

Room A

Wednesday, September 24

Invited Lectures

- T. Shimomura, presiding**
- 12:55 1A08IL Incorporation of Emulsifier Inside Polymer Particles During Emulsion Polymerization - Pros and Cons -
Masayoshi Okubo 2161
- A. Harada, presiding**
- 13:45 1A10IL Synthesis and the functions of cyclic polymers
Kiyoshi Endo..... 2164
- R. Tsuji, presiding**
- 14:35 1A12IL Manipulation of Nanoparticle Dispersion and Assembly
D. Sun,C.-c. Chu,W.n. Everett,L. Sun,W.j. Boo,Hung-jue Sue 2167
- A. Matsumoto, presiding**
- 15:25 1A14IL Stereospecific Living Radical Polymerization: Control of Molecular Weight and Tacticity
Masami Kamigaito..... 2170
- T. Uragami, presiding**
- 16:15 1A16IL The Thermodynamics Studies of Biomacromolecular Interactions by Isothermal Titration Calorimetry and Its Application in Bioseparation
Wen-yih Chen 2173
- S. Kimura, presiding**
- 17:05 1A18IL Present Status and Future Prospect of Organic Semiconductor Electronics
Tetsuo Tsutsui 2176

Thursday, September 25

Award Lectures

- T. Kato, presiding**
- 10:00 2A03IL** Preparation, characterization and Physical Properties of Cyclic Polymers
Atsushi Takano..... 2179
- T. Shimizu, presiding**
- 11:15 2A06IL** Preparation of Smart Soft Materials Using Molecular Complexes
Takashi Miyata..... 2182
- T. Ougizawa, presiding**
- 12:55 2A08IL** Controlling Slip and Adhesion between Immiscible Polymers via Interfacial Coupling Reactions
Christopher W. Macosko 2185
- M. Maeda, presiding**
- 14:10 2A11IL** Molecular, structural, and material design of bio-based polymers
Yoshiharu Kimura..... 2188
- K. Yoshinaga, presiding**
- 15:00 2A13IL** A Novel Polysaccharide/polynucleotide Complex and its Application to Medical Use

		<u>Kazuo Sakurai</u>	2191
	T. Kanbara, presiding		
15:50	2A15IL**	Novel Organic-Metallic Hybrid Polymers with Electrochromic Functions and Their Application to Color Electronic Papers <u>Masayoshi Higuchi</u>	2194
	T. Watanabe, presiding		
16:40	2A17IL**	Development of liquid crystalline semiconductors with high carrier mobility and their application to field-effect transistors <u>Masahiro Funahashi</u>	2197

Friday, September 26

Invited Lectures

	M. Takahashi, presiding		
10:25	3A04IL	Organic LEDs for General Lighting <u>Junji Kido</u>	2200
	M. Akashi, presiding		
11:15	3A06IL	Biointerface -Analysis + Design + Application- <u>Hiroo Iwata</u>	2203

Room B

Wednesday, September 24

Polymer Chemistry: Synthesis And Reaction

	A. Matsumoto, presiding		
10:00	1B03	Free-Radical Crosslinking Copolymerizations of Natural Oils and Fats as Internal Olefinic Multivinyl Crosslinkers with Allyl Monomers <u>Takayuki Kato</u> ,Hiroyuki Aota,Akira Matsumoto,Mitirou Shibano,Yasuo Matoba,Masatosi Yokoyama	2206
10:25	1B04	Pursuit of the Fate of Resonance-Stabilized Allyl Radical in Free-Radical Polymerization Mechanism of Allyl Monomers Based on End-Group Determination of Resulting Oligomers by MALDI-TOF-MS Spectrometry <u>Takeo Kumagai</u> ,Hiroyuki Aota,Akira Matsumoto,Hideya Kawasaki,Ryuichi Arakawa,Michiro Shibano,Yasuo Matoba,Katsutoshi Yokoyama	2208
10:50	1B05	Specific Polymerization Mechanism Involving β -Scission of Mid-Chain Radical Yielding Oligomers in Free-Radical Polymerization of Vinyl Ethers <u>Takeo Kumagai</u> ,Hiroyuki Aota,Akira Matsumoto	2210
	T. Terashima, presiding		
11:15	1B06	Synthesis of poly(cycloalkyl methacrylate)s and their conformation and thermal properties <u>Shinichi Ota</u> ,Hiroki Kouchi,Kouha Sumita,Akikazu Matsumoto	2212
11:40	1B07	Synthesis and Thermochromism of Novel Polydiacetylenes Containing a Phenyl Group in the Side Chain <u>Tomoyo Shimogaki</u> ,Satoshi Dei,Akikazu Matsumoto.....	2214

A. Kajiwara, presiding

12:55	1B08	Ligand Design in Iron Catalysts for Living Radical Polymerization - Activity and Versatility <u>Muneki Ishio</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto.....	2216
13:20	1B09	Bimetallic Catalysts-Mediated Living Radical Polymerization toward Efficient Catalytic Systems <u>Yusuke Tomita</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto..	2218
13:45	1B10	Metal-Catalyzed Living Radical Polymerization with Halogen Donors - Design of Halogen Donors and Catalysts toward Highly Active and Versatile Systems <u>Shinsuke Tokuoka</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto	2220

H. Tanaka, presiding

14:10	1B11	Aqueous Homogeneous Metal-Catalyzed Living Radical Polymerization <u>Hiroaki Yoda</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto.....	2222
14:35	1B12	Functional Polymers via Living Radical Polymerization with Alcohols <u>Kazuhiro Nakatani</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto	2224
15:00	1B13	Core-Imprinted Microgel Star Polymers with Template Linking Agents by Living Radical Polymerization: Designed Microgel Network Space for Molecular Recognition <u>Hironori Kojima</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto	2226
15:25	1B14	Living Radical Polymerization with Metal-Bearing Microgel Star Polymer Catalysts: - Functionalized Catalysts via Designer Polymers <u>Akihisa Nomura</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto	2228

A. Matsumoto, presiding

15:50	1B15	Synthesis of Well-defined Polymers Having Hydroxyl Groups in the Both Chain Ends Based on RAFT Polymerization. <u>Takaaki Hamaguchi</u> , Atsushi Sudo, Naoto Aoyagi, Kiyoshi Kikukawa, Takeshi Endo.....	2230
16:15	1B16	Synthesis of alternating polymers containing anthracene unit in the main chain by radical ring-opening polymerization and incorporation of opto-electronic group by polymer analogous reaction <u>Izumi Tando</u> , Hideharu Mori	2232
16:40	1B17	RAFT polymerization of vinyl pyrrole derivatives having different substituent groups <u>Taro Kitahata</u> , Hideharu Mori.....	2234

H. Mori, presiding

17:05	1B18	Electron Spin Resonance Observation of Multistep Radical Migration in Propagating Radicals of Acrylates <u>Atsushi Kajiwara</u> , Satoe Arata	2236
17:30	1B19	Influence of Ceiling Temperature and Solvent on Stereostructure in Free Radical Polymerization of Acrylates <u>Yusuke Yamamoto</u> , Hitoshi Tanaka.....	2238
17:55	1B20	Influence of Substituents on Tacticity in Free Radical Polymerization of Captodatively Substituted Acrylates <u>Naoki Saito</u> , Hitoshi Tanaka	2240

Thursday, September 25

Polymer Chemistry: Synthesis And Reactions

T. Uemura, presiding

- 9:10 2B01 Comonomer Sequence Regulation and Characterization of Radical Copolymerization of MMA and HEMA [II]
Takeo Ikemiya, Kosuke Hattori, Aiko Kubokawa, Norihito Koga, Tomohiro Hirano, Koichi Ute..... 2242
- 9:35 2B02 Radical polymerizations of acrylamide derivatives - control of stereospecificity with fluorinated alcohols
Tomohiro Hirano, Ryosuke Yamaoka, Takamasa Miyazaki, Takahiro Kamikubo, Koichi Ute 2244
- 10:00 2B03 Polymerization Reactivity of Fumarates with Hydrophilic and Hydrophobic Groups
Masato Ohnishi, Takahiro Uno, Masataka Kubo, Takahito Ito 2246
- 10:25 2B04 Polymerization Reactivity in Solid State of Quinoid Compounds with Pentafluorophenyl Group
Keita Ito, Erika Morita, Takahiro Uno, Masataka Kubo, Takahito Ito, Norimitsu Tohnai, Mikiji Miyata 2248

T. Uno, presiding

- 10:50 2B05 Stereospecific radical polymerization of bulky methacrylates for synthesis of stereogradient polymers
Kenji Ishitake, Kotaro Satoh, Masami Kamigaito, Yoshio Okamoto 2250
- 11:15 2B06 Synthesis of Sequence-Regulated Vinyl Polymers by Radical Polyaddition of Designed Monomers
Satoshi Ozawa, Kotaro Satoh, Masami Kamigaito 2252
- 11:40 2B07 Sequence-Regulated Polymers by Radical Polyaddition between Two Different Bifunctional Monomers
Tomohiro Abe, Kotaro Satoh, Masami Kamigaito 2254

K. Ute, presiding

- 12:55 2B08 Controlled Radical Polymerizations of Vinyl Monomers in the Nanochannels of Porous Metal Complexes: the Effects of Pore Sizes, Shapes, and Interaction Sites
Yukari Ono, Takashi Uemura, Kana] Kitagawa, Susumu Kitagawa 2256
- 13:20 2B09 Pre-irradiation Polymerization onto Teflon Film - In-situ & Real Time Observation by Small-Angle Neutron Scattering
Satoshi Koizumi, Hiroki Iwase, Shinnichi Sawada, Tetsuya Yamaki, Yasunari Maekawa 2258
- 13:45 2B10 Graft Polymerization of Poly(ether ether ketone)s for Fuel Cell Application - Enhancement of Grafting Degrees by Crystallinity Control
Shin Hasegawa, Shuichi Takahashi, Ken Sato, Tadashi Narita, Hiroki Iwase, Satoshi Koizumi, Yasunari Maekawa 2260

M. Kamigaito, presiding

- 14:10 2B11 Phosgene-free synthesis of α -amino acid-*N*-carboxyanhydride: Synthesis and its cyclization reaction of urethane-derivatives of α -amino acids by a reaction of α -amino acid imidazolidinium salts and diphenyl carbonate, and its
Koichi Koga, Atsushi Sudo, Takeshi Endo 2262
- 14:35 2B12 Convenient Synthesis of Polypeptides by Polycondensation of Activated Urethane Derivatives of α -Amino acids

		<u>Atushi Sudo</u> , Yasutaka Kamei, Koichi Koga, Haruo Nishida, Takeshi Endo	2264
15:00	2B13	Synthesis and characterization of novel terpyridines and their derivatives	
		<u>Ravindra Pal</u> , Masayoshi Higuchi, Dirk G. Kurth	2266
15:25	2B14	Characterization of the Schiff Base Co Complexes as Models of the Catalysts for the Stereoselective Lactide Polymerization	
		<u>Xiuli Zhuang</u> , Kenichiroh Koshika, Kenichi Oyaizu, Hiroyuki Nishide, Yongsheng Niu, Xuesi Chen	2268
		T. Hirano, presiding	
15:50	2B15	Synthesis of high-molecular-weight aliphatic polycarbonate using an enzyme catalyst	
		<u>Yoshio Yamamoto</u> , Sachiko Kaihara, Kazunobu Toshima, Shuichi Matsumura	2270
16:15	2B16	Aza-Wittig Polymerization-The Development of Novel Backbone-Containing Polymers	
		<u>Junpei Miyake</u> , Yoshiki Chujo	2272
16:40	2B17	New Click Chemistry: Click Polymerization via 1,3-Dipolar Addition of Homo Nitrile Oxides	
		<u>Yasuhito Koyama</u> , Morio Yonekawa, Yongi Lee, Norihito Miyagawa, Ryouta Seto, Toshikazu Takata	2274
17:05	2B18	Preparation of amylose in organic solvent by means of the enzymatic reaction field included by calcium alginate gel	
		<u>Hironori Izawa</u> , Yoshiro Kaneko, Jun-ichi Kadokawa	2276

Friday, September 26

Polymer Chemistry: Synthesis And Reactions

A. Sudo, presiding

9:10	3B01	Decomposition Mechanism of Cellulose by the Use of Computational Chemistry	
		<u>Kuninobu Otake</u>	2278
9:35	3B02	Synthesis of polymers having dithiocarbamates and peptide bonds and their photo-induced main-chain interconversion	
		<u>Yu Asano</u> , Akio Takahashi, Toshiyuki Oyama	2280
10:00	3B03	Photocrosslinking Utilizing Cyclic O-Acyloximes	
		<u>Kanji Suyama</u> , Tomohiro Inoue, Masamitsu Shirai	2282
10:25	3B04	Synthesis, reaction and function of one-handed helical polyphenylacetylene membranes having a L-menthol residue and two hydroxy groups	
		<u>Yunosuke Abe</u> , Hongge Jia, Masahiro Teraguchi, Takeshi Namikoshi, Marwanta Edy, Takashi Kaneko, Toshiki Aoki	2284

M. Kobayashi, presiding

10:50	3B05	Synthesis of poly(p-phenylene) having fluorescein structure in the main-chain	
		<u>Jun-ichi Kadokawa</u> , Masakazu Suenaga, Yoshiro Kaneko	2286
11:15	3B06	Synthesis of amphiphilic polysiloxanes and formation of their nanoaggregates	
		<u>Norio Iwakiri</u> , Yoshiro Kaneko, Jun-ichi Kadokawa, Takehiro Nishikawa	2288
11:40	3B07	Synthesis of amylose-grafted polyacetylenes by polymer reaction	

and its crosslinking reaction

Yousuke Sasaki,Yoshiro Kaneko,Jun-ichi Kadokawa..... 2290

J. Kadokawa, presiding

12:55 3B08 Studies on the surface functional groups of cross-linked polymers utilized for solid phases

Tomoko Mori,Naomi Kimura,Takuya Kubo,Ken Hosoya..... 2292

13:20 3B09 Development of new amphiphilic copolymers endowed with functional moieties through acetal linkage and its hydrolysis behaviors

Y Wang,Atsushi Sudo,Takeshi Endo..... 2294

13:45 3B10 Syntheses and properties of novolac resin obtained from phenol bearing *p-tert*-butyl or *p-a*-cumyl

Yusuke Nomura,Kazahiro Yamabuki,Kenjiro Onimura,Tsutomu Oishi,Noriyuki Mitani,Kouji Ishiguchi..... 2296

T. Oishi, presiding

14:10 3B11 Crisscross addition polymerization of azine compounds and 1,4-phenylene diisocyanate

Ruriko Imai,Akihito Hashidzume,Takahiro Sato 2298

14:35 3B12 Synthesis and Evaluation of Polyhydroxyethers from Bifunctional Phenols and Epoxy Compounds

Tatsuya Makino,Toshihiko Takasaki,Masami Ochiai,Atsushi Takahashi 2300

15:00 3B13 Three-component polyaddition of diamine, carbon disulfide and diacrylate in water.

Tsutomu Imazeki,Daisuke Nagai 2302

15:25 3B14 Characteristic of thiol-ene curing agent of the multifunctional secondary thiol.

Isao Yamagami,Yotaro Hattori,Akio Kuroiwa,Hiroki Takenaka,Katsumi Murofushi 2304

Room C

Wednesday, September 24

Polymer Chemistry: Synthesis And Reactions

K. Osakada, presiding

10:00 1C03 Polymerization of Vinyl Chloride with Vanadium Complex
Yoshikatsu Tsuchiya,Kiyoshi Endo..... 2306

10:25 1C04 Precision polymerization of butadiene and isoprene with metallosalen complexes

Tatsuhiko Tanaka,Kenji Nakatani,Kiyoshi Endo..... 2308

Y. Nagata, presiding

10:50 1C05 Stereoselective cyclopolymerization of 7-alkyl-1,6-dienes catalyzed by Pd complexes

Takeshi Okada,Daisuke Takeuchi,Kohtaro Osakada 2310

11:15 1C06 Controlled Cyclopolymerization of Non-conjugate Dienes by Ni Complexes

Yusuke Fukuda,Daisuke Takeuchi,Kohtaro Osakada 2312

11:40 1C07 Polymerization of Ethylene and α -Olefins by Bimetallic Complexes

with Bisiminopyridine Ligands

Yuji Takeuchi, Daisuke Takeuchi, Kohtaro Osakada 2314

E. Yashima, presiding

12:55 1C08 Synthesis of Polymer Particles by Living Coordination Dispersion
Polymerization of Various Substituted Allenes
Tadashi Iwamoto, Ikuyoshi Tomita 2316

13:20 1C09 Control of Helical Chirality of Poly(quinoxaline-2,3-diyl)s: Nonlinear
Helical Sense Induction in Copolymerization of Chiral Monomers
Tetsuya Yamada, Michinori Suginome 2318

13:45 1C10 Control of helical chirality of poly(quinoxaline-2,3-diyl)s based on
1:1 interaction between the end-group and a chiral molecule
Yuuya Nagata, Satoru Ohashi, Michinori Suginome 2320

T. Shiono, presiding

14:10 1C11 Helicity Induction and Memory of the Macromolecular Helicity of
Poly(4-carboxyphenyl isocyanide) and Its Structural Analysis
Kanji Nagai, Yoko Hase, Hiroki Iida, Katsuhiko Maeda, Kyoichi
Sawabe, Noriaki Ochi, Koichi Sakajiri, Kento Okoshi, Eiji Yashima 2322

14:35 1C12 Synthesis and Secondary Structure of Polyacetylenes Having
Diketopiperazine
Kayo Terada, Fumio Sanda, Toshio Masuda 2324

15:00 1C13 Polymerization of Phenylacetylene Derivatives with Ru Carbene
Complexes
Toru Katsumata, Masashi Shiotsuki, Fumio Sanda, Toshio Masuda 2326

15:25 1C14 Polymerization of amino acid-derived norbornene monomers
carrying carboxy and free amino groups
Sutthira Sutthasupa, Fumio Sanda, Toshio Masuda 2328

K. Endo, presiding

15:50 1C15 Synthesis of ethylene-styrene copolymer containing syndiotactic
polystyrene sequence by titanium complex catalyst
Chiharu Usui, Naofumi Naga, Hideaki Hagihara 2330

16:15 1C16 Synthesis of Novel *ansa*-Fluorenylanillinodimethyltitanium
Complexes and Olefin Polymerization Behavior
Keiichi Kato, Zhengguo Cai, Yuushou Nakayama, Takeshi Shiono 2332

16:40 1C17 Catalytic Performance of Isolated Ti Species for Propylene/ethylene
Copolymerization on TiCl₃/MgCl₂ Ziegler Catalyst
Toru Wada, Iku Kouzai, Toshiaki Taniike, Minoru Terano 2334

F. Sanda, presiding

17:05 1C18 Pretreatment Effects on Traditional Ziegler-Natta Catalyst Systems
to Clarify the Interactions among the Main Components
Sang Yull Kim, Toshiaki Taniike, Minoru Terano 2336

17:30 1C19 Effects of various internal donors on catalyst structures of
MgCl₂-supported Ziegler-Natta catalysts
Yuichi Hiraoka, Ali Dashti, Sang Yull Kim, Toshiaki Taniike, Minoru
Terano 2338

17:55 1C20 Theoretical Investigation on the Aggregation Mechanism of Ti
species in Heterogeneous Ziegler-Natta Catalysts
Toshiaki Taniike, Minoru Terano 2340

Thursday, September 25

Polymer Chemistry: Synthesis And Reactions

T. Hayakawa, presiding

9:10	2C01	Synthesis and Thermal Properties of Poly(silarylenesiloxane) Derivative with Adamantyl Moiety. <u>Yusuke Hattori</u> , Nobukatsu Nemoto 2342	2342
9:35	2C02	Synthesis of poly(tetramethylsilpyrenylenesiloxane) <u>Kazutoshi Imai</u> , Yasufumi Tamai, Nobukatsu Nemoto 2344	2344
10:00	2C03	Formation of Cyclic Silsesquioxane Tetraols and Their Reactions <u>Yuriko Kakihana</u> , Ryuichi Ito, Seiji Tateyama, Yusuke Kawakami 2346	2346
10:25	2C04	Chemoselective Direct Polyamidation Using Triazine-Based Activating Agent Naoko Takashina, Yuji Shibasaki, <u>Yoshiyuki Oishi</u> 2348	2348
K. Onimura, presiding			
10:50	2C05	Synthesis and Properties of Amino Acid-derived Optically Active Photo-responsive Polymers <u>Hiromitsu Sogawa</u> , Kayo Terada, Fumio Sanda, Toshio Masuda 2350	2350
11:15	2C06	Synthesis and Properties of conjugated polymers having 3,9-carbazolylene unit in the main chain <u>Kosaku Tamura</u> , Masashi Shiotsuki, Fumio Sanda, Toshio Masuda 2352	2352
11:40	2C07	Synthesis and Properties of Amino Acid-derived Optically Active Phenyleneethynylene-based Helical Polymers <u>Ruiyuan Liu</u> , Fumio Sanda, Toshio Masuda 2354	2354
Y. Oishi, presiding			
12:55	2C08	Synthesis and Photo Property of Polymer with Spiropyran Structure in the Main-Chain <u>Yoritake Yamashita</u> , Yoshiro Kaneko, Jun-ichi Kadokawa 2356	2356
13:20	2C09	Synthesis of Various π -Conjugated Polymers Having Tetraphenylethylene Units by Palladium-Catalyzed Three-Component Coupling Polymerization of Aryl Dihalides, Aryl Diboronic Acids, and Various Acetylenes. <u>Keiichi Aomatsu</u> , Kojiro Nakagawa, Ikuyoshi Tomita 2358	2358
13:45	2C10	Novel Palladium-Catalyzed Coupling Polymerization of Thiophene Derivatives and Aryl Dihalides Using C-H Bonds As Polymerizable Functions <u>Shigehiro Yoshida</u> , Ikuyoshi Tomita 2360	2360
14:10	2C11	Synthesis of poly(3-hexylthiophene) via catalytic oxidative polymerization <u>Kousuke Tsuchiya</u> , Kenji Ogino 2362	2362
I. Tomita, presiding			
14:35	2C12	Design of Transition Metal Catalysts with a Photochromic Ligand for Switchable Stereochemical Control in Polymerization <u>Yasunao Miyamura</u> , Kazushi Kinbara, Takuzo Aida 2364	2364
15:00	2C13	Synthesis and Polymerization of Monomer Having Chiral Bisoxazoline Pendant Group Kenjiro Onimura, <u>Shinichi Tsuchiya</u> , Kazuhiro Yamabuki, Tsutomu Oishi 2366	2366
15:25	2C14	Polymerization of Diacetylene Catalyzed by Novel Iridium(II) Complexes Bearing Anionic Chelate Ligand <u>Oji Oka</u> , Kenichi Ogata, Akinori Toyota 2368	2368
15:50	2C15	Palladium-catalyzed Addition Polymerization of Norbornene Having Cyclic Carbonate Moiety <u>Hidetada Morishita</u> , Atsushi Sudo, Takeshi Endo 2370	2370
M. Shiotsuki, presiding			
16:15	2C16	Synthesis of homo- and hetero-nuclear complexes by using cyclic	

		organodiarsenic ligands <u>Manabu Arita</u> , Yasuhiro Morisaki, Kensuke Naka, Yoshiki Chujo	2372
16:40	2C17	Precise synthesis of star-branched polymers containing polypeptide segments <u>Kenji Sugiyama</u> , Kyouichi Inoue, Akira Hirao, Anastasis Karatzas, Hermis Iatrou, Nikos Hadjichristidis	2374
17:05	2C18	Precision synthesis of star-shaped polymers with well-defined structure by living cationic polymerization and preparation of stable metallic nanoparticles catalysts <u>Shingo Nishida</u> , Naoto Yagi, Syokyoku Kanaoka, Sadahito Aoshima, Hidehiro Sakurai, Hironori Tsunoyama, Tatsuya Tsukuda	2376

Friday, September 26

Polymer Chemistry: Synthesis And Reactions

M. Minoda, presiding

9:10	3C01	Living Cationic Copolymerization of Aldehydes with Vinyl Ethers <u>Yasushi Ishido</u> , Ryosuke Aburaki, Shokyoku Kanaoka, Sadahito Aoshima	2378
9:35	3C02	Living Cationic Polymerization of Various Styrenes - Controlled Polymerization Using SnCl ₄ in the Presence of an Added Base <u>Jun Ashida</u> , Hidehiro Yamamoto, Motomasa Yonezumi, Shokyoku Kanaoka, Sadahito Aoshima	2380
10:00	3C03	Sequence-Regulated Polymers by Living Cationic and Radical Polymerizations toward Precision Template Polymerization <u>Shohei Ida</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto	2382
10:25	3C04	Specific ring-opening polymerization of methylated levoglucosan Dai Yoshida, <u>Takashi Yoshida</u> , Toshiyuki Uryu	2384

T. Hashimoto, presiding

10:50	3C05	Cationic block polymerization of poly(maleimidostyrene) as a macroinitiator <u>Shigeo Kuroda</u> , Tokio Hagiwara	2386
11:15	3C06	Anionic polymerization of alpha-methylene-N-methylpyrrolidone <u>Keita Kitazawa</u> , Takashi Suzuki, Takashi Ishizone	2388
11:40	3C07	Anionic polymerization of <i>N,N</i> -dimethylcrotonamide <u>Junichi Kusakabe</u> , Takashi Suzuki, Takashi Ishizone	2390

T. Ishizone, presiding

12:55	3C08	Living Cationic Polymerization of Divinyl Ether with Cyclic Acetal Group and Property of the Produced Polymers <u>Tamotsu Hashimoto</u> , Hiromi Takagi, Yuko Hasegawa, Michio Urushisaki, Toshikazu Sakaguchi	2392
13:20	3C09	Ring-Opening Polymerizability of a Benzylated 1,6-Anhydro-talose <u>Kazuyuki Hattori</u> , Takashi Yoshida	2394
13:45	3C10	Living Cationic Polymerization with Metal Halide in the Presence of a Dicarboxyl Compound <u>Shinya Nakayama</u> , Shokyoku Kanaoka, Sadahito Aoshima	2396
14:10	3C11	Living cationic polymerization using heteropoly acid <u>Yousuke Matsuo</u> , Shokyoku Kanaoka, Sadahito Aoshima	2398

S. Kanaoka, presiding

14:35	3C12	Stereospecific anionic polymerization of vinylphosphate <u>Minori Ohara</u> , Mariko Kawauchi, Takehiro Kawauchi, Tsutomu	
-------	------	--	--

15:00	3C13	Takeichi 2400 Ring-Opening Polymerization of 1,3-Dehydroadamantanes <u>Soutarou Inomata</u> , Yousuke Uehara, Shingo Kobayashi, Takashi Ishizone 2402	2400
15:25	3C14	Synthesis and Glass Transition Behavior of Polymers containing Adamantyl Terminals <u>Hiroshi Kataoka</u> , Hideo Shoji, Shingo Kobayashi, Takashi Ishizone 2404	2404

Room D

Wednesday, September 24

Polymer Chemistry: Synthesis And Reactions

A. Hirao, presiding

10:00	1D03	Synthesis and Functionalization of High Molecular Weight Hyperbranched Polyglycerol <u>Masaki Tamaki</u> , Harumi Kaga, Ryosuke Sakai, Toshifumi Satoh, Toyoji Kakuchi 2406	2406
10:25	1D04	Architecture of nanostructural Polymers consisting of Brush Backbone and their crystalline behaviors <u>Takuya Murakami</u> , Satoshi Uchida, Koji Ishizu 2408	2408
10:50	1D05	Synthesis of water-soluble hyperbranched polymers by RAFT polymerization of poly(ethylene glycol) diacrylates <u>Masahiro Tsukamoto</u> , Hideharu Mori 2410	2410

K. Ishizu, presiding

11:15	1D06	Synthesis and Properties of Photo-curable Hyper Branched polymer by ATRP followed by the chemical modification of resulting polymers using DBU method <u>Masafumi Takahashi</u> , Hiroto Kudo, Tadatomi Nishikubo 2412	2412
11:40	1D07	Synthesis and Functionalization of Ladder Cyclic Oligomer by the Reaction of pyrogallol and 1,5-Pentanedial based on the Dynamic Covalent Chemistry <u>Hiroyuki Seki</u> , Hiroto Kudo, Tadatomi Nishikubo 2414	2414

H. Kudo, presiding

12:55	1D08	Synthesis and Characterization of Thermoresponsive Core-Double Shell Beads Using Hyperbranched Polysiloxysilane-Immobilized Silica as Mediating Agent RAFT Polymerization <u>Me Lira</u> , Teruaki Hayakawa, Masa-aki Kakimoto 2416	2416
13:20	1D09	Syntheses of Hyperbranched Poly(siloxysilane)s with Two Kinds of Terminal Functional Groups by a Ring-opening Reaction of Epoxy Groups <u>Kazutoshi Yokomachi</u> , Teruaki Hayakawa, Masa-aki Kakimoto 2418	2418
13:45	1D10	Properties of polyhedral oligomeric silsesquioxane(POSS)-core dendrimer in water and its photochemical application <u>Kenichi Inafuku</u> , Kazuo Tanaka, Yoshiki Chujo 2420	2420

T. Nakano, presiding

14:10	1D11	Successive Synthesis of Asymmetric Star-Branched Polymers Using 1,3-Butadiene-Substituted Alkyl Bromide. <u>Kyouichi Inoue</u> , Sayato Ehara, Tomoya Higashihara, Akira Hirao 2422	2422
-------	------	---	------

14:35	1D12	Synthesis of Well-Defined Dendrimer-Like Star-Branched Polystyrenes by a New Iterative Methodology Based on Living Anionic Polymerization <u>Hee-soo Yoo</u> , Takumi Watanabe, Akira Hirao..... 2424	2424
15:00	1D13	Syntheses of multibranching polymer and influence of the branching architecture on the molecular entanglement <u>Tomoya Kitagawa</u> , Yasuhito Mune, Kaoru Adachi, Yasuhisa Tsukahara 2426	2426
15:25	1D14	Living anionic polymerization with lithiation products of <i>p</i> -methylstyrene macroinitiator and preparation of multibranching polymers <u>Ryouta Uemura</u> , Yusuke Hamaguchi, Kaoru Adachi, Yasuhisa Tsukahara 2428	2428
A. Hashidzume, presiding			
15:50	1D15	Synthesis and Recognition of Macrocyclic Phenylazomethines <u>Ryo Shomura</u> , Masayoshi Higuchi, Dirk Kurth 2430	2430
16:15	1D16	The branching block copolymer from olefin macro-monomer containing divinylbenzene. - (1) The synthesis and structural analysis <u>Toru Arai</u> , Mitsuo Matsuda, Masaru Hasegawa 2432	2432
16:40	1D17	Dilute Solution Properties of Branched Polymers Consisting of Rodlike Macromonomers <u>Moriya Kikuchi</u> , Masahiko Annaka, Atsushi Takahara, Seigou Kawaguchi 2434	2434
M. Higuchi, presiding			
17:05	1D18	Synthesis of Dendrimer Monomolecularly Imprinted with Fructose and Manipulation of Its Selectivity <u>Akihito Hashidzume</u> , Steven C. Zimmerman..... 2436	2436
17:30	1D19	Synthesis and Stimuli-Responsive Behavior of Core-Shell Type Hyper Branched Polymer <u>Suguru Motokucho</u> , Takeshi Inaba, Ken Kojio, Mutsuhisa Furukawa... 2438	2438
17:55	1D20	Construction of polyrotaxane materials by stereocomplex formation of using enantiomeric mixture of polylactide-grafted polyrotaxanes <u>Shota Akiyama</u> , Seigo Takamidou, Koji Nagahama, Tatsuro Ouchi, Yuichi Ohya, Nobuhiko Yui 2440	2440

Thursday, September 25

Polymer Chemistry: Synthesis And Reactions

Y. Shibasaki, presiding			
9:35	2D02	Synthesis and properties of graft copolymers by interfacial polycondensations using polystyrene macromonomers having a dihydroxyphenyl end group prepared by ATRP <u>Minoru Yamamoto</u> , Kaoru Adachi, Yasuhisa Tsukahara 2442	2442
10:00	2D03	Synthesis and Self-Assembly of Miktoarm Star Copolymers Consisting of Two Arms of Aromatic Polyether and One Arm of Polystyrene <u>Yuka Yamazaki</u> , Naomi Ajioka, Akihiro Yokoyama, Tsutomu Yokozawa 2444	2444
Y. Tsukahara, presiding			
10:25	2D04	Preparation of Materials for Nano Patterning Template Utilized	

		Self-organizes of POSS Containing Block Copolymers <u>Tomoyasu Hirai</u> ,Teruaki Hayakawa,Masa-aki Kakimoto,Leolukman Melvina,Gopalan Padma.....	2446
10:50	2D05	Synthesis and pH-Responsive Behavior of Block Copolymers with Pendant Carboxy Groups Obtained by Living Cationic Polymerization	
11:15	2D06	<u>Yu Shinke</u> ,Yukari Oda,Shokyoku Kanaoka,Sadahito Aoshima.....	2448
		Precise Synthesis and Stimuli Responsive Behavior of End-Functionalized Polymers with Various Shapes <u>Hiroaki Shimomoto</u> ,Naoto Yagi,Shokyoku Kanaoka,Sadahito Aoshima.....	2450
11:40	2D07	Smart Films Obtained from Block Copolymers of Various Vinyl Ethers - Primary Structures of polymers and Controlled Surface Responsiveness <u>Hiroyuki Tsujimoto</u> ,Shokyoku Kanaoka,Sadahito Aoshima.....	2452
		M. Kakimoto, presiding	
12:55	2D08	Helical structure of poly(naphthalenecarboxamide) bearing <i>N</i> -chiral and achiral side chain <u>Koichiro Mikami</u> ,Hiroaki Daikuhara,Akihiro Yokoyama,Tsutomu Yokozawa	2454
13:20	2D09	Synthesis of novel diaryl boron complexes with 1,3-diketone derivatives and π -conjugated polymers bearing their boron complexes in the main chain <u>Atsushi Nagai</u> ,Kenta Kokado,Yuuya Nagata,Yoshiki Chujo	2456
13:45	2D10	Synthesis and properties of poly(<i>p</i> -phenylene-ethynylene) derivative containing the [2.2]paracyclophane unit in the main chain <u>Lin Lin</u> ,Yasuhiro Morisaki,Yoshiki Chujo.....	2458
		T. Yokozawa, presiding	
14:10	2D11	Living anionic polymerization with monolithioferrocene and properties of polymers formed therefrom <u>Toshiki Takenaka</u> ,Minoru Yamamoto,Kaoru Adachi,Yasuhisa Tsukahara	2460
14:35	2D12	Synthesis and Application for Proton Exchange Membrane of Multi-block Polysulfone Derivatives with Sulfonic acid Groups. <u>Yoshiyuki Teraji</u> ,Kiyotaka Fukagawa,Teruaki Hayakawa,Masa-aki Kakimoto,Shogo Suehiro,Kenji Terada,Shin-iti Shimada	2462
15:00	2D13	Synthesis and Characterization of Hyperbranched poly(ether ketone sulfone)s having Sulfonic acids at the Termini <u>Takashi Ohsugi</u> ,Kiyotaka Fukagawa,Masatoshi Watanabe,Teruaki Hayakawa,Masa-aki Kakimoto	2464
15:25	2D14	Synthesis and Application of PVA having TEMPO unit in their pendant group(5) <u>Rikiya Sato</u> ,Yasuhiro Kiryu,Yasuhiro Ikeda,Yoshihiro Katsumata,Takae Furuya,Yosuke Tokiwa.....	2466
		E. Sato, presiding	
15:50	2D15	Synthesis and Characterization of Titanium-Containing Triblock Copolymers by Metal-Catalyzed Living Radical Polymerization <u>Yasutaka Tsujimoto</u> ,Kotaro Satoh,Masami Kamigaito,Hidekazu Sugimori,Hiroshi Jinnai	2468
16:15	2D16	Synthesis and chiroptical property of stimuli-responsive block copolymers derived from proline <u>Ikumi Kato</u> ,Hideharu Mori,Takesi Endo.....	2470

