

Room A

Wednesday, September 15

Invited Lectures

	T. Iwata, presiding	
11:15	1A06IL	Study on synthesis, properties, and biodegradability of bio-based polymers with periodic sequence structure <u>Hideki Abe</u> 2169
	N. Kimizuka, presiding	
12:55	1A08IL	From the chemistry of poly(2-oxazoline) and poly(ethyleneimine) to nanostructured hybrid materials <u>Ren-Hua Jin</u> 2172
	H. Watanabe, presiding	
13:45	1A10IL	Three-Dimensional Direct Visualization methods and their Applications to Polymer Nano-Structures <u>Hiroshi Jinnai</u> 2175
	K. Kurihara, presiding	
14:35	1A12IL	Precise Structure Control and Physicochemical Characterization of Soft Interfaces <u>Atsushi Takahara, Motoyasu Kobayashi</u> 2178
	T. Miyata, presiding	
15:25	1A14IL	Development of new functional materials from weak gel <u>Masayuki Yamaguchi</u> 2181
	S. Yano, presiding	
16:15	1A16IL	Fluorescence Label Studies of Thermo-Responsive Polymers and Their Applications <u>Kaoru Iwai</u> 2184
	M. Shimomura, presiding	
17:05	1A18IL	Reversible Interconnection Learning from Nature <u>Naoe Hosoda</u> 2187

Thursday, September 16

Invited Lectures

	T. Kawai, presiding	
9:10	2A01IL	Intrinsic Charge Carrier Mobility along Conjugated Backbones <u>Shu Seki</u> 2190
	T. Sasaki, presiding	
10:00	2A03IL	Past, Present and Future of R&D in Photonics Polymers <u>Hiroyuki Sasabe</u> 2193

Award Lectures

	T. Seki, presiding	
10:50	2A05IL**	Investigation of Nano-structured Polymer Thin Films and Their Separation Functions <u>Izumi Ichinose</u> 2196
	K. Yamamoto, presiding	
12:55	2A08IL**	Novel Controlled Polymerization by Utilizing Reaction Properties of Late Transition Metals. <u>Daisuke Takeuchi</u> 2199

	R. Tsushima, presiding	
14:10	2A11IL**	Construction of Densely Poly(ethylene glycol) Chain Tethered Surface and its Performance <u>Yukio Nagasaki</u> 2202
	N. Tsubokawa, presiding	
15:00	2A13IL**	Design and Creation of Carbon Nanotube/Polymer Hybrids -Fundamental and Applications- <u>Naotoshi Nakashima</u> 2205
	M. Watanabe, presiding	
15:50	2A15IL**	Compensation and control of the birefringence of a polymer for photonics <u>Akihiro Tagaya</u> 2208
	T. Iyoda, presiding	
16:40	2A17IL**	Development of Novel POSS-Containing Block Copolymers for Self-Assembled Lithography <u>Teruaki Hayakawa</u> 2211

Friday, September 17

Invited Lectures

	E. Yashima, presiding	
9:35	3A02IL	Comonomer sequence distribution, molecular-weight dependence of chemical composition, and stereoregularity of methacrylate copolymers – An approach by diffusion-ordered NMR spectroscopy(DOSY) and multivariate analysis of NMR spectra <u>Koichi Ute</u> 2214
	T. Furuike, presiding	
10:25	3A04IL	Chemical Synthesis of glycoproteins having homogeneous human complex type oligosaccharides <u>Yasuhiro Kajihara</u> 2217
	O. Kanie, presiding	
11:15	3A06IL	Systematic structural analyses of glycoconjugates:NMR and sugar library approaches <u>Koichi Kato</u> 2220

Room B

Wednesday, September 15

Polymer Chemistry: Synthesis and Reactions

	J. Oku, presiding	
10:00	1B03	Synthesis of Polyurethanes Bearing Kojic Acid-Derived Structure and Evaluation of Their Complexation Ability with Metal Ions <u>Atsushi Sudo</u> , Takeshi Endo, Miyuki Kamiya, Bungo Ochiai, Takao Shiraishi, Tetsuaki Nishida 2223
10:25	1B04	Synthesis of Polyesters by Addition Condensation of Bicyclic Bis(γ -butyrolactone) with Diols <u>Sousuke Ohsawa</u> , Balaka Barkakaty, Atsushi Sudo, Takeshi Endo 2225

10:50	1B05	The possibility of the self-healing function that used equilibrium reaction of urethane polymerization <u>Yoshimi Itoh,Erika Kohama,Takeshi Maeda</u> 2227
		T. Endo, presiding
11:15	1B06	Synthesis of polycarbosilane by hydrosilylation with platinum catalyst. <u>Takahiro Yamamoto,Jun-ichi Oku.....</u> 2229
11:40	1B07	Synthesis and properties of post poly amino acid containing amino acid moieties in the main chain <u>Toshiki Ohshiro,Hiroto Kudo,Tadatomi Nishikubo.....</u> 2231
		H. Otsuka, presiding
12:55	1B08	Development of functionalization and cross-linking of elastomers with kinetically stabilized nitrile N-oxide <u>Kaori Miura,Yasuhito Koyama,Morio Yonekawa,Toshikazu Takata</u> 2233
13:20	1B09	Novel Characterization Method of Graft Polymer Structures Prepared by Radiation-induced Grafting in Solid Polymer Films <u>Yasunari Maekawa,Shotaro Hamakawa,Kazuyuki Enomoto, Shuichi Takahashi</u> 2235
13:45	1B10	Spin-trapping Analysis for Thermal Degradation of Polymer Materials <u>Masayo Sono,Wataru Sakai,Naoto Tsutsumi,Norio Manabe</u> 2237
		J. Motoyanagi, presiding
14:10	1B11	Abnormal structures in thermally treated/kneaded liquid crystalline polyester / polycarbonate blend - characterization by matrix-assisted laser desorption / ionization mass spectrometry <u>Yukari Mizuno,Hajime Ohtani,Hatsuhiko Harashina,Yoshihisa Tajima....</u> 2239
14:35	1B12	Cathodic Reduction of a Polyfluorene Derivative and Its Application to Paired Electrosynthesis <u>Kazuya Koseki,Shotaro Hayashi,Shinsuke Inagi,Toshio Fuchigami....</u> 2241
		T. Kaneko, presiding
15:00	1B13	Pyrolysis Behavior of Poly(vinyl chloride) obtained by Precision Polymerization of Vinyl Chloride <u>Yoshikatsu Tsuchiya,Kiyoshi Endo.....</u> 2243
15:25	1B14	Thermostability improvement of thermosetting resins with alkyl boranes as a living radical initiator <u>Takahito Muraki,Hisashi Morooka,Satoru Amou,Hiroyuki Kagawa, Kenichi Souma.....</u> 2245
		Y. Maekawa, presiding
15:50	1B15	Synthesis and Autonomous Molecular Weight Change of Main-Chain-Type Dynamic Covalent Polymers <u>Hideyuki Otsuka,Atsushi Irie,Takeshi Kanehara,Keiichi Imato,Masamichi Nishihara,Atsushi Takahara</u> 2247
16:15	1B16	Synthesis and autonomous structural transformation of cross-linked polymers with exchangeable covalent bonds <u>Keiichi Imato,Masamichi Nishihara,Hideyuki Otsuka,Atsushi Takahara....</u> 2249
16:40	1B17	Dual-Locked Dismantlable Adhesives Using Degradation of Polymer Side Chains <u>Tadashi Inui,Eriko Sato,Akikazu Matsumoto.....</u> 2251
		E. Sato, presiding
17:05	1B18	Controlled synthesis of amphiphilic block polymers bearing photoresponsive pendant functions and their photoinduced structure formation <u>Izumi Nishimura,Jin Motoyanagi,Masahiko Minoda</u> 2253

17:30	1B19	Pursuit of Skewered Reactions in Free-Radical Crosslinking (Co)polymerization of Liquid Polybutadiene as Internal Olefinic Multivinyl Crosslinker <u>Taisuke Tani</u> , Akira Matsumoto, Hiroyuki Aota, Kazuhisa Fushihara, Mikio Yamada	2255
17:55	1B20	Attempt of surface modification by benzene derivatives having three oligo(ethylene oxide) chains obtained by selective cycloaromatization of one-handed helical polyacetylenes <u>Ken Taguwa</u> , Lijia Liu, Yunosuke Abe, Hiroshi Oono, Tomoyuki Ohishi, Yuriko Kakihana, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki	2257

Thursday, September 16

Polymer Chemistry: Synthesis and Reactions

H. Mori, presiding

9:10	2B01	Sequence Regulated Radical Polymerization from Template Initiator via Selective Monomer Recognition <u>Shohei Ida</u> , Makoto Ouchi, Mitsuo Sawamoto.....	2259
9:35	2B02	Design of Sequence-Embedded Template Monomers and Sequence Regulated Radical Polymerization <u>Yusuke Hibi</u> , Makoto Ouchi, Mitsuo Sawamoto	2261
10:00	2B03	Alternating Sequence Control of Functional Groups via Living Radical Alternating Copolymerization and the Cooperative Functions <u>Natsuki Yokoi</u> , Makoto Ouchi, Mitsuo Sawamoto.....	2263

M. Ouchi, presiding

10:25	2B04	Synthesis of Chitin Graft Copolymer by ATRP Using Chitin Macroinitiator <u>Shozaburo Mine</u> , Kazuya Yamamoto, Jun-ichi Kadokawa.....	2265
10:50	2B05	RAFT polymerization of N-vinylimidazolium salts in polar solvent <u>Riina Kambara</u> , Hideharu Mori.....	2267

K. Yamamoto, presiding

11:15	2B06	Synthesis and characterization of polysulfones by the radical alternating copolymerization of hydrocarbon diene monomers and sulfur dioxide <u>Naruki Tanaka</u> , Eriko Sato, Akikazu Matsumoto	2269
11:40	2B07	Radical Polymerization of Conjugated Diene with Cu/amine Complexes and Silica Particle <u>Hiroko Okamoto</u> , Kiyoshi Endo	2271

A. Matsumoto, presiding

12:55	2B08	Synthesis of ABCD Sequence-Regulated Vinyl Polymers by Metal-Catalyzed Radical Polyaddition of Designed Monomer <u>Tsuyoshi Hamada</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito	2273
13:20	2B09	Synthesis of Acrylonitrile-based Sequence-Regulated Vinyl Polymers by Metal-Catalyzed Radical Polyaddition <u>Kenta Ishizuka</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito.....	2275
13:45	2B10	Controlled/Living Radical Copolymerization of Cinnamic Acid Derivatives <u>Yuya Terao</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito.....	2277

		Y. Shibasaki, presiding	
14:10	2B11	Preparation of Carbon Alloy Catalysts from nitrogen-containing aromatic polymers <u>Masayuki Chokai</u> , Masataka Taniguchi, Shogo Moriya, Katsuyuki Matsubayashi, Tsuyoshi Shinoda, Yuta Nabae, Shigeki Kuroki, Teruaki Hayakawa, Jun-ichi Ozaki, Masa-aki Kakimoto, Seizou Miyata	2279
14:35	2B12	Influence of Shear on Fractional Polycondensation of Aromatic Copolyester via Phase Separation <u>Toshimitsu Ichimori</u> , Shinichi Yamazaki, Kunio Kimura.....	2281
15:00	2B13	Synthesis of polymers with spiropyran moieties in main-chain by polycondensation and their photoisomerization behaviors <u>Yuhki Tanaka</u> , Kazuya Yamamoto, Jun-ichi Kadokawa	2283
		T. Matsumoto, presiding	
15:25	2B14	Novel Palladium-Catalyzed Coupling Polymerization of Thiophene Derivatives and Aryl Dihalides Using C-H Bonds as Polymerizable Functions <u>Shoichi Kawamitsu</u> , Ikuyoshi Tomita	2285
15:50	2B15	Synthesis of Well-Defined Poly(3-hexylthiophene) and Block Copolymers by Pd Catalyst-Transfer Condensation Polymerization. <u>Masataka Nojima</u> , Ryosuke Suzuki, Akihiro Yokoyama, Tsutomu Yokozawa	2287
		T. Yokozawa, presiding	
16:15	2B16	Synthesis of poly(ether sulfone) having fluoroalkylsulfonic acid group <u>Takahiro Hagiwara</u> , Yuji Shibasaki, Yoshiyuki Oishi	2289
16:40	2B17	Chemoselective polymerization of 2-amino-4,6-dichloro-1,3,5-triazine with diamines <u>Takanori Koizumi</u> , Yuji Shibasaki, Yoshiyuki Oishi	2291
17:05	2B18	Quantitative synthesis of m-phenyleneimine macrocycles based on slow deprotection polycondensation and dynamic covalent chemistry <u>Toshihiko Matsumoto</u> , Saori Sugaya, Sho Hasegawa, Seitaro Oishi, Kozo Ishida	2293

Friday, September 17

Polymer Chemistry: Synthesis and Reactions

		M. Ouchi, presiding	
9:10	3B01	Electron spin resonance study of fundamentals of radical polymerization of various fumarates <u>Atsushi Kajiwara</u> , Dujiya, Satoe Arata, Naoyuki Amaya	2295
9:35	3B02	ESR study of radicals in radical polymerization of <i>tert</i> -butyl acrylate <u>Satoe Arata</u> , Kaoru Iwai, Atsushi Kajiwara	2297
		K. Iwai, presiding	
10:00	3B03	Catalyst Design for Living Radical Polymerization with Hemilabile Chelate Ligands-Activation of Iron(II) Catalysts and Monomer Recognition <u>Yusuke Fukuzaki</u> , Makoto Ouchi, Mitsuo Sawamoto	2299
10:25	3B04	Precision Polymerizations with Targeting Initiator: Synthesis of Cleavable Block Copolymers and Construction of Polymerization Fields <u>Akito Konishi</u> , Makoto Ouchi, Mitsuo Sawamoto	2301
10:50	3B05	Precision Radical Polymerization for Multiple Control via Selective Cation Recognition of PEG Side Chain <u>Minami Kawabe</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto....	2303

A. Kajiwara, presiding		
11:15	3B06	Mechanistic Discussion of Free-Radical Crosslinking Monovinyl/Divinyl Copolymerizations under Inhomogeneous Polymerization Conditions <u>Tomohiro Takamori</u> , Hiroyuki Aota, Akira Matsumoto 2305
11:40	3B07	Pursuit of Allyl Polymerization by MALDI- TOF-MS Spectrometry: Discussion of Initiation Reaction Mechanism in Allyl Polymerization with Various Peroxide and Azo Initiators <u>Hajime Tamezawa</u> , Satoshi Inoue, Hiroyuki Aota, Akira Matsumoto, Hideya Kawasaki, Ryuichi Arakawa, Katsutoshi Yokoyama, Yasuo Matoba, Michiro Shibano, Osamu Matsuda, Hirotohi Fujie 2307
M. Minoda, presiding		
12:55	3B08	Living radical polymerization of functional monomers with organic catalysts <u>Tomohiro Suzuki</u> , Atsushi Goto, Yoshinobu Tsujii 2309
13:20	3B09	Stereospecific Radical Polymerization of Lactic Acid-Derived Monomer Naoki Saito, Yoshitaka Matsubara, <u>Miki Niwa</u> , Hitoshi Tanaka 2311
K. Nagai, presiding		
13:45	3B10	Syntheses and Functions of Ion-Condensed Microgel Core Star Polymers <u>Kaoru Fukae</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto 2313
14:10	3B11	Design of Fluorous Microgel Core Star Polymers toward Highly Selective Molecular Recognition <u>Yuta Koda</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto 2315
14:35	3B12	Metal-Bearing Chiral Microgel Star Polymer toward High-Performance Catalyst for Asymmetric Reactions <u>Tomoyuki Mori</u> , Takaya Terashima, Makoto Ouchi, Mitsuo Sawamoto ... 2317
Y. Tsujii, presiding		
15:00	3B13	Synergistic of Styrene-assisted Atom Transfer Methacrylate Radical Coupling and Chain-growth Condensation Polymerization: An Efficient Route to Symmetrical Polybenzamides <u>Chih-feng Huang</u> , Akihiro Yokoyama, Tsutomu Yokozawa 2319
15:25	3B14	Synthesis of photoresist copolymers with uniform compositions by RAFT polymerization <u>Michiyasu Okuda</u> , Jin Motoyanagi, Masahiko Minoda 2321

Room C

Wednesday, September 15

Polymer Chemistry: Synthesis and Reactions

T. Kitayama, presiding		
10:00	1C03	Cationic ring-opening polymerization of 1,3-dehydroadamantanes <u>Sotaro Inomata</u> , Yusuke Harada, Takashi Ishizone 2323
10:25	1C04	Synthesis of amphiphilic block copolymer with poly[oligo(ethylene glycol) vinyl ether methacrylate] segment. <u>Takashi Kayasuga</u> , Jun Yamanaka, Manabu Inutsuka, Hideaki Yokoyama, Kohzo Ito, Takashi Ishizone 2325

T. Ishizone, presiding			
10:50	1C05	Polymer structure regulation through anionic polymerization of difunctional acrylate-type monomers with α -linker <u>Nobuya Tanaka</u> , Takehiro Kitaura, Tatsuki Kitayama.....	2327
11:15	1C06	Chemoselective anionic polymerization of heterodifunctional monomer with the aid of bulky aluminum phenoxide <u>Ayumi Hashimoto</u> , Takehiro Kitaura, Tatsuki Kitayama	2329
11:40	1C07	Synthesis of new transparent plastics by cationic copolymerization of alicyclic vinyl ethers with functionalized vinyl ethers <u>Takeshi Namikoshi</u> , Tamotsu Hashimoto, Yuka Suzuki, Michio Urushisaki, Toshikazu Sakaguchi	2331
S. Kanaoka, presiding			
12:55	1C08	One-Pot Synthesis of Block Copolymer by Transformation of Active Species between Living Cationic Polymerization and Living Radical Polymerization <u>Hiroshi Aoshima</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito	2333
13:20	1C09	Controlled Polymerization of Bulky Silyl Vinyl Ether <u>Mitsumasa Nakawaki</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito...	2335
M. Kamigaito, presiding			
13:45	1C10	Living Cationic Polymerization of Vinyl naphthalene Derivatives. <u>Yu Shinke</u> , Shokyoku Kanaoka, Sadahito Aoshima	2337
14:10	1C11	Controlled Cationic Alternating Copolymerization of Various Aromatic Aldehydes with Vinyl Ethers and Novel Chemical Cycles <u>Yasushi Ishido</u> , Shokyoku Kanaoka, Sadahito Aoshima	2339
14:35	1C12	Living cationic polymerization of fluorinated vinyl ethers and sensitive temperature-responsive behavior of fluorine-containing polymers <u>Dai Fukami</u> , Hiroaki Shimomoto, Takabumi Nagai, Ken-ichi Katsukawa, Shokyoku Kanaoka, Sadahito Aoshima	2341
K. Satoh, presiding			
15:00	1C13	Precision Synthesis of Star-Shaped and Flower-Shaped Polymers by Living Cationic Polymerization <u>Shokyoku Kanaoka</u> , Kumiko Ono, Takahiro Tokuyama, Aya Yanagisawa, Sadahito Aoshima	2343
15:25	1C14	Controlled Cationic Polymerization of Vinylcyclohexane <u>Madoka Kimura</u> , Shokyoku Kanaoka, Sadahito Aoshima	2345
T. Namikoshi, presiding			
15:50	1C15	Group Transfer Polymerization of Methyl Methacrylate Catalyzed by Proazaphosphatane <u>Junsuke Kitakado</u> , Keita Fuchise, Toshifumi Satoh, Toyoji Kakuchi.....	2347
16:15	1C16	Precise Synthesis of 3-armed Poly[4-(diphenylamino)benzyl methacrylate] via Group Transfer Polymerization Using Phosphazene Base as Catalyst <u>Yougen Chen</u> , Yikai Fang, Ryosuke Sakai, Toshifumi Satoh, Wenchang Chen, Toyoji Kakuchi	2349
16:40	1C17	Group Transfer Polymerization of acrylamides by super Brønsted acid catalysts <u>Keita Fuchise</u> , Ryosuke Sakai, Atsushi Narumi, Toshifumi Satoh, Seigou Kawaguchi, Toyoji Kakuchi	2351
T. Kitaura, presiding			
17:05	1C18	Controlled/living cationic polymerization of lactone using Brønsted acid as organocatalyst <u>Kosuke Makiguchi</u> , Yosuke Tsuji, Hideki Misaka, Toshifumi Satoh, Toyoji Kakuchi	2353

17:30	1C19	Anionic Polymerizability of Cyclic N,N-Dimethylmethacrylamides; a Quantum Chemical Study <u>Takeo Takahashi</u> , Takashi Suzuki, Keita Kitazawa, Takashi Ishizone, Keigo Saito, Tomohiro Nishihara, Yuki Hiroshige, Susumu Kawauchi.....	2355
17:55	1C20	Protection and Anionic Polymerization of <i>m</i> -(hydroxy(<i>tert</i> -butyl)amino)styrene <u>Shunsuke Tanaka</u> , Kenji Sugiyama, Akira Hirao	2357

Thursday, September 16

Polymer Chemistry: Synthesis and Reactions

J. Oku, presiding

9:10	2C01	Anionic Polymerization Using Flow Microreactor Systems and Its Applications to Synthesis of Structurally Well-defined Polymers <u>Aiichiro Nagaki</u> , Atsuo Miyazaki, Yutaka Tomida, Jun-ichi Yoshida.....	2359
9:35	2C02	Molecular Design with Heteroatoms toward Stereospecific Cationic Polymerization <u>Kazuhiro Nakatani</u> , Makoto Ouchi, Mitsuo Sawamoto	2361

A. Hirao, presiding

10:25	2C04	SEM Observation of Initial Particle Growth on Stopped-Flow Propylene Polymerization with Ziegler-Natta catalysts under Various Conditions <u>Vu Quoc Thang</u> , Toshiaki Taniike, Minoru Terano	2363
10:50	2C05	Scandium-Catalyzed Copolymerization of 1,5-Hexadiene with Styrene and Ethylene <u>Fang Guo</u> , Masayoshi Nishiura, Zhaomin Hou	2365

I. Tomita, presiding

11:15	2C06	Scandium-catalyzed random and alternating copolymerization of 1,6-heptadiene with isoprene <u>Masayoshi Nishiura</u> , Fang Guo, Zhaomin Hou	2367
11:40	2C07	Scandium-Catalyzed Syndiospecific Block Copolymerization of Styrene with Isoprene and Caprolactone <u>Li Pan</u> , Kunyu Zhang, Masayoshi Nishiura, Zhaomin Hou	2369

K. Maeda, presiding

12:55	2C08	Development of active rhodium catalysts bearing bidentate phosphine ligands for polymerization of acetylenic monomers <u>Jesus Rodriguez Castanon</u> , Naoya Onishi, Masashi Shiotuski, Fumio Sanda	2371
13:20	2C09	Control Factors of in-situ Formation of Short and Long Chain Branches on CrO _x /SiO ₂ Ethylene Polymerization Catalysts <u>Kiwamu Tonosaki</u> , Toshiaki Taniike, Minoru Terano	2373

K. Mashima, presiding

13:45	2C10	Atomic Step Structure for the Real Surface Model and Origin of Catalysis in MgCl ₂ -Supported Ziegler-Natta Catalysts <u>Toshiaki Taniike</u> , Minoru Terano	2375
14:10	2C11	Production of chemical composition distribution of ethylene/propylene copolymer due to heterogeneous active sites and variation in monomer concentration with time <u>Shougo Takahashi</u> , Toru Wada, Iku Kouzai, Toshiaki Taniike, Minoru Terano	2377

F. Sanda, presiding			
14:35	2C12	Polymerization and Monomer Isomerization of 2-butenes with (α -diimine)Ni(II)/Organoaluminum Catalysts <u>Yoshitaka Tone</u> , Kiyoshi Endo	2379
15:00	2C13	Highly Selective Trimerization of Ethylene Catalyzed by TaCl ₅ and Bis(silyl)cyclohexadiene Teruhiko Saito, Hayato Tsurugi, <u>Kazushi Mashima</u>	2381
M. Terano, presiding			
15:25	2C14	Living Polymerization of Phenylacetylene Catalyzed by Cationic Rh Complexes <u>Naoya Onishi</u> , Masashi Shiotsuki, Fumio Sanda, Toshio Masuda	2383
15:50	2C15	Synthesis of amino acid-based optically active silicon-containing conjugated polymers <u>Tokiko Ueda</u> , Masashi Shiotsuki, Fumio Sanda	2385
16:15	2C16	Synthesis of End-Functionalized Poly(phenylacetylene)s Catalyzed by Well-Defined Palladium Complexes <u>Kei Takahashi</u> , Atsushi Nakagawa, Jesus Rodriguez Castanon, Masashi Shiotsuki, Fumio Sanda, Toshio Masuda	2387
K. Nozaki, presiding			
16:40	2C17	Isomerization Double Cyclopolymerization of Various Trienes by Palladium Complexes <u>Kenya Motokuni</u> , Takeshi Okada, Daisuke Takeuchi, Kohtaro Osakada ...	2389
17:05	2C18	Selective Isomerization Polymerization of Vinylcyclohexane and Allylcyclohexane by Pd and Ni Complexes with Diimine Ligands <u>Daisuke Takeuchi</u> , Kohtaro Osakada	2391

Friday, September 17

Polymer Chemistry: Synthesis and Reactions

T. Shiono, presiding			
9:10	3C01	Copolymerization of Ethylene with Allyl Monomers <u>Masafumi Kanazawa</u> , Shingo Ito, Kyoko Nozaki	2393
9:35	3C02	Catalyst removal and reuse in the copolymerization of epoxides and CO ₂ by utilizing Diels-Alder reaction Koji Nakano, <u>Chaehoon Kim</u> , Kyoko Nozaki, Kiyoshi Nishioka	2395
A. Sudo, presiding			
10:00	3C03	Immobilization of alkyltitanium complex-based catalysts for heterogeneous living polymerization of propylene <u>Mamoru Kawamoto</u> , Zhengguo Cai, Yuushou Nakayama, Takeshi Shiono	2397
10:25	3C04	Copolymerization of propylene and styrene and styrene derivatives catalyzed with ansa-(alkyl-substituted fluorenyl) amidodimethyltitanium complex <u>Kanako Miura</u> , Zhengguo Cai, Yuushou Nakayama, Takeshi Shiono	2399
T. Uno, presiding			
10:50	3C05	Construction and Functions of Two-dimensional Polymers with Metalloporphyrin Building Blocks <u>Xiao Feng</u> , Donglin Jiang	2401
11:15	3C06	Construction and Functions of Two-dimensional Polymers with Metallophthalocyanine Building Blocks <u>Xuesong Ding</u> , Donglin Jiang	2403

