

Room A

Wednesday, May 26

INVITED LECTURES /AWARD LECTURES

T. Kanbara, Presiding			
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A. Kikuchi, Presiding			
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INVITED LECTURES /AWARD LECTURES

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Thursday, May 27

POLYMER CHEMISTRY

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POLYMER CHEMISTRY

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Room D

Wednesday, May 26

POLYMER CHEMISTRY

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Wednesday, May 26

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Thursday, May 27

BIOPOLYMERS

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T. Mori, Presiding			
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16:15	2G27	Identification of the amyloid core region of ovalbumin by point mutation and competitive peptide <u>Naoki Tanaka</u> , Yurika Noguchi, Yumi Morimoto, Syota Tominaga, Tomonori Waku, Shigeru Kunugi, Takashi Morii, Nobuyuki Takahashi	1711
16:30	2G28	Design of HSP binding cancer antigenic peptide for delivery to antigen-presenting cells <u>Tomonori Waku</u> , Yukari Watanabe, Hirotoshi Haida, Shigeru Kunugi, Naoki Tanaka	1712
16:45	2G29	Design of artificial polymer binding protein and its application to the cell	

culture.

Yuko Imanishi, Yuta Yoshino, Takaaki Date, Hisao Matsuno, Takeshi Serizawa, Atsushi Sogabe, Toshihiro Kuroita, Shigeru Kunugi, Naoki Tanaka 1713

Friday, May 28

BIOPOLYMERS

K. Ohkawa, Presiding

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| 9:30 | 3G03 | The crystal structure of the host-guest collagen model peptide (Pro-Pro-Gly) ₄ -Hyp-Asn-Gly-(Pro-Pro-Gly) ₄
<u>Tatsuya Kawaguchi</u> , Ayana Miyashita, Tatsuya Morimoto, Kenji Okuyama, Kazuhiro Mizuno, Peter B  Chinger Hans 1714 |
| 9:45 | 3G04 | Orientation of collagen fibers reflecting mechanical stress for human lung
<u>Koichi Tomoda</u> , Masanori Yosikawa, Hiroshi Kimura, Shigeyoshi Osaki 1715 |
| 10:00 | 3G05 | Self-assembly and curing of barnacle cement
<u>Kei Kamino</u> , Masahiro Nakano, Takashi Nishino..... 1716 |
| 10:15 | 3G06 | Synthesis and Assembly Formation of Amphiphilic Triblock Polypeptides with a Hydrophobic Helix
<u>Kaori Takemoto</u> , Akira Makino, Shunsaku Kimura 1717 |

T. Kawaguchi, Presiding

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| 10:30 | 3G07 | Dissipative crystallization of poly-D-lysine, poly-L-lysine and their low molecular weight analogs
<u>Tsuneo Okubo</u> , Junichi Okamoto, Akira Tsuchida..... 1718 |
| 10:45 | 3G08 | Purification of a Silk Gland Protein from Caddisfly Larva, <i>Stenopsyche marmorata</i>
<u>Kousaku Ohkawa</u> , Takaomi Nomura, Ayako Nishida, Ryoichi Arai, Kimio Hirabayashi, Masuhiro Tsukada, Koji Abe 1719 |
| 11:00 | 3G09 | Preparation of Monoclonal Antibodies Against Chiral Binaphthyl Derivatives and Construction of Novel Chiral Separation Method Using Monoclonal Antibodies
<u>Tomoki Odaka</u> , Hiroyasu Yamaguchi, Akira Harada 1720 |
| 11:15 | 3G10 | A Study of Vibrational Effects on Chemical Phenomena on Piezo-electric Element Surfaces with a Reflectometric Interference Spectroscopy
<u>Takayoshi Kawasaki</u> , Yoshio Okahata..... 1721 |

K. Sakurai, Presiding

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| 12:45 | 3G13IL* | Creation of Peptide Nanocapsules based on Viral Self-assembly
<u>Kazunori Matsuura</u> 116 |
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M. Higuchi, Presiding

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| 13:15 | 3G15 | Construction of peptide nanocapsules by self-assembly of beta-annulus peptides modified with Ni-NTA and their complexation with His-tagged proteins
<u>Tomohiro Nakamura</u> , Kenta Watanabe, Noriho Kamiya, Kazunori Matsuura, Nobuo Kimizuka..... 1722 |
| 13:30 | 3G16 | Solution properties of assembly of viral beta-annulus peptides
<u>Kazuo Sakurai</u> , Tsubasa Matsuzaki, Kenta Watanabe, Kazunori Matsuura, Nobuo Kimizuka..... 1723 |
| 13:45 | 3G17 | Vesicle formation with using stereocomplex of amphiphilic helical polypeptides
<u>Motoki Ueda</u> , Akira Makino, Tomoya Imai, Junji Sugiyama, Shunsaku Kimura 1724 |

T. Kawasaki, Presiding

14:00	3G18	Design and evaluation of in situ forming beta-sheet peptide hydrogel <u>Sachiro Kakinoki</u> ,Seiya Tanaka,Toshiya Fujisato,Tetsuji Yamaoka.... 1725
14:15	3G19	Functional regulation of photo-responsive nano-arrays composed of ordered metal coordinated peptide-redox protein conjugates <u>Xinxin Wang</u> ,Masahiro Higuchi..... 1726
14:30	3G20	Construction of Metal Complex Arrays via Solid Phase Synthesis Kentaro Tashiro, <u>Vairaprakash Pothiappan</u> ,Hisanori Ueki, Omar Yaghi 1727

K. Matsuura, Presiding

14:45	3G21	Hydrolysis and Enzymatic Polymerization Activity of Immobilized Mutant His-tag Cellulase <u>Itsuko Nakamura</u> ,Junji Sugiyama,Masashi Ohmae,Shunsaku Kimura 1728
15:00	3G22	Fabrication of novel sensing device composed of protein-induced glycopeptide cluster having multi-recognition and signal transduction ability for the target proteins <u>Mao Arai</u> ,Masahiro Higuchi 1729
15:15	3G23	Efficient Photocurrent Generation by Helical Peptide Monolayers Integrating Photoenergy-Harvesting and Electron-Hopping Functions <u>Ryosuke Moritoh</u> ,Tomoyuki Morita,Shunsaku Kimura..... 1730

Room H**Wednesday, May 26****BIOPOLYMERS****K. Ishihara, Presiding**

10:00	1H05	Synthesis of hydrophobized thermoresponsive polymers through ATRP and their incorporation to solid surfaces <u>Yosuke Takayama</u> ,Hiromasa Moriyama,Taka-aki Asoh,Akihiko Kikuchi 1731
10:15	1H06	Surface modification of alginate gel beads for regulated macromolecular drug release. <u>Shiho Suzuki</u> ,Taka-aki Asoh,Akihiko Kikuchi..... 1732
10:30	1H07	Preparation of self-assembly consisting of double thermo-responsive block copolymer for drug carrier <u>Youhei Kotsuchibashi</u> ,Mitsuhiro Ebara,Kazuya Yamamoto,Takao Aoyagi 1733
10:45	1H08	Fabrication of "Smart" Nanofiber Meshes As a Novel Cell Culture Substrate <u>Tomohiro Maeda</u> ,Mitsuhiro Ebara,Takao Aoyagi..... 1734

T. Aoyagi, Presiding

11:00	1H09	Synthesis of Thermo-Responsive Polymer Micelles Cross-Linked by Gold Nano Colloid <u>Fumi Goto</u> ,Shin-ichi Yusa,Yotaro Morishima,Kazuhiko Ishihara 1735
11:15	1H10	Cell Association of Novel Thermo-Sensitive Hyperbranched Poly(glycidol)s with Biocompatibility <u>Chie Kojima</u> ,Kohei Yoshimura,Atsushi Harada,Yuichi Sakanishi,Kenji Kono..... 1736
11:30	1H11R	Water Structure of Polymers with Non-Biofouling function <u>Masaru Tanaka</u> 1737

H. Iwata, Presiding

12:30	1H12	Characterization of the interfacial properties of the poly(methacryloyl pyridine)-g-(polyethylene glycol). <u>Yoshihiro Saito</u> , Masayuki Fukaiishi, Takashi Ishizuka, Kouji Ueno, Tetsuya Tateishi, Hidenori Otsuka 1738
12:45	1H13	Synthesis of phospholipid polymer coated functional magnetic beads available under the PCR condition <u>Yoshito Fukuda</u> , Tomohiro Konno, Toshiya Sakata, Kazuhiko Ishihara 1739
13:00	1H14	Effect of polymer structure in the well-defined brush layer on protein adsorption <u>Tomoaki Nakanishi</u> , Yuuki Inoue, Ryosuke Matsuno, Madoka Takai, Kazuhiko Ishihara 1740

M. Tanaka, Presiding

13:15	1H15	Immobilization of bioactive substances on the islet surface though a PEG-lipid conjugate <u>Hao Chen</u> , Yuji Teramura, Hiroo Iwata..... 1741
13:30	1H16	Growth factor-immobilized culture substrates for selective expansion of human neural progenitor cells <u>Shuhei Konagaya</u> , Tadashi Nakaji, Koichi Kato, Hiroo Iwata..... 1742
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14:00	1H18	Dendritic Molecular Glue: Hybridization with Proteins by Multivalent Salt-Bridge Formation and Application for Protein Delivery <u>Kou Okuro</u> , Harei Nemoto, Kazushi Kinbara, Makoto Oba, Nobuhiro Nishiyama, Kazunori Kataoka, Takuzo Aida..... 1744

C. Kojima, Presiding

14:15	1H19	Dendritic Molecular Glue: Construction and Features of Supramolecular Complex of Nucleic Acids and Molecular Glue <u>Harei Nemoto</u> , Kou Okuro, Kanjiro Miyata, Kazushi Kinbara, Kazunori Kataoka, Takuzo Aida..... 1745
14:30	1H20	Assembly of Proteins in Aqueous Solution Using Condensation Reaction <u>Hidenobu Shimizu</u> , Masayo Tomizawa, Risei Wada, Masaru Okabe..... 1746
14:45	1H21IL*	Stimuli-Responsive PEGylated Nanoparticles for Cancer Pinpoint Diagnostic and Therapy <u>Motoi Oishi</u> 119

K. Kinbara, Presiding

15:15	1H23	Higher Order Structures of Dendrimers Modified with Collagen Model Peptides Containing Hydroxyproline <u>Tomoyuki Suehiro</u> , Yuji Nikaido, Tomoyuki Koga, Nobuyuki Higashi, Chie Kojima 1747
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15:45	1H25	Novel polymeric micelle integrated with versatile bioconjugation methodology: functionalization of peripheral surface and evaluation as gene carrier <u>Shigehiro Hiki</u> , Shouta Hattori, Kanjiro Miyata, Kazunori Kataoka..... 1749
16:00	1H26	Development of light-responsive gene vector using A-B-C type triblock copolymer <u>Takahiro Nomoto</u> , Shigeto Fukushima, Michiaki Kumagai, Kanjiro

Miyata, Yu Matsumoto, Arnida Anwer, Souta Horie, Woo-dong
Jang, Nobuhiro Nishiyama, Kazunori Kataoka 1750

K. Akiyoshi, Presiding

- 16:15 1H27 Development of intracellular environment-responsive polymeric micelles incorporating platinum complexes
Nobuhiro Nishiyama, Mami Murakami, Horacio Cabral, Yu Matsumoto, Kazunori Kataoka 1751
- 16:30 1H28 Development and In Vivo Evaluation of Nano-PICsomes for Biological Carriers
Yasutaka Anraku, Akihiro Kishimura, Makoto Oba, Yuichi Yamasaki, Kazunori Kataoka 1752
- 16:45 1H29 PEG-coated iron oxide-Au core-shell nanoparticles as MR contrast agents
Michiaki Kumagai, Tridib Kumar Sarma, Horacio Cabral, Masaki Sekino, Mitsunobu R Kano, Nobuhiro Nishiyama, Kohei Miyazono, Kazunori Kataoka 1753