16:40	2D17	Synthesis and Hierarchical Structure of Novel Double Side-Chain Liquid Crystalline Diblock Copolymers <u>Rina Maeda</u> ,Teruaki Hayakawa,Masatoshi Tokita,Masa-aki Kakimoto,Hiroaki Urushibata.....	2472
17:05	2D18	Synthesis of well-defined aromatic polyamide- <i>b</i> -polystyrene by combination of chain-growth condensation polymerization and controlled/living radical polymerization. <u>Tomohiro Masukawa</u> ,Shuichi Fujii,Akihiro Yokoyama,Tsutomu Yokozawa	2474

Friday, September 26

Polymer Chemistry: Synthesis And Reactions

T. Aoki, presiding

9:10	3D01	Polymer Synthesis via Prins Cyclization in Ionic Liquid HF Salt <u>Shinsuke Inagi</u> ,Yuta Doi,Yuichiro Kishi,Toshio Fuchigami	2476
9:35	3D02	Synthesis and Characterizations of Ionic Liquid-Soluble Conjugated Polymers. <u>Daisuke Aoki</u> ,Mitsunori Furuya,Kouiti Kodama,Hisasi Kokubo,Masayosi Watanabe.....	2478

H. Kokubo, presiding

10:00	3D03	π -Conjugated Polymers Consisting of Salophen Units: Preparation, Structure, Chemical Properties and Their Complexes of Metals <u>Hiroki Fukumoto</u> ,Kazuto Yamane,Yumiko Kase,Takakazu Yamamoto	2480
10:25	3D04	Specificity of Network Polymer Precursor Obtained by Cationic Crosslinking Monoepoxide/Diepoxide Copolymerizations <u>Chisato Katahira</u> ,Nobuya Morishita,Junichi Ikeda,Pang-boey Lim,Mitsuteru Inoue,Yuri Iwasaki,Hiroyuki Aota,Akira Matsumoto ...	2482

A. Matsumoto, presiding

10:50	3D05	Synthesis and Characterization of Core-shell type Fe ₃ O ₄ Nanoparticles in Poly(organosilsesquioxane) <u>Vuthichai Ervithayasuporn</u> ,Yanhong Zhang,Yeong Hee Cho,Yusuke Kawakami	2484
11:15	3D06	Functional Hollow Polymer Particles and Applications <u>Norimasa Fukazawa</u> ,Ren-hua Jin.....	2486
11:40	3D07	Synthesis, Reaction and Function of Chiral Poly(<i>m</i> -Phenyleneethynylene) Membranes <u>Makoto Inoue</u> ,Masahiro Teraguchi,Takeshi Namikoshi,Edy Marwanta,Takashi Kaneko,Toshiki Aoki.....	2488

K. Naka, presiding

12:55	3D08	Thermal decomposition of cobalt-[telechelic poly(dimethylsiloxane)] <u>Asuka Kurokawa</u> ,Masahiro Tsuchiya.....	2490
13:20	3D09	Solubilization of fullerene C ₆₀ in water with thermo-responsive diblock copolymers. <u>Shigeki Awa</u> ,Shin-ichi Yusa,Yotaro Morishima	2492
13:45	3D10	Hydrogen bond-directed supramolecular vesicles - Behavior and properties in solution <u>Jun Sawayama</u> ,Isao Yoshikawa,Koji Araki.....	2494
14:10	3D11	Synthesis of a Novel Supramolecular Gelator having a Dehydrobenzo[12]annulene Core: Structures and Properties of the	

		Gels <u>Hajime Shigemitsu</u> ,Yuu Sakamoto,Hirofumi Senga,Ichiro Hisaki,Norimitsu Tohnai,Mikiji Miyata	2496
		N. Tohnai, presiding	
14:35	3D12	Synthesis of electric conductive organic nanofiber of TTF <u>Tomoyuki Kunita</u> ,Kazuo Tanaka,Kensuke Naka,Yoshiki Chujo.....	2498
15:00	3D13	Electrical and Optical Properties of Molecular Nanofibers composed of TTF derivatives <u>Yoko Tatewaki</u> ,Tatsuya Hatanaka,Mutsumi Kimura,Hirofusa Shirai..	2500
15:25	3D14	Composite Formation of Carbon Nanotubes and Fullerenes and Their Photoelectrochemical Properties <u>Tomokazu Umeyama</u> ,Noriyasu Tezuka,Yoshihiro Matano,Hiroshi Imahori	2502

Room E

Wednesday, September 24

New developments of polymers with diverse elements and nano-structured hybrids

10:15	SO	Introductory Remarks Keiichi Moriya, Takahiro Gunji, Yuko Uchimaru.....	2864
		T. Gunji, presiding	
10:25	1E04	Synthesis and application of cyclic compounds using chiral phosphorus atoms <u>Hiroaki Imoto</u> ,Yasuhiro Morisaki,Yoshiki Chujo	2865
10:50	1E05	Synthesis and Properties of Phosphorus-Containing Conjugated Systems with Multi Branched Structure <u>Takanobu Sanji</u>	2867
		T. Sanji, presiding	
11:15	1E06	Crosslinking of Polymers Containing Silicon Atoms in Main Chain Yuta Hasegawa,Ikuya Mashita, <u>Jun-ichi Oku</u>	2869
11:40	1E07	Applications of Si-linked Oligothiophenes to Organic Transistors <u>Joji Ohshita</u> ,Yosuke Hatanaka,Yuki Izumi,Yoshihito Kunugi,Takao Kosuge,Hiroyuki Kobayashi.....	2871
		J. Ohshita, presiding	
12:55	1E08IL	Reactive and Functional Polymers Containing Transition Metals <u>Ikuyoshi Tomita</u>	2873
		Y. Uchimaru, presiding	
13:45	1E10	Synthesis and heat resistance of Adamantane-containing silicon polymers <u>Hiroshi Hashimoto</u> ,Satoko Kitamura,Joji Ohshita,Takayuki Maehara.....	2876
14:10	1E11	Preparation of The Functional Silicone Polymers from Chrysotile Asbestos with Chemical Attach Method <u>Kimiyasu Sato</u> ,Hideyuki Tagaya,Tetsuya Shimamura,Kiyotsugu Yamashita,Shigeki Habaue,Meisetsu Kajiwara	2878
14:35	1E12	Synthesis and Photoluminescence Properties of Poly(<i>p</i> -phenylene-ethynylene) Containing <i>o</i> -Carborane Units <u>Kenta Kokado</u> ,Yoshiki Chujo	2880

S. Habaue, presiding

- 15:00 1E13 Synthesis and Structure Analysis of Borazine-diamine Polymers
Yuko Uchimaru, Hiroyuki Suda, Kenji Haraya 2882
- 15:25 1E14 The conformation control of sulfonated polyaniline by transition metals.
Toru Amaya, Daisuke Saio, Syougo Koga, Toshikazu Hirao 2884
- 15:50 1E15 Development of Novel holographic recording materials with double decker silsesquioxane derivatives in photoacid generation systems
Yeong Hee Cho, Watthanapol Jarernbunthitchai, Yusuke Kawakami .. 2886

Y. Uchimaru, presiding

- 16:15 1E16 Synthesis of precursors for oxide ceramics from metal oxides
Takahiro Gunji, Takashi Kajiwara, Yoshimoto Abe 2888
- 16:40 1E17 Refractive index control of silsesquioxane organic-inorganic hybrid polymer[2] - Refractive index control by photo-oxidation reaction of germanium polymer
Shohei Tadenuma, Akira Watanabe, Tokuji Miyashita 2890
- 17:05 1E18 Synthesis of Chiral Ladder-like Polysilsesquioxanes forming Hexagonal Phases
Yoshiro Kaneko 2892
- 17:30 1E19 Influence of conditions of melt spinning and various curing methods on synthesis of Si-O-C ceramics fibers from polymethylsilsesquioxane(PMSQ)
Ryuichi Sumimoto, Ken-ichiro Kita, Masaki Narisawa, Hiroshi Mabuchi, Masaki Sugimoto, Masahito Yoshikawa 2894

Thursday, September 25**New developments of polymers with diverse elements and nano-structured hybrids****M. Kubo, presiding**

- 9:10 2E01 Silicon carbide micro tube structure formation by adjusting conditions of melt spinning and electron beam curing
Ken-ichiro Kita, Masaki Narisawa, Hiroshi Mabuchi, Masaki Sugimoto, Masahito Yoshikawa 2896
- 9:35 2E02 Antifouling and corrosion resistant coating prepared from polysilazane hybrid
Yoshio Hasegawa, Seong-yun Kim, Akio Shimomura, Junko Shimomura, Katsuo Koishikawa 2898

Y. Hasegawa, presiding

- 10:00 2E03 Synthesis of a 3-ingredient crosslinked type layered zirconium phosphonate and its application as a proton conducting electrolyte
Shin-ichi Ogata, Masaya Kawasumi, Yoshiaki Fukushima 2900
- 10:25 2E04 Incorporation of Self-Doped Polythiophene into Silica
Masataka Kubo, Takeshi Yoshida, Takahiro Uno, Takahito Itoh 2902

M. Narisawa, presiding

- 10:50 2E05 Architecture of the Silica Hybrid Nanoparticles and Preparation of the Colloidal Crystal
Yoko Tokuno, Donghoon Lee, Satoshi Uchida, Masaaki Ozawa, Koji Ishizu 2904
- 11:15 2E06 Formation of novel siloxane-based dendrimers containing a cubic siloxane core
Kazufumi Kawahara, Yoshiaki Hagiwara, Atsushi

11:40	2E07	Shimajima, Kazuyuki Kuroda.....	2906
		Synthesis and photoluminescence properties of functional polymers having silyl group-substituted oligothiophene in the main chain	
		<u>Gen-ichi Konishi</u> , Kengo Asai, Kazuhiko Mizuno.....	2908
G. Konishi, presiding			
12:55	2E08	Preparation of inorganic-organic hybrid mesostructured materials from a coumarin derivative possessing an alkoxysilyl group	
		<u>Ayako Tsuchiya</u> , Shintaro Nasu, Kazuyuki Kuroda.....	2910
13:20	2E09	Development of silsesquioxane gate insulating materials for organic TFT	
		<u>Kimihiko Matsukawa</u> , Takashi Hamada, Hiroyoshi Naito	2912
13:45	2E10	Hybrid Material Formation by Electrochemical Approach and Its Biofunction	
		<u>Junji Watanabe</u> , Mitsuru Akashi.....	2914
K. Matsukawa, presiding			
14:10	2E11	Synthesis of Quantum-Size TiO ₂ from Fine-Controlled Organic-Metal Hybrid Dendrimers as Precursors and the Quantum Physics	
		<u>Norifusa Satoh</u> , Kimihisa Yamamoto	2916
14:35	2E12	Flexible BaTiO ₃ /nylon-6 nanocomposites with high dielectric constants	
		<u>Jiwon Choi</u> , Taeho Kim, Sang-soo Lee	2918
15:00	2E13	Synthesis and Functionalization of Chiral Metal Nanocluster-Polymer Nanotube Composites	
		<u>Hiroshi Awaji</u> , Yuh Satake, Tsukasa Nakahodo, Hisashi Fujihara.....	2920
K. Yamamoto, presiding			
15:25	2E14	Structure and Functions of Inorganic Nanoparticles Controlled by Polymers	
		<u>Tetsu Yonezawa</u>	2922
15:50	2E15	The Synthesis of MnO ₂ -loaded metal oxide / carbon clusters composite material with visible light-responsive oxidation-reduction ability	
		<u>Hideo Matsui</u> , Masakuni Yoshihara.....	2924
16:15	2E16	Clay Orientation of Polyvinyl Alcohol Nano-Hybrid	
		<u>Takashi Nishino</u> , Masaru Kotera, Yukari Inoue, Seira Morimune, Yoshimasa Urushihara.....	2926
T. Gunji, presiding			
16:40	2E17	Preparation of PEG-grafted C60 fullerene and gelation of PEG by C60 fullerene	
		<u>Horoyuki Wakai</u> , Takuya Momoi, Kumi Shirai, Takeshi Yamauchi, Norio Tsubokawa	2928
17:05	2E18	Synthesis and Characterization of Poly(methyl methacrylate) Brushes Encapsulated Silica Particles	
		<u>Dong Hoon Lee</u> , Yoko Tokuno, Satoshi Uchida, Masaaki Ozawa, Koji Ishizu.....	2930

Friday, September 26

New developments of polymers with diverse elements and nano-structured hybrids

Y. Sugahara, presiding

9:10	3E01	Synthesis of Calcium Carbonate hybrid particles by Delay Addition	
------	------	---	--

		Method	
9:35	3E02	<u>Kensuke Naka</u> , Shu-chen Huang, Yoshiki Chujo Preparation and Optical Properties of Fluorinated Polyimides/MgF ₂ Nanohybrid Thin Films Exhibiting High Transparency and Low Refractive Indices	2932
10:00	3E03	<u>Atsuhisa Suzuki</u> , Shinji Ando Synthesis of high functional ceramics by use of polymer metal complexes	2934
		<u>Masato Kakihana</u> , Valery Petrykin.....	2936
		K. Naka, presiding	
10:25	3E04	Design and Synthesis of Polymer Matrices of the Organic/Inorganic Hybrid Materials <u>Tatsuya Nishimura</u> , Takahiro Ito, Yuya Oaki, Satoshi Kajiyama, Takashi Kato.....	2938
10:50	3E05	Preparation of organic-inorganic hybrids via grafting reactions between inorganic layered materials and phosphonic acid <u>Yoshiyuki Sugahara</u> , Akira Shimada, Yumi Kato, Seiichi Tahara, P. Hubert Mutin	2940
11:15	3E06	Synthesis of inorganic-organic hybrids from porphyrin derivatives possessing amphiphilic side chains <u>Shintaro Nasu</u> , Kazuyuki Kuroda	2942

Polymer Chemistry: Synthesis And Reactions

		K. Satoh, presiding	
12:55	3E08	Chemoselective Polymer End-functionalization through Transmetallation of Heavier Heteroatoms <u>Hiroto Yamada</u> , Eiichi Kayahara, Shigeru Yamago.....	2504
13:20	3E09	High-pressure atom transfer radical polymerization for synthesizing well-defined ultrahigh molecular-weight polymers <u>Yuzo Kayama</u> , Toshihiko Arita, Kohji Ohno, Yoshinobu Tsujii, Takeshi Fukuda	2506
13:45	3E10	Synthesis of Highly Isotactic Polymethacrylates and Branch Polymer via Combination of Stereospecific Polymerization and "Click Reaction" Tatsuki Kitayama, <u>Hiroshi Tomioka</u> , Takehiro Kitaura	2508
14:10	3E11	Isotactic-specific living polymerization of methacrylates with polar functional group <u>Takehiro Kitaura</u> , Mitsuhiro Nakamura, Hitomi Hashidzume, Tatsuki Kitayama.....	2510
		T. Terashima, presiding	
14:35	3E12	Synthesis of stereo-block copolymer with resorcinol-formaldehyde novolac as a template <u>Manabu Yokozuka</u> , Yoichi Saito, Reiko Saito	2512
15:00	3E13	Synthesis and characterization of photodegradable block copolymers of polystyrene and poly(ethylene glycol) connected with 2-nitrobenzyl derivative. <u>Yuta Iwasaki</u> , Kazuo Yamaguchi, Takahiro Shimizu, Mai Hosoda, Takashi Ishizone, Syuichi Nojima, Shingo Namiki.....	2514

Room F

Wednesday, September 24

Chemistry of dimensionally controlled polymers for novel functionality

9:50	SO	Introductory Remarks Akira Harada.....	2730
A. Harada, presiding			
10:00	1F03	Controlled release of guest molecules from cyclodextrin inclusion complexes treated with ultra-high pressure <u>Kenji Hisada</u> , Chie Kato, Teruo Hori, Yuji Tokunaga, Kazumasa Hirogaki, Mitsugu Kimizu, Jun Kamitani, Takashi Yamamoto	2731
10:25	1F04	Polymer Recognition Ability of Skeleton-Modified Cyclodextrins <u>Toshiyuki Kida</u> , Akira Kikuzawa, Mitsuru Akashi	2733
N. Yui, presiding			
10:50	1F05	Supramolecular Polymerization Catalysts Consisting of Cyclodextrins Motofumi Osaki, <u>Yoshinori Takashima</u> , Hiroyasu Yamaguchi, Akira Harada.....	2735
11:15	1F06	Mechanism for the recognition of bioactive peptides by molecularly imprinted cyclodextrin polymers <u>Jun Sumaoka</u> , Shi-hui Song, Yasuhito Hirokawa, Makoto Komiyama ..	2737
11:40	1F07	Synthesis and Properties of network polymers using polyrotaxane with reactive groups on the wheel component <u>Masahiro Shioya</u> , Toshikazu Takata	2739
T. Takata, presiding			
12:55	1F08	Loose Polyrotaxanes: Polyrotaxane with Minimum Interaction between PEG and β -CD <u>Yuichiro Kobayashi</u> , Ryo Katoono, Nobuhiko Yui.....	2741
13:20	1F09	Preparation of poly(sodium acrylate) superabsorbent crosslinked with polyrotaxane-typed macro monomer. <u>Naohisa Hayamizu</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oiahi.....	2743
13:45	1F10	Preparation and Swelling Properties of Polyrotaxane Derivatives Possessing Amino Acid Side Chains <u>Jun Araki</u> , Keisuke Kagaya, Kousaku Ohkawa	2745
M. Komiyama, presiding			
14:10	1F11	Syntheses of Silicone-Based Polyrotaxane and Slide-Ring Gel <u>Kazuaki Kato</u> , Masatoshi Kidowaki, Kohzo Ito	2747
14:35	1F12	Two-component low-molecular-weight organogelators of L-lysine derivatives and N-dodecyl-L-amino acids. <u>Hiroaki Saito</u> , Masahiro Suzuki, Hirofusa Shirai, Kenji Hanabusa.....	2749
15:00	1F13	Self-assembly of hydrophobically modified polysaccharides: Effect of structures of polysaccharides <u>Yayoi Ozawa</u> , Nobuyuki Morimoto, Kazunari Akiyoshi	2751
T. Oishi, presiding			
15:25	1F14	Preparation of hydrogel by inclusion of amylose using vine-twining polymerization <u>Kazuya Fujisaki</u> , Yoshiro Kaneko, Jun-ichi Kadokawa, Hidemitsu	

15:50	1F15	Furukawa, Jian Ping Gong 2753 Supramolecule of Nitroxide Radicals via a Hydrogen Bonding and its Property <u>Satoshi Nakajima</u> , Eisuke Kato, Hiroyuki Nishide 2755	2753
16:15	1F16	Regulation of Molecular Arrangement in Supramolecular Assembly by Using Hydraulic Press <u>Norihiro Yamada</u> , Sayaka Yoshida 2757	2755
K. Hanabusa, presiding			
16:40	1F17	Construction and Functionalization of High-order Supramolecular Structures Consisting of Hydrogen Bonded Clusters <u>Norimitsu Tohnai</u> , Atsushi Yamamoto, Ichiro Hisaki, Mikiji Miyata 2759	2759
17:05	1F18	Synthesis and Structures of Artificial Double Helical Polymers Consisting of Complementary Molecular Strands Utilizing Amidinium-Carboxylate Salt Bridges <u>Yoshio Furusho</u> , Takeshi Maeda, Shinzo Kobayashi, Eiji Yashima 2761	2761
17:30	1F19	Construction of molecular rail utilizing the fluidic property of supramolecular nanofiber <u>Masato Ikeda</u> , Shun-ichi Tamaru, Shoji Takeuchi, Itaru Hamachi 2763	2763
17:55	1F20	Supramolecular Helical Nanofiber Formation by a Target OligoDNA <u>Rika Iwaura</u> , Mayumi Ohnishi-kameyama, Toshimi Shimizu 2765	2765

Thursday, September 25

Chemistry of dimensionally controlled polymers for novel functionality

Y. Sasaki, presiding			
9:10	2F01	Hierarchical Structure and Viscosity Enhancement of Amphiphilic Random Copolymers in Solution <u>Takahiro Sato</u> , Tomohiko Kimura, Akihito Hasgidzume 2767	2767
9:35	2F02	Formation of supramolecular assembly between PEG-polycation and siRNA and its application for siRNA delivery <u>Nobuhiro Nishiyama</u> , Satoru Mastumoto, Hiroyasu Takemoto, Kanjiro Miyata, James Christie, Makoto Oba, Yuichi Yamasaki, Kazunori Kataoka 2769	2769
10:00	2F03	Transformation of Molecular Information by an Artificial Cell Membrane as a Molecular Device <u>Masaru Mukai</u> , Jun-ichi Kikuchi 2771	2771
S. Takeoka, presiding			
10:25	2F04	Development of photoresponsive RNA aptamer <u>Mingzhe Liu</u> , Hiroshi Jinmei, Hiroshi Abe, Yoshihiro Ito 2773	2773
10:50	2F05	Novel Functional Model of Chromatin - Polymer-peptide conjugate regulating gene transcription <u>Yoshiki Katayama</u> , Yuko Sato, Masanori Kuramoto, Shujuro Shiozaki, Jeong-hun Kang, Daisuke Asai, Riki Toita, Hiroyuki Tanaka, Hideki Nakajima, Takeshi Mori, Takuro Niidome 2775	2775
11:15	2F06	Nanophase-Separated Structures of Block- and Graft-Type Supramacromolecules via Acid-Base Complexation <u>Atsushi Noro</u> , Akinori Tamura, Sou Wakao, Atsushi Takano, Yushu Matsushita 2777	2777
11:40	2F07	Self-assembly of head-tail type block copolymer having well-defined 3D-structure <u>Atsushi Harada</u> , Ken-ichi Nakanishi, Shin-ichi Ichimura, Chie	

		Kojima, Kenji Kono.....	2779
		H. Yamaguchi, presiding	
12:55	2F08	Control of tetramolecular quadruplex association by cationic comb-type copolymer <u>Rui Moriyama</u> , Naohiko Shimada, Arihiro Kano, Atsushi Maruyama	2781
13:20	2F09	Polycation-Supported Helical G-Wire Formation from Dilute 5'GMP Aqueous solutions Shuichiro Uehara, Mina Sakuragi, <u>Kazuo Sakurai</u>	2783
13:45	2F10	Two-dimensional self-assembly of peptide fibril on solid substrate via spontaneous secondary structural transition at solid/water interface <u>Masayoshi Tanaka</u> , Souhei Abiko, Naokiyo Koshikawa, Takatoshi Kinoshita	2785
		J. Kikuchi, presiding	
14:10	2F11	Construction of polymer nanosheets with hetero-surface functions <u>Shinji Takeoka</u> , Yosuke Okamura, Toshinori Fujie	2787
14:35	2F12	Formation of Nano-Phases within Large Spherical Complexes <u>Kosuke Suzuki</u> , Junya Iida, Sota Sato, Masaki Kawano, Makoto Fujita .	2789
15:00	2F13	Establishing Supramolecular Structure with Dendritic Polyphenylazomethines <u>Yousuke Ochi</u> , Kozue Sakurai, Kimihisa Yamamoto	2791
15:25	2F14	Adaptive Inclusion Phenomena Observed in the Self-Assembly of Nucleotides and Rare Earth Ions <u>Ryuhei Nishiyabu</u> , Nozomi Hashimoto, Nobuo Kimizuka	2793
		Y. Katayama, presiding	
15:50	2F15	An application of Bio-Nano-Process and Wet Nanotechnology - Bio-templated synthesis of nanoparticles and one of the applications. <u>Ichiro Yamashita</u>	2795
16:15	2F16	Construction and Application to Display Devices of Supramolecular Organized Systems with Liquid Crystal Molecules and Metal Nanoparticles <u>Naoto Nishida</u> , Shotaro Ohta, Yukihide Shiraishi, Shunsuke Kobayashi, Naoki Toshima	2797
16:40	2F17	A Liquid-Crystalline Pyrene Derivative Showing Piezochromic Luminescence <u>Yoshimitsu Sagara</u> , Takashi Kato	2799
17:05	2F18	Nano Fabrication of Liquid-Crystalline Block Copolymer through Supramolecular Assembly with Azobenzene Benzoic Acid <u>Masanao Sato</u> , Takeshi Kondo, Shun Mitsui, Shusaku Nagano, Takahiro Seki	2801

Friday, September 26

Chemistry of dimensionally controlled polymers for novel functionality

		I. Hisaki, presiding	
9:10	3F01	Improvement of memory property by tertiary structure control of polypeptide dielectrics for organic TFT memory device. <u>Masatoshi Hasegawa</u> , Norihisa Kobayashi, Sei Uemura, Toshihide Kamata	2803
9:35	3F02	Regulated alignment of hyper-branched polymers in a liquid crystal	

		field	
		Kenji Higashiguchi, Kei Yasui, Masaaki Ozawa, Keisuke Odoi, <u>Hirotsugu Kikuchi</u>	2805
10:00	3F03	Construction of Supramolecular Assembly by Functional Molecules <u>Masayuki Takeuchi</u> , Takahiro Kaseyama, Rie Wakabayashi, Kenji Kaneko, Seiji Shinkai	2807
		T. Fukushima, presiding	
10:25	3F04	Creation and Control of the Aggregation of Carbon Nanotubes wrapped with Functionalized beta-1,3-Glucan Polysaccharides <u>Kouta Sugikawa</u> , Munenori Numata, Youichi Tsuchiya, Kenji Kaneko, Kazuki Sada, Seiji Shinaki.....	2809
10:50	3F05	nanohybrid materials mediated by aggregates of poly(ethyleneimine) <u>Ren-hua Jin</u> , Pei-xin Zhu, Jian-jun Yuan, Hiroyuki Matsukizono	2811
11:15	3F06	Electrochromic Solid-State Devices Using Organic-Metallic Hybrid Polymers <u>Masayoshi Higuchi</u>	2813
11:40	3F07	Design of Switchable Supramolecular Luminescent Materials <u>Koji Araki</u>	2815
		K. Ariga, presiding	
12:55	3F08	Effects of Monolayer Structures on Long-Range Electron Transfer through Helical Peptide Monolayer <u>Tomoyuki Morita</u> , Kazuki Takeda, Shunsaku Kimura.....	2817
13:20	3F09	Molecular design strategy for tailoring bicontinuous electron donor and acceptor arrays <u>Fukushima Takanori</u> , Wei-shi Li, Yohei Yamamoto, Akinori Saeki, Shu Seki, Seiichi Tagawa, Takuzo Aida.....	2819
13:45	3F10	Design Synthesis of High-performance Hybrid Glycoconjugated Photosensitizers for Photodynamic Therapy <u>Shigenobu Yano</u> , Makoto Obata	2821
		S. Kimura, presiding	
14:10	3F11	Development of volatile and non-volatile memory based on specific anion binding <u>Atsuomi Shundo</u> , Jonathan Hill, Katsuhiko Ariga	2823
14:35	3F12	Control of nano-structure and functions of porphyrin J-aggregate <u>Hiroshi Segawa</u>	2825
15:00	3F13	Construction of Supramolecular Polymer Using Hemoproteins <u>Takashi Hayashi</u> , Koji Oohora, Yasuaki Kakikura, Hiroaki Kitagishi.....	2827
15:25	3F14	Dendrimer Receptors: Cytochrome c Complexation and in Cell Activity <u>Hiroshi Tsukube</u> , Satoshi Shinoda, Paul Dharam, Hideki Azuma, Yuuka Yoshida, Takeshi Nagasaki	2829

Room G

Wednesday, September 24

Recent Advances in Living Polymerization and Precision Synthesis of Various Well-Defined Polymers

9:50	SO	Introductory Remarks
------	----	----------------------

		Sadahito Aoshima	2944
		M. Kamigaito, presiding	
10:00	1G03	Alcohol- and hydrocarbon-catalyzed living radical polymerizations - reversible chain transfer catalyzed polymerizations <u>Kouji Nagasawa</u> , Atsushi Goto, Yoshinobu Tsujii, Takeshi Fukuda.....	2945
10:25	1G04	Frontiers in Transition Metal-Catalyzed Living Radical Polymerization - From Highly Active and Versatile Designer Catalysts to Functional and Sequence-Regulated Designer Polymers <u>Takaya Terashima</u> , Makoto Ouchi, Mitsuo Sawamoto.....	2947
10:50	1G05	Photoinduced Living Radical Polymerization Using Organotellurium Compounds <u>Yu Ukai</u> , Atsushi Matsumoto, Yasuyuki Nakamura, Shigeru Yamago ...	2949
		K. Maeda, presiding	
11:15	1G06	Metal-Catalyzed Radical Living Polymerization and Radical Polyaddition for Novel Polymer Synthesis : Simultaneous Chain- and Step-Growth Polymerizations <u>Masato Mizutani</u> , Kotaro Satoh, Masami Kamigaito	2951
11:40	1G07	Compartmentalization Effects in Nitroxide-Mediated Radical Polymerization in Microemulsion <u>Junpei Wakamatsu</u> , Per B. Zetterlund, Masayoshi Okubo	2953
		T. Kitayama, presiding	
12:55	1G08	The study of reaction field creation and polymerization conditions on stereoregular template polymerization by the use of stereocomplex formation <u>Hiroharu Ajiro</u> , Daisuke Kamei, Mitsuru Akashi.....	2955
13:20	1G09	Anionic Polymerization of Styrene Derivatives containing Adamantyl Groups <u>Takashi Ishizone</u> , Hiroshi Kataoka, Shingo Kobayashi.....	2957
13:45	1G10	Living Anionic polymerization of styrene derivatives containing π -conjugated moieties <u>Kenji Sugiyama</u> , Akira Hirao, Yi-chih Tung, Jung-ching Hsu, Wen-chang Chen	2959
		T. Ishizone, presiding	
14:10	1G11	Precise synthesis of stereoblock poly(methacrylate)s <u>Takehiro Kitaura</u> , Masahiro Kashioka, Tatsuki Kitayama	2961
14:35	1G12	Living cationic polymerization of vinyl ether with various metal halides using alcohol as an initiator - The relationship between the nature of Lewis acids and the polymerization behavior <u>Arihiro Kanazawa</u> , Shokyoku Kanaoka, Sadahito Aoshima	2963
15:00	1G13	Living Cationic Polymerization of Plant-Derived β -Methylstyrenes with Electron-Donating Groups <u>Shoichi Saitoh</u> , Kotaro Satoh, Masami Kamigaito	2965
		K. Osakada, presiding	
15:25	1G14	Catalytic Synthesis of Block Copolymers Using a Living Highly-Active Polymerization System with Fluorenylamidotitanium Complex <u>Zhengguo Cai</u> , Yuushou Nakayama, Takeshi Shiono	2967
15:50	1G15	Development of Living Coordination Polymerization of Allene Derivatives and Its Application to Precision Heterogeneous Polymerization <u>Ikuyoshi Tomita</u> , Tadashi Iwamoto, Kazunari Kawabe, Aya Shirai, Tomohiro Kino, Kazuhito Kikuchi.....	2969

T. Yokozawa, presiding

- 16:15 1G16 Living Polymerization of Dienes and Olefins by Palladium Complexes and Synthesis of End-Functionalized Polymer
Sehoon Park, Takeshi Okada, Daisuke Takeuchi, Kohtaro Osakada 2971
- 16:40 1G17 Preparation of Amido-Imino and Diamido Complexes of Group 4 Metals by the Controlled Benzoylation of α -Diimine Ligands and Their Application as Catalyst Precursors for Olefin Polymerization
Hiroshi Kaneko, Ryuji Ohnishi, Hayato Tsurugi, Kazushi Mashima 2973
- 17:05 1G18 Preparation of aromatic polyamides by using reaction-induced phase separation of oligomers and change in mechanism to chain polymerization
Haruki Yasuda, Kazufumi Kobashi, Kentaro Kobayashi, Shinichi Yamazaki, Tetsuya Uchida, Kunio Kimura 2975

Y. Tsujii, presiding

- 17:30 1G19 Synthesis of Hyperbranched Polyamides with Controlled Molecular Weight and Low Polydispersity by Chain-Growth Condensation Polymerization of AB₂ Monomers
Yoshihiro Ohta, Yusuke Kamijyo, Akihiro Yokoyama, Tsutomu Yokozawa 2977
- 17:55 1G20 Synthesis of Graft Copolymers through ATRP Method by Using Cellulose Derivatives
Fuxiang Chang, Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi 2979

Thursday, September 25**Recent Advances in Living Polymerization and Precision Synthesis of Various Well-Defined Polymers****T. Hashimoto, presiding**

- 9:10 2G01 Synthesis and solution properties of ionic star block copolymers via living radical polymerization
Emi Miyata, Satoshi Uchida, Koji Ishizu 2981
- 9:35 2G02 Synthesis of stereo block copolymer by template polymerization with Noria as a template
Yoichi Saito, Manabu Yokozuka, Reiko Saito 2983

S. Kanaoka, presiding

- 10:00 2G03 Synthesis of pH-Responsive Triblock Copolymer Bearing Cholesteryl Group
Yasuhiko Komatsu, Shin-ichi Yusa, Yotaro Morishima 2985
- 10:25 2G04 Networked Polystyrene-supported Synthesis of Well-defined Poly(methacrylate)
Atsushi Sudo, Daisuke Nagai, Masayoshi Tanaka, Takeshi Endo 2987
- 10:50 2G05 LCST control of poly(N-isopropylacrylamide) by end-functionalization using 'click reaction'
Keita Fuchise, Ryohei Kakuchi, Ryosuke Sakai, Toshifumi Sato, Toyoji Kakuchi 2989

T. Satoh, presiding

- 11:15 2G06 Synthesis of Poly(Vinyl Ether) Polyols with Pendant Oxyethylene Chains and Hydrophilic and Thermoresponsive Polyurethanes Therefrom
Tamotsu Hashimoto, Ayumi Takahashi, Risako Tokunaga, Michio

11:40	2G07	Urushisaki, Toshikazu Sakaguchi 2991 Preparation of novel hetero-bifunctional PEO through anionic living polymerization process and quantitative modification of the terminal ends <u>Shigehiro Hiki</u> , Kazunori Kataoka..... 2993
-------	------	---

Design, Properties and Functions of Topological Polymers

12:45	SO	Introductory Remarks Yasuhisa Tsukahara, Yasuyuki Tezuka 3001
-------	----	--

H. Oike, presiding

12:55	2G08	Synthesis of Cyclic Polymers by Living Polymerization of 2-Alkoxy-1-methylenecyclopropanes by Pd Complex and End Coupling Reaction <u>Daisuke Takeuchi</u> , Akihisa Inoue, Fujio Ishimaru, Kohtaro Osakada ... 3002
-------	------	---

13:20	2G09	Synthesis of well-defined macrocyclic polyester via Click chemistry <u>Hideki Misaka</u> , Ryohei Kakuchi, Chunhong Zhang, Ryosuke Sakai, Toshifumi Satoh, Toyoji Kakuchi 3004
-------	------	---

13:45	2G10	Gelation mechanism and control of viscoelastic properties of HMHEC by Large Ring cyclodextrin - Difference of one repeating unit in polymer range molecular weight higher than 10000 <u>Makoto Takemasa</u> , Mika Yoshioka, Shinichi Kitamura, Lennart Piculell 3006
-------	------	--

K. Osada, presiding

14:10	2G11	Synthesis of Cyclic Polymers using Living Radical Polymerization for Application to Interlocked Polymers. <u>Masutaro Hirayama</u> , Kiyoshi Endo 3008
-------	------	---

14:35	2G12	Coalescence of cyclic polymers and multibranched polymers: Synthesis of sun-shaped polymers <u>Kaoru Adachi</u> , Ryouta Uemura, Yasuhisa Tsukahara, Shotaro Hayashi, Yasuyuki Tezuka 3010
-------	------	---

Y. Tsukahara, presiding

15:00	2G13IL	Topological Polymer Chemistry for Novel Macromolecular Architectures <u>Yasuyuki Tezuka</u> 3012
-------	--------	---