11:40	3C07	light-harvesting Antennae based on Conjugated Microporus Polymers <u>Donglin Jiang</u>	2405
T. Itoh, presiding			
12:55	3C08	Synthesis and Photofunctions of New Conjugated Microporus Polymers <u>Yanhong Xu</u> , <u>Donglin Jiang</u>	2407
13:20	3C09	Synthesis of novel random and block copolymers by organotellurium-mediated controlled/living radical polymerization of (meth)acrylates and vinyl ethers <u>Eri Mishima</u> , <u>Shigeru Yamago</u>	2409
A. Goto, presiding			
13:45	3C10	Synthesis and ring-opening polymerization behavior of 1,3-benzoxazine having carboxylic acid ammonium salt -Activation of thermally induced polymerization by neighboring group participation of carboxylate- <u>Atsushi Sudo</u> , <u>Ryoichi Kudoh</u> , <u>Takeshi Endo</u>	2411
14:10	3C11	Phosgene-free synthesis and ring-opening polymerization of <i>N</i> -substituted L-glutamine <i>N</i> -carboxyanhydrides <u>Koichi Koga</u> , <u>Atsushi Sudo</u> , <u>Takeshi Endo</u>	2413
A. Matsumoto, presiding			
14:35	3C12	Topochemical Copolymerization of Tetrakis(alkoxycarbonyl)quinodimethanes and TCNQ <u>Tatsuya Suzuki</u> , <u>Takahiro Uno</u> , <u>Masataka Kubo</u> , <u>Takahito Itoh</u> , <u>Norimitsu Tohnai</u> , <u>Mikiji Miyata</u>	2415
15:00	3C13	Continuous Aldol Reaction of Acetaldehyde on Polymer Template toward Stereoregular Polyvinyl Alcohol <u>Junya Tsujita</u> , <u>Makoto Ouchi</u> , <u>Mitsuo Sawamoto</u>	2417
15:25	3C14	Synthesis of controlled poly L-lactic acid by a new organo-catalytic system and its adhesion property <u>Joji Kadota</u> , <u>Yasuyuki Agari</u> , <u>Hiroshi Hirano</u> , <u>Kiichi Hasegawa</u> , <u>Frédéric Peruch</u> , <u>Alain Deffieux</u>	2419

Room D

Wednesday, September 15

Polymer Chemistry: Synthesis and Reactions

K. Sugiyama, presiding			
10:00	1D03	Controlled Copolymerization by Metal Complexes [51]—Syntheses and Properties of Copolymer Having Unique Primary Structures by Means of Alternating Copolymerization of Carbon Dioxide and Propylene Oxide <u>Asato Yoshida</u> , <u>Hidetoshi Goto</u> , <u>Hiroshi Sugimoto</u>	2421
10:25	1D04	Synthesis and Physical Properties of Cross-linked Polyurethane Based on Hyperbranched Polyester Polyol Having Different Number of Methylene Chain <u>Suguru Motokucho</u> , <u>Mutsuhisa Furukawa</u> , <u>Satoshi Oishi</u> , <u>Ken Kojio</u>	2423
Y. Tsukahara, presiding			
10:50	1D05	Precise synthesis of novel sequential triblock ter(co)polymers by means of living anionic polymerization <u>Toshiyuki Oie</u> , <u>Kenji Sugiyama</u> , <u>Yuuri Matsuo</u> , <u>Akira Hirao</u>	2425

11:15	1D06	Precise Synthesis of Architectural Polymers by Using Chain-Functionalized AB Diblock Copolymers <u>Ahmed Abouelmagd</u> ,Kenji Sugiyama,Kota Murano,Toshiyuki Oie,Akira Hirao 2427	2427
11:40	1D07	Synthesis of helical polymer containing optically active spirobifluorene moiety in the main chain <u>Ryota Seto</u> ,Yasuhito Koyama,Kazuko Nakazono,Toshikazu Takata.... 2429	2429
Y. Morisaki, presiding			
12:55	1D08	Design of Membrane-Active Amphiphilic Copolymers by Living Polymerization for Tuning Their Biological Activities <u>Yukari Oda</u> ,Laura M. Thoma,Kenichi Kuroda,Shokyoku Kanaoka,Sadahito Aoshima..... 2431	2431
13:20	1D09	Precision Synthesis of Thermosensitive Polymers Exhibiting UCST-type Phase Separation Behavior in Aqueous Media <u>Hayato Yoshimitsu</u> ,Shokyoku Kanaoka,Sadahito Aoshima 2433	2433
S. Motokucho, presiding			
13:45	1D10	Syntheses and properties of unique polyhedral oligomeric silsesquioxane derivatives containing fluorine <u>Hitoshi Araki</u> ,Kensuke Naka..... 2435	2435
14:10	1D11	Syntheses and properties of imidazolium salt terminated POSS core dendrimers <u>Tomoaki Sato</u> ,Ryusuke Shinke,Shizuka Masuoka,Kensuke Naka 2437	2437
K. Naka, presiding			
14:35	1D12	Self-assembly of Block Copolymer Containing Cage Silsesquioxane by thermal annealing <u>Yoshihito Ishida</u> ,Masa-aki Kakimoto,Teruaki Hayakawa..... 2439	2439
15:00	1D13	Synthesis of Diblock Copolymer Consisting of Polyethylene Oxide and Polyhedral Oligomeric Silsesquioxane and Controlling Self-assembled Structures by Thermal or Solvent Annealing <u>Raita Goseki</u> ,Tomoyasu Hirai,Masa-aki Kakimoto,Sang Ouk Kim,Seong-jun Jeong,Teruaki Hayakawa 2441	2441
15:25	1D14	Synthesis and characterization of POSS ionic liquids <u>Fumiyasu Ishiguro</u> ,Kazuo Tanaka,Yoshiki Chujo..... 2443	2443
K. Nakazono, presiding			
15:50	1D15	Living anionic polymerization of vinylferrocene with metalated ferrocene and block copolymers therefrom. <u>Kenshi Oba</u> ,Kaoru Adachi,Yasuhisa Tsukahara..... 2445	2445
16:15	1D16	Effect of polymer branched structure on poly(ethylene oxide) / metal oxide composite. <u>Daichi Miyahara</u> ,Ayumu Furutera,Kaoru Adachi,Yasuhisa Tsukahara..... 2447	2447
16:40	1D17	Living anionic polymerizations of vinyl monomers with metalated products of alkyl substituted aromatic compounds and application to preparation of multibranched polymers <u>Ippei Mori</u> ,Ryota Uemura,Kaoru Adachi,Yasuhisa Tsukahara..... 2449	2449
K. Adachi, presiding			
17:05	1D18	Synthesis of Core-Shell Type Nanoparticles by Free-Radical Crosslinking Multiallyl/Multivinyl Copolymerizations and Modification of Their Shell Structures <u>Satoshi Inoue</u> ,Hiroyuki Aota,Akira Matsumoto,Katsutoshi Yokoyama,Yasuo Matoba,Michirou Shibano 2451	2451

17:30	1D19	Preparation and Characterization of core-shell structured PMMA-Silica Hybrids (2) <u>Souhei Aruga</u> , Yasuharu Yamada.....	2453
17:55	1D20	Synthesis and Characterization of Epoxy-fluoroalkyl Copolymers <u>Masanao Hara</u> , Hiroshi Uchida.....	2455

Thursday, September 16

Polymer Chemistry: Synthesis and Reactions

Y. Chujo, presiding

9:10	2D01	Novel Series of Siloxane Polymers Alternately Bearing Cage Units and Chains <u>Kunihiro Komori</u> , Naoto Sueyoshi, Keiji Tanaka, Takashi Matsuo, Kiyoshi Sakai, Masashi Kunitake.....	2457
9:35	2D02	Synthesis of Schiff Base-type conjugated aromatic polymers bearing hydrophilic groups <u>Tomoaki Shinoda</u> , Ryota Tanoue, Rintaro Higuchi, Shinobu Uemura, Masashi Kunitake.....	2459
10:00	2D03	Dynamic Behavior of Novel Molecular Helix with an Extremely High pi-Electron Density <u>Eisuke Ohta</u> , Hiroyasu Satoh, Shinji Ando, Atsuko Kosaka, Yuki Suna, Takanori Fukushima, Daisuke Hashizume, Takuzo Aida.....	2461

M. Kunitake, presiding

10:25	2D04	Hybridization of [2.2]paracyclophane containing through-space conjugated polymer <u>Yuichi Tsuji</u> , Yasuhiro Morisaki, Yoshiki Chujo.....	2463
10:50	2D05	Strong Luminescence Based on Energy Transfer from Conjugated Polymer Main-Chain to Boron Aminoquinolate as Pendant Groups <u>Yuichiro Tokoro</u> , Atsushi Nagai, Yoshiki Chujo.....	2465

T. Takata, presiding

11:15	2D06	Multi-emissive Polymers Containing Boron Diketonate Derivatives <u>Ryousuke Yoshii</u> , Atsushi Nagai, Yoshiki Chujo.....	2467
11:40	2D07	Oligo(thienylfuran)s-Layered Polymers <u>Jonas Alves Fernandes</u> , Yasuhiro Morisaki, Yoshiki Chujo.....	2469

M. Kakimoto, presiding

12:55	2D08	Synthesis and luminescent property of graft copolymers consisting of poly(p-phenylenevinylene) and poly(methyl methacrylate) <u>Kaori Funatsu</u> , Kousuke Tsuchiya, Kenji Ogino.....	2471
13:20	2D09	Preparation, Basic Chemical Properties and Structures of pi-Conjugated Copolymers Consisting of Thiophene and Pyridine or Pyrimidine <u>Hiroki Fukumoto</u> , Yoshiki Fujiwara, Takakazu Yamamoto.....	2473

K. Sada, presiding

13:45	2D10	Preparation of magnetite-containing polymer particles by utilizing amphiphilic macromonomers <u>Yukinori Shirai</u> , Isato Kura, Jin Motoyanagi, Masahiko Minoda.....	2475
14:10	2D11	Synthesis of novel polymer/magnetite nanocomposites by using hydrophilic star-shaped polymers as a template <u>Masaki Murata</u> , Isato Kura, Jin Motoyanagi, Masahiko Minoda.....	2477

T. Ogoshi, presiding			
14:35	2D12	Synthesis of organic-inorganic hybrids using amino acid-based block copolymers <u>Shoko Saito</u> , Hideharu Mori	2479
15:00	2D13	Synthesis of Network Polymers based on Tetraphenylborates <u>Yuki Furukawa</u> , Kazuki Sada	2481
15:25	2D14	Development of Novel Cationic DADMAC Polymers by Crosslinking Copolymerizations of Cyclopolymerizable DADMAC Monomer with Multiallyl Ammonium Chlorides as Crosslinkers <u>Norikazu Izumi</u> , Tadashi Kageyama, Tsutomu Sunada, Akira Matsumoto	2483
H. Yokoyama, presiding			
15:50	2D15	Construction of supramolecular networks from imidazolium cations and pillar[5]arene <u>Shunya Tanaka</u> , Tomoki Ogoshi, Tada-aki Yamagishi	2485
16:15	2D16	Polyrotaxane made from pillar[5]arene and viologen polymer <u>Tomoki Ogoshi</u> , Yoko Nishida, Tada-aki Yamagishi, Yoshiaki Nakamoto ...	2487
M. Miyata, presiding			
16:40	2D17	A Versatile Synthesis of Various CD-Polyrotaxanes by a Novel End-Capping Reaction <u>Kazuaki Kato</u> , Kohzo Ito	2489
17:05	2D18	Supramolecular Nitroxide Radical Polymer and its Electron Transfer <u>Satoshi Nakajima</u> , Masayuki Minatozaki, Hiroyuki Nishide	2491

Friday, September 17

Polymer Chemistry: Synthesis and Reactions

T. Aoki, presiding			
9:10	3D01	Tail-to-Tail Dimerization of Methyl Methacrylate Catalyzed by N-Heterocyclic Carbene <u>Shin-ichi Matsuoka</u> , Yoshiya Oota, Atsushi Washio, Koji Takagi, Masato Suzuki	2493
9:35	3D02	Synthesis and polymerization of heteroaromatics-hybridized cardo monomers and properties of the resulting polymers <u>Hitoshi Okuda</u> , Yasuhito Koyama, Toshikazu Takata	2495
S. Matsuoka, presiding			
10:00	3D03	Optimization of Preparation of Supramolecular Self-Supporting Membranes by Highly Selective Cycloaromatization of Cis-cisoidal Poly(substituted acetylene) Membranes <u>Yunosuke Abe</u> , Ken Taguwa, Lijia Liu, Yu Zang, Hiromichi Endo, Hiroshi Oono, Tomoyuki Ohishi, Yuriko Kakihana, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki	2497
10:25	3D04	Blue and White Light Emission of Organic-Inorganic Hybrids Containing Organoboron Dyes <u>Yuichi Kajiwara</u> , Atsushi Nagai, Yoshiki Chujo	2499
10:50	3D05	Preparation of Hydrogels Composed of Biodegradable Components through the Formation of Inclusion Complexes of Amylose <u>Tsuyoshi Kyutoku</u> , Yoshiro Kaneko, Hidemitsu Furukawa, Jun-ichi Kadokawa	2501
J. Kadokawa, presiding			
11:15	3D06	Dissipative Structures Depending on the Stereoregularities of Polymers <u>Yasunao Miyamura</u> , Kazushi Kinbara, Takuzo Aida	2503

11:40	3D07	Alignment Control of Molecular Assemblies by Application of Electric Fields <u>Yoshiko Shoji</u> , Masafumi Yoshio, Takuma Yasuda, Masahiro Funahashi, Takashi Kato	2505
H. Fukumoto, presiding			
12:55	3D08	Construction of nanoscopic solvent phase within M12L24 spherical complex <u>Kiyotaka Takao</u> , Kosuke Suzuki, Sota Sato, Makoto Fujita	2507
13:20	3D09	Supramolecular polymer having mendable ability <u>Nobuhiro Oya</u> , Naoko Yoshie	2509
N. Yoshie, presiding			
13:45	3D10	Supramolecular cross-linking of dumbbell-shaped PEG with β -CD dimer/tetramer based on slipping at elevated temperature, accompanied by kinetic stabilization <u>Yuichiro Kobayashi</u> , Ryo Katoono, Masayuki Yamaguchi, Nobuhiko Yui...	2511
14:10	3D11	Multi-Functional Nanosheets made of Amphiphilic Fullerene Derivatives <u>Satoshi Otsuji</u> , Junko Takizawa, Tadashi Fukawa, Mutsumi Kimura ...	2513
14:35	3D12	Luminescent switching of a π -conjugated oligomer in a flexible coordination nanospace <u>Koji Kitayama</u> , Nobuhiro Yanai, Takashi Uemura, Susumu Kitagawa ...	2515
M. Kimura, presiding			
15:00	3D13	Construction of Porous Structures by Hierarchical Accumulation of Supramolecular Assemblies of Ammonium Sulfonates Using Non-covalent Interactions <u>Atsushi Yamamoto</u> , Norimitsu Tohnai, Ichiro Hisaki, Mikiji Miyata	2517
15:25	3D14	Solid-state photoluminescence properties depending on the arrangements of fluorophores of hydrogen-bonding supramolecular assembly <u>Tomoaki Hinoue</u> , Norimitsu Tohnai, Ichiro Hisaki, Mikiji Miyata	2519

Room E

Wednesday, September 15

Development of Structurally Unique Polymer

9:50	SO	Introductory Remarks Seigou Kawaguchi	2774
T. Yokozawa, presiding			
10:00	1E03	Synthesis of Hyperbranched Polymers by Metal-Catalyzed Radical Polyaddition of AB _x Monomers <u>Daisuke Ito</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito	2775
10:25	1E04	Synthesis of Novel Acid-Cleavable Block Copolymer via Click Reaction and NMP <u>Kotaro Satoh</u> , Justin Poelma, Luis Campos, Craig Hawker	2777
T. Hayakawa, presiding			
10:50	1E05	Assembled structures and optoelectronic properties of amphiphilic block copolymers composed of nonconjugated N-vinyl monomers having an aromatic heterocycle <u>Kazunori Ishikawa</u> , Hideharu Mori, Atsuhiko Onuma, Makoto Morishima....	2779

11:15	1E06	Synthesis and Optical Properties of Aromatic Amide Oligomers and Polymers Bearing Pi-Conjugated System <u>Koji Takagi</u> , Ryohei Yamakado, Katsuya Nobuke, Shin-ichi Matsuoka, Masato Suzuki 2781	2781
11:40	1E07	Synthetic Study of Ladder-type Polyamide by Connecting Benzene Rings with Two Amide Linkages. <u>Ryohei Kiyota</u> , Makoto Karasawa, Akihiro Yokoyama, Tsutomu Yokozawa.... 2783	2783
K. Satoh, presiding			
12:55	1E08	Synthesis and Hierarchically Nanostructure Formation of Side-chain Type of Functional Block Copolymers <u>Teruaki Hayakawa</u> , Rina Maeda, Masa-aki Kakimoto 2785	2785
13:20	1E09	Large-Scale Hierarchical Ordering of Polymer Brushes toward Optical Functions <u>Nobuhiko Hosono</u> , Takashi Kajitani, Takanori Fukushima, Takuzo Aida 2787	2787
13:45	1E10	Solubilization of fullerene into polar solvents through the inclusion complex formation of st-PMMA <u>Mariko Kawauchi</u> , Takehiro Kawauchi, Tsutomu Takeichi..... 2789	2789
A. Narumi, presiding			
14:10	1E11	Supramolecular association of stereoblock copolymers induced by stereocomplexation – Effect of block length and composition on association <u>Masateru Yamazaki</u> , Takehiro Kitaura, Tatsuki Kitayama, Kohei Tanaka, Takahiro Sato 2791	2791
14:35	1E12	Precise synthesis of well-defined graft copolymers by means of living anionic polymerization <u>Kota Murano</u> , Ryosuke Kurokawa, Masahiro Uematsu, Akira Hirao 2793	2793
15:00	1E13	Investigation on the selection between ring-opening and ring-eliminating reactions of the cyclic ammonium salt end groups of poly(THF)s : experimental and computational studies. <u>Akihiro Kimura</u> , Shinnosuke Takahashi, Takuya Yamamoto, Susumu Kawauchi, Yasuyuki Tezuka 2795	2795
T. Kitayama, presiding			
15:25	1E14	Construction of Bridged-, Spiro- and Fused-Multicyclic Polymer Topologies through Click Chemistry and Metathesis <u>Naoto Sugai</u> , Hiroyuki Heguri, Takuya Yamamoto, Yasuyuki Tezuka 2797	2797
15:50	1E15	Development of novel synthetic route for macrocyclic vinylpolymers based on controlled radical polymerization <u>Yoko Ohashi</u> , Atsushi Narumi, Seigou Kawaguchi, Wolfgang Binder..... 2799	2799
H. Mori, presiding			
16:15	1E16	Architecture and investigation of phase separation in solution for prototype and random copolymer brushes <u>Nobuyuki Okamoto</u> , Satoshi Uchida, Shuichi Nojima, Koji Ishizu 2801	2801
16:40	1E17	Kinetic analysis for one-pot synthesis of polymer brushes by simultaneous polymerization of AGET-ATRP and ROP <u>Saki Tanigawa</u> , Satoshi Uchida, Koji Ishizu 2803	2803
17:05	1E18	Synthesis and Function of Hyperbranched Polyethyleneimine-Polyglycerol Modified with Phenyl Groups at Terminal Units <u>Hiroshi Ichiyanagi</u> , Suguru Motokucho, Ken Kojio..... 2805	2805
S. Uchida, presiding			
17:30	1E19	Characteristics of hyperbranched polysaccharides obtained from 1,6- anhydro-D-hexose <u>To Hoai Nguyen</u> , Akiyoshi Sasaki, Masahide Sasaki, Harumi Kaga, Toshifumi Satoh, Toyoji Kakuchi 2807	2807

17:55	1E20	Synthesis and characteristics of hyperbranched poly(2-hydroxymethyl cyclic ether) <u>Toshifumi Satoh</u> , Masaki Tamaki, Tsukasa Taguchi, Harumi Kaga, Ryosuke Sakai, Toyoji Kakuchi.....	2809
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Thursday, September 16

Development of Structurally Unique Polymer

T. Satoh, presiding

9:10	2E01	Preparation of Long-Branched Poly(ether sulfone) from Self-Polycondensation of AB ₂ Type Macromonomer <u>Daisuke Uchida</u> , Takuya Kai, Kazuya Matsumoto, Mitsutoshi Jikei.....	2811
9:35	2E02	Synthesis of Well-Defined Hyperbranched Polyamide- <i>b</i> -PEG <u>Yoshihiro Ohta</u> , Teruaki Kanou, Akihiro Yokoyama, Tsutomu Yokozawa....	2813

Y. Tsujii, presiding

10:00	2E03	Densely grafted polymer brushes synthesized by RAFT polymerization of poly(vinyl ether)-based macromonomers and NIPAM <u>Tatsuya Shimizu</u> , Jin Motoyanagi, Masahiko Minoda	2815
10:25	2E04	Dilute Solution Properties of Polystyrene Polymacromonomers Having Side Chains with a Few Repeating Units <u>Yo Nakamura</u> , Shuhei Matsumoto.....	2817

M. Minoda, presiding

10:50	2E05	Synthesis and Characterization of Knotted Ring Polymer <u>Yutaka Ohta</u> , Atsushi Takano, Yushu Matsushita	2819
11:15	2E06	Precise synthesis of concentrated polymer brush-aforded rods <u>Tatsuya Sasano</u> , Huang Yun, Kohji Ohno, Takeshi Fukuda, Yoshinobu Tsujii	2821
11:40	2E07	Precise structural control of graft-type gels and their concentrated-brush effect <u>Ryo Nakahara</u> , Akihiro Nomura, Kohji Ohno, Atsushi Goto, Takeshi Fukuda, Yoshinobu Tsujii	2823

Polymers beyond Linear Topologies

12:45	SO	Introductory Remarks <u>Hideaki Oike</u> , Junji Sakamoto	2825
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D. Jiang, presiding

12:55	2E08	Preparation of supramolecular material using cyclodextrin dedrimer <u>Shogo Yoshida</u> , Yoshinori Takashima, Hiroyasu Yamaguchi, Akira Harada.....	2826
13:20	2E09	Preparation and functions of dendrimers and their assemblies having temperature-sensitive properties <u>Kenji Kono</u> , Keishi Takeda, Yuki Hiranaka, Eiji Yuba, Atsushi Harada	2828
13:45	2E10	Molecular Conformation and Aggregation Structure of Novel H-type Alkanes as a Model Compound of Branched Polymers. <u>Hiroko Yamamoto</u> , Kohji Tashiro, Norio Nemoto	2830

H. Murakami, presiding

14:10	2E11	Selective Formation of Inclusion Complexes between Cyclodextrins and Stereoregular Poly(methacrylic acid)s <u>Takashi Miura</u> , Toshiyuki Kida, Mitsuru Akashi.....	2832
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14:35	2E12	Complexation property of loose-fit polyrotaxane composed of γ -CD and single PEG chain <u>Akihiro Takahashi</u> , Ko Yamada, Ryo Katoono, Nobuhiko Yui 2834	2834
15:25	2E14	Preparation of a Sliding Graft Copolymer having PEG side chains via a Post-Grafting Method <u>Jun Araki</u> , Kousaku Ohkawa, Yusuke Uchida, Chikara Yoshida, Yoshihiko Murakami 2836	2836
R. Katoono, presiding			
15:50	2E15	Synthesis of Side Chain-type Polyrotaxane and Control of Shuttling Behavior of The Rotaxane Moiety <u>Sakiko Suzuki</u> , Fumitaka Ishiwari, Kazuko Nakazono, Toshikazu Takata... 2838	2838
16:15	2E16	Synthesis and Property of a Polyurethane crosslinked by a Polyrotaxane <u>Hiroto Murakami</u> , Megumi Fukushima, Ken Kojio 2840	2840
16:40	2E17	Synthesis and Properties of Hydrogel with Movable Cross-Linking <u>Masataka Kubo</u> , Kazuhiro Ishida, Takahiro Uno, Takahito Itoh 2842	2842
17:05	2E18	Donor-Acceptor Type Polythiophene Polyrotaxane Thin Film <u>Taichi Ikeda</u> , Masayoshi Higuchi 2844	2844

Friday, September 17

Polymers beyond Linear Topologies

M. Kubo, presiding

9:10	3E01	Ring-expansion polymerization of cyclic thioesters and thiiranes <u>Yuki Takeshi</u> , Hiroto Kudo, Tadatomi Nishikubo 2846	2846
9:35	3E02	Acyl-transfer polymerization and ring-expansion polymerization of thiourethane and thiirane <u>Hiroto Kudo</u> , Kenichiro Sato, Takashi Iwamoto, Ryotaro Wakai, Tadatomi Nishikubo 2848	2848
10:00	3E03	Synthesis of cyclic polystyrene by living radical polymerization with cyclic initiators <u>Haruhisa Tamada</u> , Syunsuke Yabuki, Yuta Nakagawa, Hideaki Oike.... 2850	2850

H. Oike, presiding

10:25	3E04	Synthesis of sun-shaped polymers by grafting-from methods <u>Yusuke Hamaguchi</u> , Ryota Uemura, Kaoru Adachi, Yasuhisa Tsukahara 2852	2852
10:50	3E05	Synthesis and Topological Conversion of an 8-shaped Poly(THF) Having a Metathesis-cleavable Unit at the Focal Position <u>Kazuyuki Ishikawa</u> , Takuya Yamamoto, Yasuyuki Tezuka 2854	2854
11:15	3E06	Synthesis of spiro-shaped multicyclic polymers via a polymer-polymer coupling reaction using click chemistry <u>Hiroyuki Heguri</u> , Naoto Sugai, Takuya Yamamoto, Yasuyuki Tezuka.... 2856	2856
11:40	3E07	Synthesis of ladder cyclic oligomer based on dynamic covalent chemistry by the reaction of resorcinoland 1,9-nonanedial. <u>Hideatsu Ishihara</u> , Hiroto Kudo, Tadatomi Nishikubo 2858	2858

J. Sakamoto, presiding

12:55	3E08	Synthesis and characterization of soluble chiral hetero-ladder polymers by intramolecular postpolymerization between the side chains of one-handed helical polyacetylenes <u>Kohki Era</u> , Ikuya Wasuzu, Hiroyuki Tanagi, Tomoyuki Ohishi, Yuriko Kakihana, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki 2860	2860
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13:20	3E09	Mechanical and thermal properties of block copolymers containing ladder-like sequence <u>Akari Mizuno</u> , Reiko Saito 2862	2862
13:45	3E10	Alignment of Conjugated Oligomers and Polymers <u>Masayuki Takeuchi</u> , Takahiro Kaseyama, Sanjib Das, Vijayakumar Chakkooth 2864	2864
14:10	3E11	Construction and Functions of Two-dimensional Polymers <u>Donglin Jiang</u> 2866	2866
M. Takeuchi, presiding			
14:35	3E12	Organic chemistry approaches towards two-dimensional polymers <u>Junji Sakamoto</u> , A. Dieter Schlueter..... 2868	2868
15:00	3E13	Controlled and Site-Specific Self-Assembly of an Amphiphilic Molecular Graphene with a Polymer <u>Chiyong Park</u> , Takanori Fukushima, Takuzo Aida 2870	2870
15:25	3E14	Shape change of graphene oxide molecule and Particle scattering function of two-dimensional flexible macromolecule <u>Masukazu Hirata</u> 2872	2872

Room F

Wednesday, September 15

Chirality of Macromolecules and Supramolecules

9:50	SO	Introductory Remarks Kiyotaka Onitsuka 2674	2674
D. Takeuchi, presiding			
10:00	1F03	Controlled Copolymerization by Metal Complex [50]–Dual Production by Chirality Matching in Enantioselective Copolymerizations of Carbon Dioxide and Epoxides Having Bulky Side Groups <u>Kaori Sakurai</u> , Hidetoshi Goto, Hiroshi Sugimoto 2675	2675
10:25	1F04	Enantioselective polymerization of epoxides with bimetallic cobalt catalyst system <u>Wataru Hirahata</u> , Geoffrey W. Coates 2677	2677
H. Sugimoto, presiding			
10:50	1F05	Polymerization of 3-Methylcyclopentene by Metal Complexes with Diimine Ligands – Different Polymerization Mechanism Depending on Optical Purity of the Monomer <u>Takumi Nishimori</u> , Takeshi Okada, Daisuke Takeuchi, Kohtaro Osakada... 2679	2679
11:15	1F06	Complexation of P-stereogenic optically active polymers to transition metals and their structural change <u>Hiroaki Imoto</u> , Yasuhiro Morisaki, Yoshiki Chujo 2681	2681
11:40	1F07	The structure of poly(N-substituted-N-vinylamide derivative)s and their application as optically active materials <u>Hiroharu Ajiro</u> , Mitsuru Akashi 2683	2683
A. Yokoyama, presiding			
12:55	1F08	Asymmetric Anionic Polymerization of 2,6-Dimethylquinone Methides with Chlorophenyl Groups Maho Akita, <u>Takahiro Uno</u> , Masataka Kubo, Takahito Itoh..... 2685	2685

