y. Hoshino, presiding
11:40	3ESA07	Structural and Functional Analysis of Photosynthetic Antenna Protein Assemblies <u>Takehisa Dewa</u> , Ayumi Sumino, Natsuko Watanabe, Nobuaki Sasaki, Masaharu Kondo, Hideki Hashimoto, Mamoru Nango 4863
		Y. Miura, presiding
12:55	3ESA08	Preparation and Characterization of Nanoparticles Formation through Stereocomplexation of amphiphilic block copolymers <u>Ye Zhu</u> , Takami Akagi, Mitsuru Akashi 4865
		T. Dewa, presiding
13:20	3ESA09	Polymeric micelles incorporating (1,2-diaminocyclohexane)platinum (II) suppress the growth of gastric tumors and its lymph node metastasis <u>Rafi Mohammad</u> , Horacio Cabral, Nobuhiro Nishiyama, Caname Iwata, Mitsunobu R Kano, M Yashiro, K Hirakawa, Kohei Miyazono, Kazunori Kataoka 4867
13:45	3ESA10	Titanium Dioxide Biomineralization with Peptide Nanofiber <u>Takayuki Nonoyama</u> , Takatoshi Kinoshita, Masahiro Higuchi, Kenji Nagata, Kimiyasu Sato, Katsuya Kato..... 4869

Room ESB

Wednesday, September 28

Functional Polymers and Polymer Functions *“English Session”*

		T. Fujigaya, presiding
10:00	1ESB03	Study of hybrid electrolyte membrane and its electrochemical performances in PEMFC—Proton-conducting hybrid membrane: Single-cell performances— <u>Uma Thanganathan</u> 3711
10:25	1ESB04	Structured Colloidal Materials from Block Copolymers <u>Gi-ra Yi</u> , Seog-jin Jeon, Seung-man Yang, Dae-wong Jeong, Kyong-ho Yeom..... 3713
10:50	1ESB05	Synthesis and Properties of Novel Low Bandgap Polymers - Poly (terthienylenemethine)s Bearing Terthienylene Moieties in Side Chains <u>Kazuki Yabumoto</u> , Yong Soo Jeong, Kazuo Akagi..... 3715
		T. Aoki, presiding
11:15	1ESB06	Porous polybenzoxazole for low dielectric constant materials <u>Takahiro Fukumaru</u> , Tsuyohiko Fujigaya, Naotoshi Nakashima 3717
11:40	1ESB07	Fabrication of lower dielectric constant porous polyimide film using silica nanoparticle as template <u>Takeru Hayashi</u> , Tsunenobu Onodera, Takayuki Ishizaka, Hitoshi Kasai, Hidetoshi Oikawa 3719
		S. Yokoyama, presiding
12:55	1ESB08	Design of a novel zero-zero-birefringence polymer in quaternary system <u>Shuhei Iwasaki</u> , Zen Satoh, Houran Shafiee, Akihiro Tagaya, Yasuhiro Koike..... 3721

13:20	1ESB09	Proposal of Design Method for Scattering Films for Novel Liquid Crystal Display Systems <u>Daisuke Sekine</u> , Akihiro Tagaya, Yasuhiro Koike 3723	3723
13:45	1ESB10	Designing novel pressure sensitive adhesives for high definition liquid crystal displays <u>Satoshi Yanai</u> , Hiroto Ito, Akihiro Tagaya, Sumihisa Oda, Yasuhiro Koike . 3725	3725
Y. Koike, presiding			
14:10	1ESB11	Synthesis and optical stability of 150 pm/V hyperbranched polymers <u>Yuichi Mori</u> , Akinari Nakaya, Kazuhiro Yamamoto, Shiyoshi Yokoyama ... 3727	3727
14:35	1ESB12	Calculation of Bandwidth of Fresnel Lens Type Refractive Index Plastic Optical Fiber <u>Yosuke Takeuchi</u> , Eisuke Nihei 3729	3729
15:00	1ESB13	Fabrication of Optical Amplifier for Polymer Optical Fiber <u>Takayuki Hirai</u> , Eisuke Nihei 3731	3731
15:25	1ESB14	Observation of bulk heterojunction structures in organic thin-film solar cells by low-voltage SEM <u>Shin Horiuchi</u> , Takeshi Hanada, Toshihiro Yamanari, Yuji Yoshida 3733	3733
H. Goto, presiding			
15:50	1ESB15	Supramolecular control over the optical performance of azobenzene-containing polymers <u>Arri Priimagi</u> , Jaana Vapaavuori, Gabriella Cavallo, Roberto Milani, Jun-ichi Mamiya, Giancarlo Terraneo, Pierangelo Metrangolo, Matti Kaivola, Atsushi Shishido 3735	3735
16:15	1ESB16	Optically Active Polyfluorene Aggregates : Achiral Solvent Induced CPL Spectrum Switching <u>Makoto Taguchi</u> , Hong-zhi Tang, Michiya Fujiki 3737	3737
A. Shishido, presiding			
17:05	1ESB18	Synthesis and properties of poly(isothianaphthene methine) with chiral side chains <u>Yu Innami</u> , Hirotugu Kawashima, Rafaël Kiebooms, Hiromasa Goto 3739	3739
17:30	1ESB19	A Green Colored Polymer Film Prepared by Electrochemical Polymerization in a Cholesteric Liquid Crystalline Medium <u>Hirotugu Kawashima</u> , Yusuke Nitta, Hiromasa Goto 3741	3741
17:55	1ESB20	Nonlinear Optical Anisotropy of Gold Nanorods under Electric Field – Sequestered in Aligned Cylindrical Microdomains of an Ultra-High-Molecular-Weight Diblock Copolymer – <u>Akihiro Iwata</u> , Shigeru Okamoto, Tomokatsu Hayakawa, Hirokazu Hasegawa, Naokiyo Koshikawa 3743	3743