Thursday, May 27

BIOPOLYMERS

S. Mochizuki, Presiding

- 9:30 2H03 Quantum dots coated with phospholipid polymer for imaging the intracellular dynamics of biomolecules
Kouichi Masuda, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai, Kazuhiko Ishihara 1754
- 9:45 2H04 Stabilization of polyion complex nanoparticles by hydrophobic interaction and activity as a DDS carrier
Kazuki Watanabe, Hyungjin Kim, Takami Akagi, Mitsuru Akashi 1755
- 10:00 2H05 Fabrication of peptide nanospheres with density controllable polymer brush layer
Masahiro Matsumoto, Tomonori Waku, Michiya Matsusaki, Mitsuru Akashi 1756

A. Harada, Presiding

- 10:15 2H06 Evaluation of Amphiphilic Poly(amino acid) Nanoparticles as a Gene Delivery Carrier
Takami Akagi, Hyungjin Kim, Mitsuru Akashi 1757
- 10:30 2H07 PEG modification to the gene carrier responding to intracellular signals for forming stable complex with DNA
Yuki Naritomi, Akira Tsuchiya, Takeshi Mori, Takuro Niidome, Yoshiki Katayama 1758
- 10:45 2H08 Fluorescence molecular probe for protein kinase by using peptide conjugate
Haruka Koga, Riki Toita, Takeshi Mori, Takuro Niidome, Yoshiki Katayama 1759

T. Yamaoka, Presiding

- 11:00 2H09 Gene delivery systems responding to cancer cell-signal
Riki Toita, Takeshi Mori, Takuro Niidome, Yoshiki Katayama 1760
- 11:15 2H10 Preparation of thermo-responsive polymer gel-modified gold nanorods and their accumulation into tumor by light irradiation
Takuro Niidome, Atsushi Shiotani, Takeshi Mori, Yasuro Niidome, Yoshiki Katayama 1761
- 11:30 2H11R Development of magneto-responsive hybrid liposomes
Kiyofumi Katagiri, Yuji Imai, Kunihito Koumoto, Tomohiro Kaiden, Kenji

		Kono, Sadahito Aoshima	1762
		Y. Katayama, Presiding	
12:30	2H12	Dual signal-responsive liposomes for controlled cytoplasmic delivery <u>Tomohiro Kaiden</u> , Atsushi Harada, Yuichi Sakanishi, Kenji Kono.....	1763
12:45	2H13	Design of Functionalized Nanogel-crosslinking nanoparticles <u>Asako Shimoda</u> , Kazunari Akiyoshi.....	1764
13:00	2H14	Development of CpG DNA delivery system by nanogels <u>Junichi Yasuoka</u> , Sayaka Toita, Shin-ichi Sawada, Kazunari Akiyoshi..	1765
13:15	2H15	Functional Cycloamylose for Intracellular Gene Delivery <u>Sayaka Toita</u> , Kazunari Akiyoshi.....	1766
		K. Tanaka, Presiding	
13:30	2H16	Design of functional nanobiomaterial using glycogen polysaccharide nano-ball <u>Haruko Takahashi</u> , Shin-ichi Sawada, Kazunari Akiyoshi	1767
13:45	2H17	Ion complex nanogel of polysaccharides partly modified with charged molecules <u>Shin-ichi Sawada</u> , Jungo Hayashi, Shigeru Shimizu, Kazunari Akiyoshi	1768
14:00	2H18	siRNA delivery for treating familial hypercholesterolemia-Liver targeting by polymeric carriers- <u>Wakako Kamata</u> , Yoichi Tachibana, Jeong-hun Kang, Mai Inoue, Mariko Shiba, Satoshi Obika, Tetsuji Yamaoka.....	1769
		S. Asayama, Presiding	
14:15	2H19	Characterization of high-pressurized lipoplexes for gene delivery <u>Asami Sano</u> , Hokuto Konno, Kwangwoo Nam, Tsuyoshi Kimura, Akio Kishida.....	1770
14:30	2H20	Construction of recursive device for liposomes with gene expression. <u>Shin-ichi Nomura M.</u>	1771
14:45	2H21	Silk-based gene delivery system targeted for cancer therapy <u>Keiji Numata</u> , David Kaplan	1772
		Y. Ohya, Presiding	
15:00	2H22	Development of nucleic acid delivery system for targeting antigen presenting cells <u>Shinichi Mochizuki</u> , Kazuo Sakurai.....	1773
15:15	2H23	DNA Chain Length and base Dependency of the Supramolecular Structures Formed with Benzyl Amine Derivates <u>Chie Iino</u> , Mina Sakuragi, Hiroyasu Masunaga, Hiroki Ogawa, Kazuo Sakurai	1774
15:30	2H24	Design of new gene delivery system by Zn-chelated poly(1-vinylimidazole). <u>Satoshi Nishinohara</u> , Shoichiro Asayama, Hiroyoshi Kawakami	1775
15:45	2H25	Synthesis of methylated poly(L-histidine) for a new siRNA carrier. <u>Takao Kumagai</u> , Shoichiro Asayama, Hiroyoshi Kawakami	1776
		T. Niidome, Presiding	
16:00	2H26	Multilayer-Coating of Biodegradable Polymeric Micelles by Polyion-complex Formation <u>Yosuke Shibata</u> , Shinya Takeda, Yuichi Ohya.....	1777
16:15	2H27	Evasion of the accelerated blood clearance phenomenon by coating of nanoparticles with poly(N-vinyl-2-pyrrolidone) <u>Tsutomu Ishihara</u> , Taishi Maeda, Naoko Takasaki, Tohru Mizushima..	1778
16:30	2H28	Synthesis of 19F-MR probes for monitoring redox reactions <u>Narufumi Kitamura</u> , Kazuo Tanaka, Yoshiki Chujo.....	1779
16:45	2H29	Design of novel double-stranded nucleic acid probes for single nucleotide mutation detection	

Friday, May 28

BIOPOLYMERS

A. Harada, Presiding

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| 9:30 | 3H03 | Toxicity Assessment with novel contrast agent of magnetic resonance imaging for cell labeling in vivo/in vitro
<u>Yoshitaka Miyamoto</u> , Yumie Koshidaka, Hiroaki Saito, Yukimasa Kagami, Katsutoshi Murase, Noritada Kaji, Hiroshi Yukawa, Hirofumi Noguchi, Hisashi Iwata, Yoshinobu Baba, Shuji Hayashi..... 1781 |
| 9:45 | 3H04 | Development of pDNA/chitosan nanoparticles coated with hyaluronic acid for Suicide Gene Therapy
<u>Mitsuhiro Nakata</u> , Satoko Kishimoto, Masayuki Ishihara, Toshinori Sato 1782 |
| 10:00 | 3H05 | Fabrication and in vitro evaluation of poly(L-lactide)/biphasic ceramic composites (II) – Control of mechanical properties
<u>Nami Sugiyama</u> , Masahiro Fujita, Yuko Takeoka, Mamoru Aizawa, Masahiro Rikukawa..... 1783 |

T. Aoyagi, Presiding

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| 10:15 | 3H06 | Preparation of organic/inorganic nanohybrids generating reactive oxygen species by sonication under physiological conditions
<u>Masafumi Ono</u> , Atsushi Harada, Kenji Kono 1784 |
| 10:30 | 3H07 | Polymers coated with diamond-like carbon (DLC) for biomedical purposes
<u>Rena Asakawa</u> , Terumitsu Hasebe, Tetsuya Suzuki, Atsushi Hotta 1785 |
| 10:45 | 3H08 | Preparation and evaluation of collagen matrices possessing density gradient structure
<u>Yuuki Sakai</u> , Kwangwoo Nam, Tsuyoshi Kimura, Akio Kishida 1786 |

G. Chen, Presiding

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| 11:00 | 3H09 | Development of optical responsive carbon nanotubes cell cultured substrate
<u>Takao Sada</u> , Tsuyohiko Fujigaya, Naotoshi Nakashima 1787 |
| 11:15 | 3H10 | Preparation of Ca-binding silk-like proteins and their immobilization on metals for biomedical application
<u>Aya Nagano</u> , Hajime Kamoshida, Tetsuo Takemura, Nobuko Sakurai, Yasumoto Nakazawa, Tetsuo Asakura 1788 |
| 11:30 | 3H11R | Suppression of in vivo calcification against transplanted acellular vascular grafts
<u>Tetsuji Yamaoka</u> , Haruka Yamaguchi, Tomo Ehashi, Toshiyuki Moritan, Toshiya Fujisato..... 1789 |

A. Kishida, Presiding

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| 12:30 | 3H12 | Applicability of Protein Layer-Mediated Apatite Deposition Process to Various Polymer Film Surfaces
Atsushi Sakai, Hisao Matsuno, Takeshi Serizawa, <u>Mineo Hashizume</u> ... 1790 |
| 12:45 | 3H13 | Selective cell destruction using photo acid generating polymer
<u>Kyoko Kikuchi</u> , Kimio Sumaru, Toshiyuki Takagi, Manae Yamaguchi, Taku Sato, Toshiyuki Kanamori 1791 |
| 13:00 | 3H14 | Development of adipogenesis-mimicking matrices for stem cell differentiation
<u>Takashi Hoshiba</u> , Naoki Kawazoe, Tetsuya Tateishi, Guoping Chen 1792 |

K. Sumaru, Presiding

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| 13:15 | 3H15 | Preparation of Hybrid Porous Scaffolds of Biodegradable Synthetic |
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		Polymers and Collagen for Cartilage Tissue Engineering <u>Guoping Chen</u> , Naoki Kawazoe, Tetsuya Tateishi 1793	
13:30	3H16	<i>Bombyx mori</i> silk fibroin scaffolds for regenerative dentistry <u>Ryo Koyanagi</u> , Sayaka Miyamoto, Ryo Takahashi, Yoshimitsu Abiko, Norihiro Nishiyama, Noboru Kuboyama, Hideo Kiba, Tetsuo Asakura 1794	
13:45	3H17	Implantation of double russel knitted silk vascular grafts and evaluation of the short-term function in a rat abdominal aorta. <u>Takahito Yagi</u> , Michiko Sato, Yasumoto Nakazawa, Kimie Tanaka, Masataka Sata, Kenji Itoh, Tetsuo Asakura 1795	
14:00	3H18	Design of pliable and flexible biodegradable scaffolds for peripheral nerve regeneration <u>Takanari Muroya</u> , Mitsuhiro Ebara, Takao Aoyagi 1796	

Room J

Wednesday, May 26

BIOPOLYMERS

K. Yasuhara, Presiding

10:00	1J05	Preparation and function of cadherin liposomes using baculovirus-liposome fusion method <u>Koki Kamiya</u> , Kanta Tsumoto, Testuro Yoshimura, Kazunari Akiyoshi . 1797	
10:15	1J06	Distribution of glycosphingolipid GM3 in model membrane in relation to sugar recognition <u>Teruhiko Matsubara</u> , Miyuki Soma, Norihiro Soga, Toshinori Sato 1798	
10:30	1J07	Preparation of liponano-capsules by surface modification with poly(arginine) and their assembly for construction of a novel bio-scaffold <u>Saika Yamamoto</u> , Keiji Fujimoto 1799	
10:45	1J08	Nano-toxicological evaluation of nanoparticles by permeability through a cell monolayer <u>Chika Ochiai</u> , Keiji Fujimoto 1800	

K. Fujimoto, Presiding

11:00	1J09	Fabrication of 3D liposome array via hybridization of DNA <u>Keita Abe</u> , Yoshihiro Sasaki, Kazunari Akiyoshi 1801	
11:15	1J10	Effective rectin recognition using carbohydrate - hydroxyl alkanethiol hybrid monolayer <u>Yukari Sato</u> , Kyoko Yoshioka, Teiichi Murakami, Mutsuo Tanaka, Osamu Niwa 1802	
11:30	1J11	Nanodisc formation by organic-inorganic hybrid lipids and its assembly <u>Kazuma Yasuhara</u> , Shohei Miki, Jun-ichi Kikuchi 1803	

M. Sakaguchi, Presiding

12:30	1J12	Fibrillation of dried chitin into 10-20nm nanofibers by a simple grinding method under acidic conditions <u>Shinsuke Ifuku</u> , Masaya Nogi, Masafumi Yoshioka, Minoru Morimoto, Hiroyuki Yano, Hiroyuki Saimoto 1804	
12:45	1J13	Preparation of Chitin Nanofiber Using Ionic Liquid and Its Composites with Poly(vinyl alcohol)	

