

The 10th International Polymer Conference (IPC 2014)
GENERAL SCHEDULE

		day & date	Tuesday Dec.2	Wednesday December 3			Thursday December 4			Friday December 5			
		Rooms	afternoon	morning	lunch time	afternoon	morning	lunch time	afternoon	morning	lunch time	afternoon	
Regist- ration			13:00 Registration										
				8:30	Registration						12:00		
Session Hours				9:00-12:20	13:00-14:00	14:00-18:00	9:00-12:20	13:00-14:00	14:00-17:40	9:00-12:20	13:00-14:00	14:00-17:40	
Program	Keynote	Main Convention Hall	15:00 Keynote Lecture										
	Oral	Room A		S-1	—	S-1	S-7	—	S-7	S-1	—	S-1	
		Room B		S-2	—	S-2	S-5	—	S-5	S-2	—	S-2	
		Room C		S-3	—	S-3	S-3	—	S-3	S-3	S-7	—	S-7
		Room D		S-4	—	S-4	S-4	—	S-4	S-4	—	—	
		Room E		S-6	—	S-6	S-6	—	S-6	S-5	—	S-5	
	Poster			Mounting the Poster	Poster Session	Poster Display	Mounting the Poster	Poster Session	Poster Display	Mounting the Poster	Poster Session	Poster Display	
Room P			S5, S7, G4, G6			S1, S2, G1, G2, G3			S3, S4, S6, G5				
Social Events			18:30 Welcome Reception							18:30 Banquet			18:00 Farewell Party

The 10th SPSJ International Polymer Conference (IPC 2014)

Tentative Scientific Program

Keynote Lecture: Main Convention Hall Oral Presentation: Room A-E Poster Presentation: Room P

Main Convention Hall

Tuesday, December 2

Keynote Lecture

N. Kimizuka, presiding

2M01PL	Photon Science & Technology and Polymers	
15:00	<u>Hiroshi Masuhara</u> (Japan)	1
	<i>M. Akashi, presiding</i>	
2M02PL	Creativity and Innovation in Corporate Management	
16:00	<u>Takashi Yamagishi</u> (Japan)	3
	<i>Y. Chujo, presiding</i>	
2M03PL	New Frontiers Opened by the K Computer	
17:00	<u>Kimihiko Hirao</u> (Japan)	5

Room A

Wednesday, December 3

S-1 Progress in Synthetic Polymer Chemistry

S. Aoshima, presiding

3A01IL	Recent Progress of Synthetic Method for Condensation Polymers	
9:00	<u>Mitsuru Ueda</u> (Japan)	7
3A03	Efficient Polymer reaction via the Formation of Pseudopolyrotaxane Intermediate Using Macrocyclic Catalyst	
9:40	<u>Hiromitsu Sogawa</u> , Masaki Nagashima, Hikaru Iwasaki, Masahiro Ogawa, Yasuhito Koyama and Toshikazu Takata (Japan)	8
3A04	Synthesis of Polybenzoxazole via Polyalkoxyamide Precursor and their Film Fabrication	
10:00	<u>Tsuyohiko FUJIGAYA</u> , Yusuke SAEGUSA, Takahiro Fukumaru and Naotoshi Nakashima (Japan)	9
	<i>M. Ueda, presiding</i>	
3A05	<i>withdrawn</i>	
10:20		
3A06IL	AIE Macromolecules: Syntheses, Structures and Functionalities	
10:40	<u>Ben Zhong Tang</u> (China)	11
	<i>T. Takata, presiding</i>	
3A08	Synthesis of π -Conjugated Polymers Containing Heteroatoms Possessing Group 15 Elements in the Main Chain by Reactions of Organotitanium Polymers	
11:20	<u>Yoshimasa Matsumura</u> , Hiroki Nishiyama, Shinsuke Inagi and Ikuyoshi Tomita (Japan)	12
3A09	Synthesis of Functional π -Extended Conjugated Polymers by Reaction of Poly(<i>p</i> -phenylene-vinylene) Derivatives	
11:40	<u>Sho Wakana</u> , Hiroki Nishiyama, Shinsuke Inagi and Ikuyoshi Tomita (Japan)	13
3A10	An Azine-linked Covalent Organic Framework: A New Crystalline Material Platform for Explosive Sensing	
12:00	<u>Sasanka Dalapati</u> and Donglin Jiang (Japan)	14
	<i>M. Hillmyer, presiding</i>	
3A11IL	Clicking Polymers Together: Assembly of Complex, Controlled Polymer Structures from Efficient Chemistries	
14:00	<u>Christopher N. Bowman</u> , Tao Gong, Austin Baranek, Abeer Alzahrani, HanByul Song and Brian Adzima (U.S.A.)	15
3A13	Mechanism of preulcanization of isoprene rubber latex	
14:40	<u>Kewwarin Sae-heng</u> and Seiichi Kawahara (Japan)	16
	<i>C. N. Bowman, presiding</i>	
3A14IL	Sequence and Stereo Specific Polymers by ROMP	
15:00	<u>Marc A. Hillmyer</u> (U.S.A.)	17
3A16	Controlled/Living Polymerization of Methyl Methacrylate Using New Sterically Hindered Imidazoline Nitroxides: block- and block-like copolymers	
15:40	<u>Mariya Edeleva</u> , Dmitriy Parkhomenko, Beket Kanagatov, Denis Morozov, Igor Kirilyuk and Elena Bagryanskaya (Russia)	18
	<i>M. Kamigaito, presiding</i>	