M. Kubo, presiding

15:50	2G15	Crystallization Behaviors for Linear and Cyclic Poly(tetramethylene oxide) Noriyoshi Ohno, Susumu Umemoto, <u>Norimasa Okui</u> , Yasuyuki Tezuka 3015
-------	------	---

16:15	2G16	Condensation of closed-circular DNA based on its topological characteristics <u>Kensuke Osada</u> , Hiroki Oshima, Daigo Kobayashi, Weidong Li, Yuichi Yamasaki, Manabu Enoki, Kazunori Kataoka..... 3017
-------	------	--

D. Takeuchi, presiding

16:40	2G17	Synthesis and functionalization of ladder cyclic oligomer <u>Hiroyuki Kudo</u> , Tadatomi Nishikubo 3019
-------	------	---

17:05	2G18	Synthesis and Characterization of Ring and 8-shaped Polystyrenes by Ring-Closing Metathesis <u>Syuuji Nomoto</u> , Taketo Chiba, Ryoutarou Hagiwara, Hideaki Oike..... 3021
-------	------	--

Friday, September 26

Design, Properties and Functions of Topological Polymers

K. Sugiyama, presiding

- 9:10 3G01 Synthesis and Characterization of Donor-Acceptor Thiophene Rotaxanes
Taichi Ikeda, Masayoshi Higuchi, Kurth Dirk 3023
- 9:35 3G02 Graft Plyrotaxane: Graft Polymer Having the Graft Chains Bound Spatially to the Backbone
Yasuhiro Kohsaka, Kazuko Nakazono, Yasuhito Koyama, Toshikazu Takata 3025
- 10:00 3G03 Preparation of Polymer Catenane Using Solid-Phase Condensation Agent
Masataka Kubo, Yoshimasa Watanabe, Takahiro Uno, Takahito Itoh ... 3027

Y. Nakamura, presiding

- 10:25 3G04 Synthesis and Nanophase-Separated Structure of Catenated Copolymer
Yutaka Ohta, Yuuki Kushida, Yushu Matsushita, Atsushi Takano 3029
- 10:50 3G05 Kinetic Investigation of the Formation of pseudo[1]Rotaxane from a flexible Cyclodextrin Derivatives
Atsuhisa Miyawaki, Yoshinori Takashima, Hiroyasu Yamaguchi, Akira Harada 3031

H. Otsuka, presiding

- 11:15 3G06 Preparation of Double-Stranded, Quadruply-capped Polyrotaxane Composed of γ -CD and PEG
Akihiro Takahashi, Ryo Katoono, Nobuhiko Yui 3033
- 11:40 3G07 Crystallization behavior and higher-order structure of cyclic and star-like polymers
Tomoo Shiomi, Takahiro Kiya, Monticha Poovarodom, Hiroki Takeshita, Masamitsu Miya, Katsuhiko Takenaka 3035

K. Takenaka, presiding

- 12:55 3G08 Precise synthesis of exact graft polymers
Ryosuke Kurokawa, Takumi Watanabe, Akira Hirao 3037
- 13:20 3G09 Polymerization of Thiophene Monomers with Branched Structure and Optical Properties of Polymers
Koji Takagi, Chikako Torii, Shin-ichi Matsuoka, Masato Suzuki 3039

K. Tanaka, presiding

- 13:45 3G10 Fabrication of Collagen-like Triple Helix Foldamers and Their High-order Structures
Tomoyuki Koga, Harunobu Matsui, Nobuyuki Higashi 3041
- 14:10 3G11 Lyotropic Liquid Crystal Formation of Polymacromonomers Consisting of Polystyrene
Yo Nakamura, Miyako Koori, Yu Li, Takashi Norisuye 3043

K. Adachi, presiding

- 14:35 3G12 Glass Transition of Hyper-branched Polystyrenes
Kei-ichi Akabori, Hironori Atarashi, Masaaki Ozawa, Keiji Tanaka, Toshihiko Nagamura 3045
- 15:00 3G13 Synthesis and Molecular Resolution Imaging of Star-like Nanogels Based on Precise Macromolecular Design
Yoshifumi Amamoto, Moriya Kikuchi, Hiroyasu Masunaga, Sono Sasaki, Hideyuki Otsuka, Atsushi Takahara 3047
- 15:25 3G14 Properties of Hyperbranched Polymers and their application to photoresist

Room H

Wednesday, September 24

Polymeric Materials for Separation – Toward Sustainable Society -

10:15	SO	Introductory Remarks Masakazu Yoshikawa, Mitsuru Higa.....	3318
T. Aoki, presiding			
10:25	1H04	Characterization of anion-exchange membranes with a semi-interpenetrating network structure prepared by polymer blend of poly(vinyl alcohol) and poly(allyl amine) <u>Kento Akamine</u> , Mitsuru Higa	3319
10:50	1H05	Asymmetric Polymerization of Maleimide bearing L-Phenylalanine Allyl Ester <u>Taisuke Shimogouchi</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi	3321
11:15	1H06	Optical Resolution with Composite Membranes Derived from Natural Polymers <u>Yuki Iwamoto</u> , Motokazu Maruhashi, Masakazu Yoshikawa, Kanji Yamaoka, Naoya Ogata	3323
11:40	1H07	Optical Resolution with Chiral Polyamide Membranes Consisting of Acidic Amino Acid Residues <u>Takesi Hasimoto</u> , Maiko Nakagawa, Yosimi Ikeuti, Masakazu Yosikawa.....	3325
H. Yoshimizu, presiding			
12:55	1H08	Carbon dioxide permeability in the liquid and gas phase through polymer brush-type polyimide membranes <u>Naoto Yamanaka</u> , Toshihiro Wakamatsu, Kazukiyo Nagai	3327
13:20	1H09	Synthesis of poly(phenylacetylene) type polydendron having amino groups for carbon dioxide separation <u>Yuki Sato</u> , Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki.....	3329
13:45	1H10	Synthesis of substituted polyacetylenes having ionic liquid structure for carbon dioxide separation membrane <u>Edy Marwanta</u> , Takeshi Namikoshi, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki.....	3331
H. Takaba, presiding			
14:10	1H11	Gas transport properties of hyperbranched polyimide ? silica hybrid membranes (3) <u>Kumi Itahashi</u> , Tomoyuki Suzuki, Jun-ichi Oku, Yasuharu Yamada	3333
14:35	1H12	Xe-129 NMR and sorption and diffusion properties of PMMA <u>Miki Tsurunaga</u> , Hiroaki Yoshimizu	3335
15:00	1H13	Gas Transport Properties of Polymer Crystals <u>Hiroaki Yoshimizu</u> , Hirofumi Fujiwara, Juri Saji	3337
N. Endo, presiding			
15:25	1H14	Preparation of ionic liquid containing polymer membranes	

		containing for removal of various volatile organic compounds in water and their separation properties.	
		<u>You Matsuoka</u> , Takashi Miyata, Tadashi Uragami	3339
15:50	1H15	Preparation of Polymeric Cobaltporphyrin Membranes with Microphase-Separated Structure and Facilitated Oxygen Transport through the Membranes	
		<u>Masami Shoji</u> , Masao Eguchi, Hiroyuki Nishide.....	3341
		H. Matsumoto, presiding	
16:15	1H16	Gas permeation properties and morphology of a thin dense membrane of polymer blend 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> , Noriaki Fukushima, Masahiko Mizuta, Masashi Teramachi.....	3343
16:40	1H17	Synthesis of Membranes of poly(phenyleneethynylene)s having alkyl chains and their gas permeation properties	
		<u>Toshikazu Sakaguchi</u> , Chihiro Nakasuji, Daisuke Nojiri, Tamotsu Hashimoto	3345
		M. Higa, presiding	
	1H18	<i>with drawn</i>	
17:30	1H19	Effect of occupation ratio of guests on the gas permeability in the clathrate crystals of polymethylstyrene	
		<u>Yoshinori Tamai</u> , Mitsuhiro Fukuda	3347
17:55	1H20	Computational Chemistry in Membrane Separation Technology	
		<u>Hiromitsu Takaba</u> , Ai Suzuki, Michihisa Koyama, Hideyuki Tsuboi, Nozomu Hatakeyama, Akira Endou, Del Carpio C. A., Momoji Kubo, Akira Miyamoto.....	3349

Thursday, September 25

Polymeric Materials for Separation – Toward Sustainable Society -

		H. Kawakami, presiding	
9:10	2H01	Characterization of PVA-based Polymer Electrolytes Membrane Cross-linked with Sulfosuccinic acid for Direct Methanol Fuel Cells	
		<u>Nobutaka Endo</u> , Mikinori Sugita, Kento Akamine, Mitsuru Higa	3351
9:35	2H02	Characterization of the performances of a passive type direct methanol fuel cell used Poly(vinyl alcohol) based Polymer Electrolyte Membranes	
		<u>Mikinori Sugita</u> , Shin-ichi Maesowa, Nobutaka Endo, Mitsuru Higa, Ryohei Endo, Naoki Fujiwara	3353
10:00	2H03	Synthesis and characterization of poly(phenylene) derivatives having longer side chains (III) - The effect of side chain structure	
		<u>Takuyuki Ishizuka</u> , Masahiro Fujita, Yuuko Takeoka, Masahiro Rikukawa.....	3355
		M. Rikukawa, presiding	
10:25	2H04	Preparation of sulfonated copolyimide nanofibers and their membrane stabilities	
		<u>Takuya Tamura</u> , Hiroyoshi Kawakami	3357
10:50	2H05	Performance and methanol crossover of DMFC with sulfonated polyimide membranes	

11:15	2H06	<u>Takashi Shimomura</u> ,Zhaoxia Hu,Hidetoshi Kita,Ken-ichi Okamoto ... 3359 Hydrogen gas crossover in polymer electrolyte membrane fuel cell with sulfonated polyimide membrane <u>Kazuaki Yaguchi</u> ,Kangcheng Chen,Noritaka Endo,Mitsuru Higa,Ken-ichi Okamoto 3361
11:40	2H07	Swelling and mechanical property of fluoro polymer electrolyte membrane <u>Hiroyuki Watabe</u> ,Seigo Kotera,Ichiro Terada..... 3363
Y. Tamai, presiding		
12:55	2H08	Energy and environmental applications of polymeric membranes <u>Sang Yong Nam</u> ,Young Hwang Hae,Ae Jeong Mi,Jin Koh Mi 3365
13:20	2H09	Separation of bioactive compounds using thermoresponsive polymer brushes on polystyrene beads. <u>Aya Mizutani</u> ,Kenichi Nagase,Akihiko Kikuchi,Hideko Kanazawa,Yoshikatsu Akiyama,Jun Kobayashi,Masahiko Annaka,Teruo Okano 3367
13:45	2H10	Influence of surface modification to activated carbons for adsorption properties <u>Hideki Tatsumoto</u> ,Motoi Machida 3369
M. Henmi, presiding		
14:10	2H11	Structure of Water and Ion Hydration in Ion Exchange Resins <u>Koji Yamanaka</u> ,Yasuo Kameda 3371
14:35	2H12	Effect of pH on Insulin Transport Phenomena across Membranes Grafted by Weak Electrolyte Monomers Shaoling Zhang, <u>Keiichiro Saito</u> ,Hidetoshi Matsumoto,Mie Minagawa,Akihiko Tanioka 3373
15:00	2H13	Preparation and characterization of charge mosaic membranes with semi-interpenetrating network structure prepared from polymer blend of poly(vinyl alcohol) and polyelectrolytes <u>Mayumi Kobayashi</u> ,Minami Nagase,Mitsuru Higa,Takeshi Kusudou,Atsushi Jikihara,Naoki Fujiwara 3375
K. Yamanaka, presiding		
15:25	2H14	Wine filtration - The effectiveness of cross-flow by UF membrane <u>Noriaki Kato</u> ,Noriko Monden,Makoto Ohno..... 3377
	2H15	<i>with drawn</i>
16:15	2H16	Advanced Technology on Reverse Osmosis Membrane <u>Masahiro Henmi</u> ,Hiroki Tomioka,Koji Nakatsuji 3379
M. Yoshikawa, presiding		
16:40	2H17IL	Water, Air and Energy – Electrospray Materials for Sustainable World <u>Akihiko Tanioka</u> 3381

Friday, September 26

Polymeric Materials for Separation – Toward Sustainable Society -

H. Umakoshi, presiding

9:10	3H01	Fabrication and application of acrylic resin monolith based on the unique solvent affinity <u>Tomo Kitagawa</u> ,Shinya Yoneda,Takashi Tsujimoto,Hiroshi Uyama 3384
9:35	3H02	Synthesis of liquid crystalline block copolymers giving highly-ordered microphase segregation film toward membrane materials

		<u>Sadayuki Asaoka</u> , Hiroshi Nakajima, Tomokazu Iyoda, Tasuku Izutani, Masakazu Yoshikawa	3386
10:00	3H03	Molecular imprinting using self-support giant nanofilms <u>Naoki Mizutani</u> , Seung-woo Lee, Toyoki Kunitake.....	3388
		S. Asaoka, presiding	
10:25	3H04	LIPOzyme Design Using Recognition Function of Liposome and Its Application <u>Hiroshi Umakoshi</u> , Le Quoc Tuan, Kengo Morimoto, Toshinori Shimanouchi, Ryoichi Kuboi	3390
10:50	3H05	Single Molecule Detection with Ion-channel Proteins on Bilayer Lipid Membrane Microarray <u>Toshihisa Osaki</u> , Hiroaki Suzuki, Bruno Le Pioufle, Shoji Takeuchi.....	3392

Room I

Wednesday, September 24

Recent Advances in Characterization of Polymer Thin Films and Surfaces/Interfaces

9:50	SO	Introductory Remarks Hiroyuki Aoki	3605
		K. Fukao, presiding	
10:00	1I03	Conformational Analyses of Polymer Chain in Polymer Ultra Thin Film on Curved Surface - Conformational Behavior of Helical Polymer on Carbon Nanotube <u>Masanobu Naito</u> , Kazuyuki Nobusawa, Atsushi Ikeda, Hisanari Onouchi, Jun-ichi Kikuchi	3606
10:25	1I04	Molecular Scale Imaging of Mechanical Properties using AFM <u>Kuniko Kimura</u> , Kei Kobayashi, Hirofumi Yamada, Kazumi Matsushige	3608
10:50	1I05	AFM of Polymer Chain Packing in Amorphous LB Films <u>Jiro Kumaki</u> , Takashi Kajitani, Kanji Nagai, Kento Okoshi, Eiji Yashima	3610
		J. Kumaki, presiding	
11:15	1I06	The structural analysis of double helical structure in an ABC triblock terpolymer <u>Hidekazu Sugimori</u> , Kazuyuki Matsunaga, Takeshi Kaneko, Volker Abetz, Hiroshi Morita, Masao Doi, Hiroshi Jinnai	3612
11:40	1I07	Structure Control of a Double Helical Morphology in an ABC Triblock Terpolymer <u>Kazuyuki Matsunaga</u> , Hidekazu Sugimori, Takeshi Kaneko, Hiroshi Jinnai, Volker Abetz	3614
		T. Ougizawa, presiding	
12:55	1I08IL	Structure and physical properties of polymers in confined systems by optical measurements: Aggregation states and thermal molecular motion of polymers at water interface <u>Keiji Tanaka</u> , Toshihiko Nagamura	3616
13:45	1I10	In-Situ Structural Observation of a Thin Diblock Copolymer Film in Contact with Solvents by Neutron Reflectometry <u>Naoya Torikai</u> , Norifumi Yamada, Daisuke Kawaguchi, Atsushi	

		Takano, Yushu Matsushita, Erik Watkins, Jaroslaw Majewski	3619
		H. Jinnai, presiding	
14:10	1I11	Structural analysis of nano-cellular and porous polymer thin films by grazing incident small angle X-ray scattering <u>Hideaki Yokoyama</u> , Cedric Dutriez, Lei Li	3621
14:35	1I12	Direct observation of Structural Formation Process of Liquid Crystalline Microphase Separated Films by Temperature Controlled AFM <u>Motonori Komura</u> , Motoya Ohba, Tomokazu Iyoda	3623
15:00	1I13	Structure and property evaluation of microphase separated films of block copolymers with liquid crystalline in the side chains - Comparison of functions of various mesogens <u>Motoya Ohba</u> , Motonori Komura, Sadayuki Asaoka, Tomokazu Iyoda...	3625
15:25	1I14	Three-dimensional orientation analysis of PET and PEN film using polarized IR-ATR <u>Miho Momose</u> , Shinji Ando, Jun Isemoto.....	3627
		H. Aoki, presiding	
15:50	1I15	Study on structure of polystyrene thin film based on relation between physical aging behavior and film formation condition <u>Rikki Honma</u> , Seisuke Ata, Kenji Ito, Yoshinori Kobayashi, Toshiaki Ougizawa	3629
16:15	1I16	Aging phenomena in polymer thin film using capacitance measurements <u>Daisuke Tahara</u> , Koji Fukao	3631
16:40	1I17	Abnormal glass transition and inhomogeneity in polymer thin film Rintaro Inoue, Kazuko Kawashima, <u>Toshiji Kanaya</u> , Itaru Tsukushi, Go Matsuba, Koji Nishida	3633
		T. Kanaya, presiding	
17:05	1I18	Glass transition dynamics of crosslinked polymer thin layers deposited on the surface of calcium carbonate particles <u>Takashi Sasaki</u> , Manabu Misu, Takayuki Shimada, Mitsuhiko Teramoto.....	3635
17:30	1I19	Analysis of the glass transition temperature and the single chain dynamics at the interface between polymer film and substrate(II) <u>Hiroshi Morita</u> , Keiji Tanaka, Toshihiko Nagamura, Masao Doi	3637
17:55	1I20	Dynamic properties of ethanol in cyclohexane in the presence of surface molecular macroclusters determined by NMR spectroscopy <u>Miya Kamihira-ishijima</u> , Masashi Mizukami, Kazue Kurihara.....	3639

Thursday, September 25

Recent Advances in Characterization of Polymer Thin Films and Surfaces/Interfaces

		Y. Tsujii, presiding	
9:10	2I01	Development of 2D-IR Imaging System for in-situ Measurement of Dynamic Structural Change of Polymer Surface under Friction <u>Keiji Sasaki</u> , Naruhiko Inayoshi, Kohji Tashiro	3641
9:35	2I02	Surface friction of Gels - Effects of Hydrophilic and Hydrophobic substrates on gel-surface friction Studied with Direct Observation of Frictional Interface <u>Yuko Ota</u> , Hidemitsu Furukawa, Naoyuki Takedomi, Taiki Tominaga, Takayuki Kurokawa, Jian Ping Gong.....	3643

10:00	2I03	Tribological behavior of polymeric ultrathin films and their energy dissipation process <u>Kenji Hisada</u> ,Tomoaki Kawata,Daisuke Sanaka,Teruo Hori,Keiko Tawa,Naoko Akashi.....	3645
K. Hisada, presiding			
10:25	2I04	Tribological Properties of Polyelectrolyte Gel Thin Films with Various Closs-linked Structure <u>Motoyasu Kobayashi</u> ,Masataka Kaido,Atsushi Suzuki,Kazuhiko Ishihara,Atsushi Takahara.....	3647
10:50	2I05	Droplet Manipulation on High Adhesive Superhydrophobic Surfaces <u>Daisuke Ishii</u> ,Hiroshi Yabu,Masatsugu Shimomura	3649
11:15	2I06	Adhesion of polymer film surfaces swelled with water molecules <u>Takaaki Date</u> ,Mizuki Ishikawa,Keiji Tanaka,Toshihiko Nagamura,Makio Iwahashi,Takeshi Serizawa	3651
11:40	2I07	Synthesis and surface properties of well-defined, concentrated brushes of hydrophilic polymers <u>Akihiro Nomura</u> ,Atsushi Goto,Shigeru Yamago,Yoshinobu Tsujii,Takeshi Fukuda.....	3653
K. Nakajima, presiding			
12:55	2I08	Surface Wettability Control of Fluoropolymers by Direct Surface-initiated Radical Polymerization <u>Taichi Kimura</u> ,Koji Honda,Masamichi Morita,Motoyasu Kobayashi,Atsushi Takahara.....	3655
13:20	2I09	Preparation and molecular aggregation states of polymer brush with oligo ethylene oxide side chains <u>Yuki Terayama</u> ,Motoyasu Kobayashi,Hiroyasu Masunaga,Osami Sakata,Sono Sasaki,Masaki Takata,Atsushi Takahara	3657
13:45	2I10	Nanosized morphological control of grafted polymer on pore surface for developing biomolecular recognition gating membrane <u>Hidenori Kuroki</u> ,Hidenori Ohashi,Taichi Ito,Takeo Yamaguchi.....	3659
14:10	2I11	Molecular Diffusion in High-Density Poly(methyl methacrylate) Brushes Studied by Fluorescence Correlation Spectroscopy <u>Hiroaki Benten</u> ,Wolfgang Knoll.....	3661
S. Horiuchi, presiding			
14:35	2I12	Phase separation of poly(<i>N</i> -isopropylacrylamide) brush surface on silica micro-beads <u>Yusuke Hattori</u> ,Ken-ichi Nagase,Jun Kobayashi,Akihiko Kikuchi,Yoshikatsu Akiyama,Hideko Kanazawa,Teruo Okano	3663
15:00	2I13	Novel Nanomechanical Properties Evaluation of Polymeric Materials by Force Volume Mode AFM - surface layer models and stress-independency on deformation ratio <u>So Fujinami</u> ,Dong Wang,Ken Nakajima,Toshio Nishi	3665
15:25	2I14	Nano-adhesion for Polystyrene Interfaces Ifu Narayama,Kei-ichi Akabori,Hiroshi Morita, <u>Keiji Tanaka</u> ,Toshihiko Nagamura.....	3667
H. Kikuchi, presiding			
15:50	2I15	Local Thermal Analysis of Specific Thermal Properties of Polymer Thin Films on Different Substrates <u>Wataru Sakai</u> ,Naoto Tsutsumi.....	3669
16:15	2I16	Interfacial structures and properties of poly(lactic acid) laminate using scanning thermal microscope Masaru Kotera, <u>Kosuke Tsuji</u> ,Takashi Nishino,Yoshimasa	

16:40	2I17	Urushihara, Hideto Tsuji, Hiroyuki Wakaki, Junichi Narita.....	3671
		Study on Initial Formation Process of Interface between Dissimilar Polymers by High-speed Ellipsometry	
		<u>Yuki Mishima</u> , Rikki Honma, Seisuke Ata, Toshiaki Ougizawa	3673
17:05	2I18	Investigation of polymer interfaces by observation of adhesion fracture surfaces by high-resolution SEM	
		<u>Shin Horiuchi</u> , Yonggui Liao, Ayumi Nakagawa, Toshiaki Ougizawa	3675

Friday, September 26

Recent Advances in Characterization of Polymer Thin Films and Surfaces/Interfaces

T. Seki, presiding

9:10	3I01	Dynamics of Polymer Chains in Isotactic Poly(methyl methacrylate) Multilayered Thin Films and Stereocomplex Formation	
		<u>Daisuke Kamei</u> , Hiroharu Ajiro, Chizuru Hongo, Mitsuru Akashi	3677
9:35	3I02	Conformation of Block Copolymer Chain in a Two-dimensional Microphase-separated Structure Observed by Scanning Near-field Optical Microscopy	
		<u>Ryojun Sekine</u> , Hiroyuki Aoki, Shinzaburo Ito	3679
10:00	3I03	Topography and electrical conductivity observation of conjugated polymer ultrathin films by AFM	
		<u>Koji Banba</u> , Atsushi Aoki, Tokuji Miyashita.....	3681

S. Hotta, presiding

10:25	3I04	Preparation of oriented LB films of hydrophobic conjugated polymers and their structure	
		<u>Akio Toda</u> , Seiichiro Kodama, Shusaku Nagano, Koji Iwasaki, Jiro Abe, Takahiro Seki	3683
10:50	3I05	Optimization of Sensor Structure for Sensitivity Improvement on Organic Pyroelectric Infrared Sensor	
		<u>Tatsuya Sawagoshi</u> , Yasuko Koshihara, Kenji Ishida, Yasukiyo Ueda.....	3685
11:15	3I06	TEM and FTIR analysis of uniaxially oriented organic ferroelectric thin films fabricated by friction transfer technique	
		<u>Yusuke Kuroda</u> , Yasuko Koshihara, Kenji Ishida, Yasukiyo Ueda	3687
11:40	3I07	Nanoparticle-chains prepared using oriented polymer thin films	
		<u>Masatoshi Tosaka</u> , Shin-ichi Yusa, Masaki Tsuji	3689

A. Kubono, presiding

12:55	3I08	Structures of multilayered films of various long-chain molecules	
		<u>Ken Tanaka</u> , Koji Nozaki, Naohito Urakami, Takashi Yamamoto.....	3691
13:20	3I09	Single Crystal Growth of Oligomer Organic Semiconductors through Proximity Evaporation and Their Device Characterization	
		<u>Keiichiro Juri</u> , Takeshi Yamao, Shu Hotta	3693
13:45	3I10	Thin Crystal Growth of Thiophene/Phenylene Co-Oligomer by Solution Process	
		<u>Yoshihiro Nishimoto</u> , Hiroshi Akagami, Toshifumi Katagiri, Takeshi Yamao, Shu Hotta	3695

Room J

Wednesday, September 24

Polymers and Soft-Matters

9:50	SO	Introductory Remarks Yuichi Masubuchi	3697
T. Yamaguchi, presiding			
10:00	1J03	Study on network structure of sulfur cross-linked isoprene rubber revealed by small-angle neutron scattering, 2 - Network inhomogeneity and strain-induced crystallization- <u>Yuko Ikeda</u> , Norihito Higashitani, Kensuke Hijikata, Yota Kokubo, Yuichi Morita, Takuya Suzuki, Noboru Osaka, Hitoshi Endo, Mitsuhiro Shibayama, Shinzo Kohjiya	3698
10:25	1J04	Constitutive equation for rubber elasticity with change in entropy and energy II <u>Keizo Akutagawa</u> , Satoshi Hamatani, Atsushi Yamamoto, Hisashi Heguri	3700
10:50	1J05	Simulation of the dynamics at the adhesion of a small rubber particle <u>Hiroshi Morita</u> , Masao Doi	3702
H. Morita, presiding			
11:15	1J06	Debonding dynamics of polymers <u>Tetsuo Yamaguchi</u> , Masao Doi	3704
11:40	1J07	Structure of Poly(methyl methacrylate)(PMMA)/Nonsolvent Interface by Sum Frequency Generation (SFG) Spectroscopy <u>Yohei Tateishi</u> , Naoki Kai, Hidenori Noguchi, Kohei Uosaki, Keiji Tanaka, Toshihiko Nagamura	3706
H. Hasegawa, presiding			
12:55	1J08	Polymer Chain Dynamics Studied by Orientation Imaging of Single Molecule <u>Toshiaki Takahashi</u> , Hiroyuki Aoki, Shinzaburo Ito	3708
13:20	1J09	Temperature Dependence of Diffusion Behavior of Cyclic Polystyrenes with High Molecular Weights <u>Daisuke Kawaguchi</u> , Atsushi Takano, Keiji Tanaka, Toshihiko Nagamura, Naoya Torikai, Yushu Matsushita	3710
13:45	1J10	Topological Effects on Chain Dimensions of Ring Polymers Studied by Monte Carlo Simulation <u>Jiro Suzuki</u> , Atsushi Takano, Yushu Matsushita	3712
T. Uneyama, presiding			
14:10	1J11	Deformation-induced density fluctuations in polymeric materials <u>Mikihito Takenaka</u> , Shotaro Nishitsuji, Shin'ya Yoshioka, Yoshiko Ogino, Kazuki Ito	3714
14:35	1J12	Effects of local segment motion and force balance on polymer rheology <u>Jun-ichi Takimoto</u> , Hideaki Takahashi	3716
15:00	1J13	Dynamics of Cavitation in Static Melt of Polymers Atsushi Doi, <u>Masato Hashimoto</u> , Susumu Fujiwara, Takashi Itoh	3718
J. Takimoto, presiding			
15:25	1J14	Molecular Dynamics Simulation on Hysteresis Behavior of Polymeric Materials - Relationship between chain entanglements in polybutadiene and hysteresis <u>Kisaragi Yashiro</u>	3720
15:50	1J15	Principal Component Analysis for Direct Observation of Free Energy Landscape in a Super Cooled Polymer Liquid	

		<u>Akira Koyama</u> , Takashi Odagaki.....	3722
16:15	1J16	The influence of the entanglement of polycarbonate to physical properties <u>Akito Toyota</u> , Hidetoshi Fujimoto, Yasuhiro Matsuda, Tasaka Shigeru .	3724
		A. Koyama, presiding	
16:40	1J17	Molecular Characteristics and Solution and Melt Properties of Polyesters in Terms of Intramolecular Interactions <u>Yuji Sasanuma</u>	3726
17:05	1J18	Structural Study on Polyrotaxane in Solution by Means of Contrast Variation Small Angle Neutron Scattering <u>Hitoshi Endo</u> , Kohichi Mayumi, Noboru Osaka, Kohzo Ito, Mitsuhiro Shibayama	3728
17:30	1J19	Study on phase behavior and hydration of various thermosensitive polymers <u>Yasushi Maeda</u>	3730
17:55	1J20	Excluded Volume Theory - Reexamination of the Entropy Expression of Excluded Volume Molecules <u>Kazumi Suematsu</u>	3732

Thursday, September 25

Polymers and Soft-Matters

T. Araki, presiding

9:10	2J01	Crystal Structure Analysis of Deuterated and Hydrogenated Oriented Polymer Samples Based on 2-Dimensional Wide-Angle Neutron Diffraction Data <u>Makoto Hanesaka</u> , Kohji Tashiro, Takashi Oohara, Kazuo Kurihara, Ryota Kuroki, Taro Tamada, Satoru Fujiwara, Ichiro Tanaka, Nobuo Niimura, Toshiaki Kitano, Takashi Nishyu, Katsuyoshi Katsube, Keisuke Morikawa, Yukiatsu Furumiya	3734
9:35	2J02	Crystalline Phase Transition and Higher-Order Structural Change in the Hydration Process of Polyethylene Imine <u>Tomoko Hashida</u> , Kohji Tashiro.....	3736
10:00	2J03	Crystallization and interpenetrating spherulites in miscible crystalline/crystalline block copolymers <u>Takayuki Ikehara</u> , Toshiyuki Kataoka	3738

T. Ikehara, presiding

10:25	2J04	Ordering mechanism of a Photonic Crystal Made of ultra-high-molecular-weight block copolymers in a Solution. <u>Takahiko Yamanaka</u> , Sigeru Okamoto, Naoki Sakamoto, Hirokazu Hasegawa, Naokiyo Koshikawa.....	3740
10:50	2J05	Ordering structure of liquid crystalline component within microdomains of block copolymers <u>Shin-ichi Taniguchi</u> , Mitsuo Arimoto, Masamitsu Miya, Hiroki Takeshita, Katsuhiko Takenaka, Tomoo Shiomi	3742
11:15	2J06	Glassy behaviors of nematic liquid crystals in porous media <u>Takeaki Araki</u> , Hajime Tanaka.....	3744
11:40	2J07	Monte Carlo simulation of hard repulsive disk-like molecules under shear field <u>Tomonori Koda</u> , Tomohiro Konno, Akihiro Nishioka, Ken Miyata, Go Murasawa	3746

M. Nonomura, presiding

- 12:55 2J08 Three dimensional observations of phase separating structures in polymer blends
Haruko Saito, Naohiro Yoshinaga, Takaaki Mihara, Hiroshi Jinnai, Toshio Nishi 3748
- 13:20 2J09 Structure and Viscoelasticity of Starblock Copolymers: Flow Induced Orientation and Effects of Homo Polymer Addition
Masaoki Takahashi, Hiroshi Okumura, Tomoe Kuwano, Yukihiro Nishikawa, Shigeru Suzuki 3750
- 13:45 2J10 Rheological and Dielectric Behavior of Multiblock Copolymers - Estimates of Bridge/Loop Fractions and Effects of Loops on High Extensibility of Bridges
Yumi Matsumiya, Hiroshi Watanabe 3752

Y. Matsumiya, presiding

- 14:10 2J11 FCC structure in block copolymer system
Makiko Nonomura 3754
- 14:35 2J12 Optical Property of Regulated Nano Spaces by ABC Star Block Copolymers
Tomonari Dotera, Kazunari Ueda 3756
- 15:00 2J13 Computational study of phase separation and elastic behavior of block copolymers with short end-block
Takeshi Aoyagi, Daisuke Shimuzu, Yoshifumi Araki, Kiyoo Kato 3758
- 15:25 2J14 In-situ and real-time small-angle neutron scattering observation for controlled radical polymerization of poly(methyl methacrylate)-block-polystyrene
Ryuhei Motokawa, You Iida, Yue Zhao, Takeji Hashimoto, Satoshi Koizumi 3760

T. Aoyagi, presiding

- 15:50 2J15 *Im3m*-cubic phase of hydrogen-bonded mesogens BABH-*n* - Systematic MEM analysis
Kazumi Ozawa, Yasuhisa Yamamura, Syuma Yasuzuka, Hiroyuki Mori, Shoichi Kutsumizu, Kazuya Saito 3762
- 16:15 2J16 Induction of Ionic Interactions into Polymer and Liquid Crystal Formation
Yusuke Masuda, Seiji Ujiie 3764
- 16:40 2J17 Orientational Behavior of Ionic Liquid Crystals composed of Hydrophilic Polymer and Amphiphiles
Seiji Ujiie, Shiori Tomitaka, Masaya Moriyama 3766
- 17:05 2J18 Structure of Smectic Phase formed by Poly(substituted methylene) Liquid Crystalline Polymers
Nozomu Fujii, Shunsuke Kitajima, Tsuyoshi Michinobu, Masatoshi Tokita, Junji Watanabe, Kiyotaka Shigehara 3768

Friday, September 26**Polymers and Soft-Matters****T. Taniguchi, presiding**

- 9:10 3J01 Lubrication Effect of Hyaluronan on Tough DN Gel Friction under High Load
Yukihiro Nakano, Taiki Tominaga, Takayuki Kurokawa, Hidemitsu Furukawa, Jian Ping Gong 3770

9:35	3J02	Dynamics of Organo-Gels formed by Hydrogen Bonding <u>Toshiyuki Shikata</u> ,Takuya Nishida,Tadashi Inoue,Kenji Hanabusa ...	3772
10:00	3J03	Stress Growth in Transient Polymer Networks under Start-up Shear Flow <u>Tsuyoshi Koga</u> ,Fumihiko Tanaka,Isamu Kaneda	3774
10:25	3J04	Dynamics of Weakly Hydrogen Bonded Polymer Chains <u>Osamu Urakawa</u> ,Miho Fujita,Hiroyoshi Ikuta,Toshiyuki Shikata,Tadashi Inoue	3776
O. Urakawa, presiding			
10:50	3J05	Phase separation on a binary lipid membrane with a composition dependent bending rigidity <u>Takashi Taniguchi</u> ,Masataka Sugimoto,Kiyohito Koyama	3778
11:15	3J06	Change in the structure of multilamellar vesicle under shear <u>Shuji Fujii</u> ,Yoshinobu Isono	3780
11:40	3J07	Relationship structural factor and relaxation mechanism in Wormlike micelle solution <u>Kenzou Naruse</u> ,Kazuo Sakurai,Hiroyasu Masunaga	3782
S. Matsushita, presiding			
12:55	3J08	Coexistence curve measurement of PMMA/3-octanone and dielectric measurement near the critical point <u>Masaki Tamura</u> ,Rio Kita,Naoki Shinyashiki,Shin Yagihara,Toshiaki Dobashi	3784
13:20	3J09	Critical Dissolution Ionic Strength of Aqueous Chitosan <u>Kentaro Tanaka</u> ,Koji Nishida,Barbara J. Gabrys,Margaret J. Lawrence,Toshiji Kanaya.....	3786
13:45	3J10	Complexation of polyacid and polybase in aqueous solution <u>Katsuyuki Ueno</u> ,Takahiro Sato.....	3788
14:10	3J11	Dynamic property of "PICsomes" (polyion complex polymersomes) in aqueous medium <u>Akihiro Kishimura</u> ,Hidehiro Oana,Kei Yonehara,Hiroyuki Matsuda,Yuichi Yamasaki,Masao Washizu,Kazunori Kataoka	3790
A. Kishimura, presiding			
14:35	3J12	Chemomechanical transduction at air/water, oil/water interface <u>Sachiko Matsushita</u> ,Kaori Yoshida,Yohei Shibuya,Tetsuya Sato	3792
15:00	3J13	Dynamic Ultrasound Scattering Studies on Velocity Distribution and the Spatial Profile of Micro-Sediments. <u>Mariko Kohyama</u> ,Tomohisa Norisuye,Qui Tran-cong-miyata.....	3794
15:25	3J14	Preparation of ER suspensions with urethane-modified polyethylene glycol <u>Shohei Ikemiya</u> ,Keiji Minagawa,Masami Tanaka.....	3796