13:20	1F09	Syntheses of chiral polymers as a thermal denaturation model of proteins and their thermo-sensitivities <u>Shohei Nishimori</u> , Sachiko Tsuda, Takashi Aoki..... 2687	2687
13:45	1F10	Synthesis of Optically Active Maleimide Polymer Using Chiral Amines <u>Tsutomu Oishi</u> , Motohisa Azechi, Kazuhiro Yamabuki, Kenjiro Onimura.... 2689	2689
K. Maeda, presiding			
14:10	1F11	Solvent Effect on Helical Conformation of Water-soluble Poly(naphthalenecarboxamide) <u>Koichiro Mikami</u> , Akihiro Yokoyama, Tsutomu Yokozawa 2691	2691
14:35	1F12	A photodegradable, optically active, helical polymer <u>Takeshi Sakamoto</u> , Tamaki Nakano..... 2693	2693
15:00	1F13	Induced Circular Dichroism of Optically Active Polyfluorene Derivatives in Phase-Separating Solutions Yusuke Sanada, Ken Terao, <u>Takahiro Sato</u> 2695	2695
15:25	1F14	Synthesis and Properties of Azobenzene-containing Optically Active Poly(m-phenyleneethynylene)s <u>Hiromitsu Sogawa</u> , Masashi Shiotsuki, Fumio Sanda 2697	2697
T. Oishi, presiding			
15:50	1F15	Control of chirality and morphology on spiral conjugated polymers by using photoresponsive asymmetric liquid crystal reaction field. <u>Keishi Nishimura</u> , Yong Soo Jeong, Yoshinori Maeda, Kazuo Akagi 2699	2699
16:15	1F16	Block Polymerization of Phenyl Isocyanides Bearing Short and Long Alkyl Chains as the Pendants and Two-Dimensional Bilayer Smectic Ordering of the Resulting Diblock Polyisocyanides <u>Motonori Banno</u> , Zong-Quan Wu, Kanji Nagai, Shin-ichiro Sakurai, Kento Okoshi, Eiji Yashima 2701	2701
16:40	1F17	Synthesis of Amphiphilic Block Copolymers Bearing an Optically Active Polyisocyanate Chains and Their Chiroptical Properties <u>Megumi Arakawa</u> , Katsuhiko Maeda, Tomoyuki Ikai, Shigeyoshi Kanoh ... 2703	2703
F. Sanda, presiding			
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Thursday, September 16

Chirality of Macromolecules and Supramolecules

T. Sanji, presiding

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9:35	2F02	Synthesis and properties of an optically active hyperbranched polymer containing fluorene moieties Juin-meng Yu, Takeshi Sakamoto, Seiichi Furumi, Nobuyuki Tamaoki, Yun Chen, <u>Tamaki Nakano</u>	2713
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M. Higuchi, presiding

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Room G

Wednesday, September 15

Role of Fundamental Researches for Developing New Polymeric Materials

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M. Hikosaka, presiding			
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K. Inomata, presiding

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Room H

Wednesday, September 15

Variety and Universality in Soft Matter

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H. Watanabe, presiding

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T. Shikata, presiding

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K. Fukao, presiding

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S. Komura, presiding

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A. Takano, presiding

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T. Shiomi, presiding

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Y. Tsujii, presiding

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10:00	3H03	Evaluation of Topological and Connective defects in Tetra-PEG gel <u>Yuki Akagi</u> , Takuro Matsunaga, Mitsuhiro Shibayama, Ung-il Chung, Takamasa Sakai 3347	3347

K. Urayama, presiding

10:25	3H04	Anomalous Dynamics of Phase Separation Induced by Photopolymerization in Polymer Mixtures – Polymer Mixtures <u>Qui Tran-cong-miyata</u> , Daisuke Fujiki, Atsuko Hirose, Tomokazu Kinohira, Kei Kawazoe, Tomohisa Norisuye 3349	3349
10:50	3H05	Macroscopic Fluctuations and External Field Response in Dissipative Structures of a Liquid Crystal <u>Yoshiki Hidaka</u> , Fahrudin Nugroho, Tatsuhiro Ueki, Rinto Anugraha, Shoichi Kai..... 3351	3351
11:15	3H06	Cation-Specific Structural Transition for a Diamine amphiphile in Aqueous Solutions <u>Tomoki Nishimura</u> , Hiroyasu Masunaga, Isamu Akiba, Kazuo Sakurai... 3353	3353
11:40	3H07	Stimuli-Sensitive Behaviors of Lipophilic Polyelectrolytes Bearing Urea Groups <u>Shogo Amemori</u> , Kazuki Sada..... 3355	3355

Q. Tran-Cong-Miyata, presiding

12:55	3H08	Decaying process of turbulence in 2-dimensional flow field composed of surfactant bilayer film studied with its interference pattern <u>Ruri Hidema</u> , Hidemitsu Furukawa, Hideharu Ushiki 3357	3357
13:20	3H09	Viscoelastic phase separation in polymer solutions and the formation of porous materials <u>Didi Derks</u> , Hajime Tanaka, Hiroshi Uyama 3359	3359

13:45	3H10	Asymmetric Modification of Monolayered Ferritin Proteins Adsorbed on the Liquid-Liquid Interface <u>Akihiro Arikawa</u> ,Koichiro Uto,Kazuya Yamamoto.....	3361
		S. Sakurai, presiding	
14:10	3H11	Small-angle neutron scattering on Tetra-PEG gel under elongation <u>Takuro Matsunaga</u> ,Yuki Akagi,Ung-il Chung,Takamasa Sakai,Mitsuhiro Shibayama	3363
14:35	3H12	Mechanical Properties of Super Soft Gels Revealed by Biaxial Stretching Measurements in Solvents Yohsuke Bitoh,Yuji Yatsunami, <u>Kenji Urayama</u> ,Toshikazu Takigawa,Kohzo Ito	3365
15:00	3H13	The lubrication mechanism of concentrated polymer brush - formation and control of hydrodynamic lubrication layer <u>Akihiro Nomura</u> ,Kohji Ohno,Takeshi Fukuda,Yoshinobu Tsujii	3367
15:25	3H14	Molecular Conformation and High-Order Structure of Polyrotaxane in Solution <u>Koichi Mayumi</u> ,Hitoshi Endo,Michihiro Nagao,Hideaki Yokoyama, Kazuaki Kato,Jürgen Allegaier,Vitaliy Pipich,Olaf Holderer,Michael Monkenbusch,Dieter Richter,Mitsuhiro Shibayama,Kohzo Ito	3369

Room I

Wednesday, September 15

Functional and Biological Gels and Networks - Experiment and Theory -

9:50	SO	Introductory Remarks Jian Ping Gong.....	4307
		M. Annaka, presiding	
10:00	1I03	Fabrication and Functional Creation of Magnetically Attracted Smart Coacervate for a Novel Transport Carrier for Biomolecules <u>Yuki Kodama</u> ,Tomohiro Maeda,Kazuya Yamamoto,Takao Aoyagi.....	4308
10:25	1I04	Preparation of Dynamic Nanogels Cross-linked with Proteins <u>Yuji Tsuchido</u> ,Yoshihiro Sasaki,Kazunari Akiyoshi	4310
10:50	1I05	Poly(allyl amine) derivatives exhibiting UCST behavior under physiological conditions <u>Naohiko Shimada</u> ,Arihiro Kano,Atsushi Maruyama	4312
		J. Gong, presiding	
11:15	1I06IL	Design of Cell-recognizable Chimeric Antibodies for Es/iPS Cells Control. <u>Toshihiro Akaike</u> , Ichiro Harada, Bayar Hexig, Hirohiko Ise.....	4314
		A. Maruyama, presiding	
12:55	1I08	Development of a "Smart" Fiber Net with a Quick "On-Off" Response and Its Application to a Cell Culture Substrate <u>Tomohiro Maeda</u> ,Mitsuhiro Ebara,Takao Aoyagi.....	4317
13:20	1I09	Construction of Novel Soft Materials with 3D-Structured Blood Vessels <u>Hiroaki Yoshida</u> ,Michiya Matsusaki,Mitsuru Akashi.....	4319
13:45	1I10	Synthesis of novel stimuli-responsive gel particles exhibiting molecular-responsive behavior <u>Yuta Hata</u> ,Ryo Ikeda,Takashi Miyata,Tadashi Uragami.....	4321

14:10	1I11	Network structure and degradation behavior of PEG based nanocomposite gels <u>Kazutoshi Haraguchi</u> , <u>Mieko Fukasawa</u>	4323
H. Endo, presiding			
14:35	1I12	Physical properties and functions of extracellular substances – Hyaluronan and mucins <u>Kiminori Ushida</u>	4325
15:00	1I13	nonequilibrium mechanics of cytoskeletal networks <u>Daisuke Mizuno</u>	4327
15:25	1I14	Development of A Novel System for the Structure Analysis in Gels via Scanning Microscopic Light Scattering (SMILS) <u>Hidemitsu Furukawa</u> , <u>Ruri Hidema</u>	4329
H. Furukawa, presiding			
15:50	1I15	Structural investigation on uniaxially stretched nanocomposite hydrogel by means of contrast variation small-angle neutron scattering <u>Hitoshi Endo</u> , <u>Toshihiko Nishida</u> , <u>Mitsuhiro Shibayama</u> , <u>Hyan-Jun Li</u> , <u>Kazutoshi Haraguchi</u>	4331
16:15	1I16	Anisotropic gelation of collagen <u>Kazuya Furusawa</u> , <u>Shoichi Sato</u> , <u>Akimasa Fukui</u> , <u>Naoki Sasaki</u> , <u>Yasuyuki Maki</u> , <u>Takao Yamamoto</u> , <u>Toshiaki Dobashi</u>	4333
16:40	1I17	Anisotropic gel of calcium alginate <u>Yasuyuki Maki</u> , <u>Natsuki Hosoya</u> , <u>Chikayoshi Yoneyama</u> , <u>Kei Ito</u> , <u>Toshiaki Dobashi</u>	4335
Y. Maki, presiding			
17:05	1I18	Study on the mechanical behavior of double network hydrogel based on nonaffine molecular chain network model <u>Isamu Riku</u> , <u>Kyosuke Morizane</u> , <u>Koji Mimura</u>	4337
17:30	1I19	The relationship between the swelling ratio and the elasticity of Tetra - PEG gel <u>Manami Kurakazu</u> , <u>Takuya Katashima</u> , <u>Ung-il Chung</u> , <u>Takamasa Sakai</u>	4339
17:55	1I20	Gelation Mechanism of Agarose Solution Studied by NMR Measurements <u>Bona Dai</u> , <u>Shingo Matsukawa</u>	4341

Thursday, September 16

Functional and Biological Gels and Networks - Experiment and Theory -

T. Kurokawa, presiding			
9:10	2I01	Gelation Mechanism and Network Structure in Carrageenan Solutions Studied by Gradient NMR <u>Qihua Zhao</u> , <u>Shingo Matsukawa</u>	4343
9:35	2I02	Synthesis and characteristics of redox-responsive POSS-containing network polymers <u>Kazuo Tanaka</u> , <u>Wataru Ohashi</u> , <u>Yoshiki Chujo</u>	4345
10:00	2I03	Controlling Formation of Supramolecular Hydrogel by Redox <u>Masaki Nakahata</u> , <u>Yoshinori Takashima</u> , <u>Hiroyasu Yamaguchi</u> , <u>Akira Harada</u>	4347
K. Tanaka, presiding			
10:25	2I04	Novel tough and shock-absorbing hydrogel with polyion complex structure <u>Taolin Sun</u> , <u>Shinya Kuroda</u> , <u>Takayuki Kurokawa</u> , <u>Jian Ping Gong</u>	4349

10:50	2I05	A facile method to synthesize tough DN hydrogel thin films from particle precursors and visualization of fracture process <u>Jian Hu</u> , Shinya Kuroda, Takayuki Kurokawa, Jian Ping Gong 4351	4351
11:15	2I06	Enzymatic synthesis of poly(γ -glutamic acid)-tyramine conjugate hydrogel by oxidative coupling and its applications <u>Mai Kashimoto</u> , Eun-Hye Lee, Yasushi Takeuchi, Takashi Tsujimoto, Hiroshi Uyama 4353	4353
11:40	2I07	Creation of Hydrogels with Ultra High Mechanical Strength [XXVI]: Creation of Novel DN Gels by Using Strong Polyelectrolyte as Molecular Stent <u>Hitomi Satoh</u> , Tasuku Nakajima, Takayuki Kurokawa, Jian Ping Gong 4355	4355

Organic Solar Cells -Present and Future-

12:45	SO	Introductory Remarks <u>Shuzi Hayase</u> , Yoshinori Nishikitani 4571	4571
Y. Nishikitani, presiding			
12:55	2I08IL	Solar Cells from the Viewpoint of Bio-inorganic Chemistry <u>Hideki Masuda</u> 4572	4572
H. Matsui, presiding			
13:45	2I10	Cost Effective and Area-scalable Dye-sensitized Solar Cell with Micro-honeycomb Metal Electrode <u>Minoru Watanabe</u> 4575	4575
14:10	2I11	Development of squarylium near-infrared absorbing dyes for dye-sensitized solar cell <u>Hiroyuki Nakazumi</u> 4577	4577
14:35	2I12	Effects of using conducting polymer to quasi-solid-state dye-sensitized solar cells <u>Takanori Ohinata</u> , Tatsuo Mori 4579	4579
15:00	2I13	Development of Dye-sensitized Solar Cell Module <u>Katsuyoshi Mizumoto</u> , Tatsuo Toyoda, Naohiko Kato, Kazuo Higuchi ... 4581	4581
M. Watanabe, presiding			
15:25	2I14	Highly durable dye-sensitized solar cells for outdoor use <u>Hiroshi Matsui</u> , Kenichi Okada, Takeshi Yamaguchi, Nobuo Tanabe, Hironori Arakawa 4583	4583
15:50	2I15	Control in morphology of organic photovoltaic cell based on block copolymer blend <u>Kousuke Tsuchiya</u> , Tatsuya Kantou, Songeun Malee, Kenji Ogino 4585	4585
16:15	2I16	Self-organization characteristics of fullerene derivatives on wettability-controlled carbon substrate for organic thin film solar cell <u>Yusuke Tajima</u> , Kazumasa Takeshi, Teiji Chihara 4587	4587
16:40	2I17	Organic Photovoltaic Cells based on Polysilane <u>Hiroaki Tachibana</u> , Toya Mizuno, Satoko Ishibe 4589	4589
17:05	2I18	Utilization of electrodeposited polythiophenes for the low-cost production of organic thin film solar cells Yousuke Kamikado, <u>Yoshihiko Tezuka</u> , Hitoshi Tanaka 4591	4591

Friday, September 17

Organic Solar Cells -Present and Future-

H. Ohkita, presiding

- 9:10 3I01 Bulk Heterojunction solar cells composed of self-organized columnar assemblies of disk-like molecules bearing conjugated oligomers
Keisuke Takemoto, Tadashi Fukawa, Mutsumi Kimura, Hirofusa Shirai 4593
- 9:35 3I02 Development of donor materials for organic thin-film solar cells
Daisuke Kitazawa, Nobuhiro Watanabe, Shuhei Yamamoto, Jun Tsukamoto 4595
- 10:00 3I03 Series circuit of organic thin-film solar cells for energy conversion of hydrogen gas
Mitsuru Naruse, Atsushi Aoki, Takayuki Abe 4597

K. Nagai, presiding

- 10:25 3I04 Ambipolar transport of fullerene in low-bandgap polymer solar cells
Shunsuke Yamamoto, Hideo Ohkita, Hiroaki Benten, Shinzaburo Ito... 4599
- 10:50 3I05 Bimolecular recombination in polythiophene/fullerene solar cells
Hideo Ohkita, Jiamo Guo, Hiroaki Benten, Shinzaburo Ito 4601
- 11:15 3I06 Highly Efficient Polythiophene/Fullerene Solar Cells by the Interfacial Modification Using Near-Infrared Dyes
Hiroaki Benten, Satoshi Honda, Seiichirou Yokoya, Hideo Ohkita, Shinzaburo Ito 4603
- 11:40 3I07 Near-Infrared Dye-Sensitization in Polymer-based Solar Cells Studied by Transient Absorption Spectroscopy
Seiichirou Yokoya, Satoshi Honda, Hideo Ohkita, Hiroaki Benten, Shinzaburo Ito 4605

T. Toyoda, presiding

- 12:55 3I08 Photoelectrode characteristics of organic p/n bilayer in the water phase
Toshiyuki Abe, Keiji Nagai 4607
- 13:20 3I09 Photocatalytic properties of organic semiconductors with p-n junction – similarity to organic solar cell
Keiji Nagai, Yuzuri Yasuda, Shuai Zhang, Ichirou Kimishima, Ryohei Sakai, Tomokazu Iyoda, Toshiyuki Abe 4609
- 13:45 3I10 Photocatalytic Behavior of Visible Light Responsive Organic p-n Junction Semiconductors in Water Phase
Yuzuri Yasuda, Takayoshi Norimatsu, Tomokazu Iyoda, Toshiyuki Abe, Keiji Nagai 4611
- 14:10 3I11 Wet Process Fabrication and Photoelectric Conversion Properties of Organic Semiconductor Nanoparticles with p-n Junction
Shuai Zhang, Ryohei Sakai, Toshiyuki Abe, Takayoshi Norimatsu, Tomokazu Iyoda, Keiji Nagai 4613

T. Abe, presiding

- 14:35 3I12 Quantum Chemistry of the electron transfer in the photosynthetic reaction center
Jun-ya Hasegawa 4615
- 15:00 3I13 Photoexcited carrier dynamics of semiconductor quantum dots and photovoltaic properties
Taro Toyoda, Qing Shen 4617
- 15:25 3I14 Charge-Separation and -Propagation in Radical Polymers and their Photovoltaic Performances
Fumiaki Kato, Chie Okumura, Yuuki Kondo, Takakazu Saito, Kenichi Oyaizu, Michio Suzuka, Takashi Sekiguchi, Takeyuki Yamaki, Hiroyuki Nishide 4619

Room J

Wednesday, September 15

A Revisit to Definition of a Gel and Universality of Volume Phase Transition

9:50	SO	Introductory Remarks Atsushi Suzuki.....	3441
S. Matsukawa, presiding			
10:00	1J03	Structures and gelation process of organogels <u>Hiroyuki Takeno</u> ,Akiko Maehara,Shingo Kondo,Daisuke Yamaguchi,Satoshi Koizumi	3442
10:25	1J04	Analysis of gelation process of Tetra-PEG <u>Kengo Nishi</u> ,Masashi Chijiishi,Takuro Matsunaga,Takamasa Sakai,Ung-il Chung.....	3444
10:50	1J05	Synthesis and application of novel fluorescent solvatochromic dye <u>Yuri Furuhashi</u> ,Tasuku Nakajima,Takayuki Kurokawa,Hidemitsu Furukawa,Kouji Yamada,Jian Ping Gong	3446
I. Kaneda, presiding			
11:15	1J06	Observation of gelation by gradient NMR <u>Shingo Matsukawa</u>	3448
11:40	1J07	Emergence of Structure in Poly(N-normalpropylacrylamide) Gel Beads Solution <u>Sada-atsu Mukai</u> ,Masayuki Tokita	3450
T. Dobashi, presiding			
12:55	1J08	Effects of Microcrystallite Formation on the Swelling Behavior of Chemically Crosslinked PVA Gels—Possibility of the Volume Phase Transition <u>Keiichiro Kamemaru</u> ,Shintaro Usui,Yumiko Hirashima,Atsushi Suzuki	3452
13:20	1J09	Factors governing ultrastructure of regenerated cellulose gels <u>Shigenori Kuga</u>	3454
13:45	1J10	Thermally responsive properties of chemically cross-linked collagen hydrogel <u>Norihiro Kato</u> ,Ken-ichi Iimura,Takahisa Nakada.....	3456
N. Kato, presiding			
14:10	1J11	Age-related structural changes of cystallins induce the cataract <u>Noriko Fujii</u> ,Norihiro Fujii,Masaaki Sugiyama.....	3458
14:35	1J12	Dynamics of formation and disintegration of DNA gel <u>Toshiaki Dobashi</u> ,Daisuke Naito,Yasuyuki Maki,Takao Yamamoto	3460
15:00	1J13	What occurs when we recognize a gel in front of us?—The most primitive and straightforward approach <u>Kenichi Kurumada</u>	3462
K. Kurumada, presiding			
15:25	1J14	Surface undulation of chemical gels—Coupling of reaction-kinetics, solvent-redistribution and elastic-instability <u>Yoshimi Tanaka</u>	3464
15:50	1J15	Controlling of gelation behavior for gel-casting method and its application <u>Masayoshi Fuji</u> ,Tomoaki Kato,Hideo Watanabe,Takashi Shirai.....	3466

16:15	1J16	Advanced functional ceramics cultivated by polymeric gels <u>Masato Kakihana</u> , Hideki Kato	3468
16:40	1J17	Effect of MeOH on the relaxation time of the physical gel formed with HEUR <u>Isamu Kaneda</u>	3470
S. Yagihara, presiding			
17:05	1J18	Physical properties of poly(sodium acrylate) gels, cross-linked by aluminum ions, as hydrogel-patches. <u>Motoaki Goto</u> , Hitoshi Yamauchi	3472
17:30	1J19	Alfa-gel comprising surfactant/higher alcohol – Characterization by self-diffusion coefficient measurement <u>Kei Watanabe</u> , Haruhiko Inoue, Takashi Teshigawara, Tomoko Kimura.....	3474
17:55	1J20	Molecular diffusion in polysaccharide gels as observed by NMR <u>Makoto Shimizu</u> , Shingo Matsukawa.....	3476

Thursday, September 16

A Revisit to Definition of a Gel and Universality of Volume Phase Transition

I. Kaneda, presiding

9:10	2J01	Unusual changes of polymer/clay network structure during the swelling of nanocomposite gels <u>Huaiyin Ren</u> , Kazutoshi Haraguchi.....	3478
9:35	2J02	Hierarchical self-assembly based on doubly thermo-sensitive ABC-triblock copolymer and preparation of thermo-reversible ion-gel <u>Yuzo Kitazawa</u> , Takeshi Ueki, Kazuyuki Niitsuma, Hisashi Kokubo, Timothy Lodge, Masayoshi Watanabe	3480
10:00	2J03	The Volume Phase Transition of Flexible Length Network Model <u>Akinori Bando</u> , Kazuaki Kato, Yasuhiro Sakai, Hideaki Yokoyama, Kohzo Ito	3482

Y. Hirokawa, presiding

10:25	2J04	Phase Transition of Lipophilic Polyelectrolyte Gels in Organic Media <u>Kazuki Sada</u> , Toshikazu Ono, Kazuya Iseda, Shogo Amemori	3484
10:50	2J05	Swelling of Polymer Gels in Solutions of the Corresponding Linear Polymers <u>Hiroki Takeshita</u> , Yuta Akizawa, Daisuke Matsubara, Masamitsu Miya, Katsuhiko Takenaka, Tomoo Shiomi	3486
11:15	2J06	Elution of polymer chains from PVA cast gels and changes in the swelling behavior – effects of the degrees of polymerization and hydrolysis- <u>Saori Sasaki</u> , Emiko Otsuka, Yumiko Hirashima, Atsushi Suzuki	3488
11:40	2J07	Viscoelastic phase behavior of NIPA gel in its collapse phase – Observation by resonator with impedance analysis <u>Yoshimi Seida</u> , Yuri Nakano, Yoshio Nakano	3490

M. Tokita, presiding

12:55	2J08	Roles of hydrogen bonds in the re-swelling transition of poly(N-isopropylacrylamide-co-sodium acrylate) gels <u>Yumiko Hirashima</u> , Atsushi Suzuki.....	3492
13:20	2J09	Study on hydration and phase transition of temperature-responsive microgels <u>Yasushi Maeda</u>	3494

13:45	2J10	Dynamic behaviors of solvent molecules and polymer chains—The observation problem and the next step of water structures <u>Shin Yagihara</u> 3496	3496
14:10	2J11	Effect of Chemical and Internal Structures of Acrylamide Derivative Polymer Gels on Their Swelling Behavior <u>Yoshitsugu Hirokawa</u> , <u>Yuki Fujita</u> , <u>Tohru Kawahara</u> , <u>Satoshi Tanimoto</u> ... 3498	3498

Functional Polymers and Polymer Functions

M. Okabe, presiding

14:35	2J12	Fabrication of Monodisperse Gel Capsules by a microfluidic device <u>Masahiro Yasukawa</u> , <u>Tsutomu Ono</u> , <u>Yukitaka Kimura</u> 3500	3500
15:00	2J13	Fabrication and chemical modification of a hollow gel particle to render diverse absorbing properties. <u>Iku Koike</u> , <u>Keiji Fujimoto</u> 3502	3502
15:25	2J14	Polyethylene Glycol Grafting on Unidirectionally Aligned Lamellar Bilayer in Hydrogel <u>Md. Anamul Haque</u> , <u>Gen Kamita</u> , <u>Takayuki Kurokawa</u> , <u>Kaoru Tsujii</u> , <u>Jian Ping Gong</u> 3504	3504

Y. Nagasaki, presiding

15:50	2J15	Development of Protein-Encapsulating Microgels Using <i>in situ</i> Polymerization <u>Hidenobu Shimizu</u> , <u>Ryota Arai</u> , <u>Risei Wada</u> , <u>Masaru Okabe</u> 3506	3506
16:15	2J16	photonic chemical sensors based on templated photo-polymerization of functional hydrogels <u>Wonmok Lee</u> 3508	3508
16:40	2J17	Design of Hydrogels with Nanogel-coated Liposomes complex <u>Yurina Sekine</u> , <u>Yuki Moritani</u> , <u>Kazunari Akiyoshi</u> 3510	3510
17:05	2J18	Assembly of stimulus-sensitive gel particles with DNA-dye complex and evaluation of its property <u>Takashi Nishiyama</u> , <u>Yoshiharu Kagami</u> , <u>Kazuhiro Fujiki</u> , <u>Takeshi Yamauchi</u> , <u>Norio Tsubokawa</u> 3512	3512

Friday, September 17

Functional Polymers and Polymer Functions

T. Yamauchi, presiding

9:10	3J01	Properties of rigid polymer gels end-linked with symmetrical tetrafunctional cross-linker <u>Naoki Yoshihara</u> , <u>Daichi Kusano</u> , <u>Yusaku Nomoto</u> , <u>Mitsuhiro Shibayama</u> , <u>Takamasa Sakai</u> , <u>Toshiyuki Watanabe</u> 3514	3514
9:35	3J02	Stability of coordination gel consisting of stimuli-responsive ligand in water <u>Yota Takano</u> , <u>Taka-aki Asoh</u> , <u>Akihiko Kikuchi</u> 3516	3516
10:00	3J03	Synthesis of Double-Network gel: Effect of ionic strength on the mechanical properties <u>Takaharu Chida</u> , <u>Takayuki Kurokawa</u> , <u>Jian Ping Gong</u> 3518	3518