		<u>Jun-ichi Kadokawa</u> , Akihiko Takegawa, Yoshiro Kaneko	1805
13:00	1J14	Synthesis of New Superabsorbent Polymer by Inverse Suspension Copolymerization of κ -Carrageenan and Acrylic Acid	
		<u>Takafumi Seki</u> , Kazuhiro Yamabuki, Kenjiro Onimura, Tsutomu Oishi	1806
13:15	1J15	Synthesis of New Superabsorbent Resin Based on Acrylic Acid-grafted Pullulan	
		Hiroaki Saijyo, <u>Kazuhiro Yamabuki</u> , Kenjiro Onimura, Tsutomu Oishi .	1807
		J. Kadokawa, Presiding	
13:30	1J16	Dissipative crystallization of hydroxypropylcellulose	
		<u>Tsuneo Okubo</u> , Masashi Mizutani, Shinya Takahashi, Akira Tsuchida.	1808
13:45	1J17	Surface functionalization of bacteria cellulose – synthesis of bacteria cellulose-PMMA block copolymer	
		Shuhei Takahashi, Takeshi Ooura, Tadahisa Iwata, <u>Masato Sakaguchi</u>	1809
14:00	1J18	Formation Behavior of Inclusion Complexes between γ -Cyclodextrin and Stereoregular Poly(methacrylic acid)s	
		<u>Takashi Miura</u> , Toshiyuki Kida, Mitsuru Akashi	1810
14:15	1J19	Preparation and Application of Cyclodextrin Microstructures of Various Morphologies	
		<u>Toshiyuki Kida</u> , Yasuhiro Marui, Mitsuru Akashi	1811
		T. Kida, Presiding	
14:30	1J20	Preparation of guar gum-based materials using ionic liquid	
		<u>Shozaburo Mine</u> , Kohei Sonoda, Hironori Izawa, Yoshiro Kaneko, Jun-ichi Kadokawa.....	1812
14:45	1J21	Development of Functional Nanogel formed with Vitamin B6-bearing Pullulan	
		<u>Yuji Tsuchido</u> , Yoshihiro Sasaki, Kazunari Akiyoshi	1813
15:00	1J22	Synthesis of branched polysaccharides having glucuronic acid residues at nonreducing ends by phosphorylase catalysis	
		<u>Yuta Umegatani</u> , Yoshiro Kaneko, Jun-ichi Kadokawa, Hironori Izawa, Akiko Kubo.....	1814
15:15	1J23	Surface Engineering of Bacteria for Development of Mucosal Vaccine	
		<u>Chizu Morisaki</u> , Yuki Sato, Masako Oohori, Rurie Tsuru, Katsuhiko Sekimata, Reiko Sadamoto.....	1815
		S. Kimura, Presiding	
15:30	1J24	Evaluation of lectin binding affinity of synthetic glycopolymers having fucosyl-chitobiose moieties	
		<u>Hiroki Yamaguchi</u> , Tetsuo Koyama, Ken Hatano, Daiyo Terunuma, Koji Matsuoka	1816
15:45	1J25	Formation of complex between phosphorylated pullulan and antimicrobial agent and elucidation of the working mechanism	
		<u>Hiroki Yamamoto</u> , Takumi Okihara, Yasuhiro Yoshida, Naoko Namba, Noriyuki Nagaoka, Seisuke Takashima, Kazuomi Suzuki, Shogo Takashiba.....	1817
16:00	1J26	Synthesis of 1,6-Anhydro Amylose in Water	
		<u>Wei-chun Huang</u> , Tomonari Tanaka, Masato Noguchi, Atsushi Kobayashi, Shin-ichiro Shoda	1818
		T. Okihara, Presiding	
16:15	1J27	Direct synthesis of polysaccharides from free sugars via oxazoline derivatives	
		<u>Masato Noguchi</u> , Kumiko Ishikura, Tomonari Tanaka, Atsushi Kobayashi, Shin-ichiro Shoda	1819
16:30	1J28	Synthesis of Sugar Sulfates as Specific Inhibitors to Heparanase	

		<u>Yuki Fujita</u> , Masashi Ohmae, Shunsaku Kimura	1820
16:45	1J29	Hydrolysis of sulfated polysaccharides in subcritical water	
		<u>Minoru Morimoto</u> , Tetsuya Hayashi, Daiki Mori, Hitoshi Kawamoto, Shinsuke Ifuku, Jun-ichi Tamura, Saburo Minami, Kimihiko Sato, Hiroyuki Saimoto	1821

Thursday, May 27

POLYMERS AND ENVIRONMENT

A. Hotta, Presiding

9:45	2J04	Preparation of degradable polypropylene by an addition of poly(ethylene oxide) microcapsule containing TiO ₂	
		<u>Kensuke Miyazaki</u> , Hisayuki Nakatani	2028
10:00	2J05	Dismantlable adhesives using degradable polyperoxides	
		<u>Eriko Sato</u> , Hiroshi Tamura, Akikazu Matsumoto	2029
10:15	2J06	Synthesis of Degradable Epoxy Resins Containing Acetal Linkages	
		<u>Hiroyuki Meiji</u> , Michio Urushisaki, Toshikazu Sakaguchi, Tamotsu Hashimoto	2030

M. Funaoka, Presiding

10:30	2J07	Analysis of photolysis behavior of poly(L-lactic acid) under ultraviolet irradiation	
		<u>Nobuhiko Yasuda</u> , Takayuki Tsukegi, Yoshihito Shirai, Haruo Nishida	2031
10:45	2J08	Highly Selective Depolymerization of Poly(L-lactic acid) from a Binary Polymer Blend of Poly(L-lactic acid)/ Polycarbonate	
		<u>Takehiro Yasukata</u> , Yoshihito Shirai, Haruo Nishida	2032
11:00	2J09	Material Recycling of Poly(butylene-succinate)(PBS) and Poly(lactic acid)(PLA)	
		<u>Chiharu Kanemura</u> , Shigeyuki Nakashima, Atsushi Hotta	2033
11:15	2J10	Cationic and Radical Polymerizations of Styrene Dimer and Styrene Trimer as Thermal Degradation Products of Polystyrene	
		<u>Tamotsu Hashimoto</u> , Masayuki Ohara, Michio Urushisaki, Toshikazu Sakaguchi, Takashi Sawaguchi, Daisuke Sasaki	2034
11:30	2J11R	Life cycle inventory(LCI) data on commodity resins	
		<u>Hajime Nishihara</u> , Yoshimi Ozaki	2035

T. Ishigure, Presiding

12:45	2J13ILA	Topics on Advanced Polymer Material Research of Toray in China	
		<u>Yong He</u> , Qiao Chen, Yang Yang, Fangke Shao, Kai Peng, Rong Lu, Gang Wu	123

T. Hashimoto, Presiding

13:15	2J15	Preparation of Liquid Crystalline Cellulose Phenolic Esters from Plant-derived Phenolic Compounds	
		<u>Daisuke Ishii</u> , Yuusuke Nishikawa, Kouhei Nose, Mizuki Nakagawa, Hisao Hayashi	2036
13:30	2J16	Biomass-derived epoxy resin for Molding compounds	
		<u>Yoshiaki Okabe</u> , Hiroyuki Kagawa, Chiduru Sasaki, Yoshitoshi Nakamura	2037
13:45	2J17	Preparation of Polymer/Woody Biomass Composite Materials by Vapor-phase Assisted Surface Polymerization (VASP)	
		<u>Donghee Kim</u> , Yoshito Andou, Haruo Nishida, Yoshihito Shirai	2038

H. Nishida, Presiding

14:00	2J18	Successive structural conversion of hardwood lignophenol by lewis acid treatment for chemical feedstock	
		<u>Keigo Mikame</u> , Masamitsu Funaoka	2039

14:15	2J19	Response of lignin for environmental stress. <u>Kimihiko Toma</u> , Masamitsu Funaoka.....	2040
14:30	2J20	Functionality control of native lignin using condensation reactions~ Comparative analyses of intra- /inter- condensation reactions ~ <u>Yuki Tsukamoto</u> , Masamitsu Funaoka.....	2041
14:45	2J21	Syntheses of hybrid types lignin-based materials using structural distribution of native lignin—Novel synthesis process of Ligno-lignin <u>Minho Jung</u> , Masamitsu Funaoka.....	2042
H. Nakatani, Presiding			
15:00	2J22	Electrospinning of Polyelectrolytes <u>Dohiko Terada</u> , Chiaki Yoshikawa, Kun Zhang, Shinya Hattori, Takako Honda, Toshiyuki Ikoma, Hisatoshi Kobayashi	2043
15:15	2J23	Preparation of ultra-fine nanofiber by electrospinning <u>Takuma Arai</u> , Satoshi Fukushima, Hiroyoshi Kawakami	2044
15:30	2J24	Conductivity of carbon nanofiber prepared by ion irradiation method <u>Katsuya Sode</u> , Yoshiaki Suzuki, Hiroyoshi Kawakami.....	2045
15:45	2J25	Effect of polymer structures on proton conductivity of phosphoric acid doped blend membranes with sulfonate groups. <u>Yusuke Iiduka</u> , Kazuhiro Suzuki, Hiroyoshi Kawakami	2046
H. Kawakami, Presiding			
16:00	2J26	Photo-operated CO ₂ -glucose biofuel cell with fuel production function <u>Yutaka Amao</u> , Naho Shuto	2047
16:15	2J27	Characterization of local structures and dynamics in ionic liquid / H ₂ O mixtures <u>Kazuhiro Kamiguchi</u> , Yohei Takahashi, Hidenori Sato, Toshihiro Takekawa, Shigeo Sato, Kazuaki Wagatsuma	2048
16:30	2J28	Adsorption of Rare-metal of polyallylamine derivative having thiourea moiety <u>Daisuke Nagai</u> , Megumi Yoshida, Hisatoyo Morinaga.....	2049
16:45	2J29	Synthesis of Poly(amine-ester)s by polyaddition reaction and application to hazardous metal adsorbing materials <u>Akiko Nakazato</u> , Akinori Suzuki, Hisatoyo Morinaga, Daisuke Nagai....	2050

Friday, May 28

POLYMERS AND ENVIRONMENT

Y. Ando, Presiding

9:30	3J03	Effect of addition of ultra-high-molecular-weight poly[(R)-3-hydroxybutyrate] into wild-type poly[(R)-3-hydroxybutyrate] <u>Taizo Kabe</u> , Takeharu Tsuge, Kazuki Ito, Akio Takemura, Tadahisa Iwata	2051
9:45	3J04	Preparation and characterization of xylan ester derivatives <u>Noreen Fundador</u> , Akio Takemura, Tadahisa Iwata.....	2052
10:00	3J05	Evaluation of high-throughput screening system for alteration of PHA synthase substrate specificity <u>Yoriko Watanabe</u> , Yousuke Ichinomiya, Daisuke Shimada, Seiichi Taguchi, Takeharu Tsuge	2053
10:15	3J06	Biosynthesis of medium chain length polyhydroxyalkanoates from alkenoic acid by a recombinant <i>Escherichia coli</i> strain <u>Shun Sato</u> , Naoki Ishii, Hideki Abe, Takeharu Tsuge	2054
10:30	3J07	Synthesis of periodic copolymers containing 3-hydroxybutyrate unit and regulation of their biodegradability	

