

Room A

Wednesday, September 16

Invited Lectures

- T. Inoue, presiding**
- 11:15 1A-06IL Optical Characteristics of Fluorene Moieties Containing Cardo Structure
Mitsuaki Yamada 2177
- J. Kadokawa, presiding**
- 12:55 1A-08IL Nanoporous Polymeric Materials by Phase Separation
Hiroshi Uyama 2180
- A. Maruyama, presiding**
- 13:45 1A-10IL Desing of bio-interfaces using self-organization
Masaru Tanaka, Sadaaki Yamamoto, Masatsugu Shimomura 2183
- T. Aoyagi, presiding**
- 14:35 1A-12IL Polymeric micelles for drug and contrast agent carriers
Masayuki Yokoyama..... 2186

Award Lectures

- M. Watanabe, presiding**
- 15:25 1A-14IL** Development of Microporous PE Film which Contributed to Innovation of Lithium Ion Battery
Mitsuo Kohno, Yoshinao Doi, Masahiko Fukuda, Haruyuki Yoneda, Yoshifumi Nishimura
- T. Takata, presiding**
- 16:15 1A-16IL** Development and Industrialization of Biaxial Oriented Nano-alloyed Film
Tetsuya Tsunekawa, Takuji Higashioji, Hirofumi Hosokawa, Akira Kubota, Ichiro Ishizuka
- Y. Matsushita, presiding**
- 17:05 1A-18IL** Development and the applications of polyolefin and rubber clay nanocomposites
Arimitsu Usuki, Makoto Kato, Naoki Hasegawa, Hirotaka Okamoto, Masaya Kawasumi

Thursday, September 17

Award Lectures

- F. Shimizu, presiding**
- 9:10 2A-01IL** Structural Control and Functionalization of Polymer Thin Films
Tomokazu Iyoda
- T. Yokozawa, presiding**
- 10:00 2A-03IL** Synthesis, Structure and Function of π -Stacked Polymers
Tamaki Nakano
- A. Matsumoto, presiding**
- 12:55 2A-08IL** Discovery and Development of Transition Metal Catalyzed Living Radical Polymerization
Masami Kamigaito 2189
- T. Shimizu, presiding**
- 14:10 2A-11IL** Development of Polymer Gels with Autonomous Responding Function

		<u>Ryo Yoshida</u>	2192
	M. Maeda, presiding		
15:00	2A-13IL**	Studies on Preparation and Application of Hyperbranched Polymers <u>Masaaki Kakimoto</u>	2195
	T. Iyoda, presiding		
15:50	2A-15IL**	Rewritable Bragg Holograms Based on Photoresponsive Polymers <u>Atsushi Shishido</u>	2198

Invited Lectures

	A. Takahara, presiding		
16:40	2A-17IL	Electrostatic Self-Assembly Neutral/Polyelectrolyte Block Copolymer and Oppositely Charged Molecules <u>Masahiko Annaka</u>	2201

Friday, September 18

Invited Lectures

	H. Ihara, presiding		
9:35	3A-02IL	Feedstock recycling of waste plastics using sub- and supercritical fluids <u>Motonobu Goto</u>	2204
	Y. Katayama, presiding		
10:25	3A-04IL	Re-install of DNA by use of threoninol-nucleotides <u>Hiroyuki Asanuma</u>	2207
	Y. Takahashi, presiding		
11:15	3A-06IL	Dynamics of a hydrogel consisting of transient network via hydrophobic interaction <u>Isamu Kaneda</u> , Katsunori Yoshida, Tsuyoshi Koga, Fumihiko Tanaka ..	2210

Award Lectures

	H. Oikawa, presiding		
12:55	3A-08IL**	Enhanced Photocurrent Generation by Electron Hopping through Regularly-Arranged Chromophores in a Helical Peptide Monolayer <u>Tomoyuki Morita</u> , Kazuyuki Yanagisawa, Shunsaku Kimura	
	T. Kanaya, presiding		
13:25	3A-09IL**	Intrinsic Viscosity of Wormlike Regular Three-Arm Stars <u>Daichi Ida</u>	
	A. Takahara, presiding		
13:55	3A-10IL**	Conformation of Single Poly(methyl methacrylate) Chains in an Ultra-Thin Film Studied by Scanning Near-Field Optical Microscopy <u>Hiroyuki Aoki</u>	

Room B1

Wednesday, September 16

Chiral Polymers and Chiral Supramolecules

9:50	SO	Introductory Remarks Tamaki Nakano	2569
	Y. Nagata, presiding		
10:00	1B1-03	Chiral induction in achiral peptide bearing functional side chains	

		<u>Yuki Maruyama</u> , Saki Fujita, Yoshihito Inai	2570
10:25	1B1-04	Chiral interaction in optically-inactive dehydropeptide in water <u>Yoshihisa Takamori</u> , Yoshiki Odaka, Yoshihito Inai	2572
		T. Satoh, presiding	
10:50	1B1-05	Synthesis and Chiroptical Properties of Novel Oligopeptides from an Achiral Amino Acid '4-Aminopiperidine-4-carboxylic Acid' <u>Joonil Cho</u> , Masahiro Tanaka, Kazushi Kinbara, Takuzo Aida	2574
11:15	1B1-06	Multi-joint Polymers Composed of Chiral Ferrocene Joints and Rigid Diacetylene Units <u>Takahiro Fukino</u> , Norifumi Fujita, Takuzo Aida	2576
11:40	1B1-07	Novel Synthetic Methods for Amino Acid NCA and Polypeptide <u>Takeshi Endo</u> , Atsushi Sudo, Koichi Koga	2578
		T. Fukushima, presiding	
12:55	1B1-08	Synthesis of Optically Active Poly(m-phenyleneethynylene-p-phenyleneethynylene)s Derived from Amino Acids <u>Fumio Sanda</u> , Ruiyuan Liu, Masashi Shiotsuki, Toshio Masuda.....	2580
13:20	1B1-09	Asymmetric Polymerization of (S)-N-Maleoyl-L-Amino Acid Alkyl Amide Having Phenylalanine and Leucine Components at the Side Chains <u>Yasuko Wada</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi..	2582
13:45	1B1-10	Effects of Side Chain Structure and Solvents on the Helical Conformation of N-Substituted Poly(p-benzamide) <u>Akihiro Yokoyama</u> , Tomoaki Saiki, Suguru Nakano, Tsutomu Yokozawa..	2584
14:10	1B1-11	Effects of Hydrophilicity/Hydrophobicity of Side Chain on Helical Folding of Poly(naphthalenecarboxamide)s <u>Koichiro Mikami</u> , Akihiro Yokoyama, Tsutomu Yokozawa	2586
		A. Yokoyama, presiding	
14:35	1B1-12	An alternative efficient synthetic route to soluble one-handed helical polymers without any other chiral moieties (1)—Combination of asymmetric-induced copolymerization of a small amount of a chiral monomer with a comonomer having a long alkyl group and desubstitution of the chiral pendant groups from the resulting polymers by polymer reaction in membrane state <u>Yunosuke Abe</u> , Hongge Jia, Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki.....	2588
15:00	1B1-13	An alternative synthetic route to soluble one-handed helical polymers without any other chiral moieties (2)—Combination of asymmetric-induced homopolymerization of a chiral monomer having a long alkyl group and de- and resubstitution of the chiral pendant groups from the resulting polymers by polymer reaction in membrane state <u>Yunosuke Abe</u> , Hongge Jia, Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki	2590
15:25	1B1-14	Helicity Induction of Poly(phenylacetylene) Having Urea Groups by Chiral Carboxylate Guests <u>Shota Okade</u> , Tatsuro Kodama, Yasuyuki Tago, Ryohei Kakuchi, Ryosuke Sakai, Toshifumi Satoh, Toyoji Kakuchi	2592
		Y. Inai, presiding	
15:50	1B1-15	Helix-sense-selective polymerization and asymmetric-induced polymerization of phenylacetylenes having amino ether residues and two hydroxy groups <u>Hongge Jia</u> , Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki	2594
16:15	1B1-16	Synthesis of Optical Active Poly(N-Cyclohexylmaleimide) using Rh Complex Catalyst and Various Chiral Amines <u>Motohisa Azechi</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi..	2596
16:40	1B1-17	Highly Enantioselective Palladium-Catalyzed	

High-Molecular-Weight Helical Poly(quinoxaline-2,3-diyl)s as a
Chiral Polymer Ligand
Takeshi Yamamoto, Michinori Sugimoto 2598

T. Endo, presiding

- 17:05 1B1-18 Dynamic Control of Helical Chirality of Poly(quinoxaline-2,3-diyl)s
Bearing Chiral side Chains: Highly Efficient Induction of Right and
Left-Handed Helices by Solvent Effect
Tetsuya Yamada, Yuuya Nagata, Michinori Sugimoto 2600
- 17:30 1B1-19 Influence of Chiral Additives on Ring-opening Metathesis
Polymerization of Norbornene Derivatives Bearing Methylbenzyl
Group
Kenichi Mizuta, Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi.. 2602
- 17:55 1B1-20 Stereocontrol on Asymmetric Anionic Polymerization of Quinone
Methides with Various Amide Groups
Satoshi Hosokawa, Takahiro Uno, Masataka Kubo, Takahito Itoh 2604

Thursday, September 17

Chiral Polymers and Chiral Supramolecules

M. Akashi, presiding

- 9:10 2B1-01 Dynamic Nature of Polyacetylenes bearing Pendent Rotaxane
Moieties with Axially Asymmetric Wheels on the Side Chains
Fumitaka Ishiwari, Keiichi Fukasawa, Kazuko Nakazono, Yasuhito
Koyama, Toshikazu Takata 2606
- 9:35 2B1-02 Structural Transformation of Double Helical Complex Consisting of
Oligophenol Strands Bridged by Spiroborates
Kazuhiro Miwa, Yoshio Furusho, Eiji Yashima 2608
- 10:00 2B1-03 Design and Synthesis of Catenane Utilizing Amidinium-Carboxylate
Salt Bridge Formation.
Yuji Nakatani, Yoshio Furusho, Eiji Yashima 2610
- 10:25 2B1-04 Ring-opening Metathesis Polymerizations of Norbornene Derivatives
Bearing Cyclohexyl Group in the Presence of Chiral Compound
Satoko Fukutomi, Kenichi Mizuta, Kazuhiro Yamabuki, Kenjiro
Onimura, Tsutomu Oishi 2612

T. Aoki, presiding

- 10:50 2B1-05 Asymmetric Polymerization of N-Phenylmaleimide using Rh
Complex Catalyst and Various Chiral Amines
Nami Toyota, Motohisa Azechi, Kazuhiro Yamabuki, Kenjiro
Onimura, Tsutomu Oishi 2614
- 11:15 2B1-06 Radical Polymerization of N-Substituted-N-vinylformamide
Hiroharu Ajiro, Mitsuru Akashi 2616
- 11:40 2B1-07 Synthesis and application of novel polymeric chiral catalyst by using
polymer microsphere
Akihiro Nishiyama, Naoki Haraguchi, Shinichi Itsuno 2618

Y. Furusho, presiding

- 12:55 2B1-08IL Precise Syntheses and Functions of Helical Polymers Using
Transition Metal Complexes
Kiyotaka Onitsuka 2620

S. Itsuno, presiding

- 13:45 2B1-10 Synthesis of poly(phenylenevinylene)-encapsulated amylose
derivatives and their application to chiral stationary phases for
HPLC
Kazumi Tamura, Eiji Yashima, Tomoyuki Ikai, Yoshio Okamoto 2623
- 14:10 2B1-11 Synthesis of Helical Block Copolyisocyanides and Its Chiral
Recognition Ability

		<u>Toshitaka Miyabe</u> , Kazumi Tamura, Hiroki Iida, Eiji Yashima, Yoshio Okamoto	2625
14:35	2B1-12	Stereoselective inclusion of amylose toward poly(lactide)s in vine-twining polymerization <u>Yoshiro Kaneko</u> , Koji Ueno, Jun-ichi Kadokawa	2627
		K. Onimura, presiding	
15:00	2B1-13	Precise synthesis and chiral recognition of novel amylose derivatives bearing regioselective substituents <u>Tomoyuki Ikai</u> , Jun Shen, Yoshio Okamoto	2629
15:25	2B1-14	Polymer reaction <i>In-Situ</i> and enantioselective permeability of poly(phenyleneethynylene) membranes having chiral substituents <u>Makoto Inoue</u> , Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki	2631
15:50	2B1-15	Asymmetric transfer hydrogenation of imine with polymer-supported chiral catalyst VI <u>Naoki Haraguchi</u> , Keiichi Tsuru, Shinichi Itsuno	2633
		T. Takata, presiding	
16:15	2B1-16	Synthesis of chiral quaternary ammonium polymers having main chain chirality and their use in asymmetric alkylation reaction <u>Mikiya Ishimoto</u> , Naoki Haraguchi, Shinichi Itsuno	2635
16:40	2B1-17	Development of polymer-supported Catalysts Utilizing Hydroxyproline for Asymmetric Induction <u>Atsushi Ikeda</u> , Kayo Terada, Masashi Shiotsuki, Fumio Sanda	2637
17:05	2B1-18	Novel immobilization of MacMillan catalyst by ionic bond and the application to asymmetric Diels-Alder reaction <u>Yu Takemura</u> , Naoki Haraguchi, Shinichi Itsuno	2639

Friday, September 18

Chiral Polymers and Chiral Supramolecules

		T. Uno, presiding	
9:10	3B1-01	Immobilization by intramolecular covalent bonds of the helical structure synthesized by helix-sense-selective polymerization and stabilized with intramolecular hydrogen bonds <u>Koki Era</u> , Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki	2641
9:35	3B1-02	Enantiomer-Selective and Helix-Sense-Selective Living Block Copolymerization of Isocyanide Enantiomers Initiated by Single-Handed Helical Poly(phenyl isocyanide)s and AFM Observations of the Resulting Block Copolymers <u>Motonori Banno</u> , Zong-quan Wu, Kanji Nagai, Kento Okoshi, Kiyotaka Onitsuka, Eiji Yashima	2643
10:00	3B1-03	Preparation of supramolecular self-supporting membrane by highly selective cycloaromatization of polyphenylacetylene membrane (1) — Effects of the first and high ordered structure of the helical polymers on the selectivity in the cycloaromatization <u>Takeshi Namikoshi</u> , Yoshiyuki Oniyama, Lijia Liu, Yunosuke Abe, Kouki Era, Ken Taguwa, Nobuyuki Nahata, Kazuki Matumoto, Marwanta Edy, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki	2645
		F. Sanda, presiding	
10:25	3B1-04	Preparation of supramolecular self-supporting membrane by high selective cycloaromatization of polyphenylacetylene membrane (2) — Effects of the reaction conditions on the selectivity in the cycloaromatization <u>Yoshiyuki Oniyama</u> , Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki	2647

10:50	3B1-05	A Long-term Chiral Footprint in a Nanoscale Molecular Assembly <u>Wei Zhang</u> , Wusong Jin, Takanori Fukushima, Noriyuki Ishii, Takuzo Aida 2649	2649
11:15	3B1-06	Dynamic Properties of New Helical Molecules with an Extremely High π -Electron Density <u>Eisuke Ohta</u> , Hiroyasu Satoh, Atsuko Kosaka, Takanori Fukushima, Mikio Yamasaki, Kimiko Hasegawa, Takuzo Aida..... 2651	2651
11:40	3B1-07	Synthesis and properties of one-handed helical polyphenylacetylenes having oligosiloxanyl groups of different lengths prepared by helix-sense-selective polymerization <u>Lijia Liu</u> , Yu Zang, Masahiro Teraguchi, Takeshi Namikoshi, Marawanta Edy, Takashi Kaneko, Toshiki Aoki 2653	2653
T. Nakano, presiding			
12:55	3B1-08	Helix-Sense-Selective Polymerization of Phenylacetylene Bearing Two Hydroxy Groups and an Oligo(ethylene oxide) Group—Effect of Oligo(ethylene oxide) Group <u>Ken Tagawa</u> , Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki 2655	2655
13:20	3B1-09	Highly enantioselective photodimerization of anthracenecarboxylic acids in chiral liquid crystalline field—Inversion of stereochemical outcome induced by the phase transition of reaction medium <u>Yasuhiro Ishida</u> , Yuki Matsuoka, Yukiko Kai, Kazuhiko Saigo 2657	2657
13:45	3B1-10	Chirality control of liquid-crystalline conjugated polymers by photoresponsive chiral compounds available for chiral dopants. <u>Azusa Yagi</u> , Yoshinori Maeda, Shojiro Yukawa, Kazuo Akagi..... 2659	2659
14:10	3B1-11	Synthesis and Properties of Amino Acid-Based Photoresponsive Chiral Supramolecules <u>Hiromitsu Sogawa</u> , Kayo Terada, Masashi Shiotsuki, Toshio Masuda, Fumio Sanda 2661	2661
F. Sanda, presiding			
14:35	3B1-12	Synthesis and photo-induced stereomutation of optically active poly[2,7-bis(4-t-butylphenyl)fluoren-9-yl acrylate] <u>Takeshi Sakamoto</u> , Yasuyuki Fukuda, Tamaki Nakano 2663	2663
15:00	3B1-13	Polymerization of 2,7-bis(4-t-butylphenyl)dibenzofulvene with an optically active anionic initiator and photo-induced stereomutation of the obtained polymer <u>Takeshi Sakamoto</u> , Naotaka Ohashi, Takeshi Matsuki, Tamaki Nakano 2665	2665
15:25	3B1-14	Synthesis of Ionic Aromatic Conjugated Polymer and Control of the Circularly Polarized Lights <u>Kazuyoshi Watanabe</u> , Hiroshi Iida, Kazuo Akagi 2667	2667

Room B2

Wednesday, September 16

Element-based Hybrids

9:50	SO	Introductory Remarks Yoshiyuki Sugahara 2777	2777
N. Matsumi, presiding			
10:00	1B2-03	Synthesis and Structure Analysis of Borazine-diamine Polymers <u>Yuko Uchimarui</u> , Hiroyuki Suda, Hiroshi Yamashita, Li-biao Han 2778	2778
10:25	1B2-04	Synthesis and Functionality of Cyclotriphosphazene-based Polymers	

		<u>Kenzo Inoue</u>	2780
10:50	1B2-05	Preparation of Silica-Bonded Polyimide Hybrids by Sol-Gel Process <u>Keita Murakaji, Yuji Shibasaki, Yoshiyuki Oishi</u>	2782
		Y. Uchimaru, presiding	
11:15	1B2-06	Synthesis and Properties of Extended π -Electron Systems Containing Phosphorus-Bridged Stilbenes <u>Aiko Fukazawa, Youhei Kosaka, Masanao Hara, Hsin-hau</u> <u>Huang, Shigehiro Yamaguchi</u>	2784
11:40	1B2-07	Synthesis of Bio-based Polymers Using Curcumin and Their Functionalization via Element-Hybridization <u>Noriyoshi Matsumi, Namiko Nakamura, Kouichi Mano, Mari</u> <u>Miyamoto, Keigo Aoi</u>	2786
		J. Ohshita, presiding	
12:55	1B2-08	Syntheses and properties of new organic-metallic hybrid polymers <u>Masayoshi Higuchi, Ravindra Pal</u>	2788
13:20	1B2-09	Preparation and Properties of Platinum Nanoparticles Using Polyethyleneimine as a Stabilizer <u>Takanori Imai, Takashi Kajiwara, Yoshimoto Abe, Takahiro Gunji</u>	2790
13:45	1B2-10	Synthesis and optical functions of platinum complexes with cyclic-organoarsenic ligand <u>Kensuke Naka, Tatsuo Shimamoto, Takuji Kato, Manabu Arita,</u> <u>Yasuhiro Morisaki, Yoshiki Chujo, Seiji Watase, Kimihiro Matsukawa</u> ..	2792
		K. Matsukawa, presiding	
14:10	1B2-11	Controlled Radical Polymerization in Porous Metal Complexes <u>Takashi Uemura, Yukari Ono, Kana Kitagawa, Daisuke</u> <u>Hiramatsu, Susumu Kitagawa</u>	2794
14:35	1B2-12	Structural and Photoluminescence Properties of Benzyl Ether Dendron-Modified Ammonium Tribromoplumbate in Solution <u>Masa-aki Morikawa, Takashi Fukuda, Ryosuke Gondo, Nobuo</u> <u>Kimizuka</u>	2796
15:00	1B2-13	Design and Synthesis of Functional π -Conjugated Polymers Containing Selenophene Units in the Main Chain by Reaction of Organometallic Polymers Having Titanacyclopentadiene Units. <u>Hiroki Nishiyama, Ikuyoshi Tomita</u>	2798
		N. Tsubokawa, presiding	
15:25	1B2-14	Sequence Control of Metal Ion Arrays via Solid Phase Synthesis <u>Kentaro Tashiro, Vairaprakash Pothiappan, Hisanori Ueki, Yaghi</u> <u>Omar</u>	2800
15:50	1B2-15	Preparation of Phosphorescent Hybrid Thin Films by Introduction of Rare Earth Element to Silsesquioxane <u>Seiji Watase, Kazuya Ito, Syota Kitagawa, Mitsuru Watanabe,</u> <u>Yasuchika Hasegawa, Noboru Nishioka, Kimihiro Matsukawa</u>	2802
16:15	1B2-16	Preparation and characterization of Yb, Er co-doped Pb(Zr, Ti)O ₃ thin film <u>Tsuyoshi Ohishi, Takumi Soeda, Keiichi Nashimoto, Yoshiyuki</u> <u>Sugahara</u>	2804
		T. Gunji, presiding	
16:40	1B2-17	Complex formation of Laponite and organic polymer by the edge modification of Laponite <u>Kazuto Aizawa, Kazuhiro Shikinaka, Nozomu Fujii, Ken-ichi</u> <u>Sano, Taiki Tominaga, Yoshihito Osada, Kiyotaka Shigehara</u>	2806
17:05	1B2-18	Immobilization of functional materials to polymer chain grafted onto silica nanoparticle <u>Takashi Kawahara, Eiji Suzuki, Kumi Shirai, Takeshi Yamauchi,</u> <u>Kazuhiro Fujiki, Norio Tsubokawa</u>	2808
17:30	1B2-19	Monodispersed mesoporous silica spheres encapsulated with	

		Poly(p-phenylenevinylene)—Optical properties and application as a novel building block <u>Yuri Yamada</u> , Timothy L. Kelly, Tadashi Nakamura, Michael O. Wolf, Kazuhisa Yano 2810	2810
17:55	1B2-20	Siloxane network polymers alternately bearing a silsesquioxane cage and siloxane chains <u>Masashi Kunitake</u> , Naoto Sueyoshi, Noriko Kawashima, Kunihiro Komori, Jin Izumi, Keiji Tanaka, Takashi Matuo, Tomoyuki Ooba 2812	2812

Thursday, September 17

Element-based Hybrids

K. Naka, presiding			
9:10	2B2-01	Synthesis of High Refractive Index Hybrids from Aromatic Polyarylates and Inorganic Nanoparticles <u>Yusuke Imai</u> , Atsushi Terahara, Keitaro Matsui, Yukiya Hakuta, Hiromichi Hayashi, Nobuhiko Ueno, Shin Horiuchi 2814	2814
9:35	2B2-02	Development of high refractive index hybrids containing bisphenyl fluorene derivatives <u>Kimihiko Matsukawa</u> , Seiji Watase, Takuma Yoshimoto, Noboru Nishioka 2816	2816
10:00	2B2-03	Organic-Inorganic Hybrid Germanium Polymer—germanium-based high refractive index materials - <u>Ryosuke Fujii</u> , Akira Watanabe, Tokuji Miyashita 2818	2818
I. Imae, presiding			
10:25	2B2-04	Vacuum Pyrolysis of Soluble Si-Si Bonded Network Polymers—Full-Visible-Spectrum Emitters and Element Si Production <u>Michiya Fujiki</u> , Yoshiki Kawamoto, Masahiko Kato, Yuji Fujimoto, Tomoki Saito, Shin-ichi Hososhima, Giseop Kwak 2820	2820
10:50	2B2-05	Synthesis and optical properties of tris- and tetrakis[oligo(disilanylenebithienylene)dimethylsilyl]benzene <u>Akinobu Naka</u> , Yoshiaki Matsumoto, Mitsuo Ishikawa 2822	2822
11:15	2B2-06	Synthesis and Emission Properties of Organosilicon Polymers Containing Fluorene Unit <u>Koji Takagi</u> , Hiroki Kakiuchi, Ai Tahara, Takashi Atsumi 2824	2824
11:40	2B2-07	Syntheses of borate type crystalline solid lithium electrolytes and their ionic conductivities <u>Makoto Moriya</u> , Hiro Kitaguchi, Wataru Sakamoto, Toshinobu Yogo 2826	2826
Y. Sugahara, presiding			
12:55	2B2-08IL	Synthesis and Functionalities of Si- π Alternate Polymers <u>Joji Ohshita</u> 2828	2828
K. Takagi, presiding			
13:45	2B2-10	Attachment of Si-oligothiophene Alternate Polymers on Inorganic Oxides and Its Applications to Dye-Sensitized Solar Cells <u>Daiki Tanaka</u> , Junya Matsukawa, Tomonori Iwawaki, Joji Ohshita, Yousuke Ooyama, Yutaka Harima 2831	2831
14:10	2B2-11	Synthesis, Properties and Photovoltaic Performances of Branched Oligothiophenes Having Electron-Accepting Units. <u>Yutaka Ie</u> , Toshihiko Uto, Yoshio Aso 2833	2833
14:35	2B2-12	Synthesis and Properties of Polysilsesquioxane Having Oligothiophene <u>Ichiro Imae</u> , Shotaro Takayama, Daisuke Tokita, Yousuke Ooyama, Kenji Komaguchi, Yutaka Harima, Joji Ohshita 2835	2835

Friday, September 18

Chiral Polymers and Chiral Supramolecules

M. Fujiki, presiding

9:10	3B2-01	Controlling the helical foldamer conformation of poly(1,3-phenyleneethynylene)-based chiral polyradicals bearing nitronyl nitroxide and their magnetic property <u>Kiyoaki Kato</u> , Takeshi Namikoshi, Edy Marwanta, Masahiro Teraguguchi, Toshiki Aoki, Takashi Kaneko 2669
9:35	3B2-02	Chiral NMR Signalizing System based on Cooperative Binding by Achiral Indicator <u>Atsuomi Shundo</u> , Jan Labuta, Jonathan Hill, Shinsuke Ishihara, Katsuhiko Ariga 2671
10:00	3B2-03	Phase-Separation Induced Circular Dichroism in Optically Active Polyfluorene Derivative Solution <u>Yusuke Sanada</u> , Takahiro Sato 2673

T. Sato, presiding

10:25	3B2-04	Circularly Polarized Luminescence from Optically Active Polysilane Particles <u>Yoko Nakano</u> , Michiya Fujiki 2675
10:50	3B2-05	Transfer chiral electropolymerization and transfer chiral polymerization in cholesteric <u>Hiromasa Goto</u> 2677
11:15	3B2-06	Piezoelectricity of Chiral Polymeric Fibers <u>Yoshiro Tajitsu</u> 2679
11:40	3B2-07	Secondary chiral assemblies from porphyrin derivative: control of assembled structures by axial coordination <u>Hirokuni Jintoku</u> , Takashi Sagawa, Tsuyoshi Sawada, Makoto Takafuji, Hirotaka Ihara 2681

Room C

Wednesday, September 16

Advance Functional Polymers Based on Supramolecular Programming

9:50	SO	Introductory Remarks Kimihiya Yamamoto 2837
		T. Fukushima, presiding
10:00	1C-03	Preparation and characterization of fullerene having amphiphilic side chain <u>Satoshi Otsuji</u> , Mutsumi Kimura, Hirofusa Shirai 2838
10:25	1C-04	Synthesis of novel fullerene polymer conjugates by living polymerization <u>Ryo Miyabara</u> , Jin Motoyanagi, Masahiko Minoda 2840
10:50	1C-05	Formation of Supramolecular Stacking Assemblies Based on Planar Charged Species <u>Hiromitsu Maeda</u> 2842
		H. Maeda, presiding
11:15	1C-06	Self-Assembly of Electron-Accepting Cyclophanes <u>Kana Tanabe</u> , Takashi Kato 2844
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Thursday, September 17

Advance Functional Polymers Based on Supramolecular Programming

M. Morisue, presiding

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Advance Functional Polymers Based on Supramolecular Programing

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Room D

Wednesday, September 16

Recent Development of Precise Synthesis of Functional Conjugated Polymers

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Recent Development of Precise Synthesis of Functional Conjugated Polymers

H. Kokubo, presiding			
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Recent Development of Precise Synthesis of Functional Conjugated Polymers

		S. Okada, presiding	
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		S. Hotta, presiding	
12:55	3D-08	Sulfonation of poly(diphenylacetylene) derivatives and their gas permeation properties	
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Room E

Wednesday, September 16

Polymer Physics: Structure and Properties

T. Yamanobe, presiding

10:00	1E-03	Nucleation Behavior for Isotactic Polypropylene α and β Form Crystal [II] <u>Kayo Nakamura</u> , Saburo Nakamura, Susumu Umemoto, Norimasa Okui.....	2923
10:25	1E-04	Over-All Crystallization Behavior for Poly(ethylene succinate) [II] <u>Kenichiro Usuda</u> , Susumu Umemoto, Norimasa Okui	2925
10:50	1E-05	Effect of Exclusion Zone on Nucleation Behavior [II] <u>Susumu Umemoto</u> , Hiroki Yamagishi, Norimasa Okui.....	2927

M. Hikosaka, presiding

11:15	1E-06	Local Ordering and Lamellae thickness of Polypropylene under Isothermal Crystallization <u>Al Mamun</u> , Toshikazu Miyoshi.....	2929
11:40	1E-07	In-situ pulse NMR measurement during melt-drawing of crystalline polymers <u>Noriaki Miyazaki</u> , Syo Morita, Masaki Kakiage, Hiroki Uehara, Takeshi Yamanobe	2931

S. Umemoto, presiding

12:55	1E-08	Crystallization of iPP under elongational flow <u>Masamichi Hikosaka</u> , Kiyoka Okada, Jyun-ichiro Washiyama	2933
13:20	1E-09	X-ray study on nano-oriented crystals of isotactic polypropylene <u>Kiyoka Okada</u> , Jun-ichiro Washiyama, Hiroyasu Masunaga, Sono Sasaki, Masamichi Hikosaka	2935
13:45	1E-10	New insight into the monomer and polymer DCHD structures and mechanism of the topochemical polymerization using MEM charge density imaging <u>Bagautdin Bagautdinov</u> , Che-hsiu Shih, Kunihiisa Sugimoto, Sono Sasaki, Hiroshi Tanaka, Kohji Tashiro, Masaki Takata	2937
14:10	1E-11	Crystal Structure and Phase Transition Behavior of Polyethylene with Constantly-Separated Branches—(2) Crystal Structure Analysis based on X-ray Diffraction and Infrared/Raman Data Kohji Tashiro, <u>Masafumi Tasaki</u> , Alamo Rufina G.	2939
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T. Koda, presiding

15:00	1E-13	Preparation of high-performance ultra-high molecular weight polyethylene membrane by biaxial melt-drawing/relaxation and structural change during processing <u>Takuya Tamura</u> , Masaki Kakiage, Hiroki Uehara, Takeshi Yamanobe...	2943
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		T. Ougizawa, presiding	
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17:30	1E-19	Order formation process in ferroelectric polymers <u>Susumu Ikeda</u> , Eiji Yamada, Hiroyuki Shinohara, Akihiro Nishioka, Tomonori Koda	2955
17:55	1E-20	Effects of blended clay and solvent on crystallization and ferroelectricity of poly(vinylidene fluoride) <u>Eiji Yamada</u> , Hiroki Komastuzaki, Hideshige Suzuki, Go Murasawa, Ken Miyata, Akihiro Nishioka, Tomonori Koda, Susumu Ikeda	2957

Thursday, September 17

Polymer Physics: Structure and Properties

		K. Kuboyama, presiding	
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		H. Sato, presiding	
10:25	2E-04	High pressure DTA analysis of multiple melting behavior of poly(alkylene succinate)s David Rohindra, <u>Keiichi Kuboyama</u> , Toshiaki Ougizawa	2965
10:50	2E-05	Effect of Pressure on Non-isothermal Crystallization of Poly(butylene succinate) <u>David Rohindra</u> , Keiichi Kuboyama, Toshiaki Ougizawa	2967
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		S. Yamazaki, presiding	
12:55	2E-08	Investigation of Cocrystallization Phenomenon of Blend Samples between Hydrogenated and Deuterated Polyoxymethylene Viewed from Thermal Analysis and Infrared Spectral Data Kohji Tashiro, <u>Thontree Konghlang</u> , Kummetha Reghunatha Reddy, Toshiaki Kitano, Takashi Nishu	2973
13:20	2E-09	Mechanism of crystal growth from ultrathin blend polymer films <u>Ken Taguchi</u> , Akihiko Toda, Hiroshi Kajioka, Yoshihisa Miyamoto	2975
13:45	2E-10	Formation mechanism of poly (butene-1) spherulites II—Molecular weight dependence <u>Hiroshi Kajioka</u> , Koji Yamada, Ken Taguchi, Akihiko Toda	2977
		H. Itagaki, presiding	
14:10	2E-11	Enthalpy relaxation and memory effect in polystyrene <u>Waki Sakatsuji</u> , Takashi Konishi, Yoshihisa Miyamoto	2979
14:35	2E-12	Relaxation with a peak and the memory effects II <u>Yoshihisa Miyamoto</u> , Yui Uehara, Ken Sekimoto	2981
15:00	2E-13	Synthesis of Block Copolymer by Catalytic ROMP Reaction and Phase Separation of the Film <u>Yuya Suzuki</u> , Shigetaka Hayano, Yasuo Tsunogae	2983
15:25	2E-14	Phase Behavior of Polybutadiene-Poly(ϵ -caprolactone) Diblock Copolymers <u>Hideaki Takagi</u> , Katsuhiko Yamamoto, Shigeru Okamoto, Shinichi Sakurai	2985
		Y. Miyamoto, presiding	
15:50	2E-15	Effect of hydrogen bond on amorphous structure in ethylene-vinyl alcohol copolymer <u>Taku Kondoh</u> , Keiichi Kuboyama, Kenji Ito, Yoshinori Kobayashi, Toshiaki Ougizawa	2987
16:15	2E-16	Infrared and Near Infrared Spectroscopy Studies on Hydrogen Bonding and its Thermal Behavior of Poly(3-hydroxybutyrate)/Poly(vinyl phenol) <u>Harumi Sato</u> , Nahoko Ameyama, Yukihiro Ozaki	2989
16:40	2E-17	Vibrational spectroscopic study on guest exchange process of syndiotactic polystyrene <u>Fumitoshi Kaneko</u> , Tsuyoshi Tsuchida, Kenji Okuyama	2991
17:05	2E-18	Elucidation of the arrangement of a guest molecule intercalated in syndiotactic polystyrene cocrystal by angular distributions of polarized fluorescence intensities <u>Tomohiro Sagoh</u> , Hideyuki Itagaki, Gaetano Guerra, Vincenzo Venditto	2993