M. Shibayama, presiding

10:25	3J04	Properties of cellulose gel-based silica composites <u>Shilin Liu</u> , <u>Satoshi Kimura</u> , <u>Masahisa Wada</u> , <u>Shigenori Kuga</u> 3520	3520
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10:50	3J05	Investigation of surface characteristics of soft material with arrayed micro rods <u>Satoshi Takahashi</u> , Kazuhiro Fujiki, Takeshi Yamauchi, Norio Tsubokawa, Kazuhiro Fukami, Tetsuo Sakka, Yukio Ogata 3522	3522
11:15	3J06	Strengthening of the Hydrogel with porous inorganic particles <u>Hideyuki Mitomo</u> , Taiki Tominaga, Ken-ichi Sano, Naonobu Shimamoto, Kuniharu Ijio, Yoshihito Osada 3524	3524
11:40	3J07	Synthesis of Tough and Electro-Conductive Hydrogels <u>Ryoichi Kishi</u> , Kazuaki Hiroki, Taiki Tominaga, Hidenori Okuzaki, Ken-ichi Sano, Yoshihito Osada..... 3526	3526
R. Kishi, presiding			
12:55	3J08	Structural and Functional Control of Ag Nanoparticle-Containing Temperature-Sensitive Microgel <u>Dongri Gin</u> , Hiroki Suwa, Makoto Miyasaka, Atsushi Kameyama, Haruma Kawaguchi..... 3528	3528
13:20	3J09	Development of flexible EMF hydrogen gas sensor using ionic liquid gel <u>Miki Saito</u> , Hideki Myobudani, Katsuhiko Tsunashima, Takeshi Yamauchi, Norio Tsubokawa, Shuji Harada..... 3530	3530
13:45	3J10	Preparation of Oscillating actuators by assembly of Microgels <u>Takeshi Kobayashi</u> , Toshihiro Hirai, Ryo Yoshida, Daisuke Suzuki..... 3532	3532
14:10	3J11	Supramolecular hydrogel-inorganic material hybrid as fluorescent sensor <u>Masato Ikeda</u> , Atsuhiko Wada, Toshihiro Matsui, Itaru Hamachi..... 3534	3534
H. Okuzaki, presiding			
15:00	3J13	Facile fabrications of fast stimuli sensitive and mechanically strong polyrotaxane based hydrogels <u>Abu Bin Imran</u> , Takahiro Seki, Yukikazu Takeoka, Yasuhiro Sakai, Kohzo Ito 3536	3536
15:25	3J14	Antifouling properties of hydrogels against marine sessile organisms -1 – Settlement density of barnacle cyprids and its model <u>Takayuki Murosaki</u> , Takaya Noguchi, Akira Kakugo, Takayuki Kurokawa, Jian Ping Gong, Yasuyuki Nogata 3538	3538

Room K

Wednesday, September 15

Viewing Polymers by Simulation

9:50	SO	Introductory Remarks Jun-ichi Takimoto 3412	3412
T. Aoyagi, presiding			
10:00	1K03	Crystal conversion from cellulose III _I to Ibeta from proposed by molecular dynamics study <u>Toshifumi Yui</u> , Takuya Uto, Naofumi Okayama 3413	3413
10:25	1K04	Full Atomistic MD Simulation of Sodium Polyacrylate in Water <u>Hiroshi Sasaki</u> , Kazushi Fujimoto, Susumu Okazaki 3415	3415
10:50	1K05	Dynamics of polymer chains during formation of ordered structures <u>Takashi Yamamoto</u> 3417	3417

Y. Masubuchi, presiding

11:15	1K06	Computational study of the properties of Gemini amphiphilic compounds <u>Takeshi Aoyagi</u> ,Yoshinaga Tamura,Yukio Yamawaki,Masashi Yamamoto	3419
11:40	1K07	Dynamics of Structure Formation in Polymeric and Amphiphilic Systems <u>Susumu Fujiwara</u> ,Masato Hashimoto,Takashi Itoh	3421
12:55	1K08	Analysis of the polymer chain dynamics near the substrate in the film formation process <u>Hiroshi Morita</u> ,Keiji Tanaka	3423
13:20	1K09	Molecular column chains in system of hard disks <u>Tomonori Koda</u> ,Akihiro Nishioka,Ken Miyata,Go Murasawa	3425

H. Morita, presiding

13:45	1K10	Loop length analysis of tetrahedral gel <u>Masako Takasu</u> ,Yoshiaki Hashimoto,Shuhei Kawamoto	3427
14:10	1K11	Simulation study of nonlinear elasticity of model sliding gels <u>Jun-ichi Takimoto</u>	3429
14:35	1K12	Simulations on branch point motion and relaxation of branch polymers <u>Yuichi Masubuchi</u>	3431
15:00	1K13	Fast Rheological Simulation of Entangled Polymers by using a Graphic Processor <u>Takashi Uneyama</u>	3433

J. Takimoto, presiding

15:25	1K14	Viewing Polymeric Fluid Dynamics by Multiscale Simulation <u>Takahiro Murashima</u> ,Takashi Taniguchi	3435
15:50	1K15	Computer simulation of shear-induced phase separation of polymer solutions <u>Mikihito Takenaka</u> ,Syotaro Nishitsuji,Takashi Taniguchi	3437
16:15	1K16	Numerical simulation of droplet deformation with surfactant under shear flow <u>Taku Ozawa</u> ,Toshihiro Kawakatsu	3439

Functional Polymers and Polymer Functions**Y. Gotoh, presiding**

16:40	1K17	Is it possible to play the violin using spider silk ? – Challenge Stradivarius <u>Shigeyoshi Osaki</u>	3540
17:05	1K18	Property of poly(p-phenylene benzobisoxazole)s films <u>Takahiro Fukumaru</u> , <u>Tsuyohiko Fujigaya</u> ,Naotoshi Nakashima	3542

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17:30	1K19	Nanofibrillation of high performance fiber using a grinder <u>Yasumasa Okuno</u> ,Masaru Kotera,Takashi Nishino	3544
17:55	1K20	Cellulose regenerated fibers reinforced with anisotropic nanofiller <u>Jalal Uddin</u> ,Atsushi Yamamoto,Yasuo Gotoh	3546

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A. Shishido, presiding

- 9:10 2K01 Axis-selective photoreaction of photo-cross-linkable liquid crystalline polymers based on polarization-selective energy transfer
Ryosuke Ishida, Mizuho Kondo, Nobuhiro Kawatsuki 3548
- 9:35 2K02 Photopatterning of blend films consisting of a side-chain liquid-crystalline polymer and an anthracene derivative
Hideyuki Kihara, Toshiyuki Kosobe, Masaru Yoshida 3550
- 10:00 2K03 Orientational Behavior of (Low-Molecular-Weight Compound/Polymer) Binary Liquid Crystals
Takenori Kojo, Masanori Nata, Seiji Ujiie 3552

S. Ujiie, presiding

- 10:25 2K04 Photomobile Property of Crosslinked Liquid-Crystalline Polymers with Cholesteric Phases
Yohei Yoshida, Jun-ichi Mamiya, Tomiki Ikeda 3554
- 10:50 2K05 Development of Robust Chiral Molecular Sieves by the Template Polymerization of Multicomponent Liquid Crystals
Achalkumar Ammathnadu Sudhakar, Kuniyo Yamada, Yasuhiro Ishida, Kazuhiko Saigo 3556

H. Kihara, presiding

- 11:15 2K06 Preparation and Photomobile Property of Liquid-Crystalline Polymers Crosslinked by Ionic Bonds
Ayako Tomita, Jun-ichi Mamiya, Tomiki Ikeda 3558
- 11:40 2K07 Fabrication of Crosslinked Liquid-Crystalline Polymer Films with a Periodic Structure and Analyses of their Photomobile Behavior
Keisuke Saito, Jun-ichi Mamiya, Atsushi Shishido, Tomiki Ikeda 3560

T. Ikai, presiding

- 12:55 2K08 Macromol. Recognition by Cyclodextrins. Interaction of Macromolecules Bearing Amino Acid Residues in Their Side Chains with Cyclodextrins
Wataru Oi, Akihito Hashidzume, Akira Harada 3562
- 13:20 2K09 Novel Polyureas Consisting of L-Lysine Residue for Chiral Separation Membranes
Makoto Hatanaka, Yuki Nishioka, Masakazu Yoshikawa 3564
- 13:45 2K10 Recognition of Various Aromatic Compounds by Cyclodextrin Derivatives in Nonpolar Solvents
Takuya Iwamoto, Yoshinori Fujino, Toshiyuki Kida, Mitsuru Akashi 3566

M. Yoshikawa, presiding

- 14:10 2K11 Synthesis of Polyacetylenes Bearing Dynamically Chiral Pendants and Their Application to Chirality Sensing
Kouhei Shimomura, Katsuhiko Maeda, Tomoyuki Ikai, Shigeyoshi Kanoh, Eiji Yashima 3568
- 14:35 2K12 Adsorption behavior of rare-metals by poly(allylamine) derivatives
Takuya Kishi, Megumi Yoshida, Akiko Nakazato, Hisatoyo Morinaga, Daisuke Nagai 3570
- 15:00 2K13 Synthesis of Poly(amine-ester) by polyaddition reaction and application to hazardous metal adsorbing material
Akiko Nakazato, Akinori Suzuki, Hisatoyo Morinaga, Daisuke Nagai 3572

A. Hashidzume, presiding

- 15:25 2K14 A Polymeric Pseudo-Liquid Membrane as Bio-mimicry Membranes
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- 15:50 2K15 Structure analysis of induced porphyrin aggregation by ammonia
Wataru Yasukochi, Sergiy Korposh, Roman Selyanchyn, Seung-woo Lee.... 3576

T. Kida, presiding

- 16:15 2K16 Anion discrimination by fluorescence property of
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Atsushi Nagai, Shota Okade, Yasuyuki Tago, Ryosuke Sakai, Toshifumi Satoh, Toyoji Kakuchi 3578
- 16:40 2K17 Vapochromic detection of Volatile Organic Compounds using
Carbamate-Substituted Polydiacetylene Microfibers
Mingxian Jian, Ryosuke Sakai, Toshifumi Satoh, Toyoji Kakuchi 3580
- 17:05 2K18 Fuzzy Recognition Brings about High Supramolecular Selectivity
Decheng Wan, Hongting Pu, Ming Jin 3582

Friday, September 17**Functional Polymers and Polymer Functions****D. Nagai, presiding**

- 9:10 3K01 Chromatographic analysis of carbon nanotube stationary phase
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- 9:35 3K02 Synthesis of membranes of poly(vinyl ether)s bearing oxyethylene
units and their CO₂ permeability
Toshikazu Sakaguchi, Kazuya Shimada, Masako Ohashi, Tamotsu Hashimoto 3586
- 10:00 3K03 Synthesis of poly(diphenylacetylene)s with silanol groups by
polymer reaction of the membranes bearing siloxy groups
Aiko Takeda, Toshikazu Sakaguchi, Tamotsu Hashimoto 3588

T. Sakaguchi, presiding

- 10:25 3K04 Preparation of Densely-Grafted Poly(vinylsulfonic acid) Materials
and their Acid-Catalytic Proficiency and Proton Conductivity
Teruyuki Okayasu, Koji Hirose, Kei Saito, Milton Hearn, Hiroyuki Nishide..... 3590
- 10:50 3K05 Application of carbonized polybenzimidazole-wrapped carbon
nanotube for fuel cell catalyst
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K. Yoshinaga, presiding

- 11:15 3K06 Atmospheric pressure plasma liquid deposition of copper
nanoparticles and their autocatalytic properties
Hiroki Akiyama, Kazuya Yamamura, Nobuyuki Zettsu 3594
- 11:40 3K07 The synthesis of fluorinated polyrotaxanes and their surface
property
Koichiro Nakao, Masatoshi Kidowaki, Masafumi Kudo, Christian Ruslim, Norifumi Yamada, Hideaki Yokoyama, Kohzo Ito 3596

M. Mitsuishi, presiding

- 12:55 3K08 Fabrication of Well-defined Concentrated Polymer Brush on
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Kun Zhang, Ewelina Zawadzak, Chiaki Yoshikawa, Hisatoshi Kobayashi ... 3598
- 13:20 3K09 Molecular aggregation state of thin low molecular weight urethane
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H. Yokoyama, presiding

- 13:45 3K10 Preparation of Photooxidized SiO₂ film using polymer nanosheet precursor
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- 14:10 3K11 Characterization of diffusion-controlled hydrophilic conversion of poly(dimethylsiloxane) surface induced by amphiphilic phospholipid polymer
Ji-Hun Seo, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai, Kazuhiko Ishihara 3604

T. Aoki, presiding

- 14:35 3K12 Surface modification of fibrous and plate-like PET by controlled graft polymerization and its application to the apatite hybrid preparation
Kouhei Takahashi, Yugo Fukumoto, Jin Motoyanagi, Masahiko Minoda 3606
- 15:00 3K13 Mineralization of Calcium phosphate on Functional Groups -regulated Peptide Scaffold
Takayuki Nonotama, Masayoshi Tanaka, Takatoshi Kinoshita, Masahiro Higuchi, Fukue Nagata, Kimiyasu Sato, Katsuya Kato 3608

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- 9:50 SO Introductory Remarks
Akihiko Kikuchi 4357
- N. Idota, presiding**
- 10:00 1L03 Processing of Interface by Surface Enrichment Approach Using Functional Molecules
Junji Watanabe, Kazuhisa Terao, Yoshiyuki Ikeda 4358
- 10:25 1L04 A Novel Fabrication Method for Soft Interfaces by using Nanomembrane as a Polymer Nano-sticker
Hirohmi Watanabe, Aya Fujimoto, Atsushi Takahara 4360
- 10:50 1L05 Selection of PMMA-binding Peptides and their Application to Surface Modifier
Takaaki Date, Satomi Yoshino, Takeshi Serizawa 4362
- A. Kikuchi, presiding**
- 11:15 1L06IL Synthesis of hollow particles using template pH-responsive polymer micelle
Shin-ichi Yusa 4364
- Y. Iwasaki, presiding**
- 12:55 1L08 Synthesis of Stimuli-Responsive Janus Particle and Its Association Behavior in Water
Masanori Ito, Ryusuke Enomoto, Kazuki Osawa, Shin-ichi Yusa, Yotaro Morishima, Syuji Fujii, Takashi Shiono, Yuki Miyanari, Yoshinobu Nakamura 4367
- 13:20 1L09 Effect on Surface Wettability by Stereocontrol of Thermoresponsive Polymer Brush
Naokazu Idota, Kenichi Nagase, Takehiko Tsukahara, Teruo Okano, Masahiko Annaka 4369

13:45	1L10	Preparation of Multi Stimuli-responsive Nano-assembly by Double Thermo-responsive Block Copolymer <u>Youhei Kotsuchibashi</u> , Mitsuhiro Ebara, Kazuya Yamamoto, Takao Aoyagi	4371
Y. Miura, presiding			
14:10	1L11	Temperature-Responsiveness of Amphiphilic Block Copolymer Micelle Composed of Crystalline Polymer <u>Yusuke Akino</u> , Hiroyasu Masunaga, Hiroki Ogawa, Isamu Akiba, Kazuo Sakurai.....	4373
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15:00	1L13	Molecular recognition at soft-interface supported by phospholipid polymer brushes <u>Yasuhiko Iwasaki</u> , Kosuke Nakai, Takashi Shimomura, Kenichi Morigaki...	4377
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15:25	1L14	Aggregation Behavior of Alzheimer Amyloid beta Peptide (1-42) on the Multivalent Sulfonated Sugar Surface <u>Tomohiro Fukuda</u> , Erino Matsumoto, Shunsuke Onogi, Yoshiko Miura ...	4379
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Y. IKEDA, presiding			
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M. Nakayama, presiding			
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16:15	2L16	Effective Galectin Recognition using Densified Carbohydrate -Tri(ethylene glycol) Alkanethiol Hybrid Monolayer <u>Yukari Sato</u> ,Kyoko Yoshioka,Teiichi Murakami,Mutsuo Tanaka, Osamu Niwa 4423	4423

T. Kawasaki, presiding

16:40	2L17	Molecular Structure at Soft Nanointerfaces by Sum Frequency Generation Spectroscopy <u>Kohei Uosaki</u> ,Hidenori Noguchi.....	4425
17:05	2L18	Surface-Enhanced Raman Scattering and Infrared Spectroscopy Studies of Polymer Composite Surface with Carbon Nanotubes <u>Harumi Sato</u> ,Xinlei Yan,Toshiaki Suzuki,Yasutaka Kitahama, Bokobza Liliane,Yukihiro Ozaki.....	4427

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10:25	3L04	The upgrade of XR and GISAXS simultaneous measurement system of BL03XU at SPring8 <u>Hiroki Ogawa</u> ,Hiroyasu Maunaga,Sono Sasaki,Masaki Takata.....	4435

M. Kobayashi, presiding

10:50	3L05	Swelling Behavior of Soft Nano-films in Non-solvents <u>Koichiro Hori</u> ,Keiji Tanaka.....	4437
11:15	3L06	Hydrophilic Polymer Brushes Formed by Surface Segregation of Amphiphilic Block Copolymers <u>Manabu Inutsuka</u> ,Kohzo Ito,Hideaki Yokoyama,Norifumi Yamada.....	4439
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H. Jinnai, presiding

12:55	3L08	Synthesis of Temperature Responsive Cationic Amphiphilic Block Copolymer by Reversible Addition - Fragmentation Chain Transfer Process and Their Self-assembly Studies <u>Arjun Ghosh</u> ,Shin-ichi Yusa,Hideki Matsuoka,Yoshiyuki Saruwatari	4443
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H. Aoki, presiding

14:35	3L12	Deformation Process of Fiber-Reinforced Plastic under Uniaxial Extension—Three dimensional observation and analysis <u>Haruko Saito</u> ,Teruhisa Tanaka,Takaaki Mihara,Hiroyuki Komori,Hiroshi Jinnai,Toshio Nishi.....	4451
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Room M**Wednesday, September 15****Functional Polymers and Polymer Functions****T. Kawauchi, presiding**

10:00	1M03	Characterization of N-substituted maleimide/isobutene transparent resins with high thermal stability <u>Kyota Takeda</u> ,Akikazu Matsumoto	3610
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J. Ishii, presiding

11:15	1M06	Study of epoxy resins containing polyaromatic backbone cured with polyhydric phenol dimers <u>Takashi Kobayashi</u> ,Yuto Horiuchi,Toshiyuki Oyama,Akio Takahashi	3616
11:40	1M07	Study on epoxidized phenolic lignin <u>Tomoki Tsunoda</u> ,Toshiyuki Oyama,Akio Takahashi,Tsuyoshi Kono ...	3618

T. Takeichi, presiding

12:55	1M08	Chemical Structure and Properties of Polyimides using Aromatic Asymmetric diamine p-ODA,p-TPEQ <u>Ayumi Andoh</u> ,Masahiko Miyauchi,Yuichi Ishida,Takashi Sawaguchi,Rikio Yokota	3620
13:20	1M09	Structure and Properties of Novel Addition-type Polyimides Derived from PMDA and Asymmetric Diamine p-ODA <u>Ken-ichi Kazama</u> ,Masahiko Miyauchi,Yuichi Ishida,Toshio Ogasawara,Takashi Sawaguchi,Rikio Yokota	3622
13:45	1M10	Preparation and Mechanical Properties of High Heat-resistance Carbon Fiber Reinforced Plastics Derived from Novel Asymmetric Addition-type Imide Resins based on Kapton-type structures <u>Masahiko Miyauchi</u> ,Yuichi Ishida,Toshio Ogasawara,Rikio Yokota	3624

14:10	1M11	Development of Addition-type Polyimide Containing Fluorene Groups / Carbon Fiber Composites—Fabrication and Mechanical Properties of Composites from the Unidirectional Prepreg <u>Yuichi Ishida</u> ,Toshio Ogasawara,Rikio Yokota 3626	3626
Y. Yamada, presiding			
14:35	1M12	Synthesis and properties of soluble aromatic polyimides composed of [(PMDA) ₄ (DADE) ₂ (BPDA) ₂ (1,3-Diamine) ₄] _n and others <u>Yuki Shirai</u> ,Takehiro Kawauchi,Tsutomu Takeichi,Hiroshi Itatani 3628	3628
15:00	1M13	Performance improvement of polybenzoxazine through hybridization with layer double hydroxide <u>Zahidul Islam</u> ,Takehiro Kawauchi,Tsutomu Takeichi 3630	3630
15:25	1M14	Development of Polyimide Membranes of the World's First Solar Sail(IKAROS)—Molecular Designs of Polyimides with Space Environmental Stability <u>Masahiko Miyauchi</u> ,Ken-ichi Kazama,Ayumi Andoh,Motoyasu Suzuki,Takashi Sawaguchi,Minoru Iwata,Yuichi Ishida,Junichirou Ishizawa,Hiroyuki Shimamura,Rikio Yokota..... 3632	3632
M. Miyauchi, presiding			
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16:15	1M16	Preparation of Polybenzimidazole Nanofiber Networks Jin Gong,Tomonori Sugishita,Tetsuya Uchida,Shinichi Yamazaki, <u>Kunio Kimura</u> 3636	3636
16:40	1M17	Design of polymethacrylates including a cyclic structure with fixed conformation in the side chain <u>Anri Ozaki</u> ,Hiroki Kouchi,Koha Sumita,Akikazu Matsumoto..... 3638	3638
Y. Tominaga, presiding			
17:05	1M18	Hybrids of Polyaniline and Bismuth(III) Telluride Nanoparticles as Novel Organic Thermoelectric Materials <u>Naoki Toshima</u> ,Masahiro Imai,Shoko Ichikawa..... 3640	3640
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M. Rikukawa, presiding			
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9:35	2M02	Investigation of CO ₂ -treatment conditions for enhancement of ionic conduction and analysis of the gradual change in solid polymer electrolytes <u>Yoshiyuki Oe</u> ,Yoichi Tominaga 3646	3646
10:00	2M03	Design of Fuel Cell electrode structure based on properties of polyelectrolyte <u>Tatsuya Nakajima</u> ,Hidenori Ohashi,Takanori Tamaki,Takeo Yamaguchi 3648	3648

H. Ohashi, presiding			
10:25	2M04	Synthesis of Poly(phenylene) Block Copolymers and Evaluation as Electrolyte Membranes (VI)-Influence of Morphology on Properties- <u>Azusa Osawa</u> ,Masahiro Fujita,Yuko Takeoka,Masahiro Rikukawa.....	3650
10:50	2M05	Synthesis of Novel Polymeric Electrolyte Membranes Based on the Copolymerization of Vinyl Monomers from Tetraphenylethylene-Containing Polymers as Macroinitiators. <u>Hideki Tsukuda</u> ,Ikuyoshi Tomita.....	3652
11:15	2M06	Synthesis and properties of poly(phenylene)-poly(ether ketone) block copolymers (IV) - Effect of water content and morphology <u>Miru Yoshida</u> ,Masahiro Fujita,Yuko Takeoka,Masahiro Rikukawa.....	3654
H. Okuzaki, presiding			
12:55	2M08	Morphology Control of Polymer Electrolyte Membrane for Fuel Cells <u>Yasuhiro Yamashita</u> ,Mitsunori Nodono	3656
13:20	2M09	Enhanced ionic conduction in polyether/freeze-dried clay nanocomposites using supercritical carbon dioxide <u>Shunsuke Kitajima</u> ,Yoichi Tominaga	3658
13:45	2M10	Synthesis of poly(alkylene carbonates) having various side groups and evaluation as novel ion-conductive materials <u>Mizuki Nakamura</u> ,Yoichi Tominaga	3660
M. Fujita, presiding			
14:10	2M11	Sensing and Actuating Behavior of PEDOT/PSS films <u>Kosuke Hosaka</u> ,Takamichi Ito,Hidenori Okuzaki	3662
14:35	2M12	Cast-Formed Conducting Polymer Actuators Driving in Air <u>Hidenori Okuzaki</u> ,Takamichi Ito,Kosuke Hosaka	3664
15:00	2M13	Electro-active Polymer Actuator Using of Ionic Liquid / Polyurethane Gels <u>Fumiya Hishiki</u> ,Hu Yan,Hidenori Okuzaki	3666
15:25	2M14	Piezoelectricity of Chiral Polymer with Stereocomplex Tetsuo Yoshida,Yuki Higashino,Kyouhei Takai,Shintaro Kuroda,Shuhei Itou,Naoki Kawai, <u>Takaaki Nakai</u> ,Yoshiro Tajitsu	3668
H. Yan, presiding			
15:50	2M15	Inspection of Improving Piezoelectric Performance of Piezoelectric-Rubber Oriented Particles <u>Shogo Mamada</u> ,Naoyuki Yaguchi,Minoru Suzuki,Daigo Sato,Masanori Hansaka	3670
16:15	2M16	PEFC performance of sulfonated mesoporous silica/polyimide hybrid membranes Kangcheng Chen,Miyuki Shimauchi,Nobutaka Endo,Mitsuru Higa,Hidetoshi Kita, <u>Ken-ichi Okamoto</u>	3672
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Y. Takahashi, presiding			
9:10	3M01	Low-voltage Organic FETs Fabricated Using SrTiO ₃ as an Insulator <u>Hiroki Hanagata</u> ,Toshihiko Jo,Hu Yan,Hidenori Okuzaki	3678

9:35	3M02	Time-dependent Stability of Low-voltage Pentacene FETs Fabricated Using SrTiO ₃ as an Insulator <u>Toshihiko Jo</u> , Hiroki Hanagata, Hu Yan, Hidenori Okuzaki	3680
10:00	3M03	Wet-processed Low-voltage Organic FETs <u>Masashi Ikeda</u> , Hu Yan, Hidenori Okuzaki	3682
H. Okuzaki, presiding			
10:25	3M04	PFM analysis of nucleation and growth of reversed domains in VDF/TrFE copolymer <u>Yoshiyuki Takahashi</u> , Naoko Tomoda, Takeo Furukawa	3684
10:50	3M05	Transition from an exponential law to a power law of ferroelectric switching time of VDF/TrFE copolymer at ultra high electric field <u>Hajime Ishii</u> , Takashi Nakajima, Yoshiyuki Takahashi, Takeo Furukawa, Soichiro Okamura.....	3686
11:15	3M06	Structure and properties of uniaxially drawn and crystallized P(VDF/TrFE) : CNT blend films : -II. piezoelectricity and related properties <u>Hiroyuki Sagami</u> , Fuyuko Yamashita, Kenji Omote, Kuniyoshi Yokoo, Yasuhiko Kasama, Hiroji Ohigashi, Keiko Koga, Sadayuki Takahashi	3688
11:40	3M07	Preparation and Characterization of Composite Film of Polyaniline Sulfonic Acid and Carbon Nanotubes <u>Tomoyuki Kuriyama</u> , Katsumune Takahashi, Katsumi Uchida, Koji Tsuchiya, Hirofumi Yajima	3690
K. Lee, presiding			
12:55	3M08	Synthesis and transistor characteristics of carbazole derivative containing diacetylene <u>Yuuki Miyazaki</u> , Kousuke Tsuchiya, Kazuo Okamoto, Kenji Ogino.....	3692
13:20	3M09	Introduction of various ion-liquids into Light-Emitting Electrochemical Cells using ruthenium complex <u>Weichen Chen</u> , Atsushi Aoki	3694
13:45	3M10	Controlling Co-continuous Morphology of Polymer Blends by Light-Induced Phase Separation and Designing Electrically Conducting Polymers <u>Yuki Furubayashi</u> , Tasuku Murata, Masataka Fukuoka, Tomohisa Norisuye, Qui Tran-cong-miyata.....	3696
A. Aoki, presiding			
14:10	3M11	Synthesis and Optical Properties of pi-Conjugated Polymers Composed of Benzo[1,2-b:4,5-b']dithiophene and Thiophene Bearing Electron Withdrawing Ethenyl Groups in the Side Chains <u>Kwang-hoi Lee</u> , Ho-jin Lee, Kazuhide Morino, Atsushi Sudo, Takeshi Endo	3698
14:35	3M12	Preparation of Novel Polythiophenes Bearing Electron Withdrawing Ethenyl Groups in the Side Chains and Their Application to Organic Photovoltaic cells <u>Kwang-hoi Lee</u> , Ho-jin Lee, Kazuhide Morino, Atsushi Sudo, Takeshi Endo	3700
15:00	3M13	A degradation mechanism of the fuel cell electrode studied by transmission electron microtomography <u>Toshihiko Ito</u> , Ukyo Matsuwaki, Hiroshi Jinnai, Hiroyuki Tanaka, Mitsunobu Uchimura, Seiho Sugawara, Kazuhiko Shinohara	3702