Room K

Wednesday, September 24

Challenge to the polymer crystallization and the high performance polymer materials

9:50	SO	Introductory Remarks Masamichi Hikosaka	3512
------	----	--	------

Y. Tanzawa, presiding

10:00	1K03	Crystal growth from isotactic/atactic polymer ultrathin blend films <u>Ken Taguchi</u> ,Akihiko Toda,Yoshihisa Miyamoto.....	3513
10:25	1K04	Solvent-Evaporation and Crystallization Behaviors of Polyethylene thin films on Si wafers <u>Sono Sasaki</u> ,Hiroyasu Masunaga,Kazuki Ito,Masaki Takata,Koji Honda,Atsushi Takahara,Hirosi Okuda,Kohji Tashiro	3515
K. Taguchi, presiding			
10:50	1K05	New NMR strategy for polymer crystal structure: space heterogeneity and trajectory <u>Toshikazu Miyoshi</u>	3517
11:15	1K06	Molecular dynamics simulation of polymer crystallization at a step position <u>Yasutoshi Tanzawa</u>	3519
11:40	1K07	Study of spherulite formation by light scattering III <u>Daisuke Tahara</u> ,Yoshihisa Miyamoto.....	3521
N. Okui, presiding			
12:55	1K08IL	Formation of Polymer Spherulites:Role of spontaneous gradient field <u>Akihiko Toda</u>	3523
S. Umemoto, presiding			
13:45	1K10	Growth and morphology of melt-grown single crystal of iPP <u>Koji Yamada</u> ,Hirosi Kajioka,Akihiko Toda.....	3526
14:10	1K11	Structure formation of mesomorphic phase of isotactic polypropylene during heating process <u>Kazuma Okada</u> ,Koji Nishida,Go Matsuba,Takashi Konishi,Toshiji Kanaya.....	3528
14:35	1K12	Crystal Transformation of Isotactic Polybutene-1 Evaluated by Grazing Incidence X-ray Diffraction Takashi Nishino, <u>Masaru Kotera</u> ,Kazuya Torita,Takayuki Matsumoto,Masaru Mukumoto	3530
15:00	1K13	Crystallization through a Metastable Phase of Isotactic Polybutene-1 - Kinetics of II-I Transition <u>Masanori Maruyama</u> ,Koji Nozaki,Takashi Yamamoto,Koji Yamada	3532
M. Kotera, presiding			
15:25	1K14	Characterization for Cavitation Phenomena during Spherulite Growth Tomohito Takita,Susumu Umemoto, <u>Norimasa Okui</u>	3534
15:50	1K15	Crystallization Temperature Dependence of α and β Crystal Spherulites and their Stability for Isotactic Polypropylene <u>Kayo Nakamura</u> ,Susumu Umemoto,Norimasa Okui	3536
16:15	1K16	Three Dimensional Structure of Banded Spherulites <u>Susumu Umemoto</u> ,Katsuyoshi Endoh,Norimasa Okui.....	3538
K. Nozaki, presiding			
16:40	1K17	Effect of the addition of nucleating agent on the crystallization of poly(L-lactic acid) <u>Takahiko Kawai</u> ,Go Matsuba,Koji Nishida,Toshiji Kanaya,Hirotaka Okamoto,Takashi Kurose,Makoto Kato,Masatoshi Matsuda,Katsuhiko Nakajima,Nobutaka Honma	3540
17:05	1K18	Crystallization and solid structure of helical polymers <u>Takumi Okihara</u> ,Yuji Yasufuku,Akira Bonkohara.....	3542
17:30	1K19	Isotopic Effect on Isothermal Crystallization Kinetics of isotactic Polypropylene as Viewed from the Time-Resolved Synchrotron WAXD/SAXS and IR measurements and Thermal Analysis	

		<u>Kummetha Raghunatha Reddy</u> , <u>Kohji Tashiro</u> , <u>Makoto Hanesaka</u> , <u>Takashi Sakurai</u> , <u>Noburu Yamaguchi</u> , <u>Hiroyasu Masunaga</u> , <u>Sono Sasaki</u> , <u>Masaki Takata</u>	3544
17:55	1K20	Cocrystallization Phenomena and Vibrational Spectra of isotactic Polypropylene D/H Blend Samples <u>Kummetha Raghunatha Reddy</u> , <u>Kohji Tashiro</u> , <u>Takashi Sakurai</u> , <u>Noboru Yamaguchi</u>	3546

Thursday, September 25

Challenge to the polymer crystallization and the high performance polymer materials

S. Kawahara, presiding

9:10	2K01	Structural Evolution in Isothermal Crystallization Process of Aliphatic Nylon <u>Kohji Tashiro</u> , <u>Asami Nishiyama</u> , <u>Makoto Hanesaka</u> , <u>Hiroyasu Masunaga</u> , <u>Sono Sasaki</u> , <u>Kazuki Itoh</u> , <u>Masaki Takata</u>	3548
9:35	2K02	Solid state ¹⁹ F MAS NMR Characterization of the Crystalline Structure of Polyvinylidene fluoride Nanofiber Fabricated by Electrospray Deposition <u>Yoshiyasu Takiue</u> , <u>Shigeki Kuroki</u> , <u>Hidetoshi Matsumoto</u> , <u>Akihiko Tanioka</u> , <u>Shinji Ando</u>	3550
10:00	2K03	Crystalline morphology obtained after orientation and relaxation of polypropylene <u>Takaya Miyano</u> , <u>Hiromu Saito</u>	3552
10:25	2K04	Strain-induced crystallization and the contribution to stress and tensile strength in rubber <u>Shigeyuki Toki</u> , <u>Benjamin S. Hsiao</u>	3554

S. Toki, presiding

10:50	2K05	Network model for strain-induced crystallization of natural rubber <u>Masatoshi Tosaka</u> , <u>Shinzo Kohjiya</u> , <u>Yuko Ikeda</u>	3556
11:15	2K06	Effect of Strain-induced Crystallization on Tear Energy of Natural Rubber Blend <u>Seiichi Kawahara</u> , <u>Fumitoshi Noguchi</u> , <u>Yoshimasa Yamamoto</u> , <u>Tetsuji Kawazura</u>	3558
11:40	2K07	Strain-induced crystallization upon cyclic deformation for peroxide cross-linked rubbers - Natural rubber and isoprene rubber- <u>Hanako Asai</u> , <u>Daiyu Ikawa</u> , <u>Yuko Ikeda</u>	3560

T. Hashimoto, presiding

12:55	2K08IL	Development of High-strength Polyester Fibers via Higher-order Structure Control <u>Takeshi Kikutani</u>	3562
-------	--------	---	------

M. Tosaka, presiding

13:45	2K10	Spatial Distribution of Each Molecular Weight Component in Shish-kebab Structure Investigated by Small-angle Neutron Scattering <u>Yoshinobu Nozue</u> , <u>Shuichi Kimata</u> , <u>Takashi Sakurai</u> , <u>Tatsuya Kasahara</u> , <u>Noboru Yamaguchi</u> , <u>Mitsuhiro Shibayama</u> , <u>Julia Kornfield</u> ..	3565
14:10	2K11	Structure of isotactic polystyrene above melting temperature after induction of shear flow <u>Go Matsuba</u> , <u>Yuji Hayashi</u> , <u>Yunfeng Zhao</u> , <u>Koji Nishida</u> , <u>Toshiji Kanaya</u>	3567

14:35	2K12	Shear-induced crystallization of poly(L-lactic acid) - Role of molecular weight and entanglement on shish-kebab structure formation <u>Shinichi Yamazaki</u> ,Takuya Oka,Kunio Kimura,Benjamin S. Hsiao.....	3569
15:00	2K13	Shish-kebab structure formation of cyclic polyethylene from the sheared melt <u>Yuya Saito</u> ,Shinichi Yamazaki,Kunio Kimura	3571
K. Koyama, presiding			
15:25	2K14	Mechanism of Shish-Kebab Formation under Flow, Part I - Rheo-Optical Study on Direct Observation of Transient Structures in Flow-Crystallization <u>Takeji Hashimoto</u> ,Hiroki Murase,Yasuo Ohta	3573
15:50	2K15	Mechanism of Shish-Kebab Formation under Flow, Part II - Electron Microscopic Study on Transient Structure of Shish-Kebab Formation <u>Hiroki Murase</u> ,Takeji Hashimoto,Yasuo Ohta	3575
16:15	2K16	Mechanism of Shish-Kebab Formation under Flow, Part III - Study on Morphology and Tensile Properties for Shish-Kebab under Deformation <u>Yasuo Ohta</u> ,Hiroki Murase,Takeji Hashimoto	3577
S. Yamazaki, presiding			
16:40	2K17	Polymer Crystallization under elongational field <u>Masamichi Hikosaka</u> ,Kiyoka Okada,Kaori Watanabe,Sono Sasaki,Hiroyasu Masunaga	3579
17:05	2K18	Supercooled Elongational Flow and Crystallization Masataka Sugimoto,Takashi Taniguchi, <u>Kiyohito Koyama</u>	3581

Friday, September 26

Challenge to the polymer crystallization and the high performance polymer materials

H. Ito, presiding

9:10	3K01	Flow Analysis of Aqueous Solution of Silk Fibroin in the Spinneret with the Dilation and Contraction in Bombyx mori Silkworm Using Finite Element Method Calculation and Fiber Formation Mechanism <u>Motoaki Moriya</u> ,Yusuke Nakahara,Yuichi Masubuchi,Hiroshi Watanabe,Tetsuo Asakura.....	3583
9:35	3K02	Orientation-Induced Crystallization Analyzed by Laser-Heated Drawing <u>Yutaka Ohkoshi</u> ,Hiroshi Urakawa,Takayoshi Yamaguchi,Kyonghou Kim,Yasuo Gotoh,Masanobu Nagura	3585
10:00	3K03	Influence of molecular orientation on the curling phenomenon in laminated films <u>Tadakazu Miyata</u>	3587
10:25	3K04	Relationship between fiber diameters fabricated by melt-electrospinning and crystal characteristics of PP's with different tacticities. <u>Yasuhide Maruyama</u> ,Masataka Sugimoto,Takashi Taniguchi,Kiyohito Koyama	3589

Y. Ohkoshi, presiding

10:50	3K05	Formation of surface structure in injection molding of Polypropylene	
-------	------	--	--

		<u>Yutaka Kobayashi</u> , Yasuhiko Otsuki	3591
11:15	3K06	Higher-Order Structure Development in Thin-wall Injection Molding of Semi-crystalline Polymers	
		<u>Hiroshi Ito</u> , Takuro Watanabe, Hajime Suzuki, Takeshi Kikutani.....	3593
11:40	3K07	Crystallization and foaming behavior of metallocene polypropylene	
		<u>Shinichi Kitade</u> , Kenji Kobayashi, Yuuichi Yamanaka	3595
		M. Hikosaka, presiding	
12:55	3K08	Development of Novel Olefinic Hybrid Polymer	
		<u>Junji Saito</u>	3597
13:20	3K09	Preparation of aromatic polyimides by using reaction-induced crystallization of oligomers during solution polymerization	
		Kanji Wakabayashi, Takashi Sawai, Shinichi Yamazaki, Tetsuya Uchida, <u>Kunio Kimura</u>	3599
		K. Kimura, presiding	
13:45	3K10	Acceleration Mechanism of Nucleation of Polymers by Nucleating Agent	
		<u>Tsuyoshi Urushihara</u> , Naoshi Kawamoto, Kiyoka Okada, Masamichi Hikosaka.....	3601
14:10	3K11	Characterization of micro structural changes in tire cords depending on service conditions	
		<u>Masahiro Yamaguchi</u> , Ryota Okazaki, Masahiko Yamamoto, Yuji Kitamura, Kiyoka Okada, Masamichi Hikosaka	3603

Room L

Wednesday, September 24

Science of hetero nano-interface in hybrid polymers - Structure control and functionality -

9:50	SO	Introductory Remarks	
		Hidetoshi Oikawa, Katsuhiko Inomata	3450
		K. Inomata, presiding	
10:00	1L03	Convictional Dissipative Structures of Colloidal Dispersions	
		<u>Tsuneo Okubo</u> , Junichi Okamoto, Akira Tsuchida.....	3451
10:25	1L04	Drying Dissipative Structures of Monodispersed Colloidal Dispersions	
		Miyuki Sekita, Kimitaka Tajima, Asami Niizuma, Hiroshi Kimura, <u>Akira Tsuchida</u> , Tsuneo Okubo.....	3453
10:50	1L05	Electrically Induced Changes in the Rheological Properties of Aqueous Colloidal Suspensions	
		<u>Hiroshi Kimura</u> , Taiki Sugiyama, Akira Tsuchida	3455
		T. Okubo, presiding	
11:15	1L06	Nanostructured Colloidal Array in an Ionic Liquid	
		<u>Kazuhide Ueno</u> , Yuta Sano, Aya Inaba, Masayoshi Watanabe.....	3457
11:40	1L07	Structural Analysis of Nanoparticles Dispersed in the Transparent Resin using A Synchrotron X-ray Scattering	
		<u>Kazunobu Senoo</u> , Takeshi Takeuchi, Wataru Oka, Yasuo Simobe, Shigeo Kuwamoto, Yoshimasa Urushihara, Junji Matsui, Katsuhiko Nakamae	3459

H. Oikawa, presiding			
12:55	1L08IL	Mass transport phenomena for macro-porous silica filled with proton conducting polymer <u>Kiyoshi Kanamura</u> , Keiji Sasajima, Hirokazu Munakata	3461
K. Tanaka, presiding			
13:45	1L10	Fabrication of π -Conjugated Polymer Nanocore / Metal Nanoshell Hybridized Structures <u>Tsunenobu Onodera</u> , Akito Masuhara, Hitoshi Kasai, Hidetoshi Oikawa.....	3464
14:10	1L11	Fabrication of novel hybridized nanostructures composed of polydiacetylene and metal <u>Takahiro Yokoyama</u> , Akito Masuhara, Tsunenobu Onodera, Hitoshi Kasai, Hidetoshi Oikawa	3466
14:35	1L12	Control of structure and function of Ag nanoparticle-containing microsphere <u>Masahiro Asakawa</u> , Daisuke Suzuki, Haruma Kawaguchi	3468
15:00	1L13	Assembling of Gold Nanoparticles on Solid Surfaces by Employing Surface Molecular Macroclusters <u>Takeshi Kajiwara</u> , Tatsurou Shinzawa, Masashi Mizukami, Kazue Kurihara	3470
H. Kawaguchi, presiding			
15:25	1L14	Intercalation of gold nanoparticles into basic polyelectrolyte-clay nanocomposites <u>Hideo Hata</u> , Thomas Mallouk, Kazuyuki Kuroda	3472
15:50	1L15	Control of the lateral size and interparticle distance of niobate nanosheet colloid <u>Daisuke Yamaguchi</u> , Nobuyoshi Miyamoto, Satoshi Koizumi, Teruyuki Nakato, Takeji Hashimoto	3474
16:15	1L16	Control of layer thickness of composite polymer particles with "onion-like" multilayered structure <u>Takuya Tanaka</u> , Naohiko Saito, Masayoshi Okubo	3476
16:40	1L17	Development of Nanosegregated Amorphous Composites Consisting of Calcium Carbonate and an Organic Polymer <u>Yuya Oaki</u> , Satoshi Kajiyama, Tatsuya Nishimura, Hiroaki Imai, Takashi Kato	3478
K. Kurihara, presiding			
17:05	1L18	Preparation and characterization of TiO ₂ -ZrO ₂ and Thiol-acrylate resin nanocomposites with high refractive index <u>Norio Nakayama</u>	3480
17:30	1L19	Fabrication of shape-controlled C ₆₀ microcrystals and their hybridization <u>Akito Masuhara</u> , Zhenquan Tan, Hitoshi Kasai, Hachiro Nakanishi, Hidetoshi Oikawa	3482
17:55	1L20	Microstructure and Yield Stress of Electro-Rheological Nano-Suspensions under no External Electric Fields <u>Katsufumi Tanaka</u> , Ryuichi Akiyama, Naoyuki Sezaki.....	3484

Thursday, September 25

Science of hetero nano-interface in hybrid polymers - Structure control and functionality -

K. Tokumitsu, presiding

9:10	2L01	Glass Transition of Polymers Confined in Clay Galleries <u>Yohei Miwa</u> , Shulamith Schlick, Katsuhiko Yamamoto.....	3486
9:35	2L02	Imaging of polymer brushes grafted on silica particles by contamination-free TEM <u>Shin Horiuchi</u> , Takeshi Hanada, Masaharu Ebisawa, Motoyasu Kobayashi, Atsushi Takahara, Yasuhiro Matsuda	3488
10:00	2L03	Direct 3D observation of fiber-reinforced plastics under uniaxial extension <u>Hiroshi Jinnai</u> , Takaaki Mihara, Hiroshi Shima, Toshio Nishi.....	3490
10:25	2L04	Synthesis of high heat resistant solubilizers for polymer/CNT composites <u>Takuya Morishita</u> , Mitsumasa Matsushita, Yoshihide Katagiri, Kenzo Fukumori.....	3492

K. Tanaka, presiding

10:50	2L05	Interfacial Design of Polypropylene/Silica Nanocomposite for Controlled Higher-Order Structure and Stability <u>Toshiaki Taniike</u> , Masaki Umemori, Kazuo Asuka, Kenichi Sumino, Ko-hei Nitta, Minoru Terano.....	3494
11:15	2L06	Specific Phase Separation Structure and Mechanical Properties of Polyketone/Polyamide Polymer Alloy <u>Atsushi Kato</u> , Maiko Nishioka, Youhei Takahashi, Toshiya Suda, Hisahiro Sawabe, Shigeki Hikasa, Hitoshi Iwabuki, Atsushi Asano.....	3496
11:40	2L07	Mechanistic analysis of nano adhesion between polyelectrolyte multilayer films <u>Daisuke Matsukuma</u> , Takeshi Serizawa	3498

Y. Matsuo, presiding

12:55	2L08	Thermal Molecular Motion of Polystyrene at Interfaces with Solid Substrates <u>Keiji Tanaka</u> , Yohei Tateishi, Hiroshi Morita, Masao Doi, Toshihiko Nagamura	3500
13:20	2L09	Polymer Hybrid Thin Films exhibiting High Thermal Conductivity by Selective Precipitation of Silver Nanoparticles in Micro Phase-separated Polyimide Blends <u>Daisuke Yorifuji</u> , Shinji Ando	3502
13:45	2L10	Polymer Nanosheet Assembly toward Plasmonic Material <u>Shingo Ozaki</u> , Masahiro Takahashi, Hiroyuki Tanaka, Masaya Mitsuishi, Tokuji Miyashita	3504

H. Jinnai, presiding

14:10	2L11	Metal Nanostructure Formation Using DNA Template <u>Kuniharu Ijiri</u> , Aya Tanaka, Ayako Ishikawa, Kenichi Niikura, Yasutaka Matsuo.....	3506
14:35	2L12	Formation and Characterization of Nanogel-templated Apatite Nanoparticles <u>Setsubo Yamane</u> , Yoshihiro Sasaki, Kazunari Akiyoshi	3508
15:00	2L13	Cell cultivation on the surface of polymer/clay nanocomposites <u>Sakie Masatoshi</u> , Kazutoshi Haraguchi	3510

The functional properties and their applications of a composite in the light of the interactions between nano-carbon particles and polymer matrixes

15:40	SO	Introductory Remarks Masao Sumita, Hiroshi Yui.....	4469
M. Takahashi, presiding			
15:50	2L15	Filler Network and Viscoelasticity of Nano-Carbon Filled Rubber <u>Yoshinobu Isono</u> ,Takafumi Aoyama,Atsushi Kobayashi,Shuji Fujii....	4470
16:15	2L16	Properties and Structural Analysis of Various Vapor-Grown Carbon Fibers / Styrene Block Copolymers Composites <u>Takahide Kumagai</u> ,Wataru Suzuki,Eisuke Yamada,Shigeki Inukai,Hiroyuki Ueki,Toru Noguchi,Morinobu Endo	4472
16:40	2L17	Cavitation Behavior of PET under Tensile Stress and Influences of CNT <u>Masatoshi Shioya</u>	4474
17:05	2L18	Mesoscopic Mechanical Analysis of Filled Rubber with 3D-Finite Element Analysis (V) <u>Satoshi Hamatani</u> ,Keizo Akutagawa,Atsushi Yamamoto,Hisashi Heguri,Hiroshi Jinnai.....	4476

Friday, September 26

The functional properties and their applications of a composite in the light of the interactions between nano-carbon particles and polymer matrixes

M. Sumita, presiding			
9:10	3L01	Preparation and properties of graded SEBS composites with nano-carbon content gradient in the sheet direction <u>Yasuyuki Agari</u> ,Kenichiro Yutaka,Ryoki Nomura	4478
9:35	3L02	High-Performance Electromagnetic-Wave Absorber:Percolaton Network and Fractal of VGCF in Polymer Blends by Selective Adsorption of HDPE <u>Ryuji Ishikawa</u> ,Masaoki Takahashi,Yukihiro Nishikawa	4480
10:00	3L03	Dispersion State of Acetylene Black and Percolation Threshold for Electrical conductivity : Effects of Molecular Weight of Matrix <u>Takashi Doumoto</u> ,Ukihiro Nishikawa,Masaoki Takahashi,Takuya Okada	4482
10:25	3L04	Leak Currents in Nano-carbon Composites : Estimation based on RRN model <u>Yukihiro Nishikawa</u> ,Takashi Doumoto,Masaoki Takahashi.....	4484
Y. Agari, presiding			
10:50	3L05	Study on structure and properties of nano-carbon filled rubber networks by 3D-TEM <u>Yuko Ikeda</u> ,Yuki Kasahara,Yota Kokubo,Atsushi Kato,Tosiya Suda,Hisahiro Sawabe,Junichi Simanuki,Ayano Isoda,Toshinori Hasegawa,Shinzo Kohjiya.....	4486
11:15	3L06	Generating of CNT networks using co-continuous structure of polymer blends <u>Tasuku Murata</u> ,Kosuke Murata,Kohei Terasaki,Hideyuki Nakanishi,Takeshi Yamao,Syu Hotta,Tomohisa Norisuye,Qui Tran-cong-miyata.....	4488
11:40	3L07	Studies of three-dimensional structure of carbon nano-tube in	

		polymer <u>Ken-ichi Niihara</u> , Hiroshi Jinnai, Shigeki Inukai, Hiroyuki Ueki, Akira Magario, Toru Noguchi, Morinobu Endo	4490
		H. Yui, presiding	
12:55	3L08IL	Structure and Properties of Nano-Carbon Filled Polymer Composites <u>Shigeo Asai</u>	4492
		Y. Isono, presiding	
13:45	3L10	Preparation and properties of several polymer-grafted nanodiamond <u>In Oh Cha</u> , Takeshi Yamauchi, Norio Tsubokawa	4495
14:10	3L11	Polymer composite formation of nanoparticle by wet processing <u>Hiroaki Kondo</u> , Yoshito Ohtake, Yuji Jinbo, Yoshinobu Izumi.....	4497
14:35	3L12	Evaluation of length and curve degree for MWCNT, and its dispersion and conductivity in polymer <u>Teruya Goto</u> , Hiroki Arai, Hiroshi Awano, Osamu Haba, Tatsuhiro Takahashi, Noriyuki Kuramoto, Koichiro Yonetake.....	4499
		S. Akasaka, presiding	
15:00	3L13	Properties of carbon microcoil/polymer composites prepared in the polymer dispersed solutions <u>Hisae Okamoto</u> , Sachiko Hoshiya, Seiji Motojima	4501
15:25	3L14	Selective Separation Methods for Metallic and Semiconducting Single-Walled Carbon Nanotube in Aqueous Solution with Pulsed OPO Laser <u>Isamu Tajima</u> , Katsumi Uchida, Tadahiro Ishii, Hirofumi Yajima.....	4503

Room M

Wednesday, September 24

Functional Polymers and Polymer Functions

		S. Kobatake, presiding	
10:00	1M03	Syntheses and properties of step-pi-conjugated polymers as macromolecular-wire <u>Hiroyuki Aota</u> , Yusaku Akiyama, Naoki Deguchi, Shinya Suzuki, Yusuke Nakamura, Daisuke Komatsubara, Akira Matsumoto..	3829
10:25	1M04	Syntheses of step-pi-conjugated polymers and their application for photoenergy conversion system (14). Syntheses and properties of molecular-wires having different structures <u>Shinya Suzuki</u> , Hiroyuki Aota, Akira Matsumoto.....	3831
10:50	1M05	Design and Synthesis of Molecular Wires Consisting of Layered Aromatic Rings <u>Yasuhiro Morisaki</u> , Toshiyuki Sawamura, Takuya Murakami, Yoshiki Chujo.....	3833
		Y. Morisaki, presiding	
11:15	1M06	Synthesis of novel polyallyl dendrimers to apply to thiol-ene photopolymers <u>Ken'ichi Aoki</u> , Mayuko Suzuki, Kunihiro Ichimura	3835
11:40	1M07	Photosensitivity characteristics of a novel base-sensitive polymer having base-amplifying units in its main chain sensitized with a photobase generator	

		<u>Satoru Inoue</u> ,Koji Arimitsu.....	3837
		K. Aoki, presiding	
12:55	1M08	Two-photon-induced polymer nano/micro-fabrication using hyperbranched polymers with high refractive index <u>Yuichi Mori</u> ,Shin-ichiro Inoue,Shiyoshi Yokoyama,Kei Yasui,Masa-aki Ozawa	3839
13:20	1M09	Distinct Molecular Alignment Induced by Photopolymerization of Anisotropic Monomers <u>Yoshitaka Nakajima</u> ,Atsushi Shishido,Tomiki Ikeda	3841
13:45	1M10	Fixed magnetic anisotropic orientation of DAST micro crystals <u>Tatsumi Kimura</u> ,Satoru Shimada,Hirokazu Narushima,Daisuke Ishikawa	3843
14:10	1M11	Control of liquid-crystalline helical structures with the aid of a dynamic molecular response <u>Masuki Kawamoto</u> ,Natsuki Shiga,Takuya Aoki,Tatsuo Wada.....	3845
		T. Miyata, presiding	
14:35	1M12	Synthesis of azobenzene star polymers by reversible addition fragmentation chain transfer and photo-induced surface relief gratings <u>Akihisa Shibahara</u> ,Tomonari Ogata,Seiji Kurihara.....	3847
15:00	1M13	Optical Properties of pai-Conjugated Polymers Soluble in Ionic Liquids. <u>Mitsunori Furuya</u> ,Daisuke Aoki,Hisashi Kokubo,Masayoshi Watanabe.....	3849
15:25	1M14	Enhanced performance of light-emitting transistors using organic semiconducting thin films <u>Kohei Terasaki</u> ,Yasuhiro Shimizu,Takeshi Yamao,Shu Hotta.....	3851
		Y. Tajitsu, presiding	
15:50	1M15	Helix-Sense-Selective Polymerization of Phenylacetylenes Bearing Photoresponsive Groups and Photoresponse of The Polymer Membranes <u>Ippei Suzuki</u> ,Masahiro Teraguchi,Takeshi Namikoshi,Edy Marwanta,Takashi Kaneko,Toshiki Aoki.....	3853
16:15	1M16	Surface Plasmon Switching of Gold Nanoparticle by Photoisomerization Reaction of Photochromic Polymers <u>Hiroyasu Nishi</u> ,Seiya Kobatake.....	3855
16:40	1M17	Effect of glass transition temperature on the photo-degradation of poly(olefin sulfone)s <u>Chihiro Iwata</u> ,Takeo Sasaki,Minoru Matsuda	3857
		M. Watanabe, presiding	
17:05	1M18	Nanometer-scale characterization of elastic strain in photo-curing of poly(ethyl acrylate) in situ measured by Mach-Zehnder Interferometry. <u>Thuy Van-pham-dan</u> ,Kazuhiro Sorioka,Tomohisa Norisue,Qui Tran-cong-miyata.....	3859
17:30	1M19	Photoelastic Constant of Polymer film Katsunori Morii,Tetsuya Morita,Kenji Imoto,Hiroyuki Kowa,Yu Morimoto,Kanae Muraki,Mitsuo Tsukiji,Ken Yamamoto, <u>Yoshiro Tajitsu</u>	3861
17:55	1M20	Improvement of Transparency of Optical Polymer by Amorphous Structure Control <u>Haruna Obata</u> ,Norihisa Tanio.....	3863

Thursday, September 25

Functional Polymers and Polymer Functions

T. Ishigure, presiding

9:10	2M01	Measurement of orientation function of polymer chains by dichroic dye and control of the orientational birefringence of copolymers <u>Takayuki Mashima</u> ,Akihiro Tagaya,Yasuhiro Koike 3865
9:35	2M02	Zero-Birefringence Polymer and Analysis on Wavelength Dispersion of Birefringence. <u>Kota Shikama</u> ,Akihiro Tagaya,Yasuhiro Koike 3867
10:00	2M03	Zero Birefringence Cross-Linked Polymers <u>Sayuri Yamazaki</u> ,Akihiro Tagaya,Yasuhiro Koike 3869
10:25	2M04	Study on birefringence dispersion of polymers by quantum chemical calculation <u>Keiichi Kuboyama</u> ,Akifumi Ikuta,Toshiaki Ougizawa 3871

K. Kuboyama, presiding

10:50	2M05	Hole Assisted Graded Index Plastic Optical Fiber and its macro bending loss <u>Toru Hiromasa</u> ,Takaaki Ishigure 3873
11:15	2M06	Design of thermally stable GI POF prepared by partially halogenated copolymer <u>Kotaro Koike</u> ,Mikes Frantiseks,Yoshiyuki Okamoto,Yasuhiro Koike... 3875
11:40	2M07	Comparison of photorefractive effect of a block copolymer and that of a polymer blend of block copolymer and homopolymer. <u>Hidehito Matsuzaki</u> ,Takeo Sasaki..... 3877

T. Sasaki, presiding

12:55	2M08	Control of Refractive Index Profile of GI POF by the Co-extrusion Process <u>Katsumoto Watanabe</u> ,Yasushi Yamaki,Makoto Asai,Atsushi Kondo,Satoshi Takahashi,Yasuhiro Koike 3879
13:20	2M09	Low loss and thermally stable GI POF prepared from partially chlorinated polymer <u>Yukari Inuzuka</u> ,Koutaro Koike,Makoto Asai,Atsushi Kondo,Satoshi Takahashi,Yasuhiro Koike..... 3881
13:45	2M10	Proposal of Polymer Parallel Optical Waveguides with W-shaped Index Circular Cores and Their Inter-channel Crosstalk Characteristics <u>Yusuke Hirobe</u> ,Takaaki Ishigure..... 3883
14:10	2M11	Carbon nanotubes ? PMMA composites and their application to passive mode-locking devise <u>Sho Uchida</u> ,Amos Martinez,Song Yong-won,Takaaki Ishigure,Shinji Yamashita 3885

S. Lee, presiding

14:35	2M12	Poly(thioether sulfone) with High Refractive Index and High Abbe's Number <u>Yasuo Suzuki</u> ,Tomoya Higashihara,Mitsuru Ueda 3887
15:00	2M13	Chemical liquid deposition of Schiff base-type pai-conjugated polymer films at solid-liquid and air-liquid interface <u>Masashi Kunitake</u> ,Nobuo Enoki,Shigeyasu Katahira,Masayo Sakata 3889
15:25	2M14	A Novel Coating Method with Polymer Latexes Containing

		Hydrolysable Emulsifiers <u>Yoshihiro Itoh</u> , Ryo Akasaka, Fumiya Sahara.....	3891
15:50	2M15	Preparation of Poly(diacetylene) Film with Chirality Induced by Circularly Polarized Light <u>Hideki Kohn</u> , Yuki Ohshima, Takaaki Manaka, Mitsumasa Iwamoto	3893
		Y. Itoh, presiding	
16:15	2M16	A Novel Approach to Chemical Sensing Using SiO ₂ /Polymer Nanoporous Thin Films Deposited onto Long-Period Grating Optical Fibres <u>Sergiy Korposh</u> , Suguru Kodaira, S. W. James, R. P. Tatam, W. J. Batty, Seung-woo Lee.....	3895
16:40	2M17	Fabrication of optical fiber sensors using porphyrin optical properties <u>Suguru Kodaira</u> , Sergiy Korposh, S. J. James, R. P. Tatam, W. J. Batty, Seung-woo Lee.....	3897
17:05	2M18	Shape-Memory Effect of Electrospun Biodegradable Polymer Fabrics <u>Hidetoshi Matsumoto</u> , Tasuku Ishiguro, Mie Minagawa, Akihiko Tanioka, Klaus Richau, Karl Kratz, Andreas Lendlein.....	3899

Friday, September 26

Functional Polymers and Polymer Functions

T. Sasaki, presiding

9:10	3M01	Control Release from Mesoporous Nanocompartment Films <u>Qingmin Ji</u> , Jonathan P. Hill, Katsuhiko Ariga, Kazutami Sakamoto, Jong-sung Yu	3901
9:35	3M02	Nanoporous polymers thin film with functionalized on the pore wall from a amphiphilic block copolymers containing thermal cleaving linker <u>Yukimitsu Suzuki</u> , Motonori Komura, Kaori Kamata, Tomokazu Iyoda .	3903
10:00	3M03	Dendrimer-Integrated Microporous Polymers That Reveal High-Specific Surface Area: Fabrication Methodology and Their Application in Catalytic Chemical Transformation. <u>Shin Ogasawara</u> , Shinji Kato.....	3905
10:25	3M04	Free-Standing Nanofilm Using Polymer Nanosheet <u>Kei Hirachi</u> , Hiroshi Endo, Masaya Mitsuishi, Tokuji Miyashita.....	3907

T. Iyoda, presiding

10:50	3M05	Superhydrophilicity of Polymer Nanosheet / Silica Nanoparticle Multilayered Assembly <u>Takeo Suzuki</u> , Miki Ishifuji, Masaya Mitsuishi, Tokuji Miyashita.....	3909
11:15	3M06	Surface modification of silica nanoparticles with polyethyleneglycols under dry milling <u>Akira Funabiki</u> , Kunihiro Ichimura, Ken'ichi Aoki	3911
11:40	3M07	Ordered immobilization of nanoparticles on Si step edges <u>Tetsu Yonezawa</u> , Kimihiro Okuyama, Toshihiro Shimada, Tetsuya Hasegawa, Yoshinori Yamanoi, Hiroshi Nishihara	3913