3A17	Photo-driven Controlled Radical Polymerization in Photocuring: Unique Nano-structured Polymer Network Formation	
16:00	<u>Takeo Suga</u> , Kenta Minamibayashi and Hiroyuki Nishide (Japan)	19
3A18	Self-Folding Polymers via Living Radical Polymerization for Unique Compartments and Functions	
16:20	<u>Takaya Terashima</u> and Mitsuo Sawamoto (Japan)	20
3A19	Improving Thermostability and Solid State NMR Analysis of Thermoset Resin Cured by Radical Polymerization	
16:40	<u>Yuri Kajihara</u> and Takahito Muraki (Japan)	21
3A20	Copolymerization of N-tert-butylacrylamide (NTB) and 2-methyl-N-1, 3-thiazole-2-acrylamide (TMA): Synthesis, characterization and antimicrobial activity	
17:00	<u>Jeyanthi Ponnusamy</u> (India)	22
	<i>H. Otuka, presiding</i>	
3A21IL	Strategies to Enhance Cyclopolymerization using Third-Generation Grubbs Catalyst	
17:20	<u>Tae-Lim Choi</u> (Korea)	23

Thursday, December 4

S-7 Advances in Polymer and Hybrid Material Technology

S. Qiu, presiding

4A03IL	Polymer Ionic Liquids: From Green Polymer Chemistry to Stabilizers to Actuators	
9:40	<u>Markus Antonietti</u> and Jiayin Yuan (Germany)	24
	<i>Y. Sugahara, presiding</i>	
4A05IL	Porous Polymers: Targeted Design and Applications	
10:20	<u>Shilun Qiu</u> (China)	25
4A07	Synthesis and gas adsorption properties of highly porous polymers with spirobifluorene unit	
11:00	<u>Arindam Modak</u> , Yasutomo Goto, Yoshifumi Maegawa and Shinji Inagaki (Japan)	26
	<i>M. Antonietti, presiding</i>	
4A08	Design of Innovative Gas Separation Membranes through Thermally Cross-Linked Polymer of Intrinsic Microporosity	
11:20	<u>Behnam Ghalei</u> , Kento Sakurai, Qilei Song and Easan Sivaniah (Japan)	27
4A09	Adsorption of acid red from dye wastewater by Zn ₂ Al-NO ₃ LDHs and the resource of adsorbent sludge as nanofiller for polypropylene	
11:40	<u>Zhang Zhang</u> , Tian S Xue, Ruo Y Yang, Yan S Gao, Jun Y Wang, Liang Huang and Qiang Wang (China)	28
4A10	Epoxy-Based Hybrids Using Layered Perovskite Nanosheets Bearing Surface Fluoroalkoxy Groups	
12:00	<u>Yoshiyuki Sugahara</u> , Yuta Asai, Yusuke Ariake, Naokazu Idota, Kimihiro Matsukawa and Takashi Nishino (Japan)	29
	<i>S. Ando, presiding</i>	
4A11IL	Solution-Processable Triarylamine-Containing High-Performance Polymers for Optoelectronic Applications	
14:00	H. J. Yen, J. H. Wu and <u>Guey-Sheng Liou</u> (Taiwan)	30
	<i>Y. Chujo, presiding</i>	
4A13IL	Control of Structure and Morphology of Mesoporous Films for Optical Applications	
14:40	<u>Hirokatsu Miyata</u> (Japan)	31
	<i>G. -S. Liou, presiding</i>	
4A15IL	New Polymeric Materials Based on Element-Blocks	
15:20	<u>Yoshiki Chujo</u> (Japan)	32
	<i>H. Miyata, presiding</i>	
4A17	Novel Preparation of Transparent Zirconium oxide (ZrO ₂)/Epoxy Nano-hybrid Materials	
16:00	<u>Kazushi Enomoto</u> , Moriya Kikuchi, Atsushi Narumi and Seigou Kawaguchi (Japan)	33
4A18	Processing of Thermoplastic Polyurethane Nanocomposite via Reactive Extrusion	
16:20	<u>Khairatun Najwa Mohd Amin</u> , Pratheep K. Annamalai and Darren J. Martin (Australia)	34
	<i>M. Itoh, presiding</i>	
4A19	Synthesis and Application of Organic-Metallic Hybrid	