Room N

Wednesday, September 15

Functional Polymers and Polymer Functions

H. Aota, presiding

- 10:00 1N03 Proposal of Optical Amplifier Used Evanescent Wave for Plastic Optical Fiber
Takayuki Hirai, Eisuke Nihei 3704
- 10:25 1N04 Hologram recording properties of the photorefractive polymer possessing bended D-pai-A chromophore in the side-chain
Atsushi Irako, Takeo Sasaki 3706

H. Kudo, presiding

- 10:50 1N05 Development of photosensitive sulfonated polyimides based on negative-tone reaction development patterning developable with aqueous alkaline solution
Aya Kasahara, Akio Takahashi, Toshiyuki Oyama 3708
- 11:15 1N06 Binary UV-curing systems containing polyacrylate dendrimers as curing enhancer
Ken'ichi Aoki, Akiko Hiraoka, Kunihiro Ichimura 3710
- 11:40 1N07 Optical property and processability of UV-curable resin thin films containing modified ZrO₂ nanoparticles
Shimpei Kudo, Koichi Nagase, Shoichi Kubo, Okihiro Sugihara, Masaru Nakagawa 3712

Y. Koike, presiding

- 12:55 1N08 Control and Prediction of Refractive Index of Optical Polymer
Takuya Hioka, Norihisa Tanio 3714
- 13:20 1N09 Improvement and Prediction of Transparency of Optical Polymer
Shinya Kameyama, Norihisa Tanio 3716
- 13:45 1N10 Physical Aging and Optical Properties of Optical Polymer Glass
Chihiro Kawagishi, Norihisa Tanio 3718

N. Tanio, presiding

- 14:10 1N11 Compensation of birefringence in cross-linked polymers
Hiroto Ito, Sayuri Yamazaki, Akihiro Tagaya, Yasuhiro Koike 3720
- 14:35 1N12 Synthesis of Reflective-index Material Based on Calixarene
Tatsuki Shimizu, Hiroto Kudo, Tadatomi Nishikubo 3722
- 15:00 1N13 The mechanism of generating birefringence on poly (methyl methacrylate/styrene)
Takumi Kojo, Hidetoshi Takahashi, Akihiro Tagaya, Yasuhiro Koike 3724

J. Abe, presiding

- 15:25 1N14 Effect of Mechanical Properties on Photoinduced Motion of Crosslinked Azobenzene Liquid-Crystalline Polymer Films
Aki Shimamura, Jun-ichi Mamiya, Atsushi Shishido, Tomiki Ikeda 3726
- 15:50 1N15 Photoinduced Phase Transition of Poly(N-isopropylacrylamide) with Azobenzene in Water and Cononsolvent
Norihito Ishii, Jun-ichi Mamiya, Tomiki Ikeda, Xing-ping Qiu, Françoise Winnik 3728
- 16:15 1N16 Photoresponsive spiropyran-conjugated hydrogels which show a fast response
Taku Satoh, Kimio Sumaru, Toshiyuki Takagi, Katsuki Takai, Toshiyuki Kanamori 3730

A. Tagaya, presiding			
16:40	1N17	Application of addition-condensation products of pyrrole with aldehyde for photoenergy conversion devices(16) – Bandgap control below 1.0eV <u>Yutaro Maki</u> ,Hiroyuki Aota,Akira Matsumoto	3732
17:05	1N18	Syntheses of step-pi-conjugated polymers and their application for photoenergy conversion system – Performance evaluation of molecular wire <u>Shouta Nishimura</u> ,Hiroyuki Aota,Akira Matsumoto,Yasuo Kanematsu,Hideki Ichida,Norio Hamada	3734
17:30	1N19	Syntheses of step-pi-conjugated polymers and their application for photoenergy conversion systems(30) – Syntheses of A,B-block type amphiphilic polymers and photoinduced interphase energy and electron transfers <u>Yuki Uchida</u> ,Hiroyuki Aota,Akira Matsumoto	3736
17:55	1N20	Syntheses of step-pi-conjugated polymers and their application for photoenergy conversion systems(31) – Synthese and properties of new stable molecular wire <u>Hiroaki Ejiri</u> ,Hiroyuki Aota,Akira Matsumoto	3738

Thursday, September 16

Functional Polymers and Polymer Functions

J. Mamiya, presiding			
9:10	2N01	Lighting-up fluorescent dyes with "insulator base pairs". <u>Koji Sekiguchi</u> ,Hiromu Kashida,Hiroyuki Asanuma	3740
9:35	2N02	Fluorescent conjugated polyelectrolytes for biosensors and bioimaging <u>Han Young Woo</u>	3742
10:00	2N03	Second-order nonlinearities of polystyrenes bearing donor-acceptor chromophores prepared by double click reactions <u>Yongrong Li</u> ,Kazuma Tsuboi,Tsuyoshi Michinobu.....	3744
10:25	2N04	Real-time Photoswitching of Chiral Nematic Phase by the Fast Photochromic Molecule <u>Tetsuya Kato</u> ,Kana Fujita,Jiro Abe	3746
N. Kimizuka, presiding			
10:50	2N05	Fabrication of one-dimensional nanostructures composed of poly(lactic acid)s <u>Kenta Kondo</u> ,Toshiyuki Kida,Mitsuru Akashi	3748
11:15	2N06	A study on microencapsulation of Platinum complex catalyst and methylhydrosiloxane <u>Kiyomi Fuchigami</u> ,Yoshinari Taguchi,Masato Tanaka.....	3750
11:40	2N07	Preparation of Metal Oxide Nanoparticles from Polymer Micelles and Their Composites with Polymer Materials <u>Shuhei Yamada</u> ,Emiko Mouri,Kohji Yoshinaga.....	3752

Future Development of Fluorinated Polymeric Materials

12:45	SO	Introductory Remarks Hideo Sawada	4706
H. Sawada, presiding			
12:55	2N08IL	Syntheses of Novel Fluorinated Polymers - Facile Carbon-Carbon Bond Formation Reaction by the Aid of Fluorine Substituents - <u>Tadashi Narita</u>	4707

13:45	2N10	Functional fluorinated (block co)polymer materials <u>Katja Jankova</u> , Soren Hvilsted.....	4710
14:10	2N11	Selective Fluorination of Conjugated Polymers by Electrochemical Polymer Reaction <u>Shinsuke Inagi</u> , Shotaro Hayashi, Toshio Fuchigami.....	4712
14:35	2N12	Synthesis and application of new Fluoropolyethers by direct fluorination reaction Daisuke Shirakawa, <u>Hiroki Kamiya</u>	4714
15:00	2N13	Synthesis and characterization of amphiphilic silsesquioxane nanoparticles having fluoroalkyl groups <u>Chika Sada</u> , Hideharu Mori.....	4716
S. Inagi, presiding			
15:25	2N14	Recent Advance in Original Fluorinated Surfactants Potentially Non-Bioaccumulable Georges K Kostov, Frederic Boschet, <u>Bruno Ameduri</u>	4718
15:50	2N15	Development of Decomposition Techniques for Environmentally Persistent Perfluorinated Compounds and Fluoropolymers <u>Hisao Hori</u>	4720
16:15	2N16	Fluorine Compounds and Global Warming Countermeasures <u>Akira Sekiya</u>	4722
16:40	2N17	Manipulating the Molecular Aggregation States of Poly(perfluoroalkyl acrylate) Brush Thin Films using Supercritical Carbon Dioxide <u>Hiroki Yamaguchi</u> , Peter Gin, Motoyasu Kobayashi, Steve Bennett, Sushil K. Satija, Tadanori Koga, Atsushi Takahara.....	4724
17:05	2N18	Influence of alpha-substitutensts on hydrophobicity of fluoroacrylate polymer thin films with short fluoroalkyl side chains Koji Honda, Ikuo Yamamoto, Masamichi Morita, Hiroki Yamaguchi, <u>Atsushi Takahara</u>	4726

Friday, September 17

Future Development of Fluorinated Polymeric Materials

H. Hori, presiding

9:10	3N01	The surface treatment agent using biodegradability fluorine telomer compound. <u>Katsuyuki Sato</u> , Haruyoshi Tatsu, Takehiro Sono, Yoshiyama Kaneumi, Seiichiro Murata, Tadashi Matsunaga, Atsushi Arakaki, Yuko Ishii.....	4728
9:35	3N02	Hydrogen penetration property and permeability of polytetrafluoroethylene exposed to high-pressure hydrogen gas – Rubber materials for O-ring of high pressure hydrogen vessels (3) <u>Shin Nishimura</u> , Junichiro Yamabe, Hirotada Fujiwara, Hirokazu Yukawa.....	4730
10:00	3N03	Structural Science of Crystalline Fluorinated Polymers – Topics related to Formation of Lamella and Spherulite, Nucleator Effect, and Construction of Transparent Materials <u>Atsuhiro Fujimori</u>	4732
10:25	3N04	Application of novel fluorinated composites for surface modification <u>Hiroshi Kakehi</u> , Masashi Miura, Norifumi Isu, Yusuke Sato, Hideo Sawada...	4734

S. Nishimura, presiding

10:50	3N05	Self-organization of PVDF-TrFE polymers into microscopic patterns <u>Yu Tsubota</u> , Olaf Karthaus.....	4736
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11:15	3N06	Property of P(TFE/VDF) copolymer <u>Meiten Koh</u> , Nobuyuki Komatsu, Mayuko Tatemichi, Eli Mukai, Kouji Yokotani, Tetsuhiro Kodani	4738
11:40	3N07	Tribology: Technology for controlling friction and wear—The role of fluorine compounds <u>Ichiro Minami</u>	4740
K. Ogino, presiding			
12:55	3N08	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	4742
13:20	3N09	Development of Super-high-performance Polymer Electret Materials for Vibration-driven Power Generators <u>Kimiaki Kashiwagi</u> , Kuniko Okano, Yoshihiko Sakane, Tatsuya Miyajima, Yuji Suzuki, Satoshi Oki, Noriko Tanabe	4744
13:45	3N10	Preparation and Application of Novel Cross-linked Fluoroalkyl End-capped Cooligomer Magnetite or Palladium Nanocomposites Possessing Adamantane Segments <u>Tetsushi Kijima</u> , Shun Kodama, Masashi Sugiyama, Hideo Sawada	4746
T. Narita, presiding			
14:10	3N11	Investigation on synthetic methods for fluorinated polymers containing perfluoroadamantyl group and their properties <u>Miki Kanao</u> , Kousuke Tsuchiya, Kenji Ogino	4748
14:35	3N12	Preparation and Application of Fluorinated Oligomer / Polyaniline Nanocomposites <u>Taiki Tsuzukiishi</u> , Tetsushi Kijima, Hideo Sawada	4750
15:00	3N13	Preparation of Novel Fluoroalkyl End-capped Oligomeric Nanocomposites Encapsulated Organic Dyes <u>Shunsuke Izumi</u> , Yuki Goto, Hideo Sawada.....	4752

Room O

Microfabrication and Polymers for Nano-Fabrication

Wednesday, September 15

9:50	SO	Introductory Remarks Masayuki Endo	4075
H. Nakano, presiding			
10:00	1O03IL	Surface Segregation of Amphiphilic Block Copolymers <u>Hideaki Yokoyama</u>	4076
10:50	1O05	Fabrication of metal nanorod arrays using block copolymer template <u>Takenori Goda</u> , Tomokazu Iyoda	4079
11:15	1O06	In situ fabrication of metal nanoparticles by block copolymer lithography and control of their size and pattern <u>Mari Koizumi</u> , Shigenori Fujikawa	4081
11:40	1O07	Fabrication of bioMacromol. nanowires by Single Particle Nanofabrication Technique <u>Atsushi Asano</u> , Yuta Maeyoshi, Satoshi Tsukuda, Shun-ichiro Tanaka, Masaki Sugimoto, Shu Seki	4083

A. Watanabe, presiding

12:55	1008	Fabrication of nano free-standing films having normally oriented cylindrical channels. <u>Tasuku Izutani</u> , Motonori Komura, Tomokazu Iyoda, Sadayuki Asaoka....	4085
13:20	1009	Gradient Composition Distribution of Polystyrene-Based Polymer Blend Nanorods <u>Hui Wu</u> , Hideyuki Otsuka, Zhaohui Su, Atsushi Takahara.....	4087
13:45	1010	Fabrication for nano-fiber structures by arraying atto-reactors of core-shell particles <u>Shinji Watanabe</u> , Keiji Fujimoto	4089
14:10	1011	Strucuture Development by Polymerizaion-induced Phase Decomposition <u>Sadayuki Kobayashi</u> , Keiichiro Nomura.....	4091
14:35	1012	Anisotropic Nonlinear Optical Properties of Gold Nanoparticles with various shapes introduced in Block Copolymers <u>Akihiro Iwata</u> , Shigeru Okamoto, Tomokatsu Hayakawa, Hirokazu Hasegawa, Naokiyo Koshikawa.....	4093

H. Kihara, presiding

15:00	1013	Perpendicular and Parallel Aligned Oxide Nanowire Arrays by Block Copolymer Templating Processes Yongbin Zhao, Motonori Komura, <u>Tomokazu Iyoda</u>	4095
15:25	1014	Synthesis and Precise Nanostructure Control in Thin Films of Block Copolymers having Cage Silsesquioxane with Excellent Oxygen Plasma Etch Resistance <u>Teruaki Hayakawa</u> , Yoshihito Ishida, Tomoyasu Hirai, Raita Goseki, Masa-aki Kakimoto, Hiroshi Yoshida, Yasuhiko Tada, Mikihito Takenaka, Hirokazu Hasegawa.....	4097
15:50	1015	Controlled array of ferritin using self-assembled diblock copolymer patterns. <u>Go Sakaguchi</u> , Mikihito Takenaka, Hirokazu Hasegawa	4099
16:15	1016	Photoreorientation behavior of microphase separation structure and liquid crystal phase in liquid crystalline azobenzene block copolymer thin films <u>Masami Sano</u> , Naomi Takahashi, Tomoya Murase, Shusaku Nagano, Yuya Shinohara, Yoshiyuki Amemiya, Takahiro Seki.....	4101

Thursday, September 16**Microfabrication and Polymers for Nano-Fabrication****K. Asakawa, presiding**

9:10	2001	Development of resists for bio-chip using stimulus responsive polymer <u>Yoshiyuki Yokoyama</u> , Shohei Yamamura, Yuzuru Takamura, Eiichi Tamiya.....	4103
9:35	2002	Self-organization of polymer patterns on curved substrates <u>Hiroyuki Mori</u> , Olaf Karthaus	4105
10:00	2003	Precise Metal Patterning from Macromol. Catalytic thin films <u>Hiroki Yamagiwa</u> , Mutsumi Kimura, Hirofusa Shirai	4107
10:25	2004	Synthesis of photoresponsive liquid-crystalline polymers containing different mesogenic structures <u>Kunihiko Okano</u> , Takashi Yamashita	4109

T. Yamashita, presiding

10:50	2005	Preparation of anisotropic transparent conductive films by using dewetting process <u>Takayuki Nakanishi</u> , Yuji Hirai, Hiroshi Yabu, Masatsugu Shimomura	4111
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11:15	2006	Resist properties of poly(styrene) thin films for reactive-monolayer-assisted thermal nanoimprint lithography <u>Shoichi Kubo</u> , Masaru Nakagawa	4113
11:40	2007	Lyophobic-Lyophilic Patterning Properties of Resist/Top-coat Double Layer Thin Film <u>Yoshiko Kinoshita</u> , Yuki Adachi, Tsuneo Yamashita, Ikuo Yamamoto, Masamichi Morita	4115
M. Endo, presiding			
12:55	2008	Study on approaches for improvement of EUV-resist sensitivity <u>Toshiya Takahashi</u> , Hideaki Tsubaki, Hiroshi Tamaoki, Shinji Tarutani, Tomotaka Tsuchimura, Hidenori Takahashi, Takayuki Itou	4117
13:20	2009	Negative-type Photoresist for EUV Lithography using Thiol/Ene Reaction <u>Haruyuki Okamura</u> , Koichi Maki, Koji Kaneyama, Toshiro Itani, Masamitsu Shirai	4119
13:45	2010	Synthesis of Noria Derivatives and 4-hydroxybenzoylcalix[4]resorcinarene[CRA(OH)] derivatives containing Adamantyl groups for the development of EUV resist materials <u>Yuji Suyama</u> , Hiroto Kudo, Tadatomi Nishikubo, Hiroaki Oizumi, Toshiro Itani	4121
14:10	2011	Novel resist-materials based on noria derivatives containing acetal moieties. <u>Mayumi Jinguji</u> , Hiroto Kudo, Tadatomi Nishikubo, Hiroaki Oizumi, Toshiro Itani, Kazumasa Okamoto, Seiichi Tagawa, Hiroki Yamamoto	4123
14:35	2012	Positive type EUV resists material based on doublecalixresorcinarene (Beryllus) derivatives containing adamantyl ester groups <u>Hiroyuki Seki</u> , Hiroto Kudo, Tadatomi Nishikubo, Hiroaki Oizumi, Toshiro Itani	4125
15:00	2013	Optimization of pattern-forming conditions for photosensitive polyimides based on negative-tone reaction development patterning developable with aqueous alkaline solution. <u>Yumiko Nakamura</u> , Akio Takahashi, Toshiyuki Oyama	4127

Room Q

Wednesday, September 15

Soft Materials and Processes for Neo-Biomimetic

9:50	SO	Introductory Remarks <u>Atsushi Hozumi</u> , Takuya Ohzono	4485
N. Hosoda, presiding			
10:00	1Q03	Research strategy of novel materials design based on insect mimetics <u>Masatsugu Shimomura</u> , Tateo Shimozawa, Shigehisa Hori, Miki Mizushima, Tomoaki Sugiyama, Kuniharu Ijiri, Yasutaka Matsuo	4486
10:25	1Q04	Water absorption mechanism at the surface of cuticle. – Water flow at the surface of arthropod. <u>Takahiko Hariyama</u> , Hiroko Horiguchi, Daisuke Ishii, Yuji Hirai, Takeshi Higuchi, Hiroshi Yabu, Masatsugu Shimomura	4488
10:50	1Q05	Variable structural colors of animals <u>Shinya Yoshioka</u>	4490

11:15	1Q06	Design of biomimetic molecular machines and their applications <u>Kazushi Kinbara</u> 4492	4492
11:40	1Q07	Cell migration control on the micro-mechanically engineered extracellular matrix. <u>Hiroyuki Sakashita</u> ,Satoru Kidoaki 4494	4494
M. Shimomura, presiding			
12:55	1Q08IL	Biomimetics and soft material to cause innovation <u>Tomonaga Yoshida</u> 4496	4496
13:45	1Q10	Micro adhesion learning from small animals <u>Naoe Hosoda</u> 4499	4499
N. Isu, presiding			
14:10	1Q11	Tunable microwrinkles and its applications <u>Takuya Ohzono</u> ,Hirosato Monobe,Yo Shimizu 4501	4501
14:35	1Q12	Microdroplet manipulations on biomimetic high adhesive superhydrophobic surfaces <u>Daisuke Ishii</u> ,Hiroshi Yabu,Masatsugu Shimomura..... 4503	4503
15:00	1Q13	Microtextured Polymer Coatings Fabricated by UV Curing-Induced Phase Separation Technique: Creation of Superhydrophobic Surfaces <u>Shinji Kato</u> ,Aya Sato 4505	4505
15:25	1Q14	Biomimetic strategies for hybrid nanowire thin films and their super-liquid-repelling property <u>Jian-jun Yuan</u> ,Ren-Hua Jin 4507	4507
15:50	1Q15	Wettability of Nanofiber-Coated Surefaces Fabricated by Electrospinning <u>Yuichi Konosu</u> ,Hidetoshi Matsumoto,Haruka Baba,Mie Minagawa, Akihiko Tanioka 4509	4509
D. Ishii, presiding			
16:15	1Q16	Synthesis of cartilage-mimetic surface with hydration lubrication by self-initiated graft polymerization on polyaromatic ketone <u>Masayuki Kyomoto</u> ,Takaharu Tateishi,Kazuhiko Ishihara 4511	4511
16:40	1Q17	Anti-corrosion Property of Self-Assembled Monolayer-covered Aluminum Surface <u>Makoto Yagihashi</u> ,Hiroki Matsumoto,Makoto Murase,Masahiko Kojima,Atsushi Hozumi..... 4513	4513
17:05	1Q18	Preparation and wettability patterning of silicon nanospike array structures by using self-organized polymer structures as etching masks <u>Yuji Hirai</u> ,Hiroshi Yabu,Yasutaka Matsuo,Kuniharu Ijro, Masatsugu Shimomura 4515	4515
17:30	1Q19	Stabilization of Liquid Droplets with Hydrophobic Polymer Particles <u>Daisuke Matsukuma</u> ,Hirohmi Watanabe,Atsushi Takahara..... 4517	4517
17:55	1Q20	XAFS analysis of Ag in the Antibacterial Ceramics <u>Norifumi Isu</u> ,Yoshihiro Kato,Satoru Yamazaki,Chiya Numako 4519	4519

Thursday, September 16

Soft Materials and Processes for Neo-Biomimetic

T. Ohzono, presiding

9:10	2Q01	Moth-Eye Antireflection Surface Using Anodic Porous Alumina -Continuous Roll Imprinting- <u>Yoshihiro Uozu</u> 4521	4521
9:35	2Q02	Production Technology and Application of Honeycomb Film <u>Hidekazu Yamazaki</u> ,Koju Ito,Masatsugu Shimomura,Hiroshi Yabu ... 4523	4523

10:00	2Q03	Development of Micro-Tissue Chip by Combination of Inkjet Printing and Hierarchical Cell Manipulation <u>Kayo Sakaue</u> ,Koji Kadowaki,Michiya Matsusaki,Mitsuru Akashi 4525	4525
10:25	2Q04	Characteristics of arabinogalactan-adsorbed honeycomb-patterned cellulose <u>Yasumitsu Uraki</u> ,Yuka Tasaki,Yutaka Tamai,Sadaaki Yamamoto, Hiroshi Yabu,Masatsugu Shimomura 4527	4527
K. Kinbara, presiding			
10:50	2Q05	Control of the surface configuration of highly-ordered stimuli-responsive gel. <u>Chika Sato</u> ,Yasuhiro Maeda,Ryo Yoshida 4529	4529
11:15	2Q06	Swelling/Shrinking Properties of Agglutinate Stimuli-Responsive Hydrogels by Electrophoresis <u>Taka-aki Asoh</u> ,Akihiko Kikuchi 4531	4531
11:40	2Q07	Effect of peptide length and sequence on higher order structure formation of collagen dendrimers <u>Chie Kojima</u> ,Tomoyuki Suehiro,Shinya Yamamoto,Tomoko Tada, Tomonori Waku,Naoki Tanaka,Atsushi Nakahira 4533	4533
T. Hariyama, presiding			
12:55	2Q08	Precise control of cellular shapes and structures for rebirth of cell-derived materials as a novel material. <u>Akira Yamazaki</u> ,Sachiko Kaihara,Keiji Fujimoto 4535	4535
13:20	2Q09	Influence of Hydrophobic Structures of Molecules on the Plasma Membrane Permeability <u>Katsuyuki Nambara</u> ,Kenichi Niikura,Takaharu Okajima,Yasutaka Matsuo,Kuniharu Ijiro..... 4537	4537
13:45	2Q10	Functional Chromatin Model using Peptide-Grafted Polymer and Gene Regulation <u>Shujiro Shiosaki</u> ,Yuko Sato,Takeshi Mori,Takuro Niidome,Yoshiki Katayama..... 4539	4539
Y. Uozu, presiding			
14:10	2Q11	Autonomous Viscosity Oscillation by Reversible Complex Formation of Terpyridine -Terminated Poly(ethylene glycol) in the BZ reaction <u>Tomonaga Ueno</u> ,Kaori Bundo,Yuki Akagi,Takamasa Sakai,Ryo Yoshida.... 4541	4541
14:35	2Q12	Ion-Permeability Regulation of Biomembrane by Photoresponsive Dendritic Molecular Glues <u>Yushi Suzuki</u> ,Tadashi Takeuchi,Kou Okuro,Takuzo Aida 4543	4543
15:00	2Q13	Dendritic Molecular Glue: Adhesion to the Surface of Proteins by Multivalent Salt-Bridge Formation and Its Application <u>Kou Okuro</u> ,Kazushi Kinbara,Makoto Oba,Nobuhiro Nishiyama,Kazunori Kataoka,Takuzo Aida 4545	4545
15:25	2Q14	Design of Antimicrobial Amphiphilic Block Copolymers by Living Polymerization <u>Yukari Oda</u> ,Laura M. Thoma,Shokyoku Kanaoka,Sadahito Aoshima,Kenichi Kuroda 4547	4547
A. Hozumi, presiding			
15:50	2Q15	Structured silica replicated from polymeric crystalline aggregates and its functionalization <u>Hiroyuki Matsukizono</u> ,Ren-Hua Jin 4549	4549
16:15	2Q16	Self-assembled super structures of nanoparticles driven by fluorinated tetraethylene glycol surfaces. <u>Takashi Nishio</u> ,Kenichi Niikura,Yasutaka Matsuo,Kuniharu Ijiro 4551	4551

16:40	2Q17	Synthesis of Calcium Carbonate Composite Particles with Carboxylic Acid-Terminated Hyperbranched Poly(amidoamine) and the Surface Modification <u>Yuka Tanaka</u> , Kensuke Naka 4553
17:05	2Q18	Fabrication and in vitro Evaluation of Poly(L-lactide)/Biphasic Ceramic Composites (III) – Evaluation of Biodegradability <u>Nami Sugiyama</u> , Masahiro Fujita, Yuko Takeoka, Mamoru Aizawa, Masahiro Rikukawa 4555