		<u>Hideki Abe</u>	2055
		T. Tsuge, Presiding	
10:45	3J08	Synthesis of α -alkoxyacrylonitriles from pyruvic acid and their radical polymerization. <u>Yusuke Oishi</u> ,Masatoshi Miyamoto	2056
11:00	3J09	Synthesis and properties of copolymers of L-lactide and beta-propiolactone <u>Kazuki Aihara</u> ,Zhengguo Cai,Yuushou Nakayama,Takeshi Shiono	2057
11:15	3J10	Synthesis of racemization-free monomer: α -hydroxyisobutyric acid from Bio-Based Materials <u>Koutarou Watanabe</u> ,Yoshito Ando,Yoshihito Shirai,Haruo Nishida....	2058
11:30	3J11R	Recyclable material, Polytetramethyglycolide (PTMG): Its synthesis and properties <u>Yoshito Ando</u> ,Koutarou Watanabe,Yoshihito Shirai,Haruo Nishida....	2059
		T. Iwata, Presiding	
12:30	3J12	Hydrolytic Degradation Behavior of Poly(lactide) Stereocomplex up to Late Stage <u>Hideto Tsuji</u> ,Tomonori Tsuruno.....	2060
12:45	3J13	Homo- and Hetero-Stereocomplex Formation of Substituted Poly(lactide)s <u>Hideto Tsuji</u> ,Ayaka Okumura,Satomi Yamamoto,Yu Sugiura.....	2061
13:00	3J14	Structure and Mechanical properties of All-Poly (lactic acid) composite Masaru Kotera, <u>Kosuke Tsuji</u> ,Takashi Nishino,Hideto Tsuji,Kiyotuna Toyohara	2062
13:15	3J15	Relation between block composition and properties of stereoblock polylactides formed by chain coupling <u>Kazunari Masutani</u> ,Yoshiharu Kimura.....	2063
		Y. Nishio, Presiding	
13:30	3J16	Synthesis and Characterization of PLLA-Siloxane copolymers <u>Mizuho Nagata</u> ,Yasuharu Yamada	2064
13:45	3J17	Synthesis and characterization of branched PLLA-Silica hybrids <u>Hiromi Miyajima</u> ,Yasuharu Yamada.....	2065
14:00	3J18	Microphase segregated nanostructure of amphiphilic liquid crystalline diblock copolymer consist of hydrophilic PLA segment. <u>Tasuku Izutani</u> ,Motonori Komura,Tomokazu Iyoda,Sadayuki Asaoka	2066
14:15	3J19	Structure and properties of uniaxially stretched poly(L-lactic acid) (PLLA)/ poly(aspartic acid-co-L-lactide) (PAL) blend films <u>Sakiko Hirai</u> ,Hideko Oyama,Hitoshi Onishi.....	2067
		H. Tsuji, Presiding	
14:30	3J20	Molecular Dynamics and Phase Structure of Cellulose alkyl ester-graft-poly(ϵ -caprolactone) – Effects of Copolymer Composition and Intercomponent Miscibility <u>Ryosuke Kusumi</u> ,Yoshikuni Teramoto,Yoshiyuki Nishio	2068
14:45	3J21	Development of Supramolecular Structures of Cellulose acetate-graft-poly(L-lactide) in the Isothermal Crystallization Process: X-ray Diffraction and Dielectric Relaxation Measurements <u>Megumi Sato</u> ,Ryosuke Kusumi,Yoshikuni Teramoto,Yoshiyuki Nishio	2069
15:00	3J22	Blend miscibility of cellulose propionate with vinyl copolymers containing an <i>N</i> -vinyl pyrrolidone unit: Effect of the degree of propionyl substitution and the copolymer composition on a scale of homogeneity <u>Kazuki Sugimura</u> ,Shougo Katano,Yoshikuni Teramoto,Yoshiyuki Nishio	2070
15:15	3J23	Preparation of calcium carbonate/chitosan composite core-shell type particles prepared by biomineralization	

Room K

Wednesday, May 26

POLYMER CHEMISTRY “English Session”

T. Shimizu, Presiding

- 10:00 1K05 Polymer-Directed Supramolecular Polymerization of an Amphiphilic Molecular Graphene into Nanotubular Assemblies
Chiyong Park, Takanori Fukushima, Takuzo Aida 402
- 10:15 1K06 Supramolecular Block Polymers: Nanotubular Assemblies of Metal-Ion-Appended Hexabenzocoronenes with Radial and Linear Heterojunctions
Wei Zhang, Wusong Jin, Takanori Fukushima, Noriyuki Ishii, Takuzo Aida 403

T. Fukushima, Presiding

- 10:30 1K07 Social Self-Sorting—Alternating Supramolecular Oligomer Consisting of Isomers
Yoshinori Takashima, Naoki Tomimasu, Akira Kanaya, Hiroyasu Yamaguchi, Akira Harada 404
- 10:45 1K08 Conjugation of Organic-Metallic Hybrid Polymers and DNA for Application to DDS
Jinghua Li, Masayoshi Higuchi 405

D. Jiang, Presiding

- 14:00 1K18 Effects of Particle Architecture on Initial Fragmentation in Heterogeneous Ziegler-Natta Propylene Polymerization
Vu Quoc Thang, Toshiaki Taniike, Minoru Terano 406
- 14:15 1K19 Coordination Copolymerization of Ethylene with Vinyl Acetate and Allyl Acetate
Shingo Ito, Kagehiro Munakata, Masafumi Kanazawa, Kyoko Nozaki 407
- 14:30 1K20 Polymerization of Substituted Acetylenes Catalyzed by Well-defined Aryl Palladium Complexes
Jesus Rodriguez Castanon, Atsushi Nakagawa, Masashi Shiotsuki, Fumio Sanda, Toshio Masuda 408
- 14:45 1K21 Synthesis and Properties of Copper(II) Complex with an Azoaromatic Ligand
Anasuya Bandyopadhyay, Masayoshi Higuchi 409

S. Yamago, Presiding

- 15:00 1K22 Synthesis and Functions of Conjugated Porous Polymers via Ring-fusing Reaction
Yan Kou, Donglin Jiang 410
- 15:15 1K23 Simultaneous Chain- and Step-Growth Radical Polymerization by Transition-Metal Catalysts: Design of Novel Copolymers
Masato Mizutani, Kanji Nagai, Kotaro Satoh, Masami Kamigaito 411
- 15:30 1K24 New Aspects in Metal-Catalyzed Living Radical Polymerization—Super Active Aqueous Catalysts and Iron Catalysts
Makoto Ouchi, Muneki Ishio, Hiroaki Yoda, Yusuke Fukuzaki, Mitsuo Sawamoto 412

15:45	1K25	Radical Polymerization of N-Vinylformamide Derivatives Bearing Chiral Substituents <u>Hiroharu Ajiro</u> , Mitsuru Akashi.....	413
M. Akashi, Presiding			
16:00	1K26	Template-Assisted Radical Reaction toward Sequence-Regulated Polymerization <u>Shohei Ida</u> , Makoto Ouchi, Mitsuo Sawamoto	414
16:15	1K27	Concurrent Tandem Living Radical Polymerization via in-situ Monomer Transformation with Alcohols – A New Route toward Gradient Copolymers <u>Kazuhiro Nakatani</u> , Takaya Terashima, Mitsuo Sawamoto.....	415
16:30	1K28	Synthesis of core brush nanoparticles and locking of colloid crystals <u>Donghoon Lee</u> , Satoshi Uchida, Koji Ishizu, Masaaki Ozawa.....	416
16:45	1K29	Characteristics of stimuli responsive poly(N-isopropylacrylamide) (PNIPA) brushes on silicon surfaces by Atom transfer radical polymerization. <u>Muhammad Nurul Huda</u> , Hiromasa Suzuki, Takahiro Seki, Yukikazu Takeoka.....	417

Thursday, May 27

POLYMER CHEMISTRY “English Session”

M. Ouchi, Presiding			
9:30	2K03	Synthesis and Properties of Oligothiophene Layered-Polymers Based on Naphthalene <u>Jonas Alves Fernandes</u> , Yasuhiro Morisaki, Yoshiki Chujo	418
9:45	2K04	Synthesis of Polybenzamide-b-Polystyrene Block Copolymers via Combinations of Chain-growth Condensation Polymerization (CGCP) and Atom Transfer Radical Polymerization (ATRP) <u>Chih-feng Huang</u> , Akihiro Yokoyama, Tsutomu Yokozawa.....	419
10:00	2K05	Macroscopic Alignment of Cylindrical Polymer Brush toward Responsive Functions <u>Nobuhiko Hosono</u> , Takashi Kajitani, Takanori Fukushima, Takuzo Aida	420
10:15	2K06	Precise synthesis of exact graft copolymers via new methodology based on living anionic polymerization <u>Ahmed Abouelmagd</u> , Kota Murano, Kenji Sugiyama, Akira Hirao	421
T. Nishimura, Presiding			
10:30	2K07ILA	Novel Photoinitiator Systems for UV Curable Systems. <u>Xuesong Jiang</u> , Jie Yin	124

BIOPOLYMERS “English Session”

A. Kikuchi, Presiding			
11:15	2K10	Design of nitroxyl radicals containing nanoparticles and evaluation with MRI <u>Toru Yoshitomi</u> , Shingo Matsumoto, Murali C. Krishna, Ken-ichiro Matsumoto, Kazunori Anzai, Hirofumi Matsui, Aki Hirayama, Yukio Nagasaki.....	1822
11:30	2K11	Synthesis of Block and Graft Copolymers of TEMPO-Bearing Acrylamides and Lactates for Biomedical Application <u>Xiuli Zhuang</u> , Kenichi Oyaizu, Chunsheng Xiao, Natsuru Chikushi, Xuesi Chen, Hiroyuki Nishide	1823

A. Harada, Presiding

12:30	2K12	PEGylated organic nanotube-DNA complexes and their gene transfer function <u>Wuxiao Ding</u> , Hiroyuki Minamikawa, Mitsutoshi Masuda, Toshimi Shimizu 1824
12:45	2K13	Characterization of Calcium Phosphate/Polymer Hybrid Nanoparticles for siRNA Delivery to Pancreatic Cancer Cells <u>Frederico Pittella</u> , Mingzhen Zhang, Yan Lee, Kanjiro Miyata, Nobuhiro Nishiyama, Kazunori Kataoka 1825
13:00	2K14	Introduction of stearyl moieties into the biocompatible cationic polyaspartamide derivative, PAsp(DET), for siRNA delivery to a lung metastatic tumor <u>Hyun Jin Kim</u> , Horacio Cabral, Makoto Oba, Kanjiro Miyata, Nobuhiro Nishiyama, Kazunori Kataoka 1826
13:15	2K15	Multifunctional Cationic Block Copolymers for Formation of Polyion Complex Micelles with siRNA <u>R. James Christie</u> , Shigeto Fukushima, Nobuhiro Nishiyama, Kazunori Kataoka 1827

A. Kikuchi, Presiding

13:30	2K16ILA	Chitosan Based Nanoparticles for Cancer Therapy <u>Ick Chan Kwon</u> 125
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Y. Nagasaki, Presiding

14:00	2K18	Drug Delivery to Metastatic Tumor Cells Using Collagen Peptide-Modified Dendrimers-Hybrid Gels <u>Chie Kojima</u> , Eiko Nishisaka, Mikako Ogawa, Tomoyuki Suehiro, Atsushi Harada, Yasuhiro Magata, Kenji Kono 1828
14:15	2K19	Mechanism of Photodynamic Effect of Polyion Complex Micelles Encapsulating Dendrimer Phthalocyanine by Disulfide Cross-linking <u>Stephanie Herlambang</u> , Michiaki Kumagai, Souta Horie, Shigeto Fukushima, James Ronald Christie, Kyoko Urano, Kozo Miyazaki, Yuji Morimoto, Woo-dong Jang, Nobuhiro Nishiyama, Kazunori Kataoka 1829
14:30	2K20	Islet microencapsulation within sCR1-immobilized agarose gel <u>Luan Minh Nguyen</u> , Yuji Teramura, Hiroo Iwata 1830

M. Akashi, Presiding

14:45	2K21ILA	Encapsulation of bioactive compounds into chitosan nanoparticles <u>Rangrong Yoksan</u> , Lalita Keawchaon 126
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Y. Kumashiro, Presiding

15:15	2K23	Dimerization of stem-loop DNA by cationic comb-type copolymers <u>Jie Du</u> , Naohiko Shimada, Arihiro Kano, Atsushi Maruyama 1831
15:30	2K24	Preparation of pH-sensitive liposomes modified with hyperbranched poly(glycidol) derivatives having carboxyl groups and their functions as antigen delivery systems for dendritic cells <u>Eiji Yuba</u> , Atsushi Harada, Yuichi Sakanishi, Shinobu Watarai, Kenji Kono 1832
15:45	2K25	Preparation and immunological properties of nanosphere materials containing a synthetic peptide antigen from Plasmodium falciparum enolase <u>Hiroyuki Oku</u> , Kazuhiko Yano, Megumi Fukumoto, Shigeyuki Kano 1833

A. Maruyama, Presiding

16:00	2K26ILA	Functionalized Thermosensitive Polyphosphazene Hydrogels for Injectable Biomedical Applications Changju Chun, Mi-Ran Park, Thrimoorthy Potta, <u>Soo-Chang Song</u> 127
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Y. Tsuda, Presiding