16:40	Polymers. Anasuya Bandyopadhyay and <u>Deepa Oberoi</u> (India)	35
4A20	Core/shell Typed Polymer Coated Magnetic Particle Composites and Their Magnetorheological Response <u>Hyoun-Jin Choi</u> and Seung-Hyuk Kwon (Korea)	36
4A21	Swelling Behavior of Poly (N-cyclohexylacrylamide - co - Acrylamide / 2-acrylamido-2-methylpropanesulfonic acid sodium salt) Gold Nanocomposite Hydrogels <u>Pazhanisamy periasamy</u> (India)	37

Friday, December 5

S-1 Progress in Synthetic Polymer Chemistry

	<i>E. Ihara, presiding</i>	
5A02IL	Controlled Macromolecular Architectures via Metal-mediated Ring-Opening Polymerization of 4-, 5- and 6-Membered Cyclic Esters <u>Jean-Francois Carpentier</u> , S. M. Guillaume, E. Kirillov and Y. Sarazin (France)	38
	<i>T. Kitayama, presiding</i>	
5A04	Reexamination of Reactivity of N-Carboxy Amino Acid Anhydrides 57. Consideration of the real reaction mechanism and a discovery of new type topochemical polymerization <u>Hitoshi Kanazawa</u> , Aya Inada and Yuki Kanazawa (Japan)	39
5A05	Highly Ionic Conducting Polyethers with Quaternary Ammonium Moieties: Synthesis, Characterization, and Potential Applications <u>The Ban Hoang</u> , Keisuke Ota, Shigetaka Hayano, Yasuo Tsunogae and Kei Sakamoto (Japan)	40
5A06	Ever-Evolving Star Polymer Synthesis by Living Cationic Polymerization <u>Shokyoku Kanaoka</u> , Arihiro Kanazawa and Sadahito Aoshima (Japan)	41
	<i>S. Kanaoka, presiding</i>	
5A07IL	Anionic polymerization of fluorine-containing monomers Takehiro Kitaura, Yuta Ishikawa and <u>Tatsuki Kitayama</u> (Japan)	42
5A09	α -(Chloromethyl)acrylate: Effective terminating agent for stereospecific anionic polymerization of methacrylates toward end-functionalization and analysis of polymerization reaction <u>Yasuhiro Kohsaka</u> , Takashi Kurata, Kazuki Yamamoto, Ishihara Shoya and Tatsuki Kitayama (Japan)	43
5A10	Sulfobetaine (Co)polymers with Tuneable Aqueous UCST through Postpolymerization Modification of Poly(pentafluorophenyl acrylate) <u>Yicheng Zhu</u> , Peter Woodfield, Andrew B Lowe and Peter J Roth (Australia)	44
	<i>K. Nozaki, presiding</i>	
5A11IL	Polymer Reactions Based on Dynamic Covalent Chemistry <u>Hideyuki Otsuka</u> (Japan)	45
5A13	Precise synthesis of polyolefin containing reactive functionality in ethylene copolymerization by half-titanocene catalysts <u>Wannida Apisuk</u> and Kotohiro Nomura (Japan)	46
5A14	Rare-Earth-Catalyzed Syndiotactic Polymerization of Styrene with Anisoles and Pyridines as Chain Transfer Agents Atsushi Yamamoto, <u>Masayoshi Nishiura</u> and Zhaomin Hou (Japan)	47
	<i>M. Nishiura, presiding</i>	
5A15	Model Discrimination and Parameter Estimation for Olefin Copolymers Multiple-Site Catalysts <u>Mohammad A. Al-Saleh</u> and Abdirahman A. Yussuf (Kuwait)	48
5A16	Formal Aryne (Co)Polymerization to Form o-Arylene Polymers <u>Shingo Ito</u> , Keisuke Takahashi, Wenhan Wang and Kyoko Nozaki (Japan)	49
5A17	Simultaneous Formation of Redox-responsive Polymer Nanostructures by Living Coordination Polymerization of Allene Derivatives <u>Hiroshi Eguchi</u> , Hiroki Nishiyama, Shinsuke Inagi and Ikuyoshi Tomita (Japan)	50

5A18	Synthesis of well-defined functional polymer particles by living dispersion copolymerization of allene derivatives and comonomers having various functional groups <u>Akira Yamauchi</u> , Takahiro Omura, Yoshiyuki Oguchi, Hiroshi Yamauchi, Hiroki Nishiyama, Shinsuke Inagi and Ikuyoshi Tomita (Japan)	51
------	--	----