Friday, September 18

Polymer Physics: Structure and Properties

		S. Tasaka, presiding	
9:10	3E-01	Current status and future development of "Polymer database (PoLyInfo)" <u>Isao Kuwajima</u> , Masaharu Kumazaki, Kentaro Mashita, Junko Hosoya, Masayoshi Yamazaki	2995
9:35	3E-02	Effects of molecular weight on tensile properties of polypropylene <u>Yuichiro Yoshida</u> , Takanobu Kawamura, Shinichi Kitade, Koh-hei	

		Nitta.....	2997
10:00	3E-03	Influence of morphology on uniaxial tensile behavior of polyoxymethylene <u>Nurhafizah Abd Rahman</u> ,Takanobu Kawamura,Daisuke Sunaga,Koh-hei Nitta	2999
10:25	3E-04	Molecular orientation behavior of polyolefin films under biaxial deformation <u>Kazuomi Ishii</u> ,Takanobu Kawamura,Koh-hei Nitta	3001
		T. Nishino, presiding	
10:50	3E-05	in-situ Observation of Aggregation Structure Change of Linear Chain Molecules Subjected to the Shear Friction Stress on the Basis of Fourier-Transform-type Rapid-Scanning 2D Infrared Imaging Method Keiji Sasaki, <u>Kohji Tashiro</u> ,Naruhiko Inayoshi	3003
11:15	3E-06	Influence of carbonyl dipoles on the molecular mobility and material properties of polycarbonates <u>Hidetoshi Fujimoto</u> ,Chorong Jeong,Yasuhiro Matsuda,Shigeru Tasaka	3005
11:40	3E-07	Quantitative analysis of the nucleation and growth of domain in VDF/TrFE copolymer by use of Piezoresponse Force Microscopy <u>Naoko Tomoda</u> ,Yoshiyuki Takahashi,Takeo Furukawa	3007
		K. Nitta, presiding	
12:55	3E-08	Temperature Dependence of Refractive Index and Thickness of Polyimide Thin Films Measured by Optical Interferometry [II] <u>Kenji Sekiguchi</u> ,Shinji Ando	3009
13:20	3E-09	Effects of Photo-cross-link on the Strain Relaxation in Polymeric Systems Observed by Mach-Zehnder Interferometry <u>Van-pham Dan-thuy</u> ,Takashi Yokoigawa,Tomohisa Norisuye,Qui Tran-cong-miyata.....	3011
13:45	3E-10	Elastic Modulus of the Crystalline Regions of Aliphatic Polyamides at Cryogenic Temperature Takashi Nishino,Masaru Kotera, <u>Kenta Takahashi</u> ,Masatsugu Yoshida,Takayuki Izu	3013
		T. Norisuye, presiding	
14:10	3E-11	Effect of third monomer on the crystalline and bulk Young's moduli of ethylene-tetrafluoroethylene copolymer <u>Atsushi Funaki</u> ,Kohji Tashiro,Kiyotaka Arai	3015
14:35	3E-12	Measurement of elastic modulus of cellulose single nanofibers from tunicate using atomic force microscopy <u>Shinichiro Iwamoto</u> ,Weihua Kai,Akira Isogai,Tadahisa Iwata	3017
15:00	3E-13	Thrust deformation behavior of polyolefin films <u>Ayane Tabata</u> ,Takanobu Kawamura,Koh-hei Nitta.....	3019
15:25	3E-14	Application of nanocomposites to floor sheet of railway vehicle <u>Mikiya Ito</u> ,Tatsuro Sakamoto,Motoki Uehara,Kouji Tsuruta,Kenji Tamura,Akinori Arai,Touko Tachihara,Hiroyuki Muto	3021

Room F

Wednesday, September 16

Polymer Physics: Structure and Properties

		T. Inoue, presiding	
10:00	1F-03	Dimensions of Ring Polymers in Bulk	

		<u>Jiro Suzuki</u> ,Atsushi Takano,Yushu Matsushita	3023
10:25	1F-04	Rheological study of associating polymers with several associative groups on the basis of associating Rouse chain model	
		<u>Tsutomu Indei</u> ,Jun-ichi Takimoto	3025
		T. Indei, presiding	
10:50	1F-05	Effect of intermolecular hydrogen bonds on the rheological behavior in polymer melts	
		<u>Miho Fujita</u> ,Osamu Urakawa,Toshiyuki Shikata,Tadashi Inoue	3027
11:15	1F-06	Dynamic birefringence and dynamic viscoelasticity of polymacromonomers	
		<u>Hiroshi Iwawaki</u> ,Osamu Urakawa,Tadashi Inoue	3029
11:40	1F-07	Effect of molecular structure on cooperative dynamics in polymer/low-mass molecule blends	
		<u>Shogo Nobukawa</u> ,Osamu Urakawa,Toshiyuki Shikata,Tadashi Inoue ..	3031
		T. Shikata, presiding	
12:55	1F-08	Excluded Volume Theory—Concentration Dependence of Excluded Volume	
		<u>Kazumi Suematsu</u>	3033
13:20	1F-09	Conformation of Ring-Shaped Polymer with High Purity in Solution and Bulk	
		<u>Yutaka Ohta</u> ,Yuuki Kushida,Yushu Matsushita,Atsushi Takano	3035
13:45	1F-10	Dilute-Solution Properties of Polystyrene Polymacromonomer Having n-Butyl Group in Each Side Chain End	
		<u>Hidetsugu Kanda</u> ,Yo Nakamura	3037
		T. Sato, presiding	
14:10	1F-11	Dilute Solution Properties of Polyisoprene Polymacromonomer	
		<u>Kouta Inoue</u> ,Yo Nakamura	3039
14:35	1F-12	Temperature Dependence on the Aggregation Process of Polymer Chains in a Dilute Solution	
		<u>Yasuyuki Maki</u> ,Yosuke Harigane,Keisuke Maeda,Toshiaki Dobashi ...	3041
15:00	1F-13	Study on phase transition of aqueous poly(N-alkoxy(meth)acrylamide) solutions	
		<u>Yasushi Maeda</u> ,Shinji Takaku,Takashi Hidaka	3043
15:25	1F-14	Effect of intramolecular hydrogenbond on the thermo sensitivity of poly(N-isopropylacrylamide-co-N,N-diethylacrylamide) in water	
		<u>Noriyuki Kubosaki</u> ,Yukiteru Katsumoto	3045
		Y. Nakamura, presiding	
15:50	1F-15	Thermoresponsive Helix-Coil Transition and Association of Both-ends Hydrophobically-Modified Polypeptides	
		<u>Katsuhiro Inomata</u> ,Yu Hattori,Hideki Sugimoto,Eiji Nakanishi	3047
16:15	1F-16	Dielectric Relaxation Behavior of a Collagen Model Polypeptide, (Pro-Pro-Gly)10, in Aqueous Media I	
		<u>Ayako Minakawa</u> ,Toshiyuki Shikata,Kenji Okuyama	3049
16:40	1F-17	Dielectric Relaxation Behavior of a Collagen Model Polypeptide, (Pro-Pro-Gly)10, in Aqueous Media II	
		<u>Ayako Minakawa</u> , <u>Toshiyuki Shikata</u> ,Kenji Okuyama	3051
		K. Inomata, presiding	
17:05	1F-18	Counterion Mixing Effects on the Conformational Transitions of Polyelectrolytes	
		Hisashi Mori,Masaki Wakagawa,Shigeki Kuroki, <u>Mitsuru Satoh</u>	3053
17:30	1F-19	Raman spectroscopic study on structure of water in mixed solution including laponite and PEO	
		<u>Satoshi Morikubo</u> ,Yurina Sekine,Tomoko Ikeda-fukazawa	3055
17:55	1F-20	Molecular Weight Dependency of the Association Behavior of Alternating Copolymers of Sodium Maleate and Dodecyl Vinyl Ether in Dilute Aqueous Solutions	
		<u>Motoki Ueda</u> ,Akihito Hashidzume,Takahiro Sato	3057

Thursday, September 17

Polymer Physics: Structure and Properties

T. Miyata, presiding

- 9:10 2F-01 Proton conductive mechanisms of percolation transition process in Nafion/ $\{(TiO_2)(WO_3)_{0.148}\}$ coreshell hybrid membranes
Ryosuke Ito, Kensuke Yoshida, Yoshiyuki Takahashi, Takeo Furukawa, Piga Matteo, Pace Giuseppe, Di Noto Vito 3059
- 9:35 2F-02 Preparation and Viscoelastic Properties of High Molecular Weight Ring-Shaped Polystyrenes with Ultra High Purity
Kazuki Matsubara, Yutaka Ohta, Yushu Matsushita, Atsushi Takano, Yoshiaki Takahashi, Hiroshi Watanabe 3061
- 10:00 2F-03 Normal Stress Effects in Transient Networks of Telechelic Associating Polymers II
Tsuyoshi Koga, Fumihiko Tanaka 3063

S. Nagaoka, presiding

- 10:25 2F-04 Efficient Network Formation of Nanocarbon Fibers Utilizing the Selective Adsorption of Flexible Chains—Effects of Molecular Weight of Adsorbed Chains on Viscoelasticity, Electrical Conductivity and Electromagnetic Wave Absorption of the Composites
Masaoki Takahashi, Ryuji Ishikawa, Natsuhiko Mukai, Yukihiro Nishikawa 3065
- 10:50 2F-05 Characterization of Pickering Emulsions Prepared by Silica Particles Pre-adsorbed Polymer
Tomoyuki Suzuki, Masami Kawaguchi 3067
- 11:15 2F-06 Velocity Field Analysis of Microspheres by Means of Phase Mode-Dynamic Ultrasound Scattering Method
Ayumi Nagao, Mariko Kohyama, Tomohisa Norisuye, Qui Tran-cong-miyata 3069
- 11:40 2F-07 Particle shape and molecular weight dependence of ER effect for poly(ethylene glycol) suspension
Yuji Hirose, Yasufumi Otsubo 3071

A. Matsumoto, presiding

- 12:55 2F-08 Gelation mechanism in polysaccharide solutions studied by NMR
Makoto Shimizu, Shingo Matsukawa 3073
- 13:20 2F-09 High-Temperature Collapse of Cross-linked Poly(*N*-isopropylacrylamide) Gels induced by Cooperative Dehydration in Water
Hiroyuki Kojima, Tsuyoshi Koga, Fumihiko Tanaka 3075
- 13:45 2F-10 High Conjugation Molecular Gels from Self-Assembling Thiophene-Derived Molecular Tools
Koji Miyamoto, Hirokuni Jintoku, Takashi Sagawa, Tsuyoshi Sawada, Makoto Takafuji, Hirotaka Ihara 3077
- 14:10 2F-11 Gelation and Aggregation of Polybenzamide Diblock Copolymers with Strong Interaction
Toshiyuki Kataoka, Tomoyuki Ohishi, Tsutomu Yokozawa, Takayuki Ikehara 3079

T. Yokozawa, presiding

- 14:35 2F-12 Pursuit of Homogeneous Network Structure Formation Utilizing Equilibrated Polymerization in Free-Radical Multivinyl Crosslinking Polymerization
Takashi Enomoto, Hiroyuki Aota, Akira Matumoto, Junichi Ikeda 3081
- 15:00 2F-13 Free-Radical Crosslinking Multivinyl Polymerization under Controlled Termination : Molecular Design of Core-Shell Type Nanogels through Crosslinking Multiallyl/Multivinyl

		Copolymerizations	
15:25	2F-14	<u>Satoshi Inoue</u> , Hajime Tamezawa, Yuta Miwa, Hiroyuki Aota, Akira Matsumoto, Michirou Shibano, Yasuo Matoba, Katsutoshi Yokoyama ..	3083
		Preparation of Inhomogeneous Network Polymers Preceded by Nanogel-like Network-Polymer-Precursor Formation in Free-Radical Crosslinking Multiallyl Polymerization	
15:50	2F-15	<u>Hiroyuki Hamamoto</u> , Kouta Himei, Satoshi Inoue, Hiroyuki Aota, Akira Matsumoto, Michirou Shibano, Yasuo Matoba, Katsutoshi Yokoyama	3085
		Synthesis and Characterization of Novel Novolac Having Fluorene Structure	
		<u>Yoshinobu Konno</u> , Yusuke Nomura, Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi, Noriyuki Mitani, Tadatoshi Fujinaga, Koji Ishiguchi	3087
		S. Matsukawa, presiding	
16:15	2F-16	Molecular orientation behavior of rubbery polypropylene under uniaxial drawing process	
16:40	2F-17	<u>Tatsuya Higuchi</u> , Takanobu Kawamura, Koh-hei Nitta	3089
		Electric field driven deformation of thermoplastic elastomer as PVC substitution materials	
17:05	2F-18	<u>Daisuke Matoba</u> , Yenoju Jang, Toshihiro Hirai	3091
		Physical and Morphological Properties of Poly(lactic acid)- Urethane blend films	
		<u>John Baiju</u> , Suguru Motokucho, Ken Kojio, Mutsuhisa Furukawa	3093

Friday, September 18

Polymer Physics: Structure and Properties

		K. Okoshi, presiding	
9:10	3F-01	Frequency characteristic and the effective force of dielectric elastomer acutator	
9:35	3F-02	<u>Tomoaki Ishii</u> , Yusuke Hara, Shingo Maeda, Shuji Hashimoto	3095
		Variation of birefringence and tensile stress with time in natural rubber vulcanizates	
10:00	3F-03	<u>Masatoshi Tosaka</u>	3097
		Change in Tensile Stress and birefringence in cross-linked natural rubber during repeated cyclic deformation	
10:25	3F-04	<u>Masatoshi Tosaka</u>	3099
		Effect of nematic conformation on the stability of segmented main-chain liquid crystals	
		<u>Toshihiro Hiejima</u>	3101
		T. Yatabe, presiding	
10:50	3F-05	Inversion of phase sequence between the cubic and SmC phases in homologous BABH-n cubic liquid crystalline compounds under pressure	
11:15	3F-06	<u>Yoji Maeda</u> , Kimiya Ando, Yuh Iida, Yohei Ueda, Nobuyuki Kobayashi, Hiroyuki Mori, Shoichi Kutsumizu	3103
		Molecular Simulation of Interface between Liquid Crystal and Rubbed Substrate	
11:40	3F-07	<u>Tomonori Koda</u> , Yosuke Hyodo, Kazuki Seino, Yuichi Momoi, Kaoru Furuta, Akihiro Nishioka, Ken Miyata, Go Murasawa	3105
		Synthesis of helical aromatic conjugated polymer in high temperature chiral nematic liquid crystal field	
		<u>Keishi Nishimura</u> , Yong Soo Jeong, Kiyoshi Suda, Kazuo Akagi	3107
		M. Tosaka, presiding	
12:55	3F-08	Hybridization of Discotic LC Molecules Bearing Ionic Liquid Side	

		Chains with Carbon Nanotubes <u>Jeongho Lee</u> , Norifumi Fujita, Takuzo Aida, Akhtarul Alam, Yohei Yamamoto, Takanori Fukushima.....	3109
13:20	3F-09	Influence of Extreme Flexible Spacer on Smectic Phase Behavior of Poly(substituted methylene)-type Liquid Crystalline Polymers. <u>Shogo Nakada</u> , Nozomu Fujii, Kazuhiro Shikinaka, Masatoshi Tokita, Junji Watanabe, Kiyotaka Shigehara	3111
13:45	3F-10	Smectic Phase Behaviors of Several Liquid Crystalline Polymers with Different Substituent Density and Substitution Position <u>Nozomu Fujii</u> , Masatoshi Tokita, Junji Watanabe, Kiyotaka Shigehara	3113
		N. Fujita, presiding	
14:10	3F-11	Liquid crystalline conjugated oligomers—Mesomorphic properties of phenyleneethynylene-based oligomers with lateral and terminal alkyl chains <u>Tetsuo Yatabe</u> , Yuji Kawanishi	3115
14:35	3F-12	Anomalous Smectic A Structure Formed by Main-Chain Liquid Crystalline Polyester with 1-Methyl Pentane Spacer <u>Ryohei Ishige</u> , Shinichiro Funaoka, Masatoshi Tokita, Sungmin Kang, Junji Watanabe	3117
15:00	3F-13	Entropically Driven Formation of Smectic phases in Binary Mixtures of Rigid-Rod Helical Polysilanes <u>Kento Okoshi</u> , Akiko Suzuki, Masatoshi Tokita, Michiya Fujiki, Junji Watanabe	3119
15:25	3F-14	End group effect on phase behavior of liquid crystalline dendrimer <u>Susumu Adachi</u> , Sadahiro Nakanichi, Sungmin Kang, Masatoshi Tokita, Junji Watanabe	3121

Room G

Wednesday, September 16

Polymer Physics: Structure and Properties

		K. Shikinaka, presiding	
10:00	1G-03	Preparation of core/shell particles by self assembling of silica particles at O/W interface <u>Atsumi Uchimura</u> , Sachiyo Kubota, Takeshi Wakiya, Shoji Nagaoka, Makoto Takafuj, Hirotaka Ihara	3123
10:25	1G-04	Fabrication of nano-fibers and nano-tubes by an atto-reactor of core-shell particles <u>Shinji Watanabe</u> , Keiji Fujimoto	3125
10:50	1G-05	The Exclusion of Impurity Particles Accompanied with Crystallization of Charged Colloidal Silica. <u>Koki Yoshizawa</u> , Sachiko Onda, Mariko Shinohara, Tomohiro Taniji, Junpei Yamanaka, Masakatsu Yonese	3127
		K. Inomata, presiding	
11:15	1G-06	Direct Observation of Drying Dissipative Structure Formation <u>Akira Tsuchida</u> , Shinya Takahashi, Hiroshi Kimura, Tsuneo Okubo.....	3129
11:40	1G-07	Electrorheological Effect of Aqueous Hectorite Suspension Working under Low Field Strength—Aqueous Hectorite Suspension- Shinya Takahashi, <u>Hiroshi Kimura</u> , Akira Tsuchida	3131
		N. Tsutsumi, presiding	
12:55	1G-08	Layer-by-Layer Assembly Films of Polymethylene-type	

		Polyelectrolytes with Highest Charge Density. <u>Nozomu Fujii</u> , Kouji Fujimoto, Tsuyoshi Michinobu, Misaho Akada, Seimei Shiratori, Katsuhiko Ariga, Kiyotaka Shigehara 3133
13:20	1G-09	Preparation of Oriented Conjugated Polymers by Electrochemical Polymerization of Aromatic Monomers in Nematic Liquid Crystals <u>Kohsuke Kawabata</u> , Hiromasa Goto..... 3135
13:45	1G-10	Synthesis and Function of Diblock Copolymer Modified on the Linking Site Between the Blocks—Introduction of Porphyrin to Cylindrical Microphase-Separation Interface <u>Takafumi Tanabe</u> , Sadayuki Asaoka, Tomokazu Iyoda, Yukimitsu Suzuki, Shingo Hadano 3137
14:10	1G-11	Characterization of organic light-emitting diodes using pi-conjugated polymer nanofilm as hole injection layer <u>Tomoaki Inoguchi</u> , Atsushi Aoki 3139
		T. Hasegawa, presiding
14:35	1G-12	Local Thermal Analysis of Physical Properties of PMMA Ultrathin Film <u>Kohei Shinmura</u> , Wataru Sakai, Naoto Tsutsumi..... 3141
15:00	1G-13	Analysis of Molecular Aggregation States of Surface-initiated Poly(perfluoroalkyl acrylate) Thin Films in Supercritical Carbon Dioxide <u>Hiroki Yamaguchi</u> , Motoyasu Kobayashi, Masamichi Morita, Gin Peter, Tadanori Koga, Bennett Steve, Satija Sushil K., Atsushi Takahara 3143
15:25	1G-14	Effect of membrane formation condition on structure of polystyrene thin film based on glass transition temperature and density <u>Rikki Honma</u> , Seisuke Ata, Kenji Ito, Yoshinori Kobayashi, Toshiaki Ougizawa 3145
		M. Kobayashi, presiding
15:50	1G-15	Plane arrangement of Polystyrene in Thin Films <u>Seisuke Ata</u> , Kenji Ito, Yoshinori Kobayashi, Toshiaki Ougizawa..... 3147
16:15	1G-16	Infrared Imaging Analysis of a cross section of multilayer polymer thin films by using chemometrics <u>Terumi Sakabe</u> , Satoru Yamazaki, Takeshi Hasegawa 3149
16:40	1G-17	Comb-Like Polymers Having Amphiphilic Side Groups for the Formation of Gold Nanomaterials <u>Jong-chan Lee</u> , Sang-ho Cha, Ki-hyun Kim, Young-sik Yoon 3151
		A. Aoki, presiding
17:05	1G-18	Stripe patterning of spin-coated films of polyetherimide/poly(ε-caprolactone) blend <u>Yoshiaki Motohashi</u> , Kaori Niki, Hitoshi Shindo..... 3153
17:30	1G-19	Formation of nano structures and chiral ordering in L-glutamide-derived self-assembling systems <u>Yoshiko Kira</u> , Yutaka Okazaki, Tsuyoshi Sawada, Makoto Takafuji, Hirotaka Ihara 3155
17:55	1G-20	Micelles formation of poly(ethylene oxide- <i>b</i> -sodium-2-acrylamido-1-propanesulphonate- <i>b</i> -styrene) and its interaction with dibucaine. <u>Bishnu Prasad Bastakoti</u> , Airi Yoneda, Sudhina Guragain, Yuuichi Yokoyama, Shin-ichi Yusa, Kenichi Nakashima..... 3157

Thursday, September 17

Polymer Physics: Structure and Properties

T. Imaoka, presiding

9:10	2G-01	The Effect of Solvent on Two-dimensional Nano Pattern of PEGylated
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		Peptide at Solid/Liquid Interface	
		<u>Souhei Abiko</u> , Masayoshi Tanaka, Takatoshi Kinoshita, Naokiyo Koshikawa	3159
9:35	2G-02	Photopolymerization of diacetylene using β -sheet peptide as a template	
		<u>Tomohisa Tguchi</u> , Tomoyuki Koga, Nobuyuki Higashi.....	3161
10:00	2G-03	Observation of electric field generation in self-assembled monolayer of helical peptide-oligo(phenyleneethynylene) conjugates	
		<u>Hideori Nakayama</u> , Tomoyuki Morita, Shunsaku Kimura	3163
		T. Koga, presiding	
10:25	2G-04	Interaction between Concanavalin A and Self-Assembled Monolayers of Alkane Thiols with Saccharide End Groups	
		Haruki Okawa, Kaori Yaeshima, <u>Shunsuke Morohashi</u> , Kazuhiko Hashimoto.....	3165
10:50	2G-05	Self-assembled monolayer of fine metal-assembling dendrimer having a disulfide core	
		<u>Norifusa Satoh</u> , Kimihisa Yamamoto	3167
11:15	2G-06	2D molecular organization of Ru-Ru complexes on Au(111) investigated by electrochemical STM	
		<u>Kouhei Sakata</u> , Renpei Kuwahara, Soichiro Yoshimoto, Masashi Kunitake, Keita Kuroiwa, Nobuo Kimizuka	3169
11:40	2G-07	Fabrication of Highly Orientated Microfibers of Soluble Pseudo 1D Metal Complexes	
		<u>Rempei Kuwahara</u> , Keita Kuroiwa, Nobuo Kimizuka	3171
		T. Takarada, presiding	
12:55	2G-08	Effects of Substituents on Metallo-Supramolecular Coordination Polymers	
		<u>Jinghua Li</u> , Taichi Ikeda, Ravindra R. Pal, Masayoshi Higuchi.....	3173
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		<u>Toshihiro Hayashi</u> , Masayoshi Higuchi	3175
13:45	2G-10	Electrochemical polymerization of meso-tetra (o-aminophenyl) porphyrin on an Au (111) electrode surface	
		<u>Tomoaki Shinoda</u> , Masashi Kunitake, Soichiro Yoshimoto.....	3177
14:10	2G-11	Ultra thin films of cross-linked π conjugated polymers constructed by spontaneous aromatic Schiff base reaction	
		<u>Shigeyasu Katahira</u> , Nobuo Enoki, Ryota Tanoue, Sota Funamoto, Orii Moriyama, Masashi Kunitake	3179
		M. Higuchi, presiding	
14:35	2G-12	Formation of Schiff Base Type π Conjugated Monolayers at Solid-Liquid Interface	
		<u>Ryota Tanoue</u> , Nobuo Enoki, Shigeyasu Katahira, Sota Funamoto, Orii Moriyama, Masashi Kunitake	3181
15:00	2G-13	Mechanism of Non-crosslinking Aggregation of Au Nanoparticles with DNA	
		<u>Yoshizumi Katafuchi</u> , Masahiro Fujita, Kazuki Ito, Naoki Kanayama, Tohru Takarada, Mizuo Maeda.....	3183
15:25	2G-14	Micrometer-sized, Monodisperse, Cross-linked, Hollow Polymer Particles with a Single Hole in the Shell	
		Mizuki Ito, Hideto Minami, <u>Masayoshi Okubo</u>	3185
15:50	2G-15	Estimation of distribution of carboxyl groups within copolymer particles prepared by emulsion copolymerization using ITC	
		<u>Toyoko Suzuki</u> , Miyuki Yanagisawa, Masayoshi Okubo	3187
		M. Kunitake, presiding	
16:15	2G-16	Preparation of Core/Shell Composite Particles by Seeded Dispersion Polymerization in Ionic Liquid	
		<u>Hideto Minami</u> , Akira Kimura, Masayoshi Okubo	3189

16:40	2G-17	Structure and thermal properties of thin layers deposited on the surface of calcium carbonate particles <u>Takashi Sasaki</u> , Toshiya Nakamoto, Takahiko Matsukawa, Rumi Kuroda, Shigeru Yonezawa, Satoshi Irie, Kensuke Sakurai.....	3191
17:05	2G-18	Synthesis of Hollow Metal Oxide Nanospheres by Templating Polymeric Micelles with Core-Shell-Corona Architecture <u>Dian Liu</u> , Kenichi Nakashima	3193

Friday, September 18

Polymer Physics: Structure and Properties

J. Kumaki, presiding

9:10	3G-01	Theoretical analysis of formation of cuplike vesicles by adsorbing Talin to lipid bilayer membranes <u>Yukio Suezaki</u> , Tamiki Umeda	3195
9:35	3G-02	Preparation of Protein Nanocapsules by Condensation Reaction of Butylcyanoacetate with Formaldehyde <u>Hidenobu Shimizu</u> , Masayo Tomizawa, Risei Wada, Masaru Okabe	3197
10:00	3G-03	Preparation of Layer-by-layer Deposited Polymer Ultrathin Films Using Microfluidic Devices <u>Atsushi Aoki</u> , Kazuhiro Takano	3199
10:25	3G-04	Controlling Surface Density of Amine Derivatives on a Monolayer Substrate Having Photoremovable Succinimidyl ester <u>Hidekazu Nakayama</u> , Jun Nakanishi, Takahiro Shimizu, Yutaro Yoshino, Hideo Iwai, Shingo Kaneko, Kazuo Yamaguchi, Yasuhiro Horiike	3201

T. Fujigaya, presiding

10:50	3G-05	PMMA Stereocomplexation in a Langmuir Monolayer Naoyuki Aiba, Yutaro Sasaki, <u>Jiro Kumaki</u>	3203
11:15	3G-06	Formation and Molecular Arrangement of Langmuir-Blodgett Films for Aromatic Polyamides Containing Long Alkyl Chain as Side-chain <u>Natsuki Sato</u> , Satoshi Chiba, Yoko Abe, Yuji Shibasaki, Atsuhiko Fujimori	3205
11:40	3G-07	Surface pressure measurements and surface morphologies of poly(n-hexyl isocyanate) monolayers spread at the air-water interface <u>Takako Morioka</u> , Masami Kawaguchi, Osamu Shibata.....	3207

H. Jinnai, presiding

12:55	3G-08	Dilute solution properties investigated by SEC-SAXS and SEC-MALLS-VISC (3) <u>Makoto Takemasa</u> , Yoshiaki Yuguchi, Shinichi Kitamura, Katsuyoshi Nishinari	3209
13:20	3G-09	Characterization of Co- and Terpolymer of Methacrylates by Multivariate Analysis of ¹³ C NMR <u>Hikaru Momose</u> , Tomoya Maeda, Kosuke Hattori, Tomohiro Hirano, Koichi Ute	3211
13:45	3G-10	Supramolecular association of stereoblock copolymers induced by stereochemical recognition <u>Masateru Yamazaki</u> , Takehiro Kitaura, Tatsuki Kitayama, Kouhei Tanaka, Takahiro Sato	3213
14:10	3G-11	A Sharp Switchover of Hydrogen Bonds Involved in the Zipper-type Screw-Sense Inversion of Polyaspartates <u>Akihiro Abe</u> , Hidemine Furuya	3215

T. Kitayama, presiding

14:35	3G-12	The structural control of double helical structure of ABC triblock terpolymer <u>Hidekazu Sugimori</u> , Kazuyuki Matsunaga, Takeshi Kaneko, Volker Abetz, Hiroshi Jinnai.....	3217
15:00	3G-13	Structural control of double helical morphology of ABC triblock terpolymer <u>Song Hong</u> , Hidekazu Sugimori, Ryuhei Kimoto, Kazuyuki Matsunaga, Takeshi Kaneko, Volker Abetz, Hiroshi Jinnai	3219
15:25	3G-14	Synthesis and evaluation of soluble polybenzoxazoles precursor <u>Takahiro Fukumaru</u> , Tsuyohiko Fujigaya, Naotoshi Nakashima	3221

Room H

Wednesday, September 16

Polymer Characterization "Hierarchal Structures and Dynamics "

9:50	SO	Introductory Remarks Toshikazu Miyoshi	3725
		S. Ando, presiding	
10:00	1H-03IL	Precise Structure of Silks studied by NMR, Design and Production of New Silk, and Application of New Silk to Scaffold for Tissue Engineering <u>Tetsuo Asakura</u>	3726
		N. Asakawa, presiding	
10:50	1H-05	Precise Analysis of Structure and Dynamics of Polymer LED Materials by Solid-State NMR <u>Hironori Kaji</u> , Tatsuya Fukushima, Yurie Shimahara, Yohei Kiuchi.....	3729
11:15	1H-06	Reversible hierarchical phase separation of a polymer blend in LB films Yutaro Sasaki, Naoyuki Aiba, <u>Jiro Kumaki</u>	3731
11:40	1H-07	Fabrication and Analysis of nanoporous structures using block copolymer template and supercritical carbon dioxide <u>Hideaki Yokoyama</u> , Masateru Ito, Yasuhiro Sakai, Kohzo Ito, Kenji Sugiyama	3733
		J. Kumaki, presiding	
12:55	1H-08	Solvation and intramolecular interaction of polymers studied by vibrational spectroscopy combined with quantum chemical calculations <u>Yukiteru Katsumoto</u>	3735
13:20	1H-09	Distribution of Crystal Orientation and Higher-Order Structure in Sequentially-biaxially-oriented Polyethylene Samples based on Synchrotron Microbeam X-ray Small-Angle and Wide-Angle Scattering Data Kohji Tashiro, <u>Tran Hai Ninh</u> , Makoto Hanesaka, Kazuki Ito, Hiroyasu Masunaga, Sono Sasaki, Masaki Takata.....	3737
13:45	1H-10	Development of high contrast X-ray microtomography and its application to polymer materials <u>Yukihiro Nishikawa</u> , Natuhiko Mukai, Kenta Takemura, Masaoki Takahashi	3739
14:10	1H-11	High Contrast X-ray Microtomography—Observation of Alumina Network in Bicontinuous Structure of Polymer Blend. <u>Kenta Takemura</u> , Yukihiro Nishikawa, Masaoki Takahashi, Yuichi Shimokoba	3741

H. Yokoyama, presiding

14:35	1H-12	Dynamic Tube Dilation of Multi-branched Polymers—Self-consistent Coarse Graining of Length and Time Scales <u>Hiroshi Watanabe</u>	3743
15:00	1H-13	Cooperative and Hierarchical Dynamics in Polymer / Low-Mass Molecule Mixtures <u>Osamu Urakawa</u> , Shogo Nobukawa, Toshiyuki Shikata, Tadashi Inoue ..	3745
15:25	1H-14	Molecular Dynamics in Interfacial Region of Microphase-Separated Structure of PS-block-PMA Studied by Selective Spin-Labeling <u>Yohei Miwa</u> , Katsuhiko Yamamoto, Shigetaka Shimada, Masato Sakaguchi	3747

O. Urakawa, presiding

15:50	1H-15	Structure and Dynamics of Polyrotaxane Solid Materials <u>Aoi Inomata</u> , Yasuhiro Sakai, Christian Ruslim, Michiko Ito, Junko Suda, Koichi Mayumi, Changming Zhao, Yuya Shinohara, Hideaki Yokoyama, Yoshiyuki Amemiya, Kohzo Ito	3749
16:15	1H-16	Hierarchical Dynamics of Polymers in Contact with Non-solvents <u>Kazuki Yoshihiro</u> , Tomotaka Mizuno, Hiroshi Sasaki, Toshihiko Nagamura, Keiji Tanaka	3751
16:40	1H-17	Solid to solid (II-I) transition of isotactic polybutene-1—Phase transition behavior at temperatures near the glass transition point <u>Masanori Maruyama</u> , Yusuke Sakamoto, Koji Nozaki, Koji Yamada, Hiroshi Kajioka, Akihiko Toda, Takashi Yamamoto	3753

H. Kaji, presiding

17:05	1H-18	Stochastic Resonant Devices using Polymer Dynamics, and their Hierarchization <u>Naoki Asakawa</u>	3755
17:30	1H-19	NMR studies of the dynamic structure and its relation with conjugation length for Poly(3-hexylthiophene) <u>Koji Yazawa</u> , Yoshio Inoue, Tadashi Shimizu, Masataka Tansho, Naoki Asakawa.....	3757
17:55	1H-20	Global and Local Dynamics of Polymer Colloid by Latex State NMR Spectroscopy <u>Seiichi Kawahara</u> , Kazuya Watanabe, Yoshimasa Yamamoto, Keiichi Akabori	3759

Thursday, September 17**Polymer Characterization "Hierarchical Structures and Dynamics "****A. Toda, presiding**