K. Yamaguchi, presiding

12:55	3M08	Design of Chemical-Modified Cellulose Particles for Removal of Glucoamylase from Sake Materials <u>Koichi Kai</u> , Masayo Sakata, Masashi Kunitake	3915
13:20	3M09	Fabrication of the discrete PS@Au nanoparticles array controllable	

		their structural parameters	
		<u>Nobuyuki Zettsu</u> , Shuhei Uchida, Kazuya Yamamura	3917
13:45	3M10	Nanofabrication of A 2D Array of Gold Nanodots by Using Self-assembled Micellar Monofilms	
		<u>Shigeru Watanabe</u> , Inamur R. Laskar, Tomokazu Iyoda	3919
		M. Mitsuishi, presiding	
14:10	3M11	Evaluation of Self-Assembled Monolayer on Gold Surface Containing Activated Carbonate Connected with Photodegradable Group.	
		<u>Takahiro Shimizu</u> , Haruhisa Ishida, Kazuo Yamaguchi	3921
14:35	3M12	Characterization of the SAMs prepared by silane coupling agents containing photodegradable 2-nitrobenzyl ester connected with oligo(ethylene oxide) chain	
		<u>Tepei Hashimoto</u> , Naoya Sato, Tomohiro Abe, Kazuo Yamaguchi	3923
15:00	3M13	Aggregation Structures and Molecular Dynamics of Poly(methyl methacrylate) at Interfaces with Non-solvents	
		<u>Tomotaka Mizuno</u> , Hiroshi Sasaki, Keiji Tanaka, Toshihiko Nagamura	3925
15:25	3M14	Thermal Transport Properties of Highly Oriented and Crystallized Polymers: P(VDF/TrFE) Single Crystalline Films and Ultra-High Drawn Polyethylene Fiber	
		<u>Hiroji Ohigashi</u> , Hiroshi Itahara	3927

Room N

Wednesday, September 24

Functional Polymers and Polymer Functions

M. Rikukawa, presiding

10:00	1N03	Click-Type Reaction for Conjugated Polymers	
		<u>Tsuyoshi Michinobu</u>	3929
10:25	1N04	Long lived charge-separation with using nonpolar space inside the dendrimer	
		<u>Naoki Inoue</u> , Takane Imaoka, Kimihisa Yamamoto	3931
10:50	1N05	Application of High-Functional Double-Layer type Dendrimer with Carbazole Skeleton	
		<u>Yuto Kasai</u> , Ken Albrecht, Kimihisa Yamamoto	3933

N. Satoh, presiding

11:15	1N06	Synthesis and characterization of poly(thiophene) derivatives having benzothiazole ring (III) - Influence of copolymer ratio on EL properties	
		<u>Katsuhiro Esashika</u> , Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa	3935
11:40	1N07	Syntheses and Evaluation of Thiophene-Fluorene Copolymers Having Chiral Side Chains (I)	
		<u>Takashi Hirahara</u> , Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa	3937

Y. Takahashi, presiding

12:55	1N08	Light-emitting electrochemical cell using ruthenium complex - Effect on atmosphere and ligands	
-------	------	--	--

		<u>Takashi Takaki</u> ,Atsushi Aoki.....	3939
13:20	1N09	Solid-State Structure and Light-Emitting Property of Polyfluorene	
		<u>Yohei Kiuchi</u> ,Takashi Sesei,Asako Hirai,Hironori Kaji.....	3941
13:45	1N10	Piezoelectric properties of poly l-lactic acid film	
		Masatoshi Nakayama,Shingo Kataoka,Ken Yamamoto, <u>Yoshiro Tajitsu</u>	3943
14:10	1N11	Orientation Behavior of Dispersed Particles and Characteristics of Silicone Rubber-Piezoelectric Particles Composite Processing under Electric Field	
		<u>Shogo Mamada</u> ,Naoyuki Yaguchi,Minoru Suzuki,Masanori Hansaka	3945
		M. Teraguchi, presiding	
14:35	1N12	Electrochromic properties of the phthalate-polymer modified electrode	
		<u>Yuichi Watanabe</u> ,Satomi Tanaka,Norihisa Kobayashi.....	3947
15:00	1N13	Field Emission Properties of Carbon Nanotubes on Carbon Fabrics	
		<u>Hidetoshi Matsumoto</u> ,Kenichi Suzuki,Shinji Imaizumi,Mie Minagawa,Akihiko Tanioka,Yasuhiko Hayashi,Kazuyuki Fukuzono,Gehan Amaratunga.....	3949
15:25	1N14	Aligned Thin Film of Water-Soluble Conjugated Polymers- SWNTs Composite by Self-Assembly	
		<u>Naoya Adachi</u> ,Mutsumi Kimura,Hirofusa Shirai	3951
		M. Kimura, presiding	
15:50	1N15	Ferroelectricity of ultrathin film of nylon 11	
		<u>Tomohiro Yamaoka</u> ,Wataru Sakai,Naoto Tsutsumi.....	3953
16:15	1N16	Thickness dependence of ferroelectric polarization switching in VDF/TrFE copolymer films	
		<u>Takashi Nakajima</u> ,Koji Sakurai,Yoshiyuki Takahashi,Soichiro Okamura,Takeo Furukawa.....	3955
16:40	1N17	Local ferroelectric properties in thin films of VDF/TrFE copolymer	
		<u>Naoko Tomoda</u> ,Yoshiyuki Takahashi,Takeo Furukawa	3957
		A. Aoki, presiding	
17:05	1N18	Fabrication of high performance film fo poly(vinylidene fluoride)	
		<u>Yuji Minami</u> ,Junya Ueda,Yoshiyuki Takahashi,Takeo Furukawa.....	3959
17:30	1N19	Room-Temperature Magnetic Bistability of Lanthanide-Pyridinodiketone Integrated Complex Crystals	
		Lijun Song, <u>Tomokazu Iyoda</u>	3961
17:55	1N20	Optical active helical main chain structure and magnetic property of poly{3,5-bis(hydroxymethyl)-4-benzyloxyphenylacetylene} bearing galvinoxyl	
		<u>Hiroo Katagiri</u> ,Takeshi Namikoshi,Marwanta Edy,Masahiro Teraguchi,Toshiki Aoki,Takashi Kaneko	3963

Thursday, September 25

Functional Polymers and Polymer Functions

H. Goto, presiding

9:10	2N01	Orientation and Polarized Emission Charactor on Columnar Liquid Crystal by Shear Stress	
		<u>Yusuke Akama</u> ,Kiyoshi Minoura,Takuma Yasuda,Takeshi Shimomura,Takashi Kato.....	3965

9:35	2N02	Liquid Crystalline Semiconductors of Triphenylenes with Hydrogen-Bond Controlled Carrier Mobility <u>Yo Shimizu</u> , Yasuo Miyake, Hiroshiro Monobe, Akihiko Fujii, Masanori Ozaki, Wen-hao Yu, Ke-qing Zhao 3967	3967
10:00	2N03	Thermal activation behavior of carrier mobility in perfluoroalkylated triphenylene derivatives <u>Yasuo Miyake</u> , Akihiko Fujii, Masanori Ozaki, Yo Shimizu 3969	3969
10:25	2N04	In-situ Monitoring of Film Preparation Process and Electrical Orientation of Cellulose Derivatives <u>Katsufumi Tanaka</u> , Yuichiro Tanabe, Ryuichi Akiyama 3971	3971
		K. Tanaka, presiding	
10:50	2N05	Unusual smectic phase observed in main-chain liquid crystalline polymer with bulky group as branch in spacer <u>Ryohei Ishige</u> , Masatoshi Tokita, Kazuya Kato, Junji Watanabe..... 3973	3973
11:15	2N06	Novel Liquid Crystalline Semiconductors Composed of Fused Metalloporphyrin Dimers <u>Tsuneaki Sakurai</u> , Keyu Shi, Hiroshi Sato, Kentaro Tashiro, Atsuhiko Osuka, Akinori Saeki, Shu Seki, Seiichi Tagawa, Takuzo Aida..... 3975	3975
11:40	2N07	Synthesis and Phase Transition of Poly(α -fluoroacrylate)s with Biphenyl Side Groups: Influence of α -Fluorine Atom on the Mesogenicity <u>Qin Ren</u> , Keiichi Moriya, Yoshito Tanaka, Tetsuo Shimizu 3977	3977
		M. Tokita, presiding	
12:55	2N08	Preparation and Photoresponsive Behavior of Crosslinked Azobenzene Liquid-Crystalline Polymer Composites with Chemically Modified Carbon Nanotubes <u>Tetsuya Ozawa</u> , Mizuho Kondo, Jun-ichi Mamiya, Motoi Kinoshita, Tomiki Ikeda 3979	3979
13:20	2N09	Self-Assembly and Unique Properties of a Bowl-shaped π -Conjugated Molecule <u>Daigo Miyajima</u> , Kentaro Tashiro, Fumihito Araoka, Hideo Takezoe, Takuzo Aida..... 3981	3981
13:45	2N10	Synthesis and Property of Polythiophene Derivatives Bearing Azobenzene Moiety Using Cholesteric Liquid Crystal <u>Reina Ohta</u> , Hiromasa Goto..... 3983	3983
14:10	2N11	Construction of Helical Structures from Achiral Biphenyl Carboxylic Acids <u>Kwang-un Jeong</u> , Brian S. Knapp, Frank W. Harris, Denk-ke Yang, Stephen Z. D. Cheng 3985	3985
		H. Okuzaki, presiding	
14:35	2N12	Chirality and Morphology Control of Copolymer-type PEDOT Derivatives by Electrochemical Polymerization on Chiral Nematic Liquid Crystal Field. <u>Yongsoo Jeong</u> , Kazuo Akagi 3987	3987
15:00	2N13	Improvement of Liquid-Phase Growth for Fabricating Organic Semiconductor Devices <u>Hiroshi Akagami</u> , Yoshihiro Nishimoto, Takeshi Yamao, Shu Hotta, Yuji Yoshida 3989	3989
15:25	2N14	High mobility n-type organic crystal transistors <u>Yasuhiro Shimizu</u> , Takeshi Yamao, Shu Hotta, Reiko Azumi 3991	3991
15:50	2N15	Synthesis and field-effect transistor characteristics of thiophene/phenylene co-oligomers with trifluoromethyl groups	

Toshifumi Katagiri, Seiji Bando, Masayoshi Miyada, Takuya Sakaguchi, Yasuhiro Shimizu, Takeshi Yamao, Shu Hotta 3993

T. Shikata, presiding

16:15	2N16	Effect of Surface Modification of Polysilsesquioxane Gate Insulator on Transistor Performance <u>Takashi Hamada</u> , Takashi Nagase, Hiroyoshi Naito, Kimihiro Matsukawa 3995	3995
16:40	2N17	Low-voltage pentacene FET using HfSiO as a high dielectric constant insulator <u>Tsubasa Kagata</u> , Hu Yan, Hidenori Okuzaki 3997	3997
17:05	2N18	Ambipolar characteristics of solution processed bilayer field effect transistors <u>Takeomi Morita</u> , Syuichi Nagamatsu, Shinya Oku, Wataru Takashima, Keiichi Kaneto 3999	3999

Friday, September 26

Functional Polymers and Polymer Functions

W. Takashima, presiding

9:10	3N01	Gas Barrier Property of Poly(1,4-butanediol-1,4-diyl/tetrahydrofuran-2,5-diyl) <u>Yoshimasa Yamamoto</u> , Takayuki Saito, Kazuya Watanabe, Seiichi Kawahara 4001	4001
9:35	3N02	Responsive temperature control and aggregation behavior of double thermo-responsive block copolymers <u>Youhei Kotsuchibashi</u> , Yamamoto Kazuya, Takao Aoyagi 4003	4003
10:00	3N03	Synthesis and Optical Activities of Furan-based Conjugated Polymers with Jewel Beetle Like Iridescence by the Asymmetric Electrochemical Polymerization <u>Kohsuke Kawabata</u> , Hiromasa Goto 4005	4005

T. Shimomura, presiding

10:25	3N04	Synthesis of poly(diphenylacetylene) membranes with sulfonic acid groups and their physical properties and PEFC performance <u>Ryotaro Yamamoto</u> , Hitoshi Ito, Eiichi Akiyama, Kazuyoshi Takeda, Hiroshi Yokota, Cheol Min Yun, Yuta Saito, Yu Nagase 4007	4007
10:50	3N05	Synthesis and properties of block/block sulfonated polyimides <u>Zhaoxia Hu</u> , Kouso Matsuda, Yan Yin, Ken-ichi Okamoto 4009	4009
11:15	3N06	Characterization of high temperature polymer electrolyte fuel cell using PBI/H ₃ PO ₄ membrane (I) <u>Hiroki Ohmori</u> , Masahiro Fujita, Yuuko Takeoka, Masahiro Rikukawa 4011	4011
11:40	3N07	Proton Conducting Polymer Electrolyte Membranes Based on Hyperbranched Polymers <u>Takahito Itoh</u> , Takahiro Sakakibara, Yuki Takagi, Keita Hirai, Masashi Tamura, Takahiro Uno, Masataka Kubo, Yuichi Aihara 4013	4013

Y. Takeoka, presiding

12:55	3N08	Ion-conduction mechanism in polymer electrolytes including poly(methyl glycidyl ether) <u>Nobuharu Kuki</u> , Chie Kato, Osamu Urakawa, Toshiyuki Shikata, Tadashi Inoue 4015	4015
13:20	3N09	Electrochemical Investigation of Molecular Recognition using	

		Poly(aniline boronic acid): Templating Effects on the Complexation of Boronic Acid Group with Fructose <u>Eiichi Shoji</u> , Yasushi Komori 4017	
13:45	3N10	The effect of introducing double-layered ceramics into Nafion membrane on its dielectric and conductive properties <u>Kensuke Yohida</u> , Ryosuke Ito, Yoshiyuki Takahashi, Takeo Furukawa, Matteo Piga, Giuseppe Pace, Vito Di Noto 4019	
		E. Shoji, presiding	
14:10	3N11	Electrochemical deformation and rheology of conducting polymer <u>Wataru Takashima</u> , Keiichi Kaneto, Makoto Ookawa, Hikaru Hashimoto, Kazuo Tominaga 4021	
14:35	3N12	Synthesis and characterization of insulated molecular wire made from cucurbit[7]uril and conducting polymer. <u>Yuta Watanabe</u> , Yuki Mitsuboshi, Takeshi Shimomura 4023	
15:00	3N13	Electrical properties of a single polythiophene nanofiber <u>Yasutaka Ichimura</u> , Takeshi Shimomura 4025	
15:25	3N14	Research and Development of All-Solid-State Lithium Polymer Secondary Batteries - Investigation of electrode components and improvement by introduction of inorganic electrolytes <u>Shiro Seki</u> , Yo Kobayashi, Yasutaka Ohno, Takeshi Kobayashi, Yuichi Mita, Hajime Miyashiro 4027	

Room 0

Wednesday, September 24

Molecular machines working in intracellular environments

9:50	SO	Introductory Remarks Kenji Kono 4979	
		T. Nagasaki, presiding	
10:00	1003	Control of subcellular localization of spatially regulated supramolecular assembly for effective photodynamic therapy <u>Nobuhiro Nishiyama</u> , Michiaki Kumagai, Souta Horie, Shigeto Fukushima, Kozo Miyazaki, Kyoko Urano, Woo-dong Jang, Ping-shan Lai, Yuji Morimoto, Kazunori Kataoka 4980	
10:25	1004	Evaluation of Cellular Uptake and of Poly(L-Lysine)-graft-Polyethyleneglycol (PLL-g-PEG) <u>Masashi Akutagawa</u> , Takeshi Yamano, Naohiko Shimada, Arihiro Kano, Atsushi Maruyama 4982	
		N. Nishiyama, presiding	
10:50	1005	Cationic Cycloamylose for Gene Delivery <u>Sayaka Toita</u> , Yuki Soma, Nobuyuki Morimoto, Shinichi Kitamura, Kazunari Akiyoshi 4984	
11:15	1006	Photo-enhancement of endosomal escape of azobenzene-based lipid/DNA polyplex for efficient gene delivery <u>Takeshi Nagasaki</u> , Katsutoshi Wada, Tsutomu Hamada 4986	
11:40	1007	A Polymer-Peptide Conjugate Regulating Transgene Expression in Cancer Cell Specifically <u>Jeong-hun Kang</u> , Riki Toita, Tetsuro Tomiyama, Daisuke	

		Asai,Hideki Nakajima,Takeshi Mori,Takuro Niidome,Yoshiki Katayama.....	4988
		K. Kono, presiding	
12:55	1O08IL	Multifunctional envelope type nano device for non-viral gene delivery:Concept and Application of Programmed Packaging <u>Hideyoshi Harashima</u>	4990
		K. Akiyoshi, presiding	
13:45	1O10	Trails for generating an artificial nucleus within a living cell <u>Tokuko Haraguchi</u> ,Shouhei Kobayashi,Hiroko Osakada,Tomoko Kojidani,Takako Koujin,Yasushi Hiraoka.....	4993
14:10	1O11	Development of method for antibody delivery into living cells using PTD fusion protein <u>Masayasu Mie</u> ,Hiromi Kobayashi,Eiry Kobatake	4995
14:35	1O12	Nitric Oxide Release in Human Aortic Endothelial Cells Induced by Interaction with Polymeric Nanoparticles <u>Takehiro Nishikawa</u> ,Norio Iwakiri,Yoshiro Kaneko,Nobuhiro Morone,Jun-ichi Kadokawa.....	4997
		Y. Ito, presiding	
15:00	1O13	Control of cell-medicated immunity by antigenic peptide-HSP complex <u>Naoko Asada</u> ,Hirotooshi Haida,Takashi Morii,Tetsuya Hasegawa,Shigeru Kunugi,Naoki Tanaka	4999
15:25	1O14	Proliferation of multi-potent undifferentated cells on honeycomb films. <u>Sadaaki Yamamoto</u> ,Masaru Tanaka,Yuka Morita,Hiroshi Yabu,Kuniharu Ijiri,Masatsugu Shimomura	5001
15:50	1O15	Structural analysis of well-oriented microtubule assemble by synchrotron small angle X-ray scattering <u>Kazuhiro Shikinaka</u> ,Momoko Yoshida,Ryuzo Kawamura,Akira Kakugo,Hidemitsu Furukawa,Jianping Gong,Hiroyasu Masunaga,Sono Sasaki,Tomomi Masui,Satoshi Koizumi	5003
		A. Kikuchi, presiding	
16:15	1O16	Nucleic acid detection using DNA-templated chemical reaction <u>Miwako Uda</u> ,Kazuhiro Furukawa,Jin Wang,Hiroshi Abe,Satoshi Tsuneda,Yoshihiro Ito	5005
16:40	1O17	Rhodamine-labeled Biocleavable Polyrotaxanes as Artificial Gene Carrier; Imaging of Intracellular SS-Cleavable and DNA Release from Polyplex <u>Haejoo Lee</u> ,Ryou Katoono,Junpei Horiuchi,Atsushi Yamasita,Nobuhiko Yui,Tooru Ooya,Atsushi Maruyama,Kentarou Kogure,Hidetaka Akita,Hideyoshi Harasima	5007
		A. Maruyama, presiding	
17:05	1O18	Intracellular Environment- and Signal-Responsive PEGylated Nanogels for Nanobioimaging <u>Motoi Oishi</u> ,Yukio Nagasaki.....	5009
17:30	1O19	Design, Synthesis and Biological Application of MRI Probes with Tunable Switches for Monitoring in vivo Enzymatic Activity <u>Kazuya Kikuchi</u>	5011
17:55	1O20	Polymeric micelle carrier system for targeting of drugs and contract agents <u>Masayuki Yokoyama</u> ,Masamichi Nishihara,Koichi Shiraishi,Toshiko Harada,Taku Sato	5013

Thursday, September 25

Functional Polymers and Polymer Functions

Y. Ishida, presiding

- 9:10 2001 Study on the correlation between chemical structures and viscoelastic properties of thermoplastic polyimides
Masahiro Toriida, Masayoshi Yamamoto, Yasunori Saito, Wataru Yamashita, Shoji Tamai 4029
- 9:35 2002 Colorless Polyimides Prepared from Cycloaliphatic Tetracarboxylic Dianhydrides with Controlled Steric Structures (2)
Masatoshi Hasegawa, Mari Fujii, Akira Uchida, Daiki Hirano, Shinya Yamaguchi, Eiichiro Takezawa, Atsushi Ishikawa..... 4031
- 10:00 2003 Synthesis and properties of soluble polyimides bearing long chain alkyl groups via polymer reaction
Yusuke Tsuda, Yuki Sonda, Takaaki Matsuda..... 4033

M. Teraguchi, presiding

- 10:25 2004 Synthesis and Properties of Novel Asymmetric Addition-type Imide Oligomers with High Solubility
Masahiko Miyauchi, Yuuichi Ishida, Toshio Ogasawara, Rikio Yokota .. 4035
- 10:50 2005 Synthesis and Properties of Highly Soluble Imide Oligomers Based on the Dianhydride Containing Fluorene Ring
Yuichi Ishida, Toshio Ogasawara, Rikio Yokota 4037
- 11:15 2006 High performance polybenzoxazine
Yoshihiro Aoyagi, Motoki Kuroe, Shou Kurihara..... 4039
- 11:40 2007 Influence of plasticizers on cyclization of polybenzoxazole precursor
Yuki Shirai, Zhonglong Shen, Takehiro Kawauchi, Tsutomu Takeichi .. 4041

J. Gong, presiding

- 12:55 2008 L-isoleucine based polymer organogelators with poly(ethylene glycol)
Sachiyo Kishi, Masahiro Suzuki, Hirohisa Shirai, Kenji Hanabusa 4043
- 13:20 2009 Porphyrin-fullerene complex assisted by L-glutamide molecular gelation
Hirokuni Jintoku, Naomi Watanabe, Takashi Sagawa, Tsuyoshi Sawada, Makoto Takafuji, Hirotaka Ihara..... 4045
- 13:45 2010 Preparation of Supramolecular Hydrogels Composed of Hydrolyzable Polyrotaxane and their Mechanical Properties
Hojoon Shin, Shin-ichiroh Fukuda, Ryo Katoono, Nobuhiko Yui 4047

K. Hanabusa, presiding

- 14:10 2011 Self-healing of hydrogels having ordered structure. - Effect of sacrificial bond controlled by order-disorder transition.
Yuhei Shirakura, Hidemitsu Furukawa, Yoshimi Tanaka, Takayuki Kurokawa, Yoshihito Osada, Jian Ping Gong..... 4049
- 14:35 2012 Surface-photofunctionalization of polymer hydrogel with azobenzene through VUV oxidation-based treatment
Hozumi Aoshima, Shusaku Nagano, Takahiro Seki 4051
- 15:00 2013 Control of Spatio-Temporal Structure for Polymeric Microspheres toward Advanced Functional Materials
Daisuke Suzuki, Ryo Yoshida..... 4053
- 15:25 2014 Electromagnetic wave sensitivity of poly(*N*-isopropylacryamide) gels containing carbon microcoils and their applications in medical field
Shigenori Sato, Takeshi Yamauchi, Norio Tsubokawa, Kenji Kawabe, Yukio Hishikawa, Seiji Motojima 4055

T. Ishida, presiding

15:50	2015	Polymeric cinchona-derived ammonium salts as recoverable phase transfer catalyst for asymmetric synthesis of α -amino acids. <u>Devproshad Kumer Paul</u> , Yukihiko Arakawa, Naoki Haraguchi, Shinichi Itsuno	4057
16:15	2016	Asymmetric Hydrogenation of alpha-amide ketones using Polymer-supported Catalysts <u>Vinia Ipai Chiwara</u> , Miyuki Takahashi, Naoki Haraguchi, Shinichi Itsuno	4059
16:40	2017	Synthesis of novel polymer-supported chiral quaternary ammonium salt and its application to asymmetric reaction III <u>Yukihiko Arakawa</u> , Azusa Oishi, Naoki Haraguchi, Shinichi Itsuno.....	4061
17:05	2018	HELIX-SENSE-SELECTIVE POLYMERIZATION OF PHENYLACETYLENE HAVING ACHIRAL LIGANDS AND ASYMMETRIC REACTION USING THE OBTAINED POLYMERS MEMBRANE <u>Kazuki Matsumoto</u> , Hiroki Yotsuyanagi, Takeshi Namikoshi, Masahiro Teraguchi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki.....	4063

Friday, September 26**Functional Polymers and Polymer Functions****S. Itsuno, presiding**

9:10	3001	Catalytic Activity of Porous Coordination Polymers Supported Gold Clusters for Liquid Phase Oxidation and Hydrogenation <u>Tamao Ishida</u> , Megumi Nagaoka, Kyoko Kuroda, Masatake Haruta	4065
9:35	3002	Deposition of Au Nanoparticles onto Multilayer Polyelectrolyte Particles and its Catalytic Activity in Liquid Phase Reactions <u>Tatsuya Tsukagoshi</u> , Tamao Ishida, Masatake Haruta.....	4067
10:00	3003	Fabrication of TiO ₂ nano-networks and their photocatalytic activities <u>Masahiro Kikuchi</u> , Masahiro Suzuki, Hirofusa Shirai, Kenji Hanabusa	4069
10:25	3004	Synthesis of Poly(vinylsulfonic acid) and its Characteristics <u>Teruyuki Okayasu</u> , Hiroyuki Nishide, Kei Saitoh, Hearn Milton.....	4071

I. Hisaki, presiding

10:50	3005	Selective Solvent Extraction of Ionic Substrates with Alkali-Hydrolysable Surfactants <u>Yoshihiro Itoh</u> , Yuichi Uemura	4073
11:15	3006	Evaluation of separation properties for novel monolithic columns based on hydrophilic polymer <u>Naomi Kimura</u> , Takuya Kubo, Kunimitsu Kaya, Ken Hosoya	4075
11:40	3007	Adsorption and Desorption Behavior of Organic Nanotubes with Small Molecules and Cyclodextrins <u>Masaru Aoyagi</u> , Masumi Asakawa, Masaki Kogiso, Toshimi Shimizu	4077

K. Hosoya, presiding

12:55	3008	Sorption of high pressure carbon dioxide in methacrylate copolymers with an adamantyl group <u>Kunihisa Owa</u> , Kazuoki Takeo, Masao Nakagawa, Kazukiyo Nagai	4079
13:20	3009	Optical resolution of racemic alcohols by inclusion compounds of	

		cholic acid derivatives and their chiral recognition mechanism <u>Yute Kin</u> , Taketoshi Murai, Ichiro Hisaki, Norimitsu Tohnai, Mikiji Miyata.....	4081
13:45	3O10	C60/C70 molecular recognition of syndiotactic PMMA helical structure <u>Takehiro Kawauchi</u> , Mariko Kawauchi, Yuya Kodama, Tsutomu Takeichi, Atsushi Kitaura, Eiji Yashima	4083
		M. Miyata, presiding	
14:10	3O11	Recognition of Guest Compounds by Cyclodextrin Derivatives in Nonpolar Organic Media <u>Yoshinori Fujino</u> , Akira Kikuzawa, Toshiyuki Kida, Kazuhiro Miyawaki, Eiichi Kato, Misturu Akashi	4085
14:35	3O12	Three-dimensional Detection of Oxygen Distribution Using the Polymer Coating Pt- Porpholactone and -Porphyrine <u>Waskitoaji Wihatmoko</u> , Junji Kato, Tsuyoshi Hyakutake, Hiroyuki Nishide.....	4087
15:00	3O13	Uiquitous chemosensor: photoresponse upon chemical stimuli to origo-phenylene phenols <u>Ken Okamoto</u> , Jonathan Hill, Katsuhiko Ariga	4089

Room Q

Wednesday, September 24

Polymer materials for energy conversion

9:50	SO	Introductory Remarks Akinori Konno, Kenichi Oyaizu.....	4280
		T. Yamaki, presiding	
10:00	1Q03	Synthesis and properties of locally and densely sulfonated poly(arylene ether)s <u>Kazuya Matsumoto</u> , Tomoya Higashihara, Mitsuru Ueda.....	4281
10:25	1Q04	Synthesis and Properties of Sulfonated Polyether Ionomer Membranes with Different Hydrophobic Groups <u>Byungchan Bae</u> , Kenji Miyatake, Masahiro Watanabe	4283
10:50	1Q05	Synthesis of poly(phenylene) block copolymers and evaluation of electrolyte membranes (II) - The effect of hydrophobic unit ratio <u>Azusa Osawa</u> , Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa.....	4285
		Y. Saito, presiding	
11:15	1Q06	Synthesis and properties of poly(sulfonated arylene)-block-poly(naphtalimide) copolymers Huiping Bi, Shouwen Chen, Kangcheng Chen, Zhaoxia Hu, <u>Ken-ichi Okamoto</u>	4287
11:40	1Q07	Fel cell performance and durability of polymer electrolyte fuel cells with side-chain-type sulfonated polyimide membranes Kazuaki Yaguchi, Hajime Yamamoto, Zhaoxia Hu, <u>Noritaka Endo</u> , Mitsuru Higa, Ken-ichi Okamoto	4289
		K. Kiden, presiding	
12:55	1Q08	Syntheses of sulfonated copolyimide with controlled proton channel structure	

		<u>Kota Yamazaki</u> ,Hiroyoshi Kawakami	4291
13:20	1Q09	Fuel Cell Performance of Multiply-Crosslinked Polymer Electrolyte Membranes - Effect of Radiation and Chemical Crosslinking <u>Tetsuya Yamaki</u> ,Shin-ichi Sawada,Masaharu Asano,Yasunari Maekawa,Masaru Yoshida,Lorenz Gubler,Selmiye Alkan-guersel,Guenther Scherer	4293
13:45	1Q10	Synthesis and Characterization of Electrolyte Membranes for Non-humidified Intermediate Temperature Fuel Cells <u>Tomohiro Yasuda</u> ,Seung-yul Lee,Atsushi Ogawa,Masayoshi Watanabe.....	4295
		Y. Maekawa, presiding	
14:10	1Q11	Study on the thermophysical properties of protonated ionic liquid <u>Toshihiro Takekawa</u> ,Hiroshi Ogawa,Tomokazu Yamane,Wataru Ogihara,Hiroko Wakamatsu,Hidenori Sato,Hiroyuki Ohno	4297
14:35	1Q12	Investigation of proton conduction mechanism for designing the polymer gel electrolytes of the fuel cells <u>Yuria Saito</u> ,H Omukai,Tatsuya Umecky,Seiji Maeda,Toshikatsu Kojima,Tetsuo Sakai	4299
15:00	1Q13	Low-temperature relaxation and freezing of water in perfluorosulfonate and hydrocarbon polymer electrolyte membranes <u>Koh Kiden</u> ,Takahiro Ohkubo,Libin Wu,Hamdy F.m Mohamed,Naohiko Takimoto,Akihiro Ohira	4301
		K. Oyaizu, presiding	
15:25	1Q14	water transport properties of polymer electrolyte membrane for PEFC <u>Koichiro Aotani</u> ,Norio Kubo,Kazuhiro Kamiguchi,Hidenori Sato.....	4303
15:50	1Q15	Characterization of water in polymer electrolyte membrane for fuel cell by NMR Spectroscopy <u>Kazuhiro Kamiguchi</u> ,Hidenori Sato,Koichiro Aotani,Shogo Takamuku,Naoya Matsuoka.....	4305
16:15	1Q16	Degradation Study on PFSA Polymer Electrolytes from NMR Analysis of Decomposition Products <u>Mari Takasaki</u> ,Yoko Sakiyama,Yoshitsugu Nakagawa,Kenji Tanabe,Kenji Ookubo,Nobuyuki Sato,Tomohiro Minamide,Hiroshi Nakayama,Michio Hori	4307
		H. Murata, presiding	
16:40	1Q17	Degradation Mechanism of Graft-type Polymer Electrolyte Membranes for Fuel Cells Kazuyuki Enomoto,Shuichi Takahashi,Takanori Iwase,Takashi Yamashita, <u>Yasunari Maekawa</u>	4309
17:05	1Q18	Observation for Running Polymer Electrolyte Fuel Cells by Combined Ultra-Small-Angle Neutron Scattering and Neutron Imaging <u>Hiroki Iwase</u> ,Satoshi Koizumi,Daisuke Yamaguchi,Masahito Matsubayashi,Yasunari Maekawa,Takeji Hashimoto	4311
17:30	1Q19	Analysis of Water Transport Mechanism by Tracer Permeation Experiment and Dissipative Particle Dynamics Simulation - Comparison of Crosslinked-Polytetrafluoroethylene Electrolyte Membrane and Nafion <u>Shin-ichi Sawada</u> ,Tetsuya Yamaki,Masaharu Asano,Akihiro Suzuki,Takayuki Terai,Yasunari Maekawa	4313
17:55	1Q20	Development of Organic Anode-active Polymers for Secondary	

Batteries
Kenichi Oyaizu, Wonsung Choi, Akihiko Hatemata, Hiroyuki Nishide... 4315

Thursday, September 25

Polymer materials for energy conversion

K. Oyaizu, presiding

- 9:10 2Q01 Preparation and Electrocatalytic Activity of Nafion®-Protected Au-Pt Bimetallic Nanoparticles
Takahiro Yoshimoto, Naoki Toshima, Hideo Naohara 4317
- 9:35 2Q02 Development of Metal/Polypyrrole Composite Fine Particles for Fuel Cell Catalysts
Hidenori Murata, Yasuhiro Kawai, Daisuke Mori, Makoto Yuasa 4319
- 10:00 2Q03 Enzymatic biofuel cell electrodes using conducting films of polythiophene derivatives as enzyme-immobilizing supports
Takashi Kuwahara, Mizuki Kondo, Masato Shimomura 4321

A. Konno, presiding

- 10:25 2Q04 Application of TEMPO-Substituted Redox Polymer for Aqueous Electrolyte-Type Secondary Battery
Kenichiroh Koshika, Naoki Sano, Kenich Oyaizu, Hiroyuki Nishide 4323
- 10:50 2Q05 Charge transfer process in radical polymer/carbon composite electrodes
Sunao Yoshihara, Hiroshi Isozumi, Masanori Kasai, Hisatomo Yonehara, Yuko Ando, Kenichi Oyaizu, Hiroyuki Nishide 4325
- 11:15 2Q06 Photophysical properties of deuterated tris(8-quinolinolato)aluminum in organic light emitting diodes
Keiji Noine, Yong-jin Pu, Ken-ichi Nakayama, Haruki Shimodaira, Takayuki Fujimoto, Junji Kido 4327
- 11:40 2Q07 Organic Radical Light-emitting diode: A new approach from photoinduced electron-transfer reaction and thermoluminescence
Hiroshi Ikeda, Hayato Namai, Yosuke Hoshi, Nobuyuki Kato, Yoshii Morishita, Kazuhiko Mizuno 4329

A. Furube, presiding

- 12:55 2Q08 Novel Thiazolothiazole Containing Conducting Polymers for OFETs
Itaru Osaka, Rui Zhang, Genevieve Sauve, Tomasz Kowalewski, Richard D. McCullough 4331
- 13:20 2Q09 Photocatalyst using Visible Light Responsive Organic p-n Junctions
Yuzuri Yasuda, Keiji Nagai, Takayoshi Norimatsu, Toshiyuki Abe 4333
- 13:45 2Q10 Fullerene hole carrier in polymer solar cells
Shunsuke Yamamoto, Jiamo Guo, Hideo Ohkita, Shinzaburo Ito 4335
- 14:10 2Q11 Synthesis of PEDOT/PSS Thin Film using Concentrated Polymer Brush and Its Application to Photovoltaic Device
Yuu Yoshioka, Takashi Morinaga, Kohji Ohno, Yoshinobu Tsujii, Takeshi Fukuda, Takashi Sagawa, Susumu Yoshikawa 4337

H. Ohkita, presiding

- 14:35 2Q12 Study of Charge Separation Dynamics in Organic Thin Film Solar Cell Materials Investigated by Transient Absorption Spectroscopy
Steffan Cook, Akihiro Furube, Ryuzi Katoh 4339
- 15:00 2Q13 Synthesis of all-conjugated diblock copolymer by living polymerization and observation of their micro-phase separation towards organic solar cell