Room B

Wednesday, December 3

S-2 Progress in Polymer Physics

	<i>K. Terao, presiding</i>	
3B01IL	Healing Property of Thermoplastic Elastomers after Mechanical Deformation using a Synchrotron X-ray Small-angle Scattering Technique <u>Ken Kojio</u> (Japan)	52
3B03	Syndiotactic polystyrene co-crystalline films with inorganic and organometallic substances using heterocyclic compounds as precursors <u>Takumi Sano</u> , Mochizuki Jun and Itagaki Hideyuki (Japan)	53
	<i>K. Kojio, presiding</i>	
3B04	Preparation and Properties of <i>l</i> -PLLA/hyper-branched P(DLA-co-CL)Stereocomplexes <u>SUTHAWAN BUCHATIP</u> , ATTITSA PETCHSUK and PAKORN OPAPRAKASIT (Thailand)	54
3B05	A New Method for Increasing the Mechanical Stress of Multi-filaments <u>Shigeyoshi Osaki</u> (Japan)	55
3B06	Complex formation consisting of triple helical peptides and polyelectrolytes <u>Ken Terao</u> , Ryoko Kanenaga, Tasuku Yoshida, Yusuke Kita, Takahiro Sato, Kazunori Mizuno and Hans Peter Bachinger (Japan)	56
3B07	Hierarchical Self-Association in Amphiphilic Polymer Solutions <u>Takahiro Sato</u> , Rintaro Takahashi and Francoise Winnik (Japan)	57
	<i>H. Yokoyama, presiding</i>	
3B08IL	Examining the Role of Crystalline Structure in Electronic and Thermal Transport: Controlled Crystallization Behavior of Poly(3-(2'-ethyl)hexylthiophene)ethyl(P3EHT) <u>Rachel A. Segalman</u> , Victor Ho, Bryan Boudouris, Bryan Beckingham and Emily Davidson (U.S.A.)	58
3B10	Carrier Formation and Molecular Motion of Poly(3-hexylthiophene) in Films <u>Yudai Ogata</u> , Daisuke Kawaguchi and Keiji Tanaka (Japan)	59
	<i>K. Nakajima, presiding</i>	
3B11IL	Shifting Networks to Achieve Subgroup Symmetry Properties - A Story about Biomimicking Butterfly Wing Structure <u>Rong-Ming Ho</u> , Han-Yu Hsueh, Yi-Chun Ling, Hsiao-Fang Wang, Lung-Yu Chang Chien, Yu-Chueh Hung and Edwin L. Thomas (Taiwan)	60
3B13	Block Copolymer Photonic Films Swollen with a Nonvolatile Ionic Liquid <u>Atsushi Noro</u> , Yusuke Tomita, Yuya Shinohara, Yoshio Sageshima, Joseph Walsh, Yushu Matsushita and Edwin Thomas (Japan)	61
3B14	Actuation of Cholesteric Liquid Crystal Elastomers and Gels <u>Kenji Urayama</u> , Hama Nagai, Fuchigami Yuuta, Daisuke Itakura and Toshikazu Takigawa (Japan)	62
	<i>K. Urayama, presiding</i>	
3B15IL	Non-volatile Reversible Magnetic Memory, Actuation and Transduction from Liquid crystalline Elastomer Nanocomposites <u>Raffaele Mezzenga</u> (Switzerland)	63
3B17	Viscoelastic properties of ring polystyrenes with multi-legs <u>Yuya Doi</u> , Atsushi Takano, Yoshiaki Takahashi and Yushu Matsushita (Japan)	64
3B18	Melt Rheology and Mechanical Properties of Bagasse ash-reinforced RHDPE composites <u>Watcharin Sitticharoen</u> , Adirake Chainawakul, Teerawat	

	Sangkas and Yuwadee kuntham (Thailand)	65
	<i>A. Noro, presiding</i>	
3B19IL	Rheology and phase transition of polymer blends and	
16:40	copolymers	
	Yafang Xu, Peng He and <u>Wei Yu</u> (China)	66
3B21	Molecular Simulations of Anti-Stain Polymeric Coatings	
17:20	<u>Gaurav Manik</u> and Yash Singhvi (India)	67