9:10	2H-01	Structural Evolution Process in Isothermal Crystallization Phenomena of Crystalline Polymers—Investigation by Highly-resolved Time-dependent Measurements of Synchrotron SAXS/WAXD and Infrared Spectra <u>Kohji Tashiro</u> , Kummetha Raghunatha Reddy, Asami Nishiyama, Makoto Hanesaka, Hiroyasu Masunaga, Sono Sasaki, Masaki Takata	3761
9:35	2H-02	Hierarchical Structure and Non-Equilibrium Intermediate Phase in Polymer Crystallization Yunfeng Zhan, Yoshiko Ogino, Go Matsuba, Koji Nishida, <u>Toshiji Kanaya</u> .	3763
10:00	2H-03	Molecular Ordering and Dynamics in Polymer Crystals. <u>Toshikazu Miyoshi</u> , Al Mamun.....	3765
10:25	2H-04	Crystallization of isotactic polypropylene from mesomorphic phase during heating with constant rates <u>Harutoshi Asakawa</u> , Koji Nishida, Kazuma Okada, Go Matuba, Toshiji	

		Kanaya,Hiroki Ogawa.....	3767
		T. Hayakawa, presiding	
10:50	2H-05	Formation of polymer spherulites by a spontaneous gradient field <u>Akihiko Toda</u> ,Ken Taguchi,Hiroshi Kajioka	3769
11:15	2H-06	Analysis of Crystalline Structures of Polylactic Acid by Electron Microscopy <u>Shin Horiuchi</u> ,Kyoko Masuno,Naoki Yokoyama	3771
11:40	2H-07	Formation of Hierarchical Structure Using Nano-Scale Dispersion and Mixing Technique with High-Shear Flow Field <u>Hiroshi Shimizu</u> ,Yongjin Li	3773
		H. Yokoyama, presiding	
12:55	2H-08	Creation of Films with Hierarchical Ordered Structures Targeted for Block Copolymer Lithography <u>Teruaki Hayakawa</u> ,Tomoyasu Hirai,Masa-aki Kakimoto,Melvina Leolukman,Padma Gopalan.....	3775
13:20	2H-09	Hierarchical structure and functions of morphology-retaining carbonized polyacetylene <u>Satoshi Matsushita</u> ,Mutsumasa Kyotani,Masaki Shimomura,Akira Kaito,Masahiro Nagao,Yoshio Matsui,Kazuo Akagi.....	3777
13:45	2H-10	Exclusion and phase behavior of structural defects of microphase separated films with perpendicularly oriented cylinders by low molecular liquid crystals. <u>Ai Tsugueda</u> ,Tomokazu Iyoda,Motonori Komura	3779
		T. Miyoshi, presiding	
14:10	2H-11	Crystallization mechanism and morphology of polyamide-6 <u>Jun Kawabata</u> ,Go Matsuba,Koji Nishida,Toshiji Kanaya.....	3781
14:35	2H-12	Gel Film Formation and Development of Morphology and Mechanical Properties upon Drawing of Silk of the Hornet <u>Tsunenori Kameda</u> ,Qiang Zhang,Eiji Togawa,Yasushi Tamada	3783
15:00	2H-13	High-Impact Property related on Characteristic Lamellar Structure of Crystalline Phase and Water-Absorbed Amorphous Phase in PK/PA alloys <u>Atsushi Asano</u> ,Maiko Nishioka,Youhei Takahashi,Atsushi Kato,Shigeki Hikasa,Hitoshi Iwabuki,Kazuya Nagata,Hidenori Sato,Toshinori Hasegawa,Hisahiro Sawabe,Toshiya Suda,Masazumi Arao,Ayano Isoda,Mitsuo Mukai	3785

Polymer Physics: Structure and Properties

		T. Sato, presiding	
15:50	2H-15	Two-dimensional micro-scale thermal analysis with a high-speed infrared camera <u>Junko Morikawa</u> ,Toshimasa Hashimoto	3223
16:15	2H-16	Measurement of Thermal Conductivity of Polymeric Thermal Insulation Materials by Contact-type Temperature Wave Analysis <u>Toshimasa Hashimoto</u> ,Junko Morikawa	3225
16:40	2H-17	High-resolution SEM observation of wet specimens using ionic liquid <u>Hirohide Otake</u> ,Yukari Dan	3227
17:05	2H-18	Evaluation of viscoelastic properties of the electrolyte membrane used in polymer electrolyte fuel cell via nanoindenter <u>Carlos Seiti Kuroda</u> ,Naohiko Takimoto,Akihiro Ohira	3229

Friday, September 18

Polymer Physics: Structure and Properties

Y. Yamada, presiding

9:10	3H-01	Preparation of Optically Active Polyisocyanide Using Cholesteric Liquid Crystal as an Asymmetric Solvent <u>Satoshi Ohkawa</u> , Reina Ohta, Hiromasa Goto.....	3231
9:35	3H-02	Synthesis and spherulitic growth rate of PEO/PES block copolymer prepared by dimerization of anthracene. <u>Noriaki Aoyagi</u> , Hiroto Kudo, Toshiyuki Kataoka, Tadatomi Nishikubo, Takayuki Ikehara	3233
10:00	3H-03	Structure, Viscoelasticity, Extension Behavior and Electrical Conductivity of SBR Filled with Fringed-Shape Carbon Black <u>Takuya Kurihara</u> , Shingo Nagata, Yukihiro Nishikawa, Masaaki Takahashi	3235
10:25	3H-04	Additional Effects of Low Molecular Compounds on Deformation Properties in Shape Memory Polymer based on Polyurethane Composites <u>Mizue Kuriyagawa</u> , Takanobu Kawamura, Shunichi Hayashi, Koh-hei Nitta.....	3237
		K. Nitta, presiding	
10:50	3H-05	Effect of addition of POSS fillers on thermal properties of commodity polymers <u>Shigehiro Adachi</u> , Norihiko Yasuda, Kazuo Tanaka, Yoshiki Chujo	3239
11:15	3H-06	Gas permeation properties and morphology of a dense membrane film prepared from polymer alloy of poly(styrene-block-ethylene/butylene-block-styrene) triblock copolymer (SEBS), poly(ethylene-co-propylene) (EPP) and poly(ethylene-co-ethylacrylate) (EEA). <u>Masamoto Uenishi</u>	3241
11:40	3H-07	Preparation and characterization of nanoporous hyperbranched polyimides <u>Jun Sakai</u> , Tomoyuki Suzuki, Yasuharu Yamada	3243
		H. Saito, presiding	
12:55	3H-08	A new polymer composite with dispersed submicron-scale amorphous carbon fabricated by vapor deposition methods <u>Masaaki Mori</u> , Atsushi Hotta	3245
13:20	3H-09	Amination of polypropylene powder by atmospheric pressure glow plasma and its application for polymer blends <u>Keiko Koga</u> , Youichi Sano, Tohiyuki Nagaishi, Yukihiro Zanka, Yuji Fujita	3247
13:45	3H-10	Production of Polymer Particles Utilizing Phase Separated Structure of Sugar Alcohol/Polymer Blends and Rheology of the Blends : Cyclic Olefin Copolymer and PMMA <u>Katsura Higuchi</u> , Masaaki Takahashi, Hisayoshi Ito, Aya Nakai	3249
14:10	3H-11	Crystallization of Homopolymers Confined in Cylindrical Nanodomains from Microphase Separation <u>Kenichi Kadena</u> , Yuya Ohguma, Shuichi Nojima, Takashi Ishizone, Yuta Iwasaki, Kazuo Yamaguchi	3251
		A. Hotta, presiding	
14:35	3H-12	Independent Orientation and Relaxation Behavior of Low Molecule in Polymer/Low Molecule Blends <u>Ryoya Seto</u> , Hiromu Saito, Kikuo Arimoto, Tomiaki Otake	3253
15:00	3H-13	Diffusion Behavior of Polymer Complex in Polymer Blends <u>Yoko Imamura</u> , Noboru Osaka, Hiromu Saito, Kota Yariyama, Noriyuki Dogishi, Akira Kaneko	3255
15:25	3H-14	In-situ observation of phase separating process in a polymer blend system <u>Haruko Saito</u> , Masahiro Yoshinaga, Takaaki Mihara, Hiroshi Jinnai, Toshio Nishi	3257

Room J1

Wednesday, September 16

Construction, Control and Analysis of Surfaces and Interfaces

9:50	SO	Introductory Remarks Masashi Kunitake	3840
		A. Aoki, presiding	
10:00	1J1-03	Synthesis of concentrated polymer brushes with extraordinarily large thickness by high-pressure atom transfer radical polymerization <u>Shu-yao Hsu</u> , Yuzo Kayama, Toshihiko Arita, Kohji Ohno, Takeshi Fukuda, Yoshinobu Tsujii	3841
10:25	1J1-04	Analysis of protein adsorption behavior on well defined polymer brush surface using nano force curve measurement <u>Tomoaki Nakanishi</u> , Yuuki Inoue, Ryosuke Matsuno, Madoka Takai, Kazuhiko Ishihara	3843
10:50	1J1-05	Analysis of surface and bulk morphology of polymer electrolyte membrane—Correlation with mass transfer phenomena <u>Akihiro Ohira</u> , Carlos Seiti Kuroda, Naohiko Takimoto, Hamdy Mohamed, Surasak Seesukphronrarak, Koh Kidena, Yoshinori Kobayashi	3845
		M. Kunitake, presiding	
11:15	1J1-06	Mechanical property measurements of self-organized honeycomb-patterned polymer films by using an atomic force microscope. <u>Yuki Nakamichi</u> , Masahiro Ara, Yuji Hirai, Hiroshi Yabu, Sou Fujinami, Ken Nakajima, Toshio Nishi, Masatsugu Shimomura.....	3847
11:40	1J1-07	Topography and Local Conductivity Mapping of Polyaniline LB Films using Current-Sensing AFM <u>Atsushi Aoki</u> , Koji Banba.....	3849
12:55	1J1-08IL	High-resolution Imaging in Liquids and Local Hydration Force Measurements by Frequency Modulation AFM <u>Hirofumi Yamada</u>	3851
		A. Tsuda, presiding	
13:45	1J1-10	Synergetic Surface Modification on Fluoropolymer Film by Surface-Initiated Radical Polymerization and Nanoimprint Lithography <u>Taichi Kimura</u> , Masamichi Morita, Motoyasu Kobayashi, Atsushi Takahara.....	3854
14:10	1J1-11	Preparation of honeycomb-patterned film prepared from stimuli-responsive amphiphilic polymers <u>Miki Kojima</u> , Yuji Hirai, Hiroshi Yabu, Masatsugu Shimomura.....	3856
14:35	1J1-12	Design of a Mass Transport Surface Using Peristaltic Motions of a Self-Oscillating Gel and Evaluation of the Transportability <u>Yoko Murase</u> , Reiji Takeshima, Mio Hidaka, Ryo Yoshida	3858
		T. Kawasaki, presiding	
15:00	1J1-13	Molecular Design and Functions of Dynamic Supramolecular Nanoclusters <u>Akihiko Tsuda</u>	3860
15:25	1J1-14	Diffusion behavior of methanol molecules into thin poly(methyl	

		methacrylate) films <u>Koichiro Hori</u> ,Toshihiko Nagamura,Keiji Tanaka.....	3862
15:50	1J1-15	Local conformatoin of polystyrene at solid interfaces and its dependence on interfacial free energy <u>Naoki Kai</u> ,Toshihiko Nagamura,Keiji Tanaka	3864
16:15	1J1-16	Poly(ethlene glycol) network incorporating poly(amidoamine) dendrimer—Relation between the structure and the CO2 separation properties <u>Ikuo Taniguchi</u> ,Ryosuke Shimizu,Shingo Kazama,Hiroshi Jinnai	3866
		T. Nakanishi, presiding	
16:40	1J1-17	AR-QCM Analysis for Protease Reactions that depends on Hardness of Proteins <u>Takayoshi Kawasaki</u> ,Chikako Tanaka,Yoshio Okahata	3868
17:05	1J1-18	An Enhanced Anomalous-reflection-QCM with a Modified Au electrode <u>Taisuke Kojima</u> ,Takayoshi Kawasaki,Yoshio Okahata.....	3870
17:30	1J1-19	Electron Beam-Induced Graft Copolymerization for Polypropylene Fabrics <u>Kenji Hisada</u> ,Yuki Yoshida,Teruo Hori,Yukie Kondo	3872

Thursday, September 17

Construction, Control and Analysis of Surfaces and Interfaces

		A. Ohira, presiding	
9:10	2J1-01	Infrared Spectroscopic Study of Molecular Interaction in Thin Films of Poly(N-isopropylacrylamide) <u>Takeshi Hasegawa</u> ,Shuntaro Tatsuta,Yukiteru Katsumoto	3874
9:35	2J1-02	Micro Raman Scopic Study of Diacetylene polymerization <u>Yu Nemoto</u> ,Masahito Sano.....	3876
10:00	2J1-03	Interfacial Structures of Phase-separated Polymer Mixtures by Confocal Raman Microscopy <u>Yoshitaka Takahashi</u> ,Masahito Sano	3878
10:25	2J1-04	Preparation and Photofunction of Azobenzene Liquid Crystalline Graft Chains <u>Kenjiro Imai</u> ,Shusaku Nagano,Takahiro Seki.....	3880

Sensing, Transport and Separation with High Selectivity Induced by Biological Materials

11:05	SO	Introductory Remarks Koji Yamanaka	3787
		A. Higuchi, presiding	
11:15	2J1-06	Block Copolymer Templating based on PEO Nanocylinder Channels <u>Tomokazu Iyoda</u> ,Kaori Ito,Motonori Komura.....	3788
11:40	2J1-07	Functionalization of nano thin films based on self-supporting and molecular recognition <u>Seung-woo Lee</u> ,Naoki Mizutani,Sergiy Korposh.....	3790
12:55	2J1-08	Dimensional control of nanoporous polyethylene membranes and their biological applications <u>Makiko Kanou</u> ,Noriaki Sakamoto,Hiroki Uehara,Yusuke Inoue,Takeshi Yamanobe	3792
		K. Yamanaka, presiding	
13:20	2J1-09	DNAzyme-linked aptamer assays of thrombin from colorimetric sensing <u>Akon Higuchi</u> ,Hisashi Fukushima	3794

13:45	2J1-10	Design of practically functionalized ferritin immunodiagnosis particles by construction of a PEG/antiferritin coimmobilized layer onto nanospheres <u>Xiaofei Yuan</u> , Dolca Febregat Montfort, Keitaro Yoshimoto, Yukio Nagasaki 3796	3796
14:10	2J1-11	Polymeric micelle from a poly(ethylene glycol)-b-poly(L-lysine) block copolymer: Utilization of the polymeric micelle for magnetic resonance imaging <u>Kouichi Shiraishi</u> , Kumi Kawano, Takuya Minowa, Huili Ma, Yoshie Maitani, Masayuki Yokoyama 3798	3798
14:35	2J1-12	Effect of Antibody Immobilization on Specific Antigen Binding—Investigation using Surface X-ray Scattering <u>Keisuke Gohda</u> , Yuji Teramura, Shuichiro Kuwajima, Atsuhito Okonogi, Hiroo Iwata, Hidetoshi Kotera 3800	3800
M. Yoshikawa, presiding			
15:00	2J1-13	Quantum dots covered with biocompatible phospholipid polymer for cellular pH imaging <u>Kouichi Masuda</u> , Ryosuke Matsuno, Tomohiro Konno, Madoka Takai, Kazuhiko Ishihara 3802	3802
15:25	2J1-14	Fabrication and response analysis of FET ion sensor using calcium responsive gel <u>Takashi Endo</u> , Akira Matsumoto, Yuji Miyahara, Ryo Yoshida 3804	3804
15:50	2J1-15	Synthesis of Anionic Conjugated Polyelectrolytes for Protein Sensing and Fluorescent Patterning <u>Taek Lee</u> , Chan Kyu Kwak, Jung Hyo Lee, Tae Hyeon Kim 3806	3806
K. Yoshimoto, presiding			
16:15	2J1-16	Chiral separation with molecularly imprinted nanofiber from cellulose acetate <u>Yuuki Sueyoshi</u> , Chiho Fukushima, Masakazu Yoshikawa 3808	3808
16:40	2J1-17	Poly(2-ethylhexyl acrylate) for polymeric pseudo-liquid membranes <u>Yuuya Murai</u> , Sadayuki Asaoka, Masakazu Yoshikawa 3810	3810
17:05	2J1-18	Development of an artificial membrane trafficking system by employing signal-responsive molecular switches <u>Zhonghua Wang</u> , Hiroshi Ito, Kazuma Yasuhara, Jun-ichi Kikuchi 3812	3812

Friday, September 18

Sensing, Transport and Separation with High Selectivity Induced by Biological Materials

T. Okada, presiding			
9:10	3J1-01	CO ₂ permeability and selectivity of UV-crosslinked telechelic polyimide membranes <u>Hayato Shirokura</u> , Kazuhito Yoshida, Shuichi Sato, Shinji Kanehashi, Sou Miyata, <u>Kazukiyo Nagai</u> 3814	3814
9:35	3J1-02	Free-Standing Block Copolymer Film with Visualized Molecule-Transport Channels <u>Takashi Yamamoto</u> , Sadayuki Asaoka, Motonori Komura, Yukimitsu Suzuki, Tomokazu Iyoda 3816	3816
10:00	3J1-03	Fusogenic liposomes as an intracellular delivery system <u>Kenji Kono</u> , Eiji Yuba, Tomohiro Kaiden, Atsushi Harada 3818	3818
K. Nagai, presiding			
10:25	3J1-04	Preparation and Characterization of Gelatin Microcapsule Cross-Linked by Enzymatic Reaction <u>Satoshi Ikegami</u> , Masumi Hyuga, Tomoko Okada, Norihiko Minoura, Takuya Yasuhara, Takashi Iwasaki, Mikio Tajima 3820	3820

10:50	3J1-05	<i>withdrawn</i>	
11:15	3J1-06	A Synthetic Keyhole that Discriminates Exact Shapes of Guest Molecules <u>Takane Imaoka</u> , Kimihisa Yamamoto.....	3822
11:40	3J1-07	Alternating copolymerization on silica and its application for the unique separation of shape-constrained isomers <u>Abul Khayer Mallik</u> , Makoto Takafuji, Tsuyoshi Sawada, Hirotaka Ihara	3824
		Y. Kameda, presiding	
12:55	3J1-08	Structural dynamics and functional expression of the Echerichia coli chaperonin <u>Kunihiro Kuwajima</u> , Atsushi Mukaiyama, Takashi Nakamura, Koki Makabe	3826
13:20	3J1-09	Hydration structures of proteins <u>Masayoshi Nakasako</u>	3828
13:45	3J1-10	Computer Simulations on Molecular Recognition and Information Transmission in Biological Systems <u>Shigenori Tanaka</u>	3830
14:10	3J1-11	Solvation Behavior of HFIP-Water Mixtures for the Peptide Group and Their Phase Separation <u>Toshiyuki Takamuku</u>	3832
		T. Takamuku, presiding	
14:35	3J1-12	Hydration Structure of Amino Acids Determined by Neutron Diffraction with Isotopic Substitution Method—Direct Observation of Intermolecular Hydrogen Bonds in Aqueous Solutions <u>Yasuo Kameda</u> , Yuko Amo, Takeshi Usuki.....	3834
15:00	3J1-13	Electrical Signal Recordings of Nanopore Protein in Bilayer Lipid Membrane Microarray <u>Toshihisa Osaki</u> , Hiroaki Suzuki, Bruno Le Pioufle, Shoji Takeuchi.....	3836
15:25	3J1-14	Microdroplet transfer and separation on high adhesive superhydrophobic surfaces <u>Daisuke Ishii</u> , Hiroshi Yabu, Masatsugu Shimomura.....	3838

Room J2

Wednesday, September 16

Merging of Chemistry and Physics for Soft Matters

9:50	SO	Introductory Remarks Keji Tanaka	3598
		K. Tanaka, presiding	
10:00	1J2-03	Relaxation of the single polymer chains in entangled systems observed by scanning near-field optical microscopy <u>Toru Ube</u> , Hiroyuki Aoki, Shinzaburo Ito, Jun-ichi Horinaka.....	3599
10:25	1J2-04	Glass transition and dynamics of stacked ultrathin polymer films <u>Koji Fukao</u> , Yuto Oda, Kenji Nakamura, Daisuke Tahara.....	3601
		K. Fukao, presiding	
10:50	1J2-05	Local viscosity of confined liquid evaluated using the shear resonance and fluorescence lifetime measurement <u>Motohiro Kasuya</u> , Daisuke Fukushima, Hiroshi Sakuma, Kazue Kurihara	3603
11:15	1J2-06	Localized Surface Plasmon Resonance in Gold Nanoparticle	

		Assemblies formed by Surface Molecular Macroclusters <u>Takeshi Kajiwara</u> , Tatsuro Shinzawa, Masashi Mizukami, Kazue Kurihara	3605
11:40	1J2-07	Swelling behavior of hydrophilic concentrated polymer brushes incorporated with electrostatic interaction <u>Akihiro Nomura</u> , Atsushi Goto, Shigeru Yamago, Yoshinobu Tsujii, Takeshi Fukuda.....	3607
		M. Komura, presiding	
12:55	1J2-08	Observation of three-dimensional structures in the block copolymer nanoparticles <u>Takeshi Higuchi</u> , Kiwamu Motoyoshi, Kazutaka Koike, Hiroshi Yabu, Kazuyuki Matsunaga, Hidekazu Sugimori, Hiroshi Jinnai, Masatsugu Shimomura	3609
13:20	1J2-09	Preparation of organic-inorganic hybrid particles based on phase separation of polymers <u>Hiroshi Yabu</u> , Kazutaka Koike, Kiwamu Motoyoshi, Takeshi Higuchi, Masatsugu Shimomura	3611
13:45	1J2-10	New Epitaxial Phase Transition between DG and HEX in PS-b-PI Hae-wong <u>Park</u> , Jueun Jung, Taihyun Chang, Kazuyuki Matsunaga, <u>Hiroshi Jinnai</u>	3613
		H. Yabu, presiding	
14:10	1J2-11	Structural formation process of microphase separated films of block copolymers with liquid crystalline side chains <u>Motonori Komura</u> , Tomokazu Iyoda	3615
14:35	1J2-12	Characteristic Cylindrical Nanophase-Separated Structures Having Non-Constant Mean Curvature from ABC Triblock Terpolymers <u>Mutsuhiko Yamada</u> , Atsushi Noro, Atsushi Takano, Yushu Matsushita	3617
15:00	1J2-13	Interaction between Polymer Chains and Nanocarbons, and Structure and Functionality of the Polymer Composites—DNA/SWCNT and Selective Adsorption of Flexible Chains on Nanocarbons <u>Masaoki Takahashi</u> , Yukihiro Nishikawa, Shingo Nagata, Natsuhiko Mukai, Takuya Kurihara	3619
		A. Takano, presiding	
15:25	1J2-14	High Contrast X-ray Microtomography—Orientation Control of Carbon Fibers Utilizing Bicontinuous Structure of Polymer Blends <u>Yuichiro Komasu</u> , Yukihiro Nishikawa, Masaoki Takahashi.....	3621
15:50	1J2-15	Controlling of morphology of ternary polymer blends by using photo-chemical reaction <u>Masataka Fukuoka</u> , Yuta Takeda, Hideyuki Nakanishi, Tomohisa Norisuye, Qui Tran-cong-miyata.....	3623
16:15	1J2-16	Design of Conducting Polymer Blends by Photo-Induced Phase Separation <u>Tasuku Murata</u> , Tomohisa Norisuye, Qui Tran-cong-miyata.....	3625

Construction, Control and Analysis of Surfaces and Interfaces

		M. Sakata, presiding	
17:05	1J2-18	High-Sensitive Immunoassay System with Protein A Immobilized on Block copolymer brush <u>Nobuyuki Tajima</u> , Ryosuke Matsuno, Madoka Takai, Kazuhiko Ishihara ..	3882
17:30	1J2-19	Physicochemical Characterization of Surface Layer of Mixed Lipid Membrane <u>Toyoko Imae</u>	3884

17:55	1J2-20	Biocompatibility on Nanostructure-Controlled Phospholipid Polymer Interface <u>Madoka Takai</u> , Kazuhiko Ishihara 3886	3886
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Thursday, September 17

Construction, Control and Analysis of Surfaces and Interfaces

O. Karthaus, presiding

9:10	2J2-01	Supramolecular Templates towards Nanoflake-Metal Surfaces <u>Takashi Nakanishi</u> , Yanfei Shen, Helmuth Moehwald 3888	3888
9:35	2J2-02	Electroless plating with metal colloid catalyst having super adhesion to plastics <u>Shin Horiuchi</u> , Yukimichi Nakao 3890	3890
10:00	2J2-03	Preparation and morphology control of bioceramics/polymer composites via emulsion stabilized by interaction between nanoparticles and polymer <u>Hayata Maeda</u> , Masahiro Okada, Syuji Fujii, Yoshinobu Nakamura, Tsutomu Furuzono 3892	3892
10:25	2J2-04	Formation of Nanograss-like silica thin-film and its superhydrophobic function <u>Ren-hua Jin</u> , Jian-jun Yuan 3894	3894

M. Okada, presiding

10:50	2J2-05	Facile and Large Scale fabrication of shape-designed metal nanostructure by nanocoating. <u>Shigenori Fujikawa</u> , Wakana Kubo, Kentaro Miyoshi, Mari Koizumi 3896	3896
11:15	2J2-06	Development and Evaluation of New Separation Method using Magnetic Material and Thermo-Responsive Polymer with Carboxyl Group <u>Hisashi Yagi</u> , Mitsuhiro Ebara, Kazuya Yamamoto, Takao Aoyagi 3898	3898
11:40	2J2-07	Preparation and properties of core-shell nanohybrids of molecular crystals <u>Kunihiro Ichimura</u> 3900	3900

T. Imae, presiding

12:55	2J2-08	Surface Modification by Surface-initiated Polymerization From Polydopamine Thin Films on Metal Substrates <u>Motoyasu Kobayashi</u> , Masami Terada, Atsushi Takahara 3902	3902
13:20	2J2-09	Biomimetic Formation of hierarchically structured Titania Thin-Film on Solid Surface <u>Jian-jun Yuan</u> , Ren-hua Jin 3904	3904

K. Kojio, presiding

13:45	2J2-10	Alignment Control of Microphase-Separated Domains of Amphiphilic Block Copolymers in Ultra Thin Film <u>Toru Yamaguchi</u> , Hiroshi Yamaguchi, Tomokazu Iyoda 3906	3906
14:10	2J2-11	Regiospecific accumulation of porphyrin on microphase segregation interface of liquid crystalline <u>Masashi Aotani</u> , Masakazu Yoshikawa, Tomokazu Iyoda, Sadayuki Asaoka 3908	3908
14:35	2J2-12	Conformation of Single Homopolymer Chain in Microphase-Separated Block Copolymer Monolayer Studied by Scanning Near-Field Optical Microscopy <u>Yasunari Tamai</u> , Ryojun Sekine, Hiroyuki Aoki, Shinzaburo Ito 3910	3910

S. Kurihara, presiding

15:00	2J2-13	Interfacial Behavior of Phase-Separated Block Copolymer Thin Films in Contact with Different Solvents	
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		<u>Naoya Torikai</u> , Norifumi Yamada, Daisuke Kawaguchi, Atsushi Takano, Yushu Matsushita, Erik Watkins, Jaroslaw Majewski	3912
15:25	2J2-14	The Microphase-separated Structure Formed in Polyurethane Bulk and Thin Films	
		<u>Ken Kojio</u> , Mutsuhisa Furukawa, Suguru Motokucho, Yusuke Uchiba, Yasunori Yamamoto, Yuuichi Nishino.....	3914
15:50	2J2-15	The microphase-separated structure of thin polymer films prepared with polyurethanes bearing various primary structures	
		<u>Tsunetami Ichinose</u> , Mutsuhisa Furukawa, Suguru Motokucho, Yasunori Yamamoto, Yusuke Uchiba, Ken Kojio	3916
		R. Jin, presiding	
16:15	2J2-16	Effects of the surface roughness of polyolefin films on their peel strength	
		<u>Shotaro Nishino</u> , Takanobu Kawamura, Hiroshi Yoshitani, Koh-hei Nitta.....	3918
16:40	2J2-17	Development of a Large Area Dewetting Apparatus	
		<u>Olaf Karthaus</u> , Takanori Wachi	3920
17:05	2J2-18	Layer-by-Layer Assembly from Ionic Liquids	
		<u>Takuya Nakashima</u> , Kotov Nicholas.....	3922

Friday, September 18

Construction, Control and Analysis of Surfaces and Interfaces

		M. Takeuchi, presiding	
9:10	3J2-01	Formation and nano-scale characterization of highly-ordered porphyrin arrays at electrochemical interfaces	
		<u>Soichiro Yoshimoto</u>	3924
9:35	3J2-02	Synthesis and Characterization of Thiolate-Protected Metal Clusters with Well-Defined Chemical Compositions	
		<u>Yuichi Negishi</u>	3926
10:00	3J2-03	Design and Photoelectronic Properties of Fullerene Derivatives Having Self-Assembly Capabilities	
		<u>Yutaka Matsuo</u>	3928
10:25	3J2-04	Controls of Polymer Synthesis and Properties in Flexible Coordination Nanochannels	
		<u>Takashi Uemura</u> , Daisuke Hiramatsu, Koji Kitayama, Nobuhiro Yanai, Susumu Kitagawa	3930
		H. Takaya, presiding	
10:50	3J2-05	One-Dimensional Self-Assembly of Self-Assembled Aromatic Stacks	
		<u>Michito Yoshizawa</u>	3932
11:15	3J2-06	Modification of gold nanoparticles by cyclic ligands and their metal-ion sensing	
		<u>Masayoshi Higuchi</u> , Ryo Shomura	3934
11:40	3J2-07	Construction of Supramolecular Assembly by Functional Molecules	
		<u>Masayuki Takeuchi</u> , Xuan Zhang	3936
		M. Higuchi, presiding	
12:55	3J2-08	Self-Assembly of Metalated-Peptide on Liquid-Vapor Interface	
		<u>Hikaru Takaya</u> , Katsuhiko Isozaki, Masaharu Nakamura.....	3938
13:20	3J2-09	Mechanistic Insight of the interface of protein surface and metal ions	
		<u>Takafumi Ueno</u> , Satoshi Abe, Mizue Abe.....	3940
13:45	3J2-10	Preparation and photoluminescence properties of multilayer films composed of nanosheets	
		<u>Shintaro Ida</u> , Yuki Sonoda, Yasumichi Matsumoto	3942
		M. Takafuji, presiding	

14:10	3J2-11	Inorganic Nanoparticle Assembly Using Polymer Nanosheet <u>Takeo Suzuki</u> , Miki Ishifuji, Masaya Mitsuishi, Tokuji Miyashita 3944
14:35	3J2-12	Characterization of Silver Ion Complexes adsorbed on Gold Nanorods by using SALDI-MS <u>Yuki Nakamura</u> , Naotoshi Nakashima, Yasuro Niidome 3946
15:00	3J2-13	Surface modification of PET substrates for the preparation of high-performance polymer-apatite hybrids <u>Yugo Fukumoto</u> , Kohei Takahashi, Jin Motoyanagi, Masahiko Minoda... 3948
15:25	3J2-14	Self-Assembly of Zinc Chlorin Dyes Controlled by Dendron Groups <u>Shinobu Uemura</u> , Sanchita Sengupta, Frank Wuerthner 3950

Room J3

Wednesday, September 16

Merging of Chemistry and Physics for Soft Matters

9:50	SO	Introductory Remarks Hiroshi Morita 3598
		Y. Masubuchi, presiding
10:00	1J3-03	Structure and elasticity of physically cross linked interpenetrated network <u>Yoshiaki Takahashi</u> , Akihiko Takada, Masashi Nakamura 3627
10:25	1J3-04	Dynamic viscoelastic properties of natural rubber with nano-matrix structure <u>Keiichi Akabori</u> , Daichi Suzuki, Yoshimasa Yamamoto, Seiichi Kawahara 3629
		K. Akabori, presiding
10:50	1J3-05	Preparation and Properties of Polyrotaxane Hydrogels Utilizing A Cyclodextrin Oligomer <u>Takayuki Arai</u> , Toshikazu Takata 3631
11:15	1J3-06	Creation of Hydrogels with Ultra High Mechanical Strength(XXI) Research on Damage Zone in DN Gels by Static and Dynamic Light Scattering <u>Qiu Ming Yu</u> , Hidemitsu Furukawa, Yoshimi Tanaka, Tasuku Nakajima, Takayuki Kurokawa, Jian Ping Gong 3633
11:40	1J3-07	Anomaly in Stretching Induced Swelling of Polyrotaxane Gels Naoki Murata, <u>Kenji Urayama</u> , Toshikazu Takigawa, Masatoshi Kidowaki, Hideaki Yokoyama, Kohzo Ito 3635
		Y. Takahashi, presiding
12:55	1J3-08	Dynamics of Diblock Copolymers in Disordered State—Effect of Dynamic Asymmetry <u>Hiroshi Watanabe</u> 3637
13:20	1J3-09	Viscoelastic behavior of Smectic Liquid Crystal <u>Shuji Fujii</u> , Yoshinobu Isono, Shigeyuki Komura 3639
13:45	1J3-10	Electrical response of chiral smectic liquid crystal elastomer <u>Yang Ho Na</u> , Sho Kubota, Seiji Ujiie, Hiroshi Orihara 3641
		Y. Na, presiding
14:10	1J3-11	Gelation curve and cloud point curve of poly(<i>N</i> -isopropylacrylamide) in water and its characterization by light scattering and dielectric spectroscopy <u>Shinya Nakano</u> , Takao Ogiso, Yoshiyuki Nakamura, Shingo Fukuzawa, Rio Kita, Naoki Shinyashiki, Shin Yagihara, Yukiteru

		Katsumoto, Masaru Yoneyama	3643
14:35	1J3-12	Shifting the Cloud Points in Aqueous Solutions of Temperature-Sensitive Polymers by Solvent Mixing <u>Fumihiko Tanaka</u> , Hiroyuki Kojima, Tsuyoshi Koga, Francise M. Winnik .	3645
15:00	1J3-13	Micellization Behavior of a Thermoresponsive Block Copolymer in Aqueous Solution <u>Kohei Tanaka</u> , Takahiro Sato, Shin-ichi Yusa	3647
		A. Noro, presiding	
15:25	1J3-14	Micellar cubic phases formed by hydrogen-bonded mesogens TABH- <i>n</i> Junpei Ono, Koichi Sakajiri, <u>Shoichi Kutsumizu</u>	3649
15:50	1J3-15	Dynamic Coexistence of Micellar Shapes in Amphiphilic Solution <u>Susumu Fujiwara</u> , Masato Hashimoto, Takashi Itoh	3651
16:15	1J3-16	Influence of the structures of pre-existing spherulites on the formation process of interpenetrating spherulites <u>Takayuki Ikehara</u> , Toshiyuki Kataoka	3653
		T. Ikehara, presiding	
16:40	1J3-17	Microstructure and micro-mechanical properties of crystalline polymer <u>So Fujinami</u> , Ken Nakajima, Toshio Nishi	3655
17:05	1J3-18	Preparation of block copolymer/metal salt hybrids via metal-to-ligand coordination and their nanophase-separated structures <u>Yoshio Sageshima</u> , Atsushi Noro, Yushu Matsushita	3657
17:30	1J3-19	Preparation of Graft-Type Supramacromolecules with Multiple Ionic Bonds and Control of Their Nanophase-Separated Structures <u>Akihisa Ohshika</u> , Atsushi Noro, Atsushi Takano, Yushu Matsushita	3659
17:55	1J3-20	Thermoreversible Nanophase-Separated Structure of Block-Type Supramacromolecules via Hydrogen Bonding <u>Hajime Yamagishi</u> , Atsushi Noro, Yushu Matsushita	3661