16:30	2K28	Thermoresponsive polymer brush surfaces for cell sheet harvest: control of polymer length and graft density <u>Hironobu Takahashi</u> , Masamichi Nakayama, Teruo Okano..... 1834
16:45	2K29	Adhesion and distribution of mesenchymal stem cell on micropatterned polymer surface <u>Wei Song</u> , Naoki Kawazoe, Tetsuya Tateishi, Guoping Chen 1835

Friday, May 28

BIOPOLYMERS “English Session”

T. Taniguchi, Presiding

9:30	3K03ILA	Microspheres and Microcapsules for Bioseparation Media and Biological Drug Delivery Carriers <u>Guanghui Ma</u> , Zhiguo Su, Lianyan Wang, Wei Wei 128
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Y. Kumashiro, Presiding

10:00	3K05	Reexamination of the Reactivity of Amino Acid N-Carboxy anhydrides (36) – Polymerization of Amino Acid NCAs in Solutions and in the Solid state, and Proposal of Viscosity Equations for Molecular Weights of Some Polypeptides <u>Hitoshi Kanazawa</u> , Aya Inada, Takayuki Arai, Kentaro Itoh 1836
10:15	3K06	X-ray single crystal analysis of a pseudo single crystal prepared from lysozyme microcrystalline powder <u>Fumiko Kimura</u> , Kimihiko Mizutani, Bunzo Mikami, Tsunehisa Kimura 1837
10:30	3K07	Analysis of protein conformational changes using reflectometric interference spectroscopy <u>Tooru Ooya</u> , Kazunari Yoshida, Toshifumi Takeuchi..... 1838
10:45	3K08	Hydrophilic and hydrophobic characteristics of polyglycerol dendrimers <u>Haejoo Lee</u> , Yoshiki Mitachi, Tooru Ooya, Toshifumi Takeuchi 1839

T. Oya, Presiding

11:00	3K09	Interaction between temperature responsive polymers observed by atomic force microscopy <u>Yoshikazu Kumashiro</u> , Kazuhiro Fukumori, Hironobu Takahashi, Masamichi Nakayama, Yoshikatsu Akiyama, Kiyotaka Sakai, Masayuki Yamato, Teruo Okano..... 1840
11:15	3K10	Simulation of TEM pattern with half planer and half tilting stripes of helical molecule by tilted Cartesian coordinate <u>Kazuo Takahashi</u> 1841
11:30	3K11	Preparation of thermo-responsive copolymer brush surfaces including hydrophobic group and characterization of them as chromatographic matrices <u>Kenichi Nagase</u> , Mio Kumazaki, Jun Kobayashi, Akihiko Kikuchi, Yoshikatsu Akiyama, Hideko Kanazawa, Masahiko Annaka, Teruo Okano..... 1842

13:00

FAPS SYMPOSIUM

Room L

Wednesday, May 26

POLYMERS AND ENVIRONMENT *“English Session”*

T. Iwata, Presiding

- 10:00 1L05 Microbial Production of Lactate-based Polyesters
Ken'ichiro Matsumoto, Miwa Yamada, Fumi Shozui, Shu Uramoto, Ren
Motohashi, Takanori Nakai, Kotaro Shimizu, Seiichi Taguchi 2072
- 10:15 1L06 Synthesis and Properties of tri-block Polylactide and Their Enantiomeric
Blends with Aliphatic Polyester as Soft Segment
Masayuki Hirata, Yoshiharu Kimura 2073
- 10:30 1L07 Biodegradation and application of hydroxyl terminated poly(fumaric
acid-co-diethylene glycol)
Qun Yang, Da-nian Lu, Yoshiharu Kimura 2074

POLYMER INDUSTRY AND TECHNOLOGY *“English Session”*

T. Iwata, Presiding

- 10:45 1L08 Properties of pressure-sensitive composite adhesives with carbon
nanotubes
Takuya Tetsumoto, Yasuo Gotoh 2129

POLYMER PHYSICS *“English Session”*

H. Furukawa, Presiding

- 12:30 1L12 Relation between Equalization of Alkylene Spacers and Phase Behaviors
in Poly(substituted methylene) Liquid Crystalline Polymers.
Jun Mikami, Nozomu Fujii, Kazuhiro Shikinaka, Masatoshi Tokita, Junji
Watanabe, Kiyotaka Shigehara 651
- 12:45 1L13 Effects of nano-fibers on Liquid Crystalline Behavior and Reflection
Spectra for aqueous solutions of hydroxypropyl cellulose
Takashi Araki, Takatoshi Nozaki, Katsufumi Tanaka, Ryuichi Akiyama . 652
- 13:00 1L14 Combined SANS, WANS, and Weighing Studies of Microbial Cellulose:
Elucidation of Hierarchical Structures in Drying Process
Yue Zhao, Satoshi Koizumi, Takeji Hashimoto, Yoko Tomita, Tetsuo Kondo 653
- 13:15 1L15 Network Structure in Agarose Gels Studied by PFG-NMR Technique
Bona Dai, Shingo Matsukawa 654
- 13:30 1L16 Gelation Mechanism and Network Structure in Carrageenan Solutions
Studied by gradient NMR
Qihua Zhao, Shingo Matsukawa 655

K. Shikinaka, Presiding

- 13:45 1L17 Anisotropic Properties and Structures of Nanosheet Liquid Crystal -
poly(N-isopropylacrylamide) Hybrid Gels
Nobuyoshi Miyamoto, Morio Shintate, Yuichiro Kamachi, Ryuhei
Motokawa 656
- 14:00 1L18 Microrheology of Nanogel-structured Gel
Yurina Sekine, Tomoko Ikeda-fukazawa, Masatoshi Ichikawa, Kenichi
Yoshikawa, Kazunari Akiyoshi 657
- 14:15 1L19 Hydrogels with macroscopically ordered structure based on semi-rigid
polyion complex formation

		<u>Zi Liang Wu</u> , Takayuki Kurokawa, Hidemitsu Furukawa, Md. Arifuzzaman, Jian Ping Gong	658
14:30	1L20	Determination of Residual Dipolar Interaction from Transverse ¹ H NMR Relaxation in Elastomers	
		<u>Shigenobu Hayashi</u> , Yoshihiko Komori.....	659
14:45	1L21	Nonuniformity in Peroxide Cross-Linked Natural Rubber as Revealed by Contrast-Variation Small-Angle Neutron Scattering	
		<u>Hanako Asai</u> , Yuko Ikeda, Norihito Higashitani, Yota Kokubo, Takuya Suzuki, Noboru Osaka, Hitoshi Endo, Mitsuhiro Shibayama, Shinzo Kohjiya	660
		Y. Li, Presiding	
15:00	1L22	Analyses of Conformation of Dialkylpolysilanes on Carbon Nanotubes	
		<u>Woojung Chung</u> , Masanobu Naito, Michiya Fujiki.....	661
15:15	1L23	Structure and Properties of Poly (vinyl alcohol)/Nanodiamond Composites	
		<u>Seira Morimune</u> , Masaru Kotera, Takashi Nishino, Kimiya Goto, Katsuhiko Hata	662
15:30	1L24	Characteristic Reinforcement of Functionalized CMC-embedded PVA Films	
		Adhikali Prashanta, Masaki Ujihara, <u>Toyoko Imae</u>	663
15:45	1L25	Influence of Interfacial Interaction on Physicochemical Properties of Imogolite/Polymer Nanocomposites	
		<u>Wei Ma</u> , Weng On Yah, Hideyuki Otsuka, Atsushi Takahara	664
		T. Nishino, Presiding	
16:00	1L26	SAXS study of microdomain structures formed in semi-dilute solutions of ultra-high-molecular-weight block copolymers	
		<u>Shigeru Okamoto</u> , Kazuhiro Sato, Shinpei Ito, Mai Ohira, Naoki Sakamoto, Hirokazu Hasegawa, Naokiyo Koshikawa.....	665
16:15	1L27	Formation Mechanism of Microdomain Structure Induced by Differentiating Non-solvent in Semi-dilute Solutions – Structural Analysis by SANS, Rheometry and Simulation	
		<u>Koji Ando</u> , Takahiko Yamanaka, Shigeru Okamoto, Naoki Sakamoto, Tadashi Inoue, Daisuke Yamaguchi, Satoshi Koizumi, Hirokazu Hasegawa, Naokiyo Koshikawa.....	666
16:30	1L28	Microdomain Structures in Electrospun Micro-Fibers of Styrene-Ethylenebutylene-Styrene Triblock Copolymer	
		Wonchalerm Rungswang, Masaya Kotaki, <u>Shinichi Sakurai</u> , Takuma Shimojima, Go Kimura, Suwabun Chirachanchai.....	667
16:45	1L29	Fabrication of Electrically Conductive Polymeric Materials with High Stretchability and Excellent Elasticity by a Surface Coating Method	
		<u>Yongjin Li</u> , Hiroshi Shimizu.....	668

Thursday, May 27

POLYMER PHYSICS “English Session”

Y. Sasanuma, Presiding

9:30	2L03	Structural Relaxation of Side-Chain Type Liquid Crystalline Polymer with thermal ageing near T _g	
		<u>Yutaka Tanaka</u> , Hiroshige Asano	669
9:45	2L04	The Clapeyron Analysis of Screw-Sense Inversion of Polyaspartates in the Solid State	

		<u>Akihiro Abe</u> ,Yoji Maeda,Hidemine Furuya.....	670
10:00	2L05	Stress-induced Structural Changes of PAN-based Carbon Fibers as Observed by Synchrotron X-ray and Raman Scattering Measurements	
		<u>Takayuki Kobayashi</u> ,Kohji Tashiro,Kazunori Sumiya,Takayuki Takahagi	671
10:15	2L06	Micro-Dielectronic Environmental Effect on the Electronic States of (n,m) Single-Walled Carbon Nanotubes	
		<u>Yasuhiko Hirana</u> ,Yasuhiko Tanaka,Yasuro Niidome,Naotoshi Nakashima	672
		T. Iyoda, Presiding	
10:30	2L07	Swelling Structure of Polymer Thin Films by Non-solvents	
		<u>Hironori Atarashi</u> ,Masahiro Hino,Takeshi Serizawa,Keiji Tanaka.....	673
10:45	2L08	Aggregation states of poly(methyl methacrylate) ultrathin film at water interface	
		<u>Ayanobu Horinouchi</u> ,Hironori Atarashi,Norifumi Yamada,Keiji Tanaka	674
11:00	2L09	Surface aggregation structure of (poly(2-methoxyethyl acrylate)/poly(methyl methacrylate)) blend film	
		<u>Toyoaki Hirata</u> ,Hisao Matsuno,Masaru Tanaka,Keiji Tanaka	675
11:15	2L10	Local conformation of polystyrene at substrate interface	
		<u>Naoki Kai</u> ,Yoshihisa Fujii,Keiji Tanaka.....	676
11:30	2L11R	Introduction of Temporal Structures to Polymer Colloid	
		<u>Daisuke Suzuki</u> ,Ryo Yoshida.....	677
		K. Tanaka, Presiding	
12:30	2L12	Free volume of thin films of Nafion for fuel cells obtained from energy-variable slow positron annihilation spectroscopy	
		<u>Hamdy F. M. Mohamed</u> ,C. S. Kuroda,Y. Kobayashi,R. Suzuki,A. Ohira	678
12:45	2L13	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.....	679
13:00	2L14	Amphiphilic Liquid Crystalline Block Copolymer Film with perpendicular and parallel Cylindrical Domains: Orientation Control and Structural Transcription	
		<u>Yongbin Zhao</u> ,Tomokazu Iyoda.....	680
13:15	2L15	Analytical investigations of the behavior of silole-core dendrimers having peripheral carbohydrates in water and acetone/water mixed solvent	
		<u>Hiroaki Aizawa</u> ,Ken Hatano,Nobuaki Honsho,Hitoshi Saeki,Tetsuo Koyama,Koji Matsuoka,Daiyo Terunuma	681
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		<u>Motonori Komura</u> ,Tomokazu Iyoda.....	682
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14:15	2L19ILA	Soft Materials Nanoengineering via Directed Molecular Assembly	
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14:45	2L21ILA	Self-Assembly of Block copolymers of pi-Cojugated Polymers and Coil polymers	
		<u>Chi-An Dai</u> ,Yi-Huan Lee,Wei-Che Yen,Wei-Fang Su	131
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15:45	2L25	Fabrication of Semisoft Colloidal Crystals in Ionic Liquid <u>Yun Hwang</u> , Akisato Takata, Kohji Ohno, Takeshi Fukuda, Yoshinobu Tsujii, Masahide Takahashi.....	685
16:00	2L26	Preparation of Cationic-type Polyelectrolyte Brushes with Narrow Molecular Weight Distributions by the Surface-initiated Polymerization Using a Fluoroalcohol and Ionic Liquid as the Solvents <u>Motoyasu Kobayashi</u> , Masami Terada, Moriya Kikuchi, Atsushi Takahara	686
		M. Kobayashi, Presiding	
16:15	2L27	Swelling properties of concentrated polymer brushes of weak polyelectrolytes <u>Shingo Yokota</u> , Akihiro Nomura, Atsushi Goto, Takeshi Fukuda, Yoshinobu Tsujii, Eiichi Kayahara, Shigeru Yamago.....	687
16:30	2L28	Hand operating controlled dynamic behavior of molecular machine <u>Taizo Mori</u> , K. Okamoto, Jonathan P. Hill, Katsuhiko Ariga, Satoshi Shinoda, Hiroshi Tsukube.....	688
16:45	2L29	Effect of High Temperature on the Changes in Morphology of Perfluorinated Membranes for Polymer Electrolyte Fuel Cell <u>Mohammad A. Barique</u> , Surasak Seesukphronrarak, Naohiko Takimoto, C. S. Kuroda, Akihiro Ohira.....	689