Thursday, December 4

S-5 Frontiers in Green Materials and Technology

	<i>N. Yoshie, presiding</i>	
4B01IL	Production of Unusual Microbial Polyesters	
9:00	<u>Ken'ichiro Matsumoto</u> , Masahiro Miyake, Satsuki Terai, Taizo Kabe, Tetsufumi Shiba, Toshihiko Ooi, Tadahisa Iwata and Seiichi Taguchi (Japan)	68
4B03IL	Bio inspired green micro and nanocomposites for the future	
9:40	<u>Sabu Thomas</u> (India)	69
	<i>S. Thomas, presiding</i>	
4B05IL	Biopolymer-based Copolymers and Their Self-Assembly Structures for Biomaterials Applications	
10:20	Jing-ling Zhu and <u>Jun Li</u> (Singapore)	70
4B07	Influence of Blend Ratios and Compatibilizer on Mechanical Properties of Poly(lactic acid)/Polybutylene succinate Blended Fibers	
11:00	<u>Natthaphop Suwannamek</u> , Chureerat Praharn, Wattana Klinsukhon and Sirada Padee (Thailand)	71
	<i>J. Li, presiding</i>	
4B08	The effects of plasma modification of polylactide and polycaprolactone.	
11:20	<u>Krzysztof Moraczewski</u> , Rafał Malinowski, Piotr Rytlewski and Marian Żenkiewicz (Poland)	72
4B09	Effect of Clay Incorporation into PLA and PBAT-based Blends on Relevant Packaging Properties	
11:40	<u>Sutinee Girdthep</u> , Patmarin Worajittiphon, Winita Punyodom, Thanawadee Leejarkpai and Robert Molloy (Thailand) ..	73
4B10	Heat resistance epoxy resin from woody lignin obtained by steam explosion	
12:00	<u>Hiroyuki Kagawa</u> , Yoshiaki Okabe, Chizuru Sasaki and Yoshitoshi Nakamura (Japan)	74
	<i>K. Hironaka, presiding</i>	
4B11IL	Green Polymer Chemistry and Biocatalysis: New-to-the-World Polymers from Yeast Derived Glycolipid and ω -Hydroxyfatty acid Monomers	
14:00	<u>Richard A. Gross</u> (U.S.A.)	75
4B13IL	Recent Developments and Challenges of Bioplastic Industry in Korea	
14:40	<u>In-Joo Chin</u> (Korea)	76
	<i>R. A. Gross, presiding</i>	
4B15IL	Efficient synthesis and new recovery techniques of polyhydroxyalkanoates from bacterial cells	
15:20	<u>Kumar Sudesh</u> (Malaysia)	77
4B17	Molecular, Crystal, and Higher-Order Structures of Medium-Chain-Length Poly[(R)-3-hydroxyalkanoate]s	
16:00	<u>Hironori MARUBAYASHI</u> , Shiori KATSUMATA, Ayaka HIROE, Takeharu TSUGE, Takaaki HIKIMA, Masaki TAKATA and Tadahisa IWATA (Japan)	78
	<i>I. -J. Chin, presiding</i>	
4B18	Evaluation of various crude enzymes from agricultural waste for recovery and purification of polyhydroxyalkanoate	
16:20	<u>Kanokphorn Sangkharak</u> , Piyaporn Wangsirikul, Tewan Yunu, Nisa Pichid and Poonsuk Prasertsan (Thailand)	79
4B19	Thermal Properties of Human Hair Keratin Finished onto Cotton Fabric	
16:40	<u>Jitsopa Chaliewsak</u> , Sireerat Charuchinda and Manchumas Prousoontorn (Thailand)	80
4B20	Novel Silk Materials from Hornet Vespa Cocoons: Fabrications, Characterizations and Functionalizations	
17:00	<u>Tsunenori Kameda</u> (Japan)	81

Friday, December 5

S-2 Progress in Polymer Physics

	<i>Y. Higaki, presiding</i>	
5B03	Phase behaviors of semi-fluorinated block	

9:40	copolymers/carbon dioxide systems with different non-fluorous blocks	
	<u>Tomoaki Shinkai</u> , Hideaki Yokoyama, Kohzo Ito, Yasuhiro Sakai and Kenji Sugiyama (Japan)	82
5B04	Viscoelasticity of inhomogeneous polymers characterized by loss tangent measurements in atomic force microscopy	
10:00	<u>Hung K Nguyen</u> , Makiko Ito and Ken Nakajima (Japan) ..	83
5B05IL	Spontaneous nanodomain formation on polymer surfaces: hydrolysis / condensation cure inorganic network (HyCoin) formation for antimicrobial effectiveness and cytocompatibility	
10:20	Xiaomei Zeng, Jiangmin Chen, Chenyu Wang, Lynn F. Wood, Dennis E. Ohman and <u>Kenneth J. Wynne</u> (U.S.A.) ..	84
	<i>T. Koga, presiding</i>	
5B07	Pore Surface Engineering of Covalent Organic Frameworks and Impact on Carbon Dioxide Adsorption	
11:00	<u>Ning Huang</u> and Donglin Jiang (Japan)	85
5B08	Direct Observation of the End-to-End Distance of Chains in a Polymer Langmuir Monolayer	
11:20	Fumiki Honma and <u>Jiro Kumaki</u> (Japan)	86
5B09IL	Use of Silicone-Containing Reagents to Control Structure and Properties of Inorganic Surfaces. Some overly complicated systems and some Very Simple Systems	
11:40	<u>Thomas J. McCarthy</u> , L. Wang, J. W. Krumpfer and A. Y. Fadeev (U.S.A.)	87
	<i>D. Kawaguchi, presiding</i>	
5B11IL	Structure Formation and Rheology of Associating Polymers	
14:00	<u>Tsuyoshi Koga</u> (Japan)	88
5B13	Rheological Behavior of Hydrogen Bonding Polymers	
14:40	<u>Osamu Urakawa</u> , Yoshiyuki Ogihara, Osamu Yamane and Tadashi Inoue (Japan)	89
	<i>O. Urakawa, presiding</i>	
5B14	The analysis of DNA dynamics near nanopore by the ultraviolet light spot	
15:00	<u>Hirohito Yamazaki</u> , Mutsumi Tsukahara, Shintaro Ito, Keiko Esashika and Toshiharu Saiki (Japan)	90
5B15	Preparation of functional soft interfaces based on bio-inspired surface modification	
15:20	<u>Wei Ma</u> and Atsushi Takahara (Japan)	91
5B16IL	Preparation and Properties of Natural Rubber with Filler-nanomatrix Structure	
15:40	<u>Seiichi Kawahara</u> and Yoshimasa Yamamoto (Japan)	92
	<i>S. Kawahara, presiding</i>	
5B18	Spatial Heterogeneity in Repeated Cycle of Sol-gel Transition of Molecular Assembled Systems	
16:20	<u>Yuji Matsumoto</u> , Atsuomi Shundo, Keigo Matsumoto, Masashi Ohno, Katsuaki Miyaji, Nobutomo Tsuruzoe, Masahiro Goto and Keiji Tanaka (Japan)	93
5B19	Chain Dimension at Water Interface and Wetting Behavior of Poly(sulfobetain) Brushes	
16:40	<u>Yuji Higaki</u> , Ai Takenaka, Rika Yoshimatsu, Motoyasu Kobayashi and Atsushi Takahara (Japan)	94
5B20	Design of Poly(vinyl ether)s for Control of their Interfacial Structures and Blood-Compatibility	
17:00	<u>Yukari Oda</u> , Cui Zhang, Hisao Matsuno, Norifumi L. Yamada, Shokyoku Kanaoka, Sadahito Aoshima and Keiji Tanaka (Japan)	95
5B21	Aggregation States and Dynamics of Bio-inert Polymer at Water Interface	
17:20	<u>Hisao Matsuno</u> , Toyooki Hirata, Daisuke Kawaguchi, Tomoyasu Hirai, Norifumi L Yamada, Masaru Tanaka and Keiji Tanaka (Japan)	96