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Merging of Chemistry and Physics for Soft Matters

		Y. Sakai, presiding	
9:10	2J3-01	Nematic ordering of self-assembled helical rods from nucleotide-appended bolaamphiphile and DNA as a template <u>Rika Iwaura</u> , Tomohiko Iizawa, Hiroyuki Minamikawa, Mayumi Ohnishi-kameyama, Toshimi Shimizu	3663
9:35	2J3-02	Dispersion, Liquid Crystal, and Organogels of a Lipid Nanotube in Organic Solvents <u>Hiroyuki Minamikawa</u> , Koji Abe, Mitsutoshi Masuda, Toshimi Shimizu ..	3665
10:00	2J3-03	Control of self-replicating patterns in reaction-diffusion system using gel <u>Tomonaga Ueno</u> , Ryo Yoshida	3667
		S. Fujinami, presiding	
10:25	2J3-04	Control of the drying process of polymer solution droplets with the addition of surfactant <u>Tadashi Kajiya</u> , Wataru Kobayashi, Masao Doi	3669
10:50	2J3-05	Graft Copolymers with MOVABLE Graft Chains—Sliding Graft Copolymer <u>Yasuhiro Sakai</u> , Marie Uno, Masatoshi Kidowaki, Kazuaki Kato, Hideaki Yokoyama, Kohzo Ito	3671
		T. Koga, presiding	

11:15	2J3-06IL	Rheo-optical studies on soft matter <u>Tadashi Inoue</u> 3673	
		H. Minamikawa, presiding	
12:55	2J3-08	Molecular Design of Organic Semiconductors Using Liquid Crystalline Fused Metalloporphyrin Dimers <u>Tsuneaki Sakurai</u> , Kentaro Tashiro, Atsuhiko Osuka, Akinori Saeki, Shu Seki, Seiichi Tagawa, Takuzo Aida 3676	
13:20	2J3-09	Quantitative analysis of adhesions between two planar substrates coated with layer-by-layer assembled films Daisuke Matsukuma, <u>Takeshi Serizawa</u> 3678	
13:45	2J3-10	Programmable DNA nanosystem via photoresponsive nucleic acids <u>Kenzo Fujimoto</u> , Hajime Okada, Tomoko Ohtake, Yumiko Takemura, Shinzi Ogasawara 3680	
		K. Fujimoto, presiding	
14:10	2J3-11	Composite nanomaterials by self-assembly and controlled crystallization of poly(2-isopropyl-2-oxazoline)-grafted pullulan <u>Nobuyuki Morimoto</u> , Françoise Winnik, Kazunari Akiyoshi 3682	
14:35	2J3-12	Stimuli-Responsive Luminescent Materials Based on Metastable Liquid-Crystalline Phases <u>Yoshimitsu Sagara</u> , Takashi Kato 3684	
15:00	2J3-13	Development of stimuli-sensitive polyion complexes based on block copolymers and control of their structural transformation triggered by external stimuli. <u>Akihiro Kishimura</u> , Hidehiro Oana, Mutsuki Morinaga, Hiroyuki Matsuda, Yuichi Yamasaki, Masao Washizu, Kazunori Kataoka 3686	
		A. Narumi, presiding	
15:25	2J3-14	New type of soft matters with concentrated-brush effects—Design and synthesis of well-defined graft-type of gels <u>Ryo Nakahara</u> , Akihiro Nomura, Kohji Ohno, Takeshi Fukuda, Yoshinobu Tsujii 3688	
15:50	2J3-15	Simultaneous Chain- and Step-Growth Radical Polymerization by Transition-Metal Catalysts for Novel Copolymer Synthesis <u>Masato Mizutani</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito 3690	
		T. Serizawa, presiding	
16:15	2J3-16	Macrocyclic Polymer Synthesis via Ring Expansion Vinyl Polymerization <u>Atsushi Narumi</u> , Seigou Kawaguchi, Sylvia Zeidler, Haitham Barqawi, Wolfgang Binder 3692	
16:40	2J3-17	Crosslinking of Polymers Containing Silicon Atoms in Main Chain <u>Ikuya Mashita</u> , Jun-ichi Oku 3694	
17:05	2J3-18	The molecular morphology of new substances H-shaped alkanes and the effects of carbon number for their crystal structures <u>Hiroko Yamamoto</u> , Kohji Tashiro, Norio Nemoto, Yukihiro Motoyama, Yoshiaki Takahashi 3696	

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Merging of Chemistry and Physics for Soft Matters

T. Miyata, presiding

9:10	3J3-01	DNA condensation of linear DNA and circular supercoiled DNA <u>Yuichi Yamasaki</u> , Kensuke Osada, Kazunori Kataoka 3698
9:35	3J3-02	Mechanism of pDNA condensation induced by PEG-PLys block copolymers <u>Kensuke Osada</u> , Sorato Ikeda, Yuichi Yamasaki, Manabu Enoki, Keiji

10:00	3J3-03	Itaka, Kazunori Kataoka..... 3700 Construction of Thermally Stable Micelles by Amphiphilic Cyclic Block Copolymers—Creation of New Topology Effects <u>Satoshi Honda</u> , Takuya Yamamoto, Yasuyuki Tezuka..... 3702
		K. Osada, presiding
10:25	3J3-04	Preparation of Endocrine-Disruptor-Responsive Gels by Molecule Imprinting and Their Responsive Behavior for Derivatives. <u>Syo Ohtaka</u> , Manabu Okutani, Takashi Miyata, Tadashi Uragami 3704
10:50	3J3-05	Role of PEG packed layer on antibody-fragment immobilized gold surface <u>Keitaro Yoshimoto</u> , Motohiko Nishio, Hiroaki Sugasawa, Yukio Nagasaki.. 3706
		Y. Nagasaki, presiding
11:15	3J3-06IL	Properties and Functions of Soft Interfaces <u>Mizuo Maeda</u> 3708
		K. Hagita, presiding
12:55	3J3-08	Simulations on selective absorption phenomena of solutions of long and short homopolymer chains onto a hard solid wall <u>Hiroki Kubo</u> , Takashi Honda, Toshihiro Kawakatsu..... 3711
13:20	3J3-09	Simulation of formation and chain length recognition of pseudopolyrotaxane <u>Naohito Urakami</u> , Junko Imada, Takashi Yamamoto 3713
13:45	3J3-10	Analysis of heterogeneity-related elasticity of polymer gels <u>Asumi Sugimura</u> , Hiroshi Noguchi, Mitsuhiro Shibayama 3715
		H. Morita, presiding
14:10	3J3-11	Extraction of Important Factors Governing Micro-Phase Separation Phenomena of Polyethylene-Poly(ethylene Oxide) Crystalline Diblock Copolymer <u>Kohji Tashiro</u> , Weiyu Cao, Makoto Hanesaka, Hiroyasu Masunaga, Sono Sasaki, Masaki Takata..... 3717
14:35	3J3-12	Simulational study of physical properties of polymer system by using large-scale coarse grained model <u>Katsumi Hagita</u> 3719
15:00	3J3-13	Hydrodynamic effects on the disorder-to-order transitions of diblock copolymer melts <u>Takashi Honda</u> , Toshihiro Kawakatsu 3721
15:25	3J3-14	Behavior of crystal defect in hard-sphere crystal grown on square pattern <u>Atsushi Mori</u> 3723

Room K

Wednesday, September 16

Computational Simulation for Material Innovation

9:50	SO	Introductory Remarks Kazuo Teraishi 3561
		K. Teraishi, presiding
10:00	1K-03	Prediction for Radical Polymerization of Monomers by using Quantum Chemical Calculation <u>Susumu Kawauchi</u> , Shinnosuke Takahashi, Keigo Saito, Tomohiro Nishihara 3562
10:25	1K-04	Polymerization and Chain Transfer Reaction of Amine by

		Metallocene Catalysts: Theoretical Study	
10:50	1K-05	Yuji Aoki, Yoshihide Nakao, Hirofumi Sato, <u>Shigeyoshi Sakaki</u>	3564
		Simulation of emulsion copolymerization by mean rate coefficient method	
11:15	1K-06	<u>Kiyoshi Suzuki</u> , Kazumi Fujita, Mamoru Nomura	3566
		Simulation Study of Structure and Dynamics of Gel with Tetrahedral Monomers	
		<u>Masako Takasu</u> , Yoshiaki Hashimoto	3568
		S. Kawauchi, presiding	
11:40	1K-07	Efficient quantum chemical calculations toward tangled polymers	
		<u>Yuriko Aoki</u> , Feng Long Gu	3570
12:55	1K-08	Quantum chemical estimation method of the dielectric constant of organic materials including polymers	
		<u>Takayuki Takahagi</u>	3572
13:20	1K-09	A study to improve the accuracy of physical properties predicted by molecular dynamics simulation	
		<u>Munehiro Hayashi</u> , Yosuke Miyazaki, Masaaki Tsutsubuchi, Yoshiaki Togawa	3574
		T. Yamamoto, presiding	
13:45	1K-10	Structures and Properties of Aromatic Polyesters in Terms of Weak Intramolecular Interactions: A Comparative Study of PET and PTT	
		<u>Yuji Sasanuma</u> , Nobuaki Suzuki	3576
14:10	1K-11	Prediction of Structures and Properties of Poly(ethylene thioterephthalate) and Poly(ethylene dithioterephthalate)	
		<u>Daisuke Abe</u> , Yuji Sasanuma	3578
14:35	1K-12	Simulation study of the adhesion of the nano-scale viscoelastic sphere	
		<u>Hiroshi Morita</u> , Masao Doi	3580
15:00	1K-13	Viscoelastic Behavior for End-linking of Entangled Star Polymer	
		<u>Yutaka Tanaka</u>	3582
		H. Morita, presiding	
15:25	1K-14	Modeling and Evaluation of Deformation Behavior of Rubber	
		<u>Yoshihiro Tomita</u> , Masato Naito, Maruku Kitamura, Toshiki Mochizuki	3584
15:50	1K-15	Viscoelastic Flow Simulation of Polymer Melts on Polymer Processing	
		<u>Shuichi Tanoue</u> , Yoshiyuki Iemoto	3586
16:15	1K-16	Evaluation of mixing performance of a twin-screw extruder using computer simulation	
		<u>Toshihisa Kajiwar</u> , Yasuya Nakayama, Hideki Tomiyama	3588
16:40	1K-17	Flower micelle formed by an amphiphilic random copolymer in aqueous solution	
		<u>Takahiro Sato</u> , Yukio Tominaga, Akihito Hashizdume, Yotaro Morishima .	3590
		A. Hashidzume, presiding	
17:05	1K-18	Analysis of phase separated structure of the ABA triblock copolymer/oil system by using self-consistent field theory	
		<u>Harutaka Kanazawa</u> , Takashi Taniguchi, Masataka Sugimoto, Kiyohito Koyama	3592
17:30	1K-19	How powerful is the molecular simulation in studying crystallization of helical polymers?	
		<u>Takashi Yamamoto</u>	3594
17:55	1K-20	Molecular dynamics of crystallization and melting in polyethylene-like polymer	
		<u>Takashi Yamamoto</u>	3596

Thursday, September 17

Applications of Synchrotron Radiation and Neutron Beam to Soft Material Science

9:00	SO	Introductory Remarks Masahiko Annaka	3497
		M. Annaka, presiding	
9:10	2K-01	The effect of ion species, concentration of added salt and polymer length on the nanostructure of strongly ionic amphiphilic diblock copolymer self-assembly monolayer on the water surface <u>Shunichi Nakayama</u> , Tasuku Yamada, Ploysai Kaewsaiha, Hideki Matsuoka	3498
9:35	2K-02	Analysis of internal structure of heterogeneous N-isopropylacrylamide gel <u>Yoshitsugu Hirokawa</u> , Takeji Hashimoto, Satoshi Koizumi	3500
10:00	2K-03	Formation mechanism of internal structure of heterogeneous N-isopropylacrylamide gel <u>Takeji Hashimoto</u> , Yoshitsugu Hirokawa, Naoto Yagi	3502
		Y. Hirokawa, presiding	
10:25	2K-04	Quantitative 3D structural observation for meso-scale structures <u>Yoshitaka Aoyama</u> , Souhei Motoki, Takeshi Kaneko, Toshiaki Suzuki, Hideo Nishioka, Yoshihiro Okura, Yukihito Kondo, <u>Hiroshi Jinnai</u>	3504
10:50	2K-05	Transmission electron microtomography for meso-scale structures <u>Sohei Motoki</u> , Takeshi Kaneko, Yoshitaka Aoyama, Hideo Nishioka, Yoshihiro Ohkura, Yukito Kondo, Hiroshi Jinnai	3506
		T. Hashimoto, presiding	
11:15	2K-06IL	Possibility of Single Macromolecule Imaging with X-ray FEL <u>Tsumoru Shintake</u>	3508
		M. Annaka, presiding	
12:55	2K-08	Development of SEC-SAXS (3) – Experimental setup and application <u>Makoto Takemasa</u> , Yoshiaki Yuguchi, Shinichi Kitamura	3511
13:20	2K-09	Structural Analysis of Nanoparticle Formation and Aggregation of PNIPAAm-DNA Conjugate <u>Masahiro Fujita</u> , Hui Ying Tang, Kazuki Ito, Naoki Kanayama, Tohru Takarada, Mizuo Maeda	3513
13:45	2K-10	Supermolecular structures for cationic lipids/DNA complexes <u>Satoshi Hashida</u> , Yasuya Kudo, Mina Sakuragi, Tomoki Nishimura, Yasuhiro Masunaga, Kazuo Sakurai	3515
		M. Fujita, presiding	
14:10	2K-11	Characterization of Structure and Dynamics of Lipid Nanodiscs by Small-Angle Neutron Scattering <u>Minoru Nakano</u> , Masakazu Fukuda, Takayuki Kudo, Masakazu Miyazaki, Yusuke Wada, Tetsurou Handa	3517
14:35	2K-12	Protein dynamics revealed by small-angle X-ray scattering and molecular dynamics simulation <u>Mamoru Sato</u>	3519
15:00	2K-13	Side-Group-Dependent Helical Conformation of Amylose Alkyl Carbamates in Solution <u>Fumihiro Maeda</u> , Ken Terao, Shinichi Kitamura, Takahiro Sato, Takashi Norisuye	3521
		S. Nojima, presiding	
15:25	2K-14	Neutron Scattering Analysis of Fluorinated block Copolymers in Supercritical Carbon Dioxide <u>Masateru Ito</u> , Kohichi Mayumi, Noboru Osaka, Mitsuhiro Shibayama, Kenji Sugiyama, Yasuhiro Sakai, Hideaki Yokoyama, Kohzo Ito	3523
15:50	2K-15	Molecular weight dependence of Tetra-PEG gel network	

		<u>Takuro Matsunaga</u> , Yuki Akagi, Manami Kurakazu, Ung-il Chung, Takamasa Sakai, Mitsuhiro Shibayama	3525
16:15	2K-16	Structural Formation of Drawing Polyethylene with Time-resolved Small Angle Neutron and X-ray Scattering Measurement	
		<u>Chie Ito</u> , <u>Go Matsuba</u> , Koji Nishida, Toshiji Kanaya	3527
		G. Matsuba, presiding	
16:40	2K-17	Characterization of Molecular Aggregation Structure of Polyimide Films by Grazing Incidence Wide Angle X-ray Diffraction (GIWAXD)	
		<u>Junji Wakita</u> , Sangwoo Jin, Moonhor Ree, Shinji Ando	3529
17:05	2K-18	Variation in ordered structure of Polyimide thin films induced by high pressure as studied by X-ray diffraction	
		<u>Kazuhiro Takizawa</u> , Kenji Sekiguchi, Masaki Kakiage, Junji Wakita, Hiroyasu Masunaga, Shinji Ando	3531

Friday, September 18

Applications of Synchrotron Radiation and Neutron Beam to Soft Material Science

		T. Shiomi, presiding	
9:10	3K-01	Refinement of Crystal Structure of Poly(Lactic Acid) based on Synchrotron X-ray and Neutron Diffraction Data and the Evaluation of Ultimate Mechanical Properties	
		<u>Kaewkan Wasanasuk</u> , Kohji Tashiro, Makoto Hanesaka, Takashi Ohhara, Kazuo Kurihara, Ryota Kuroki, Taro Tamada, Satoru Fujiwara, Tomoji Ozeki, Tetsuo Kanamoto	3533
9:35	3K-02	Order-order transition of block copolymer with shear aligned microstructure	
		<u>Kuniaki Matsuda</u> , Myung Im Kim, Mikihiro Takenaka, Kazuki Ito, Hirokazu Hasegawa	3535
10:00	3K-03	Domain Spacing Distribution in a Lamellar-Forming Block Copolymer	
		<u>Ken-ichi Niihara</u> , Hidekazu Sugimori, Hiroyasu Masunaga, Sono Sasaki, Naoto Yagi, Taihyun Chang, Tadanori Koga, Hiroshi Jinnai	3537
		D. Kawaguchi, presiding	
10:25	3K-04	Detailed Investigation of Hydrogen Bonds in Crystal Structure of Poly(vinyl Alcohol) based on Wide-angle Neutron and X-ray Structure Analyses	
		Kohji Tashiro, <u>Makoto Hanesaka</u> , Takashi Ohhara, Kazuo Kurihara, Ryota Kuroki, Taro Tamada, Satoru Fujiwara, Katsuyoshi Katsube, Keisuke Morikawa, Yukiatsu Komiya	3539
10:50	3K-05	Phase Structure in Liquid Crystalline-Liquid Crystalline block copolymers	
		<u>Tomoo Shiomi</u> , Hiroki Takeshita, Shin-ichi Taniguchi, Takebumi Abe, Masamitsu Miya, Katsuhiko Takenaka	3541
11:15	3K-06	Effects of Methylene Spacer Length on Phase Behavior of Side-Chain Liquid Crystalline Block Copolymers	
		<u>Hiroki Takeshita</u> , Shunsuke Adachi, Shin-ichi Taniguchi, Masamitsu Miya, Katsuhiko Takenaka, Tomoo Shiomi	3543
11:40	3K-07	Characteristic Melting Behavior of Crystalline Block Copolymers Observed Using Synchrotron Small-Angle X-ray Scattering	
		Keiko Tonami, <u>Shuichi Nojima</u> , Takashi Honda, Yasuo Tsunogae	3545
		K. Tanaka, presiding	
12:55	3K-08	Evaluation of Interdiffusion of Linear Polystyrene / Cyclic Polystyrene Bilayer Films	
		<u>Daisuke Kawaguchi</u> , Atsushi Takano, Jaroslaw Majewski, Naoya	

13:20	3K-09	Torikai,Yushu Matsushita 3547 Studies on shear thickening phenomena of clay-PEO mixture from the microscopic view-point <u>Makiko Takeda</u> ,Takuro Matsunaga,Toshihiko Nishida,Asumi Sugumura,Hitoshi Endo,Mitsuhiro Shibayama..... 3549
13:45	3K-10	Dynamics and Static Structure of Polyrotaxane in Solution Investigated by Contrast Variation Neutron Scattering Method <u>Hitoshi Endo</u> ,Kohichi Mayumi,Kohzo Ito,Mitsuhiro Shibayama,Michihiro Nagao,Michael Monkenbusch,Dieter Richter.... 3551
14:10	3K-11	In-Situ Observation on Thermally-Induced Structural Changes of Thin Block Copolymer Films by Neutron and X-Ray <u>Naoya Torikai</u> ,Daisuke Kawaguchi,Atsushi Takano,Yushu Matsushita,Hiroshi Okuda,Robert Dalglish,Sean Langridge 3553
		N. Torikai, presiding
14:35	3K-12	Swollen Structure of Poly(methyl methacrylate) Thin Films in Alcohol by Neutron Reflectivity <u>Hironori Atarashi</u> ,Masahiro Hino,Toshihiko Nagamura,Keiji Tanaka.. 3555
15:00	3K-13	Swollen Behavior of Cationic and Zwitter type Polyelectrolyte Brushes Analyzed by Nuetron Reflectivity <u>Motoyasu Kobayashi</u> ,Moriya Kikuchi,Aya Fujimoto,Masami Terada,Yuki Terayama,Masahiro Hino,Kazuhiko Ishihara,Atsushi Takahara 3557
15:25	3K-14	The dependence of salt concentration on swollen thickness of zwitterionic polyampholytes brush at aqueous solution interface <u>Yuki Terayama</u> ,Moriya Kikuchi,Motoyasu Kobayashi,Masahiro Hino,Atsushi Takahara..... 3559

Room L1

Wednesday, September 16

Photonics and Microelectronics Materials and the Microfabrication Processes for Next Generation Devices

9:50	SO	Introductory Remarks Akira Watanabe, Taku Hirayama..... 4355
		T. Hirayama, presiding
10:00	1L1-03	High Resolution Positive-Working Molecular Resist Derived from Truxene <u>Shigeki Hattori</u> ,Arisa Yamada,Satoshi Saito,Koji Asakawa,Takeshi Koshiba,Tetsuro Nakasugi..... 4356
10:25	1L1-04	Development of the simulation model for the pattern formation process <u>Hiroshi Morita</u> ,Masao Doi..... 4358
		T. Yamashita, presiding
10:50	1L1-05	Synthesis of Noria Derivatives containing Admantyl groups for the develop of EB and EUV resist materials <u>Yuji Suyama</u> ,Hiroto Kudo,Tadatomi Nihikubo,Kazumasa Okamoto,Takahiro Furusawa,Seiichi Tagawa,Hiroaki Oizumi,Toshiro Itani 4360
11:15	1L1-06	Development of Positive Type EB and EUV Resists Based on Noria-like Macrocycle <u>Nobumitsu Niina</u> ,Hiroto Kudo,Tadatomi Nishikubo,Ken

		Maruyama,Toshiyuki Kai,Tsutomu Shimokawa,Hiroaki Oizumi,Toshiro Itani.....	4362
11:40	1L1-07	Negative type EB and EUV resists based on Noria derivatives <u>Hiroyuki Seki</u> ,Yuki Kato,Hiroto Kudo,Tadatomi Nishikubo,Ken Maruyama,Toshiyuki Kai,Tsutomu Shimokawa,Hiroaki Oizumi,Toshiro Itani.....	4364
		H. Nakano, presiding	
12:55	1L1-08IL	Nanoimprint Technology and It's Application <u>Shinji Matsui</u>	4366
		K. Asakawa, presiding	
13:45	1L1-10	Fabrication of 3D photonic crystal structures by femtosecond laser lithography <u>Hiroaki Misawa</u> ,Saulius Juodkazis,Vygantas Mizeikis,Quan Sun,Kosei Ueno,Satoaki Takabatake	4369
14:10	1L1-11	Fabrication of biomacromolecule nanowires by Single Particle Nanofabrication Technique Atsushi Asano,Satoshi Tsukuda,Masaki Sugimoto, <u>Shu Seki</u>	4371
14:35	1L1-12	Fabrication of micropatterns by laser direct writing method using metal and semiconductor inks <u>Akira Watanabe</u> ,Ryosuke Fujii,Tokuji Miyashita.....	4373
		H. Misawa, presiding	
15:00	1L1-13	Photoinduced vaporization of poly(olefin sulfone)s possessing a photobase generator. <u>Takayuki Kondo</u> ,Takeo Sasaki,Minoru Matsuda	4375
15:25	1L1-14	Mechanism of the conversion of polymer to monomer in photodepolymerizable poly(olefin sulfone)s. <u>Motoki Noro</u> ,Takeo Sasaki,Minoru Matsuda	4377
15:50	1L1-15	Application of reworkable monomers having epoxy units to UV nanoimprint lithography <u>Hiroyuki Wakayama</u> ,Kanji Suyama,Haruyuki Okamura,Masamitsu Shirai.....	4379
16:15	1L1-16	Examination of the low defect process of topcoat-less resist by ozone treatment <u>Mamoru Terai</u> ,Teruhiko Kumada,Takuya Hagiwara,Tomofumi Miyauchi,Tetsuro Hanawa,Daiju Shiono,Jyunichi Onodera,Naoki Man,Takeshi Matsunobe	4381
		S. Seki, presiding	
16:40	1L1-17	Effect of aspect ratio on Adhesive Strength between Microsized SU-8cylinder and Si substrate <u>Chiemi Ishiyama</u> ,Akinobu Shibata,Masato Sone,Yakichi Higo	4383
17:05	1L1-18	Synthesis and evaluation of fluorinated block copolymers for hydrophobic resist surface. <u>Miki Kanao</u> ,Atsushi Otake,Kousuke Tsuchiya,Kenji Ogino.....	4385
17:30	1L1-19	Comparison of Lyophobic-Lyophilic Patterning Properties for "Resist Thin Film with Liquid Repellent Agent" and "Resist/Liquid Repellent Agent Double Layer Thin Film" <u>Yuki Adachi</u> ,Takashi Kanemura,Ikuo Yamamoto,Masamichi Morita ..	4387
17:55	1L1-20	Fabrication of magnetic conductive nickel rod-like filler and its application to photo-mountable anisotropic conduction polymer sheets Kei Kobayashi, <u>Masaru Nakagawa</u>	4389

Thursday, September 17

Photonics and Microelectronics Materials and the Microfabrication Processes for Next Generation Devices

M. Yoshida, presiding

9:10	2L1-01	Precisely Controlled Self-assembly of POSS Containing Block Copolymers Using Graphoepitaxy Method <u>Tomoyasu Hirai</u> ,Melvina Leolukman,Padma Gopalan,Teruaki Hayakawa,Masa-aki Kakimoto	4391
9:35	2L1-02	A liquid-crystalline polymer containing photoresponsive block mesogene for manipulation of nanophase separations <u>Kunihiko Okano</u> ,Yasuyuki Mikami,Takashi Yamashita.....	4393
10:00	2L1-03	Control of Ferritin Arrays using Self-assembled Diblock Copolymer Patterns <u>Go Sakguchi</u> ,Mikihito Takenaka,Hirokazu Hasegawa	4395

M. Nakagawa, presiding

10:25	2L1-04	Highly oriented line & space pattern using block copolymer lithography and the application for metal wire grid <u>Koji Asakawa</u> ,Young-rae Hong,Vincent Pelletier,Douglas Adamson,Richard Register,Paul Chaikin	4397
10:50	2L1-05	16nm-periodic Nanohole Array through Block Copolymer Templating Ryoko Watanabe,Kaori Ito, <u>Tomokazu Iyoda</u>	4399

M. Endo, presiding

11:15	2L1-06IL	Block Copolymer Lithography toward 16-nm-technology Nodes <u>Toru Yamaguchi</u> ,Hiroshi Yamaguchi.....	4401
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K. Matsukawa, presiding

12:55	2L1-08	Liquid crystalline semiconductors as self-assembling organic semiconductors <u>Yo Shimizu</u>	4404
13:20	2L1-09	Organic Electrolytes as Novel Gel Forming Materilas <u>Masaru Yoshida</u>	4406
13:45	2L1-10	Fabrication of polymer devices having stacked layer structure by ESDUS <u>Katsuhiko Fujita</u> ,Masato Shakutsui,Kouji Sagane	4408
14:10	2L1-11	Highly conductive and transparent PEDOT/PSS thin films <u>Hu Yan</u> ,Toshihiko Jo,Hidenori Okuzaki	4410

H. Okuzaki, presiding

14:35	2L1-12	Influence of the ferroelectric behavior generated by the polypeptide/organic-semiconductor laminated film on the TFT Memory Device. <u>Takashi Inomata</u> ,Kazuki Nakamura,Norihisa Kobayashi,Sei Uemura,Toshihide Kamata	4412
15:00	2L1-13	Low-voltage operation of organic single crystal transistors with a ultrathin gate insulator <u>Takao Nishikawa</u> ,Masahiro Tominari,Jyunichi Takeya	4414
15:25	2L1-14	Development of functional polysilsesquioxanes for the gate insulating materials on organic TFT <u>Kimihiro Matsukawa</u> ,Mitsuru Watanabe,Seiji Watase,Takashi Hamada,Takashi Nagase,Hiroyoshi Naito	4416

M. Shirai, presiding

15:50	2L1-15	Ploymer characteristics and pattern transfer in nanoimprint <u>Yoshihiko Hirai</u>	4418
16:15	2L1-16	Reactive-monolayer-assisted thermal nanoimprint lithography—(I): Sum Frequency Generation Spectroscopic study of a monolayer	

		photo-graft reaction <u>Hirokazu Oda</u> , Ken Onda, Masaru Nakagawa 4420	
16:40	2L1-17	Reactive-monolayer-assisted thermal nanoimprint lithography(II) – -Au submicron patterns fabricated by electrodeposition- <u>Koichi Nagase</u> , Tomoyuki Ohtake, Toshiaki Takaoka, Shoichi Kubo, Masaru Nakagawa..... 4422	
17:05	2L1-18	Reactive-monolayer-assisted thermal nanoimprint lithography (III): Fluorescent resist for thermal nanoimprint lithography <u>Yuko Sato</u> , Koichi Nagase, Shoichi Kubo, Masaru Nakagawa..... 4424	

Friday, September 18

**Photonics and Microelectronics Materials and the Microfabrication Processes
for Next Generation Devices**

T. Seki, presiding

9:10	3L1-01	Development of a particle nano-imprinting technique by core-shell particles—Functionalization of a nano-interface and approach for a zepto-reactor <u>Hideaki Watanabe</u> , Keiji Fujimoto..... 4426	
9:35	3L1-02	Fabrication and characterization of polyimide-based inverse opal structures from highly-ordered SiO ₂ microspheres as templates <u>Takeru Hayashi</u> , Tsunenobu Onodera, Takayuki Ishizaka, Tadashi Mitsui, Yutaka Wakayama, Hitoshi Kasai, Hidetoshi Oikawa 4428	
10:00	3L1-03	Self-Organization of Inorganic/Polymer Thin-Film Composites on Photo-Patterned Polymer Matrices <u>Takeshi Sakamoto</u> , Yosuke Nishimura, Tatsuya Nishimura, Takashi Kato 4430	
10:25	3L1-04	Photochromic Hexabenzocoronene Nanotube—Photoconductivity Control via Ring-Closing/Opening Reaction of a Surface Dithienylethene Functionality <u>Yohei Yamamoto</u> , Yaning He, Wusong Jin, Takanori Fukushima, Akinori Saeki, Shu Seki, Seiichi Tagawa, Takuzo Aida 4432	

M. Funahashi, presiding

10:50	3L1-05	KPFM observation of photoinduced local surface potential change in structured photovoltaic device <u>Tetsuya Aoyama</u> , Satoshi Watanabe, Yasumasa Fukuchi, Masako Fukasawa, Takafumi Sassa, Takashi Yamashita, Mutsuyoshi Matsumoto, Tatsuo Wada..... 4434	
11:15	3L1-06	Photo-triggered surface relief formation in a liquid crystalline titania-azobenzene hybrid film Kaori Nishizawa, Shusaku Nagano, <u>Takahiro Seki</u> 4436	
11:40	3L1-07	Reversible Surface Microfabrication of Spirooxazine Thin Films <u>Shohei Fujii</u> , Takashi Ubukata, Yasushi Yokoyama 4438	
12:05	3L1-08	Photoinduced Surface Relief Grating Formation Using Novel Photochromic Amorphous Molecular Materials <u>Hideyuki Nakano</u> 4440	

Room L2

Wednesday, September 16

New Trend in Photonics Polymer

9:50	SO	Introductory Remarks Nobuhiro Kawatsuki.....	4442
		N. Kawatsuki, presiding	
10:00	1L2-03	Photo-switching Behavior of Photonic Crystals Containing Azobenzene Polymer Liquid Crystal <u>Tomomi Shiota</u> , Masaki Moritsugu, Tomonari Ogata, Yutaka Kuwahara, Seiji Kurihara	4443
10:25	1L2-04	Preparation of multi-bilayered mirrors composed hydrophobic azo-polymer and polyvinylalcohol, and their photochemical properties. <u>Takeru Ishikawa</u> , Masaki Moritsugu, Tomonari Ogata, Yutaka Kuwahara, Seiji Kurihara	4445
10:50	1L2-05	Alignment Control of Stimuli-Responsive Luminescent Liquid Crystals Using Rubbed Polymers <u>Shogo Yamane</u> , Yoshimitsu Sagara, Takashi Kato	4447
		H. Benten, presiding	
11:15	1L2-06	Optical properties of organic molecular crystals evaluated on the one-dimensional periodic structure fabricated by the interference exposure. <u>Yoshitaka Makino</u> , Taiki Hinode, Takeshi Inoue, Takeshi Yamao, Shu Hotta, Naoto Tsutsumi	4449
11:40	1L2-07	Photoreversible Formation of Colloidal Dispersion in Polymer Solution <u>Haruhisa Akiyama</u> , Masaru Yoshida, Nobuyuki Tamaoki	4451
		S. Kurihara, presiding	
12:55	1L2-08	Control of Photoluminescence and Photoinduced Orientation of Fluorene Derivatives on H-bonded Photoalignment layer <u>Ryoichi Ando</u> , Yuta Minami, Mizuho Kondo, Nobuhiro Kawatsuki	4453
13:20	1L2-09	Dynamic Control of Emission and Quenching of Water-dispersed Nanospheres Consisting of Photoresponsive Conjugated Polymers <u>Tatsuaki Miyashita</u> , Hiroyuki Hayasaka, Kazuya Tamura, Bell Stephen, Mutsumasa Kyotani, Kazuo Akagi.....	4455
13:45	1L2-10	Photoresponsive polymer-complex formation of spiropyran-functionalized polymer <u>Kimio Sumaru</u> , Toshiyuki Takagi, Katsuki Takai, Toshiyuki Kanamori	4457
		K. Sakamoto, presiding	
14:10	1L2-11	Preparation of concentration-gradient materials based on TTF cation radicals in polymer composite films by photopatterning <u>Fumiyasu Ishiguro</u> , Kazuo Tanaka, Yoshiki Chujo.....	4459
14:35	1L2-12	freestanding phase segregated block copolymer film fabricated by photocrosslinking of liquid crystalline side chain <u>Tasuku Izutani</u> , Takashi Yamamoto, Tomokazu Iyoda, Sadayuki Asaoka	4461
		M. Mitsuishi, presiding	
15:00	1L2-13	Spontaneous molecular orientation and photoresponsive properties of multi-layered mirror prepared by spin coating of hydrophobic azo-polymer and polyvinylalcohol <u>Seiji Kurihara</u>	4463
15:25	1L2-14	Molecular recognition and orientational control by photo-induced immobilization <u>Mamiko Narita</u> , Fumihiko Hoshino, Taiji Ikawa, Makoto Mouri, <u>Osamu Watanabe</u>	4465