Friday, May 28

POLYMER PHYSICS “English Session”

T. Kanaya, Presiding

9:30	3L03	Study on micro-convections induced in a polystyrene / malonate solution under temperature gradient <u>Hui Liu</u> , Muneaki Yamane, Shinichi Sakurai	690
9:45	3L04	Drug Inclusion of an Amphiphilic Polymer Micelle Explored with Synchrotron SAXS <u>Isamu Akiba</u> , Satoshi Hashida, Hiroyasu Masunaga, Hiroki Ogawa, Naoto Yagi, Kouichi Shiraishi, Masayuki Yokoyama, Kazuo Sakurai.....	691
10:00	3L05	Reversible Thermoresponsive Behavior of Poly(chloroethyl vinyl ether-alt-maleic anhydride) in THF/Hexane Mixed Solvent <u>Zhenjie Liu</u> , Katsuhiro Inomata, Hideki Sugimoto, Eiji Nakanishi.....	692
10:15	3L06	Dilute Solution Properties of Poly(styrene macromonomer) with Polybutadiene Backbone <u>Yo Nakamura</u> , Yuji Hatanaka	693
10:30	3L07	The effect of molecular parameters on thermal behavior of poly (N-n-propylacrylamide-co-acrylic acid) aqueous solutions <u>Mohamed R. Berber</u> , Inas H. Hafez, Keiji Minagawa, Masami Tanaka, Takeshi Mori.....	694

K. Tashiro, Presiding

10:45	3L08	Ferroelectric Polymer Nanoflake Crystal – Temperature Dependence of the Spontaneous Polarization <u>Nobuyuki Takahashi</u> , Masamichi Hikosaka	695
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11:00	3L09	Single Crystal Analysis of a Pseudo Single Crystal by ^{13}C Solid-State NMR <u>Ryosuke Kusumi</u> , Tsunehisa Kimura 696	696
11:15	3L10	Effect of Segregation Power Variation via Chemical Modification on Microphase-Separated Structures <u>Siti Sarah</u> , Daisuke Kawaguchi, Yushu Matsushita 697	697
11:30	3L11R	Formation of disordered crystal in plasticized poly(L-lactic acid) <u>Takahiko Kawai</u> , Shunsuke Koido, Takayuki Iwasaki, Koji Nishida, Toshiji Kanaya, Makoto Kato, Hirotaka Okamoto, Arimitsu Usuki, Katsuhiko Nakajima, Takashi Kurose 698	698
S. Sakurai, Presiding			
12:30	3L12	Structural Evolution Process in Isothermal Crystallization Phenomenon of Molten Poly(lactic Acid) as Studied by Time-resolved Synchrotron WAXD/SAXS and Infrared Spectral Measurements <u>Kaewkan Wasanasuk</u> , Kohji Tashiro, Makoto Hanesaka, Hiroko Yamamoto, Thontree Kongkhlang, Tran Hai Ninh, Sono Sasaki, Hiroyasu Masunaga, Hiroki Ogawa, Masaki Takata 699	699
12:45	3L13	β to α form transition in crystalline structures of syndiotactic polystyrene (sPS) <u>Tetsu Ouchi</u> , Suguru Nagasaka, Atsushi Hotta 700	700
13:00	3L14	Discussion on Compression-induced Kink Band Formation Mechanism of Oriented Poly(vinylidene Fluoride) <u>Tran Hai Ninh</u> , Kohji Tashiro 701	701
13:15	3L15	Changes of Molecular Chains Aggregation State in Melt-Crystallization Process of Nylon 66 and 1212 <u>Kummetha Raghunatha Reddy</u> , Kohji Tashiro 702	702
I. Akiba, Presiding			
13:30	3L16	Cocrystallization Phenomenon in Isothermal Crystallization Process of Hydrogenated/Dueterated Polyoxymethylene Blend Samples as Studied by Time-resolved Infrared Spectral Measurements <u>Thontree Kongkhlang</u> , Kohji Tashiro 703	703
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14:00	3L18	Overshoot Crystal Growth of Paraffin under a Horizontal Temperature Gradient Muneaki Yamane, <u>Shinichi Sakurai</u> 705	705
A. Hotta, Presiding			
14:15	3L19	Configurational Properties of Poly(1-alkyl phosphirane) and Poly(1-phenyl phosphirane) <u>Yuji Sasanuma</u> , Yoko Ogawa, Masanao Matsumoto 706	706
14:30	3L20	Structures and Properties of Homologues of Poly(ethylene terephthalate) in Terms of Oxygen-to-Sulfur Substitutional Effects <u>Daisuke Abe</u> , Yuji Sasanuma 707	707
14:45	3L21	Characterization of chemical structures of one-handed helical graft copolymers from siloxane macromonomers by using highly selective aromatization reaction of the copolymers <u>Lijia Liu</u> , Masahiro Teraguchi, Takeshi Namikoshi, Edy Marwanta, Takashi Kaneko, Toshiki Aoki 708	708
15:00	3L22	Conformational relaxation of sigma-conjugated polymer radical anion on picosecond time scale <u>Akinori Saeki</u> , Yuko Ohnishi, Shu Seki 709	709

Room M

Wednesday, May 26

FUNCTIONAL POLYMERS *“English Session”*

S. Nagano, Presiding

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| 10:00 | 1M05 | Polyvinyl alcohol fibers reinforced with cellulose whiskers
<u>Ahmed Jalal Uddin</u> , Jun Araki, Yasuo Gotoh 1163 |
| 10:15 | 1M06 | Effect of Layer Double Hydroxide on Thermomechanical Properties of Polybenzoxazine
<u>Zahidul Islam</u> , Takehiro Kawauchi, Tsutomu Takeichi..... 1164 |
| 10:30 | 1M07 | Porphyrin Molecular Switch Based on Intermolecular Photoredox Behavior
<u>Shinsuke Ishihara</u> , Atsuomi Shundo, Kei Ohkubo, Shunichi Fukuzumi, Jonathan P. Hill, Katsuhiko Ariga..... 1165 |

K. Ariga, Presiding

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| 10:45 | 1M08 | Circularly Polarized Luminescence from Cyclodextrin-Pyrene Inclusion Complex and its Optical Switching Control
<u>Masanobu Naito</u> , Ken-ichiro Yasui 1166 |
| 11:00 | 1M09 | Photo-crosslinkable Liquid Crystalline Azo polymer for Surface Relief Gratings and Persistent Fixation
<u>Wenhan Li</u> , Shusaku Nagano, Takahiro Seki 1167 |
| 11:15 | 1M10 | Preparation and structural study on side chain liquid crystalline polynorbornene brush
<u>Soutarou Kakehi</u> , Shusaku Nagano, Takahiro Seki..... 1168 |
| 11:30 | 1M11R | Degradation of Organic Compounds Using Organophotocatalyst with p-n Junction Responsive to Whole Visible Light
<u>Keiji Nagai</u> , Yuzuri Yasuda, Shuai Zhang, Ichiro Kimishima, Tomokazu Iyoda, Toshiyuki Abe 1169 |

S. Okamoto, Presiding

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| 12:30 | 1M12 | Organic semiconductor nanoparticles with p-n junctions: fabrication and their properties on visible-light-responsive photocatalysis
<u>Shuai Zhang</u> , Toshiyuki Abe, Takayoshi Norimatsu, Tomokazu Iyoda, Keiji Nagai 1170 |
| 12:45 | 1M13 | Photoalignment of nematic liquid crystal on surface photofunctionalized polyimide films through VUV oxidation-based treatment
<u>Akira Sasaki</u> , Shusaku Nagano, Takahiro Seki 1171 |
| 13:00 | 1M14 | Synthesis and Evaluation of Negative Type Molecular Resist Based on Novel Noria Derivative
<u>Nobumitsu Niina</u> , Hiroto Kudo, Tadatomi Nishikubo, Ken Maruyama, Toshiyuki Kai, Tsutomu Shimokawa, Hiroaki Oizumi, Toshiro Itani..... 1172 |
| 13:15 | 1M15 | Control of birefringence in photonics polymer for liquid crystal displays
<u>Zen Satoh</u> , Takayuki Mashima, Akihiro Tagaya, Yasuhiro Koike..... 1173 |

K. Nagai, Presiding

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| 13:30 | 1M16 | Laser Resonator with Lower Threshold Fabricated using Giant Grains of microdomain structures in Semi-dilute Solutions of |
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		ultra-high-molecular-weight block copolymers <u>Shigeru Okamoto</u> , Naoki Shiba, Koji Ando, Takahiko Yamanaka, Naoki Sakamoto, Akihiko Ikeda, Hirokazu Hasegawa, Naokiyo Koshikawa.....	1174
13:45	1M17	Partially Chlorinated GI-POF with High Thermal Stability <u>Ryosuke Nakao</u> , Yoshiki Mukawa, Kotaro Koike, Atsushi Kondo, Yoshiyuki Okamoto, Yasuhiro Koike.....	1175
14:00	1M18	Development of fluorinated polymer for graded index polymer optical fibers <u>Atsushi Kondo</u> , Kotaro Koike, Yoshiyuki Okamoto, Yasuhiro Koike.....	1176
14:15	1M19	Optical characteristic analysis of perfluorinated polymer based graded index polymer optical fibers <u>Atsushi Kondo</u> , Osakazu Kimoto, Chikafumi Tanaka, Satoshi Takahashi, Yasuhiro Koike.....	1177
		T. Kimura, Presiding	
14:30	1M20	Strengthening of the Hydrogel with inorganic particles <u>Hideyuki Mitomo</u> , Taiki Tominaga, Ken-ichi Sano, Kuniharu Ijio, Yoshihito Osada.....	1178
14:45	1M21	Carbon nanotube gel as a drug reservoir <u>Tsuyohiko Fujigaya</u> , Tatsuro Morimoto, Yasuro Niidome, Naotoshi Nakashima.....	1179
15:00	1M22	Presence of water capable of sustaining mechanical toughness of polymer network <u>Taiki Tominaga</u> , Ken-ichi Sano, Yoshihito Osada.....	1180
15:15	1M23	Local Shrinking/Swelling Control for Newly Designed pH-responsive Hydrogels by Photo-induced pH-Jump Reaction <u>Prapatsorn Techawanitchai</u> , Mitsuhiro Ebara, Takao Aoyagi.....	1181
15:30	1M24	Synthesis of Tough and Electro-Conductive Hydrogels <u>Ryoichi Kishi</u> , Kazuaki Hiroki, Taiki Tominaga, Ken-ichi Sano, Yoshihito Osada.....	1182
		T. Fujigaya, Presiding	
15:45	1M25	Magnetic responsive gel/carbon fiber composite <u>Tsunehisa Kimura</u> , Yusuke Umehara, Fumiko Kimura.....	1183
16:00	1M26	Aqua Material; A Novel High-Water-Content Moldable Hydrogel <u>Qigang Wang</u> , Justin L. Mynar, Masaru Yoshida, Yasuhiro Ishida, Kou Okuro, Kazushi Kinbara, Takuzo Aida.....	1184
16:15	1M27	Gel-sol transition of microtubule-gel with high-order hierarchical structure <u>Ryuzo Kawamura</u> , Taiki Tominaga, Naoko Oda, Ken-ichi Sano, Kuniharu Ijio, Yoshihito Osada.....	1185
16:30	1M28	Reversible Gel-Sol transition of Actin Gel <u>Ken-ichi Sano</u> , Ryuzo Kawamura, Taiki Tominaga, Naoko Oda, Kuniharu Ijio, Yoshihito Osada.....	1186
16:45	1M29	DNA gel cross-linked by intercalation <u>Ken-ichi Sano</u> , Taiki Tominaga, Osamu Haruta, Hiromichi Nakagawa, Kuniharu Ijio, Yoshihito Osada.....	1187