Room C

Wednesday, December 3

S-3 Frontiers in Complex Macromolecular Systems

	<i>N. Kimizuka, presiding</i>	
3C01IL	Macroscopic self-assembly and self-healing through molecular recognition	
9:00	<u>Akira Harada</u> (Japan)	97
3C03IL	Nanostructured Polymer Materials by Covalent Self-assembly	
9:40	<u>Kimoon Kim</u> (Korea)	98

	<i>A. Harada, presiding</i>	
3C05	When gamma-Cyclodextrins Meet with Polymer Chains	
10:20	<u>Zeng-guo Feng</u> (China) 99	
3C06	Chiral Recognition by Cyclodextrin Derivatives in Nonpolar Solvents and Its Application	
10:40	<u>Toshiyuki Kida</u> , Takuya Iwamoto, Haruyasu Asahara, Tomoaki Hinoue and Mitsuru Akashi (Japan) 100	
3C07	Mechanically Linked Block/Graft Copolymers Derived from Functionalized Macromolecular [2]Rotaxanes	
11:00	<u>Daisuke Aoki</u> , Satoshi Uchida and Toshikazu Takata (Japan) 101	
	<i>K. Kim, presiding</i>	
3C08	Synthesis of macromolecular [2]rotaxanes and their properties dependent on the component mobility	
11:20	<u>Zhen Chen</u> , Daisuke Aoki, Satoshi Uchida and Toshikazu Takata (Japan) 102	
3C09	Controlled mechanical properties of slide-ring gels by molecular designs of precursor polyrotaxanes	
11:40	<u>Kazuaki Kato</u> , Nanako Nakamura, Yuya Okazumi, Yoshinori Okabe, Tomoki Mizusawa and Kohzo Ito (Japan) 103	
3C10	Supramolecular Formations Based on Difunctionalized Pillar[5]arenes	
12:00	<u>Tomohiro Akutsu</u> , Tomoki Ogoshi and Tada-aki Yamagishi (Japan) 104	
	<i>T. Uemura, presiding</i>	
3C11IL	Structurally Precise Organic Materials	
14:00	<u>William R. Dichtel</u> , Brian J. Smith, Gippum Hwang, Anton D. Chavez and Ryan P. Bisbey (U.S.A.) 105	
3C13IL	Conjugated polymers sheathed within their own cyclic sidechains	
14:40	<u>Kazunori Sugiyasu</u> (Japan) 106	
	<i>W. R. Dichtel, presiding</i>	
3C15	Complex Architectures Composed of Disc-shaped Macromolecules	
15:20	<u>Takashi Kajitani</u> , Kyuri Motokawa, Masaki Takata and Takanori Fukushima (Japan) 107	
3C16	Supramolecular Thiophene Nanosheets: Self-Assembly through Polymer Folding	
15:40	<u>Taichi Ikeda</u> (Japan) 108	
3C17	Influence of multibranching polymer architectures on their bulk properties	
16:00	<u>Yasuhisa Tsukahara</u> , Thanh (Hai) Nguyen, Katsuya Mukai, Hideki Nishimura and Kaoru Adachi (Japan) 109	
	<i>Y. Tsukahara, presiding</i>	
3C18	Synthesis of polymeric nano-objects using polymerization-induced self-assembly in CO ₂ -expanded media	
16:20	<u>Siming Dong</u> , Wei Zhao, Frank (P.) Lucien, Sebastien Perrier and Per (B.) Zetterlund (Australia) 110	
3C19	Research on depletion-effect-driven formation of micro-segregated smectic phase	
16:40	<u>Takuya Tanaka</u> , Shigeki Shinohara, Itsuki Kato and Kento Okoshi (Japan) 111	
3C20	Analysis of aggregate structures and functionality of acrylic acid oligomers	
17:00	<u>Shirun Ho</u> (Japan) 112	