15:50	1L2-15	Proposal of Method of Birefringence Control of Cellulose Derivatives <u>Nobutaka Itabashi</u> , Akihiro Tagaya, Yasuhiro Koike 4467	4467
T. Kaneko, presiding			
16:15	1L2-16	The other technology of photoalignment—In-cell retarder on Color filter for Transflective VA-LCDs <u>Sosuke Akao</u> , Godai Fukunaga, Masashi Aimatsu, Takao Taguchi 4469	4469
16:40	1L2-17	Orientation Control of Organic Semiconductor Molecules by Photoaligned Polyimide Films <u>Kenji Sakamoto</u> , Dong Guo, Kazushi Miki, Susumu Ikeda, Koichiro Saiki . 4471	4471
O. Watanabe, presiding			
17:05	1L2-18	Manufacture of Highly Thermal Resist Aromatic Polyester POF <u>Masayoshi Tabata</u> , Hironori Nakashima, Yashitada Namikawa, Yasushi Takenaka, Yasuteru Mawatari, Takayoshi Yamazaki, Kazuhiko Otsuka..... 4473	4473
17:30	1L2-19	Synthesis of Highly Thermally Stable Transparent Resin Through Structure Control of Aromatic Polyester <u>Yasushi Takenaka</u> , Yoshitada Namikawa, Hironori Nakashima, Yasuteru Mawatari, Masayoshi Tabata, Takayoshi Yamazaki, Kazuhiko Otsuka..... 4475	4475
17:55	1L2-20	Plasmon-enhanced second harmonic generation from hybrid polymer nanosheet assemblies <u>Masaya Mitsuishi</u> , Miki Ishifuji, Tokuji Miyashita 4477	4477

Thursday, September 17

New Trend in Photonics Polymer

T. Ogata, presiding			
9:10	2L2-01	Synthesis and High Hole Mobility of Liquid-Crystalline Side-Chain Siloxane Copolymers with Terthiophene Moieties <u>Masahiro Funahashi</u> , Aya Matsui, Toru Tsuji, Takashi Kato 4479	4479
9:35	2L2-02	Fabrication of semiconducting polymer films with photo-polymerizable discotic liquid crystals <u>Yo Shimizu</u> , Hirosato Monobe..... 4481	4481
M. Funahashi, presiding			
10:00	2L2-03	Self-assembly of discotic molecules with imidazolium ion-appended paraffinic side chains—Formation of bicontinuous cubic liquid crystalline structures and their charge transport properties <u>Takanori Fukushima</u> , Md. Akhtarul Alam, Jin Motoyanagi, Yohei Yamamoto, Akinori Saeki, Shu Seki, Seiichi Tagawa, Takuzo Aida..... 4483	4483
10:25	2L2-04	Fluorescence Characteristics of an Organic Semiconductor Crystal Thin Film equipped with a nanocavity. <u>Yoichi Sakurai</u> , Hidekazu Sugimori, Hiroshi Akagami, Kazuyuki Matsunaga, Takeshi Yamao, Shu Hotta, Hiroshi Jinnai 4485	4485
10:50	2L2-05	Improvement of the Power Conversion Efficiency in Polymer/Fullerene Solar Cells by Interfacial Dye Modification <u>Hiroaki Bente</u> , Satoshi Honda, Seiichirou Yokoya, Hideo Ohkita, Shinzaburo Ito 4487	4487
W. Sakai, presiding			
11:15	2L2-06	Multi-bilayered films and their photomechanical properties <u>Mayuko Kaji</u> , Tomonari Ogata, Yutaka Kuwahara, Seiji Kurihara 4489	4489
11:40	2L2-07	Development of composite photomobile materials by direct bonding between polymers and substrates <u>Ryo Miyasato</u> , Munenori Yamada, Mizuho Kondo, Jun-ichi Mamiya, Tomiki Ikeda 4491	4491

T. Seki, presiding

12:55	2L2-08	Synthesis of Polymer Particles Containing Azobenzene Moieties and Their Photomobile Behavior <u>Yuki Takamiya</u> , Sohta Tonouchi, Atsushi Shishido, Tomiki Ikeda.....	4493
13:20	2L2-09	Photoresponsive Polymer Brushes by Dense Integration of Photochromic Functionalities <u>Nobuhiko Hosono</u> , Takashi Kajitani, Takanori Fukushima, Takuzo Aida	4495
13:45	2L2-10	Photo-induced molecular twisting behavior of chiral cyclic compounds at various terminal positions. <u>Natsuki Shiga</u> , Masuki Kawamoto, Kazuto Takaishi, Takashi Yamashita, Tatsuo Wada.....	4497

A. Shishido, presiding

14:10	2L2-11	Photoinduced Deformation of Polymer Fibers Containing Anthracene Derivatives <u>Takehiro Matsuda</u> , Ryohei Fukae, Mizuho Kondo, Nobuhiro Kawatsuki	4499
14:35	2L2-12	Photoinduced Surface Relief Grating Formation Using Single Crystals of Azobenzene-based Photochromic Amorphous Molecular Materials <u>Hideyuki Nakano</u>	4501

H. Nakano, presiding

15:00	2L2-13	Dynamic photocontrol of microphase separation in a liquid crystalline azobenzene block copolymer thin film . <u>Tomoya Murase</u> , Yusuke Koizuka, Shusaku Nagano, Kazuaki Kamihara, Yuya Shinohara, Yoshiyuki Amemiya, Takahiro Seki.....	4503
15:25	2L2-14	Fabrication of Photomobile Polymer Materials by Photochemical Reactions <u>Yukari Watanabe</u> , Yumiko Naka, Jun-ichi Mamiya, Atsushi Shishido, Tomiki Ikeda	4505
15:50	2L2-15	Preparation of Nanoparticle-Doped Hybrid Polymers and Multilayer Film Application <u>Okihiro Sugihara</u> , Yu Kurata, Toshikuni Kaino, Masaru Nakagawa	4507

Friday, September 18**GELS: from Fundamentals to Applications****H. Okuzaki, presiding**

9:10	3L2-01	Lipophilic Polyelectrolytes as Smart Polymers(1) : Development of Novel High-Absorbent Polymer Gels based on Polystyrene in Organic Solvents <u>Kazuya Iseda</u> , Toshikazu Ono, Kazuki Sada	4327
9:35	3L2-02	Lipophilic Polyelectrolytes as Smart Polymers(2) : Gelator and Thickener Properties of Crystalline Poly(Octadecyl Acrylates) with Lipophilic Ion-pairs <u>Toshikazu Ono</u> , Kazuki Sada.....	4329
10:00	3L2-03	Preparation and Optical Properties of self-organizingly microphase-separated gel <u>Naomi Kumano</u> , Yukikazu Takeoka, Takahiro Seki, Masahiko Ishii, Hiroshi Nakamura	4331

Y. Takeoka, presiding

10:25	3L2-04	Fast thermo-response of PNIPAM nanofiber gels fabricated by electrospinning <u>Hidenori Okuzaki</u> , Keiko Kobayashi, Hu Yan, Shi-jian Su.....	4333
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10:50	3L2-05	Synthesis and charactalization of themo-responsive polymer modified Goldnanorod <u>Kohei Shimoda</u> ,Tsuyohiko Fujigaya,Yasuro Niidome,Naotoshi Nakashima.....	4335
11:15	3L2-06	Control of the scndary macromolecule structure by photodhromic cross-linker— Macro physical properties control of polymer gel <u>Kanayo Imura</u> ,Tomonari Ogata,Yutaka Kuwahara,Seiji Kurihara.....	4337
11:40	3L2-07	Change in the charged states of a pH-memorizable ionic gel <u>Mitsuru Higa</u> ,Sayo Kamimoto,Kyouhei Takeichi,Masaomi Fujii.....	4339
M. Higa, presiding			
12:55	3L2-08	Hierarchical self-assembly of multi-stimuli-responsive block copolymers based on phase changes of polymers in ionic liquids <u>Takeshi Ueki</u> ,Masayoshi Watanabe.....	4341
13:20	3L2-09	Photo-induced phase transition of polymer gels in an ionic liquid <u>Ayuko Yamaguchi</u> ,Koichi Kodama,Takeshi Ueki,Masayoshi Watanabe ..	4343
13:45	3L2-10	Interception of quorum sensing due to the autoinducer trapping method using hydrogel <u>Norihiro Kato</u> ,Tsukasa Ikeda,Tomohiro Morohoshi,Yu Ozonoe,Hiroshi Motohashi,Azumi Kobayashi	4345
14:10	3L2-11	Physical gel formation of an amphiphilic chitosan derivative in water and its application <u>Mai Kashimoto</u> ,Keisuke Fukushima,Takashi Tsujimoto,Hiroshi Uyama,Yukari Arai,Haruyoshi Seino,Shigehisa Fujiwara,Kazuhiko Hamada	4347
K. Sada, presiding			
14:35	3L2-12	Artificial meniscus using the PVA hydrogel <u>Suong-hyu Hyon</u> ,Ryo Horiuchi,Kazuaki Matsumura,Kenta Takahashi,Takashi Nishino	4349
15:00	3L2-13	Novel adhesion method of gels with inorganic particulate <u>Hidekazu Abe</u> ,Yusuke Hara,Shingo Maeda,Shuji Hashimoto	4351
15:25	3L2-14	Antifouling properties of hydrogels against barnacles and its mechanism in marine environment <u>Takayuki Murosaki</u> ,Takaya Noguchi,Akira Kakugo,Takayuki Kurokawa,Hidemitsu Furukawa,Jian Ping Gong,Yoshihito Osada,Yasuyuki Nogata,Kiyotaka Matsumura,Nobuhiro Fusetani	4353

Room L3

Wednesday, September 16

GELS: from Fundamentals to Applications

9:50	SO	Introductory Remarks Sada Kazuki, Takao Aoyagi.....	4240
K. Urayama, presiding			
10:00	1L3-03	A Novel Hydrogel containing Nano Crosslinkers with Swelling Ratio Controlled by Post Treatment <u>Yang Liu</u> ,Meifang Zhu,Wei Zhang,Makoto Takafuji,Hiroataka Ihara	4241
10:25	1L3-04	Synthesis and Characteristics of Nanocomposite Gels prepared by Photo-polymerization <u>Tetsuo Takada</u> ,Kazutoshi Haraguchi	4243
10:50	1L3-05	Synthesis of Salt-Resistant Superabsorbent Polymer by Inverse Suspension Copolymerization of Sulfonate Monomers and Acrylic	

		Acid <u>Shotaro Harada</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi ..	4245
		K. Onimura, presiding	
11:15	1L3-06	Synthesis of Block or Star-Shaped Copolymers with Various Functional Groups and Their Stimuli-Induced Self-Assembly <u>Yukari Oda</u> , Hayato Yoshimitsu, Shokyoku Kanaoka, Sadahito Aoshima .	4247
11:40	1L3-07	Preparations of various ionic polyrotaxane derivatives and ionic slide-ring gels <u>Jun Araki</u>	4249
		K. Haraguchi, presiding	
12:55	1L3-08	The Volume Phase Transition of Ionic Slide-Ring Gels <u>Akinori Bando</u> , Koichi Mayumi, Yasuhiro Sakai, Hideaki Yokoyama, Kohzo Ito	4251
13:20	1L3-09	Ultrathin film double-network hydrogel: Preparation, toughness and its applications for fracture mechanism analysis and force generation actuator <u>Songmiao Liang</u> , Takayuki Kurokawa, Jian Ping Gong	4253
13:45	1L3-10	The Effect of Water to the Strength of Double Network Hydrogels Analyzed by FT-IR Hiroko Itagaki, <u>Tasuku Nakajima</u> , Yukiteru Katsumoto, Takayuki Kurokawa, Hidemitsu Furukawa, Jian Ping Gong	4255
		K. Onimura, presiding	
14:10	1L3-11	Effects of Cross-linker Amount on Gelation of Supramacromolecular Ion Gels via Hydrogen Bonding <u>Atsushi Noro</u> , Yushu Matsushita, Timothy Lodge	4257
14:35	1L3-12	Sol-Gel Transition of PVA Solution and Viscoelastic Properties of Gels with Various Degrees of Polymerization <u>Risei Wada</u> , Hiroshi Matsuoka, Hidenobu Shimizu, Masaru Okabe	4259
15:00	1L3-13	Effect of Cross-link Density and Salt Concentration on Relaxation Modes of Polyphosphobetaine Hydrogels by Dynamic Light Scattering <u>Tatsuro Goda</u> , Hidemitsu Furukawa, Yuji Miyahara, Kazuhiko Ishihara...	4261
15:25	1L3-14	Network structure and mechanical properties of Tetra-PEG gel <u>Takamasa Sakai</u> , Yuki Akagi, Manami Kurakazu, Chihiro Yoshimura, Ung-il Chung, Takuro Matsunaga, Mitsuhiro Shibayama ..	4263
		M. Okabe, presiding	
15:50	1L3-15	Synthesis and characterization of Tetra-PEG/clay nanocomposite gel <u>Mieko Fukasawa</u> , Takamasa Sakai, Ung-il Chung, Kazutoshi Haraguchi	4265
16:15	1L3-16	Electro-opto-mechanical effects of swollen liquid crystal elastomers Atsushi Fukunaga, <u>Kenji Urayama</u> , Toshikazu Takigawa	4267
16:40	1L3-17	Creation of new high viscous gel by ionic bond <u>Shinya Kuroda</u> , Takayuki Kurokawa, Hidemitsu Furukawa, Qiu Ming Yu, Jian Ping Gong	4269
		H. Furukawa, presiding	
17:05	1L3-18	Synthesis and Properties of Inorganic Nanosheet Liquid Crystal -poly(N-isopropylacrylamide) hybrid gel Nobuyoshi Miyamoto, <u>Morio Shintate</u> , Ryuhei Motokawa	4271
17:30	1L3-19	Gelation of polysaccharide solution and spatial patterning <u>Takayuki Narita</u> , Isamu Ohnishi, Yushi Oishi, Masayuki Tokita	4273
17:55	1L3-20	Phase Behaviors of Agarose Solution Takaharu Morita, Takayuki Narita, Sada-atsu Mukai, <u>Masayuki Tokita</u> .	4275

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Y. Nagasaki, presiding

9:10	2L3-01	Preparation of xanthan gum/ionic liquid gel and its conversion into hydrogel <u>Hironori Izawa</u> , Yoshiro Kaneko, Jun-ichi Kadokawa.....	4277
9:35	2L3-02	Preparation of Reorganizable Chemical Gels and their Polymer Reaction <u>Yoshifumi Amamoto</u> , Moriya Kikuchi, Hiroyasu Masunaga, Sono Sasaki, Hideyuki Otsuka, Atsushi Takahara	4279
10:00	2L3-03	Fabrication of Surface Modified Hydrogels with Stimuli Responsive Polyion Complex for Controlled-Release <u>Yukie Takemoto</u> , Hiroharu Ajiro, Taka-aki Asoh, Mitsuru Akashi	4281

J. Kadokawa, presiding

10:25	2L3-04	Nano-Reactor Base on PEGylated Nanogels for Nano-Therapy and Diagnosis <u>Motoi Oishi</u> , Yukio Nagasaki.....	4283
10:50	2L3-05	Application of Star-Shape Triblock Copolymers of 8-Arm PEG-Polylactide-PEG Exhibiting Temperature-Responsive Sol-Gel Transition as Biodegradable Injectable Materials <u>Kanae Fujiura</u> , Koji Nagahama, Tatsuro Ouchi, Yuichi Ohya.....	4285
11:15	2L3-06	Creation of 3D-Engineered Tissues with Endothelial Cell Capillary Networks by Hydrogel Template Approach <u>Hiroaki Yoshida</u> , Michiya Matsusaki, Mitsuru Akashi.....	4287
11:40	2L3-07	Design of Hybrid Hydrogels with Nanogel-coated liposomes as cross-linking domain <u>Yurina Sekine</u> , Yuki Moritani, Nobuyuki Morimoto, Kazunari Akiyoshi...	4289

Y. Hara, presiding

12:55	2L3-08	Photo-Fabrication of High Mechanical Strength Supramolecular Hydrogel for Cell Culture Hybrid Matrix <u>Harunobu Komatsu</u> , Masato Ikeda, Itaru Hamachi.....	4291
13:20	2L3-09	Preparation of Magnetic Hydrogel Microsphere Utilizing Thermoresponsive Coacervate <u>Yuki Kodama</u> , Tomohiro Maeda, Kazuya Yamamoto, Takao Aoyagi	4293
13:45	2L3-10	Coacervate formation by novel chiral polymers and their molecular recognitions <u>Yoshitaka Inoue</u> , Takashi Aoki	4295
14:10	2L3-11	Production of functionalized gel particles by the alternate deposition of polymers. <u>Hiroko Watanebe</u> , Keiji Fujimoto	4297

T. Miyata, presiding

14:35	2L3-12	Photo-regulation of oscillation using self-oscillating polymer with photochromic site to induce LCST changes <u>Tatsuya Yamamoto</u> , Ryo Yoshida.....	4299
15:00	2L3-13	Driving characteristics and mechanical strength of autonomous gel actuator <u>Satoshi Nakamaru</u> , Yusuke Hara, Shingo Maeda, Shuji Hashimoto.....	4301
15:25	2L3-14	Preparation of gradient hydrogels and their bending behaviors <u>Taka-aki Asoh</u> , Mitsuru Akashi	4303

T. Aoyagi, presiding

15:50	2L3-15	Integrated microvalve array composed of photoresponsive hydrogel sheet <u>Kimio Sumaru</u> , Andras Szilagyi, Shinji Sugiura, Toshiyuki Takagi, Koji Hattori, Toshiyuki Kanamori	4305
16:15	2L3-16	Micropatterning of thin hydrogels by visible light irradiation with the	

		modified liquid crystal display projector	
16:40	2L3-17	<u>Jun Kobayashi</u> , Kazuyoshi Itoga, Masayuki Yamato, Teruo Okano 4307 Preparation of molecule-responsive gel films and their responsive signal changes using surface plasmon resonance sensor	
17:05	2L3-18	<u>Takashi Miyata</u> , Hiroki Isobe, Tadashi Uragami 4309 Cofactor-Coupling Molecular Recognition Sites Prepared by Molecular Imprinting	
		Kohei Takeda, Atsushi Kuwahara, Kohei Ohmori, Tooru Ooya, <u>Toshifumi Takeuchi</u> 4311	

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		N. Tanaka, presiding	
9:10	3L3-01	Organogel based on dehydrobenzoannulene derivative—its structure and properties	
		<u>Ichiro Hisaki</u> , Hajime Shigemitsu, Norimitsu Tohnai, Mikiji Miyata 4313	
9:35	3L3-02	Hierarchical Structure Formation of PBDT in Hydrogel: (II) Cylindric Structure	
		<u>Zi Liang Wu</u> , Takayuki Kurokawa, Hidemitsu Furukawa, Jian Ping Gong 4315	
10:00	3L3-03	Stress Sensitive Photonic Hydrogel with an Enormous TAMAGOYAKI Structure	
		<u>Gen Kamita</u> , Hidemitsu Furukawa, <u>Takayuki Kurokawa</u> , Hiroyuki Mayama, Haque Md. Anamul, Kaoru Tsujii, Jian Ping Gong 4317	
		H. Furukawa, presiding	
10:25	3L3-04	Gelation Behavior of Agarose Sols Studied by NMR Measurements	
		<u>Bona Dai</u> , Shingo Matsukawa 4319	
10:50	3L3-05	Aggregation Structure and Gelation Mechanism in Native Gellan Solution	
		<u>Ayaka Shinsho</u> , Nobuki Ando, Shingo Matsukawa 4321	
11:15	3L3-06	Study on diffusion of molecules in gels by gradient NMR	
		<u>Shingo Mastukawa</u> 4323	
11:40	3L3-07	Design of the competitive peptides that control the amyloid fibril like structure in protein gel	
		<u>Naoki Tanaka</u> , Yurika Noguchi, Shota Tominaga, Shigeru Kunugi, Takashi Morii, Nobuyuki Takahashi 4325	

Room L4

Wednesday, September 16

Advanced Nanomaterials

9:50	SO	Introductory Remarks	
		Naotoshi Nakashima 4509	
		N. Nakashima, presiding	
10:00	1L4-03IL	Molecular Design of Polyelectrolytes Active in Non-Polar Media	
		<u>Kazuki Sada</u> 4510	
10:50	1L4-05	Synthesis of New Azo Aromatic Ligand By Metal Promoted Ring Amination Reaction. Coordination Chemistry of aforesaid ligand	
		<u>Anasuya Bandyopadhyay</u> , Masayoshi Higuchi 4513	

M. Mitsuishi, presiding

- 11:15 1L4-06 Photo-switchable hydrogel system created by using supramolecular inclusion complex between side chains of polymers.
Shingo Tamesue, Yoshinori Takashima, Hiroyasu Yamaguchi, Seiji Shinkai, Akira Harada 4515
- 11:40 1L4-07 Fabrication and structure control of Schiff base type π -conjugated polymer thin films by spontaneous chemical liquid deposition.
Nobuo Enoki, Sota Funamoto, Orii Moriyama, Ryota Tanoue, Shigeyasu Katahira, Masashi Kunitake 4517

K. Sada, presiding

- 12:55 1L4-08 SiO₂ network formation using silsesquioxane nanosheet—from nano biochemistry to molecular-scale electronics
Tatsuya Ikenuma, Takeo Suzuki, Masaya Mitsuishi, Tokuji Miyashita.. 4519
- 13:20 1L4-09 Structural Change in Polymerization Reaction Process of Nylon-Clay Nanocomposite System—(3) Investigation of Origins of Discontinuous Changes in Layer Structure
Kohji Tashiro, Yoshiaki Aibara, Tatsuya Sugiyama, Arimitsu Usuki, Makoto Kato 4521
- 13:45 1L4-10 Effect of Clay Arrangement on Thermal Conductivity of Polyimide-Clay Nanocomposite Thin Film
Masaki Kakiage, Shinji Ando 4523
- 14:10 1L4-11 Synthesis and characterization of epoxy-silica nanocomposites by using perhydropolysilazane as a curing reagent
Tohru Kumagai, Reiko Saito 4525

R. Saito, presiding

- 14:35 1L4-12 Surface-Mediated Alignment of Lyotropic Discotic Liquid Crystalline Nanostructure/Silica Hybrid Films
Mitsuo Hara, Shusaku Nagano, Takahiro Seki 4527
- 15:00 1L4-13 Color-Tunable Visible Light Emission from Dye-Doped Fluorescent Mesostructured Organosilica Films
Norihiro Mizoshita, Yasutomo Goto, Yoshifumi Maegawa, Takao Tani, Shinji Inagaki 4529
- 15:25 1L4-14 Synthesis of High Refractive Index Nanocomposites from Polyether-Polyarylate Copolymer
Yusuke Imai, Atsushi Terahara, Keitaro Matsui, Yukiya Hakuta, Hiromichi Hayashi, Nobuhiko Ueno, Shin Horiuchi 4531

M. Takeuchi, presiding

- 15:50 1L4-15 Gelation of Ionic Liquids on the Basis of Self-Assembly of Block Copolymers and Application to Polymer Actuators.
Satoru Imaizumi, Hisashi Kokubo, Masayoshi Watanabe 4533
- 16:15 1L4-16 Assembly of Nanomaterials Using a Liquid-Liquid Interface
Rinko Kudo, Toshiaki Shibata, Jun Matsui, Takahiro Yokoyama, Akito Masuhara, Hitoshi Kasai, Hidetoshi Oikawa, Tokuji Miyashita 4535
- 16:40 1L4-17 Layer-by-Layer Assembly with Lipophilic Polyelectrolytes in Low-polar media
Masahiko Ohta, Kazuki Sada 4537

Y. Imai, presiding

- 17:05 1L4-18 Construction of Large 3D Periodic Structured Coatings
Norimasa Fukazawa, Ren-hua Jin 4539
- 17:30 1L4-19 Synthesis of "Spatially Isolated" π -Conjugated Molecules
Kazunori Sugiyasu, Masayuki Takeuchi 4541
- 17:55 1L4-20 Synthesis and Characterization of Donor-Acceptor Type Polythiophene Poyrotaxanes
Taichi Ikeda, Masayoshi Higuchi 4543

Thursday, September 17

Advanced Nanomaterials

K. Tanaka, presiding

9:10	2L4-01	Synthesis of Optically Active Syndiotactic PMMA and its Application to Optical Resolution of Higher Fullerenes <u>Atsushi Kitaura</u> , Munenori Shimoyama, Hiroki Iida, Takehiro Kawauchi, Jiro Kumaki, Eiji Yashima.....	4545
9:35	2L4-02	Controlled synthesis of novel hydrophilic block copolymers and their conjugation with magnetite <u>Isato Kura</u> , Masayuki Kotani, Masaki Murata, Jin Motoyanagi, Masahiko Minoda	4547
10:00	2L4-03	Hybridization of polydiacetylene core / noble metal shell <u>Tsunenobu Onodera</u> , Daisuke Ishikawa, Kohei Takahashi, Akito Masuhara, Hitoshi Kasai, Hidetoshi Oikawa	4549
10:25	2L4-04	Fabrication and characterization of hybridized nanostructure by microwave irradiation <u>Akito Masuhara</u> , Takahiro Yokoyama, Yoshihisa Matsuda, Hitoshi Kasai, Hachiro Nakanishi, Hidetoshi Oikawa.....	4551

A. Masuhara, presiding

10:50	2L4-05	Preparation of Silica-Based Hollow Spheres by Using a Thermally Responsive Diblock Copolymer Containing a Cationic Block <u>Yuko Aoyama</u> , Chihiro Urata, Masamichi Nakayama, Yusuke Yamauchi, Teruo Okano, Kazuyuki Kuroda	4553
11:15	2L4-06	Development of novel fluorescent magnetic polymer particles and their applications <u>Mamoru Hatakeyama</u> , Shintaro Kawata, Yusuke Mochizuki, Yoshinori Kita, Hiroshi Kishi, Kosuke Nishio, Satoshi Sakamoto, Hiroshi Handa	4555
11:40	2L4-07	Gold Nanoparticles with Lipophilic Ion Pairs ; Synthesis and Assembly Behaviors <u>Ryo Hamamoto</u> , Kazuki Sada	4557

Y. Takaguchi, presiding

12:55	2L4-08	Thermal Molecular Motion of Biopolymers in Solid Films <u>Keiji Tanaka</u> , Junichi Nakahara, Toshihiko Nagamura	4559
13:20	2L4-09	Synthesis, Structure and Viscoelastic Behavior of DNA-SWCNT-Polycations Complex Film <u>Shingo Nagata</u> , Yukihiro Nishikawa, Masaaki Takahashi.....	4561
13:45	2L4-10	Formation of Percolation Network of Nano Carbon Fibers Utilizing the Bicontinuous Structure of Polymer Blend and Selective Adsorption of Polymer Chains <u>Natsuhiko Mukai</u> , Yukihiro Nishikawa, Masaaki Takahashi.....	4563

M. Sano, presiding

14:10	2L4-11	Photosensitized Hydrogen Evolution from Water Using Fullerodendron/SWNT Supramolecular Nanocomposite <u>Wakako Sakata</u> , Tomoyuki Tajima, Tetsuya Uchida, Syunsuke Nishimoto, Michihiro Miyake, Yutaka Takaguchi	4565
14:35	2L4-12	Fabrication of CaCO ₃ /SWNT Nanocomposite Using Fullerodendron-Assisted Approach <u>Akira Tsutsui</u> , Tomoyuki Tajima, Yutaka Takaguchi.....	4567
15:00	2L4-13	Direct Determined Precise Electronic States of Single-Walled Carbon Nanotubes <u>Yasuhiko Hirana</u> , Yasuhiko Tanaka, Naotoshi Nakashima.....	4569
15:25	2L4-14	Poly (vinyl alcohol) Composite with Nanodiamond Takashi Nishino, Masaru Kotera, <u>Seira Morimune</u> , Kimiya Goto, Katsuhiko Hata	4571

T. Nishino, presiding

15:50	2L4-15	Improvement of the actuation for CNT composites by incorporation of additives <u>Takushi Sugino</u> , Kenji Kiyohara, Ichiroh Takeuchi, Ken Mukai, Kinji Asaka.....	4573
16:15	2L4-16	Foaming Behavior and Electrical Properties of Carbon Nano Fiber Filled Polymer Composites Treated with High-Pressure Carbon Dioxide Akira Kuragano, Syuichi Akasaka, <u>Shigeo Asai</u> , Masao Sumita.....	4575
16:40	2L4-17	Optical Properties of Isolated, Purified Carbon Nanohorn <u>Hibiki Matsumoto</u> , Masahito Sano.....	4577
17:05	2L4-18	Reducing Effects of Carbon Nanotubes on Cytochrome c <u>Takafumi Nakajima</u> , Masahito Sano	4579

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Advanced Nanomaterials

S. Hadano, presiding

9:10	3L4-01	Development of Light-Driven Carbon Nanotube Microdevice <u>Eijiro Miyako</u> , Takahiro Hirotzu.....	4581
9:35	3L4-02	Analyses of Conformation of Polymer Chain on the Carbon Nanotube <u>Masanobu Naito</u> , Woojung Chung, Kazuyuki Nobusawa, Atsushi Ikeda, Michiya Fujiki.....	4583
10:00	3L4-03	Precision Synthesis of Poly(Ionic Liquids) and Hybridization with Carbon Nanotubes <u>Xiaoyu Long</u> , Kenji Goboh, Junko Aimi, Norifumi Fujita, Takuzo Aida...	4585
10:25	3L4-04	Design of new nanocarbon materials using microphase separation of block copolymers <u>Junko Aimi</u> , Takuzo Aida, Krzysztof Matyjaszewski	4587

N. Fujita, presiding

10:50	3L4-05	Functional polymer covered by cucurbituril <u>Yuki Mituboshi</u> , Takeshi Shimomura.....	4589
11:15	3L4-06	Application of polymer composites containing the mixed-valence TTF nanowires to transparent conductive films <u>Kazuo Tanaka</u> , Fumiyasu Ishiguro, Yoshiki Chujo.....	4591
11:40	3L4-07	Fabrication of Highly-Arranged Nanoelectrode Array through Block Copolymer Template Method <u>Shingo Hadano</u> , Tomokazu Iyoda, Jingze Li.....	4593

Room L5

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Advanced Nanomaterials

9:50	SO	Introductory Remarks Yasuro Niidome	4509
		Y. Sasaki, presiding	
10:00	1L5-03	Carbon nanotube interface design for direct electron transfer reaction of enzyme <u>Masato Tominaga</u>	4595
10:25	1L5-04	Selective separation for semiconductive single walled carbon nanotubes by utilizing polysaccharide as dispersing agent and density gradient ultracentrifugation	

		<u>Yoshiya Kaminosono</u> ,Katsumi Uchida,Koji Tsuchiya,Tadahiro Ishii,Hirofumi Yajima	4597
10:50	1L5-05	Field Effect Transistor using Double-walled Carbon Nanotube for Biosensing <u>Katusmi Uchida</u> ,Kazuo Omura,Syouta Yajima,Takahiro Mori,Takahiro Morimoto,Kouji Ishibashi,Hirofumi Yajima	4599
		H. Yajima, presiding	
11:15	1L5-06	Evaluation of cell properties on carbon nanotube material <u>Kohji Nakazawa</u> ,Yukiko Yoshiura,Yusuke Sakai	4601
11:40	1L5-07	Construction of Artificial Cell Array for Creation of Biochip <u>Yoshihiro Sasaki</u> ,Keita Abe,Jun-ichi Kikuchi,Kazunari Akiyoshi.....	4603
		M. Tominaga, presiding	
12:55	1L5-08	Supramolecular hydrogel as nanobiomaterial <u>Masato Ikeda</u> ,Itaru Hamachi	4605
13:20	1L5-09	Electromagnetic Response of Metallic Microcoils fabricated through Bio-Templating Process <u>Soichiro Suzuki</u> ,Kaori Ito,Tomokazu Iyoda,Yasunori Yamanobe,Noriaki Sugamoto,Atsushi Yamada	4607
13:45	1L5-10	Synthesis of phosphorylcholine type zwitterion surfactant by Michael addition and evaluation of the solubilization property <u>Ryosuke Matsuno</u> ,Kimiaki Takami,Kazuhiko Ishihara	4609
		K. Nakazawa, presiding	
14:10	1L5-11	Preparation of organic-inorganic composite particle for detecting cell signals in the vessel <u>Suzuka Amemori</u> ,Michiya Matsusaki,Kazunori Okano,Mitsuru Akashi.....	4611
14:35	1L5-12	Preparation and optical properties of gold nanoparticle 3D Array on a virus structure <u>Keita Nagakawa</u> ,Kenichi Niikura,Noriko Ohtake,Tadaki Suzuki,Yasutaka Matsuo,Hirofumi Sawa,Kuniharu Ijio	4613
15:00	1L5-13	Preparation and characterization of ultrasmall size metal nanoparticles with emission <u>Yuichi Shishino</u> ,Tetsu Yonezawa,Koji Kawai,Hiroshi Nishihara.....	4615
15:25	1L5-14	Synthesis of photoluminescent silicon nanoparticles using microwave <u>Yasuhisa Shibata</u> ,Yasuhiko Iwasaki,Hideya Kawasaki	4617
		S. Yusa, presiding	
15:50	1L5-15	Preparation of anisotropic core-shell nanoparticles and their optical properties <u>Yasuro Niidome</u> ,Yoshifumi Okuno,Koji Nishioka,Naotoshi Nakashima...	4619
16:15	1L5-16	One-Dimensional Self-Assembly of Monodispersed Silica Nanospheres in Liquid Phase <u>Ayae Sugawara</u> ,Masashi Fukao,Atsushi Shimojima,Tatsuya Okubo ..	4621
16:40	1L5-17	Preparation of multi-core silica-coated iron oxide nanoparticles with enhanced magnetic signal for MRI <u>Asako Narita</u> ,Wataru Uchiyama,Narufumi Kitamura,Kazuo Tanaka,Yoshiki Chujo	4623
		Y. Iwasaki, presiding	
17:05	1L5-18	Soft Materials Based on Self-assembly of Colloidal Nanoparticles in Ionic Liquids <u>Masayoshi Watanabe</u> ,Kazuhide Ueno,Aya Inaba,Yuta Sano	4625
17:30	1L5-19	Synthesis of Sulfonated Polyaniline-Metal Nanoparticles Hybrid and its Catalytic function <u>Daisuke Saio</u> ,Toru Amaya,Toshikazu Hirao	4627
17:55	1L5-20	Development of pH responsive nanoparticle hybrids <u>Kensuke Naka</u> ,Shizuka Masuoka,Tomoaki Sato	4629