15:25	2Q14	Yue Zhang, <u>Keisuke Tajima</u> ,Kazuhito Hashimoto.....	4341
		Synthesis of Completely Regioregular CN-PPV and investigation of its properties	
15:50	2Q15	<u>Shigeyoshi Sato</u> ,Keisuke Tajima,Kazuhito Hashimoto.....	4343
		Enhancement in thermal stability of the polymer photovoltaic cells by using cross-linkable polyhiophene	
		<u>Shoji Miyanishi</u> ,Keisuke Tajima,Kazuhito Hashimoto	4345
K. Tajima, presiding			
16:15	2Q16	Dynamics of Charge-Carrier Formation and Recombination in Polythiophene-Fullerene Organic Solar Cells	
		<u>Hideo Ohkita</u> ,Jiamo Guo,Hiroaki Benten,Shinzaburo Ito	4347
16:40	2Q17	Dye Modification of Donor-Acceptor Interface in Organic Solar Cells	
		<u>Satoshi Honda</u> ,Takahiro Nogami,Hideo Ohkita,Shinzaburo Ito	4349
17:05	2Q18	Application of electropolymerized polythiophene/fullerene composite films to organic thin film solar cell	
		Hayato Inui, <u>Yoshihiko Tezuka</u> ,Hitoshi Tanaka	4351

Friday, September 26

Polymer materials for energy conversion

S. Hayase, presiding			
9:10	3Q01	A Photoinduced Hydrogen Evolution System with an Antibody-Porphyrin Complex as a Photosensitizer	
		<u>Hiroyasu Yamaguchi</u> ,Takeshi Onji,Akira Harada,Akira Harada	4353
9:35	3Q02	Characteristics of nanoporous inorganic polymer semiconductor as a photoanode and its application to biophotochemical cell	
		<u>Masao Kaneko</u> ,Junichi Nemoto,Hirohito Ueno.....	4355
10:00	3Q03	Energy-storable Dye-sensitized Solar Cell - New Type Cell with Hybrid Electrode	
		<u>Hiroshi Segawa</u> ,Akira Ogawa,Yosuke Saito,Satoshi Uchida,Takaya Kubo	4357
10:25	3Q04	Charge Separating Reaction of Dendritic Macromolecules that Assist an Internal Photoelectric Effect	
		<u>Takane Imaoka</u> ,Naoki Inoue,Kimihisa Yamamoto	4359
H. Segawa, presiding			
10:50	3Q05	High efficiency dye-sensitized solar cells with hybrid structures - From the point of light harvesting and carrier collection-	
		<u>Shuzi Hayase</u> ,Fumi Inakazu,Takeshi Kougo,Yusuke Noma.....	4361
11:15	3Q06	R & D toward the high conversion efficiency on dye-sensitized solar cells	
		Masatoshi Yanagida,Kazuyuki Kasuga,Takashi Funaki,Nobuko Onozawa,Mitsuhiko Kurashige,Kazuhiro Sayama,Yuji Kawanishi, <u>Hideki Sugihara</u>	4363
11:40	3Q07	Highly Durable Modules of Dye-sensitized Solar Cell	
		<u>Takayuki Kitmaura</u>	4365
H. Sugihara, presiding			
12:55	3Q08	Improvement of ZnO solar cells sensitized by organic dyes	
		<u>Tsukasa Yoshida</u> ,Yosuke Himori,Keigo Ichinose,Kazumasa Funabiki,Masaki Matsui.....	4367
13:20	3Q09	Photoexcited carrier dynamics of semiconductor quantum dots and photovoltaic properties	

13:45	3Q10	<u>Taro Toyoda</u> , Qing Shen 4369 Characterization of Charge Recombination at a Semiconductor Quantum Dots/TiO ₂ Interface and Their Influence on Solar Cell Performance	
		<u>Yasuhiro Tachibana</u> , Kazuya Umekita, Keisuke Yoshimura, Susumu Kuwabata..... 4371	
		T. Yoshida, presiding	
14:10	3Q11	Correlation between charge recombination rate and structure of dyes in dye-sensitized solar cells	
		<u>Shogo Mori</u> , Masanori Miyashita, Kenji Sunahara, Nagatoshi Koumura, Kohjiro Hara 4373	
14:35	3Q12	The application of dye-sensitized solid-state solar cell using CuI to photorechargeable battery	
		<u>Akinori Konno</u> , Yuji Ohtsuka, Yusuke Hama 4375	

Room R

Wednesday, September 24

**Ultra-fine Nano- and Micro-Structures and Photonic and Electronic Properties of Novel
Organic, Polymeric, and Supramolecular Materials**

9:50	SO	Introductory Remarks	
		Hideyuki Nakano..... 4377	
		S. Nagano, presiding	
10:00	1R03	Micropatterning by laser direct writing technique	
		<u>Akira Watanabe</u> , Tokuji Miyashita..... 4378	
10:25	1R04	Fluorescence Characteristics of Organic Semiconductor Single Crystal Thin Films Equipped with Optical Microcavity.	
		<u>Yoichi Sakurai</u> , Kazuyuki Matsunaga, Tomoharu Miki, Fumio Hirato, Takesi Yamao, Shu Hotta, Hiroshi Jinnai 4380	
10:50	1R05	Fabrication of Diffractive Optical Elements within Polymers by Ultrashort Pulse Laser Irradiation	
		<u>Hiroyuki Mochizuki</u> , Wataru Watanabe, Rikuya Ezo, Takayuki Tamaki, Yasuyuki Ozeki, Kazuyoshi Itoh, Makoto Kasuya, Katsumi Matsuda, Satoshi Hirono..... 4382	
		A. Watanabe, presiding	
11:15	1R06IL	Femtosecond laser source for nano/micro-structuring and functionalization	
		<u>Hiroaki Misawa</u> 4384	
		T. Iyoda, presiding	
12:55	1R08	Hierarchical Structure Control of Helical Conjugated Polymers Synthesized in Chiral Liquid Crystal Reaction Field	
		<u>Munju Goh</u> , Mutsumasa Kyotani, Kazuo Akagi 4386	
13:20	1R09	Control of Helicity in Helical Polyacetylene Synthesised using Thermally Helical-Sense Controllable Liquid Crystal as Asymmetric Reaction Field	
		<u>Masaharu Yamamoto</u> , Munju Goh, Mutsumasa Kyotani, Kazuo Akagi.. 4388	
13:45	1R10	Synthesis of Liquid Crystalline di-Substituted Polyacetylene Derivatives with Blue-Light Emission	

		<u>Benedict San Jose</u> , Satoshi Matsushita, Yasuyuki Moroishi, Kazuo Akagi.....	4390
		S. Nagano, presiding	
14:10	1R11	Thermal phase transition behavior of the micro-phase separation structures in the block copolymer nanoparticles <u>Takeshi Higuchi</u> , Kiwamu Motoyoshi, Hiroshi Yabu, Masatsugu Shimomura	4392
14:35	1R12	Fabrication of Out-of-Plane Anisotropic Nanostructured Electrode with Block Copolymer Template <u>Hideaki Komiyama</u> , Ryoko Watanabe, Tomokazu Iyoda, Kaori Kamata .	4394
15:00	1R13	Metallic Nanopillar Array Templated by PEO Nanocylindrical Structure in Liquid Crystalline Block Copolymer Thin Film <u>Kaori Kamata</u> , Soichiro Suzuki, Hideaki Komiyama, Tomokazu Iyoda...	4396
		H. YABU, presiding	
15:25	1R14	Optical alignment of microphase separation in liquid crystalline block copolymers <u>Yusuke Koizuka</u> , Yuichi Morikawa, Shusaku Nagano, Takahiro Seki....	4398
15:50	1R15	Inversed Surface Micelle Formation via Block Copolymer Monolayer Hybridized with Low-Molecular-Weight Amphiphile, and Formation of Metal Patterns <u>Tetsuay Kinumatsu</u> , Syusaku Nagano, Takahiro Seki.....	4400
16:15	1R16	NIL mold manufacturing using self-organized diblock copolymer as patterning template <u>Naoko Kihara</u> , Hiroyuki Hieda, Katsuyuki Naito	4402
		A. Takahara, presiding	
16:40	1R17	Self assembly of colloidal particles on a nanostructured template coated with polyelectrolyte multilayers <u>Yong Hoon Kim</u> , Paula T. Hammond.....	4404
17:05	1R18	Fabrication of Micro- and Nano-pattern with Function by Doping of Dye Vapor into Polymer Films <u>Toshiko Mizokuro</u> , Nobutaka Tanigaki, Takashi Hiraga	4406
		K. Kamata, presiding	
17:30	1R19	A nano-imprinting technique by core-shell particles for surface nano-indentation. <u>Hideaki Watanabe</u> , Keiji Fujimoto.....	4408
17:55	1R20	Nanoimprinting of Nano-structure on Poly(fluoroalkyl acrylate) Thin Films Kohji Honda, Masamichi Morita, <u>Atsushi Takahara</u>	4410

Thursday, September 25

Ultra-fine Nano- and Micro-Structures and Photonic and Electronic Properties of Novel Organic, Polymeric, and Supramolecular Materials

		H. Okamura, presiding	
9:10	2R01	Development of resist for bio-chip using thermo-responsive polymer <u>Yoshiyuki Yokoyama</u> , Satoshi Fujiki, Katsumi Tanino, Yuzuru Takamura, Eiichi Tamiya	4412
9:35	2R02	Development of high-performance reaction development patterning by applying chemical amplification <u>Xu Cheng</u> , Akio Takahashi, Toshiyuki Oyama	4414

10:00	2R03	Lyophobic-Lyophilic Patterning with Fluorine Lyophobic Resist <u>Masamichi Morita</u> , Mayumi Miyazaki, Takuji Ishikawa, Takashi Kanemura, Tsuneo Yamashita, Ikuo Yamamoto	4416
A. Takahashi, presiding			
10:25	2R04	Positive tone photo-sensitive polyimide based from activated ester terminated poly(amic acid) <u>Masao Tomikawa</u> , Naoyo Okamoto, Satoshi Yoshida	4418
10:50	2R05	High Resolution Resist for Screen Printing <u>Haruyuki Okamura</u> , Minoru Kainoki, Kohei Takada, Hideyuki Nakajiri, Keiko Muramatsu, Munenori Yamashita, Masamitsu Shirai ...	4420
S. Seki, presiding			
11:15	2R06IL	Low Molecular-weight Amorphous Resists <u>Mitsuru Ueda</u>	4422
E. Yashima, presiding			
12:55	2R08	Construction and Properties of One-Dimensional Supramolecular Assembly of Dehydro[12]annulene <u>Ichiro Hisaki</u> , Yuu Sakamoto, Hajime Shigwimitsu, Hirofumi Senga, Norimitsu Tohnai, Mikiji Miyata	4425
13:20	2R09	Synthesis of Insulated Molecular Wires by Polymerization of [1]Rotaxane Monomers and Its Applications <u>Jun Terao</u> , Susumu Tsuda, Yuuji Tanaka, Nobuaki Kambe	4427
13:45	2R10	Preparation and Characteristic Control of Conducting Polymer Wire/Metal Oxide Hybrid Interface <u>Yasuhiro Tachibana</u> , Satoshi Makuta, Kazuya Umekita, Yasuhide Otsuka, Jun Terao, Susumu Tsuda, Nobuaki Kambe, Susumu Kuwabata	4429
T. Miyashita, presiding			
14:10	2R11	Formation of Inclusion Complexes of Amylose derivatives with Polyaniline and Evaluation of Their Conductivity <u>Suguru Nakano</u> , Toshiyuki Kida, Akinori Saeki, Shuhei Seki, Seiichi Tagawa, Mitsuru Akashi	4431
14:35	2R12	Synthesis of a Luminescent Amylose?Poly(phenylenevinylene) Composite and Its Chemical Modification through Macromolecular Reaction <u>Kazumi Tamura</u> , Katsuhiko Maeda, Yoshio Furusho, Eiji Yashima	4433
15:00	2R13	Sugar Nanowires Based on Cyclodextrin Prepared by Single Particle Nano-fabrication Technique <u>Shogo Watanabe</u> , Shu Seki, Masaki Sugimoto	4435
J. Terao, presiding			
15:25	2R14	Electric Properties of Assembled π Conjugated Nanomaterials Using a Liquid-Liquid Interface <u>Toshiaki Shibata</u> , Jun Matsui, Takahiro Yokoyama, Akito Masuhara, Hitoshi Kasai, Hidetoshi Oikawa, Tokuji Miyashita	4437
15:50	2R15	Effect of Solvent on PEDOT/PSS Nanometer-Scaled Thin Films <u>Hu Yan</u> , Hidenori Okuzaki	4439
Y. Tachibana, presiding			
16:15	2R16	Fabrication and Structure Analysis of Melt-Molding Films Made of Highly-Pure Thiophene/Phenylene Co-Oligomers <u>Takuya Sakaguchi</u> , Keiichiro Juri, Takeshi Yamao, Shu Hotta	4441
16:40	2R17	Field Effect Transistors of Conjugated polymers prepared by Evaporative Spray Deposition using Ultra-dilute Solution(ESDUS) <u>Koji Sagane</u> , Tetsuya Yamamoto, Masato Shakutsui, Katsuhiko Fujita	

		4443
17:05	2R18	Electrochromic property and making solid devices with Organic-Metallic Hybrid Polymers <u>Yumeno Akasaka</u> , Masayoshi Higuchi, Taichi Ikeda, Dirk Kurth	4445

Friday, September 26

Ultra-fine Nano- and Micro-Structures and Photonic and Electronic Properties of Novel Organic, Polymeric, and Supramolecular Materials

A. Saeki, presiding

9:35	3R02	Development of photodeformable azotolane liquid crystals <u>Kunihiko Okano</u> , Makoto Shinohara, Takashi Yamashita	4447
10:00	3R03	Photoinduced Surface Relief Grating Formation on a (100) Surface of a Single Crystal of 4-(Dimethylamino)azobenzene <u>Hideyuki Nakano</u>	4449
10:25	3R04	Photoinduced Surface Relief Formations without Azobenzene <u>Takashi Ubukata</u> , Koji Takahashi, Shuro Yamaguchi, Yusuke Moriya, Shohei Fujii, Yasushi Yokoyama	4451
10:50	3R05	Microfabrication of polymer films using patterned light <u>Yusuke Moriya</u> , Takashi Ubukata, Yasushi Yokoyama	4453

T. Ubukata, presiding

11:15	3R06	Carbonization of honeycomb-patterned hyperbranched poly(phenylenevinylene) film. <u>Hiroataka Ejima</u> , Tadahisa Iwata, Naoko Yoshie.....	4455
11:40	3R07	Structure control of honeycomb-patterned film prepared by using amphiphilic copolymers <u>Miki Kojima</u> , Yuji Hirai, Hiroshi Yabu, Masatsugu Shimomura.....	4457

M. Funahashi, presiding

12:55	3R08	Photon Antibunching Behavior of Isolated Conjugated Polymer chains <u>Sadahiro Masuo</u> , Tomoya Tanaka, Shinjiro Machida, Akira Itaya	4459
13:20	3R09	Charge Carrier Dynamics in Rubrene Single Crystal <u>Akinori Saeki</u> , Shu Seki, Taishi Takenobu, Yoshihiro Iwasa, Seiichi Tagawa.....	4461
13:45	3R10	Ambipolar charge transport properties in fullerene?hexabenzocoronene coaxial nanotube <u>Yohei Yamamoto</u> , Takanori Fukushima, Guanxin Zhang, Wusong Jin, Noriyuki Ishii, Akinori Saeki, Shu Seki, Seiichi Tagawa, Takeo Minari, Kazuhito Tsukagoshi, Takuzo Aida.....	4463

H. Nakano, presiding

14:10	3R11	Self-Assembly of A Chiral Donor-Acceptor Amphiphilic Dyad For Molecular Design of Photoconducting Materials <u>Yumi Hizume</u> , Richard Charvet, Kentaro Tashiro, Yohei Yamamoto, Akinori Saeki, Shu Seki, Takuzo Aida	4465
14:35	3R12	Nematic Liquid Crystal Alignment on Surface Microwrinkles <u>Takuya Ohzono</u> , Hirosato Monobe, Yo Shimizu	4467

Room S

Wednesday, September 24

Nano world opened up through photonics

9:50	SO	Introductory Remarks Shu Hotta, Naoto Tsutsumi.....	4505
S. Hotta, presiding			
10:00	1S03	Optical nonlinearity of polaron states in conjugated polymers <u>Hideo Kishida</u> , Kenichi Hibino, Arao Nakamura.....	4506
10:25	1S04	Improvement of resolution in two photon initiated polymerization by use of wave-front controlled laser. <u>Kohei Toyoda</u> , Keisuke Chujo, Kenro Totani, Takasige Omatu, Tosiya Watanabe	4508
10:50	1S05	Plasmonic Metamaterials <u>Takuo Tanaka</u> , <u>Nobuyuki Takeyasu</u>	4510
A. Fujii, presiding			
11:15	1S06	Surface potential imaging of light-controlled donor-acceptor spatial distribution in organic photovoltaic devices <u>Tetsuya Aoyama</u> , Satoshi Watanabe, Yasumasa Fukuchi, Takafumi Sassa, Kowashi Watanabe, Takashi Yamashita, Mutsuyoshi Matsumoto, Tatsuo Wada.....	4512
11:40	1S07	Enhancement of Outcoupling Efficiency and Expansion of Fluorescent Angular Distributions of Highly Fluorescent Polyimides by Electro spray Deposition <u>Kosaku Sakai</u> , Shinji Ando, Hidetoshi Matsumoto, Akihiko Tanioka.....	4514
S. Yokoyama, presiding			
12:55	1S08	Photo-pumped laser devices based on photopolymerizable cholesteric liquid crystals <u>Hiroyuki Yoshida</u> , Takuya Isomura, Yo Inoue, Akihiko Fujii, Masanori Ozaki	4516
13:20	1S09	Pinning Effect on the Surface of Three Dimensional Structure on Appearance of Cholesteric Blue Phases <u>Masayoshi Ojima</u> , Takeshi Noma, Hiroaki Asagi, Akihiko Fujii, Masanori Ozaki, Hirotsugu Kikuchi.....	4518
13:45	1S10	Ag nanocubes assembly into dimeric structure <u>Nobuyuki Zettsu</u> , Shuhei Uchida, Munehisa Mitani	4520
O. Sugihara, presiding			
14:10	1S11IL	Organic Transistor Evolves <u>Yoshihiro Iwasa</u>	4522
T. Watanabe, presiding			
15:00	1S13	Systematic study of electro-optic polymers doped with TCF-based chromophores <u>Xianqing Piao</u> , Kouji Murata, Shin-ichiro Inoue, Shiyoshi Yokoyama, Hideki Miki, Isao Aoki, Akira Otomo, Hidehisa Tazawa	4525
15:25	1S14	Development and optical device application of ultrafast photoresponsive polymer materials in near-infra-red region <u>Ryuji Matsumoto</u> , Tatsuaki Inoue, Daisuke Tomita, Toshihiko Nagamura	4527
15:50	1S15	Fabrication of Photonic Crystals and Introduction of Optical Defects <u>Kensuke Sasaki</u> , Shin-ichiro Inoue, Shiyoshi Yokoyama.....	4529
16:15	1S16	Organic Dye Laser <u>Takashi Ishibashi</u> , Wataru Sakai, Naoto Tsutsumi	4531
N. Tsutsumi, presiding			
16:40	1S17	A Laser Resonator Fabricated with an Ultra-High-Molecular-Weight	

		Block Copolymer - Grain Size and Morphology Dependence of Lasing Efficiency <u>Naoki Shiba</u> ,Koji Sumi,Takahiko Yamanaka,Shigeru Okamoto,Naoki Sakamoto,Hirokazu Hasegawa,Naokiyo Koshikawa... 4533
17:05	1S18	Organic single-crystal light-emitting transistors <u>Taishi Takenobu</u> ,Satria Bisri,Yohei Yomogida,Takeshi Yamao,Shu Hotta,Masayuki Yahiro,Chihaya Adachi,Yoshihiro Iwasa..... 4535
17:30	1S19	Ring laser emission of conjugated polymer composite with high luminescent and conductive properties <u>Akihiko Fujii</u> ,Masahiko Watanabe,Naoyuki Yamasaki,Kimihiro Masuyama,Masanori Ozaki 4537
17:55	1S20	Optical properties of inorganic nanoparticles dispersed hybrid polymers II <u>Yu Kurata</u> ,Kyoji Komatsu,Okihiko Sugihara,Toshikuni Kaino,Nobuyuki Kambe..... 4539

Thursday, September 25

Nano world opened up through photonics

T. Aoyama, presiding

9:10	2S01	Optical Constant Determination of Organic Semiconducting Crystals by Laser Spectroscopy <u>Yuki Okuda</u> ,Kazunori Yamamoto,Takeshi Yamao,Shu Hotta 4541
9:35	2S02	Laser Spectroscopy of Oligomer Crystals with Periodically Formed Optical Gain <u>Takeshi Inoue</u> ,Takashi Ishibashi,Takeshi Yamao,Shu Hotta,Wataru Sakai,Naoto Tsutsumi 4543
10:00	2S03	Photoluminescence from Organically-stabilized Silicon Quantum Dot <u>Naoto Shirahata</u> ,Tohru Tsuruoka,Tsuyoshi Hasegawa,Yoshio Sakka 4545

The forefront of polymer structure science explored by synchrotron radiation

10:40	SO	Introductory Remarks Kazuo Sakurai, Sono Sasaki..... 3394
		M. Takenaka, presiding
10:50	2S05	Establishment of Synchrotron Grazing-incidence Small-angle and Wide-angle X-ray Scattering Experimental Method for Polymeric Materials in SPring-8 <u>Sono Sasaki</u> ,Hiroyasu Masunaga,Kazuki Ito,Masaki Takata,Katsuaki Inoue,Naoto Yagi,Hiroshi Okuda,Atsushi Takahara 3395
11:15	2S06	Molecular Aggregation States of Surface-initiated Poly(2-(perfluorooctyl)ethyl acrylate) Thin Films by Grazing Incidence X-ray Diffraction <u>Hiroki Yamaguchi</u> ,Koji Honda,Motoyasu Kobayashi,Masamichi Morita,Hiroyasu Masunaga,Osami Sakata,Sono Sasaki,Masaki Takata,Atsushi Takahara 3397
11:40	2S07	Self-assembly behavior and nanostructure of the monolayer of a cationic amphiphilic diblock copolymer on the air/water interface

		<u>Tasuku Yamada</u> ,Yoshiko Suetomi,Ploysai Kaewsaiha,Hideki Matsuoka.....	3399
		K. Tashiro, presiding	
12:55	2S08IL	Advanced Structural Materials Science Developed by Ultra Stable Photon Source, SPring-8 <u>Masaki Takata</u>	3401
13:45	2S10	Small-Angle and Ultra-Small-Angle X-ray Scattering Study using Synchrotron Radiation on Polymer Fibers <u>Hiroki Murase</u> ,Yasunori Fukushima,Kenichi Funaki,Kouichi Hirao,Yasumasa Morimoto,Yasuo Ohta,Masaru Kotera,Mikihito Takenaka,Masugu Sato,Takeji Hashimoto	3404
14:10	2S11	Investigation on dynamics of nano-particles in rubber with X-ray Photon Correlation Spectroscopy <u>Yuya Shinohara</u> ,Hiroyuki Kishimoto,Naoto Yagi,Yoshiyuki Amemiya	3406
14:35	2S12	The study of filler dispersion in rubber by Ultra Small X-ray Scattering <u>Shotaro Nishitsuji</u> ,Mikihito Takenaka,Naoya Amino,Yasuhiro Ishikawa	3408
		Y. Shinohara, presiding	
15:00	2S13	X-ray study on structure of nano oriented crystals of iPP crystallized under large strain rate <u>Kiyoka Okada</u> ,Kaori Watanabe,Akihiko Toda,Sono Sasaki,Hiroyasu Masunaga,Masamichi Hikosaka	3410
15:25	2S14	Crystallization process of poly-esters under shear flow <u>Hiroshi Tomohisa</u> ,Go Matsuba,Kouji Nishida,Toshiji Kanaya.....	3412
15:50	2S15	Synchrotron WAXD/SAXS Simultaneous Measurement of Structure Changes in Crystal Lattice and Higher-Order System during the Necking Phenomenon of Polymers <u>Kohji Tashiro</u> ,Shinichi Takeda,Makoto Hanesaka,Hiroyasu Masunaga,Sono Sasaki,Kazuki Itoh,Masaki Takata.....	3414
		T. Shiomi, presiding	
16:15	2S16	Phase Transition Behavior of a Series of Polyethylene-Poly(ethylene Oxide) Diblock Copolymers Studied by Simultaneous Synchrotron WAXD/SAXS Measurements <u>Weiyu Cao</u> ,Kohji Tashiro,Makoto Hanesaka,Hiroyasu Masunaga,Sono Sasaki,Masaki Takata.....	3416
16:40	2S17	First and second hydration water molecules of collagen-helix based on single crystal analyses at high resolution <u>Kenji Okuyama</u>	3418
17:05	2S18	Structure Analysis of Polymer Crystal Based on Wide-Angle X-ray Diffraction Data by Utilizing High-energy Synchrotron X-ray Beam <u>Kohji Tashiro</u> ,Makoto Hanesaka,Tomoji Ozeki	3420

Friday, September 26

The forefront of polymer structure science explored by synchrotron radiation

		K. Sakurai, presiding	
9:10	3S01	Solution structure analysis of amylose tris(<i>n</i> -butylcarbamate) in various alcohols <u>Ken Terao</u> ,Yuichi Sano,Shinichi Kitamura,Takashi Norisuye	3422

9:35	3S02	Dilute solution properties of amylose phenylcarbamates in solution <u>Maiko Tsuda</u> , Ken Terao, Shinichi Kitamura, Takashi Noriyasu 3424	3424
10:00	3S03	Structure formation in side-chain liquid crystalline block copolymers <u>Hiroki Takeshita</u> , Shin-ichi Taniguchi, Noriaki Okumura, Masamitsu Miya, Katsuhiko Takenaka, Tomoo Shiomi 3426	3426
10:25	3S04	Development of Size Exclusion Chromatography coupled with Small Angle X-ray Scattering (SEC-SAXS) by using high flux beamline BL-40XU in SPring-8 <u>Makoto Takemasa</u> , Yoshiaki Yuguchi, Shinichi Kitamura 3428	3428
S. Sasaki, presiding			
10:50	3S05	Time-Resolved Small-Angle X-ray Scattering Studies on Spontaneous Perpendicular Orientation of Cylinders in a Block Copolymer Film <u>Shinichi Sakurai</u> , Takuma Shimojima, Hiroki Yamanishi, Junji Fukuhara, Hidekazu Yoshida, Katsuhiko Yamamoto, Shigetaka Shimada 3430	3430
11:15	3S06	Gelation Processes of PNIPAM gel <u>Mikihito Takenaka</u> , Naoki Iwase, Shotaro Nishitsuji, Kazuki Ito 3432	3432
11:40	3S07	Investigation of Diffusion and Re-orientation in Iodine/Nylon 6 Complex [VI] - Influence on Initial Stage of Complex by Water. <u>Akio Kawaguchi</u> , Naoki Tsurutani 3434	3434
12:55	3S08	Studies of microphase-separated structure in block copolymer by SAXS and TEMT <u>Ken-ichi Niihara</u> , Hidekazu Sugimori, Hiroshi Jinnai, Hiroyasu Masunaga, Sono Sasaki, Katsuji Yagi, Taihyun Chang 3436	3436
13:20	3S09	Analysis of Biodegradable Polyester Fibers by X-ray Tomography with Synchrotron Radiation <u>Toshihisa Tanaka</u> , Kentaro Uesugi, Akihisa Takeuchi, Yoshio Suzuki, Tadahisa Iwata 3438	3438
S. Sakurai, presiding			
13:45	3S10	Observation with SAXS of nano-inhomogeneous structure in MMA/BzMA random copolymers - Comparison with results of PHB and low-frequency Raman spectroscopy <u>Kazuyuki Horie</u> , A. Wypych, J. Ulanski 3440	3440
14:10	3S11	Complex Phase Behavior of PB-b-PCL/PB blend near Lamella-Gyroid Phase Boundary <u>Hideaki Takagi</u> , Katsuhiko Yamamoto, Shigeru Okamoto, Shinichi Sakurai 3442	3442
14:35	3S12	Characteristic scattering curves observed during heating process of crystalline-amorphous diblock copolymers <u>Keiko Tonami</u> , Tomoki Higa, Shuichi Nojima, Yasuo Tsunogae 3444	3444
15:00	3S13	Time-resolved small-angle X-ray scattering investigation of the phase transitions between two bicontinuous cubic phases in thermotropic LC system <u>Hiroyuki Mori</u> , Shoichi Kutsumizu, Kazuya Saito, Katsuhiko Yamamoto 3446	3446
15:25	3S14	Supramolecular structure of the ionic complexes made from cationic lipids and DNA <u>Kazuo Sakurai</u> , Hiroyasu Masunaga, Tomoki Nishimura, Mina Sakuragi 3448	3448

Room T

Wednesday, September 24

Science and Technology of Gel-Based Materials

9:50	SO	Introductory Remarks Kenji Urayama, Takashi Aoki	4547
K. Urayama, presiding			
10:00	1T03	SANS study on hierarchical structures of swollen rubber <u>Mikihito Takenaka</u> , Shotaro Nishitsuji, Naoya Amino, Yasuhiro Ishikawa, Daisuke Yamaguchi, Satoshi Koizumi.....	4548
10:25	1T04	Sturcute analysis of a high-strength hydrogel with ideally homogeneous network structure from tetrahedron-like macromonomers <u>Takuro Matsunaga</u> , Takamasa Sakai, Hitoshi Endo, Ung-li Chung, Mitsuhiko Shibayama.....	4550
S. Koizumi, presiding			
10:50	1T05	Organic/inorganic network structure of nanocomposite gels <u>Yingjia Xu</u> , Kazutoshi Haraguchi.....	4552
11:15	1T06	The origin of lamellar structure in gellan gum gels <u>Yuji Jinbo</u> , Koshi Sato, Satoshi Hayasaka, Yoshinobu Izumi	4554
11:40	1T07	Gelation mechanism, gel structure and physical properties of Inulin semi-dilute solutions <u>Shingo Matsukawa</u> , Moriko Inaba, Yasuhiko Tomono, Tadashi Wada...	4556
M. Shibayama, presiding			
12:55	1T08	Comparison of cluster size observed by SANS and DSC measurements for the solvent in stereoregular polypropylene gel. <u>Narumi Fujiwara</u> , Takahiko Nakaoki, Kazuko Inoue, Satoshi Koizumi, Daisuke Yamaguchi.....	4558
13:20	1T09	Cluster size of solvent in polylactide gel and formation of porous material Tsunehiko Nakasugi, <u>Takahiko Nakaoki</u>	4560
13:45	1T10	High Water Absorption of Microbial Cellulose Gel - Hierarchical Structure and Water Distribution Determined by Ultra-Small Angle Neutron Scattering <u>Satoshi Koizumi</u> , Yoko Tomita, Yue Zhao, Hiroki Iwase, Daisuke Yamaguchi, Tetsuo Kondo, Takeji Hashimoto, Tomomi Masui	4562
14:10	1T11	Study on the Microscopic Structure of Telechelic Hydrophobically Modified Poly(N-isopropylacrylamide) in Water <u>Taisuke Fujimoto</u> , Masahiko Annaka, Françoise Winnik.....	4564
M. Takenaka, presiding			
14:35	1T12	Sliding Behavior of Cyclic Molecules in Polyrotaxane and Slide-Ring Gel <u>Koichi Mayumi</u> , Michihiro Nagao, Noboru Osaka, Hitoshi Endo, Yasuhiro Sakai, Mitsuhiko Shibayama, Kohzo Ito	4566
15:00	1T13	Mechanical Properties of Slide-Ring Gels Revealed by Various Deformation Modes Norio Akuzawa, Naoki Murata, <u>Kenji Urayama</u> , Toshikazu Takigawa, Masatoshi Kidowaki, Kohzo Ito	4568

15:25	1T14	The effect of a solvent on the stress growth behavior for an associated thickener <u>Isamu Kaneda</u> , Tsuyoshi Koga, Fumihiko Tanaka 4570	4570
S. Matsukawa, presiding			
15:50	1T15	Design and fabrication of the homogeneous hydrogel with high mechanical properties - Network size-dependence of mechanical properties <u>Takamasa Sakai</u> , Takuro Matsunaga, Yuki Akagi, Manami Kurakazu, Mitsuhiro Shibayama, Ung-il Chung 4572	4572
16:15	1T16	Creation of Hydrogels with Ultra High Mechanical Strength [XIX]: The effect of water content <u>Hiroko Itagaki</u> , Takayuki Kurokawa, Hidemitsu Furukawa, Yoshimi Tanaka, Jian Ping Gong, Yukiteru Katsumoto 4574	4574
16:40	1T17	Quick preparation of free-form DN gels with high strength <u>Shinya Kuroda</u> , Takayuki Kurokawa, Hidemitsu Furukawa, Yoshimi Tanaka, Jian Ping Gong 4576	4576
H. Furukawa, presiding			
17:05	1T18	Influence of Particles Alignment on Magnetorheological Effect of Magnetic Gels Yuhei Kosugi, <u>Tetsu Mitsumata</u> 4578	4578
17:30	1T19	Effect of addition of low molecular weight substances on the synergistic interaction between xyloglucan and xanthan <u>Bo-sook Kim</u> , Makoto Takemasa, Katsuyoshi Nishinari 4580	4580
17:55	1T20	The Analysis of the Condensation Transition of Plasmid DNA Induced by Block Copolymers <u>Hiroki Oshima</u> , Daigo Kobayashi, Weidong Li, Tomonori Shiotani, Manabu Enoki, Kensuke Osada, Yuichi Yamasaki, Kazunori Kataoka 4582	4582

Thursday, September 25

Science and Technology of Gel-Based Materials

K. Sada, presiding			
9:10	2T01	Control of amyloid fibril formation and gelation of ovalbumin <u>Yurika Noguchi</u> , Nobuyuki Takahashi, Tetsuya Hasegawa, Takashi Morii, Syota Tominaga, Shigeru Kunugi, Naoki Tanaka 4584	4584
9:35	2T02	Specific adsorption of metal ions to novel sugar-chain gels with an unbalanced charge ratio <u>Maiko Okajima</u> , Shinji Myasato, Shin'ichiro Kaneko, Takeshi Fukase, Takeshi Bamba, Kazumasa Hirata, Shin'ichiro Kajiyama, Eiichiro Fukusaki, Tatsuo Kaneko 4586	4586
10:00	2T03	Preparation of robust gelling materials from carrageenans as well as their composites with cellulose using an ionic liquid <u>Kamlesh Prasad</u> , Jun-ichi Kadokawa, Yoshiro Kaneko 4588	4588
10:25	2T04	Development of new gelators derived from cyclic dipeptide for cosmetics and their evaluation <u>Hiroko Hoshizawa</u> , Masahiro Suzuki, Kenji Hanabusa 4590	4590
H. Okuzaki, presiding			
10:50	2T05	Development of nanocomposite hydrogels for medical devices <u>Toru Takehisa</u> , Kazutoshi Haraguchi, Toshihide Mizuno, Eisuke Tatsumi, Yoshiyuki Tenaka 4592	4592