Thursday, December 4

S-3 Frontiers in Complex Macromolecular Systems

	<i>K. Sada, presiding</i>	
4C01IL	Supramolecular Assembly Based on Facile and Versatile Macrocyclic Pillararenes	
9:00	<u>Tomoki Ogoshi</u> (Japan) 113	
4C03IL	Systems Chemistry: Emergence of Self-Synthesizing Materials from Molecular Networks	
9:40	Asish Pal, Jianwei Li, Morteza Malakoutikhah, Jan Sadownik and <u>Sjibren Otto</u> (Netherlands) 114	
	<i>S. Otto, presiding</i>	
4C05	Synthesis of Pendant Imidazolyl Group-containing Amphiphilic Block Copolymers by RAFT Polymerization Using Novel CTA and Their Micelle Formation	
10:20	<u>Yoshih Ishida</u> , Takayo Sekiguchi, Takuya Sato, Mitsuru Ueda and Atsushi Kameyama (Japan) 115	
4C06	Polyion complex aggregates with thermo-responsive	

10:40	incompatible binary shells	
	Shin-ichi Yusa, <u>Atsushi Nagae</u> , Keita Nakai, Ryusuke Enomoto, Kazuhiko Ishihara and Yasuhiko Iwasaki (Japan) 116	
4C07	Functional Amphiphilic Multi-Block Oligomers	
11:00	<u>Takahiro Muraoka</u> and Kazushi Kinbara (Japan) 117	
	<i>K. Kinbara, presiding</i>	
4C08	Construction and Functionalization of Self-assembled Structures Composed of Filamentous Viruses	
11:20	<u>Toshiki Sawada</u> , Junko Morikawa and Takeshi Serizawa (Japan) 118	
4C09	Self-assembled Block Copolymer Electrolytes Functionalized by LCST Thermo-Sensitivity in Ionic Liquids	
11:40	<u>Yumi Kobayashi</u> , Yuza Kitazawa, Hisashi Kokubo and Masayoshi Watanabe (Japan) 119	
4C10	Rational Molecular Design of Thermo-Sensitive Polymers by Supramolecular Interaction	
12:00	<u>Kazuki Sada</u> , Shogo Amemori, Yoshimi Hamano and Kenta Kokado (Japan) 120	
	<i>M. Akashi, presiding</i>	
4C11IL	Exotic Nanoparticles from Block Copolymer Solution Assembly	
14:00	<u>Darrin Pochan</u> (U.S.A.) 121	
4C13IL	Helical Oligothiazoles: Structure and Photofunction	
14:40	<u>Takuya Nakashima</u> (Japan) 122	
	<i>D. Pochan, presiding</i>	
4C15	Fascile Separation 99%-Purity Semiconducting Single-walled Carbon Nanotubes Based on Dynamic Supramolecular Coordination Chemistry	
15:20	Fumiyuki Toshimitsu and <u>Naotoshi Nakashima</u> (Japan) 123	
4C16	Effect of Chemical Structure of Polyfluorene on Selective Extraction of Semiconducting Single-walled Carbon Nanotubes	
15:40	Takahiro Fukumaru, Fumiyuki Toshimitsu, Tsuyohiko Fujigaya and <u>Naotoshi Nakashima</u> (Japan) 124	
4C17	Processing and characterization of Epoxy/Carbon Black Nano composites using Orthogonal Array Technique	
16:00	<u>Gurulingappa B Rudrakshi</u> , Ramachandra M Kulkarni and Narasimha Murthy HN (India) 125	
	<i>N. Nakashima, presiding</i>	
4C18	Relating structure and performance of layered liquid crystals formed from nanoplatelets in epoxy	
16:20	<u>Kevin L White</u> , Minhao Wong, Peng Li, Yuji Higaki, Atsushi Takahara and Hung-Jue Sue (Japan) 126	
4C19	Thin Film Preparation of Polylactide Copolymers by Stereocomplex Formation Using Inkjet System	
16:40	<u>Hiroharu Ajiro</u> , Ayaka Kuroda and Mitsuru Akashi (Japan) 127	
4C20	Interfacial Polymer Complexation by Hydrogen Bonding	
17:00	<u>Shuguang Yang</u> (China) 128	