Thursday, September 17

Single Molecule Detection and Manipulation for Polymer Science

9:00	SO	Introductory Remarks Kuniharu Ijro, Satoru Kidoaki	4631
		K. Ijro, presiding	
9:10	2L5-01	Single Molecular Wires by the use of Electrochemical Epitaxial Polymerization <u>Hiroshi Sakaguchi</u>	4632
9:35	2L5-02	Molecular Nanowiring using Single Conductive Polymers <u>Yuji Okawa</u> , Swapn Kumar Mandal, Tsuyoshi Hasegawa, Shigeru Tsukamoto, Chunping Hu, Yoshitaka Tateyama, Jonathan P. Hill, Katsuhiko Ariga, Masakazu Aono	4634
10:00	2L5-03	Development of novel π -conjugated polymers toward molecular wire <u>Yoshiaki Kashimura</u> , Touichiro Goto, Hiroshi Nakashima, Kazuaki Furukawa, Erjing Wang, Hongxiang Li, Wenping Hu, Keichi Torimitsu ...	4636
10:25	2L5-04	Stepwise Synthesis of Multifunction integrated Macromolecules for Molecularscale Electronics <u>Shoji Tanaka</u>	4638
		Y. Okawa, presiding	
10:50	2L5-05	Single-Molecules Imaging of the Linear Motor Property as a Unidirectional Molecular Motion along Single Chain of a π -Conjugated Polymer <u>Ken-ichi Shinohara</u> , Noriyuki Kodera, Toshio Ando	4640
11:15	2L5-06	Electrode-less Measurement of Charge Carrier Mobility in Conjugated Polymers <u>Yoshihito Honsho</u> , Shu Seki, Akinori Saeki, Hiroyuki Hayasaka, Kazuo Akagi	4642
11:40	2L5-07	Relationship between conformation and photophysical and electrical properties of single conjugated polymer chains <u>Martin Vacha</u> , Satoshi Habuchi	4644
		K. Shinohara, presiding	
12:55	2L5-08	Nanofishing Measurement on a Single Polymer Chain <u>Ken Nakajima</u> , Toshio Nishi	4646
13:20	2L5-09	Mechanism underlying the specific binding between Ti-binding peptide aptamer and Ti surfaces <u>Tomohiro Hayashi</u> , Yuuki Arai, Masahiko Hara	4648
13:45	2L5-10	Single molecular pair study on gelation mechanism of HMHEC-amylose <u>Makoto Takemasa</u> , Marit Sletmoen, Bjørn Toger Stokke	4650
		A. Maruyama, presiding	
14:10	2L5-11	Analysis of glycosylations catalyzed by dextran sucrase using an SPM <u>Megumi Asakura</u> , Toshiaki Mori, Yoshio Okahata	4652
14:35	2L5-12	Kinetic Analyses of interaction force for Gb3-sugar binding protein using SPM <u>Yuya Akiyama</u> , Toshiaki Mori, Yoshio Okahata	4654
15:00	2L5-13	Encapsulation of desired molecules into virus-like nano capsules using peptide tags <u>Noriko Ohtake</u> , Kenichi Niikura, Tadaki Suzuki, Keita Nagakawa, Hirofumi Sawa, Kuniharu Ijro	4656
		S. Kidoaki, presiding	
15:25	2L5-14IL	single molecule imaging in living cells <u>Makio Tokunaga</u> , Kumiko Sakata-sogawa	4658
		Y. Okahata, presiding	

16:15	2L5-16	Spontaneous Size Control and Dynamic Behavior of Monodispersed Polyion Complex Vesicles (PICsomes) <u>Yasutaka Anraku</u> , Akihiro Kishimura, Yuichi Yamasaki, Kazunori Kataoka.....	4661
16:40	2L5-17	Evaluation of cationic comb-type copolymers/DNA interaction by single molecule force measurements <u>Masanori Hirano</u> , Naohiko Shimada, Akihiro Kano, Satoru Kidoaki, Atsushi Maruyama	4663
17:05	2L5-18	Fabrication of DNA conjugated gold nanoparticle for single electron devices <u>Ayako Ishikawa</u> , Yasutaka Matsuo, Kenji Suzuki, Kenichi Niikura, Kuniharu Ijiro.....	4665

Friday, September 18

Single Molecule Detection and Manipulation for Polymer Science

S. Kidoaki, presiding

9:10	3L5-01	Phase Transition Behaviors of Single and a Few Chain Assemblies Confined in Coordination Nanospaces <u>Nobuhrio Yanai</u> , Takashi Uemura, Susumu Kitagawa	4667
9:35	3L5-02	Dimension of Single Polymer Chain Studied by Super-Resolution Fluorescence Microscopy Technique <u>Hiroyuki Aoki</u> , Kazuki Mori, Toshiaki Takahashi, Shinzaburo Ito	4669

H. Aoki, presiding

10:00	3L5-03	Determination of Diffusion Coefficients of Cyclic and Linear Poly(tetrahydrofuran)s having a Perylene Diimide Unit by Single-Molecule Imaging <u>Takuya Yamamoto</u> , Norihiro Satoh, Satoshi Habuchi, Martin Vacha, Yasuyuki Tezuka	4671
10:25	3L5-04	Dilute Solution Properties of Semiflexible Three-Arm Star Polymers <u>Takenao Yoshizaki</u> , Daichi Ida.....	4673
10:50	3L5-05	Chain length effect on a conformational transition in a semiflexible homo-polymer chain <u>Yuji Higuchi</u> , Takahiro Sakaue, Kenichi Yoshikawa	4675

Room M

Wednesday, September 16

Biopolymers and Biorelated Polymers

A. Ikeda, presiding

10:00	1M-03	Thermoresponsive Silica-Based Material Applying to a Novel Chromatography for Separation of Model Drugs <u>Prapatsorn Techawanitchai</u> , Mitsuhiro Ebara, Kazuya Yamamoto, Takao Aoyagi.....	4677
10:25	1M-04	Immobilization of cyclic β -peptide on gold substrate for construction of nanopore with dipole <u>Koji Okumura</u> , Yusuke Ishihara, Shunsaku Kimura.....	4679
10:50	1M-05	Photochemical Property of Ru - Tris bipyridine complexes with monoclonal antibodies <u>Tamaki Gionn</u> , Hiroyasu Yamaguchi, Akira Harada.....	4681
11:15	1M-06	Reexamination of Reactivity of N-Carboxy Amino Acid Anhydrides	

		(33) —Preparation of Monodispersed High Molecular Weight Polypeptides in the Polymerization of Amino Acid NCAs. <u>Hitoshi Kanazawa</u>	4683
11:40	1M-07	Artificial extracellular matrix proteins containing non-natural amino acids biosynthesized in bacteria using T7 expression system <u>Akinori Takasu</u> , Shiori Kondo, Akihiro Ito, Inchan Kwon, David. A Tirrell ..	4685
		A. Takasu, presiding	
12:55	1M-08	Biological functions of laminin active peptides conjugated chitosan membranes. <u>Ayano Sasaki</u> , Dai Otagiri, Yuji Yamada, Kentaro Hozumi, Yamato Kikkawa, Fumihiko Katagiri, Motoyoshi Nomizu	4687
13:20	1M-09	Treatment of formaldehyde using enzyme-doped polymer matrix <u>Akihiro Watari</u> , Asuka Kanou, Tomoko Tada, Shigeru Kunugi, Yasuhisa Shibata, Yasuhiko Iwasaki, Satoshi Yamada, Kenshiro Syuto, Syujiro Sakaki, Naoki Tanaka	4689
13:45	1M-10	Determination of fibril core region in protein gel by point mutation Shota Tominaga, <u>Yurika Noguchi</u> , Shigeru Kunugi, Takashi Morii, Nobuyuki Takahashi, Naoki Tanaka	4691
14:10	1M-11	New Protein-chip Detected by Enhanced Fluorescence Based on the Grating-Coupled Surface Plasmon Resonance <u>Keiko Tawa</u> , Yuji Nishizawa, Hironobu Hori, Junji Nishii, Takahiko Nakaoki.....	4693
14:35	1M-12	Linker Effects on Electron Transfer through Helical Peptide Monolayers <u>Yoko Arikuma</u> , Kazuki Takeda, Tomoyuki Morita, Masashi Ohmae, Shunsaku Kimura.....	4695
		K. Tanaka, presiding	
15:00	1M-13	Self-Assembly of Poly(ethylene glycol)-linked photosynthetic Light-Harvesting Model Polypeptide / Pigment Complexes <u>Kosuke Shimoyama</u> , Tsuyoshi Ochiai, Shunsuke Yajima, Takehisa Dewa, Keiji Yamashita, Mamoru Nango	4697
15:25	1M-14	Stability Evaluation of Peptide Nanospheres with PEG brush layer. <u>Masahiro Matsumoto</u> , Tomonori Waku, Michiya Matsusaki, Mitsuru Akashi.....	4699
15:50	1M-15	A study on microencapsulation of dibenzoyl peroxide. <u>So Ito</u> , Kiyomi Fuchigami.....	4701
		K. Tawa, presiding	
16:15	1M-16	Molecular structure analysis of 1,3,5-trimethylbarbituric acid (TMBA) in aqueous solution and fundamental study for the application on its microencapsulation <u>Kiyomi Fuchigami</u> , So Ito.....	4703
16:40	1M-17	Development of water-soluble fluorophores generating visible light with UV excitation via photon upconversion based on triplet-triplet annihilation <u>Kenichi Inafuku</u> , Kazuo Tanaka, Yoshiki Chujo	4705
17:05	1M-18	Photodynamic activity of the photoreceptive energy donor-acceptor system using fullerene and fluorochrome <u>Atsushi Ikeda</u> , Motofusa Akiyama, Jun-ichi Kikuchi, Takuya Ogawa, Tatsuo Takeya.....	4707
17:30	1M-19	Various complexes obtained by self-assembly of dendrimer phthalocyanine and block copolymer <u>Shigeto Fukushima</u> , Michiaki Kumagai, Souta Horie, Stephanie Herlambang, Woo-dong Jang, Nobuhiro Nishiyama, Kazunori Kataoka ..	4709

Thursday, September 17

Biopolymers and Biorelated Polymers

T. Ishihara, presiding

9:10	2M-01	Preparation and function of connexin proteoliposomes using baculovirus-liposome fusion method <u>Koki Kamiya</u> , Kanta Tsumoto, Tetsuro Yoshimura, Kazunari Akiyoshi..	4711
9:35	2M-02	Development and In Vivo Evaluation of Nano-PICsomes for Biological Carriers <u>Yasutaka Anraku</u> , Akihiro Kishimura, Kanjiro Miyata, Makoto Oba, Kensuke Osada, Yuichi Yamasaki, Kazunori Kataoka.....	4713
10:00	2M-03	Development of perfluorocarbon/polymer nanodroplets for tumor-targeted ultrasound contrast agents <u>Masamichi Nishihara</u> , Kenji Imai, Masayuki Yokoyama	4715
10:25	2M-04	Preparation of the assembly consisted of the various stimuli-responsive polymer for drug carrier <u>Youhei Kotsuchibashi</u> , Mitsuhiro Ebara, Kazuya Yamamoto, Takao Aoyagi	4717

M. Nishihara, presiding

10:50	2M-05	Development of Stealth-Type Polymeric Nanoparticles <u>Tsutomu Ishihara</u> , Megumu Higaki, Yutaka Mizushima, Tohru Mizushima	4719
11:15	2M-06	Preparation of size tunable hydrophobically modified g-PGA nanoparticles and evaluation of activity as a vaccine adjuvant <u>Hyungjin Kim</u> , Takami Akagi, Michiya Matsusaki, Tomofumi Uto, Masanori Baba, Mitsuru Akashi.....	4721
11:40	2M-07	Preparation of pH-sensitive liposomes modified with hyperbranched poly(glycidol) derivatives and their function as cytoplasmic delivery system of antigenic proteins <u>Eiji Yuba</u> , Atsushi Harada, Yuichi Sakanishi, Shinobu Watarai, Kenji Kono	4723

K. Yamamoto, presiding

12:55	2M-08	Control of Protein Functions using Dendritic Molecular Glues <u>Kou Okuro</u> , Kazushi Kinbara, Kouhei Tsumoto, Noriyuki Ishii, Takuzo Aida	4725
13:20	2M-09	Hybridization of Dendritic Molecular Glues with Nucleic Acids via a Multivalent Salt-Bridge Formation. <u>Harei Nemoto</u> , Kou Okuro, Kazushi Kinbara, Takuzo Aida.....	4727
13:45	2M-10	Cationic nanogels for CpG DNA delivery and application for immunotherapy <u>Junichi Yasuoka</u> , Sayaka Toita, Shinichi Sawada, Kazunari Akiyoshi...	4729
14:10	2M-11	Functional cycloamylose for siRNA delivery <u>Sayaka Toita</u> , Yuki Soma, Nobuyuki Morimoto, Kazunari Akiyoshi	4731
14:35	2M-12	Polyamine-lipid Conjugates as Effective Gene Carriers: Gene Transferability and their Morphology <u>Takehisa Dewa</u> , Kiyoshi Kato, Misa Uchida, Ayumi Sumino, Tomohiro Asai, Naoto Oku, Mamoru Nango.....	4733

T. Dewa, presiding

15:00	2M-13	The relation between Structure of Ethylenediamine-Bearing Lipids and its transfection efficiency <u>Yumi Kamikawa</u> , Tomoki Nishimura, Shinichi Mochizuki, Kazuo Sakurai	4735
15:25	2M-14	Organic molecular gel from cationic L-glutamide-derived lipids for Gene delivery <u>Takayuki Ueno</u> , Shuta Soga, Vijaya Gopal, N. Madhusudhara Rao, Makoto Takafuji, Hirotaka Ihara.....	4737
15:50	2M-15	Stabilization of polyion complex nanoparticles by hydrophobic	

		interaction <u>Kazuki Watanabe</u> , Hyungjin Kim, Takami Akagi, Mitsuru Akashi 4739	
16:15	2M-16	Complex Formation between Poly(vinylamine-co-N-vinylisobutylamide) and DNA <u>Wanpen Tachaboonyakiat</u> , Mitsuru Akashi 4741	
16:40	2M-17	Analysis of transcription of pressure-condensed plasmid DNA in cells <u>Hokuto Konno</u> , Tsuyoshi Kimura, Asami Sano, Toshiya Fujisato, Akio Kishida..... 4743	
17:05	2M-18	Disulfide cross-linked polyplex micelles for gene carriers directed to long blood circulation. – Effect of PLys chain length and cross-linking degree. <u>Sorato Ikeda</u> , Kanjiro Miyata, Makoto Oba, Kensuke Osada, Yuichi Yamasaki, Kazunori Kataoka..... 4745	

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Biopolymers and Biorelated Polymers

H. Kitano, presiding

9:10	3M-01	Preparation of collagen gels including various adriamycin-attached polymers and the metastasis-involving cytotoxicity <u>Eiko Nishisaka</u> , Tomoyuki Suehiro, Chie Kojima, Atsushi Harada, Kenji Kono 4747	
9:35	3M-02	Gene expression analysis of osteoblast differentiation on <i>Bombyx mori</i> silk fibroin scaffolds <u>Ryo Koyanagi</u> , Sayaka Miyamoto, Yoshimitsu Abiko, Tetsuo Asakura... 4749	
10:00	3M-03	Regulation of stem cell functions by development-mimicking extracellular matrices <u>Takashi Hoshiba</u> , Naoki Kawazoe, Tetsuya Tateishi, Guoping Chen..... 4751	
10:25	3M-04	Study of the cell behavior in the model culture environment composed of nanofibers <u>Dohiko Terada</u> , Chiaki Yoshikawa, Shinya Hattori, Takako Honda, Tosiya Ikoma, Hisatoshi Kobayashi 4753	

D. Terada, presiding

10:50	3M-05	Cell culture on photosensitive silicone resin <u>Keiko Sumitomo</u> , Takahiro Arakawa, Asuka Tanioka, Hiromi Sato, Seiichi Saito, Seiji Koike, Yoshinori Yamaguchi 4755	
11:15	3M-06	Development of Cellular Lamination for Three-dimensional Tissue Models by Layer-by-Layer Assembly <u>Michiya Matsusaki</u> , Koji Kadowaki, Mitsuru Akashi 4757	
11:40	3M-07	Study on Biocompatibility of Zwitterionic Polymers <u>Kazuyuki Ishihara</u> , Makoto Gemmei-ide, Hiromi Kitano, Takahiro Mukaiyama, Yosiyuki Saruwatari 4759	

M. Tanaka, presiding

12:55	3M-08	Adipogenic differentiation of mesenchymal stem cells on polymer-micropatterned surfaces <u>Naoki Kawazoe</u> , Likun Guo, Tetsuya Tateishi, Guoping Chen 4761	
13:20	3M-09	Culturing human cancer cells on self-organized honeycomb patterned films <u>Haruka Maeda</u> , Yutaka Tochigi, Yuuki Nakamichi, Hiroshi Yabu, Jun-ichi Hamada, Sadaaki Yamamoto, Masatsugu Shimomura.. 4763	
13:45	3M-10	Preparation of Blood Compatible Dialyzer by Physical Adsorption of Human Thrombomodulin <u>Masaaki Omichi</u> , Michiya Matsusaki, Takafumi Funaki, Shinya Kato, Ikuro Maruyama, Mitsuru Akashi 4765	

14:10	3M-11	Development of the Small-Diameter Vascular Grafts Based on Silk Fibroins from Bombyx mori for the Tissue Engineering. <u>Yasumoto Nakazawa</u> , Michiko Sato, Toshiki Kikuchi, Kan Kajimoto, Tai Iwamura, Katsumi Miyauchi, Hiroyuki Daita, Masataka Sata, Tetsuo Asakura 4767
		K. Akiyoshi, presiding
14:35	3M-12	Surface modification of HAp and fabrication of PLLA/HAp composite materials (III)—Effect on mechanical properties <u>Mami Hatanaka</u> , Masahiro Fujita, Yuko Takeoka, Mamoru Aizawa, Masahiro Rikukawa 4769
15:00	3M-13	Fabrication and in vitro evaluation of poly(L-lactide)/biphasic ceramic composites <u>Nami Sugiyama</u> , Masahiro Fujita, Yuko Takeoka, Mamoru Aizawa, Masahiro Rikukawa 4771
15:25	3M-14	Fabrication of Layer-by-Layer Micro-patterning Composed of Biopolymers or Living Cells by Inkjet Printing <u>Kayo Sakaue</u> , Koji Kadowaki, Michiya Matsusaki, Mitsuru Akashi 4773

Room N

Wednesday, September 16

Biopolymers and Biorelated Polymers

		T. Sato, presiding
10:00	1N-03	Development of "DNA dots" by introduction of multiple fluorescent dyes into DNA. <u>Koji Sekiguchi</u> , Tomohiko Takatsu, Hiromu Kashida, Hiroyuki Asanuma . 4775
10:25	1N-04	Oligonucleotide Modification of M ₁₂ L ₂₄ Spherical Complex and Recognition of Complementary DNA <u>Takashi Kikuchi</u> , Sota Sato, Yoshihisa Sei, Kentaro Yamaguchi, Makoto Fujita 4777
10:50	1N-05	Stability assessment of oligoDNA/carbon nanotube hybrids <u>Yuki Yamamoto</u> , Tsuyohiko Fujigaya, Naotoshi Nakashima 4779
11:15	1N-06	High-throughput analysis of single nucleotide polymorphisms using partially double-stranded DNA probes <u>Tomoya Ishii</u> , Kentaro Muraki, Naohiko Shimada, Arihiro Kano, Nao Nishida, Katushi Tokunaga, Atsushi Maruyama 4781
11:40	1N-07	Analysis of RNA using partialy double-stranded probe and cationic copolymer <u>Asako Nakamura</u> , Naohiko Shimada, Tomoya Ishii, Kentaro Muraki, Arihiro Kano, Atsushi Maruyama 4783
		A. W. Kawaguchi, presiding
12:55	1N-08	Design of cationic copolymer as an inducer of B-Z transition of DNA <u>Naohiko Shimada</u> , Arihiro Kano, Atsushi Maruyama 4785
13:20	1N-09	Design and characterization of siRNA carriers composed of polyanions grafted with siRNA and polycations <u>Hiroyasu Takemoto</u> , Masataka Nakanishi, Kanjiro Miyata, Nobuhiro Nishiyama, Yuichi Yamasaki, Kazunori Kataoka 4787
13:45	1N-10	Ten years of progress on fungal chitosan research— <u>Nitar Nwe</u> , Tetsuya Furuike, Seiichi Tokura, Willem F. Stevens, Hiroshi Tamura 4789
14:10	1N-11	Preparation of chitin nanofibers and its transparent nano-composite film

		<u>Masafumi Yoshioka</u> , Shinsuke Ifuku, Masaya Nogi, Kentarou Abe, Minoru Morimoto, Hiroyuki Saimoto, Hiroyuki Yano.....	4791
14:35	1N-12	Synthesis of Inhibitors Specific to Heparanase <u>Yuki Fujita</u> , Masashi Ohmae, Shunsaku Kimura.....	4793
		A. Maruyama, presiding	
15:00	1N-13	Chemoenzymatic Synthesis of Alginate Having Amylose Graft-chains. <u>Yuji Omagari</u> , Yoshiro Kaneko, Jun-ichi Kadokawa	4795
15:25	1N-14	Derivatization of chitin in ionic liquid <u>Shozaburo Mine</u> , Hironori Izawa, Yoshiro Kaneko, Jun-ichi Kadokawa...	4797
15:50	1N-15	Preparation of Cellulose-Chitin Composite Gel and Film Using Ionic Liquids. <u>Akihiko Takegawa</u> , Yoshiro Kaneko, Jun-ichi Kadokawa	4799
16:15	1N-16	Rheological Properties of Concentrated Solutions of Gellan in an Ionic Liquid <u>Jun-ichi Horinaka</u> , Shinichirou Honda, Toshikazu Takigawa.....	4801
16:40	1N-17	The Inhibition Mechanisms of the Glycomonomers and the Glycopolymers for the β -Glucuronidase—The π - π Stacking Interaction and the Cluster Effect <u>Asei William Kawaguchi</u> , Tatsunori Egashira, Haruki Okawa, Kazuhiko Hashimoto.....	4803
17:05	1N-18	Surface modification of a liposome by polymer adsorption and its functionalization by conjugation with functional nanomaterials <u>Rina Iikubo</u> , Keiji Fujimoto.....	4805

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Biopolymers and Biorelated Polymers

		Y. Matsuo, presiding	
9:10	2N-01	phenylenediamine-modified resin for detecting redox enzyme on chip Kenichi Kanno, Yasumasa Matsumoto, Yuya Yoshida, Yuichiro Takaki, Hirofumi Kawazumi, Tsuyoshi Arakawa, Yuya Konishi.....	4807
9:35	2N-02	phenylenediamine-film for detecting redox enzyme <u>Kenichi Kanno</u> , Yasumasa Matsumoto, Yuya Yoshida, Yuichiro Takaki, Hirofumi Kawazumi, Tsuyoshi Arakawa, Takeshi Endo	4809
10:00	2N-03	Preparation of plastic antibodies by molecular imprinting and affinity purification <u>Yu Hoshino</u> , Takashi Kodama, Horoyuki Koide, Takeo Urakami, Naoto Oku, Yoshio Okahata, Kenneth Shea.....	4811
10:25	2N-04	Fabrication of oriented microtubules and estimation of polarity <u>Yoshiki Tamura</u> , Momoko Yoshida, Kazuhiro Shikinaka, Ryuzou Kawamura, Akira Kakugo, Jian Ping Gong, Hidemitsu Furukawa.....	4813

Bio-inspired Nanotechnology

11:05	SO	Introductory Remarks Shigeori Takenaka, Takahiro Sato	5232
		S. Takenaka, presiding	
11:15	2N-06	Design and application of nanogel sheet by nanogel bottom-up method <u>Shinichi Sawada</u> , Yoko Tada, Kazunari Akiyoshi	5233
11:40	2N-07	Cell chip using collagen/PEG micropatterned technique <u>Yusuke Sakai</u> , Yukiko Yoshiura, Kohji Nakazawa	5235
		T. Ueno, presiding	
12:55	2N-08	Importance of multiple display of oligosaccharides in	

		sugar-dependent nuclear transport <u>Shota Sekiguchi</u> , Kenichi Niikura, Yasutaka Matsuo, Shigehiro Yoshimura, Kuniharu Ijio.....	5237
13:20	2N-09	Thermal Denaturation, Renaturation, and Aggregation of Double Helical Polymers <u>Takahiro Sato</u> , Yusuke Biyajima.....	5239
13:45	2N-10	Solvent-Dependent Chain Stiffness of Amylose tris(3,5-dimethylphenylcarbamate) in Solution Maiko Tsuda, <u>Ken Terao</u> , Yasuko Nakamura, Shinichi Kitamura, Takahiro Sato	5241
14:10	2N-11	Highly Sensitive Detection of Ciguatoxins using Antibodies <u>Takeshi Tsumuraya</u> , Ikuo Fujii, Masahiro Hirama	5243
		T. Tsumuraya, presiding	
14:35	2N-12	Synthesis of Inorganic Materials using Porous Protein Crystals <u>Satoshi Abe</u> , Susumu Kitagawa, Takafumi Ueno	5245
15:00	2N-13	Heme binding analysis of heme oxygenase and its application to heme sensor <u>Shinya Koga</u> , Hiroshi Iwasaki, Hideyuki Komatsu, Masakazu Sugishima, Yuichiro Higashimoto, Masato Noguchi, <u>Hiroshi Sakamoto</u> ..	5247
15:25	2N-14	Fabrication of Asymmetric Polymer Modified Bio-Nanodots and Their Characterization <u>Koichiro Uto</u> , Mika Yamamoto, Kazuya Yamamoto, Takao Aoyagi, Kenji Iwahori, Ichiro Yamashita.....	5249
15:50	2N-15	Design and functional evaluation of dual prenyltransferase inhibitors for targeting common structure of protein surface <u>Junko Ohkanda</u>	5251
		J. Ohkanda, presiding	
16:15	2N-16	Interaction of cells with peptides that bind to sialyloligosaccharides <u>Teruhiko Matsubara</u> , Miki Yamashita, Kazutoshi Iijima, Toshinori Sato .	5253
16:40	2N-17	Construction of nanocapsule by self-assembly of β -Annulus peptide <u>Kenta Watanabe</u> , Kazunori Matsuura, Nobuo Kimizuka	5255
17:05	2N-18	Polysaccharide and nucleic acid complex's solution property. <u>Tsubasa Matsuzaki</u> , Siniti Motiduki, Kazuo Sakurai.....	5257

Friday, September 18

Bio-inspired Nanotechnology

		S. Sato, presiding	
9:10	3N-01	Construction of the specific DNA structures from photoreactive DNA conjugates <u>Toshihiro Ihara</u> , Pelin Arslan, Motoko Mukae, Akinori Jyo.....	5259
9:35	3N-02	Novel DNA nanomachines driven by polyelectrolytes as fuels <u>Jie Du</u> , Naohiko Shimada, Arihiro Kano, Atsushi Maruyama.....	5261
10:00	3N-03	Selective capturing of a guest molecule into nanometer-sized wells embedded in a DNA nanostructure <u>Akinori Kuzuya</u> , Mayumi Kimura, Naohiro Koshi, Kentaro Numajiri, Makoto Komiyama	5263
		T. Ihara, presiding	
10:25	3N-04	DNA-templated J-aggregate self-assembled from a nucleotide-appended anthracene dye and its functions <u>Rika Iwaura</u> , Yuu Someya, Hiroharu Yui, Tomohiko Iizawa, Mayumi Ohnishi-kameyama	5265
10:50	3N-05	Evaluation of ferrocenylnaphthalene diimide derivatives for electrochemical telomerase indicator <u>Shinobu Sato</u> , Ryota Fujikawa, Keiichi Ohtsuka, Shigeori Takenaka	5267

11:15	3N-06	Adsorption of DNA onto honeycomb films <u>Koki Sugiyama</u> , Olaf Karthaus.....	5269
11:40	3N-07	DNA nanofiber arrays for nanodevice configuration <u>Hidenobu Nakao</u> , Hideki Hayashi, Kazushi Miki	5271
T. Wada, presiding			
12:55	3N-08IL	Designable DNA Functions toward New Nanobiotechnology <u>Naoki Sugimoto</u>	5273
13:45	3N-10	Construction of DNA-templated nanowire by using galactose-modified naphthalenediimide <u>Keiichi Ohtsuka</u> , Kohei Komizo, Shigeori Takenaka	5276
14:10	3N-11	Construction of light-driven DNA nanodevice and its applications <u>Xingguo Liang</u> , Hidenori Nishioka, Toshio Mochizuki, Mengguang Zhou, Nobutaka Takenaka, Hiroyuki Asanuma	5278
H. Nakao, presiding			
14:35	3N-12	Stabilization of DNA duplex through electrostatic interaction between cationic dyes and phosphate anions <u>Takamitsu Hayashi</u> , Taiga Fujii, Hiromu Kashida, Hiroyuki Asanuma..	5280
15:00	3N-13	Syntheses of Peptide Ribonucleic Acids (PRNA) that Carries a Phenylboronic Acid Moiety as an Internal Switch of the Base's Syn-Anti Orientation and the Active Control of RNA-Complexation Behavior by pH as an External Factor <u>Takehiko Wada</u> , Keiichiro Geshi, Nobuya Sawa, Eriko Endo, Seiji Sakamoto, Yasuyuki Araki, Tatsuya Mizutani, Yoshihisa Inoue	5282
15:25	3N-14	Electrochemical detection of colon cancer gene suffered from aberrant methylation by using ferrocenylnaphthalene diimide as a hybridization indicator <u>Shinobu Sato</u> , Yusuke Kanezaki, Masato Tsueda, Keiichi Ohtsuka, <u>Shigeori Takenaka</u>	5284

Room Q

Wednesday, September 16

Synergistic Biopolymer System

9:50	SO	Introductory Remarks Naoki Tanaka, Kazunari Akiyoshi.....	5170
M. Nango, presiding			
10:00	1Q-03	Observation of physical property changes of supported lipid bilayer on a Quartz-crystal Microbalance based on an admittance analysis <u>Hiroyuki Furusawa</u> , Yukihiro Kudo, Yoshio Okahata	5171
10:25	1Q-04	Observation of conformational changes on formation of a ribosomal translation initiation complex using an admittance analysis of a Quartz-crystal microbalance <u>Yumi Tsuyuki</u> , Shuntaro Takahashi, Hiroyuki Furusawa, Yoshio Okahata	5173
Y. Okahata, presiding			
10:50	1Q-05	Design of Artificial Photosynthesis Gel Systems Involving Cooperative Electronic Transmission Circuit <u>Kosuke Okeyoshi</u> , Ryo Yoshida.....	5175
11:15	1Q-06	Self-assembly of photosynthetic antenna polypeptides/pigments complexes <u>Kaori Harada</u> , Osamu Goto, Katsunori Nakagawa, Kouji Iida, Hirofumi Tanaka, Takuji Ogawa, Hideki Hashimoto, Takehisa Dewa, <u>Mamoru</u>	

		<u>Nango</u>	5177
11:40	1Q-07	The role of amyloid fibril formation on the activity of chaperone peptide. <u>Keisuke Miyata</u> ,Kazuhito Teramura,Shigeru Kunugi,Daizo Hamada, <u>Naoki Tanaka</u>	5179
		N. Tanaka, presiding	
12:55	1Q-08	Chaperoning Activity of Cationic Comb-Type Copolymer for Intermolecular DNA Quadruplex <u>Rui Moriyama</u> ,Naohiko Shimada,Arihiro Kano,Atsushi Maruyama	5181
13:20	1Q-09	Opposite Effects of Stimuli-Responsive Polypeptides on Protein Folding <u>Ryo Hanamura</u> ,Ayae Sugawara,David A Tirrell,Tatsuya Okubo.....	5183
13:45	1Q-10	Inhibition of protein amyloidosis with glycosaminoglycan model polymers <u>Yoshiko Miura</u> ,Hikaru Mizuno	5185
		K. Akiyoshi, presiding	
14:10	1Q-11IL	Cross-Talk between Biomacromolecules in a Cell-Sized Closed Vesicle: Real World Modeling of Living Cell <u>Kenichi Yoshikawa</u>	5187
15:00	1Q-13	Novel molecular imprinting technology utilizing antibody variable region fragments—Open Sandwich Molecular imprinting method: OS-MIP <u>Hiroshi Ueda</u> ,Kouichi Minami,Masaki Ihara,Hirohiko Tsuzuki.....	5190
		H. Asanuma, presiding	
15:25	1Q-14	Design of Fluorescent Biosensors from a Ribonucleopeptide Assembly <u>Takashi Morii</u>	5192
15:50	1Q-15	Function and application of "Super Catalytic Antibody" (Antigenase) <u>Emi Hifumi</u>	5194
16:15	1Q-16	Photodynamic therapy for cancer using cross-linked polymeric micelle encapsulating photosensitizers <u>Michiaki Kumagai</u> ,Stephanie Herlambang,Souta Horie,Shigeto Fukushima,Yuji Morimoto,Woo-dong Jang,Nobuhiro Nishiyama,Kazunori Kataoka	5196
		H. Ueda, presiding	
16:40	1Q-17	Development of highly sensitive molecular beacons by "base pairs" of dyes in a stem part. <u>Hiromu Kashida</u> ,Tomohiko Takatsu,Xingguo Liang,Kosuke Niwa,Tomokazu Takase,Yasuko Yoshida,Hiroyuki Asanuma.....	5198
17:05	1Q-18	Effect of PEGylation of head-tail type polycation vector to polyplex formation <u>Atsushi Harada</u> ,Yuka Kimura,Kenji Kono	5200
17:30	1Q-19	Polymer Modification Induces Higher Order Structure of the Collagen Model Peptide <u>Chie Kojima</u> ,Sayako Tsumura,Tomoyuki Suehiro,Atsushi Harada,Kenji Kono	5202
17:55	1Q-20	Novel end-functionalized polymers applicable for versatile bioconjugation method: design, synthesis, and utilization to gene carrier <u>Shigehiro Hiki</u> ,Mai Sanjoh,Kazunori Kataoka	5204