Room R

Wednesday, September 15

Panoscopic Materials Based on Polymer Nanoscience and Nanotechnology

9:50	SO	Introductory Remarks Shusaku Nagano 4129
		S. Nagano, presiding
10:00	1R03	Half Structures of Porphyrins: Control of Hierarchical π -Spaces on the Basis of Dipyrroin Metal Complexes <u>Hiromitsu Maeda</u> , Takashi Hashimoto, Takuma Nishimura, Hiroaki Kobayashi, Ryo Akuta, Yuki Nishimura 4130
10:25	1R04	Constructions and functions of one-dimensionally layered structures of π -electron systems <u>Yasuhiro Morisaki</u> , Yoshiki Chujo 4132
10:50	1R05	Syntheses of Molecular Electronics Devices by Build-up Process <u>Jun Terao</u> , Kyouhei Homma, Tetsuaki Fujihara, Yasushi Tsuji 4134
11:15	1R06	Controlling Nanostructures of π -Conjugated Supramolecular Polymers <u>Shiki Yagai</u> , Yusaku Goto 4136
11:40	1R07	Construction of Dye-Organized Nanotubes: Light Harvesting Ability and Light-Stimulus Morphological Control <u>Naohiro Kameta</u> , Masumi Asakawa, Mitsutoshi Masuda, Toshimi Shimizu... 4138
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12:55	1R08	Chirality Control of Aromatic Conjugated Polymers in Thermally Helicity-Controllable Asymmetric Liquid Crystal Reaction Field <u>Sangbum Ahn</u> , Munju Goh, Masaharu Yamamoto, Kazuyoshi Watanabe, Kazuo Akagi 4140
13:20	1R09	Photo-induced self-assembly of multi-stimuli responsive block copolymers in an ionic liquid <u>Yutaro Nakamura</u> , Takeshi Ueki, Kazuyuki Niitsuma, Ayuko Yamaguchi, Timothy Lodge, Masayoshi Watanabe 4142
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		N. Mizoshita, presiding
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K. Oyaizu, presiding			
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Thursday, September 16

Panoscopic Materials Based on Polymer Nanoscience and Nanotechnology

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10:50	2R05	Preparing TEMPO-Substituted Polymethacrylate/Single-Wall Carbon Nanotube Composites and Their Application for Transparent Charge-Storage Electrode <u>Wonsung Choi</u> ,Kenichi Oyaizu,Hiroyuki Nishide,Seok-ju Choi,Kurt E. Geckeler.....	4173
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11:15	2R06	Spinning of carbon nanotubes by using electrohydrodynamic field <u>Shinji Imaizumi</u> ,Hidetoshi Matsumoto,Yuichi Konosu,Kazuma Tsuboi,Mie Minagawa,Akihiko Tanioka,Krzysztof Koziol,Alan Windle	4175
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H. Yabu, presiding			
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14:10	2R11	New Applications of Nanostructure-controlled Plasmonics—Toward High Efficiency LEDs and Solar Cells <u>Koichi Okamoto</u>	4185
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N. Zettsu, presiding			
15:00	2R13	Measurements of SERS by using silver pincushion films with silver nano-gaps <u>Yuji Hirai</u> ,Hiroshi Yabu,Yasutaka Matsuo,Kuniharu Ijiro, Masatsugu Shimomura	4189
15:25	2R14	Fabrication of diarylethene nanoparticles for optical-waveguide by microspheres array <u>Norio Tagawa</u> ,Akito Masuhara,Tsunenobu Onodera,Hitoshi Kasai, Hidetoshi Oikawa	4191
15:50	2R15	Molecular Structure for Photoactuators by Photoresponsive Organic Crystals in Mesoscopic Size <u>Seiya Kobatake</u>	4193
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Panoscopic Materials Based on Polymer Nanoscience and Nanotechnology

A. Masuhara, presiding			
9:10	3R01	Preparation of Janus Particles <u>Yuji Kiyono</u> ,Olaf Karthaus	4201
9:35	3R02	Control of the phase separation structures in the diblock copolymer nanoparticles and their structural analysis <u>Takeshi Higuchi</u> ,Shunsuke Sato,Kazutaka Koike,Hiroshi Yabu, Hidekazu Sugimori,Haruko Saito,Hiroshi Jinnai,Masatsugu Shimomura...	4203

10:00	3R03	Preparation of gold nanoparticles and polymer composite particles with micro phase separation structures <u>Kazutaka Koike</u> , Takayuki Nakanishi, Takeshi Higuchi, Hiroshi Yabu, Masatsugu Shimomura	4205
E. Sato, presiding			
10:25	3R04	Functionalization of Metal-Organic Frameworks by Post-Synthetic Method Using Click Reaction <u>Kouta Sugikawa</u> , Hiroki Sato, Shunjiro Nagata, Takumi Ishiwata, Kazuki Sada	4207
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11:40	3R07	Synthesis and application of block copolymers containing a main-chain degradable polyperoxide <u>Eriko Sato</u> , Takashi Hagihara, Akikazu Matsumoto	4213
S. Asaoka, presiding			
12:55	3R08	Material Design with Dibenzo[d,d']benzo[1,2-b:4,5-b']difuran as a Core Framework <u>Koji Nakano</u> , Motonobu Takahashi, Natsuko Chayama, Kyoko Nozaki	4215
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14:10	3R11	Molecular design of amphiphilic LC block copolymers giving normally oriented cylindrical nanostructures with high aspect ratio <u>Sadayuki Asaoka</u> , Masashi Aotani, Tasuku Izutani, Syunsuke Yamada, Takeshi Yamada, Hirohisa Yoshida, Motonori Komura, Tomokazu Iyoda	4221
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Room S

Wednesday, September 15

Physical Chemistry of Optoelectronic Polymer Materials

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T. Michinobu, presiding			
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10:25	1S04	Synthesis of optically active conjugated polymers and control of optical rotation, optically active electrochromism <u>Hiromasa Goto</u> 3967	3967
10:50	1S05	Self-Threading Polythiophene <u>Kazunori Sugiyasu</u> , Yuki Ouchi, Yoshihito Honsho, Shu Seki, Masayuki Takeuchi 3969	3969
K. Sugiyasu, presiding			
11:15	1S06	Synthesis and Properties of Through-Space Conjugated Polymers Transferring Energy and/or Charge <u>Shizue Ueno</u> , Lin Lin, Yasuhiro Morisaki, Yoshiki Chujo 3971	3971
11:40	1S07	Development of Thiophene-Fused π -Electron Systems Based on Intramolecular Double 5- <i>exo</i> Cyclization of Dithienylacetylenes <u>Aiko Fukazawa</u> , Takashi Karasawa, Daisuke Kishi, Yuki Tanaka, Hongyu Zhang, Jian Wang, Stephan Irle, Shigehiro Yamaguchi 3973	3973
J. Terao, presiding			
12:55	1S08	One-Step Synthesis and Postfunctionalization of Ladder-Type Conjugated Polymers <u>Tsuyoshi Michinobu</u> , Dong Wang 3975	3975
13:20	1S09	Synthesis and Carrier Transporting Properties of Si-Linked Oligothiophenes <u>Joji Ohshita</u> , Shigenori Matsui, Yosuke Hatanaka, Yuta Tominaga, Yoshihito Kunugi 3977	3977
13:45	1S10	Circularly Polarized Luminescence of Di-Substituted Polyacetylene through the Formation of a Chiral Nematic Liquid Crystal Phase <u>Benedict Arcena San Jose</u> , Satoshi Matsushita, Kazuo Akagi 3979	3979
S. Seki, presiding			
14:10	1S11	Synthesis and properties of a novel π -stacked polymer consisting of thiophene moieties Takeshi Sakamoto, Tohru Yade, <u>Tamaki Nakano</u> 3981	3981
14:35	1S12	Syntheses of step- π -conjugated polymers and their application for photoenergy conversion systems <u>Hiroyuki Aota</u> , Takeshi Ishikawa, Yuya Kondo, Yuya Hamamura, Yuki Uchida, Hiroaki Ejiri, Dai Takaya, Shouta Nishimura, Yutaro Maki, Akira Matsumoto 3983	3983
15:00	1S13	Highly Environmentally Stable Semiconducting Polymers Based on Benzobisthiazole <u>Itaru Osaka</u> , Kazuo Takimiya, Richard Mccullough 3985	3985
N. Tohnai, presiding			
15:25	1S14	Kumada Coupling Polymerization of Thiophene Monomer Bearing Pyridine Ring at 3-Position <u>Koji Takagi</u> , Hyun-ho Joo, Eiki Kawagita, Shin-ichi Matsuoka, Masato Suzuki 3987	3987
15:50	1S15	Single-chain Photoconductive Polymer Constrained in Coordination Nanochannels <u>Noriyuki Uchida</u> , Takashi Uemura, Susumu Kitagawa, Shu Seki, Atsushi Asano 3989	3989
16:15	1S16	Molecular dynamics of poly(alkylthiophene) and AC impedance measurements <u>Naoki Asakawa</u> 3991	3991
H. Takaya, presiding			
16:40	1S17	Rectification of electron transfer through an electron potential gradient <u>Takane Imaoka</u> , Hiroki Kobayashi, Kimihisa Yamamoto 3993	3993

17:05	1S18	Single-Photon Emission from a Single Coonjugated Polymer Chain <u>Sadahiro Masuo</u> , Masaaki Hosugi, Shinjiro Machida, Akira Itaya 3995	3995
17:30	1S19	Optoelectronic Properties of Supramolecular Structures by using Organic salts <u>Norimitsu Tohnai</u> , Tomoaki Hinoue, Ichiro Hisaki, Mikiji Miyata 3997	3997
17:55	1S20	Synthesis and Optoelectronic Properties of Versatile π -Conjugated Polymers by Novel Parallel Synthetic Methods <u>Ikuyoshi Tomita</u> , Hiroki Nishiyama, Shoichi Kawamitsu, Hideki Tsukuda..... 3999	3999

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Physical Chemistry of Optoelectronic Polymer Materials

S. Yagai, presiding

9:10	2S01	Microfabrication of general polymer films using patterned UV light <u>Takashi Ubukata</u> , Yusuke Moriya, Shintaro Yamamoto, Yasushi Yokoyama 4001	4001
9:35	2S02	The Electronic States of Individual (n,m)SWNTs and Micro-Environmental Effects Yasuhiko Hirana, Yasuhiko Tanaka, Yasuro Niidome, <u>Naotoshi Nakashima</u> 4003	4003
10:00	2S03	New approach for chirality recognition of carbon nanotubes <u>Hiroaki Ozawa</u> , Natsuko Ide, Tsuyohiko Fujigaya, Michiya Fujiki, Naotoshi Nakashima 4005	4005

T. Ubukata, presiding

10:25	2S04	Construction of Highly-Organized Perylene Bisimide Assemblies <u>Shiki Yagai</u> , Tomohiro Seki..... 4007	4007
10:50	2S05	Modulation of Function of π -Conjugated System <u>Hayato Tsuji</u> 4009	4009
11:15	2S06	Creation of functional nanomaterials utilizing unique wrapping properties of semi-artificial polysaccharides <u>Munenori Numata</u> , Daiki Kinoshita, Hitoshi Tamiaki, Seiji Shinkai 4011	4011
11:40	2S07	Superstructure dependent optical and electrical properties for one dimensional assemblies based on butadiyne-bridged conjugated macrocycles <u>Ichiro Hisaki</u> , Hajime Shigemitsu, Norimitsu Tohnai, Mikiji Miyata 4013	4013

S. Seki, presiding

12:55	2S08IL	Organic and Polymeric Materials with Optical and Electronic Properties: Toward Static and Dynamic Responsive Functions <u>Takanori Fukushima</u> 4015	4015
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H. Tsuji, presiding

13:45	2S10	Liquid Crystalline Fused Porphyrin Dimers: Switchable p/n-Semiconducting Properties by Peripheral Molecular Design <u>Tsuneaki Sakurai</u> , Kentaro Tashiro, Atsuhiko Osuka, Akinori Saeki, Shu Seki, Takuzo Aida..... 4018	4018
14:10	2S11	Construction and Functions of Sheet-shaped Polymers <u>Donglin Jiang</u> 4020	4020
14:35	2S12	Photoconductive Coaxial Nanofibers Consisting of Copper Phthalocyanine Octakis(Perylenediimide) <u>Akihisa Yamaguchi</u> , Yohei Yamamoto, Takanori Fukushima, Akinori Saeki, Shu Seki, Takuzo Aida..... 4022	4022

I. Hisaki, presiding

15:00	2S13	Controlled Metal Array Formation Based on Metallated Amino Acids:— Synthesis and Photochemical Properties of NCN-Pincer Transition Metal Complexes Tethered to Norvaline Peptides <u>Hikaru Takaya</u> , Daisuke Sasano, Kazuki Ogata, Tomoya Yokoi, Hirofumi Seike, Katsuhiko Isozaki, Masaharu Nakamura 4024	4024
15:25	2S14	Interfacial assembly of photofunctional nanomaterials and their photoelectric properties <u>Rinko Kudo</u> , Takahiro Yokoyama, Jun Matsui, Akito Masuhara, Hitoshi Kasai, Hidetoshi Oikawa, Tokuji Miyashita 4026	4026
15:50	2S15	Interlayer Energy Transfer in Dye-labeled Polymer Multilayer Thin Films Prepared by Spin-coating <u>Shinjiro Machida</u> , Nobuya Nakagawa, Kazunobu Uchida, Sadahiro Masuo, Akira Itaya 4028	4028
I. Osaka, presiding			
16:15	2S16	Controlling Fluorescence of Perylenediimide Produced by Tumbling of Cyclodextrin <u>Yu Fukui</u> , Yoshinori Takashima, Hiroyasu Yamaguchi, Akira Harada... 4030	4030
16:40	2S17	Photomechanical behavior of photochromic molecular fibers <u>Hideyuki Nakano</u> 4032	4032
17:05	2S18	High temperature XRD analysis of crystallization process in liquid-crystalline semiconducting polymer <u>Toru Mitsunaga</u> , Daisuke Kumaki, Takashi Takasaki, Shizuo Tokito.... 4034	4034

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9:10	3S01	Self-Assembled Radical/Ionic-Domain Formation toward Organic Thin Film Device <u>Takeo Suga</u> , Shunya Takeuchi, Miki Sakata, Takuya Horie, Hiroyuki Nishide..... 4036	4036
9:35	3S02	Organic-Metallic Hybrid Polymer for Applications on Smart Window and Electronic Paper <u>Jian Zhang</u> , Masayoshi Higuchi 4038	4038
10:00	3S03	Surface Morphology and Crystallization of Poly(3-hexylthiophene) in Polymer Blend Films <u>Yasunari Tamai</u> , Hiroyuki Aoki, Hideo Ohkita, Shinzaburo Ito..... 4040	4040
10:25	3S04	Method to produce thin films of conducting polymers from solution by dewetting <u>Takanori Wachi</u> , Olaf Karthaus 4042	4042

Y. Yamamoto, presiding

10:50	3S05	Controlling the Nano-scale Film Structure of Polypeptide as a Ferroelectric Layer and the Influence of the structure on the Device Property <u>Sei Uemura</u> , Takashi Inomata, Tomoo Fukushima, Kazuki Nakamura, Norihisa Kobayashi, Toshihide Kamata 4044	4044
11:15	3S06	Development of vertical-type organic transistors based on a novel principle <u>Ken-ichi Nakayama</u> , Yong-jin Pu, Hisahiro Sasabe, Masaaki Yokoyama, Junji Kido 4046	4046

11:40	3S07	Color Tunable Multilayer OLED Composed of DNA/polyaniline/Ru(II)(bpy) ₃ ²⁺ Complex <u>Kazuki Nakamura</u> , Takayuki Ishikawa, Norihisa Kobayashi 4048	4048
D. Jiang, presiding			
12:55	3S08IL	Formation of Supramolecular Assemblies Comprising π -Conjugated Molecules Responsive to Chemical Stimuli <u>Hiromitsu Maeda</u> 4050	4050
13:45	3S10	Correlation between optical and electronic properties of single crystals of thiophene/phenylene co-oligomer <u>Akinori Saeki</u> , Shu Seki, Yasuhiro Shimizu, Takeshi Yamao, Shu Hotta 4053	4053
14:10	3S11	Amphiphilic Molecular Design as a Rational Strategy for Long-Range Electron Donor/Acceptor Heterojunction <u>Yohei Yamamoto</u> , Wei-shi Li, Takanori Fukushima, Akinori Saeki, Shu Seki, Takuzo Aida 4055	4055
A. Saeki, presiding			
14:35	3S12	Electropolymerized polyviologen: its nanostructure, charge propagation and charge storage <u>Naoki Sano</u> , Wataru Tomita, Kenichi Oyaizu, Hiroyuki Nishide 4057	4057
15:00	3S13	Precisely size-defined nanofin array of conductive polymer and its chemical sensor <u>Sota Funamoto</u> , Masashi Kunitake, Hsiao-hua Yu, Shyh-chyang Luo, Shigenori Fujikawa..... 4059	4059
15:25	3S14	Layer-by-layer fabrication of redox-active metal complex on a substrate and its x-ray diffraction analysis <u>Katsuhiko Kanaizuka</u> , Ryo Tamura, Takuya Nakabayashi, Sono Sasaki, Masa-aki Haga 4061	4061

Room T

Wednesday, September 15

Element-Based Hybrid Polymers

9:50	SO	Introductory Remarks Tetsu Yonezawa 4225	4225
N. Shirahata, presiding			
10:00	1T03	Design and Synthesis of Functional π -Conjugated Polymers Containing Chalcogen Elements by Reactions of Organometallic Polymers Having Titanacyclopentadiene Units in the Main Chain <u>Ikuyoshi Tomita</u> , Hiroki Nishiyama 4226	4226
10:25	1T04	Phosphole oxides as sensory materials <u>Takanobu Sanji</u> 4228	4228
10:50	1T05	Influence of Interfacial Interaction on the Structure and Properties of Imogolite/Polymer Nanocomposites <u>Wei Ma</u> , Weng-on Yah, Hideyuki Otsuka, Atsushi Takahara 4230	4230
K. Naka, presiding			
11:15	1T06	Sequence Control of Metal Ion Arrays via Solid Phase Synthesis <u>Hisanori Ueki</u> , Kentaro Tashiro, Vairaprakash Pothiappan, Omar Yaghi... 4232	4232
11:40	1T07	Functionalization of Nanoparticles by Control of Polymer-Metal Nano-interface <u>Tetsu Yonezawa</u> 4234	4234

T. Yonezawa, presiding			
12:55	1T08	Properties of polymer-silica hybridized nanopowders prepared by dry grinding <u>Kunihiro Ichimura</u> 4236	4236
13:20	1T09	Dispersibility control of nanodiamonds by grafting of polymers and their application for composite plating <u>In Oh Cha</u> , Takeshi Yamauchi, Norio Tsubokawa, Masaharu Koizumi, Hajime Sasaki..... 4238	4238
13:45	1T10	Polyimide-Clay Hybrid Materials – Swelling Behavior of Organophilic-Montmorillonite in NMP <u>Mitsuru Nakano</u> 4240	4240
I. Tomita, presiding			
14:10	1T11IL	New Organic-Inorganic Hybrid Polymers <u>Yoshiki Chujo</u> 4242	4242
M. Nakano, presiding			
15:00	1T13	Optical properties of a silver nanoparticle-polymer hybrid prepared by Vacuum Process <u>Satoshi Udagawa</u> , Tetsu Yonezawa 4245	4245
15:25	1T14	Size-tunable Luminescent IV Semiconductor Nanoparticles <u>Naoto Shirahata</u> , Yoshio Sakka 4247	4247
15:50	1T15	Synthesis of Siloxane-diamine Polymers <u>Yuko Uchimaru</u> , Jianyu Dong, Hiroshi Yamashita, Li-biao Han..... 4249	4249
M. Kubo, presiding			
16:15	1T16	Emission Properties of Silsesquioxane-Europium Complex Hybrids <u>Seiji Watase</u> , Shota Kitagawa, Daiki Fujisaki, Mitsuru Watanabe, Yasuchika Hasegawa, Noboru Nishioka, Kimihiro Matsukawa 4251	4251
16:40	1T17	Controlled Solid-state Luminescence of Platinum(II) Complex with Organoarsenic Ligand by Adsorbing and Desorbing Solvent Molecules <u>Takuji Kato</u> , Kensuke Naka 4253	4253
17:05	1T18	Control of three-dimensional structure and hydrogen storage for metal nanoparticles <u>Yuki Yamamoto</u> , Yoshinori Yamanoi, Hiroshi Nishihara, Ai Minoda, Shinji Oshima, Yoshihiro Kobori 4255	4255
Y. Uchimaru, presiding			
17:30	1T19	Fine-patterning of photosensitive organic-inorganic hybrid materials <u>Hiroyo Segawa</u> 4257	4257
17:55	1T20	Hybridization of Polycyclopentadithiophen with Inorganic Materials <u>Masataka Kubo</u> , Makoto Towatari, Takahiro Uno, Takahito Itoh..... 4259	4259

Thursday, September 16

Element-Based Hybrid Polymers

A. Shimojima, presiding			
9:10	2T01	Flame-Retardant Composite Film Consisted of Laponite and PEG with Flexibility and Transparency <u>Kazuto Aizawa</u> , Kazuhiro Shikinaka, Nozomu Fujii, Yoshihito Osada, Kiyotaka Shigehara 4261	4261
9:35	2T02	Synthesis and Properties of Polysiloxanes Having Cage Silsesquioxanes in the Main Chain <u>Takahiro Shioda</u> , Takahiro Gunji, Yoshimoto Abe, Noritaka Abe..... 4263	4263

K. Katagiri, presiding			
10:00	2T03	Synthesis and Structural Analysis of Ladder Polysilsesquioxanes from Sila-functional Cyclic Tetrasiloxanes <u>Hiroyasu Seki</u> , Takahiro Gunji, Yoshimoto Abe, Noritaka Abe	4265
10:25	2T04	Preparation of ladder-like polysilsesquioxanes containing chiral groups and control of their nanostructures <u>Yoshiro Kaneko</u> , Hisaya Toyodome, Hisako Sato, Akihiko Yamagishi	4267
Y. Kaneko, presiding			
10:50	2T05	Synthesis of Silica-Organic Hybrid Nanoporous Materials from D4R Units Functionalized with Bromophenyl Groups <u>Atsushi Shimojima</u> , Watcharop Chaikittisilp, Aya Sugawara, Tatsuya Okubo.....	4269
11:15	2T06	Interlayer surface modification of the protonated layered tetratitanate $H_2Ti_4O_9 \cdot xH_2O$ with phenylphosphonic acid <u>Shintaro Nagahama</u> , Yumi Kato, Yoshiyuki Sugahara	4271
11:40	2T07	Palladium Nanoparticles Captured in Microporous Polymers: Enhancing Catalytic Activities Based on Structural Control of Polymer Supports. <u>Shin Ogasawara</u> , Shinji Kato	4273
N. Ueno, presiding			
12:55	2T08	Sol-gel Synthesis of Silica in Porous Coordination Polymers <u>Takashi Uemura</u> , Yu Kadowaki, Susumu Kitagawa	4275
13:20	2T09	Function-Fusion Hybrid Capsular Materials with On-Demand Release Property <u>Kiyofumi Katagiri</u> , Yuji Imai, Kunihiro Koumoto, Tomohiro Kaiden, Kenji Kono, Sadahito Aoshima	4277
13:45	2T10	Development of Nanostructurally-controlled Gold Nanoparticle Array and its Application to Biosensor <u>Shiho Tokonami</u> , Hiroshi Shiigi, Tsutomu Nagaoka	4279
K. Matsukawa, presiding			
14:10	2T11	Self-assembly method of linearly aligning ZnO nanoparticles for a nanophotonic signal transmission device <u>Tetsu Yonezawa</u> , Takashi Yatsui, Yo Ryu, Tetsu Morishima, Wataru Nomura, Tadashi Kawazoe, Masao Washizu, Hiroyuki Fujita, Motokazu Ohtsu.....	4281
14:35	2T12	Preparation of Hybrid Materials by the Photoreactions of Organosilicon Polymers <u>Joji Ohshita</u> , Daiki Tanaka, Junya Matsukawa, Yousuke Ooyama, Yutaka Harima, Yoshihito Kunugi	4283
15:00	2T13	High Refractive index Micropattern Fabricated from Organogermanium Polymer <u>Ryosuke Fujii</u> , Akira Watanabe, Tokuji Miyashita.....	4285
J. Ohshita, presiding			
15:25	2T14	Syntesis of high refractive index nanocomposites and their properties under of high humidity and high temperature <u>Nobuhiko Ueno</u>	4287
15:50	2T15	Preparation of high refractive index hybrids by using bisphenyl fluorene with telechiric alkoxy silane groups <u>Kimihiro Matsukawa</u> , Takuma Yoshimoto, Noboru Nishioka, Seiji Watase	4289
16:15	2T16	Design and Preparation of Core-Polymerized Micelles Containing Boron Atoms for Boron Neutron Capture Therapy <u>Shogo Sumitani</u> , Motoi Oishi, Yukio Nagasaki	4291

		T. Uemura, presiding	
16:40	2T17	Nonvolatile Memory Switching Behavior of Newly Synthesized Co(III)-polymer <u>Anasuya Bandyopadhyay</u> , Masayoshi Higuchi	4293
17:05	2T18	Synthesis of Organic-Inorganic Hybrid Type Organoboron Ion-gels and Their Properties <u>Noriyoshi Matsumi</u> , Akihito Kagata, Nobuaki Yoshioka, Kousuke Yoshida, Sonu Ram Shankar, Keigo Aoi	4295

Friday, September 17

Element-Based Hybrid Polymers

		T. Yonezawa, presiding	
10:00	3T03	Wettability Improvement by Silica Nanoparticle Addition in Solution-Processed TIPS-Pentacene Field-Effect Transistors <u>Kimihiro Matsukawa</u> , Saori Yamazaki, Sakae Tokai, Takashi Nagase, Seiji Watase, Hiroyoshi Naito, Mitsuru Watanabe	4297
10:25	3T04	Magneto-optical properties of polymer thin films containing lanthanide nanocrystals <u>Yasuchika Hasegawa</u>	4299
10:50	3T05	Preparation of highly water-dispersible titanium-silicon binary oxide nanoparticles and their hybridization with polymers <u>Yoshiro Kaneko</u> , Eisaburo Ishikawa	4301
		K. Matsukawa, presiding	
11:15	3T06	Effect of substitution groups in POSS fillers for lowering refractive indices in polymer films <u>Kazuo Tanaka</u> , Shigehiro Adachi, Norihiko Yasuda, Yoshiki Chujo	4303
11:40	3T07	Synthesis and Low Temperature Dehydrating Imidation Polymerization of 1,4-Dihydro-1,4-diarsininetetracarboxylic Acid Dianhydride Tatsuo Shimamoto, Takuji Kato, <u>Kensuke Naka</u> , Manabu Arita, Yasuhiro Morisaki, Yoshiki Chujo	4305

Room U

Wednesday, September 15

Polymer Membranes for Environmental and Energy Applications

9:50	SO	Introductory Remarks Kazukiyo Nagai	4621
		K. Nagai, presiding	
10:00	1U03	T2 relaxation of gas and higher-order structure in glassy polymer <u>Masahiro Okazawa</u> , Hiroaki Yoshimizu	4622
10:25	1U04	Gas Transport Properties of Liquid Crystalline Aromatic Polyester with Various n-Alkyl Side Chains <u>Toshihito Karakasa</u> , Hiroaki Yoshimizu	4624
10:50	1U05	Gas transport properties of polyimide membranes containing substituent groups <u>Masako Miki</u> , Yasuharu Yamada	4626
11:15	1U06	Preparation of hyperbranched polymer-modified nanoparticle/polyimide composite membrane having high CO ₂ permeability <u>Shoichi Hasebe</u> , Satoshi Aoyama, Hiroyoshi Kawakami	4628