11:15	2T06	Application of enantiomeric mixture of multi-arms PEG-PLA star-shaped triblock copolymers exhibiting temperature-responsive sol-to-gel transition for injectable drug delivery system <u>Kanae Fujiura</u> , Kouji Nagahama, Tatsuhiro Ouchi, Yuichi Ohya..... 4594	4594
11:40	2T07	Regulation of target gene expression in opportunistic pathogens using autoinducer recognition gel <u>Norihiro Kato</u> , Tsukasa Ikeda, Tomohiro Morohoshi, Yu Ozonoe, Hiroshi Motohashi, Azumi Kobayashi..... 4596	4596
R. Yoshida, presiding			
12:55	2T08	Stimuli-responsive polymers and gels with LCST-type phase behavior in ionic liquids <u>Ayuko Yamaguchi</u> , Junji Sakamoto, Koichi Kodama, Naoki Ito, Takeshi Ueki, Masayoshi Watanabe 4598	4598
13:20	2T09	Ion gels based on colloidal self-assembly in an ionic liquid <u>Aya Inaba</u> , Kazuhide Ueno, Yuta Sano, Takeshi Ueki, Masayoshi Watanabe..... 4600	4600
13:45	2T10	Discontinuous swelling behavior of lipophilic polyelectrolyte gels in organic solvents <u>Toshikazu Ono</u> , Seiji Shinkai, Kazuki Sada 4602	4602
14:10	2T11	Molecular Design of Anion-Responsive Polymer Gels Krishnamurthi Janakiraman, Toshikazu Ono, Seiji Shinkai, <u>Kazuki Sada</u> 4604	4604
T. Kaneko, presiding			
14:35	2T12	Effect of Ionic Liquid on Response for Actuators using Carbon Nanotube-Ionic Liquid Gels <u>Naohiro Terasawa</u> , Ichiroh Takeuchi, Ken Mukai, Hajime Matsumoto, Kinji Asaka 4606	4606
15:00	2T13	Relation between equivalent circuit and response property of actuator using nano-carbon/ionic liquid gel electrodes <u>Ichiroh Takeuchi</u> , Kinji Asaka, Naohiro Terasawa, Takushi Sugino, Kenji Kiyohara, Ken Mukai, Soushi Shiraishi, Takanori Fukushima, Takuzou Aida 4608	4608
15:25	2T14	Development and Performance of Chemical Actuators (V): Effects of the Relative Humidities and Driving Waveforms on the Bending Performance of Composite Electrodes based on Perfluorosulfonic Acid Polymer <u>Eiichi Shoji</u> , Daisuke Hirayama..... 4610	4610
M. Watanabe, presiding			
15:50	2T15	Thermo-responsive Properties of PNIPAM Nanofiber Gels Fabricated by Electrospinning <u>Keiko Kobayashi</u> , Hu Yan, Hidenori Okuzaki 4612	4612
16:15	2T16	Bending control of thermoresponsive gradient gels <u>Taka-aki Asoh</u> , Michiya Matsusaki, Mitsuru Akashi 4614	4614
16:40	2T17	Design of novel micro-conveyer using peristaltic motion of self-oscillating gel <u>Yoko Murase</u> , Reiji Takeshima, Shingo Maeda, Shuji Hashimoto, Ryo Yoshida 4616	4616

Friday, September 26

Science and Technology of Gel-Based Materials

T. Aoyagi, presiding

9:10	3T01	Decananometer structure of the aerogel capsule and its application in laser fusion target <u>Han Yang, Keiji Nagai, Mitsuo Nakai, Takayoshi Norimatsu</u> 4618	4618
9:35	3T02	Synthesis and Application of Size-Controlled Gold Nanoparticles within Multi Stimuli-Responsive Nanogel-Reactors <u>Takahito Nakamura, Motoi Oishi, Yukio Nagasaki</u> 4620	4620
10:00	3T03	Preparation and functionalization of gel particles with a hollow structure. <u>Yuko Kiridoshi, Keiji Fujimoto</u> 4622	4622
10:25	3T04	Preparation of Hollow Hydrogel Particles with Thermosensitivity <u>Hidenobu Shimizu, Atsuko Mitsugi, Risei Wada, Masaru Okabe</u> 4624	4624
M. Okabe, presiding			
10:50	3T05	Composite microgel with multiple stimuli-responsiveness <u>Haruma Kawaguchi, Shintaro Hattori, Yu Horie</u> 4626	4626
11:15	3T06	Design of self-assembled nanogels by thermo-responsive polymer grafted polysaccharides <u>Nobuyuki Morimoto, Françoise M. Winnik, Kazunari Akiyoshi</u> 4628	4628
11:40	3T07	Phase Separation Behavior of Binary Stimuli-Responsive Polymers System Inducing Coacervation and Preparation of Semi-IPN Microgel <u>Tomohiro Maeda, Yusuke Akasaki, Kazuya Yamamoto, Takao Aoyagi</u> ... 4630	4630
T. Aoki, presiding			
12:55	3T08	Preparation of molecule-responsive gel films on surface plasmon resonance sensor chips and their responsive signal changes <u>Hiroki Isobe, Kouji Tasaka, Takashi Miyata, Tadashi Uragami</u> 4632	4632
13:20	3T09	Block cationic polyplexes encapsulating dendrimer-based photosensitizers with disulfide cross-linking <u>Michiaki Kumagai, Yu Cheng, Souta Horie, Shigeto Fukushima, Stephanie Herlambang, Woo-dong Jang, Nobuhiro Nishiyama, Kazunori Kataoka</u> 4634	4634
13:45	3T10	Synthesis and Anisotropic Volume Phase Transition Behavior of Inorganic Nanosheet Liquid Crystal - poly(N-isopropylacrylamide) hybrid gel - <u>Nobuyoshi Miyamoto, Morio Shintate, Ryuhei Motokawa</u> 4636	4636
T. Miyata, presiding			
14:10	3T11	Swelling behavior of PVA gel film prepared by Cast-drying method <u>Emko Otsuka, Mayo Eda, Kyosuke Takane, Atsushi Suzuki</u> 4638	4638
14:35	3T12	Thermo-responsive properties of chiral polymers, poly[(N-1-hydroxymethyl)propyl methacrylamides] (PHMPMAs), with hydroxyl groups of side chains <u>Sachiko Tsuda, Takashi Aoki</u> 4640	4640
15:00	3T13	Synthesis of Stimuli-Responsive Polymers with Various Sequences and Design of Their Programmable Self-Assemblies <u>Yukari Oda, Shokyoku Kanaoka, Sadahito Aoshima</u> 4642	4642
15:25	3T14	Physical hydrogel formation of amphoteric biopolymer with myristoyl side chain in water. <u>Keisuke Fukushima, Takashi Tsujimoto, Hiroshi Uyama, Haruyoshi Seino, Kazuhiko Hamada, Tadao Okuma</u> 4644	4644

Room U

Wednesday, September 24

Biomolecular Chemistry; Tailor Made Biopolymers

9:50	SO	Introductory Remarks Takehiko Wada, Yoshiko Miura	4792
		T. Niidome, presiding	
10:00	1U03	Molecular Communication by employing Tailor-made Artificial Cell Membranes <u>Jun-ichi Kikuchi</u> , Masaru Mukai, Zhong-hua Wang, Takahiro Ishikawa, Satoshi Hiyama, Yuki Moritani, Tatsuya Suda	4793
10:25	1U04	Design and evaluation of artificial extracellular matrix conjugated laminin <u>Sachiro Kakinoki</u> , Kaori Hiraku, Tetsuji Yamaoka	4795
10:50	1U05	Mixed peptide-chitosan membranes as a tailor-made biomaterial <u>Chikara Fujimori</u> , Dai Otagiri, Kentaro Hozumi, Yamato Kikkawa, Motoyoshi Nomizu	4797
11:15	1U06	Peptidic biomaterial containing β -sheet structure <u>Yoshiaki Hirano</u> , Naoki Nishishita, Masahito Oka, Mitsuhiro Miyazawa	4799
		Y. Hirano, presiding	
11:40	1U07	Design and functional analyses of peptides that bind to sialic acid-containing oligosaccharides on cell surface <u>Teruhiko Matsubara</u> , Miki Yamashita, Hanae Nodono, Toshinori Sato..	4801
		Y. Hirano, presiding	
12:55	1U08	Preparation of Biodegradable Polymer Porous Scaffolds for Cell Culture <u>Guoping Chen</u> , Naoki Kawazoe, Tetsuya Tateishi	4803
13:20	1U09	Fabrication of Biocompatible Gelator Based on Collagen Model Peptide for Specific Recognition of Collagen <u>Ryotaro Amekawa</u> , Tomonori Waku, Michiya Matsusaki, Mitsuru Akashi	4805
		M. Akashi, presiding	
13:45	1U10IL	Temperature-Responsive Surfaces for Cell Sheet Tissue Engineering Therapy <u>Teruo Okano</u>	4807
14:35	1U12	Synthesis of Novel pH-Responsive Polymers based on Poly(aspartic acid) and their Utilization as Functional Components in Synthetic Gene Carrier System <u>Mai Sanjoh</u> , Shigehiro Hiki, Kanjirou Miyata, Takehiko Ishii, Yuichi Yamasaki, Kazunori Kataoka	4809
		K. Kato, presiding	
15:00	1U13	Importin-mediated nuclear import system for drugs <u>Takeshi Nagasaki</u> , Takeshi Kawazu, Masatoshi Yoshida	4811
15:25	1U14	Preparation of stimulus-sensitive nanoparticles by chemical modification of casein for a DDS carrier. <u>Maho Hori</u> , Keiji Fujimoto	4813
15:50	1U15	Gene drug delivery into liver using dendritic poly(L-lysine) <u>Takuro Niidome</u> , Kazuto Watanabe, Yusuke Sugao, Takeshi Mori, Yoshiki Katayama	4815
16:15	1U16	Preparation of release controllable collagen gel achieved by using dendrimers <u>Chie Kojima</u> , Sayako Tsumura, Eiko Nishisaka, Atsushi Harada, Kenji Kono	4817

M. Numata, presiding

16:40	1U17	Ternary complex employed APCs-Specific drug delivery <u>Naotaka Terada</u> ,Jusaku Minari,Shinichi Mochizuki,Naohiko Shimada,Ken Ishii,Kazuo Sakurai 4819
17:05	1U18	Regulation of gene expression by pressure-condensed plasmid DNA <u>Tsuyoshi Kimura</u> ,Hokuto Konno,Toshiya Fujisato,Akio Kishida..... 4821
17:30	1U19	Effect of cationic comb-type copolymer on B-Z transition of DNA <u>Naohiko Shimada</u> ,Arihiro Kano,Atsushi Maruyama 4823
17:55	1U20	Structural design of bioconjugated gels exhibiting DNA sequence-responsive behavior Takashi Miyata, <u>Misa Ueba</u> ,Chihiro Ohba,Tadashi Uragami 4825

Thursday, September 25**Biomolecular Chemistry; Tailor Made Biopolymers****K. Fujimoto, presiding**

9:10	2U01	The synthesis of porphyrin-incorporated DNAs, construction of porphyrin-array on DNA duplex and evaluation of the fluorescence resonance energy transfer behavior. <u>Takuro Yoshikuni</u> ,Naoki Hashimoto,Souya Jo,Tatsuro Ouchi,Yuichi Ohya,Hitoshi Tamiaki..... 4827
9:35	2U02	Photochromic Nucleobases - Novel photoresponsive nucleobases for regulation of functional nucleic acid activity <u>Shinzi Ogasawara</u> ,Mizuo Maeda 4829
10:00	2U03	Preparation of coherent hetero clusters by DNA-dye conjugation <u>Taiga Fujii</u> ,Hiromu Kashida,Hiroyuki Asanuma 4831
10:25	2U04	Gene detection using superstructure on DNA scaffold <u>Toshihiro Ihara</u> ,Pelin Arslan,Motoko Mukae,Yusuke Kitamura,Akinori Jyo 4833

T. Ihara, presiding

10:50	2U05	Photoswitching of GFP gene expression by introducing azobenzene <u>Kenta Fujioka</u> ,Ryuji Wakuta,Xingguo Liang,Hiroyuki Asanuma..... 4835
11:15	2U06	Application for Photochemical DNA Manipulation for Construction of DNA Nano-architecture <u>Kenzo Fujimoto</u> 4837
11:40	2U07	DNA Methylation detection in homogenous medium by using fluorescence poly-intercalator <u>Yusuke Sato</u> ,Keiichi Ohtsuka,Shinobu Sato,Shigeori Takenaka 4839

H. Asanuma, presiding

12:55	2U08	Synthesis of novel ferrocenylnaphthalene diimide as an electrochemical hybridization indicator and its application for the precise DNA detection <u>Masato Tsueda</u> ,Shinobu Sato,Sadayoshi Watanabe,Keiichi Ohtsuka,Shigeori Takenaka 4841
13:20	2U09	Cell-free transcription-translation conducted by template DNA with repetitive sequence <u>Takahiko Nojima</u> ,Hiroshi Kimura,Teruo Fujii 4843

T. Wada, presiding

13:45	2U10IL	Design of new restriction DNA cutter for future biotechnology <u>Makoto Komiyama</u> 4845
14:35	2U12	The RAPID system: Synthesis of non-natural peptide library

		Hiroshi Murakami, <u>Hiroaki Suga</u>	4848
15:00	2U13	Construction of Designed Peptide Nanofibers and Nanotubes <u>Ayaka Miyachi</u> , <u>Tsuyoshi Takahashi</u> , <u>Hisakazu Mihara</u>	4850
		H. Mihara, presiding	
15:25	2U14	Chaperonin Nanotubes and Their Functions <u>Shuvendu Biswas</u> , <u>Kazushi Kinbara</u> , <u>Noriyuki Ishii</u> , <u>Hideki Taguchi</u> , <u>Takuzo Aida</u>	4852
15:50	2U15	Chaperone-like Activity of Hydrophobized pullulan nanogel <u>Wakiko Asayama</u> , <u>Kazunari Akiyoshi</u>	4854
16:15	2U16	Protein stabilization by PEG/polyamine graft copolymers <u>Yukio Nagasaki</u> , <u>Hiroshi Sakuma</u> , <u>Andre-boyet Laura</u> , <u>Xiaofei Yuan</u> , <u>Keitaro Yoshimoto</u> , <u>Tsuneyoshi Matsuoka</u> , <u>Kentaro Shiraki</u>	4856
		H. Suga, presiding	
16:40	2U17	Molecular Chaperone Properties of Elastin Mimetic Polypeptides <u>Ayae Sugawara</u> , <u>David A. Tirrell</u>	4858
17:05	2U18	Amyloid Fibril Formation Inhibition Mechanism of Peptides from small HSP <u>Kazuhito Teramura</u> , <u>Mutsumi Tokuhara</u> , <u>Shigeru Kunugi</u> , <u>Daizou Hamada</u> , <u>Naoki Tanaka</u>	4860

Friday, September 26

Biomolecular Chemistry; Tailor Made Biopolymers

		T. Tsumuraya, presiding	
9:10	3U01	Accumulation of Metal Ions on the Surface of Porous Protein Crystal <u>Satoshi Abe</u> , <u>Tomomi Koshiyama</u> , <u>Takafumi Ueno</u> , <u>Yoshihito Watanabe</u>	4862
9:35	3U02	Design and construction of functional metallopeptides using a molecular evolutionary method <u>Akira Wada</u> , <u>Yoshihiro Ito</u>	4864
10:00	3U03	Asymmetric Hydrogenation Catalysts Using Antibodies with Transition Metal Complexes <u>Hiroyasu Yamaguchi</u> , <u>Tohko Hirano</u> , <u>Hideaki Kiminami</u> , <u>Yuusuke Kosako</u> , <u>Akira Harada</u>	4866
		T. Mori, presiding	
10:25	3U04	Chemoenzymatic Synthesis of Amylose-grafted Heteropolysaccharides <u>Yoshiro Kaneko</u> , <u>Yuji Omagari</u> , <u>Shun-ichi Matsuda</u> , <u>Jun-ichi Kadokawa</u>	4868
10:50	3U05	The elimination of Aldehyde from air by the enzyme-doped MPC film <u>Akihiro Watari</u> , <u>Tomoko Tada</u> , <u>Shigeru Kunugi</u> , <u>Satoshi Yamada</u> , <u>Kenshiro Syuto</u> , <u>Shujiro Sakaki</u> , <u>Naoki Tanaka</u>	4870
11:15	3U06	Holoenzyme: Controlling of the Reactions by Incorporating Artificial Cofactors <u>Takeshi Tsumuraya</u> , <u>Fumihiko Ishikawa</u> , <u>Ikuo Fujii</u>	4872
11:40	3U07	A fusion approach to an ATP-receptor peptide based on rational, random and tailor-made strategies <u>Jun Matsui</u> , <u>Katsuyuki Tamaki</u> , <u>Naoki Sugimoto</u>	4874
		A. Wada, presiding	
12:55	3U08	Self-assembly of C3- and C5-symmetric Tryptophan-Zipper Peptides in Water	

		<u>Kazunori Matsuura</u> , Hiroki Hayashi, Kazuya Murasato, Nobuo Kimizuka.....	4876
13:20	3U09	Evaluation of Physical Properties of Proteins based on Energy Dissipation of a Quartz-crystal Microbalance <u>Yukihiko Kudo</u> , Hiroyuki Furusawa, Yoshio Okahata	4878
		N. Tanaka, presiding	
13:45	3U10	Reaction Analyses on DNA with an Anomalous-reflection-QCM <u>Takayoshi Kawasaki</u> , Yuichi Manaka, Kotaro Kajikawa, Yoshio Okahata.....	4880
14:10	3U11	Analysis of Enzymatic Glycosylation using AFM <u>Toshiaki Mori</u> , Daisuke Kurota, Yoshio Okahata	4882
		H. Yamaguchi, presiding	
14:35	3U12	Creation of functional nanomaterials utilizing the unique wrapping properties of natural polysaccharides <u>Munenori Numata</u> , Kouta Sugikawa, Shuichi Haraguchi, Shingo Tamesue, Seiji Shinkai, Hitoshi Tamiaki	4884
15:00	3U13	Synthesis of silica nanoparticles modified with functional sugar and their characteristic interaction with proteins <u>Ikumi Kitamura</u> , Naoyuki Yamazaki, Hidenori Otsuka.....	4886
15:25	3U14	Asymmetric Modification of Polymer to Ferritin Proteins Immobilized on the Substrate and Their Characterization <u>Koichiro Uto</u> , Mika Yamamoto, Kazuya Yamamoto, Takao Aoyagi, Kenji Iwahori, Ichiro Yamashita	4888

Room V

Wednesday, September 24

Synthetic polymers for regenerative medicine and stem cell researches

9:50	SO	Introductory Remarks Hiroo Iwata	5126
		H. Iwata, presiding	
10:00	1V03IL	What cells need now to the scaffolds <u>Junya Toguchida</u>	5127
		M. Tanaka, presiding	
10:50	1V05	Amphiphilic polymer-based surface modification for cell transplantation <u>Yuji Teramura</u> , Osamu Inui, Yoshihiro Kaneda, Hiroo Iwata.....	5130
11:15	1V06	3D-Nanofiber fabric consisted of PGA-Collagen Composite - Toward early neovascularization and tissue ingrowth into the scaffold <u>Hisatoshi Kobayashi</u> , Yoshiro Yokoyama, Yoshihiro Yasuda, Hiroyuki Koyama, Tsuyoshi Takato	5132
11:40	1V07	Creation of 3D-Engineered Tissues by Disulfide-Crosslinked Template Hydrogel <u>Hiroaki Yoshida</u> , Michiya Matsusaki, Mitsuru Akashi.....	5134
		T. Shimizu, presiding	
12:55	1V08	Development of the Small-Diameter Vascular Grafts Based on Silk Fibroins from Transgenic Silkworm for the Vascular Regeneration. <u>Yasumoto Nakazawa</u> , Rui Takahashi, Keisuke Yagi, Shizuo	

		Yamazaki,Chiyuki Takabayashi,Souichirou Enomoto,Masataka Sata,Kan Kajimoto,Hiroyuki Daita,Katsumi Miyauchi,Tetsuo Asakura	5136
13:20	1V09	Control of cell functions using self-organized honeycomb patterned films <u>Masaru Tanaka</u> ,Emiko Ito,Sadaaki Yamamoto,Birch Mark,Masatsugu Shimomura	5138
13:45	1V10	Construction and functionalization of spheroid array for tissue engineered organ. <u>Masashi Yamamoto</u> ,Tomomi Satomi,Koji Ueno,Tetsuya Tateishi,Hidenori Otsuka	5140
		M. Tanaka, presiding	
14:10	1V11	Organic-Inorganic Composite Matrix Composed of Phospholipid Polymer Hydrogel for Bone-Regeneration <u>Yasuo Toyomoto</u> ,Ryosuke Matsuno,Tomohiro Konno,Madoka Takai,Kazuhiko Ishihara	5142
14:35	1V12	Extraction of chitosan and chitosan/glucan complex from fungal cell wall and construction of scaffold for tissue engineering <u>Nitar Nwe</u> ,Tetsuya Furuike,Hiroshi Tamura	5144
15:00	1V13	Fabrication of 3-D tissue models with capillary network by co-culturing with layered fibroblast sheets and patterned endothelial cells. <u>Megumi Muraoka</u> ,Tatsuya Shimizu,Yoshikatsu Akiyama,Jun Kobayashi,Yukiko Tsuda,Yoshiro Kobayahi,Teruo Okano	5146
		H. Kobayashi, presiding	
15:25	1V14	Functional regeneration of nerve by tissue-derived scaffold transplantation <u>Tomo Ehashi</u> ,Asami Nishigaito,Toshia Fujisato,Toshiyuki Moritan,Tetsuji Yamaoka	5148
15:50	1V15	Preparation and characterization of decellularized corneal scaffold <u>Yoshihide Hashimoto</u> ,Seiichi Funamoto,Syuji Sasaki,Manabu Mochizuki,Shinya Hattori,Toshiya Fujisato,Tsuyoshi Kimura,Hisatoshi Kobayashi,Akio Kishida.....	5150
16:15	1V16	Time-lapse analysis of cell behaviors on fine structures <u>Satoshi Fujita</u> ,Masahiro Ohshima,Hiroo Iwata	5152
		A. Kishida, presiding	
16:40	1V17	Microsphere culture of stem cells using microchip technique <u>Kohji Nakazawa</u> ,Yukiko Yoshiura,Yusuke Sakai,Tomoko Tamura,Ryuhei Mori,Shiro Yoshida.....	5154
17:05	1V18	Differentiation of mouse embryonic stem cells induced by utilizing cell patterning culture substrate <u>Daisuke Sasaki</u> ,Tatsuya Shimizu,Shinako Masuda,Yukiko Tsuda,Jun Yamashita,Masayuki Yamato,Teruo Okano.....	5156
17:30	1V19	Culture vessels with immobilized growth factors <u>Takashi Kitajima</u> ,Makoto Sakuragi,Yoshihiro Ito	5158
17:55	1V20	Myogenic Differentiation of rat stem cells on various Extracellular Matrix proteins <u>Azizi Miskon</u> ,Tomo Ehashi,Atsushi Mahara,Hiroshi Uyama,Tetsuji Yamaoka	5160

Thursday, September 25

Recent Development of Drug Delivery System and Related Subjects

9:00	SO	Introductory Remarks Yukio Nagasaki	4899
Y. Nagasaki, presiding			
9:10	2V01	Bioimaging using quantum dot solubilized into RAFT agents micelle or phospholipid polymer micelle <u>Ryosuke Matsuno</u> ,Yusuke Goto,Tomohiro Konno,Madoka Takai,Kazuhiko Ishihara	4900
9:35	2V02	Synthesis and Evaluation of Novel Chiral Dendrimer Amine-coordinated Gd Complexes as Highly Effective MRI Contrast Agents <u>Teruyuki Kondo</u>	4902
10:00	2V03	Fluorinated Polymer Nanoparticles as a Novel ¹⁹ F-MRI Probe Prepared by Dendrimer-initiated Living Radical Polymerization <u>Michihiro Ogawa</u> ,Satoshi Nitahara,Hiroyuki Aoki,Shinzaburo Ito,Kimihiro Yoshimura,Hidetoshi Tsuzuki,Yoshinori Tomida,Tetsuya Yano	4904
10:25	2V04	Approach to MRI Contrast Agents from Molecular Magnets <u>Noboru Koga</u>	4906
T. Niidome, presiding			
10:50	2V05	Development of transplanted cell tracking using MRI in a rat hindlimb ischemia model <u>Yoichi Tachibana</u> ,Jyunichiro Ennmi,Hidehiro Iida,Tetsuji Yamaoka ..	4908
11:15	2V06	Development of Fluorescent Label for Bioimaging under NIR Excitation - Materials for Biologically Benign Bioimaging <u>Kohei Soga</u>	4910
11:40	2V07	Stimuli response control of inorganic nanoparticles with organic salts modified on the surface <u>Asako Narita</u> ,Kentaro Suzuki,Kensuke Naka,Shinae Kizaka-kondoh,Masahiro Hiraoka,Yoshiki Chujo	4912
A. Maruyama, presiding			
12:55	2V08	Single molecular imaging of a Brownian motion and a structural dynamics in a chiral helical pi-conjugated polymer <u>Ken-ichi Shinohara</u> ,Noriyuki Koderu,Toshio Ando	4914
13:20	2V09	Synthesis of ICG-Containing Amphiphilic Triblock Copolymers by Using Ring-Opening Metathesis Polymerization (ROMP) and Its Application to Tumor Imaging <u>Koji Miki</u> ,Yoshiaki Kuramochi,Kazuaki Oride,Hiroshi Harada,Masahiro Hiraoka,Kouichi Ohe	4916
13:45	2V10	Preparation of FRET polymer nanoparticles by nanoemulsion methods and the applications for optical imaging <u>Junichi Kakuta</u> ,Satoshi Nitahara,Hiroyuki Aoki,Shinzaburo Ito,Kimihiro Yoshimura,Masato Minami,Yoshinori Tomida,Tetsuya Yano	4918
14:10	2V11	Development of Hightthroughput Assay of Protein Kinase and its application for diagnosis <u>Yoshiki Katayama</u> ,Yoji Asami,Hirotarou Kitazaki,Takeshi Mori,Takuro Niidome.....	4920
K. Kono, presiding			
14:35	2V12	Simple and Rapid Colorimetric Detection of Small Molecules Using Noncrosslinking Gold Nanoparticle Aggregation	

		<u>Atsushi Ogawa, Mizuo Maeda</u>	4922
15:00	2V13	Nanobiodevices for the surface diagnostics of cells	
		<u>Takanori Ichiki</u>	4924
15:25	2V14	High-throughput genotyping using partially double-stranded probes and cationic comb-type copolymer	
		<u>Naohiko Shimada, Tomoya Ishii, Arihiro Kano, Nao Nishida, Katsushi Tokunaga, Atsushi Maruyama</u>	4926
15:50	2V15	Preparation and biological properties of glycopolymer modified gold nanoparticle II.	
		<u>Masayuki Toyoshima, Tomohiro Fukuda, Yoshiko Miura</u>	4928
		M. Maeda, presiding	
16:15	2V16	Construction of multi-functional protein nano-particles toward DDS	
		<u>Eiry Kobatake, Yoshihiko Fujita, Masayasu Mie</u>	4930
16:40	2V17	Nanogel delivery system for immunotherapy	
		<u>Kazunari Akiyoshi, Shinichi Sawada</u>	4932
17:05	2V18	Design of stable radical-containing nanoparticles (RNP) for anti-oxidative stress drug	
		<u>Yukio Nagasaki, Toru Yoshitomi</u>	4934

Friday, September 26

Recent Development of Drug Delivery System and Related Subjects

K. Kogure, presiding

9:10	3V01	Design of light-responsive drug-release polymeric micelles based photothermal conversion property of gold nanoparticle	
		<u>Atsushi Harada, Akihiko Yuzawa, Shoichi Suzaki, Chie Kojima, Kenji Kono</u>	4936
9:35	3V02	Gold Nanoparticles Modified Having Photocleavable Reactive Groups	
		<u>Jun Nakanishi, Hidekazu Nakayama, Takahiro Shimizu, Haruhisa Ishida, Yukiko Kikuchi, Kazuo Yamaguchi, Yasuhiro Horiike</u>	4938
10:00	3V03	Tissue adhesive hydrogel for sustained release of drugs and proteins	
		<u>Yoshihiko Murakami, Chikara Yoshida, Yusuke Uchida</u>	4940

T. Nagasaki, presiding

10:25	3V04	Evaluation of pH-sensitive liposomes composed of synthetic zwitterionic lipids for drug delivery	
		<u>Yosuke Obata, Shinji Takeoka</u>	4942
10:50	3V05	Transdermal delivery of siRNA nano particles via iontophoresis - Nano particles pass through the skin by electric power	
		<u>Kentaro Kogure, Kaoru Kigasawa, Akinobu Saito, Kiyoshi Kanamura, Hideyoshi Harashima, Kazuaki Kajimoto</u>	4944
11:15	3V06	Characterization of reduction-environmental responsive peptide nanospheres with density-tunable brush as DDS carrier	
		<u>Tomonori Waku, Michiya Matsusaki, Mitsuru Akashi</u>	4946
11:40	3V07	Nucleic acid delivery to antigen presenting cells by using sizofiran	
		<u>Shinichi Mochizuki, Jusaku Minari, Mika Kasuga, Yoshiyuki Adachi, Kazuo Sakurai</u>	4948

Y. Nagasaki, presiding

12:55	3V08IL	Advanced polymers for NanoBiotechnology - Development of Polymer-based Nanodevices for Pinpoint Therapy and Diagnostics	
		<u>Kazunori Kataoka</u>	4950
13:45	3V10	Elevated endosomal escape by diphtheria toxin T	

		domain-conjugated polyplex <u>Shinji Kakimoto</u> , Tsutomu Hamada, Masahiro Takagi, Hideki Azuma, Takeshi Nagasaki	4953
14:10	3V11	Artificially-Designed Functional Oligodeoxynucleotides for the Modulation of Gene Expression - An Approach to Intracellular Chemistry by Means of the Advanced Delivery System <u>Shigeki Sasaki</u> , Fumi Nagatsugi, Shuhei Imoto, Yosuke Taniguchi, Kazumitsu Onizuka	4955
14:35	3V12	Gene transfer of Adrenomedullin using polyplex nanomicelles attenuates monocrotaline-induced pulmonary hypertension in rats <u>Mariko Shiba</u> , Kanjiro Miyata, Takehiko Ishii, Nobuhiro Nishiyama, Keiji Itaka, Kazunori Kataoka	4957
K. Kataoka, presiding			
15:00	3V13	Development of novel polycationic lipids for a gene carrier : morphology change of their DNA complex and their functions. <u>Daisuke Baba</u> , Misa Uchida, Ayumi Sumino, Kiyoshi Kato, Takehisa Dewa, Keiji Yamashita, Tomohiro Asai, Naoto Oku, Mamoru Nango	4959
15:25	3V14	Multifunctional envelope-type nano device for in vivo systemic delivery of siRNA <u>Hideyoshi Harashima</u>	4961

Room W

Wednesday, September 24

Medical polymers - novel functionalities and their estimation

9:50	SO	Introductory Remarks Hiroyoshi Kawakami, Tetsuji Yamaoka	5027
H. Kawakami, presiding			
10:00	1W03	Development of Biocompatible Surface by Physical Adsorption of Human Thrombomodulin <u>Masaaki Omichi</u> , Michiya Matsusaki, Takafumi Funaki, Sinya Katou, Mitsuru Akashi	5028
10:25	1W04	Cell adhesion to surfaces competitively adsorbed with fibronectin and albumin <u>Yusuke Arima</u> , Hiroo Iwata	5030
M. Matsusaki, presiding			
10:50	1W05	Complement activation by polymers carrying hydroxyl group <u>Masako Kawagoe</u> , Yusuke Arima, Mitsuaki Toda, Hiroo Iwata	5032
11:15	1W06	Activation of the complement system on degraded methoxy-capped poly ethylene glycol coating surface. <u>Mitsuaki Toda</u> , Yusuke Arima, Hiroo Iwata	5034
11:40	1W07	How would collagen gel structure affect the physical and biological properties? <u>Kwangwoo Nam</u> , Tsuyoshi Kimura, Akio Kishida	5036
S. Takeoka, presiding			
12:55	1W08	Evaluation of cell adhesion force onto thermo-responsive polymeric surface <u>Yoshikazu Kumashiro</u> , Kazuhiro Fukumori, Yoshikatsu	

13:20	1W09	Akiyama,Kiyotaka Sakai,Masayuki Yamato,Teruo Okano 5038 Features of temperature-responsive polymer grafted surfaces for culturing cells and application of the surfaces to observation of cell detachment process by TIRF microscopy <u>Kazuhiro Fukumori</u> , <u>Yoshikatsu Akiyama</u> ,Jun Kobayashi,Masayuki Yamato,Kiyotaka Sakai,Teruo Okano 5040	5038
13:45	1W10	Correlation between phase transition behaviors of water sorbed into various solid polymers and their biocompatibilities <u>Makoto Gemmei-ide</u> ,Atsushi Ohya,Hiromi Kitano..... 5042	5040
T. Kida, presiding			
14:10	1W11	Polysaccharide nansoheets integrated for pleural tissue-defect repair of beagle <u>Toshinori Fujie</u> ,Noriyuki Matsutani,Manabu Kinoshita,Yosuke Okamura,Shinji Takeoka..... 5044	5044
14:35	1W12	Construction of Freestanding nanosheets derived from poly(L-lactic acid) and their apprication for a wound dressing using a stomach-surgical operation model <u>Yosuke Okamura</u> ,Koki Kabata,Toshinori Fujie,Manabu Kinoshita,Shinji Takeoka 5046	5046
15:00	1W13	Two-dimensional Array and Protein Adsorption of Hydroxyapatite-nanocrystal onto Polyelectrolyte Multilayers <u>Kazuya Yamamoto</u> ,Yuka Sato,Takao Aoyagi,Masahiro Okada,Tsutomu Furuzono 5048	5048
A. Mahara, presiding			
15:25	1W14	Preparation of Thermoresponse Adsorption/Elution Chromtography Matrices and Separation of Blood Proteins with Them. <u>Kenichi Nagase</u> ,Jun Kobayashi,Akihiko Kikuchi,Yoshikatsu Akiyama,Hideko Kanazawa,Teruo Okano 5050	5050
15:50	1W15	Inhibitory effect of Amyloid b aggregation by glycosaminoglycan-model polymer <u>Hikaru Mizuno</u> ,Kiyofumi Yamamoto,Yoshiko Miura..... 5052	5052
16:15	1W16	Preparation of DNA-responsive gels with fluorescence donor and acceptor and their DNA sequence recognition for fluorescence resonance energy transfer (FRET). <u>Makoto Minamitsuji</u> ,Takashi Miyata,Tadashi Uragami 5054	5054
A. Harada, presiding			
16:40	1W17	A Novel Nano-Biointerface for High-Sensitivity Sensing Using Orientation Controlled Protein A <u>Nobuyuki Tajima</u> ,Ryosuke Matsuno,Tomohiro Konno,Madoka Takai,Kazuhiko Ishihara 5056	5056
17:05	1W18	Synthesis and characterization of emulsion particles modified with dendron-type sugars at their surfaces <u>Naoyuki Yamazaki</u> ,Koji Ueno,Hidenori Otsuka 5058	5058
17:30	1W19	Adhesion force measured between proteins and sugars tethered to the polymer chain end <u>Mari Yoshida</u> ,Ryohei Sato,Koji Ueno,Hidenori Otsuka 5060	5060
17:55	1W20	PEG modified surface as an intelligent biointerface <u>Keitaro Yoshimoto</u> ,Yukio Nagasaki 5062	5062

Thursday, September 25

Medical polymers - novel functionalities and their estimation

H. Otsuka, presiding

- 9:10 2W01 Dense immobilization of biomolecules on polymer brushes supported by silicone nanofilaments
Yasuhiko Iwasaki, Yuki Omichi, Ryoko Iwata 5064
- 9:35 2W02 Build up a Multilayered Tissue by Fabrication of Nanofilms on Cell Surface
Michiya Matsusaki, Koji Kadowaki, Mitsuru Akashi 5066
- 10:00 2W03 Effect of morphological change of polymeric nanofilms to cell function
Koji Kadowaki, Michiya Matsusaki, Mitsuru Akashi 5068

Y. Iwasaki, presiding

- 10:25 2W04 Novel polymeric cryoprotective agents
Kazuaki Matsumura, Naoki Nakajima, Suong-hyu Hyon 5070
- 10:50 2W05 Micro-patterned fluorinated polyimide film for cell culture
Mami Osoegawa, Yuuki Karube, Shoichiro Asayama, Naoto Matuno, Hiroyoshi Kawakami 5072
- 11:15 2W06 Cytocompatible phospholipid polymer hydrogel; Evaluation of the reversible property and cell preserve function (Cell-Container).
Tomohiro Konno, Kazuhiko Ishihara 5074
- 11:40 2W07 Characterization of infiltrated cells into scaffolds with controlled release matrices of growth factors.
Yu Kimura, Yasuhiko Tabata 5076