Thursday, September 17

Synergistic Biopolymer System

K. Niikura, presiding

9:10	2Q-01	Biosensing system by utilizing thermoresponsive core-shell type polymeric micelle
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		<u>Naoyuki Fukushima</u> , Yoshiaki Fujinawa, Katsumi Uchida, Koji Tsuchiya, Hirofumi Yajima	5206
9:35	2Q-02	High Performance Surface Plasmon Resonance Biosensing System by Utilizing Phase Transition Behavior of Thermoresponsive Core-shell Type Polymeric Micelle <u>Maiko Iuchi</u> , Naoyuki Fukushima, Katsumi Uchida, Koji Tsuchiya, Hirofumi Yajima	5208
		Y. Iwasaki, presiding	
10:00	2Q-03	Novel Biosensing based on Production Rates of Au Nanoparticles <u>Yu Hirai</u> , Mamoru Aizawa, Takeshi Serizawa	5210
10:25	2Q-04	Synthesis of pyridine-graft-functional PEG copolymer and their interfacial characterization <u>Takashi Ishiduka</u> , Michihiro Iijima, Koji Ueno, Tetsuya Tateishi, Hidenori Otsuka.....	5212
		T. Serizawa, presiding	
10:50	2Q-05	Design and Function of Vitamin B6-polysaccharide Conjugates <u>Yuji Tsuchido</u> , Yoshihiro Sasaki, Kazunari Akiyoshi	5214
11:15	2Q-06	Sequence-selective metallization of synthesized DNA polymers composed of natural and nonnatural bases <u>Yukie Watanabe</u> , Aya Tanaka, Yasutaka Matsuo, Kenichi Niikura, Kuniharu Ijro	5216
11:40	2Q-07	Caged culture substrate based on an amino-terminated surface and a photocleavable PEG <u>Shingo Kaneko</u> , Jun Nakanishi, Hidekazu Nakayama, Yutaro Yoshino, Kazuo Yamaguchi, Yasuhiro Horiike	5218
		H. Otsuka, presiding	
12:55	2Q-08	Characterization of Dual-Function Surface with Zwitterionic Polymer Brushes <u>Hisatomo Suzuki</u> , Hiromi Kitano, Kohji Ohno, Yoshiuki Saruwatari, Kenji Hisada, Takuya Kato	5220
13:20	2Q-09	Biodegradable Polyrotaxane Exhibiting Protease-Triggered Hydrolysis <u>Yuichi Ohya</u> , Seigo Takamido, Koji Nagahama, Tatsuro Ouchi, Nobuhiko Yui	5222
		T. Yamaoka, presiding	
13:45	2Q-10	Multi-peptide-chitosan membranes synergetically promote different receptor interactions <u>Kentaro Hozumi</u> , Kazuki Kobayashi, Chikara Fujimori, Fumihiko Katagiri, Yamato Kikkawa, Yuichi Kadoya, Motoyoshi Nomizu	5224
14:10	2Q-11	Biomolecular recognition on micropatterned fluid lipid bilayer arrays <u>Kosuke Nakai</u> , Yasuhiko Iwasaki, Kenichi Morigaki	5226
		Y. Ohya, presiding	
14:35	2Q-12	Spheroid formation composed of hepatocytes and nonparenchymal cells for tissue engineering <u>Yuichi Nakasone</u> , Masashi Yamamoto, Tomomi Satomi, Kazunori Kataoka, Tetsuya Tateishi, Hidenori Otsuka	5228
15:00	2Q-13	Differentiation potential of MSC subpopulations with different surface marker densities purified by cell-rolling column Atsushi Mahara, <u>Tetsuji Yamaoka</u>	5230

Room R

Wednesday, September 16

New Horizon in Polysaccharide Materials

9:50	SO	Introductory Remarks Junichi Kadokawa, Takuya Kitaoka	4964
		D. Tatsumi, presiding	
10:00	1R-03	Molecular dynamics simulation study of the solvated cellulose crystal materials <u>Toshifumi Yui</u> , Koji Tominaga, Hirohide Shiiba, Tatsuhiko Miyata, Fumio Hirata, Kenji Tajima, Min Yao	4965
10:25	1R-04	Functionalization of woody polysaccharides—to approach creation of artificial woody cell wall <u>Yasumitsu Uraki</u> , Yutaka Tamai, Takuro Hirai, Hiroshi Yabu, Masaru Tanaka, Masatsugu Shimomura.....	4967
		Y. Uraki, presiding	
10:50	1R-05	Structures and Properties of Poly(L-lactic acid) in situ Polymerized between Cellulose Nano fiber <u>Takashi Nishino</u> , Masaru Kotera, <u>Katsuya Jinno</u>	4969
11:15	1R-06	Potential of polysaccharides as additives for cellulosic materials <u>Daisuke Tatsumi</u>	4971
11:40	1R-07	Preparation and Functional Development of Cellulose Derivatives Having a Hetero Atom in the Side Chains—An Introduction of Sulfur or Phosphorus <u>Dan Aoki</u> , Yoshikuni Teramoto, Yoshiyuki Nishio	4973
		Y. Yuguchi, presiding	
12:55	1R-08	Individualization of nano-sized native cellulose fibrils by TEMPO-mediated oxidation and expression of the material properties <u>Tsuguyuki Saito</u> , Yimin Fan, Hayaka Fukuzumi, Yusuke Okita, Akira Isogai	4975
13:20	1R-09	Recent Developments of All-Cellulose Composites <u>Takashi Nishino</u> , Masaru Kotera, Mari Suetsugu.....	4977
13:45	1R-10	Organization of functional dyes through the use of semi-artificial polysaccharides <u>Kouta Sugikawa</u> , Munenori Numata, Kazuki Sada, Seiji Shinkai	4979
		T. Nishino, presiding	
14:10	1R-11	Structural characterization of association of β -1,4 linked glucan chain and dye molecule <u>Yoshiaki Yuguchi</u> , Yukihiro Nishikawa	4981
14:35	1R-12	Hybrid Oligosaccharide-poly(N-isopropylacrylamide) Block Copolymer Systems: "Click" Chemistry and Self-assembling Morphology <u>Issei Otsuka</u> , Keita Fuchise, Sami Halila, Sebastien Fort, Karim Aissou, Akira Hirao, Toyoji Kakuchi, Redouane Borsali	4983
		J. Kadokawa, presiding	
15:00	1R-13IL	Synthesis of Polysaccharides via Enzymatic Polymerization <u>Shiro Kobayashi</u>	4985
		T. Furuike, presiding	
15:50	1R-15	Preparation of novel glycogen-based polysaccharide materials by means of phosphorylase-catalyzed chain-elongation <u>Hironori Izawa</u> , Yoshiro Kaneko, Jun-ichi Kadokawa.....	4988
16:15	1R-16	Synthesis of Temperature Responsive Polysaccharide <u>Kosuke Maruyama</u> , Toru Hoshi, Toshiki Hagiwara, Takashi Sawaguchi .	4990
16:40	1R-17	Sulfated polysaccharides with anti-virus activity for medical materials <u>Takashi Yoshida</u> , Guxi Te, Taisei Kanamoto, Hideki Nakashima	4992
		T. Yoshida, presiding	

17:05	1R-18	Preparation and biological evaluation of GlycoCD <u>Tetsuya Furuike</u> , Hiroshi Tamura.....	4994
17:30	1R-19	Syntheses of Polyacrylic Superabsorbent Gels with Pullulan <u>Hiroaki Saijo</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi .	4996
17:55	1R-20	Preparation of Water-Insoluble Composite Films from Glycosaminoglycans <u>Mineo Hashizume</u> , Hironobu Kobayashi, Masafumi Ohashi, Tomoko Numata	4998

Thursday, September 17

New Horizon in Polysaccharide Materials

T. Kida, presiding

9:10	2R-01	Synthesis of gold nanoparticles using NMMO redox system for in situ glyco-conjugation <u>Shingo Yokota</u> , Takuya Kitaoka	5000
9:35	2R-02	Stimuli-responsiveness in amylose modified with boronic acid <u>Yasumasa Kanekiyo</u> , Masayuki Tsuchiya, Yasumasa Suzuki, Ken Okamoto, Katsuhiko Ariga	5002
10:00	2R-03	Recognition of glycosaminoglycans by liver sinusoidal endothelial cells <u>Ryota Hamano</u> , Shinichi Mochizuki, Naohiko Shimada, Arihiro Kano, Akira Teramoto, Koji Abe, Atsushi Maruyama.....	5004

H. Matsuno, presiding

10:25	2R-04	Molecular Recognition by 6-O-Modified Cyclodextrins in Nonpolar Solvents <u>Toshiyuki Kida</u> , Yoshinori Fujino, Kazuhiro Miyawaki, Eiichi Kato, Mitsuru Akashi	5006
10:50	2R-05	Synthesis of glyco-azobenzene derivatives and their application to surface glyco-modifications <u>Yukiko Ogawa</u> , Chiharu Yoshiyama, Takuya Kitaoka	5008

Y. Ogawa, presiding

11:15	2R-06	Application of Carbon Microcoils (CMCs) Coated with Saccharides— The Versatile Uses of Carbon Microcoils (CMCs) with Saccharides for Biomaterials and Daily Necessities <u>Hisae Okamoto</u> , Masaki Ichihara, Seiji Motojima	5010
11:40	2R-07	Maltose macromer-grafted porous particles for selective separation of lectins <u>Takao Satoh</u> , Tomohiro Shirosaki, Shoji Nagaoka, Yuka Yamamoto, Makoto Takafuji, Hirotaka Ihara	5012

T. Kitaoka, presiding

12:55	2R-08	Design and application of new functionalized glycogen polysaccharide nano-ball <u>Haruko Takahashi</u> , Shin-ichi Sawada, Kazunari Akiyoshi	5014
13:20	2R-09	Selection and characterization of the short peptides that specifically bind to highly crystalline cellulose surfaces <u>Hisao Matsuno</u> , Kentaro Kanai, Jun Ishikawa, Makio Iwahashi, Shigeru Shimizu, Kimio Kurita, Takeshi Serizawa	5016
13:45	2R-10	Development of nucleic acid delivery system for targeting antigen presenting cells by using polysaccharide <u>Shinichi Mochizuki</u> , Kazuo Sakurai	5018

Polymer Industry and Technology: Processes and Products

M. Takafuji, presiding

14:10	2R-11	Effect of polystyrene addition on tensile properties in melt spinning <u>Tae Hwan Oh</u> , Seok Kyun Noh, Sung Soo Han, Won Seok Lyoo, Seong Cheol Kim 5485
14:35	2R-12	Preparation of Ionomer-Clay Composites and Their Structure and Mechanical Properties <u>Hidetoshi Kumagai</u> , Shoichi Kutsumizu, Ryo Mashita, Takashi Sasaki, Mikio Yamada 5487
15:00	2R-13	Liquid Permeability Control of Crazed Polymer Film by UV Light <u>Takahiro Hirama</u> , Sokichi Okubo, Teruyuki Yokoi, Akiyoshi Takeno, Minoru Miwa 5489
		H. Sugimoto, presiding
15:25	2R-14	Properties of polyurethane made from alicyclic diisocyanate and alicyclic diol <u>Yoshimi Itoh</u> , Masafumi Yamaguchi, Takeshi Maeda 5491
15:50	2R-15	Blister Fracture of Rubbers for O-ring Exposed to High Pressure Hydrogen Gas <u>Shin Nishimura</u> , Junichiro Yamabe, Hirotada Fujiwara 5493
16:15	2R-16	Evaluation of Hydrogen Content in Rubber Material for Pressure-resistant Vessels Sealing <u>Hirotada Fujiwara</u> , Junichiro Yamabe, Shin Nishimura 5495
		H. Fujiwara, presiding
16:40	2R-17	Preparation of cellulose/inorganic materials particles composite microbeads and thier applications to abrasive of Silicone Wafer <u>Shoji Nagaoka</u> , Kazuhiro Tonda, Akinari Magota, Ken Satoh, Makoto Takafuji, Hirotaka Ihara 5497
17:05	2R-18	An effect of the bamboo for the water absorption and the oil absorption of Insyuu-washi <u>Naofumi Terada</u> , Shinichi Kimura, Hiromi Konishi 5499

Room T1

Wednesday, September 16

Frontiers and Advances of Polymeric Biomaterials

9:50	SO	Introductory Remarks Masaru Tanaka, Takeshi Serizawa 5020
		M. Tanaka, presiding
10:00	1T1-03IL	Correlation between the Function of polymer Materials and the Structure of Vicinal Water <u>Hiromi Kitano</u> 5021
10:50	1T1-05	Mesoscale Structure Formation of Adsorbed Interfacial Water Studied by Surface Forces Measurement and SFG Spectroscopy Atsushi Kobayashi, <u>Masashi Mizukami</u> , Kazue Kurihara 5024
11:15	1T1-06	Charactalization of ultra thin temperature responsive polymer layer on glass surface <u>Kazuhiro Fukumori</u> , Yoshikatsu Akiyama, Yoshikazu Kumashiro, Jun Kobayashi, Masayuki Yamato, Kiyotaka Sakai, Teruo Okano 5026
11:40	1T1-07	Dynamic Behavior of Temperature-Responsive Poly(N-isopropylacrylamide) Ultra Thin Layer <u>Yoshikazu Kumashiro</u> , Kazuhiro Fukumori, Yoshikatsu Akiyama, Kiyotaka Sakai, Masayuki Yamato, Teruo Okano 5028
		M. Mizukami, presiding

12:55	1T1-08	Thermally Modulated Cell Adhesion/Detachment System Using Thermoresponsive Polymer Brush Surfaces <u>Hironobu Takahashi</u> , Masamichi Nakayama, Teruo Okano.....	5030
13:20	1T1-09	Preparation of thermoresponsive interface for cell adhesion/detachment control <u>Minami Watanabe</u> , Kenichi Nagase, Akihiko Kikuchi, Teruo Okano	5032
13:45	1T1-10	Network structures and dynamics of swollen poly(acrylate)s as revealed by ¹³ CNMR <u>Yuko Miwa</u> , Hiroyuki Ishida, Hazime Saito, Masaru Tanaka, Akira Mochizuki	5034
Y. Akiyama, presiding			
14:10	1T1-11	Correlation between the adhesion of fibroblast to various polymer surfaces and the phase transition of sorbed water <u>Makoto Gemmei-ide</u> , Atsushi Ohya, Hiromi Kitano	5036
14:35	1T1-12	Cell adhesion behavior on functional polymer brush surfaces using quartz crystal microbalance with dissipation <u>Tomomi Kitagawa</u> , Yuuki Inoue, Madoka Takai, Kazuhiko Ishihara	5038
15:00	1T1-13	Hydration State and Protein Adsorption Behavior at Phospholipid Polymer Brush Surface <u>Yuuki Inoue</u> , Kazuhiko Ishihara	5040
T. Serizawa, presiding			
15:25	1T1-14	Novel Biointerface with Well-Defined Concentrated Polymer Brushes <u>Chiaki Yoshikawa</u> , Shinya Hattori, Takako Honda, Kun Zhang, Dohiko Terada, Hisatoshi Kobayashi	5042
15:50	1T1-15	In vivo pharmacokinetics of fine particles grafted with hydrophilic polymer brush <u>Tatsuki Akashi</u> , Kohji Ohno, Takeshi Fukuda, Yoshinobu Tsujii, Yoshimasa Takafuji, Yasuhiko Tabata	5044
16:15	1T1-16	Preservation of Hematopoietic Stem Cells from Umbilical Cord Blood Stored in a Surface Derivatized with Polymer Nanosegments <u>Akon Higuchi</u>	5046
16:40	1T1-17	Cryoprotective properties of poly-L-lysine derivative polyampholytes <u>Kazuaki Matsumura</u> , Fumiaki Hayashi, Toshio Nagashima, Suong-hyu Hyon	5048
A. Higuchi, presiding			
17:05	1T1-18	Biodistribution of carbon nanohorns and their surface modification <u>Sachiko Matsumura</u> , Jin Miyawaki, Ryota Yuge, Shigeo Sato, Akihiro Tomida, Sumio Iijima, Masako Yudasaka, Kiyotaka Shiba	5050
17:30	1T1-19	Competitive adsorption of fibronectin/albumin and cell adhesion to self-assembled monolayers with different surface functional groups <u>Yusuke Arima</u> , Hiroo Iwata.....	5052
17:55	1T1-20	Design of dynamic surface based on polyrotaxanes <u>Dae Hyeok Yang</u> , Ryo Katoono, Jun Yamaguchi, Yoshiko Miura, Nobuhiko Yui	5054

Thursday, September 17

Frontiers and Advances of Polymeric Biomaterials

K. Kato, presiding

9:10	2T1-01	Surface Modification Using Peptides that Specifically Bind to Polymers: Relations between Interfacial Structure of Polymers and Expression of the Peptide Functions. <u>Takaaki Date</u> , Jun Sekine, Hisao Matsuno, Takeshi Serizawa	5056
9:35	2T1-02	Biological selection of peptides that bind to π -conjugated polymers	

		<u>Hiroataka Ejima</u> ,Hiromi Kikuchi,Hisao Matsuno,Hirofumi Yajima,Takeshi Serizawa	5058
10:00	2T1-03	Construction of peptides that specifically bind to self-assembled nanomaterials for development of molecular arrays <u>Toshiki Sawada</u> ,Tsuyoshi Takahashi,Hisakazu Mihara.....	5060
		M.Nomizu, presiding	
10:25	2T1-04	Preparation of collagen matrix possessing properties of native tissue <u>Kwangwoo Nam</u> ,Seiichi Funamoto,Tsuyoshi Kimura,Akio Kishida	5062
10:50	2T1-05	Development of Collagen-Sensitive gelator triggered by Triple helix interaction <u>Michiya Matsusaki</u> ,Ryotaro Amekawa,Tomonori Waku,Kohji Nishida,Mitsuru Akashi.....	5064
11:15	2T1-06	Thermo Responsive Sol-gel Transition of Multi-armed Polyethylene Glycol / Collagen Model Peptide <u>Ryotaro Amekawa</u> ,Tomonori Waku,Michiya Matsusaki,Mitsuru Akashi.....	5066
11:40	2T1-07	Effect of layer-by-layer nanofilms prepared on cell interface to cellular functions <u>Koji Kadowaki</u> ,Michiya Matsusaki,Mitsuru Akashi	5068
		H. Kobayashi, presiding	
12:55	2T1-08	Honeycomb patterned polymer films promote proliferation of mesenchymal stem cells <u>Yuka Morita</u> ,Sadaaki Yamamoto,Hiroshi Yabu,Emiko Ito,Osamu Honmou,Kuniharu Ijro,Masatsugu Shimomura	5070
13:20	2T1-09	Development of the spheroid array using honeycomb film <u>Yusuke Sakai</u> ,Kohju Ito,Kentaro Shiratsuchi,Masaru Tanaka,Masatsugu Shimomura,Kohji Nakazawa	5072
13:45	2T1-10	Fabrication and evaluation of hydrogel with thermo-responsive honeycomb structure as tissue engineering scaffold <u>Yasuhiro Maeda</u> ,Chika Sato,Ryo Yoshida	5074
14:10	2T1-11	Biomolecule Gradient in a Three-dimensional Scaffold Directs Spatial Osteoblastic Differentiation of Mesenchymal Stem Cells <u>Masaya Yamamoto</u> ,Yasuhiko Tabata	5076
		G. Chen, presiding	
14:35	2T1-12	Encapsulation of Langerhans of islets with living cells by amphiphilic polymers <u>Yuji Teramura</u> ,Hiroo Iwata	5078
15:00	2T1-13	Functional Three-Dimensional Cell Culture Systems using Cell Adhesive Peptides <u>Yuji Yamada</u> ,Fumihiko Katagiri,Kentaro Hozumi,Motoyoshi Nomizu..	5080
15:25	2T1-14	Preservation and evaluation of stem cells using cytocompatible phospholipid polymer hydrogel with reversible property <u>Tomohiro Konno</u> ,Kazuhiko Ishihara	5082
15:50	2T1-15	Preparation and characterization of amphiphilic polymers for the improvement of cell transplantation <u>Tetsushi Taguchi</u> ,Michiko Ito.....	5084
		T. Konno, presiding	
16:15	2T1-16	Development of Polypeptide Fibers for Scaffolds <u>Takayuki Matsuda</u> ,Takeyuki Kitagawa,Takayuki Mino,Hiroshi Uyama,Yasuhiko Tabata.....	5086
16:40	2T1-17	Nanofiber based-scaffolds for corneal stromal regeneration <u>Hisatoshi Kobayashi</u> ,Shinya Hattori,Takako Honda,Seiichi Funamoto,Shuji Sasaki,Yoshihide Hashimoto,Toshiya Fujisato,Dohiko Terada,Tsuyoshi Kimura,Manabu Mochizuki,Akio Kishida.....	5088

17:05	2T1-18	Fabrication of Biodegradable Polymer Scaffolds with Controlled Porous Structures <u>Guoping Chen</u> , Young-gwang Ko, Naoki Kawazoe, Tetsuya Tateishi.....	5090
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Friday, September 18

Frontiers and Advances of Polymeric Biomaterials

A. Kikuchi, presiding

9:10	3T1-01	Control the redifferentiation of chondrocytes on hydrogels <u>Jing Jing Yang</u> , Yong Mei Chen, Jian Fang Liu, Takayuki Kurokawa, Jian Ping Gong	5092
9:35	3T1-02	Design of basement membrane-like materials using laminin-derived polypeptide <u>Tadashi Nakaji-hirabayashi</u> , Koichi Kato, Hiroo Iwata	5094
10:00	3T1-03	Design of Interface between Collagen and Neural Stem Cell Using Chimeric Protein <u>Koichi Kato</u> , Yuji Edgar Egawa, Makiko Hiraoka, Tadashi Nakaji-hirabayashi, Hiroo Iwata	5096

T. Nakaji-Hirabayashi, presiding

10:25	3T1-04	Construction of the capsule wall optimized for a DDS carrier by deposition of organic and inorganic biomaterials onto a liposome <u>Yuuka Fukui</u> , Keiji Fujimoto.....	5098
10:50	3T1-05	Surface Modification and Subsequent Apatite Layer Formation onto Commonly Used Polymers Utilizing Wet Processes <u>Mineo Hashizume</u> , Yuri Sakamoto, Atsushi Sakai, Hideharu Kawakubo...	5100
11:15	3T1-06	Synthesis of Stimuli-responsive Nanocomposites and their Biocompatibility <u>Kazutoshi Haraguchi</u> , Kazutaka Murata, Noriko Kotobuki, Touru Takehisa	5102
11:40	3T1-07	Saccharide sensing chip showing traffic light-type color change <u>Yasumasa Kanekiyo</u> , Yuto Iwami, Wakana Takayoshi.....	5104

T. Oya, presiding

12:55	3T1-08	Preparation of thermoresponsive microfluidic surfaces for controlled interaction with bioactive compounds. <u>Hiromasa Moriyama</u> , Taka-aki Asoh, Akihiko Kikuchi	5106
13:20	3T1-09	Preparation and characterization of thermoresponsive capillary chromatography with immobilized metal ion affinity ligands <u>Satoshi Kawahara</u> , Taka-aki Asoh, Akihiko Kikuchi	5108
13:45	3T1-10	Separation Mechanisms on Thermo-responsive Polymer Brushes for Aqueous HPLC — Effects of polymer brush thickness on the retention <u>Yusuke Hattori</u> , Kenichi Nagase, Jun Kobayashi, Akihiko Kikuchi, Yoshikatsu Akiyama, Hideko Kanazawa, Teruo Okano	5110

Y. Miura, presiding

14:10	3T1-11	In-situ X-ray Reflectivity of N-isopropylacrylamide Ultra-thin Films <u>Shuichiro Kuwajima</u> , Yuji Teramura, Keiko Kawano, Kenji Ishida, Kazumi Matsushige, Hiroo Iwata, Hidetoshi Kotera	5112
14:35	3T1-12	Preparation of thermoresponsive nano-interface using ATRP and interaction with peptides. <u>Aya Mizutani</u> , Kenichi Nagase, Akihiko Kikuchi, Hideko Kanazawa, Yoshikatsu Akiyama, Jun Kobayashi, Masahiko Annaka, Teruo Okano	5114
15:00	3T1-13	Preparation of Thermoresponsive Anionic Copolymer Brush for Thermally Modulated Adsorption/Elution of Proteins <u>Kenichi Nagase</u> , Simuck Yuk, Jun Kobayashi, Akihiko	

		Kikuchi, Yoshikatsu Akiyama, Hideko Kanazawa, Masahiko Annaka, Teruo Okano	5116
15:25	3T1-14	Analysis of polyglycerol dendrimer-immobilized silicon surface by reflectometric interference spectroscopy Tooru Ooya, Hyung Woo Choi, Haejoo Lee, Toshifumi Takeuchi	5118

Room T2

Wednesday, September 16

Key Technologies for Precise Recycling of Polymers

9:50	SO	Introductory Remarks Haruo Nishida	5363
		N. Kihara, presiding	
10:00	1T2-03	Thermal degradation behavior of polytetramethylglycolide and its chemical recyclability Yoshito Ando, Hikaru Fujita, Yoshihito Shirai, Haruo Nishida	5364
10:25	1T2-04	Synthesis of polymers containing degradable polyperoxide segments and evaluation of the degradation behavior Eriko Sato, Tomoaki Kitamura, Kenichiro Yasui, Akikazu Matsumoto ..	5366
10:50	1T2-05	Synthesis of Acid-catalyzed Degradable Copolymers by Controlled Cationic Copolymerization Yasushi Ishido, Ryosuke Aburaki, Shokyoku Kanaoka, Sadahito Aoshima	5368
		Y. Ando, presiding	
11:15	1T2-06	Synthesis and oxidative degradation of poly(diacylhydrazine)–Recovery of monomer and oxidative polymerization-depolymerization Nobuhiro Kihara, Yusuke Iino, Kentaro Nagashima	5370
11:40	1T2-07	Photo-crosslinking and De-crosslinking of Oligo(hemiacetal ester)s Having Methacrylate Side Chains Daisaku Matsukawa, Tomoya Mukai, Haruyuki Okamura, Masamitsu Shirai	5372
		H. Nakatani, presiding	
12:55	1T2-08IL	Precise Chemical Recycling of Commodity Plastic Takashi Sawaguchi	5374
13:45	1T2-10	Degradation of Polyethylene into Petrochemicals Using Chlorine Tolerant Catalyst Yoshio Uemichi, Akio Seino, Yasuharu Kanda, Masatoshi Sugioka	5377
		T. Sawaguchi, presiding	
14:10	1T2-11	Novel Functionlization of Telechelic Oligopropylene Daisuke Sasaki, Yoshihiro Suzuki, Takafumi Shimura, Narihito Orii, Masaaki Yoshida, Toru Hoshi, Toshiki Hagiwara, Takashi Sawaguchi ..	5379
14:35	1T2-12	Preparation of degradable polypropylene by an addition of poly(ethylene oxide) microcapsule containing TiO ₂ Hisayuki Nakatani, Kensuke Miyazaki	5381
15:00	1T2-13	Recovery of the monomers from functional lignin: lignophenol Hiroshi Nonaka, Masamitsu Funaoka	5383
		Y. Kuwahara, presiding	
15:25	1T2-14	Development of wood-derived-solvent for solubilization of thermosetting resin – Recovery of useful resources by solubilization of waste printed circuit board	

		<u>Tohru Kamo</u>	5385
15:50	1T2-15	Saccharification Behavior of Microcrystalline Cellulose under the High-pressure Carbon Dioxide Including Supercritical Condition in the Absence of Catalyst. <u>Hiroshi Ichiyanagi</u> ,Mutsuhisa Furukawa,Ken Kojio,Suguru Motokucho	5387
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17:55	1T2-20	Plasticity recovery from cross linked polyethylene by selective oxidation in supercritical CO2 <u>Masaaki Yoshida</u> ,Ryosuke Kobayashi,Toshiharu Goto,Takanori Yamazaki	5397

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Key Technologies for Precise Recycling of Polymers

		M. Yoshida, presiding	
9:10	2T2-01	Highly selective depolymerization of poly(lactic acid) from various polymer alloys—- Listing the positive / negative additives - <u>Takayuki Tsukegi</u> ,Nobuhiko Yasuda,Noriaki Hashimoto,Hiroki Yanagida,Yoshihito Shirai,Haruo Nishida	5399
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10:00	2T2-03	Monomer recovery by the hydrolysis of polycarbonate with superheated steam <u>Toshiro Tsuji</u> ,Toshiaki Sugawara.....	5403
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		K. Ikenaga, presiding	
10:50	2T2-05	Precise Identification of Wasted Plastics by Using New Optical Sensing Techniques <u>Hirofumi Kawazumi</u> ,Akihiro Tuchida,Kazuyoshi Arikata,Yasuo Tuchida.....	5407
11:15	2T2-06	Technological report;Current trend of sorting technology in Japanese recycling <u>Yoshifumi Kato</u>	5409
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Frontiers and Advances of Polymeric Biomaterials

H. Kawakami, presiding

- 12:55 2T2-08 Preparation and Tumor-Targeting of Nanoparticles by Using BSH-Conjugated poly-L-Lysine
Takeshi Nagasaki, Kazuhiro Uechi, Hironobu Yanagie 5120
- 13:20 2T2-09 Design of multifunctional liposomes for temperature-sensitive drug release and imaging
Kenji Kono, Seiji Nakashima, Atsushi Harada, Daisuke Kokuryo, Ichio Aoki, Sadahito Aoshima, Yukihito Ishizaka 5122
- 13:45 2T2-10 Design of nanocarriers for drug and gene delivery to inside of tumors
Nobuhiro Nishiyama, Muri Han, Makoto Oba, Horacio Cabral, Mitsunobu Kano, Kazunori Kataoka 5124

T. Nagasaki, presiding

- 14:10 2T2-11 Biodegradable poly(amino acid)-based gene carrier; Evaluation of the self-catalyzed degradation and the biocompatibility
Takehiko Ishii, Keiji Itaka, Kazunori Kataoka 5126
- 14:35 2T2-12 Anticancer drug-loaded polymeric micelles for active targeting — Synthesis and evaluation of novel end-functionalized polymer applicable for installing of biomolecules as ligand
Tomoya Takenaka, Shigehiro Hiki, Horacio Cabral, Yutaka Miura, Nobuhiro Nishiyama, Kazunori Kataoka 5128
- 15:00 2T2-13 Investigation of anionic polysaccharides for in vitro and in vivo gene delivery
Toshinori Sato, Mitsuhiro Nakata, Anastasia Riany, Yoshiyoku Koyama, Satoko Kishimoto, Masayuki Ishihara 5130
- 15:25 2T2-14 Surface modification of alginate gel beads for controlled macromolecular drug release
Shiho Suzuki, Taka-aki Asoh, Akihiko Kikuchi 5132

T. Sato, presiding

- 15:50 2T2-15 Release of DNA Binary Complexes from the Ternary Complexes by Amphoteric Carboxymethyl Poly(L-histidine)
Shoichiro Asayama, Miyuki Sudo, Hiroyoshi Kawakami 5134
- 16:15 2T2-16 Search for lipid-like compounds taken into the specific cell cycle phase
Katsuyuki Nambara, Kenichi Niikura, Ryosuke Kamitani, Takaharu Okajima, Yasutaka Matsuo, Kuniharu Ijio 5136
- 16:40 2T2-17 Non-endocytic rapid cellular uptake using phospholipid-mimicked polymers
Tatsuro Goda, Yusuke Goto, Yuji Miyahara, Kazuhiko Ishihara 5138
- 17:05 2T2-18 Nanoparticles as Extracellular Signals and Signal Processing at Microdomain of Plasma Membrane
Takehiro Nishikawa, Norio Iwakiri, Yoshiro Kaneko, Nobuhiro Morone, Jun-ichi Kadokawa 5140

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Frontiers and Advances of Polymeric Biomaterials

T. Morita, presiding

- 9:10 3T2-01 Design of Nanogel-crosslinking Hydrogel for Protein Delivery
Asako Shimoda, Kazunari Akiyoshi 5142

9:35	3T2-02	Design of PEGylated Nanogels Containing Quaternary Polyamine Core as Bile Acid Adsorbents for Oral Administration <u>Tsuyoshi Yamazaki</u> , Motoi Oishi, Masato Tamura, Mariko Harada-shiba, Akihiko Kikuchi, Yukio Nagasaki.....	5144
10:00	3T2-03	Enhanced Endogenous Gene Silencing Efficacy of siRNA by Using PEGylated Nanogels Bearing Regulated Degree of Quaternized Amine Moieties <u>Atsushi Tamura</u> , Motoi Oishi, Yukio Nagasaki.....	5146
10:25	3T2-04	Self-assembly of dendron type sugar surfactants and their protein recognition <u>Hideki Hakukawa</u> , Naoyuki Yamazaki, Tetsuya Tateishi, Hidenori Otsuka.....	5148
K. Nam, presiding			
10:50	3T2-05	Formation of dendrimer interface and analysis of biomolecular recognition <u>Erino Matsumoto</u> , Tomohiro Fukuda, Yoshiko Miura	5150
11:15	3T2-06	Product and biological properties of hybrid materials via precision glycopolymer <u>Masayuki Toyoshima</u> , Tomoyuki Ooura, Tomohiro Fukuda, Erino Matsumoto, Yoshiko Miura.....	5152
11:40	3T2-07	Novel polyurethane-type biomaterial with MPC-modified diol <u>Kimiaki Takami</u> , Kazuhiko Ishihara.....	5154
N. Nishiyama, presiding			
12:55	3T2-08	Regulation of immune responses by nanoparticle-based vaccine <u>Takami Akagi</u> , Hyungjin Kim, Tomofumi Uto, Masanori Baba, Mitsuru Akashi.....	5156
13:20	3T2-09	Design and preparation of the radical-containing nanoparticle (RNP) as the pH-sensitive EPR imaging nanoprobe <u>Toru Yoshitomi</u> , Takashi Mamiya, Hirofumi Matsui, Aki Hirayama, Yukio Nagasaki	5158
13:45	3T2-10	Fluorescence Resonance Energy Transfer of DNA-Responsive Hydrogels Having Single Nucleotide Polymorphism Recognition Functions. <u>Misa Ueba</u> , Makoto Minamitsuji, Takashi Miyata, Tadashi Uragami	5160
K. Niikura, presiding			
14:10	3T2-11	FRET-type Near Infrared Fluorescent Polymer Nanoparticles Prepared by Nano-emulsion Method for Optical Imaging <u>Shohei Kurose</u> , Satoshi Nitahara, Hiroyuki Aoki, Shinzaburo Ito, Kimihiro Yoshimura, Masato Minami, Yoshinori Tomida, Tetsuya Yano.....	5162
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15:00	3T2-13	Photo-Responsive Drug Delivery System by Using Silica Gel Structures and Gold Nanorods <u>Yukichi Horiguchi</u> , Takuro Niidome, Naotoshi Nakashima, Yasuro Niidome.....	5166
15:25	3T2-14	Stem cell labeling by iron oxide nanoparticles with different sizes and surface potentials <u>Jun-ichiro Jo</u> , Yasuhiko Tabata.....	5168