11:40	1U07	Carbon dioxide permseparation properties of porous inorganic particle/sulfonated polyimide hybrid membranes <u>Miyuki Shimauchi</u> ,Kangcheng Chen,Nobutaka Endo,Mitsuru Higa,Hidetoshi Kita,Ken-ichi Okamoto	4630
H. Yoshimizu, presiding			
12:55	1U08	Poly(amidoamine) dendrimer immobilized PEG network for preferential CO ₂ separation <u>Ikuo Taniguchi</u> ,Teruhiko Kai,Shuhong Duan,Shingo Kazama.....	4632
13:20	1U09	CO ₂ permeability and Stability of fluorine-containing polyimide membranes under high pressure CO ₂ <u>Shinji Kanehashi</u> ,Shuichi Sato,Kazukiyo Nagai	4634
13:45	1U10	Correlation of gaspermeability with mechanical property for ionomer membranes <u>Akihiro Ohira</u> ,Carlos Seiti Kuroda,Hamdy Mohamed,Naohiko Takimoto,Yoshinori Kobayashi	4636
14:10	1U11	Gas permeation properties and morphology of a dense membrane film prepared from polymer alloy of poly(styrene-block-ethylene/ butylene-block- styrene) triblock copolymer (SEBS), poly (ethylene -co-propylene) (EPP) and poly(ethylene-co-ethylacrylate) (EEA) <u>Masamoto Uenishi</u> ,Masahiko Mizuta,Masashi Teramachi, Noriaki Fukushima	4638
I. Taniguchi, presiding			
14:35	1U12	Free volume and oxygen permeability of hydrated biphenol-based sulfonated poly(arylene ether sulfone) <u>Hamdy F. M. Mohamed</u> ,Y. Kobayashi,C. S. Kuroda,A. Ohira	4640
15:00	1U13	Gas Diffusion Properties of Polymer Crystals <u>Hiroaki Yoshimizu</u>	4642
15:25	1U14	The gas diffusion properties in crystalline phase of poly(4-methyl-1-pentene) <u>Yuki Okumura</u> ,Hiroaki Yoshimizu.....	4644
Y. Nagase, presiding			
15:50	1U15	Preparation of self-supporting membranes from poly(1,3-phenyleneethynylene) derivatives and their permselectivity <u>Makoto Inoue</u> ,Tomoyuki Ohishi,Yuriko Kakihana,Masahiro Teraguchi,Takashi Kaneko,Toshiki Aoki	4646
16:15	1U16	Separation of the VOC ingredient from air using high permeable silicon- or fluorine-containing polymer membranes <u>Shuichi Sato</u> ,Maiko Suzuki,Shinji Kanehashi,Kazukiyo Nagai	4648
16:40	1U17	Developments of Polymer Membranes for Concentration of Alcohol and Membrane Permeation Technique <u>Tadashi Uragami</u>	4650
T. Uragami, presiding			
17:05	1U18	Siloxane-Grafted Polyimides Exhibiting High Organic-Selectivity and Durability <u>Cheol Min Yun</u> ,Eiichi Akiyama,Takeshi Yamanobe,Hiroki Uehara, Yu Nagase	4652
17:30	1U19	Preparations and Pervaporation Property of Siloxane-Grafted Aromatic Polymer membranes <u>Yu Nagase</u>	4654
17:55	1U20	Modified Polysulfone Membranes Bearing Alanine Residue as a Chiral Selector <u>Hiroaki Mizushima</u> ,Sadayuki Asaoka,Masakazu Yoshikawa,Michael Guiver,Gilles Robertson	4656

Thursday, September 16

Polymer Membranes for Environmental and Energy Applications

K. Yamanaka, presiding

- 9:35 2U02 Dielectric spectroscopy of water structures in polymer-water and liposome-water systems – New characterization
Shin Yagihara, Yasuyuki Hosoi, Shunpei Kato, Rio Kita, Naoki Shinyashiki, Akira Motizuki, Masaru Tanaka 4658
- 10:00 2U03 Adsorption dynamics of polyelectrolytes onto bare solid surface
Yasuhisa Adachi, Ken Shou 4660
- 10:25 2U04 Permeation Behavior of ions through NF membranes
Endang Katmiwati, Keiichiro Saito, Hidetoshi Matsumoto, Mie Minagawa, Akihiko Tanioka 4662

Y. Adachi, presiding

- 10:50 2U05 Structure of Water and Ion Hydration in the Polymer for Water Treatment
Koji Yamanaka, Yasuo Kameda 4664
- 11:15 2U06 Preparation and characterization of hollow fiber membrane with low fouling property used for water treatment application
Hideto Matsuyama, Tatsuo Maruyama, Yoshikage Ohmukai 4666
- 11:40 2U07 Membrane fouling in polymeric membranes used for water treatment
Katsuki Kimura 4668

H. Matsuyama, presiding

- 12:55 2U08 Development of High Performance RO Membranes
Masahiro Henmi, Masahiro Kimura, Takao Sasaki, Hiroki Tomioka 4670
- 13:20 2U09 Improved hollow fiber reverse osmosis membrane and its applications
Toshiyuki Yagi, Yuji Ito, Kenta Kochi, Makoto Ohno 4672
- 13:45 2U10 Microfiltration membrane and degassing membrane for water treatment
Hiroshi Hosokawa 4674

N. Hoshikawa, presiding

- 14:10 2U11 Properties of fluoropolymer electrolyte membrane for use under high-temperature and low-humidity
Hiroyuki Watabe, Shinji Kinoshita, Tetsuji Shimohira, Ichiro Terada 4676
- 14:35 2U12 Higher Performance and durability of Perfluorinated Membrane for PEFC
Naoto Miyake, Masatoshi Honda, Tsuneaki Tanabe 4678
- 15:00 2U13 Proton transport mechanism of phosphoric acid doped blend membranes.
Kazuhiro Suzuki, Hiroyoshi Kawakami 4680
- 15:25 2U14 Preparation of phosphoric acid doped blend membranes composed of block graft copolyimides and their fuel cell properties.
Yusuke Iiduka, Hiroyoshi Kawakami 4682

I. Terada, presiding

- 15:50 2U15 Effect of microphase-separated structure on proton conductivity for hydrocarbon polymer electrolyte membrane
Atsuhiko Onuma, Yoshiyuki Takamori, Takaaki Mizukami, Makoto Morishima, Kenji Yamaga 4684
- 16:15 2U16 Synthesis and characterization of novel fluorocarbon-hydrocarbon block copolymer membranes
Naohiro Hoshikawa, Akihiro Shinohara, Youichi Hosokawa, Naoki Hasegawa, Masaya Kawasumi 4686

16:40	2U17	Synthesis and properties of sulfonated poly(arylene ether) block copolymers containing various hydrophobic blocks <u>Byungchan Bae</u> ,Takayuki Hoshi,Kenji Miyatake,Masahiro Watanabe.....	4688
17:05	2U18	Non-humidified Intermediate Temperature Fuel Cell Using Composite Membrane Including Protic Ionic Liquid <u>Tomohiro Yasuda</u> ,Seung-yul Lee,Shin-ichiro Nakamura,Kei Kinugawa,Masayoshi Watanabe	4690

Friday, September 17

Polymer Membranes for Environmental and Energy Applications

H. Kawakami, presiding

9:10	3U01	Anion Conductive Poly(arylene ether) Ionomer Membranes Containing Ammonio Groups <u>Manabu Tanaka</u> ,Masaki Koike,Keita Fukasawa,Kenji Miyatake,Masahiro Watanabe	4692
9:35	3U02	Molecular consideration on superacid-modified poly(arylene ether)s <u>Takefumi Mikami</u> ,Kenji Miyatake,Masahiro Watanabe.....	4694
10:00	3U03	Methanol crossover and DMFC performance of nano-inorganic particle/sulfonated polyimide hybrid membranes <u>Kangcheng Chen</u> ,Miyuki Shimauchi,Nobutaka Endo,Mitsuru Higa, Hidetoshi Kita,Ken-ichi Okamoto	4696

S. Kanehashi, presiding

10:25	3U04	Robust Polymeric Electrolytes Based on Novel Palladium-Catalyzed Coupling Polymerization of Thiophene Derivatives and Aryl Dihalides via C-H Bonds Activation Process <u>Shoichi Kawamitsu</u> ,Ikuyoshi Tomita	4698
10:50	3U05	Conductivity of carbon nanofiber prepared by ion-irradiation <u>Katsuya Sode</u> ,Yoshiaki Suzuki,Hiroyoshi Kawakami	4700
11:15	3U06	Fuel cell properties of composite membrane containing aligned nanofibers. <u>Ryouhei Takemori</u> ,Katsuya Sode,Takuya Tamura,Hiroyoshi Kawakami...	4702
11:40	3U07	Analysis of energy conversion characteristics in vibration-electric-generation system using piezoelectric polymers <u>Takeo Furukawa</u> ,Hidekazu Kodama,Takashi Nakajima,Yoshinobu Yasuno,Munehiro Date.....	4704

Room V

Wednesday, September 15

Innovation in Development of Network Polymers

9:50	SO	Introductory Remarks <u>Toshiyuki Oyama</u> , Taro Fukui	5428
		T. Oyama, presiding	
10:00	1V03	The Research for Curing Behavior of Epoxy Resin Containing Metal Particle <u>Motomasa Yonezumi</u> ,Satoshi Okumoto,Yasuo Fukuhara,Hirohisa Hino.....	5429

10:25	1V04	Cross-linking of elastomers exploiting nitrile <i>N</i> -oxide <u>Morio Yonekawa</u> , Yasuhito Koyama, Young-gi Lee, Toshikazu Takata... 5431	5431
10:50	1V05	Synthesis of new novolacs from phenol derivatives and its unique conformation <u>Yusuke Tojo</u> , Gen-ichi Konishi 5433	5433
T. Takata, presiding			
11:15	1V06	Synthesis of a polymer having 1,3-benzoxazine moiety in the side chain derivated from poly(allylamine) <u>Hiroaki Oie</u> , Atsushi Sudo, Takeshi Endo 5435	5435
11:40	1V07	Synthesis of Novel Network Polymer Precursors by Free-Radical Crosslinking Monomethacrylate/Multimethacrylate Copolymerizations Equilibrated at Elevated Temperatures <u>Takashi Enomoto</u> , Kouichi Hirata, Hiroyuki Aota, Akira Matsumoto..... 5437	5437
A. Sudo, presiding			
12:55	1V08	Photochemical generation of superbases and its application to anionic UV-curing <u>Koji Arimitsu</u> , Ryosuke Endo 5439	5439
13:20	1V09	Chain Propagation in UV Curing of Reworkable Methacrylates Under Imprint Conditions <u>Daisaku Matsukawa</u> , Haruyuki Okamura, Masamitsu Shirai 5441	5441
13:45	1V10	Phase Structure of Cross-linked Polyurethane with Various Molecular Weight <u>Ken Kojio</u> , Suguru Motokucho, Junpei Arata, Takeshi Osajima 5443	5443
14:10	1V11	Recycling of unsaturated polyester resin and investigation of styrene cross-linking development using subcritical water— Enhanced recycling of styrene-fumaric acid copolymer and its structural analysis. <u>Takaharu Nakagawa</u> , Masaru Hidaka, Shin Matsugi, Hiroki Ohira, Takao Hayashi, Takuji Shimokage, Satoshi Okumoto 5445	5445
K. Kojio, presiding			
14:35	1V12	Structural analysis of nanoparticle highly-packed network polymer using a synchrotron X-ray scattering <u>Kazunobu Senoo</u> , Ken Takeuchi, Yasuo Simobe, Shigeo Kuwamoto, Yoshimasa Urushihara, Leo Li, Junji Matsui, Katsuhiko Nakamae 5447	5447
15:00	1V13	Analysis of network structure for cured phenolic resins <u>Nobuyuki Ikeda</u> , Tatsuro Kobayashi, Yuji Suzuki, Takahisa Yamamoto 5449	5449
15:25	1V14	Structure and Physical Properties of Dried Tetra-PEG Gel <u>Yusaku Nomoto</u> , Takuro Matsunaga, Mitsuhiro Shibayama, Takamasa Sakai, Ung-il Chung, Masatoshi Tosaka 5451	5451
H. Uyama, presiding			
15:50	1V15	Development of high toughness and high refractive index hybrid materials by thiol-ene reaction <u>Kimihiro Matsukawa</u> , Seiji Watase 5453	5453
16:15	1V16	Effects of 3D structure of inorganic backbone moiety on optical properties of silsesquioxane epoxy resins <u>Mitsukazu Ochi</u> , Yasuhiro Uno, Miyuki Harada 5455	5455
16:40	1V17	Preparation of Epoxy/Zirconia Hybrid Materials by In-situ Polymerization Using Curing Agent for the Reactivity Control of Zirconium Alkoxide <u>Mitsukazu Ochi</u> , <u>Daisuke Nii</u> , Miyuki Harada 5457	5457

K. Matsukawa, presiding

17:05	1V18	Synthesis and characterization of organic-inorganic hybrid network polymers toward transparent heat resistant materials <u>Akira Watanabe</u> , Takahiro Ishikawa, Tokuji Miyashita 5459
17:30	1V19	Shape memory materials based on plant oil network <u>Takashi Tsujimoto</u> , Yuki Yoshida, Hiroshi Uyama 5461
17:55	1V20	Fabrication of Polymer Nanofiber Networks and the Gas Separation Application <u>Sadaki Samitsu</u> , Rui Zhang, Xinsheng Peng, Izumi Ichinose 5463

Thursday, September 16**Innovation in Development of Network Polymers****H. Kishi, presiding**

9:10	2V01	Development of High Performance Networked Polymers Having Isocyanurate Moieties Based on Cyclotrimerization of Isocyanates <u>Masaki Moritsugu</u> , Atsushi Sudo, Takeshi Endo 5465
9:35	2V02	Synthesis of Novel High Thermal Conducting Epoxy Monomers and Characterization of the Self-Assembled Structures in the Thermosets <u>Teruaki Hayakawa</u> , Rina Maeda, Sou Kodama, Masa-aki Kakimoto, Hiroaki Urushibata, Shinya Tokizaki, Naoki Yasuda, Hideharu Nobutoki 5467

T. Fukui, presiding

10:25	2V04	Study on heat resistant resins using reaction between maleimide and benzoxazine <u>Reo Takaiwa</u> , Toshiyuki Oyama, Akio Takahashi 5469
10:50	2V05	Novel high-molecular-weight polybenzoxazine precursors having azomethine unit <u>Tsutomu Takeichi</u> , Minoru Ohara, Takehiro Kawauchi 5471
11:15	2V06	Deformation and fracture of epoxy/acryl block copolymer nano-alloys <u>Hajime Kishi</u> , Yumi Kunimitsu, Shinya Oshita, Yoshihiro Morishita 5473
11:40	2V07	Miscibility in Binary Blend of Polynorbornene Having Ester Groups and Polymer Having Hydroxyl Groups Based on Hydrogen Bonding Interaction <u>Shimon Tanaka</u> , Haruo Nishida, Takeshi Endo 5475

M. Ochi, presiding

12:55	2V08	Molecular Design of Novel Networked Polymers for Functional Materials <u>Takeshi Endo</u> 5477
13:20	2V09	Synthesis and Property of Poly(ethylene Glycol)-Based Networked Polymers Having Sulfonic Acid Lithium or Sulfonylimide Lithium Salt Structures <u>Kozo Matsumoto</u> , Takeshi Endo 5479
13:45	2V10	Preparation and Property of Ion-Gels Consisting of Poly(ethylene Glycol)-Based Networked Polymers and Ionic Liquids <u>Kozo Matsumoto</u> , Takeshi Endo 5481

T. Takeichi, presiding

14:10	2V11IL	Accelerated Rate of Polymerization in Benzoxazine Resins without Added Initiators or Catalysts <u>Hatsuo Ishida</u> , Tarek Agag 5483
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15:00	2V13	Crosslinking Reaction Mechanism of Epoxy Resins. 3. Pursuit of Dendritic Network-Polymer-Precursor Formation in Crosslinking Diepoxide/Diamine Polymerizations <u>Yujiro Kaneda</u> ,Hiroyuki Aota,Akira Matsumoto 5486	5486
15:25	2V14	Recyclable Network Polymer Systems Using Stimuli-Responsible Rotaxanes <u>Yasuhiro Kohsaka</u> ,Takahiro Yoshii,Kazuko Nakazono,Yasuhito Koyama,Toshikazu Takata 5488	5488
K. Matsumoto, presiding			
15:50	2V15	Reorganizable Chemical Gels toward Precise Network Controls and Self-Healing Reactions <u>Yoshifumi Amamoto</u> ,Jun Kamada,Krzysztof Matyjaszewski,Hideyuki Otsuka,Atsushi Takahara..... 5490	5490
16:15	2V16	Molecular Design of Network Polymer Precursors and Construction of Crosslink-System-Materials by Controlling the Primary-Polymer-Chain Forming Reaction in Free-Radical Crosslinking Multivinyl Polymerization <u>Akira Matsumoto</u> ,Satoshi Inoue,Hiroyuki Aota 5492	5492
16:40	2V17	Ultrasonic Irradiation on Vinyl-Type Network Polymers. 3. Degradation of Crosslink-System-Materials Consisting of Designed Network Polymer Precursors Based on Free-Radical Crosslinking Multivinyl Polymerization <u>Kouta Himeji</u> ,Hiroyuki Aota,Akira Matsumoto 5494	5494
17:05	2V18	Construction of High-Functionality and High-Performance Crosslink-System-Materials by Hybridizing Rigid and Flexible Network Polymer Precursors <u>Takeshi Okada</u> ,Hiroyuki Aota,Akira Matsumoto,Toshifumi Fujii,Hiroyuki Toridome 5496	5496

Room W

Wednesday, September 15

Polymers for Medical Technology: to Prevent, to Diagnose and to Cure the Disease

9:50	SO	Introductory Remarks Akio Kishida..... 5077	5077
A. Kishida, presiding			
10:00	1W03	continuous antimicrobial agent of phosphorylated pullulan and surfactant for the oral use Hiroki Yamamoto, <u>Takumi Okihara</u> ,Yasuhiro Yoshida,Naoko Namba,Noriyuki Nagaoka,Seisuke Takashima,Kazuomi Suzuki,Shogo Takashiba 5078	5078
10:25	1W04	Amphiphilic poly(amino acid) nanoparticles as vaccine adjuvants <u>Takami Akagi</u> ,Masanori Baba,Mitsuru Akashi 5080	5080
T. Taguchi, presiding			
10:50	1W05	Improved decellularizing method for prevention of calcification after transplantation of decellularized blood vessel <u>Jeong-hun Kang</u> ,Hiroshi Tanaka,Kenji Minatoya,Mitsuru Sago,Naoto Mihashi,Atsushi Mahara,Toshiyuki Moritan,Toshiya Fujisato,Tetsuji Yamaoka 5082	5082

11:15	1W06	Development and functionalization of the small-diameter vascular graft based on the silk fibroin toward application to vascular regeneration <u>Yasumoto Nakazawa</u> , Tatsuya Hayashi, Takahito Yagi, Haruka Maeda, Kenji Itoh, Masataka Sata, Tetsuo Asakura 5084	5084
11:40	1W07	Preparation and characterization of collagen matrix for the replication of native tissue function <u>Kwangwoo Nam</u> , Yuuki Sakai, Tsuyoshi Kimura, Akio Kishida 5086	5086
Y. Ohya, presiding			
12:55	1W08IL	Fabrication of 3D liposomal array for potential biomedical applications <u>Yoshihiro Sasaki</u> , Keita Abe, Kazunari Akiyoshi 5088	5088
H. Otsuka, presiding			
13:45	1W10	Visible-light curable gelatin derivative <u>Yoshihiro Ito</u> , Sei Obuse, Takashi Kitajima, Kiyomi Mitsukoshi, Takahisa Matsue, Hideo Tashiro 5091	5091
14:10	1W11	Biofunctionalization of metal or ceramic surface by immobilization of growth factor <u>Yoshihiro Ito</u> , Jeonghwa Kang, Makoto Sakuragi, Hiroshi Abe, Takashi Kitajima 5093	5093
14:35	1W12	The influence of shear stress on inner surfaces of pPVC tubes for cardiopulmonary bypass <u>Hiroyuki Kuromitsu</u> , Takashi Aoki 5095	5095
T. Serizawa, presiding			
15:00	1W13	Development of drug-eluting stent with anti-thrombogenic and endothelial cell adhesive properties <u>Tetsushi Taguchi</u> , Motoki Inoue, Katsuhito Fujiu, Ichiro Manabe, Ryozi Nagai 5097	5097
15:25	1W14	Anticoagulant activity of enzymatically synthesized amylose derivatives <u>Jun-ichi Takahara</u> , Michihiro Sunako, Kayo Hosoya, Kayo Terada, Shiho Hirohara, Tsuyoshi Ando, Masao Tanihara 5099	5099
15:50	1W15	Improvement of photothermal property of gold nanoparticles encapsulated in the PEGylated dendrimer for application to photothermal therapy <u>Chie Kojima</u> , Yasuhito Umeda, Atsushi Harada, Horinaka Horinaka, Kenji Kono 5101	5101
16:15	1W16	Development of controlled-releasing matrix of non-woven mats containing water-soluble drug <u>Takuro Kimura</u> , Takeyuki Kitagawa, Hiroshi Uyama, Yasuhiko Tabata 5103	5103
K. Fujimoto, presiding			
16:40	1W17	Development of Blood Purification Therapy by Using Human Thrombomodulin Immobilized Dialyzer <u>Masaaki Omichi</u> , Michiya Matsusaki, Ikuro Maruyama, Mitsuru Akashi 5105	5105
17:05	1W18	Surface forces study on heat shock response of transcriptional proteins Yoshiki Nakata, Takahiro Yamaguchi, Takehiro Suzuki, Kazuya Morikawa, <u>Kazue Kurihara</u> 5107	5107
17:30	1W19	Aggregation States of Poly(2-methoxyethylacrylate)/ Poly(methyl methacrylate) Blends at Water Interface <u>Hisao Matsuno</u> , Toyoaki Hirata, Masaru Tanaka, Keiji Tanaka 5109	5109
17:55	1W20	Catalytic Activity of Cellulose Microfibril <u>Takeshi Serizawa</u> , Toshiki Sawada, Masahisa Wada 5111	5111

Thursday, September 16

Polymers for Medical Technology: to Prevent, to Diagnose and to Cure the Disease

A. Mahara, presiding

- 9:10 2W01 Effect of charge of hydrogels on the behavior of mouse induced pluripotent stem (miPS) cells
Jing Jing Yang, Jian Fang Liu, Takayuki Kurokawa, Jian Ping Gong.... 5113
- 9:35 2W02 MSC Culture/Differentiation and Detachment Using the Surface of Thermosensitive Nanocomposite Films
Noriko Kotobuki, Kazutaka Murata, Kazutoshi Haraguchi..... 5115
- 10:00 2W03 Preparation of Substrates Orientation-Immobilized with Jagged1 to Proliferate Hematopoietic Stem Cells
Hiroyuki Toda, Masaya Yamamoto, Hiroshi Kohara, Yasuhiko Tabata.... 5117
- 10:25 2W04 Evaluation of cell attachment activity for combination of cell attachment peptides and beta-sheet peptide
Masanobu Wada, Masaya Yamamoto, Yasuhiko Tabata, Yoshiaki Hirano... 5119

Y. Iwasaki, presiding

- 10:50 2W05 Application of hepatocyte spheroids for tissue engineering.
Yuichi Nakasone, Masashi Yamamoto, Koichi Kutsuzawa, Kazunori Kataoka, Tetsuya Tateishi, Hidenori Otsuka..... 5121
- 11:15 2W06 Design of flexible, temperature-responsive, and biodegradable polymeric scaffolds and their cell adhesion examinations
Takanari Muroya, Mitsuhiro Ebara, Takao Aoyagi 5123
- 11:40 2W07 Injectable or micropatterned heparin-based hydrogel for cell culture and tissue engineering
Giyoong Tae 5125

H. Kobayashi, presiding

- 12:55 2W08IL Exploring the basic concept to develop a novel biomaterial
Akio Kishida..... 5127

Y. Hirano, presiding

- 13:45 2W10 On-demand photo-manipulation of adherent cells on culture substrates functionalized with PAG polymers
Kimio Sumaru, Kyoko Kikuchi, Toshiyuki Takagi, Manae Yamaguchi, Taku Satoh, Toshiyuki Kanamori 5130
- 14:10 2W11 Product and biological properties of complex materials via precision glycopolymer
Masayuki Toyoshima, Nobuhiko Yui, Yoshiko Miura 5132
- 14:35 2W12 AFM study of interaction between proteins and sugars tethered to the polymer chain end
Hidenori Otsuka, Mari Yoshida, Koji Ueno, Aya Midorikawa 5134

M. Tanaka, presiding

- 15:00 2W13 Surface modification of cells via polymerizable sugar chains
Hiroshi Matsuno, Yasuhiko Iwasaki 5136
- 15:25 2W14 GFP detection on the plasmonic substrate with bispecific antibodies against antigen and ZnO surface
Keiko Tawa, Mitsuo Umetsu, Takamitsu Hattori, Izumi Kumagai 5138
- 15:50 2W15 Dye-containing Polymer Nanoparticles as Photoacoustic Contrast Agents
Mayumi Nojiri, Hiroyuki Fujimoto, Hiroyuki Aoki, Shinzaburo Ito, Masato Minami, Yoshinori Tomida, Satoshi Yuasa, Tetsuya Yano.... 5140

A. Maruyama, presiding

16:15	2W16	Development of 19F MR probes based on silica nanoparticle as a signal regulator for monitoring biological reactions <u>Narufumi Kitamura</u> , Kazuo Tanaka, Yoshiki Chujo 5142
16:40	2W17	Design of nitroxyl radicals containing nanoparticles for therapy and diagnosis of oxidative stress injury <u>Toru Yoshitomi</u> , Yukio Nagasaki..... 5144
17:05	2W18	Synthesis and function of herceptin-having poly(vinylpyrrolidone-co-methacrylic acid)-coated magnetite nanoparticles Kaname Tsutsumiuchi, <u>Mai Yamashiro</u> , Toshihide Sugimura, Makoto Takahashi, Takeshi Kobayashi..... 5146

Friday, September 17**Polymers for Medical Technology: to Prevent, to Diagnose and to Cure the Disease****K. Kono, presiding**

9:10	3W01	Boronic acid-based saccharide sensing chip showing remarkable color changes <u>Yuto Iwami</u> , Yuki Miyata, Yasumasa Kanekiyo 5148
9:35	3W02	ABBA self-assembled polyelectrolytes electrospun fibers-mat for application to glucose sensor <u>Ashutosh Tiwari</u> , Dohiko Terada, Chiaki Yoshikawa, Hisatoshi Kobayashi.... 5150
10:00	3W03	Development of time-programmed local multidrug administration system for biochemical modulation <u>Tatsuya Okuda</u> , Satoru Kidoaki 5152

T. Mori, presiding

10:25	3W04	Novel Preparation Method of Stable Lipid Membrane-Incorporated Fullerenes and Their Photodynamic Activity <u>Atsushi Ikeda</u> , Motofusa Akiyama, Yoshihiko Kawai, Miyuki Mori, Jun-ichi Kikuchi, Takuya Ogawa, Tatsuo Takeya 5154
10:50	3W05	Preparation of multi-functional liposomes for accurate drug delivery using thermosensitive polymers <u>Kenji Kono</u> , Seiji Nakashima, Fuminori Ozaki, Tomohiro Kaiden, Eiji Yuba, Atsushi Harada, Sadahito Aoshima 5156
11:15	3W06	Design and application of Polysaccharide nanogel-based drug delivery system <u>Asako Shimoda</u> , Kazunari Akiyoshi 5158
11:40	3W07	Therapeutic efficacy of in vivo BNA release against hypercholesterolemia <u>Atsushi Yamashita</u> , Yoichi Tachibana, Wakako Kamata, Jeong-hun Kang, Hidetaka Torigoe, Mariko Shiba, Satoshi Obika, Tetsuji Yamaoka ... 5160