Thursday, May 27

FUNCTIONAL POLYMERS “English Session”

M. Takenaka, Presiding

9:30	2M03	Development of Zwitterionic Conducting Polymer with Controllable
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		Protein Absorption	
9:45	2M04	<u>Haichao Zhao</u> , Hsiao-hua (bruce) Yu, Shyh-chyang Luo, Bo Zhu.....	1188
		Controlling Cell and Biomacromolecule Adhesion on Conducting Polymer Thin Films	
10:00	2M05	<u>Hsiao-hua Yu</u> , Shyh-chyang Luo, Bo Zhu, Jun Sekine	1189
		Development of size exclusion chromatography for nanoparticles and quantum dots by utilizing concentrated polymer brush	
10:15	2M06	<u>Toshihiko Arita</u> , Tomoka Yoshimura, Tadafumi Adschiri	1190
		Morphological Studies of Amphiphilic Double-Decker Shaped Polyhedral Oligomeric Silsesquioxanes Ultrathin Films prepared by the Langmuir Blodgett Technique	
		<u>Asuman Celik Kucuk</u> , Jun Matsui, Tokuji Miyashita	1191
		J. Matsui, Presiding	
10:30	2M07	Directed Self-Assembly of PS-PDMS with grooved substrate and chemical registration	
		<u>Mikihito Takenaka</u> , Syusuke Aburaya, Satoshi Akasaka, Yasuhiko Tada, Hiroshi Yoshida, Go Sakaguchi, Hirokazu Hasegawa	1192
10:45	2M08	Control of Arrangement Structure in Metal Nanoparticle Array through Block Copolymer Template Method	
		<u>Shingo Hadano</u> , Hiroshige Handa, Tomokazu Iyoda.....	1193
11:00	2M09	Design of novel mass transport surfaces utilizing self-oscillating polymer and gel	
		<u>Yoko Murase</u> , Mio Hidaka, Ryo Yoshida	1194
11:15	2M10	Biomimic Conductive Polymer toward Antifouling Nano-biointerface	
		<u>Bo Zhu</u> , Shyh-chyang Luo, Jun Sekine, Hsiao-hua Yu	1195
11:30	2M11R	Encapsulation of Liquid Droplets with Hydrophobic Polymer Micro-particles	
		<u>Daisuke Matsukuma</u> , Hirohmi Watanabe, Atsushi Takahara.....	1196

INVITED LECTURES

		K. Kimura, Presiding	
12:30	2M12IL**	Enhanced Ionic Conduction in Organoboron Ion Gels Facilely Designed via Condensation of Cellulose with Boric Acids in Ionic Liquids	
		<u>Noriyoshi Matsumi</u>	83
		T. Kanaya, Presiding	
13:00	2M14IL**	Surface Modification of Polypropylene Molded Sheets by Means of Surface-Initiated ATRP of Methacrylates	
		<u>Tomoaki Matsugi</u> , Junji Saito, Nobuo Kawahara, Shingo Matsuo, Hideyuki Kaneko, Norio Kashiwa, Motoyasu Kobayashi, Atsushi Takahara.....	86
		S. Kimura, Presiding	
13:30	2M16IL**	Solution Properties of Amylose Tris(phenylcarbamate): Local Conformation and Chain Stiffness in 1,4-Dioxane and 2-Ethoxyethanol	
		<u>Ken Terao</u>	89

FUNCTIONAL POLYMERS “English Session”

		N. Kawatsuki, Presiding	
14:00	2M18	Symmetry and stimulus response of smectic-C elastomers	
		<u>Kazuyuki Hiraoka</u> , Ryugo Kazama, Manami Kobayashi	1197

14:15	2M19	Influence of alkylene spacer length on thermal and photo alignment behavior of polyethylene imines having azobenzene side chain groups <u>Mohammad Kamruzzaman</u> , Seiji Kurihara, Yutaka Kuwahara, Tomonari Ogata, Seiji Ujiie 1198	1198
14:30	2M20	Development of Photoluminescent Ionic Liquid Crystals <u>Kana Tanabe</u> , Takashi Kato 1199	1199
14:45	2M21	Ionic Liquid Crystalline Triphenylenes: Their Unusual Behaviors upon Hybridization with Single-Walled Carbon Nanotubes <u>Jeongho Lee</u> , Norifumi Fujita, Takuzo Aida, Akihisa Yamaguchi, Yohei Yamamoto, Takanori Fukushima 1200	1200
T. Fukushima, Presiding			
15:00	2M22	Photomechanical Effect of Anthracene Polymers Containing Biphenyl Side Chains <u>Mizuho Kondo</u> , Takehiro Matsuda, Masahiko Takemoto, Ryohei Fukae, Nobuhiro Kawatsuki 1201	1201
15:15	2M23	Ionic Conduction of 3D Nano-channels Formed by Self-organization of Ionic Liquid Crystals <u>Takahiro Ichikawa</u> , Masafumi Yoshio, Atsushi Hamasaki, Junko Kagimoto, Hiroyuki Ohno, Takashi Kato 1202	1202
15:30	2M24	Chirality-Controlled Polymerization for Aromatic Conjugated Copolymer: Synthesis of Chiral Poly(bithienylenephenylene) Derivatives in Thermally Helical Sense-Switchable Asymmetric Liquid Crystal Reaction Field <u>Sangbum Ahn</u> , Munju Goh, Masaharu Yamamoto, Kazuyosi Watanabe, Kazuo Akagi 1203	1203
15:45	2M25	Bio-inspired information processor using emergent property of stochastic threshold units – A noise generator based on poly(alkylthiophene)s <u>Naoki Asakawa</u> , Tomoya Suzuki 1204	1204
K. Tajima, Presiding			
16:00	2M26	High-Temperature Magnetic Bistability of Lanthanide Metal Coordination Polymer Complexes <u>Lijun Song</u> , Tomokazu Iyoda 1205	1205
16:15	2M27	Organic-Metallic Hybrid Polymer for Smart Window Application <u>Jian Zhang</u> , Masayoshi Higuchi 1206	1206
16:30	2M28	Vectorial Electron Transfer and Charge Accumulation in Hetero-deposited Film of Redox Polymer Nanosheet and Inorganic Nanoparticle Tomoka Shimada, <u>Jun Matsui</u> , Tokuji Miyashita 1207	1207
16:45	2M29	Liquid Crystalline Fused Porphyrin Dimers: Switchable p/n-Semiconducting Properties by pi-stacking Mode <u>Tsuneaki Sakurai</u> , Kentaro Tashiro, Atsuhiko Osuka, Akinori Saeki, Shu Seki, Takuzo Aida 1208	1208

Friday, May 28

FUNCTIONAL POLYMERS “English Session”

N. Toshima, Presiding

9:45	3M04	Synthesis and Chiroptical Properties of Novel Oligopeptides from an Achiral Amino Acid '4-Aminopiperidine-4-carboxylic Acid' <u>Joonil Cho</u> , Kazushi Kinbara, Takuzo Aida 1209	1209
10:00	3M05	Applications of Novel Oligopeptides from an Achiral Amino Acid '4-Aminopiperidine-4-carboxylic Acid'	

		Joonil Cho, <u>Yuta Honda</u> ,Kazushi Kinbara,Takuzo Aida.....	1210
10:15	3M06	Chirality Sensors Based on Polythiophene with Tethered Chiral Pendants <u>Gaku Fukuhara</u> ,Yoshihisa Inoue.....	1211
10:30	3M07	Asymmetric transfer hydrogenation of cyclic sulfonimine with polymer-supported chiral catalyst _II_ <u>Haruki Sugie</u> ,Naoki Haraguchi,Shinichi Itsuno.....	1212
		K. Kinbara, Presiding	
10:45	3M08	Synthesis of Novel Polymer-supported MacMillan catalyst <u>Masahiro Kaneko</u> ,Yu Takemura,Naoki Haraguchi,Shinichi Istuno.....	1213
11:00	3M09	Synthesis of Main Chain Ionic Chiral Polymers and Their Application to Asymmetric Reactions <u>Md. Abdus Salam</u> ,Md. Masud Parvez,Naoki Haraguchi,Shinichi Itsuno	1214
11:15	3M10	Study on Structure-property Relationship of Hyperbranched Polyimides for CO ₂ /CH ₄ Separation <u>Masako Miki</u> ,Yasuharu Yamada.....	1215
11:30	3M11	Synthesis and gas transport properties of triazine containing hyperbranched polyimide - silica hybrid membranes <u>Tomoyuki Suzuki</u> ,Yasuharu Yamada,Jun Sakai	1216
		M. Higuchi, Presiding	
12:30	3M12	Morphology-Retaining Carbonization for Helical Graphite using Helical Polyacetylene as a Precursor <u>Shinsuke Yamamoto</u> ,Satoshi Matsushita,Mutsumasa Kyotani,Kazuo Akagi	1217
12:45	3M13	Preparation of Photoreponsive Conjugated Polymer Nanospheres and Dynamic Control of Their Fluorescence <u>Kenji Kuwada</u> ,Tatsuaki Miyashita,Hiroyuki Hayasaka,Stephen Bell,Kazuo Akagi	1218
13:00	3M14	Synthesis and Properties of Polyfluorene Derivatives bearing Ferroelectric Liquid Crystalline Groups <u>Jin-woo Park</u> ,Kiyoshi Suda,Kazuo Akagi.....	1219
13:15	3M15	In-situ Observation inside Operating Fuel Cell by a Combined Method of Small-Angle Neutron Scattering and Neutron Radiograph <u>Satoshi Koizumi</u> ,Hiroki Iwase,Ananda Putra,Daisuke Yamaguchi.....	1220
		K. Tajima, Presiding	
13:30	3M16	Fabrication of Protic Ionic Liquid/Sulfonated Polyimide Composite Membranes as Electrolyte Membranes for Non-humidified Intermediate Temperature Fuel Cells. <u>Tomohiro Yasuda</u> ,Seung-yul Lee,Shin-ichiro Nakamura,Masayoshi Watanabe	1221
13:45	3M17	Proton conductivity and gas permeability of sulfonated graft copolyimide membranes <u>Kota Yamazaki</u> ,Hiroyoshi Kawakami	1222
14:00	3M18	Synthesis And Properties of Anion Exchange Membranes Containing Fluorene Groups <u>Manabu Tanaka</u> ,Masaki Koike,Kenji Miyatake,Masahiro Watanabe...	1223
14:15	3M19	General Approach for Bulk Synthesis of 1-D Functionalized PEDOT Nanostructures <u>Shyh-chyang Luo</u> ,Bo Zhu,Jun Sekine,Zhao Haichao,Hsiao-hua Yu...	1224
		K. Miyatake, Presiding	
14:30	3M20	Preparation of a polyfluorene film by ESDUS <u>Katsuhiko Fujita</u> ,Takeshi Noda,Kouji Sagane.....	1225
14:45	3M21	Synthesis of fullerene attached block copolymer and its application to	

polymer solar cell

15:00	3M22	<u>Shoji Miyanishi</u> , Yue Zhang, Keisuke Tajima, Kazuhito Hashimoto.....	1226
		Design and Synthesis of Low Band Gap Dyad Molecules and Their Application for Organic Photovoltaic Devices	
		<u>Seiichiro Izawa</u> , Keisuke Tajima, Kazuhito Hashimoto	1227