T. Konno, presiding

- 12:55 2W08 Development of a novel technique using cell agglomerates for construction of cellular tissues
Akina Nakaune, Keiji Fujimoto 5078
- 13:20 2W09 Cell-Surface Display of Polymer-appended Ligands: Application to the Cell Patterning
Kenichi Niikura, Ryosuke Kamitani, Takaharu Okajima, Kuniharu Ijiri 5080
- 13:45 2W10 The preparation of photo-curable biodegradable hydrogel and application as three-dimensional cellular scaffold
Hiroki Kawahara, Yoshihiro Nishimura, Tatsuou Ouchi, Yuichi Ohya . 5082

S. Hyon, presiding

- 14:10 2W11 Cell arrangement using amphiphilic polymers
Syota Namura, Yuji Teramura, Hiroo Iwata 5084
- 14:35 2W12 Purification and evaluation of mesenchymal stem cells isolated by antibody-immobilized materials
Atsushi Mahara, Kana Okada, Toshiyuki Moritan, Tetsuji Yamaoka 5086
- 15:00 2W13 Caged Culture Substrate Based on a Photocleavable PEG - -Surface characterization and cell manipulation-
Yukiko Kikuchi, Jun Nakanishi, Shingo Kaneko, Hidekazu Nakayama, Takahiro Shimizu, Kazuo Yamaguchi, Yasuhiko Yoshida, Yasuhiro Horiike 5088

Y. Ohya, presiding

- 15:25 2W14 High sensitive immunomicroarray based on the Living Radical Photopolymerization
Madoka Takai, Sibarani James, Kazuhiko Ishihara 5090
- 15:50 2W15 Tumor imaging by polymeric micelle MRI contrast agent
Kouichi Shiraishi, Kumi Kawano, Takuya Minowa, Yoshie

		Maitani, Masayuki Yokoyama.....	5092
16:15	2W16	Chemo-enzymatic synthesis of a novel degradable polymeric micelle containing cyclic acetal <u>Sachiko Kaihara</u> , John Fisher, Shuichi Matsumura	5094
		M. Yokoyama, presiding	
16:40	2W17	Function of Double-Stranded RNA Homopolymer Poly(rC)Poly(rG) for a New pH-Sensitive Drug Carrier <u>Shoichiro Asayama</u> , Ai Ogawa, Hiroyoshi Kawakami	5096
17:05	2W18	Function and gene expression mechanism of alkylated poly(1-vinylimidazole) as gene carrier. <u>Tomoe Hakamatani</u> , Shoichiro Asayama, Hiroyoshi Kawakami.....	5098

Friday, September 26

Medical polymers - novel functionalities and their estimation

S. Asayama, presiding

9:10	3W01	Anticancer Effect of Bioabsorbable Fibers Including Antimetabolites <u>Takayuki Mino</u> , Hiroshi Uyama, Chun Man Lee, Toru Kitagawa, Yoshiki Sawa.....	5100
9:35	3W02	Preparation of photosensitive liposomes and dendrimers by complexation with gold <u>Kenji Kono</u> , Yutaka Nishimoto, Yasuhito Umeda, Yusuke Hirano, Chie Kojima, Atsushi Harada, Hiromiti Horinaka	5102
10:00	3W03	Preparation of PLGA particles containing water-soluble drug with low molecular weight - Preparation of biodegradable polymer particles containing water-soluble drug with low molecular weight <u>Fuminori Ito</u> , Hiroyuki Fujimori, Hiroyoshi Kawakami, Kiyoshi Kanamura, Kimiko Makino.....	5104
10:25	3W04	Design and characterization of a polymeric micelle from a triblock copolymer with an endosomal escaping segment for systemic gene delivery <u>Kanjiro Miyata</u> , Makoto Oba, Takehiko Ishii, Shigeto Fukushima, Nobuhiro Nishiyama, Kazunori Kataoka	5106

K. Akiyoshi, presiding

10:50	3W05	Preparation of organic-inorganic hybrid nanocapsules and functionalization of a capsule wall <u>Yuuka Fukui</u> , Keiji Fujimoto	5108
11:15	3W06	Evaluation of stabilized polyplex as a nonviral gene vector formed by hydrophobically-modified PEG/Polycation block copolymers for systemic administration <u>Yoshiyuki Hayakawa</u> , Shigehiro Hiki, Takehiko Ishii, Kanjiro Miyata, Kazunori Kataoka	5110
11:40	3W07	PEG-detachable polyplex micelles based on biocleavable disulfide linkage system as bioresponsive nonviral gene vector <u>Takehiko Ishii</u> , Seiji Takae, Kanjiro Miyata, Makoto Oba, Nobuhiro Nishiyama, Keiji Itaka, Yuichi Yamasaki, Hiroyuki Koyama, Kazunori Kataoka	5112

K. Fujimoto, presiding

12:55	3W08	Preparation and evaluation of novel temperature and light-responsive polymeric micelle <u>Masamichi Nishihara</u> , Yoshihiko Murakami, Takashi Shinoda, Jun	
-------	------	---	--

13:20	3W09	Yamamoto,Masayuki Yokoyama 5114 Gene Delivery Using Having Hyaluronan Comb-Type Cationic Copolymer <u>Soichiro Shiroyama</u> ,Arihiro Kano,Shinichi Mochiduki,Naohiko Shimada,Atsushi Maruyama 5116	5114
13:45	3W10	Design of Nanogel Cross-Linked Hybrid Nanoparticles and Application to drug delivery system <u>Asako Shimoda</u> ,Kazunari Akiyoshi 5118	5116
T. Yamaoka, presiding			
14:10	3W11	Tumor targeting and PDT activity of fullerene modified by water-soluble polymers <u>Jian Liu</u> ,Masaya Yamamoto,Yasuhiko Tabata 5120	5118
14:35	3W12	Gene Transfection into Adherent Cells with Electroporation on Dendrimer-modified Gold Electrode <u>Syohei Koda</u> ,Yuuki Inoue,Hiroo Iwata 5122	5120
15:00	3W13	Layer Structural Investigation for Antigen-Antibody Reaction on a Solid Surface by X-ray Reflectivity <u>Shuichiro Kuwajima</u> ,Yuji Teramura,Keisuke Gohda,Kenji Ishida,Kazumi Matsushige,Hiroo Iwata,Hidetoshi Kotera..... 5124	5122

Room X

Wednesday, September 24

Current status and prospect of Plastic recycling

9:50	SO	Introductory Remarks Takashi Yamawaki 5227	5227
T. Sawaguchi, presiding			
10:00	1X03	Technology progress of macromolecule chemistry and status of plastic recycling <u>Takashi Yamawaki</u> 5228	5228
T. Yamawaki, presiding			
10:25	1X04IL	Recycling of Waste Plastics---Current Status and Future Perspective <u>Masaru Tanaka</u> 5230	5230
Y. Sumida, presiding			
11:15	1X06	Current status and challenges of Plastic Containers and Packaging Recycling Law <u>Isao Kaneko</u> 5233	5233
11:40	1X07	The Present State and Issues of the Recycling Law for Electrical Home Appliances <u>Hiroshi Tsujita</u> ,Koji Nishikawa 5235	5235
12:55	1X08	Considering the new Japanese Automotive Recycling System <u>Kenichi Togawa</u> ,Kazunori Kitagawa 5237	5237
T. Hayata, presiding			
13:20	1X09	Closed recycling of plastics collected from used home appliances <u>Koji Nishikawa</u> ,Hiroshi Tsujita 5239	5239
13:45	1X10	Material recycle of multilayer film by compatibilization <u>Hiroki Sakamoto</u> ,Mariko Kato 5241	5241

14:10	1X11	Voluntary action plan for PET bottle recycling <u>Kenji Matsuno</u>	5243
14:35	1X12	Gasification of Waste Plastics by Pressurized Two-stage Gasification Process (EUP) <u>Yoshihiro Omiya</u>	5245
S. Hirose, presiding			
15:00	1X13	Catalytic Cracking of Civil Waste Plastics – Dechlorination and Physical Properties of Oil <u>Kaoru Fujimoto,Hiroyuki Haga,Takashi Yamawaki</u>	5247
15:25	1X14	Plastic recycling technique through RPF <u>Motoyasu Takenaka,Shigeyuki Taguchi</u>	5249
15:50	1X15	Fuel Production and Power Generation from Waste Plastics <u>Kunio Yoshikawa</u>	5251
I. Kaneko, presiding			
16:15	1X16	Implementation of the energy recovery of plastic waste by incineration with power generation in Tokyo’s 23 Wards. <u>Shojiro Kobayashi</u>	5253
16:40	1X17	Study on environmental impacts of sorting and collecting scenarios of containers & packaging plastics waste by LCA <u>Hajime Nishihara,Junichi Nakahashi</u>	5255
17:05	1X18	Effect of Recycling Method for each Resin on Environmental Burdens in Plastic Containers and Packaging Wastes Recycling <u>Asako Okuno,Kazuo Yamamoto,Fumiyuki Nakajima</u>	5257
H. Nishihara, presiding			
17:30	1X19	A new scheme of bio-olefin production from bioalcohol <u>Takashi Nakagawa</u>	5259
17:55	1X20	For the Spread of Bioplastics <u>Takeshi Nakamura</u>	5261

Thursday, September 25

Leading-edge engineering of biomass plastics

9:00	SO	Introductory Remarks Hiroshi Uyama, Tadahisa Iwata.....	5264
J. Kadokawa, presiding			
9:10	2X01	Synthesis and Characteristics of Optically Active Poly(phenylactic acid) and Its Copolymers, and Stereospecific Interaction between Optically Active Poly(phenylactic acid) and Poly(lactic acid) <u>Hideto Tsuji,Hiroshi Matsuoka,Shinichi Itsuno</u>	5265
9:35	2X02	Bio-based polymers functionalized with reversible bonds <u>Naoko Yoshie,Kazuki Ishida</u>	5267
10:00	2X03	Poly(methyl -methoxyacrylate) as the amorphous transparent material - A promising substitute for polystyrene derived from renewable resources <u>Masatoshi Miyamoto,Futoshi Nakamura,Akira Kunitomo</u>	5269
H. Tsuji, presiding			
10:25	2X04	Preparation of Regenerated Polysaccharide Materials Using Ionic Liquids <u>Jun-ichi Kadokawa,Masa-aki Murakami,Yoshiro Kaneko,Lianzhen Lin</u>	5271
10:50	2X05	Development of high-performance biomass plastics based on	

		structural characters of phenolic phytochemicals <u>Tatsuo Kaneko</u> ,Takanori Ishikura,Daisaku Kaneko,Kazuyuki Obara .	5273
11:15	2X06	Synthesis of high-molecular-weight of poly (butylene succinate) via cyclic oligomers directed towards chemical recycling <u>Maiko Kuwahara</u> ,Kazunobu Toshima,Shuuichi Matsumura	5275
11:40	2X07	Characterization of Electro-spun Poly(L-lactic acid) Fibers - Effect of Molecular Weight and Processing Parameters <u>Amalina M. Afifi</u> ,Masaki Yamamoto,Jae-chang Lee,Shigeyuki Nakano,Hideki Yamane,Yoshiharu Kimura.....	5277
		K. Satoh, presiding	
12:55	2X08	Development of Heat Cured Hybrid Lacquer Paint Film using Titanium Alkoxide <u>Yoshikatsu Shiraokawa</u> ,Takahisa Ishimura,Tomoki Hamajima,Tetsuo Miyakoshi	5279
13:20	2X09	Development of Environmental-Friendly Hybrid Lacquer Paints using Natural Reactive Thinner <u>Takahisa Ishimura</u> ,Yoshikatsu Shiraokawa,Tomoki Hamajima,Tetsuo Miyakoshi	5281
13:45	2X10	Synthesis and Properties of Novel Bio-based Epoxy Resins from Wood-lignin Derivatives as a Metal Adhesives. <u>Yuki Hasegawa</u> ,Masakiyo Hishida,Tsuyoshi Michinobu,Eiji Masai,Yuichiro Otsuka,Masaya Nakamura,Seiji Ohara,Yoshihiro Katayama,Kiyotaka Shigehara.....	5283
		H. Uyama, presiding	
14:10	2X11L	Sustainable Synthesis and Chemical Recycling of Biomass Plastics <u>Shuichi Matsumura</u>	5285
		N. Yoshie, presiding	
15:00	2X13	Structure and enzymatic degradation of beta-structure of poly[(R)-3-hydroxybutyrate] <u>Tadahisa Iwata</u> ,Sho Sato,Yasuhiko Yoshida,Toshihisa Tanaka	5288
15:25	2X14	A new aspect of PHB pyrolysis and its selective depolymerization <u>Haruo Nishida</u> ,Hidayah Ariffin,Yoshihito Shirai.....	5290
15:50	2X15	Bio-based Polymers via Controlled/Living Cationic Polymerization of Naturally-Occurring Monomers <u>Kotaro Satoh</u> ,Hiroko Sugiyama,Shoichi Saitoh,Masami Kamigaito.....	5292
		H. Nishida, presiding	
16:15	2X16	Crystallization and Spherulite Growth of Poly(L-lactide)/Poly(L-lactide-co-glycolide) (80:20) Blends <u>Leevameng Bouapao</u> ,Hideto Tsuji.....	5294
16:40	2X17	Crystallization Behavior and Structure of PLLA and PLLA/PDLA Blend Treated with High-pressure Carbon Dioxide <u>Shigeo Asai</u> ,Yukihiro Ikura,Hironori Marubayashi,Hideki Takamori,Shuichi Akasaka,Masao Sumita	5296
17:05	2X18	Development of bio-based alternative ABS materials which are superior impact resistance <u>Akihiro Oishi</u> ,Hiroshi Iida,Yoichi Taguchi	5298

Friday, September 26

Leading-edge engineering of biomass plastics

T. Nishino, presiding

9:10	3X01	Plasticization of polylactide by radiation crosslinking - Improvement of the PLA gel's strength by high shear mixing <u>Shin-ichi Kanazawa, Makoto Nakabayashi</u> 5300	5300
9:35	3X02	Structure and Properties of Poly(L-lactide): Polymorphic Crystallization and Physical Aging Behavior <u>Pengju Pan, Yoshio Inoue</u> 5302	5302
10:00	3X03	End Group Analysis of Bacterially Produced Poly(3-hydroxybutyrate) <u>Kenji Yamanaka, Yoshiharu Kimura, Toshiji Kudo</u> 5304	5304
10:25	3X04	Molecular engineering of polyhydroxyalkanoate (PHA) synthase and application to PHA production in plant <u>Kenichiro Matsumoto, Fumi Shozui, Hiroaki Shimada, Seiichi Taguchi</u> 5306	5306
H. Yamane, presiding			
10:50	3X05	Polyhydroxyalkanoate with a novel naturally occurring monomer <u>Takeharu Tsuge</u> 5308	5308
11:15	3X06	Chemical Modification of bacterial cellulose using supercritical carbon dioxide and composite fabrication <u>Takashi Nishino, Masaru Kotera, Mari Suetsugu</u> 5310	5310
11:40	3X07	Syntheses and applications of chemically-modified celluloses having ester or urethane bond <u>Naoki Ichihara, Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi</u> 5312	5312
T. Tsuge, presiding			
12:55	3X08	Biodegradation and analysis of soil-microorganisms on mulch film <u>Atsuyoshi Nakayama, Naoko Yamano, Seiichi Aiba</u> 5314	5314
13:20	3X09	Changes in Enzymatic PHB Degradation by Amino Acid Substitution in the Substrate-Binding Domain of PHB Depolymerase <u>Naoya Komiya, Tomohiro Hiraishi, Mizuo Maeda</u> 5316	5316
13:45	3X10	Microbial degradation of aliphatic-aromatic copolyester <u>Kenichi Kasuya, Tomoko Tagaya, Nariaki Ishii, Yoshio Inoue</u> 5318	5318
A. Nakayama, presiding			
14:10	3X11	Surface modification and high functionalization of poly(lactide) by end-capping technique <u>Hideki Abe, Kenji Kurokawa, Koichi Yamashita, Yoshiharu Doi</u> 5320	5320
14:35	3X12	Development of Star-shaped Poly(lactic acid) with Polyglycerol Core <u>Ryuji Terauchi, Takashi Tsujimoto, Hiroshi Uyama</u> 5322	5322
15:00	3X13	Structural control of stereoblock poly(lactic acid) having different PLLA/PDLA unit compositions. <u>Masayuki Hirata, Yoshiharu Kimura</u> 5324	5324
15:25	3X14	Stereocomplexation in the solution spun PLLA.PDLA blend fibers <u>Jun Jae Lee, Hideki Yamane</u> 5326	5326

Room Y

Wednesday, September 24

New research trends on fine network polymers

9:50	SO	Introductory Remarks Masamitsu Shirai, Shunichi Numata..... 5341	5341
------	----	---	------

	T. Takeichi, presiding	
10:00	1Y03	synthesis of star-shaped poly (phenoxy propylene sulfide) with end-functional groups and photo reactions <u>Mitsuhiro Hirata</u> , Bungo Ochiai, Takeshi Endo 5342
10:25	1Y04	Addition Effects of Acids and Bases on the Main Chain Rearrangement of <i>N,O</i> -Acetal-type Polymer Obtained by the Ring-Opening Polymerization of 1,3-Benzoxazine <u>Ryouichi Kudoh</u> , Atsushi Sudo, Takeshi Endo..... 5344
	H. Otsuka, presiding	
10:50	1Y05	Substituent effects on the ring-opening polymerization of of <i>N</i> -alkyl-1,3-benzoxazine <u>Atsushi Sudo</u> , Long-chao Du, Takeshi Endo..... 5346
11:15	1Y06	Photopolymerization of vinyl monomers and cyclic ethers using hyperbranched polystyrenes with thiobenzoxazolyl group at the terminals as initiators <u>Atsushi Kameyama</u> , Toshiaki Yagishita, Kohei Hagiwara 5348
11:40	1Y07	Preparation of various functional novolacs and evaluation of their characteristics <u>Tadamasa Nemoto</u> , Gen-ichi Konishi 5350
	M. Shirai, presiding	
12:55	1Y08IL	Molecular Design of Networked Polymer: Its New Evolution <u>Takeshi Endo</u> 5352
13:45	1Y10	Synthesis of Rotaxane-typed Network Polymer Using Metathesis Reaction and Inclusion Reaction <u>Kazuhiro Yamabuki</u> , Kenjiro Onimura, Tsutomu Oishi 5355
	K. Matsumoto, presiding	
14:10	1Y11	Narrow molecular weight distribution phenolic novolac resin - New synthesis method and basic properties <u>Satoshi Takehara</u> , Takao Suetake, Shigeki Inatomi 5357
14:35	1Y12	Performance enhancement of polybenzoxazine by hybridization with polysiloxane <u>Tsutomu Takeichi</u> , Hosta Ardhyana, Takehiro Kawauchi..... 5359
15:00	1Y13	Semicrystalline Network Polymers Showing Two-way Conversion between Hard and Soft Mechanical Properties <u>Kazuki Ishida</u> , Yoshikake Nishiyama, Yuta Michimura, Naoko Yoshie .. 5361
	N. Yoshie, presiding	
15:25	1Y14	Formulation of Polyrotaxane Network Utilizing Cyclodextrin Oligomer <u>Takayuki Arai</u> , Toshikazu Takata 5363
15:50	1Y15	Reaction of Network Polymers Cross-linked by Alkoxyamine Derivatives <u>Hideyuki Otsuka</u> , Yoshifumi Amamoto, Yuji Higaki, Takeshi Maeda, Atsushi Takahara..... 5365
16:15	1Y16	Preparation of High molecular weight phenolic resin <u>Pengfei Wang</u> , Tomoki Ogoshi, Tada-aki Yamagishi, Yoshiaki Nakamoto 5367
	A. Kameyama, presiding	
16:40	1Y17	Structural Bonding <u>Martin Hornung</u> , Takahisa Doba 5369
17:05	1Y18	Pursuit of Nanogel Formation as Extreme Network Polymer Precursor with High Crosslink Density in Free-Radical Multiallyl Crosslinking Polymerization

		<u>Hiroyuki Hamamoto</u> ,Hiroyuki Aota,Akira Matsumoto,Michiro Shibano,Yasuo Matoba,Katsutoshi Yokoyama	5371
17:30	1Y19	Elucidation of Free-Radical Crosslinking Polymerization Mechanism: Design of Network Polymers Utilizing a Variety of Network Polymer Precursors	
		<u>Yuta Miwa</u> ,Hiroyuki Aota,Akira Matsumoto	5373
17:55	1Y20	Synthesis of degradable polymers having peroxy linkage at the cross-linking or branching point and their decomposition behaviors	
		<u>Eriko Sato</u> ,Tomoaki Kitamura,Akikazu Matsumoto	5375

Thursday, September 25

New research trends on fine network polymers

K. Matsumoto, presiding

9:10	2Y01	Formation of network polymers using photobase generators based on photocyclization <u>Koji Arimitsu</u> ,Atsushi Nakajima	5377
9:35	2Y02	Photo-generation of strong bases and their application to photoreactive materials <u>Ryosuke Endo</u> ,Koji Arimitsu.....	5379
10:00	2Y03	Formation of network polymers using photoinduced base proliferation reactions <u>Tomomasa Kashino</u> ,Koji Arimitsu.....	5381

T. Oyama, presiding

10:25	2Y04	Design of Reworkable UV-Curing Resin and Its Application to UV Imprint Lithography Daisaku Matsukawa,Hiroyuki Wakayama,Kazuyuki Mitsukura,Haruyuki Okamura,Kanji Suyama,Yoshihiko Hirai, <u>Masamitsu Shirai</u>	5383
10:50	2Y05	Synthesis of photo-crosslinked polymer hybrids and their optical properties <u>Kimihiro Matsukawa</u>	5385
11:15	2Y06	Shape-memory properties of photo-cross-linked poly(ϵ -caprolactone) Minoru Nagata, <u>Yu Yamamoto</u>	5387
11:40	2Y07	Synthesis and property of photo-curable hyperbranched polymers and their functionality <u>Tadatomi Nishikubo</u> ,Hiroto Kudo,Takaaki Hirabayashi,Ken Maruyama.....	5389

S. Numata, presiding

12:55	2Y08IL	Development of high-functional network polymers by controlling the network chain orientation <u>Mitukazu Ochi</u>	5391
13:45	2Y10	Confinement of Ionic liquid by Networked Polymers Based on Multifunctional Epoxy Resins <u>Kozo Matsumoto</u> ,Takeshi Endo	5394
14:10	2Y11	High Thermal Conductivity of Liquid Crystalline Epoxy Resin/BN Filler Composites Having Ordered Network Structure Miyuki Harada, <u>Nana Hamaura</u> ,Mitsukazu Ochi,Yasuyuki Agari.....	5396

K. Arimitsu, presiding

14:35	2Y12	Preparation of Epoxy/Zirconia hybrid materials with high refractive index	
-------	------	---	--

		Mitukazu Ochi, <u>Yasufumi Suzuki</u>	5398
15:00	2Y13	Low CTE epoxy resins containing polyaromatic backbones <u>Yuichi Ohnishi</u> ,Toshiyuki Oyama,Akio Takahashi	5400
15:25	2Y14	The study of Lignophenol-cured epoxy resins <u>Shohei Tuda</u> ,Toshiyuki Oyama,Akio Takahashi,Yoshiaki Okabe,Yoshitaka Takezawa,Shinji Yamada,Yoji Okabe	5402
		T. Takata, presiding	
15:50	2Y15IL	Molecular design, synthesis, and evaluation of variegated epoxy resins corresponding to various demands from high-tech field <u>Ichiro Ogura</u> ,Kazuo Arita,Yoshiyuki Takahashi,Nobuya Nakamura,Kunihiro Morinaga	5404
16:40	2Y17	Utilization of <i>in situ</i> polymerized vinyl polymer modifiers for toughening of epoxy resins <u>Hiroki Shinozaki</u> ,Toshiyuki Oyama,Akio Takahashi.....	5407
17:05	2Y18	Template Synthesis of Physically-Crosslinked Polypyrrole by Using Porous Metal Complexes <u>Yu Kadowaki</u> ,Nobuhiro Yanai,Takashi Uemura,Susumu Kitagawa	5409

Friday, September 26

New research trends on fine network polymers

T. Ohtori, presiding

9:10	3Y01	Influence of the Introduced Flexible Chains to Mesogenic Type Epoxy Resin Networks on Thermal and Mechanical Properties <u>Miyuki Harada</u> ,Naoki Okamoto,Mitsukazu Ochi	5411
9:35	3Y02	Precise nano structures and mechanical properties of epoxy resin networks modified with block copolymers <u>Hajime Kishi</u> ,Yumi Kunimitsu,Jin Imade,Shinya Oshita,Yoshihiro Morishita,Mitsunori Asada	5413
10:00	3Y03	Analysis for gelation process of polyurethane using light scattering <u>Kazuhiro Hatano</u> ,Masahiko Ishii,Takuya Suzuki,Mitsuhiro Shibayama	5415

M. Harada, presiding

10:25	3Y04	Phase separation of phenolic resin in solution <u>Tada-aki Yamagishi</u> ,Masaaki Ozawa,Tomoki Ogoshi,Yoshiaki Nakamoto	5417
10:50	3Y05	Morphologies of Acrylic Rubber / Epoxy Resin Adhesive Films by Reaction-Induced Phase Decomposition and its Properties <u>Kazuhiro Miyauchi</u> ,Atsushi Takahara,Takashi Inoue.....	5419
11:15	3Y06	Cured structural analysis of phenolic resins by Solid-State NMR <u>Nobuyuki Ikeda</u> ,Takahisa Yamamoto,Tatsuhiko Yoshida	5421
11:40	3Y07	Cross-linked reaction of network-type organic-inorganic polymer studied by fluorescence probe method <u>Takahiro Ishikawa</u> ,Akira Watanabe,Tokuji Miyashita	5423

T. Yamagishi, presiding

12:55	3Y08	Characterization of cross-linking sequence structures in cured resins by MALDI-MS combined with specific sample decomposition <u>Hajime Ohtani</u> ,Mami Kamiyama,Hiroyasu Kataoka	5425
13:20	3Y09	Enhanced Recycling of FRP using Subcritical Water - Subcritical water hydrolysis pilot test and enhanced recycling process bench test	

		<u>Takaharu Nakagawa</u> , Shin Matsugi, Toshihiro Miyazaki, Shinya Hirota, Keishi Shibata, Tatsuo Itoh, Hiroshi Yano, Nobuaki Yabunouchi, Yuichiro Yasuda	5427
13:45	3Y10	Development of high performance plant oil-based polymers using acid anhydrides	
		<u>Kohei Takeshita</u> , Takashi Tsujimoto, Hiroshi Uyama	5429
14:10	3Y11	Reworkable Multifunctional Methacrylates: Photocuring, Thermal Curing, and Photoinduced Thermolysis	
		<u>Haruyuki Okamura</u> , Toru Terakawa, Masamitsu Shirai	5431

Room Z

Wednesday, September 24

Fabrication and Reliability of Advanced Polymer Composites

9:50	SO	Introductory Remarks Nobuo Ikuta, Kazuya Nagata	5433
		H. Hamada, presiding	
10:00	1Z03	Dispersion of Inorganic Oxide Nano-Particles into Polymer Matrix via Press-Drawing <u>Satoshi Nomura</u> , Keiichi Kuboyama, Toshiaki Ougizawa	5434
10:25	1Z04	Mechanical Property of Natural Fiber Reinforced Sheet Molding Compound (SMC) Composites. <u>Shunsuke Teraoka</u> , Yuya Hidekuma, Gregoire Petit, Asami Nakai, Hiroyuki Hamada	5436
		T. Ougizawa, presiding	
10:50	1Z05	Preparation of Self-reinforced Poly(p-phenylene terephthalamide) Composite Takashi Nishino, Masaru Kotera, <u>Sho Isokawa</u>	5438
11:15	1Z06	Fatigue Life of Glass Fiber Reinforced Resin <u>Atsushi Kato</u> , Kouichi Handa, Ikuo Narisawa	5440
11:40	1Z07	The Low-cycle Fatigue Properties of Multi Axial Warp Knitted Fabric Composite <u>Yuki Kadoma</u> , Akiko Odawara, Asami Nakai, Hiroyuki Hamada, Masanori Okano	5442
		T. Hori, presiding	
12:55	1Z08	Characterization and Degradation Behavior of PLLA/Segmented Poly(urethaneurea) blends <u>Tomoko Shirahase</u> , Michiko Hadano, Takamichi Shinohara, Reddy Thatiparti Thimma, Velate Nivasu Muram, Atushi Takahara	5444
13:20	1Z09	Crystallization rate and heat resistance of Cellulose fiber filled PLA (Poly lactic acid) <u>Naoki Yokouchi</u>	5446
13:45	1Z10	Effect of the surface treatment on the mechanical property of natural fiber reinforced biodegradable resin composite <u>Hajime Nakamura</u> , Shikamoto Naoyuki, Asami Nakai, Hiroyuki Hamada	5448
		A. Takahara, presiding	
14:10	1Z11	Modification of PP Surface by Supercritical Fluid and Radiation Techniques	

		<u>Satoko Okubayashi</u> , Isao Tabata, Teruo Hori, Kazuaki Abe, Yuki Igushi.....	5450
14:35	1Z12	Organic metal complexes were impregnated into the fiber or polymer plate	
		<u>Teruo Hori</u> , Isao Tabata, Kenji Hisada, Satoko Okubayashi	5452
15:00	1Z13	Relation between Interfacial Reinforcement and Mechanical Properties in Composites of p-Aramid Fiber with Adhesive Property	
		<u>Etsuko Shirota</u> , Fumiyasu Funami, Kazuhiko Kosuge, Nobuo Ikuta	5454
K. Nagata, presiding			
15:25	1Z14IL	An Approach to Develop Advanced High-functional Polymer Composites	
		<u>Hiroshi Yui</u>	5456
16:15	1Z16	Structural Changes in Formation Process of Nylon-6-Clay Nanocomposites	
		<u>Kohji Tashiro</u> , Yoshiaki Aibara, Tatsuya Sugiyama, Arimitsu Usuki, Makoto Kato.....	5459
M. Kato, presiding			
16:40	1Z17	Transparent hybrid material based on the cured epoxy silsesquioxane	
		Mitukazu Ochi, <u>Yasuhiro Uno</u> , Ken-ichi Watanabe, Kazuhiro Yoshida ..	5461
17:05	1Z18	Properties and morphology of organoclay/various TSBC bend-composites	
		<u>Eisuke Yamada</u> , Tomohiro Yamaguchi, Kazuya Nagata	5463
17:30	1Z19	Tribological behavior of ultrathin films prepared with silane coupling agents on silica surface	
		<u>Kenji Hisada</u> , Akihito Egawa, Teruo Hori	5465
17:55	1Z20	Effect of Silane Binding to Magnetic Particles on Filling of Resin in Composites	
		<u>Yoshio Awakura</u> , Tomohiro Tsukano, Fumiyasu Funami, Ryota Matsui, Nobuo Ikuta	5467

Thursday, September 25

Fabrication and Reliability of Advanced Polymer Composites

K. Yoshinaga, presiding			
9:10	2Z01	Preparation of Novel Cross-linked Fluoroalkyl End-capped Cooligomeric Nanocomposites-Encapsulated Gold Nanoparticles	
		<u>Masaki Mugisawa</u> , Hideo Sawada.....	5469
9:35	2Z02	Preparation and Application of Cross-linked Fluoroalkyl End-capped Cooligomer/Gold Nanocomposites in Ionic Liquids	
		<u>Yoshitaka Okada</u> , Katsuhiko Tsunashima, Masashi Sugiya, Hideo Sawada	5471
10:00	2Z03	Preparation of Novel Fluoroalkyl End-capped Vinyltrimethoxysilane Oligomeric Nanoparticles Possessing a Lower Refractive Index Characteristic	
		<u>Toshihiro Suzuki</u> , Hiroki Takashima, Katuhisa Takishita, Hideo Sawada	5473
10:25	2Z04	Preparation and Fluorescent Characteristic of Novel Cross-linked Fluoroalkyl End-capped Oligomeric Nanocomposites Possessing Aromatic Siloxane Segments as Core Units	
		<u>Yuki Goto</u> , Hideo Sawada	5475

T. Nishino, presiding			
10:50	2Z05	Production and patterning of nanocrystals using atto-reactors. <u>Megumi Yamasaki</u> , Keiji Fujimoto	5477
11:15	2Z06	Dispersion of Titania Nanoparticles into Organic Solvents and Fabrication of Poly(methyl methacrylate) Hybrid Film <u>Shuhei Yamada</u> , Emiko Mouri, Kohji Yoshinaga	5479
11:40	2Z07	Fine structural estimation of fibers for crystalline fluorinated copolymers <u>Atsuhiko Fujimori</u>	5481
N. Tsubokawa, presiding			
12:55	2Z08	Synthesis of Metal Nanoparticles Using Sulfur-Containing Cage-shaped Polyhedral Oligomeric Silsesquioxanes as a Stabilizer <u>Shingo Hadano</u> , Yoshiki Chujo	5483
13:20	2Z09	A Molecular Weight Dependence of Dispersion-Flocculation Transition in Monodisperse Poly(methyl methacrylate)/Nano Silica Hybrid <u>Takashi Sawaguchi</u> , Atsushi Sakurai, Hibiki Shimamoto, Toru Hoshi, Toshiki Hagiwara, Shoichiro Yano	5485
13:45	2Z10	Manufacturing Nano-composites using Silane Coupling Agents Nobuo Ikuta, <u>Tomohiro Tsukano</u>	5487
14:10	2Z11	Behavior of electric resistance in carbonnanofiber dispersed-polyethylene gels <u>Hitoshi Fujimatsu</u> , Yohsuke Nakahara, Tokihiro Takizawa, Hisanao Usami	5489
H. Fujimatsu, presiding			
14:35	2Z12	Mechanical Properties of CFRP with Dispersed Carbon Nanofiber <u>Takahiro Ito</u> , Yuka Takai, Asami Nakai, Hiroyuki Hamada, Aly-hassan Mohamed Sayed, Hiroshi Hatta	5491
15:00	2Z13	Grafting of polymers onto the surface of multi-walled carbon nanotubes <u>Kei Yaotome</u> , Tsutomu Kamimura, Kazuhiro Fujiki, Takeshi Yamauchi, Norio Tsubokawa	5493
15:25	2Z14	Synthesis of polyimide/diamond nanocomposites <u>Qingxin Zhang</u> , Kimiyoshi Naito, Yoshihisa Tanaka, Yutaka Kagawa	5495
N. Ikuta, presiding			
15:50	2Z15	Clay Dispersibility and Mechanical Properties of the Interlayer Initiation Type Epoxy/clay Nanocomposite Cured with Acid Anhydride Miyuki Harada, <u>Masanori Aoki</u> , Mitsukazu Ochi	5497
16:15	2Z16	Creation of soft nanocomposite materials consisting of clay/polymer system. <u>Kazutoshi Haraguchi</u>	5499
16:40	2Z17	Properties of GFRPs by Pultrusion using of Epoxy Resin /Clay nanocomposites as Matrix <u>Kiichi Hasegawa</u> , Hiroshi Hirano, Joji Kadota, Shin-ichi Nishida, Naoyuki Takemura, Satoshi Sugihara	5501
17:05	2Z18	Mechanical Property of Boehmite/PC Transparent Nano-composite - New Comosite with Transparent, Low-CTE and Highly Toughness <u>Haruo Unno</u> , Yasuaki Kai, Katsumi Morohoshi, Hironobu Muramatsu, Takashi Oda, Tomohiro Itou, Manabu Kawa, Naoko Fujita	5503