T. Kimura, presiding

12:55	3W08	Therapy of inflammation by nucleic acid delivery for targeting antigen presenting cells using polysaccharide <u>Shinichi Mochizuki</u> , Hidetoshi Takedatsu, Keiichi Mitsuyama, Jun Nishihira, Yoshikazu Koyama, Kazuo Sakurai 5162
13:20	3W09	siRNA-grafted polyaspartate for PIC-based siRNA delivery <u>Hiroyasu Takemoto</u> , Atsushi Ishii, Kanjiro Miyata, Yuichi Yamasaki, Nobuhiro Nishiyama, Kazunori Kataoka 5164
13:45	3W10	RNAi using methylated poly(L-histidine)/siRNA complexes. <u>Takao Kumagai</u> , Shoichiro Asayama, Hiroyoshi Kawakami 5166

S. Asayama, presiding			
14:10	3W11	Gene delivery systems responding to cancerous signals with peptide-polymer conjugates <u>Riki Toita</u> , Tetsuro Tomiyama, Takeshi Shinbori, Takeshi Mori, Takuro Niidome, Yoshiki Katayama	5168
14:35	3W12	Design of gene carriers based on pH-responsive alpha-amino acids <u>Takuya Wada</u> , Arihiro Kano, Naohiko Shimada, Atsushi Maruyama	5170
15:00	3W13	Functionalization of organic nanotube and their gene transfer function <u>Wuxiao Ding</u> , Mitsutoshi Masuda, Toshimi Shimizu	5172
15:25	3W14	Investigation of pDNA/polysaccharide complexes as gene delivery system and their application to suicide gene therapy <u>Toshinori Sato</u> , Mitsuhiro Nakata, Anastasia Riany, Yoshiyuki Koyama, Satoko Kishimoto, Masayuki Ishihara	5174

Room X

Wednesday, September 15

New Horizon of Glycoscience (Directed to Structure and Function)

9:50	SO	Introductory Remarks Takahiko Matsushita	5041
T. Mori, presiding			
10:00	1X03IL	Research on "sweet spot": Accessing chemical evolution to oligosaccharide structure by chemistry and structural biology <u>Osamu Kanie</u>	5042
A. Kobayashi, presiding			
10:50	1X05	Oligosaccharide synthesis using fluororous chemistry <u>Mamoru Mizuno</u> , Kohtaro Goto, Hiroko Kawakami, Mami Tojino	5045
11:15	1X06	Synthesis and Polymerization of bioactive saccharides <u>Koji Matsuoka</u>	5047
11:40	1X07	Synthetic studies on complex glycans of bacterial glycoconjugate <u>Akihiro Ishiwata</u>	5049
K. Matsuoka, presiding			
12:55	1X08	Synthesis of biologically important oligosaccharides and their applicaiton to chemical biology. <u>Hiroshi Tanaka</u>	5051
13:20	1X09	Elaborating strategy toward the synthesis of gangliosides with high efficiency <u>Hiromune Ando</u> , Hideharu Ishida, Makoto Kiso	5053
13:45	1X10	Single molecular analysis of polysaccharides using a solid state nanopore <u>Makoto Takemasa</u> , Masahiro Fujita, Mizuo Maeda	5055
T. Matsubara, presiding			
14:10	1X11	Development of an NMR method for detecting hydrogen bonds in oligosaccharides <u>Yoshiki Yamaguchi</u> , Shinya Hanashima	5057
14:35	1X12	Labeling of Higher Oligosaccharides by Using Water-soluble Dehydrative Condensing Agents <u>Atsushi Kobayashi</u> , Hikaru Nagai, Tomonari Tanaka, Masaki Ishihara, Masato Noguchi, Shin-ichiro Shoda	5059

15:00	1X13	Biofunctional Analysis of N-Glycans on Proteins, Cells, and Dendrimers by Noninvasive Imaging – N-Glycan-Based Noninvasive Imaging and Targeting <u>Katsunori Tanaka</u> , Koichi Fukase.....	5061
R. Sadamoto, presiding			
15:25	1X14	Kinetic Analyses of the Elongation of the Glycoconjugates by Chondroitin Polymerase <u>Toshiaki Mori</u> , Masaaki Iida, Takayuki Kodera, Nobuo Sugiura, Koji Kimata, Yoshio Okahata.....	5063
15:50	1X15	A single molecular force-curve measurement between verotoxin and Gb3 sugar molecules. <u>Yumi Tsuyuki</u> , Toshiaki Mori, Yoshio Okahata	5065
16:15	1X16	A single molecular detection of glycosylations catalyzed by dextran sucrose using an SPM force curve <u>Toshiaki Mori</u> , Megumi Asakura, Yoshio Okahata	5067
M. Mizuno, presiding			
16:40	1X17	Sulfonated glycopolymers as glycosaminoglycan models <u>Yuri Nishimura</u> , Hikaru Mizuno, Yoshiko Miura	5069
17:05	1X18	The relationship between carbohydrate recognition and distribution of glycosphingolipids in membrane microdomain <u>Teruhiko Matsubara</u> , Kazutoshi Iijima, Miyuki Soma, Norihiro Soga, Toshinori Sato.....	5071
O. Kanie, presiding			
17:30	1X19	Syntheses of chondroitin sulfate partial structures and their interaction analysis with proteins <u>Masahiro Wakao</u> , Rumi Obata, Chiho Sakami, Yuhei Kakitsubata, Takao Kondo, Yasuo Suda	5073
17:55	1X20	Surface engineering of bacteria for imaging of bacteria in intestines <u>Reiko Sadamoto</u> , Chizu Morisaki, Yusuke Uemura, Masako Oohori, Rurie Tsuru.....	5075

Thursday, September 16

Folding Biopolymer

9:00	SO	Introductory Remarks Hiroyuki Asanuma	4931
X. Liang, presiding			
9:10	2X01	Base sequence selective metallization using unnatural base-introduced DNA block copolymer synthesized by DNA polymerase <u>Yukie Watanabe</u> , Yasutaka Matsuo, Kenichi Niikura, Kuniharu Ijiro	4932
9:35	2X02	Fluorescent imaging of a potassium ion in a living cell using oligonucleotide-peptide conjugate Keiichi Ohstuka, Tomoki Matsuda, Takeharu Nagai, Shinobu Sato, <u>Shigeori Takenaka</u>	4934
10:00	2X03	Development of the cross-linking reactions activated by duplex formation <u>Fumi Nagatsugi</u> , Shuhei Imoto, Tsuneaki Hori, Shinya Hagihara, Yousuke Taniguchi, Shigeki Sasaki.....	4936
K. Ohtsuka, presiding			
10:25	2X04	Nanopatterning of Enzymes to DNA Origami Scaffold and Their Activity Assay <u>Akinori Kuzuya</u> , Kentaro Numajiri, Naohiro Koshi, Takahiro Yamazaki, Mayumi Kimura, Makoto Komiyama.....	4938

10:50	2X05	Quantized folding of pDNA induced by PEG-PLys block copolymer. <u>Kensuke Osada</u> , Yuichi Yamasaki, Manabu Enoki, Kazunori Kataoka....	4940
11:15	2X06	Self-Assembly of Poly(N-isopropylacrylamide)-DNA Block Copolymers <u>Kyosuke Isoda</u> , Naoki Kanayama, Tohru Takarada, Mizuo Maeda	4942
11:40	2X07	Analysis of the interaction of dsDNA-Cationic Porphyrin Complex used by High Time-Resolved Circular Dichroism apparatus. Makoto Murakami, Yasuyuki Araki, Seiji Sakamoto, <u>Takehiko Wada</u>	4944
H. Asanuma, presiding			
12:55	2X08IL	Polymer materials to manipulate biopolymer folding and functions <u>Atsushi Maruyama</u>	4946
F. Nagatsugi, presiding			
13:45	2X10	Development of functional molecules for targeting microRNA – Inhibition of microRNA function by disturbing the folding structure of RISC <u>Asako Yamayoshi</u> , Yohei Matsuyama, Daiki Momokawa, Yukiko Yamada, Akio Kobori, Akira Murakami.....	4949
14:10	2X11	Arrangement of gold nanoparticles using DNA hybridization. <u>Nozomi Miyoshi</u> , Takeaki Uehara, Takuya Tamaki, Shoso Shingubara, Yuichi Ohya	4951
14:35	2X12	Development of highly sensitive In-Stem Molecular Beacon by using asymmetric dye-cluster <u>Taiga Fujii</u> , Yuichi Hara, Yasuko Yoshida, Xingguo Liang, Hiromu Kashida, Hiroyuki Asanuma.....	4953
K. Matsuura, presiding			
15:00	2X13	DNA analysis using circularization of DNA conjugate <u>Toshihiro Ihara</u> , Pelin Arslan, Motoko Mukae, Akinori Jyo.....	4955
15:25	2X14	Molecular design of azobenzene derivatives for reversible photoregulation of DNA functions with visible light <u>Hidenori Nishioka</u> , Xingguo Liang, Hiroyuki Asanuma	4957
15:50	2X15	Aqueous solution properties of thermo-sensitive poly(methacrylamide) derivatives with optically active moieties in side chains. <u>Takashi Aoki</u> , Sachiko Tsuda	4959
T. Ihara, presiding			
16:15	2X16	Fabrication of Artificial Foldamers with Triple Helix Conformation and Their Applications <u>Tomoyuki Koga</u> , Yoichi Kawasaki, Syota Takagi, Yuji Nikaido, Nobuyuki Higashi.....	4961
16:40	2X17	Synthesis of Triple-Stranded Helicate Composed of Peptide Chains and Control of Its Chirality <u>Naoki Ousaka</u> , Yuki Takeyama, Eiji Yashima	4963
17:05	2X18	Surface Control of Peptide Nanospheres with Detachable and Attachable Polymer Brush Layers <u>Masahiro Matsumoto</u> , Tomonori Waku, Michiya Matsusaki, Mitsuru Akashi.....	4965

Friday, September 17

Folding Biopolymer

A. Yamayoshi, presiding			
9:10	3X01	Construction of nanocapsules by self-assembly of internal skeleton peptide of spherical virus <u>Kazunori Matsuura</u> , Kenta Watanabe, Tomohiro Nakamura, Nobuo Kimizuka.....	4967

9:35	3X02	Design of the chaperone peptide assembly for the inhibition of protein misfolding Sayuri Fukuhara, Tatsutoshi Nishigaki, Keisuke Miyata, Tomonori Waku, Shigeru Kunugi, <u>Naoki Tanaka</u>	4969
10:00	3X03	Fluorescence changes of conjugated polyelectrolytes through complexations with peptides <u>Hirofumi Yajima</u> , Hirofumi Yajima, Takeshi Serizawa....	4971
N. Tanaka, presiding			
10:25	3X04	Design and development for human antigenases <u>Emi Hifumi</u>	4973
10:50	3X05	NMR structural analysis of the model peptide for crystalline domain of Bombyx mori silk fibroin in solution and solid states <u>Yu Suzuki</u> , Yuya Satoh, Tatsuya Ogawa, Tetsuo Asakura.....	4975
11:15	3X06	Mineralization of Apatite-Binding Peptides under Body Fluid Conditions <u>Mineo Hashizume</u> , Yuki Uchida, Noriaki Kamaya, Teruhiko Matsubara, Toshinori Sato	4977
11:40	3X07	Effect of dynamic reorganization of functional groups introduced into side chains of a polypeptide via imine bonds on its higher-order structure <u>Toshiyuki Oyama</u> , Tatsunori Matsunaga, Yui Ozaki, Keiichiro Endo, Akio Takahashi	4979
Y. Miura, presiding			
12:55	3X08	Design and application of artificial molecular chaperone based on nanogel engineering <u>Shin-ichi Sawada</u> , Kazunari Akiyoshi	4981
13:20	3X09	Chaperoning of fusogenic peptides with cationic comb-type copolymers <u>Shuichi Tokunaga</u> , Naohiko Shimada, Arihiro Kano, Atsushi Maruyama....	4983
T. Wada, presiding			
13:45	3X10	Functional Nanogel for Intracellular Protein Delivery <u>Aya Nakajima</u> , Sayaka Toita, Nobuyuki Morimoto, Kazunari Akiyoshi	4985
14:10	3X11	Evaluation of interactions between signal transduction proteins. <u>Taizo Umemura</u> , Motoi Konishi, Miya Ishijima, Masaya Fujita, Kazue Kurihara	4987
14:35	3X12	Functional Materials by Self-Organization of Glycopolymer <u>Yoshiko Miura</u> , Masayuki Toyoshima, Mami Matsuoka	4989
15:00	3X13	Constructing of connexin-integrated liposomes by in vitro protein synthesis <u>Junichi Yasuoka</u> , Yuki Moritani, Kazunari Akiyoshi	4991

Room Y

Wednesday, September 15

Frontier of Biosupramolecular Materials -Function Programming and Application-

9:50	SO	Introductory Remarks Teruyuki Komatsu	4993
T. Komatsu, presiding			
10:00	1Y03	Diverse morphologies of supramolecular self-assembly from nucleotide-appended bolaamphiphiles <u>Rika Iwaura</u> , Tomohiko Izawa, Hiroyuki Minamikawa, Mayumi Ohnishi-kameyama, Toshimi Shimizu	4994

10:25	1Y04	Preparation of DNA wire by use of H aggregation of cationic dyes <u>Takamitsu Hayashi</u> , Taiga Fujii, Hiromu Kashida, Hiroyuki Asanuma....	4996
R. Iwaura, presiding			
10:50	1Y05	Structural optimization of in template assisted synthesis of DNA catenanes <u>Masami Hamano</u> , Takeaki Uehara, Kenta Jyozuka, Yuichi Ohya	4998
11:15	1Y06	Analysis of the polycation/DNA interactions by the single molecular observation in microchannel flow <u>Naotaka Sonda</u> , Masanori Hirano, Naohiko Shimada, Arihiro Kano, Atsushi Maruyama	5000
11:40	1Y07	Hybridization of carbon nanotube/DNA complex with polycation Yuki Yamamoto, <u>Tsuyohiko Fujigaya</u> , Arihiro Kano, Atsushi Maruyama, Naotoshi Nakashima.....	5002
T. Komatsu, presiding			
12:55	1Y08IL	Programmable Coordination Chemistry Inspired By Biopolymers <u>Kentaro Tanaka</u>	5004
T. Fujigaya, presiding			
13:45	1Y10	Simple synthesis of 2-glucosamine-based nanotubes and their drug encapsulation functions <u>Mitsutoshi Masuda</u> , Wuxiao Ding, Momoyo Wada, Toshimi Shimizu	5007
14:10	1Y11	Organization and Functional Analysis of Supramolecular Assembly of Photosynthetic Antenna Membrane Proteins <u>Takehisa Dewa</u> , Ayumi Sumino, Nobuaki Sasaki, Natsuko Watanabe, Takashi Morii, Hideki Hashimoto, Mamoru Nango	5009
14:35	1Y12	Highly Efficient Production of Various Organic Nanotubes with Different Surfaces and Their Application to an Adsorbent <u>Masaki Kogiso</u> , Masaru Aoyagi, Masumi Asakawa, Toshimi Shimizu	5011
15:00	1Y13	Application of Metal Coordinated Nanotubes toward Heterogeneous Catalysts <u>Masaru Aoyagi</u> , Tanmay Chattopadhyay, Masaki Kogiso, Masumi Asakawa, Toshimi Shimizu.....	5013
T. Kawasaki, presiding			
15:25	1Y14	Novel Method for Chemical Modification of Proteins Aiming at Construction of Protein Supramolecules <u>Takashi Matsuo</u> , Chie Imai, Takashi Saito, Takashi Hayashi, Shun Hirota	5015
15:50	1Y15	Molecular design of porous protein crystals <u>Takafumi Ueno</u>	5017
16:15	1Y16	Stimuli-responsive Tubular Biocontainers by Controlled Assembly of Chemically Modified Molecular Chaperonins <u>Shuvendu Biswas</u> , Kazushi Kinbara, Noriyuki Ishii, Hideki Taguchi, Takuzo Aida	5019
16:40	1Y17	Ring-shaped assembly of microtubules shows preferential rotation. <u>Natsuki Hosoda</u> , Yoshiki Tamura, Akira Kakugo, Jian Ping Gong.....	5021
K. Kinbara, presiding			
17:05	1Y18	Protein immobilization on the metal nanoparticle-modified electrodes <u>Nobuhumi Nakamura</u> , Kenichi Murata, Masato Suzuki, Hiroyuki Ohno ...	5023
17:30	1Y19	Functionalized Catalytic- and Energy Conversion-Systems with Monoclonal Antibodies <u>Hiroyasu Yamaguchi</u> , Akira Harada.....	5025
17:55	1Y20	Preparation of virus capsules enabling stimuli-responsive drug-release <u>Yusuke Musashi</u> , Kenichi Niikura, Noriko Ohtake, Hirofumi Sawa, Kuniharu Ijro	5027

Thursday, September 16

Frontier of Biosupramolecular Materials -Function Programming and Application-

H. Kawakami, presiding

9:10	2Y01	Biological selection of conjugated polymer-binding peptides and their application as water dispersants <u>Hiroataka Ejima</u> , Takeshi Serizawa 5029
9:35	2Y02	Morphological Control and Function of Cyclodextrin Structures <u>Toshiyuki Kida</u> , Yasuhiro Marui, Mitsuru Akashi 5031
10:00	2Y03	Cell Culture Materials using Low-Molecular-Weight Gelators <u>Masahiro Suzuki</u> , Kenji Hanabusa, Akira Teramoto, Koji Abe 5033

T. Serizawa, presiding

10:25	2Y04	Gene Delivery System by Controlling DNA Complex Dissociation <u>Shoichiro Asayama</u> , Tomoe Hakamatani, Hiroyoshi Kawakami 5035
10:50	2Y05	Preparation and function of cadheirn liposomes using baculovirus-liposome fusion method <u>Koki Kamiya</u> , Kanta Tsumoto, Tetsuro Yoshimura, Kazunari Akiyoshi 5037
11:15	2Y06	Preparation of liposome containing Mn-porphyrin with multi-enzyme activity <u>Mami Osoegawa</u> , Shoichiro Asayama, Hiroyoshi Kawakami 5039

Developments of Biobased Polymers Towards the Realization of "Green Innovations"

12:45	SO	Introductory Remarks Hideki Abe 5252
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T. Tsuge, presiding

12:55	2Y08IL	Biosynthesis of Polyhydroxyalkanoate from Palm Oil and its Applications <u>Kumar Sudesh</u> 5253
13:45	2Y10	Synthesis of Liquid Crystalline Polyesters from Lignin Precursors <u>Daisuke Ishii</u> , Hiroki Maeda, Hisao Hayashi 5256
14:10	2Y11	Improvements on thermal properties of lignophenols by modifications on hydroxyl groups <u>Mitsuru Aoyagi</u> , Masamitsu Funaoka 5258

T. Hiraishi, presiding

14:35	2Y12	Polyhydroxyalkanoate synthesis from alkenoic acids as recycled resource <u>Takeharu Tsuge</u> , Naoki Ishii, Masako Yoshioka, Shun Sato 5260
15:00	2Y13	Molecular structure and chemical durability of poly-gamma-glutamate-based thermoplastics <u>Haruna Oya</u> , Makoto Ashiuchi 5262
15:25	2Y14	Stability of Polyamide 4 <u>Atsuyoshi Nakayama</u> , Norioki Kawasaki, Sahori Takeda, Naoko Yamano, Noboru Yamamoto 5264
15:50	2Y15	Enzymatic synthesis and properties of novel biobased thermoplastic elastomer <u>Takuma Kobayashi</u> , Shuichi Matsumura 5266

A. Nakayama, presiding

16:15	2Y16	Preparation and characterization of poly[(R)-3-hydroxybutyrate-co-4-hydroxybutyrate] porous fiber <u>Hiroyuki Ichino</u> , Chizuru Hongo, Taizo Kabe, Akio Takemura, Tadahisa Iwata, Kentaro Uesugi, Akihisa Takeuchi, Yoshio Suzuki, Kazuki Ito, Takaaki Hikima, Masaki Takata 5268
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16:40	2Y17	Elucidation of functions of biopolyester-degrading enzyme by evolutionary engineering technique <u>Tomohiro Hiraishi</u> , Mizuo Maeda..... 5270
17:05	2Y18	Characterization of a novel aliphatic polyesters-degrading denitrifying bacterium <u>Ken-ichi Kasuya</u> , Taro Yotsumoto, Tomoko Tagaya, Tomohide Watanabe, Nariaki Ishii, Yoshio Inoue 5272

Friday, September 17

Developments of Biobased Polymers Towards the Realization of "Green Innovations"

T. Tsujimoto, presiding

9:10	3Y01	Synthesis and characterization of PLA-Siloxane copolymer (2) <u>Mizuho Nagata</u> , Yasuharu Yamada..... 5274
9:35	3Y02	Characterization of Mechanical Properties of Poly(lactic acid) Stereocomplex Single Nanofibers <u>Kaoru Mikayama</u> , Shinichiro Iwamoto, Akio Takemura, Tadahisa Iwata, Yoshihiko Kuwana, Yasushi Tamada, Takaaki Hikima, Masaki Takata 5276
10:00	3Y03	Preparation of poly(lactide) nanofibers with solvent diffusion method. <u>Moe Kitanaka</u> , Takaichi Watanabe, Tsutomu Ono, Yukitaka Kimura 5278
10:25	3Y04	Molecular organization and crystallization behavior on a flat surface immobilized with polylactides; Formation of single crystal arrays of homo-chiral and stereocomplex polylactides <u>Hajime Nakajima</u> , Tomoko Fujiwara, Yoshiharu Kimura..... 5280

T. Iwata, presiding

10:50	3Y05	Structure Evolution of Poly(L-Lactic Acid) in the Isothermal Crystallization from the Melt Viewed from the SAXS/WAXD and FTIR Spectroscopic Measurements <u>Kaewkan Wasanasuk</u> , Kohji Tashiro, Makoto Hanesaka, Hiroko Yamamoto, Raghunatha Reddy Kummetha, Thontree Kongkhleng, Tran Hai Ninh, Sono Sasaki, Hiroyasu Masunaga, Hiroki Ogawa, Masaki Takata..... 5282
11:15	3Y06	Highly effective monomer recycling of poly(lactic acid) in polymer alloys <u>Haruo Nishida</u> , Takayuki Tsukegi, Yoshito Ando, Yoshihito Shirai..... 5284
11:40	3Y07	Design of functionalized glycogen polysaccharide nano-ball <u>Haruko Takahashi</u> , Shin-ichi Sawada, Kazunari Akiyoshi 5286

Y. Yamada, presiding

12:55	3Y08	Novel 1:2 Sequence-Regulated Bio-Based Copolymers by Precision Radical Copolymerization of Naturally-Occurring Limonene and Maleimide Derivatives <u>Masaru Matsuda</u> , Kanji Nagai, Kotaro Satoh, Masami Kamigaito..... 5288
13:20	3Y09	The cellulose diblock copolymer initiated by cellulose mechano radicals <u>Masato Sakaguchi</u> , Takeshi Ohura, Tadahisa Iwata 5290
13:45	3Y10	Bacteria Cellulose/Nanodiamond Nanocomposites <u>Takashi Nishino</u> , Masaru Kotera, Mari Suetsugu, Yasushi Hisaoka, Kimiya Goto, Katsuhiko Hata..... 5292

H. Abe, presiding

14:10	3Y11	Development of plant oil-based cellulose composites <u>Emi Ohta</u> , Takashi Tsujimoto, Hiroshi Uyama 5294
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14:35	3Y12	Preparation of Biocomposites Using Self-Organization of Low Molecular-Weight Gelator <u>Mitsuhiro Shibata</u> , Naozumi Teramoto, Katsuyuki Kaneko 5296
15:00	3Y13	Preparation of Chitin Nanowhiskers and Their Composites Using Ionic Liquid <u>Shozaburo Mine</u> , Qing Li, Akihiko Takegawa, Kazuya Yamamoto, Jun-ichi Kadokawa 5298
15:25	3Y14	True nanofiber of chitosan of high molecular weight – Introduction of the new concept, Redox-electrospinning <u>Dohiko Terada</u> , Chiaki Yoshikawa, Kun Zhang, Ashutosh Tiwari, Aiko Okamura, Ewelina Zawadzak, Shinya Hattori, Takako Honda, Toshiyuki Ikoma, Hisatoshi Kobayashi 5300

Room Z

Wednesday, September 15

Latest Science and Technology for Resources Recycling System

9:50	SO	Introductory Remarks Takashi Sawaguchi 5306
K. Ikenaga, presiding		
10:00	1Z03	Chemical synthesis and immunoreactivity of (1->3)- β -D-glucopyranan using D-glucose as a starting material <u>Kaname Tsutsumiuchi</u> , Tomoaki Ohno, Yoshihiro Ishihara, Masahiko Okada 5307
10:25	1Z04	Energy recovery system used easily degradable PLA packaging <u>Seishi Yoshikawa</u> , Tsutaki Katayama, Masahito Kogure 5309
Y. Sumida, presiding		
10:50	1Z05	Development of highly efficient recycling technology for multilayer films <u>Takashi Yamawaki</u> , Yoshimi Ozaki, Tamio Yamato, Makoto Baba 5311
11:15	1Z06	Interfacial adhesion and mechanical properties of syndiotactic polypropylene/cellulose composites <u>Keisuke Iwakura</u> , Masato Hamadate, Kensuke Miyazaki, Masakazu Aoyama, Noriyasu Okazaki, Minoru Terano, Hisayuki Nakatani 5313
11:40	1Z07	Liquefaction of epoxy circuit board in wood derived tar. – Recovery of useful resources from end-of-life-electronic equipments <u>Tohru Kamo</u> , Zhuoyi Zou, Mariko Adachi, Shin Suzuki, Hajime Yasuda, Hideki Nakagome 5315
T. Sawaguchi, presiding		
12:55	1Z08IL	New Materials and Control Technologies for Recycling System Construction <u>Haruo Nishida</u> 5317
H. Nakatani, presiding		
13:45	1Z10	Recycled EPS from waste home electronic appliances plastic <u>Michihiro Takeda</u> , Ryosuke Chinomi 5320
14:10	1Z11	High-speed continuous preparation of BDF by microwave irradiation Kazutoshi Ikenaga, <u>Yasuto Ogata</u> , Yuji Ueda 5322

14:35	1Z12	Development of High Performance Catalysts for Degradation of Polyolefins into Petrochemicals <u>Yoshio Uemichi, Yoshimi Ochiai, Yoshimoto Nakano, Yasuharu Kanda, Masatoshi Sugioka</u> 5324	5324
15:00	1Z13	Chemical Recycling of poly(vinyl chloride) by Dechlorination due to Substitution Reaction <u>Toshiaki Yoshioka</u> 5326	5326
M. Yoshida, presiding			
15:25	1Z14	Microwave degradation of FRP and remaking FRP <u>Kazutoshi Ikenaga, Masahiro Baba</u> 5328	5328
15:50	1Z15	Recycling of CFRP with Supercritical Alcohol <u>Idzumi Okajima, Masataka Hiramatsu, Toshiro Ueda, Yoshinobu Shimamura, Takeshi Sako</u> 5330	5330
16:15	1Z16	Enhanced Recycling of FRP using Subcritical Water(3) – Conversion of FRP recyclate using subcritical water hydrolysis into functional polymers <u>Takaharu Nakagawa, Shinya Hirota, Keishi Shibata, Nobuaki Yabunouchi, Yuichiro Yasuda, Masaru Hidaka, Jyunko Matsui, Masaki Sato, Takumi Izumitani, Noriko Imanari, Shin Matsugi, Hiroki Ohira,</u> 5332	5332
16:40	1Z17	Development in Chemical Recycling Process of Phenolic Resin by Supercritical Fluid Technology <u>Masaki Ishikawa</u> 5334	5334
T. Kamo, presiding			
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