Room P

Poster Presentation Time

301+302											
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28 Fri.		17:40-18:20	h								
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Presentation Time

Mounting & Removing Time

Display Time

Wednesday, May 26

POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS

<a = 10:00~10:40>

<b = 10:40~11:20>

1Pa001	Synthesis of Soluble Polymers with High Fullerene[60] Contents <u>Yusuke Washino</u> , Tsuyoshi Michinobu, Kiyotaka Shigehara.....	422
1Pb002	Synthesis of polymer having spiropyran moieties in main-chain and its photoisomerization behavior <u>Yuki Tanaka</u> , Yoshiro Kaneko, Jun-ichi Kadokawa.....	423
1Pa003	Synthesis of poly(tetramethylsilarylenesiloxane) derivatives with cyclopentadithiophene moiety <u>Hitoshi Hanamura</u> , Nobukatsu Nemoto	424
1Pb004	Synthesis and characterization of block copolymer containing perylenediimide <u>Shota Ichikura</u> , Kousuke Tsuchiya, Kenji Ogino.....	425
1Pa005	Synthesis and Characterization of conjugated polymers with triphenylamine backbone <u>Kousuke Tsuchiya</u> , Kenji Ogino	426
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2Pd150	Effect of cell density on adipogenic differentiation of mesenchymal stem cell on micropatterned polymer grafted surface <u>Naoki Kawazoe</u> , Hongxu Lu, Likun Guo, Tetsuya Tateishi, Guoping Chen 1938
2Pc151	Development of Novel Three-Dimensional Scaffold Using Ion Implantation into Polymer <u>Shinya Morisaki</u> , Daisuke Mano, Atsushi Ogura, Toshiyuki Tanaka, Kyouichirou Mizutani, Yoshiaki Suzuki, Hitoshi Sakuragi 1939
2Pd152	Cell attachment on ePTFE modified by ion-beam <u>Shunsuke Hamago</u> , Hirofumi Yajima, Kyouichirou Mizutani, Toshiyuki Tanaka, Yoshiaki Suzuki, Hitoshi Sakuragi 1940
2Pc153	Modification of living cell surface via metabolic-induced polymerizable carbohydrates <u>Hiroshi Matsuno</u> , Yasuhiko Iwasaki 1941
2Pd154	An application to DDS of sugar chain-supported carbosilane dendrimer <u>Kentaro Otomo</u> , Hiroaki Aizawa, Masumi Villeneuve, Ken Hatano, Koji Matsuoka, Daiyo Terunuma 1942
2Pc155	Py-g-PEG stabilized core/shell nanorod for DDS <u>Toshihiko Kurosawa</u> , Koichi Kutsusawa, Hidenori Otsuka 1943
2Pd156	Design of biocompatible temperature-responsive vesicles using isobutyramide-terminated poly(amideamine) dendron-lipids and

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2Pc157	<u>Yuki Hiranaka</u> , Atsushi Harada, Kenji Kono Preparation of Poly(amidoamine) Dendron with Folate Installed PEGylated Liposome and Its Cellular Uptake. <u>Keita Mizoguchi</u> , Asami Saito, Katsumi Uchida, Kouji Tsuchiya, Hirofumi Yajima	1944 1945
2Pd158	Preparation and evaluation of cross-linked polymeric micelles with dynamic covalent bond <u>Masamichi Nishihara</u> , Keiichi Imato, Atsushi Irie, Hideyuki Otsuka, Atsushi Takahara	1946
2Pc159	Development of sheet-type material containing polymeric micelle formed from block polymer for controlled sustained release of proteins <u>Hitomi Moroishi</u> , Yoshihiko Murakami	1947
2Pd160	The correlation of the particle diffusion style and the ligand reaction of artificial red blood cell flowing in a narrow tube <u>Naoto Okuda</u> , Hiromi Sakai, Shinji Takeoka, Eishun Tsuchida.....	1948
2Pc161	Preparation of biotin-modified polymer and their application to novel drug delivery system <u>Yurie Kawano</u> , Kouichi Yoshimaru, Hiromori Tsutsumi, Kouichi Yoshimura, Hiroki Aoki, Syunichi Kuroda	1949
2Pd162	Design of PEGylated polyamine nanogel for the use of drug carrier in vivo. <u>Masato Tamura</u> , Satoshi Ichinohe, Atsushi Tamura, Yutaka Ikeda, Yukio Nagasaki	1950

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2Pe131	Development of funnel-like collagen sponges using an embossing ice particulate template for cartilage tissue engineering <u>Hongxu Lu</u> , Young-gwang Ko, Naoki Kawazoe, Tetsuya Tateishi, Guoping Chen 1958	1958
2Pf132	Fabrication of 3-D tissue model with micropatterned vascular endothelial cells by surface micro patterning <u>Megumi Muraoka</u> , Kazuyoshi Itoga, Sachiko Sekiya, Tatsuya Shimizu, Masayuki Yamato, Teruo Okano 1959	1959
2Pe133	Studies of shear stress-dependent cell detachment from temperature-responsive cell culture surfaces by using microfluidic devices <u>Zhonglan Tang</u> , Yoshikatsu Akiyama, Teruo Okano 1960	1960
2Pf134	Investigation of adhesivity between polymer and collagen by controlling the energy provision <u>Kosuke Kasahara</u> , Kwangwoo Nam, Tsuyoshi Kimura, Shigeru Shimizu, Akio Kishida 1961	1961
2Pe135	Characterization of PEGylated polyamidoamine dendrons as the reaction field of metal nanoparticles <u>Atsushi Harada</u> , Akihiko Yuzawa, Kenji Kono 1962	1962
2Pf136	Preparation of metal nanoparticles at the glass surface immobilizing polymer-modified polyamidoamine dendrons <u>Kanako Ochi</u> , Akihiko Yuzawa, Atsushi Harada, Kenji Kono 1963	1963
2Pe137	Preperation of regenerated sericin fiber by means of wet spinning <u>Keiichi Kasuga</u> , Takahiro Shinbo, Akira Teramoto, Koji Abe 1964	1964
2Pf138	Application of Saccharides-coated Carbon Microcoils (CMCs) to Bioactivators – Effect of Saccharides-coated CMCs as Symbiotic Activators <u>Hisae Okamoto</u> , Seiji Motojima 1965	1965

2Pe139	Design of polymer-based gene carriers showing efficient transfection with minimal cytotoxicity <u>Kanjiro Miyata</u> , Makoto Oba, Takehiko Ishii, Shigeto Fukushima, Takahiro Nomoto, Nobuhiro Nishiyama, Kazunori Kataoka 1966
2Pf140	Towards application of cationic polyaspartamide derivatives to siRNA delivery <u>Tomoya Suma</u> , Kanjiro Miyata, Takehiko Ishii, Nobuhiro Nishiyama, Yuichi Yamasaki, Kazunori Kataoka 1967
2Pe141	Evaluation of pDNA/fragmin/chitosan complexes as a non-viral gene delivery vector <u>Anastasia Riany</u> , Toshinori Sato 1968
2Pf142	Preparation and aggregation behavior of Gemini type pH-response peptide lipid containing Histidine <u>Akihiro Banno</u> , Takaaki Tanaka, Hideki Sugimoto, Katsuhiko Inomata, Eiji Nakanishi 1969
2Pe143	Functional cycloamylose for intracellular antibody delivery <u>Aya Nakajima</u> , Sayaka Toita, Nobuyuki Morimoto, Kazunari Akiyoshi 1970
2Pf144	Design of novel acid-labile nanogels <u>Sayaka Hirano</u> , Nobuyuki Morimoto, Shigeru Shimizu, David H. Thompson, Kazunari Akiyoshi 1971
2Pf146	Synthesis of biodegradable and elastic materials with enhanced durability for clinical applications <u>Jik Han Jung</u> , Min Ji Kim, Jeongho An, Dong June Chung 1972
2Pe147	Production of silk-like proteins by transgenic silkworm and application to biomaterials <u>Hiroyuki Hayashi</u> , Makoto Isozaki, Ken-ichiro Tatematsu, Keiro Uchino, Hideki Sezutsu, Yasushi Tamada, Hisatoshi Kobayashi, Tetsuo Asakura 1973
2Pf148	Functionalization of injectable hydrogel using 8-arm PEG-b-PLA-cholesterol conjugate for tissue engineering <u>Hiroyuki Suzuki</u> , Kanae Fujiura, Koji Nagahama, Yuichi Ohya 1974
2Pe149	Development of heparin controlled-releasing non-woven mats by coaxial electrospinning <u>Takuro Kimura</u> , Takeyuki Kitagawa, Hiroshi Uyama, Yasuhiko Tabata 1975
2Pf150	Fabrication of drug including poly L-lactide ultra-fine fiber by laser electrospinning and drug elution from the fibers <u>Yuka Yamaguchi</u> , Yoshitami Ohwa, Satoshi Tachihara, Midori Takasaki, Kengo Morie, Yutaka Ohkoshi, Toshihiro Hirai, Akira Mochizuki, Toshifumi Shiroya, Shuzo Yamashita 1976
2Pe151	Influence of hydration state on adsorption force of proteins at phospholipid polymer brush surface <u>Yuuki Inoue</u> , Takehiko Tsukahara, Kazuhiko Ishihara 1977
2Pf152	Study on Water Structure and Blood Compatibility of Copolymers based on 2-hydroxyethyl methacrylate(HEMA) <u>Kazumasa Takekoshi</u> , Takahiro Namiki, Akira Mochizuki 1978
2Pe153	Fluoride anion-sensing behavior of curcumin-borane complex in the presence of water <u>Noriyoshi Matsumi</u> , Mari Miyamoto, Keigo Aoi 1979
2Pf154	Preparation of thermoresponsive soft interfaces on capillary inner surfaces and their interaction with biomolecules <u>Akihiko Kikuchi</u> , Hiromasa Moriyama, Satoshi Kawahara, Taka-aki Asoh 1980
2Pe155	Preparation of thermoresponsive immobilized metal ion affinity interfaces having iminodiacetic acid side groups. <u>Masayuki Seo</u> , Satoshi Kawahara, Taka-aki Asoh, Akihiko Kikuchi 1981

2Pf156	Functional interface based on polyelectrolyte multilayers for a novel permeative biosensor <u>Heyun Shen</u> , Junji Watanabe, Takami Akagi, Mitsuru Akashi 1982
2Pe157	Synthesis and surface characterization of biodegradable polymers with high ordered structure. <u>Mari Miura</u> , Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa 1983
2Pf158	NMR analysis of Novel Silk-like Proteins with Cell Adhesion Activity for Bone Tissue Engineering <u>Ai Yoshida</u> , <u>Yu Suzuki</u> , Ryo Koyanagi, Masakatsu Kamiya, Makoto Demura, Tetsuo Asakura 1984
2Pe159	Structural Analysis of Model Peptides for Local Structure of Spider Dragline Silk using Solid-State NMR <u>Yuya Satoh</u> , Makiko Ikenaga, Syunsuke Kametani, Tetsuo Asakura 1985
2Pf160	Hydration state at the phospholipid polymer-brush surface <u>Kazuomi Inoue</u> , Yuuki Inoue, Takehiko Tsukahara, Kazuhiko Ishihara 1986
2Pe161	Interaction of polysaccharide nanogels with proteins by fluorescence correlation spectroscopy <u>Daisuke Iida</u> , Haruko Takahashi, Sigeru Shimizu, Kazunari Akiyoshi..... 1987

Friday, May 28

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3Pc159	Gene Mutation Assay by Affinity Capillary Zone Electrophoresis using DNA-PEG Block Copolymers <u>Takashi Watanabe</u> , Yukiharu Matsuoka, Tohru Takarada, Mizuo Maeda..... 2025
3Pd160	Interaction between DNA and photoresponsive poly(vinyl alcohol) carrying a Malachite Green derivative <u>Ryoko Uda</u> 2026
3Pc161	DNA analysis of Japanese lacquer plants <u>Rina Su</u> , Mami Touji, Takashi Yoshida 2027