Room U

Wednesday, September 16

Polymers and Environment

T. Iwata, presiding

10:00	1U-03	Synthesis of polyperoxides by radical polymerization and application to dismantlable adhesion <u>Hiroshi Tamura</u> , Asako Mihashi, Eriko Sato, Akikazu Matsumoto 5286
10:25	1U-04	Removal of toxic metals and recovery of rare metals by porous chelating polymers <u>Tatsuya Oka</u> , Takashi Tsujimoto, Hiroshi Uyama 5288
10:50	1U-05	Crystallization Behaviors of LLA-rich PLA <u>Takuma Goto</u> , Masatsugu Mochizuki, Hideki Yamane 5290

H. Uyama, presiding

11:15	1U-06	Potential of oil palm lignocellulose for producing aromatic and aliphatic raw materials <u>Takanori Shinano</u> , Masamitsu Funaoka, Yoshihito Shirai, Mohd Ali Hassan 5292
11:40	1U-07	Successive Functionality Control of Lignin under Oxidative and Reductive Environments <u>Shimpei Horii</u> , Masamitsu Funaoka 5294

M. Mochizuki, presiding

12:55	1U-08	Study on lignin epoxy resins <u>Kaori Nakagawa</u> , Toshiyuki Oyama, Akio Takahashi, Yoshitoshi Nakamura, Yoshiaki Okabe, Hiroyuki Kagawa 5296
13:20	1U-09	Status of plastics waste recycling systems and study on the selection of the recycling methods by LCA methodology <u>Hajime Nishihara</u> , Yoshimi Ozaki 5298

M. Funaoka, presiding

13:45	1U-10	Structure, physical properties and enzymatic degradation of polyhydroxyalkanoate films with uniaxial cold-drawing <u>Jaiqi Zhang</u> , Tadahisa Iwata, James Hansgate, Christopher Schwier 5300
14:10	1U-11	Preparation and Characterization of PLA Nano Porous Fibers by Electrospinning <u>Yuka Kato</u> , Satoshi Kimura, Akio Takemura, Tadahisa Iwata 5302
14:35	1U-12	Morphology and mechanism of flame retardancy of new elastomer compound—Non halogen material for wire cable cover <u>Katsumi Suzuki</u> , Yoshifumi Araki, Masahiro Fujiwara, Kiyoo Kato 5304
15:00	1U-13	Effect of Comonomer-Unit Compositional Distribution on Physical Properties of Bacterial Poly[(3-hydroxybutyrate)-co-(3-mercaptopropionate)] <u>Fang Yu</u> , Bo Zhu, Yoshio Inoue 5306

Recent Developments in Biobased Polymers

15:40	SO	Introductory Remarks Naoko Yoshie 5413
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S. Taguchi, presiding

15:50	1U-15IL	Measuring method of biomass carbon ratio of bioplastics <u>Masao Kunioka</u> 5414
16:40	1U-17	Bio- PEGylation of PHB by chain transfer reaction in recombinant Escherichia coli <u>Satoshi Tomizawa</u> , Hideki Abe, Takeharu Tsuge 5417

T. Hiraishi, presiding

17:05	1U-18	A microbial factory for lactate-based polymers <u>Seiichi Taguchi</u> , Miwa Yamada, Ken'ichiro Matsumoto, Takanori Nakai, Kotaro Shimizu 5419
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17:30	1U-19	Reforming of Stereo-regular Poly-gamma-glutamate as Bio-thermoplastics <u>Makoto Ashiuchi</u> , Kenzo Fukushima 5421
17:55	1U-20	Microbial production of glyceric acid from raw glycerol and development of novel bio-based polymers <u>Tokuma Fukuoka</u> , Hiroshi Habe, Dai Kitamoto, Keiji Sakaki 5423

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Recent Developments in Biobased Polymers

Y. Teramoto, presiding

9:10	2U-01	Precise structural control of phenolic lignin-based polymer <u>Mitsuru Aoyagi</u> , Masamitsu Funaoka 5425
9:35	2U-02	Successive structural conversion of lignin for aromatic chemical feedstock <u>Keigo Mikame</u> , Masamitsu Funaoka 5427
10:00	2U-03	Bio-base Polyurethane composed of lignin-biodegradation Intermediate <u>Ryo Miyamori</u> , Kazuhiro Shikinaka, Eiji Masai, Yuichiro Otsuka, Masaya Nakamura, Seiji Ohara, Yoshihiro Katayama, Kiyotaka Shigehara 5429

K. Mikame, presiding

10:25	2U-04	Application of biomass-derived epoxy resin to copper-clad laminates (1) <u>Hiroyuki Kagawa</u> , Yoshiaki Okabe, Yoshitaka Takezawa 5431
10:50	2U-05	Application of biomass-derived epoxy resin to copper-clad laminates (2) <u>Yoshiaki Okabe</u> , Hiroyuki Kagawa, Yoshitoshi Nakamura, Chizuru Sasaki 5433
11:15	2U-06	Elaborate designing of biodegradable microcompositions composed of biomass polymer/aliphatic polyester <u>Yoshikuni Teramoto</u> , Ryosuke Kusumi, Yoshiyuki Nishio 5435
11:40	2U-07	Terminally-Catecholized Hyper Branched Polymers with High Performance Adhesive Nature and their Application to Hybrid Materials <u>Daisaku Kaneko</u> , Keitaro Matsumoto, Tatsuo Kaneko 5437

D. Kaneko, presiding

12:55	2U-08	Preparation and structure analysis of microbial polyesters gel-films <u>Taizo Kabe</u> , Tadahisa Iwata 5439
13:20	2U-09	Mechanical property analysis of single nanofiber prepared from microbial polyesters and cellulose acetate <u>Tadahisa Iwata</u> , Masafumi Asano, Shinichiro Iwamoto, Yoshihiko Kuwana, Yasushi Tamada 5441
13:45	2U-10	Development of polytetramethylglycolide and its chemical recyclability <u>Haruo Nishida</u> , Yoshihito Shirai 5443

T. Iwata, presiding

14:10	2U-11	Mechanical and Thermal properties of Biobased Polyamide 4 <u>Atsuyoshi Nakayama</u> , Norioki Kawasaki, Maki Ooshima, Naoko Yamano 5445
14:35	2U-12	Plasticization of biomass plastic by branched poly(lactic acid) <u>Yoshimi Haza</u> , Ryuji Terauchi, Takashi Tsujimoto, Hiroshi Uyama 5447
15:00	2U-13	Synthesis and properties of tri-stereoblock polylactides <u>Kazunari Masutani</u> , Yoshiharu Kimura 5449
15:25	2U-14	Synthesis and characterization of a polylactide-block-polycarbonate <u>Yuichiro Hayashi</u> , Koji Kobayashi, Yoshiharu Kimura 5451

T. Tsujimoto, presiding

15:50	2U-15	Synthesis and properties of diblock sb-PLAs having non-equivalent PDLA/PLLA ratios. <u>Kaori Kobayashi</u> , Masayuki Hirata, Yoshiharu Kimura, Kazuaki Sogo, Yuka Komazawa, Shin Tou..... 5453
16:15	2U-16	Synthesis of a poly(lactic acid) methacrylate-type macromonomer <u>Maho Arimoto</u> , Kiyooki Ishimoto, Hitomi Ohara, Shiro Kobayashi, Masahiko Ishii, Kouji Morita, Hirofumi Yamashita, Naoya Yabuuchi 5455
16:40	2U-17	Emulsion copolymerization of a poly(lactic acid) methacrylate-type macromonomer with an alkyl methacrylate <u>Kiyooki Ishimoto</u> , Maho Arimoto, Hitomi Ohara, Shiro Kobayashi, Masahiko Ishii, Kouji Morita, Hirofumi Yamashita, Naoya Yabuuchi 5457
17:05	2U-18	Anti-hydrolysis performance of cured coating films of acrylic polyols with pendant poly(lactic acid)s <u>Kouji Morita</u> , Hirofumi Yamashita, Naoya Yabuuchi, Masahiko Ishii, Maho Arimoto, Kiyooki Ishimoto, Hitomi Ohara, Shiro Kobayashi..... 5459

Friday, September 18**Recent Developments in Biobased Polymers****T. Kawasaki, presiding**

9:10	3U-01	Studies on analysis and drying properties of Vietnamese lacquer paints <u>Takahisa Ishimura</u> , Toshi Kashiyama, Tomohiro Moteki, Takayuki Honda, Tetsuo Miyakoshi 5461
9:35	3U-02	Preparation and Dielectric Properties of Porous Silk Compacts <u>Yuuki Iwasaki</u> , Toshihiro Kuzuya, Shinji Hirai, Yasushi Tamada 5463
10:00	3U-03	Interaction between Chitin-Binding Domain and Chitin Surface <u>Yoshihiro Kikkawa</u> , Tomohiro Hiraishi, Masatoshi Kanosato, Tadayuki Imanaka, Takeshi Tanaka..... 5465
10:25	3U-04	Elucidation of adsorption mechanism of biopolyester degrading enzyme and the development of an improved enzyme <u>Tomohiro Hiraishi</u> , Naoya Komiya, Mizuo Maeda 5467

Y. Kikkawa, presiding

10:50	3U-05	Synthesis of covalent-bonded DNA-Lipid complexes with reactive lipids possessing a four-membered ring. <u>Yusuke Yonamine</u> , Takayoshi Kawasaki, Yoshio Okahata..... 5469
11:15	3U-06	Esterification of DNA phosphate groups with reactive aziridinium derivatives. <u>Yuuko Fujiwara</u> , Yusuke Yonamine, Takayoshi Kawasaki, Yoshio Okahata 5471
11:40	3U-07	Synthesis of New Aliphatic Polycarbonates from Nucleosides <u>Toyokazu Sekido</u> , Shin-ichi Matsuoka, Koji Takagi, Masato Suzuki 5473

H. Abe, presiding

12:55	3U-08	Self-healing of polymers cross-linked by thermally reversible covalent bond <u>Naoko Yoshie</u> , Kazuki Ishida, Hitomi Araki, Mariko Watanabe..... 5475
13:20	3U-09	Precision Radical Copolymerization of Naturally-Occurring Terpene for Novel Bio-Based Copolymer <u>Masaru Matsuda</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito..... 5477

N. Yoshie, presiding

13:45	3U-10	Enzymatic synthesis and properties of novel biobased elastomers <u>Mayumi Yasuda</u> , Hiroki Ebata, Shuichi Matsumura 5479
14:10	3U-11	Synthesis and function of periodic copolymers containing 3-hydroxybutyrate unit

		<u>Hideki Abe</u> , Ayaka Nagai	5481
14:35	3U-12	Thermal and mechanical properties of random multiblock copoly(butylene succinate/lactide) synthesized from prepolymers with different molecular weight	
		<u>Hiroshi Iida</u> , Akihiro Oishi, Yoichi Taguchi	5483

Room V

Wednesday, September 16

Creation of Smart and Fine Network Polymers Cross-linked Chemically and Physically

9:50	SO	Introductory Remarks Toshikazu Takata, Hiroto Murakami	5520
		S. Motokucho, presiding	
10:00	1V-03	Synthesis and Property of Epoxy-Based Networked Polymers Having Ionic Groups <u>Kozo Matsumoto</u> , Takeshi Endo	5521
10:25	1V-04	Switching of structural order in cross-linked polymers based on two-component liquid crystals <u>Yasuhiro Ishida</u> , Sayaka Amano, Kazuhiko Saigo	5523
10:50	1V-05	Organic-inorganic hybrid polymers by hydrosilylation—Synthesis and characterization of heat-resistance network polymers <u>Takahiro Ishikawa</u> , Akira Watanabe, Tokuji Miyashita	5525
		Y. Ishida, presiding	
11:15	1V-06	Honeycomb-like Composite of High Thermal Conductive Nano-size Filler and Particulate Phenolic Resin, and Its Thermal Conductivity <u>Kiichi Hasegawa</u> , Yasuyuki Agari, Hiroshi Hirano, Hironori Ishikawa, Manabu Nishikawa	5527
11:40	1V-07	Fabrication of porous materials of crosslinked acryl resin by phase separation <u>Tomo Kitagawa</u> , Takashi Tsujimoto, Hiroshi Uyama	5529
		H. Kishi, presiding	
12:55	1V-08	Characteristics of solvent soluble polyimide resin <u>Satoko Ito</u> , Eiju Ichinose, Seiichi Uno	5531
13:20	1V-09	Optical Properties of Epoxy/Zirconia Hybrids Based on Epoxy Resin Modified with Mercaptosilane <u>Mitsukazu Ochi</u> , Yasufumi Suzuki, Miyuki Harada	5533
13:45	1V-10	Optical Properties of Epoxy/zirconia Hybrid Materials synthesized via In-situ Polymerization with Reactivity-controlled Metal alkoxide Mitsukazu Ochi, <u>Daisuke Nii</u> , Miyuki Harada	5535
		M. Ochi, presiding	
14:10	1V-11	Preparations and Properties of Organic-inorganic Hybrid Slide-Ring Gels <u>Kazuaki Kato</u> , Kohzo Ito	5537
14:35	1V-12	Nano phase structures of epoxy / acryl block copolymer alloys <u>Hajime Kishi</u> , Yumi Kunimitsu, Jin Imade, Shinya Oshita, Yoshihiro Morishita, Mitsunori Asada	5539
15:00	1V-13	New transparent composites with high heat resistance and dimensional stability. —Glass cloth reinforced transparent film using cyanate ester. <u>Hirotsugu Kishimoto</u> , Yukio Matsushita, Shinji Hashimoto	5541
		K. Kato, presiding	

15:50	1V-15	Structure and Formation Mechanism of Organic/Inorganic Network <u>Ying-jia Xu</u> , Kazutoshi Haraguchi.....	5543
16:15	1V-16	The refractive-index change of the polymers containing bicyclo ortho ester and spiro ortho ester groups <u>Hiroto Kudo</u> , Masaya Suzuki, Yoko Egawa, Tadatomi Nishikubo	5545
16:40	1V-17	New Low-CTE & High-Modulus Materials for Next Generation Application <u>Shin Takanezawa</u> , Hikari Murai, Shinji Tsuchikawa, Koji Morita, Masaaki Takekoshi, Tetsurou Irino	5547
H. Kudo, presiding			
17:05	1V-18	Temperature dependence of Tetra-PEG gel with homogeneous network structure <u>Takuro Matsunaga</u> , Kengo Nishi, Yuki Akagi, Ung-il Chung, Takamasa Sakai, Mitsuhiro Shibayama	5549
17:30	1V-19	Orientation Behavior of Terphenyl Type Liquid Crystalline Epoxy Resin under a Magnetic Field <u>Miyuki Harada</u> , Junichiro Ando, Mitsukazu Ochi	5551
17:55	1V-20	Synthesis and Characterization of Novel Twin Mesogenic Type Epoxy Resin Having Terphenyl Structure Miyuki Harada, <u>Tour Kurata</u> , Mitsukazu Ochi	5553

Thursday, September 17

Creation of Smart and Fine Network Polymers Cross-linked Chemically and Physically

K. Nakajima, presiding			
9:10	2V-01	Molecular Mobility of Bulk and Surface of Cross-linked Polyurethane <u>Takeshi Osajima</u> , Mutsuhisa Furukawa, Suguru Motokucho, Ken Kojio.....	5555
9:35	2V-02	Influence of polymerization method on aggregation structure and mechanical property of rigid polymer glycol-based polyurethane <u>Ryohei Isowaki</u> , Mutsuhisa Furukawa, Suguru Motokucho, Ken Kojio..	5557
10:00	2V-03	Cis-trans isomerization of diene rubber during vulcanization <u>Koya Yoshimoto</u> , Masayoshi Ito	5559
K. Kojio, presiding			
10:25	2V-04	The influence of silica on the development of crosslink in crosslinking structure by sulfur in isoprene rubber <u>Takuya Akikusa</u> , Masayoshi Ito	5561
10:50	2V-05	Strain-induced crystallization of natural rubber <u>Hanako Asai</u> , Yuko Ikeda	5563
11:15	2V-06	Study on Network Control and Properties of Isoprene Rubber Vulcanizates <u>Yuko Ikeda</u> , Norihito Higashitani, Hanako Asai, Yuichi Morita, Yota Kokubo, Takuya Suzuki, Noboru Osaka, Hitoshi Endo, Mitsuhiro Shibayama, Shinzo Kohjiya	5565
11:40	2V-07	Nano-scale Viscoelasticity Measurement on Elastomer Materials <u>Ken Nakajima</u> , So Fujinami, Toshio Nishi	5567
T. Yamagishi, presiding			
12:55	2V-08	Preparation of Supramolecular Spherical Cyclodextrin Dendrimer and Its Molecular Recognition <u>Shogo Yoshida</u> , Daisuke Taura, Yoshinori Takashima, Akihito Hashizdume, Hiroyasu Yamaguchi, Akira Harada	5569
13:20	2V-09	Development of Three-component Polyaddition System Consisted of Epoxide, Amine, and Aromatic lactone and Its Application to Networked Polymer <u>Atsushi Sudo</u> , Takeshi Endo	5571

13:45	2V-10	Synthesis and Properties of Thermosetting Fluorinated Aromatic Polyimides with Ethynyl Pendant Groups Takahiro Nakamura,Nobuya Maikusa,Yuji Shibasaki, <u>Yoshiyuki Oishi...</u> 5573
14:10	2V-11	Performance Enhancement of Polybenzoxazine by Molecular Design <u>Tsutomu Takeichi</u> ,Takehiro Kawauchi,Syouko Hirai,Kouhei Takasaki... 5575
		Y. Oishi, presiding
14:35	2V-12	Synthesis and Application of Low-shrinkage UV Curable Resins with Reworkable Properties <u>Daisaku Matsukawa</u> ,Tatsuya Hatsuse,Haruyuki Okamura,Masamitsu Shirai 5577
15:00	2V-13	Synthesis of Main Chain-Type Polyrotaxanes Using New Click Chemistry and Their Derivation by Polymer reaction <u>Young-gi Lee</u> ,Yasuhito Koyama,Morio Yonekawa,Toshikazu Takata... 5579
15:25	2V-14	Properties of Polycatenane obtained from the polymerization of Cyclic Disulfide bearing Functional Group <u>Masutaro Hirayama</u> ,Naomi Kado,Kiyoshi Endo..... 5581
		A. Sudo, presiding
15:50	2V-15	Synthesis of phenolic resin with controlled branched structure <u>Tada-aki Yamagishi</u> ,Takashi Shimizu,Tomoki Ogoshi,Yoshiaki Nakamoto..... 5583
16:15	2V-16	Polymerization of Phenol and Hybridization of Phenol Polymer with Ionic Liquids <u>Tomoki Ogoshi</u> ,Takeshi Onodera,Tada-aki Yamagishi,Yoshiaki Nakamoto,Akihito Kagata,Noriyoshi Matsumi,Keigo Aoi..... 5585
16:40	2V-17	Preparation of Photoreactive Nano-matrix Dispersed Elastomer (1) <u>Yoshimasa Yamamoto</u> ,Pukkate Nanthaporn,Tatsuya Horimai,Keiichi Akabori,Seiichi Kawahara..... 5587
17:05	2V-18	Preparation of Photoreactive Nano-matrix Dispersed Elastomer (2) <u>Yoshimasa Yamamoto</u> ,Pukkate Nanthaporn,Tatsuya Horimai,Keiichi Akabori,Seiichi Kawahara..... 5589

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Creation of Smart and Fine Network Polymers Cross-linked Chemically and Physically

		S. Kawahara, presiding
9:10	3V-01	Structures and properties of high hard segment polyurethane/epoxy composites <u>Eisuke Yamada</u> 5591
9:35	3V-02	In-situ measurement of thermal cross-linking behavior for novel silicones having rigid and hyper-branched molecular architectures and the resultant mechanical properties <u>Masazumi Saito</u> ,Hiroki Uehara,Takeshi Yamanobe,Keita Noguchi,Katsuki Ohisi,Eiichi Akiyama 5593
10:00	3V-03	Mechanical Properties of Crosslinked Polyurethane based on Hyperbranched Polyester <u>Satoshi Oishi</u> ,Mutsuhisa Furukawa,Ken Kojio,Suguru Motokucho.... 5595
		E. Yamada, presiding
10:25	3V-04	The Microphase-separated Structure and Mechanical Properties of Polyurethane Elastomers Prepared at Various Annealing Temperatures <u>Ken Kojio</u> ,Mutsuhisa Furukawa,Suguru Motokucho,Shun Matsumura . 5597
10:50	3V-05	Effect of Strain-induced Crystallization on Tear Strength of Crosslinked Natural rubber Blend <u>Seiichi Kawahara</u> ,Fumitoshi Noguchi,Keiichi Akabori,Yoshimasa Yamamoto 5599

11:15	3V-06	Thermal property of side-chain crystalline polymer chelated by aluminium <u>Keisuke Futashima</u> , Hiroto Murakami, Minoru Nanchi, Shinichiro Kawahara.....	5601
11:40	3V-07	Functionalization of network polymers by using photo-reversible reaction <u>Naoko Yoshie</u> , Petty Sukarsaatmadja, Kazuki Ishida	5603

Room W

Wednesday, September 16

Polymers related to New Batteries -Solar Cells and Fuel Cells-

9:50	SO	Introductory Remarks Katsuhiko Fujita	5605
		S. Uchida, presiding	
10:00	1W-03	Proposal of high efficiency 3D-dye-sensitized solar cell <u>Shuzi Hayase</u> , Jun Usagawa, Kenshirou Uzaki, Takafumi Inoue, Pandey Shyam, Yoshihiro Yamaguchi	5606
10:25	1W-04	Plastic dye-sensitized solar cells and developments for high functions and performance <u>Tsutomu Miyasaka</u>	5608
		S. Hayase, presiding	
10:50	1W-05	Dye Sensitized Solar Cell Using Nitroxide Radicals as Redox Mediator <u>Fumiaki Kato</u> , Naoki Hayashi, Akira Takahashi, Chie Okumura, Yuuki Kondo, Takaya Murakami, Kenichi Oyaizu, Hiroyuki Nishide	5610
11:15	1W-06	Solidification Technique of Electrolyte for Dye-sensitized Solar Cells <u>Satoshi Uchida</u> , Takaya Kubo, Hiroshi Segawa.....	5612
11:40	1W-07	Back Contact Dye-sensitized Solar Cells <u>Liyuan Han</u>	5614
		Y. Maekawa, presiding	
12:55	1W-08	Analysis of PFSA dispersion by UAS method <u>Masaru Yoshitake</u>	5616
13:20	1W-09	Solid-state NMR and XPS characterization of ORR active carbon alloy catalysts <u>Shigeki Kuroki</u> , Jun-ichi Ozaki, Seizo Miyata	5618
		S. Kuroki, presiding	
13:45	1W-10	Relationship between Structural and Proton Conductive Properties of Crosslinked-Fluoropolymer-Based Electrolyte Membranes—Consideration Based on Nanometer-to-Micrometer Hierarchical Structures <u>Tetsuya Yamaki</u> , Ryuhei Motokawa, Hiroki Iwase, Shin-ichi Sawada, Masaharu Asano, Satoshi Koizumi, Yasunari Maekawa	5620
14:10	1W-11	Morphology-Controlled Graft Polymerization in Poly(ether ether ketone) films. <u>Shin Hasegawa</u> , Hiroki Iwase, Satoshi Koizumi, Masato Ohnuma, Yasunari Maekawa	5622
		M. Yoshitake, presiding	
14:35	1W-12	Analysis of Proton Behavior in Polymer Electrolyte Membrane <u>Hiroshi Hasegawa</u> , Koh Kidena, Naohiko Takimoto, Takahiro Okubo, Barique Md Abdul, Akihiro Ohira	5624
15:00	1W-13	Free volume and gas permeation in a perfluorinated polymer	

		electrolyte membrane for fuel cells <u>Hamdy F. M. Mohamed</u> , Y. Kobayashi, A. Ohira 5626	
15:25	1W-14	Homogeneity of proton-conductive networks evaluated by electrochemical-AFM – Relationship between morphology and RH dependence of proton conductivity <u>Naohiko Takimoto</u> , Akihiro Ohira 5628	
15:50	1W-15	Phase Separation of Graft-Type Polymer Electrolyte Membranes and Swelling and Detachment behavior of the Grafts <u>Yasunari Maekawa</u> , Kazuyuki Enomoto, Shuichi Takahashi, Takanori Iwase, Takashi Yamashita, Hiroki Iwase, Satoshi Koizumi 5630	
		K. Kidena, presiding	
16:15	1W-16	Synthesis of Polymer Electrolyte Membranes Functionalized with Sulfoalkyl Grafts and Its Ionic Conductivity <u>Kazuyuki Enomoto</u> , Shuichi Takahashi, Haruna Ohba, Nobuhiro Kihara, Yasunari Maekawa 5632	
16:40	1W-17	In-situ Observation Inside an Operating Fuel Cell by a Combined Method of Small-Angle Neutron Scattering and Neutron Radiography <u>Ananda Putra</u> , Satoshi Koizumi, Daisuke Yamaguchi, Hiroki Iwase, Yasunari Maekawa, Masahito Matsubayashi, Takeji Hashimoto 5634	
17:05	1W-18	Preparation of Carbon Alloy Catalysts from nitrogen-containing rigid rod polymers <u>Masayuki Chokai</u> , Masataka Taniguchi, Shogo Moriya, Katsuyuki Matsubayashi, Tsuyoshi Shinoda, Yuta Nabae, Shigeki Kuroki, Teruaki Hayakawa, Masa-aki Kakimoto, Jun-ichi Ozaki, Seizo Miyata.. 5636	
17:30	1W-19	Preparation of Carbon Alloy Catalysts from Nitrogen-containing Thermostability Polymers <u>Masataka Taniguchi</u> , Masayuki Chokai, Shogo Moriya, Katsuyuki Matsubayashi, Tsuyoshi Shinoda, Yuta Nabae, Shigeki Kuroki, Teruaki Hayakawa, Masa-aki Kakimoto, Jun-ichi Ozaki, Seizo Miyata.. 5638	

Thursday, September 17

Polymers related to New Batteries -Solar Cells and Fuel Cells-

		S. Yoshikawa, presiding	
9:10	2W-01	Current status and future of small molecular type organic solar cells <u>Masahiro Hiramoto</u> 5640	
9:35	2W-02	Synthesis of Oligo(p-phenylenevinylene)s and Their Application to Nanostructured Organic Solar Cells <u>Keisuke Tajima</u> , Takeshi Nishizawa, Lim Hady Kesuma, Kazuhito Hashimoto 5642	
10:00	2W-03	Synthesis of double-cable block copolymers and their application to polymer solar cell <u>Shoji Miyanishi</u> , Yue Zhang, Keisuke Tajima, Kazuhito Hashimoto 5644	
		M. Hiramoto, presiding	
10:25	2W-04	Synthesis and applications of novel cyano-substituted semiconducting polymers <u>Shigeyoshi Sato</u> , Keisuke Tajima, Kazuhito Hashimoto 5646	
10:50	2W-05	Characteristics of Concentration Gradient Bulk Heterojunction Photovoltaic Cells prepared by Evaporative Spray Deposition using Ultradilute Solution <u>Tdashi Iwamoto</u> , Masato Syakutui, Katsuhiko Fujita 5648	
11:15	2W-06	Relations between Device Structure and Carrier Transport in Organic Thin Film Solar Cells <u>Susumu Yoshikawa</u> 5650	
11:40	2W-07	Development of Organic Thin Film Solar Cells Using	

Light-Harvesting Dyes

Izumi Takishita, Takashi Sagawa, Makoto Abe, Ryu Tange, Osamu Yoshikawa, Kohji Inai, Hirokuni Jintoku, Hiroataka Ihara, Susumu Yoshikawa..... 5652

K. Tajima, presiding

12:55 2W-08 Degradation mechanism of polymer-based organic solar cells
Toshihiro Yamanari, Hiroyuki Ogo, Tetsuya Taima, Jun Sakai, Jun Tsukamoto, Yuji Yoshida..... 5654

13:20 2W-09 Dynamics of Excitons and Charged Carriers in Polymer-Based Solar Cells Studied by Transient Absorption Spectroscopy
Hiroaki Benten, Jiamo Guo, Hideo Ohkita, Shinzaburo Ito 5656

13:45 2W-10 Origin of the open-circuit voltage in polymer solar cells
Akiko Orimo, Kohji Masuda, Satoshi Honda, Hiroaki Benten, Hideo Ohkita, Shinzaburo Ito 5658

14:10 2W-11 Photovoltaic Properties of Composite Films of Electrodeposited Poly(3-methylthiophene) and Fullerenes
Yousuke Kamikado, Hayato Inui, Yoshihiko Tezuka, Hitoshi Tanaka.... 5660

N. Nakashima, presiding

14:35 2W-12 Fabrication and of Fullerene-Diamine Adduct Particles by Addition Reaction and Their Photocurrent Generation Properties
Tsuyoshi Akiyama, Ken-ichi Matsuoka, Satoshi Matsumura, Hidetaka Seo, Sunao Yamada 5662

15:00 2W-13 Charge Transport and Storage Properties of Radical Polymer Gels as Electrode-active Materials
Kenichi Oyaizu, Hiroyuki Nishide 5664

15:25 2W-14 A Rechargeable Device Based on Redox Property of Hydrophilic Radical Polymers
Kenichiroh Koshika, Naoki Sano, Natsuru Chikushi, Kenichi Oyaizu, Hiroyuki Nishide..... 5666

15:50 2W-15 Preparation of Poly(styrenesulfamide acid) and its Proton Conductivity under Unhumidified Condition
Teruyuki Okayasu, Katsuyuki Takahashi, Hiroyuki Nishide 5668

T. Akiyama, presiding

16:15 2W-16 Preparation and Properties of Highly Polyphosphoric-Acid-Doped Polyimide Membranes for Medium Temperature Fuel Cell Applications
Jianhua Fang, Xiaoxia Guo, Sen Yuan, Kangcheng Chen, Ken-ichi Okamoto, Chenliang Fan..... 5670

16:40 2W-17 Development of Novel Electrocatalyst for Fuel Cell Composed from Polybenzimidazole / Carbon Nanotube Composites
Tsuyohiko Fujigaya, Minoru Okamoto, Kazuya Matsumoto, Naotoshi Nakashima 5672

17:05 2W-18 Evaluation of Novel Electrocatalysts for Fuel Cells Based on Polybenzimidazole / Carbon Nanotube Composites
Kazuya Matsumoto, Tsuyohiko Fujigaya, Naotoshi Nakashima..... 5674

Friday, September 18

Polymers related to New Batteries -Solar Cells and Fuel Cells-

H. Kawakami, presiding

9:10 3W-01 Effect of Mobile Hydrogen Compounds onto the Properties of Sulfonated Polyimide Membranes
Jumpei Saito, Kenji Miyatake, Masahiro Watanabe 5676

9:35 3W-02 Aromatic polyether electrolyte membranes with superacid groups

		<u>Takuya Shimura</u> ,Takefumi Mikami,Kenji Miyatake,Masahiro Watanabe	5678
10:00	3W-03	Synthesis and properties of aromatic polyether block copolymers with highly sulfonated blocks <u>Byungchan Bae</u> ,Takeshi Yoda,Kenji Miyatake,Hiroyuki Uchida,Masahiro Watanabe.....	5680
		K. Miyatake, presiding	
10:25	3W-04	Synthesis and properties of poly(phenylene)-poly(ether ketone) block copolymers (II) – Effect of ion exchange capacity <u>Miru Yoshida</u> ,Masahiro Fujita,Yuko Takeoka,Masahiro Rikukawa.....	5682
10:50	3W-05	Synthesis of poly(phenylene) block copolymers and evaluation as electrolyte membranes (V) – Effect of composition and morphology on properties <u>Azusa Osawa</u> ,Masahiro Fujita,Yuko Takeoka,Masahiro Rikukawa.....	5684
11:15	3W-06	Polymer electrolytes containing phenolic structures and Broensted acids for PEFC under unhumidified condition <u>Yusuke Okumoto</u> ,Akio Takahashi,Toshiyuki Oyama,Toshihiro Takekawa.....	5686
11:40	3W-07	Fabrication of Protic Ionic Liquid/ Sulfonated Polyimide Composite Membranes as Electrolyte Membranes for Non-humidified Intermediate Temperature Fuel Cells <u>Tomohiro Yasuda</u> ,Seung-yul Lee,Shin-ichiro Nakamura,Masayoshi Watanabe	5688
		K. Okamoto, presiding	
12:55	3W-08	property evaluation of sulfonated graft copolyimide electrolyte membranes <u>Kota Yamazaki</u> ,Hiroyoshi Kawakami.....	5690
13:20	3W-09	Fuel cell properties of novel polymer electrolyte membranes at low up to high temperatures and low humidity <u>Kazuhiro Suzuki</u> ,Hiroyoshi Kawakami.....	5692
13:45	3W-10	Proton conductivity of composite membrane containing aligned sulfonated polyimide nanofibers <u>Ryouhei Takemori</u> ,Takuya Tamura,Hiroyoshi Kawakami	5694
		M. Rikukawa, presiding	
14:10	3W-11	PEFC Performance of Crosslinked Membranes of Sulfonated Polyimides Derived from Sulfophenoxybenzidine <u>Kazuaki Yaguchi</u> ,Kangcheng Chen,Nobutaka Endo,Mitsuru Higa,Ken-ichi Okamoto	5696
14:35	3W-12	PEFC Performance of Hybrid Membranes from Sulfonated Polyimides and Inorganic Nano-Particles <u>Kazuaki Yaguchi</u> ,Kangcheng Chen,Hajime Yamamoto,Nobutaka Endo,Mitsuru Higa,Hidetoshi Kita,Ken-ichi Okamoto	5698
15:00	3W-13	DMFC Performance of Sulfonated Polyimides Bearing Benzimidazole Groups <u>Nobutaka Endo</u> ,Zhaoxia Hu,Kangcheng Chen,Mitsuru Higa, Ken-ichi Okamoto	5700
15:25	3W-14	Relation between Proton Conductivity and Hydrogen-Bonding Network Structure of Di- and Trifunctional Benzimidazole Compounds – Discussion based on Crystal Structure Analysis of Low-molecular-weight Model Compounds <u>Kohji Tashiro</u> ,Autchara Pangon,Kimiko Hasegawa,Mikio Yamasaki,Puripong Totsatitpaisan,Suwabun Chirachanchai	5702