Thursday, September 29

Functional Polymers and Polymer Functions *“English Session”*

T. Kaneko, presiding			
9:10	2ESB01	Construction and Evaluation of Self-assemble Porous PLLA film with Biomass based Additive <u>Konchai Klangkanasub</u> , Patthanawihok Suphachai, Yoshito Andou, Minato Wakisaka, Haruo Nishida 3745	3745
9:35	2ESB02	Photo-induced bending control of pH-responsive smart bigels via pH-jump reaction <u>Prapatsorn Techawanitchai</u> , Naokazu Idota, Mitsuhiro Ebara, Takao Aoyagi 3747	3747
10:00	2ESB03	Alignment of Ferritin Protein Molecules on Diblock Copolymer Patterns by Using Self-Assembly <u>Siti Aisyah B. Shamsudin</u> , Go Sakaguchi, Mikihiro Takenaka, Hirokazu Hasegawa 3749	3749

H. Hasegawa, presiding		
10:25	2ESB04	Preparation of nematic liquid crystalline polymers derived from wholly aromatic amino acid and their polarized photoluminescent properties <u>Kai Kan</u> , Daisaku Kaneko, Tatsuo Kaneko..... 3751
10:50	2ESB05	Photochromic Materials that Liquefy upon Irradiation by Light <u>Yasuo Norikane</u> , Kouji Sakaki, Yumiko Nakamura, Reiko Azumi, Yuki Hirai, Masaru Yoshida..... 3753
11:15	2ESB06	Preparation of polythiophene polyrotaxane thin film and its electrochromism <u>Taichi Ikeda</u> , Masayoshi Higuchi 3755
11:40	2ESB07	Ordering of metal nanoparticles within the polymer film through optical interference <u>Akihiro Matsubayashi</u> , Kenji Fukunaga, Tetsuro Tsuji, Kikuo Ataka, Hisashi Ohsaki, Keiji Tanaka 3757
T. Aoyagi, presiding		
12:55	2ESB08	Enhancement in Conversion of Condensation Product by Novel Membrane Reactor with Ionic Liquid, Polymer Membrane and Microwave <u>Tadashi Uragami</u> , Junji Kishimoto, Takashi Miyata..... 3759
13:20	2ESB09	High Performance Ion-Gel with Tetra-PEG network <u>Hanako Asai</u> , Kenta Fujii, Mitsuhiko Shibayama, Takeshi Ueki, Takamasa Sakai, Masayoshi Watanabe 3761
13:45	2ESB10	Conducting Polymer/Metal Oxide Nanocomposites for Supercapacitor Application <u>Heejoon Ahn</u> , Rahul Salunkhe, Kihun Jang, Hyunuk Yu..... 3763
H. Kasai, presiding		
14:10	2ESB11	Sorption Behaviors of Porous Coordination Polymer Containing Nanosized TiO ₂ in the Channel <u>Cho Rong Kim</u> , Takashi Uemura, Susumu Kitagawa 3765
14:35	2ESB12	Core-Shell-Corona Polymeric Micelles as a Template for the Synthesis of Hollow Inorganic Nanoparticles <u>Kenichi Nakashima</u> , Bishnu Bastakoti, Sudhina Guragain, Yuuichi Yokoyama, Shin-ichi Yusa..... 3767
15:00	2ESB13	Immobilization of Pt nanoparticles on carbon nanotubes mediated by dendrimers and their application to electrochemical reactions <u>Toyoko Imae</u> , Ampornphan Siriviriyannun 3769
T. Uemura, presiding		
15:25	2ESB14	Synthesis of isocyanide-stabilized palladium nanotetrahedrons <u>Yuki Yamamoto</u> , Yoshinori Yamanoi, Hiroshi Nishihara, Shinji Oshima, Yoshihiro Kobori..... 3771
15:50	2ESB15	Encapsulation of Diarylethene Nanocrystals by Polystyrene and their Optical Properties <u>Norio Tagawa</u> , Akito Masuhara, Tsunenobu Onodera, Hitoshi Kasai, Hidetoshi Oikawa 3773
16:15	2ESB16	Corporative Self-Assembly of Supramolecular Block Copolymers Carrying Mid-Chain Complementary Hydrogen-Bonding Sites <u>Sang Ho Lee</u> , Makoto Ouchi, Mitsuo Sawamoto..... 3775