Friday, December 5

S-3 Frontiers in Complex Macromolecular Systems

	<i>T. Fukushima, presiding</i>	
5C02IL	Modulating Molecular Packing Patterns of Planar Compounds	
9:20	<u>Hsiu-Fu Hsu</u> and Hsin-An Lin (Taiwan) 129	
5C04	Chiral Colloidal Suspension of Twisted Silica Nanoribbons in Several Solvents	
10:00	<u>Yutaka Okazaki</u> , Emilie Pouget, Makoto Takafuji, Hirota Ibara and Reiko Oda (Japan) 130	
	<i>H. Ajiro, presiding</i>	
5C05	Hierarchic Porous Structure by Using Osmotic Shock and UV-Laser Interference	
10:20	<u>Masateru Ito</u> , Easan Sivaniah and Hernan Miguez (Japan) 131	
5C06	Crystal Cross-linking Method for Preparation of Regular Network Polymers	
10:40	<u>Kenta Kokado</u> , Takumi Ishiwata, Shunjiro Nagata, Yuki Furukawa and Kazuki Sada (Japan) 132	
5C07	Polysilane Confined in Coordination Nanospaces	
11:00	<u>Takashi Kitao</u> , Takashi Uemura and Susumu Kitagawa (Japan) 133	

S-7 Advances in Polymer and Hybrid Material Technology*K. Matsukawa, presiding*

5C08IL	High Thermal Conductive Hybrid Materials Using Mesogen-containing Epoxy Resin	11:20	<u>Yoshitaka Takezawa</u> (Japan) 134
5C10	Enhanced Thermal Conductivity Based on Vertical Double Percolation Morphology in Phase Separated Polyimide Blend Films	12:00	<u>Shinji Ando</u> , Daisuke Yorifuji, Tomoya Murakami and Shoya Uchida (Japan) 135
			<i>S. Inagaki, presiding</i>
5C11IL	Innovative Battery Research for Sustainable Mobility	14:00	<u>Yukinari Kotani</u> and Hideki Iba (U.S.A.) 136
			<i>H. Fukui, presiding</i>
5C13IL	Preparation of Ionic Polysilsesquioxanes with Regular Structures and Their Functionalization	14:40	<u>Yoshiro Kaneko</u> (Japan) 137
			<i>M. Ito, presiding</i>
5C15IL	Periodic Mesoporous Organosilicas for Environmental and Energy Applications	15:20	<u>Shinji Inagaki</u> (Japan) 138
			<i>B. Ochiai, presiding</i>
5C17IL	Polymer-Derived Silicon Oxycarbides: Structural Characteristics and Electrochemical Performance	16:00	<u>Hiroshi Fukui</u> (Japan) 139
			<i>Y. Kaneko, presiding</i>
5C19	Mitigating the effects of space debris on composite structures embedding self-healing and carbon nanotube nanocomposite materials.	16:40	<u>Brahim Aissa</u> , Emile Haddad, Wes Jamroz and Federico Rosei (Canada) 140
5C20	Conductive hybrid porous thin films prepared by metal-complexation induced self-assembly	17:00	<u>Sajjad Husain Mir</u> and Bungo Ochiai (Japan) 141

Room D**Wednesday, December 3****S-4 Frontiers in Biomedical Polymers***T. Sakai, presiding*

3D01	Structural Designs of Biologically Stimuli-Responsive Gels with Biomolecular Complexes as Dynamic Crosslinks	9:00	<u>Takashi Miyata</u> , Mayuko Morota, Kaori Okawa, Tomoyuki Kida, Akifumi Kawamura and Tadashi Uragami (Japan) 142
3D02	Fibrin-Hyaluronic Acid Interpenetrating Network Hydrogel and Quantification of its Degradation	9:20	<u>Yu Zhang</u> , Philipp Heher, Heinz Redl, Jöns Hilborn and Dmitri Ossipov (Sweden) 143
			<i>T. Aoyagi, presiding</i>
3D03IL	Polymeric micelles for targeted drug delivery	9:40	<u>Wim E. Hennink</u> , Marina Talelli, Bart J. Crielgaard and Yang Shi (Netherlands) 144
			<i>T. Miyata, presiding</i>
3D05IL	Drug Delivery with Polymeric Nanoparticles Responsive to Tumor Microenvironment for Cancer Therapy	10:20	<u>Jun Wang</u> , Chun-Yang Sun, Yang Liu and Xian-Zhu Yang (China) 145
3D07	Photo-induced cutting and detachment of cultured cell monolayer on PAG-polymer-functionalized surface	11:00	<u>Kimio Sumaru</u> , Kana Morishita, Toshiyuki Takagi, Taku Satoh and Toshiyuki Kanamori (Japan) 146
			<i>M. Matsusaki, presiding</i>
3D08	Surface design of heparin-functionalized temperature-responsive cell culture surfaces for maintenance of cellular functions and cell sheet recovery	11:20	<u>Jun Kobayashi</u> , Yoshinori Arisaka, Kazuo Ohashi, Kohei Tatsumi, Kyungsook Kim, Yoshikatsu Akiyama, Masayuki Yamato and Teruo Okano (Japan) 147
3D09	Thermally-modulated Cell Separation using Hydrophobized Thermoresponsive Copolymer Brush Surfaces	11:40	<u>Kenichi Nagase</u> , Yuri Hatakeyama, Tatsuya Shimizu, Katsuhisa Matsuura, Masayuki Yamato, Naoya Takeda and Teruo Okano (Japan) 148

3D10	Aliphatic polycarbonate-based biodegradable block copolymers: Engineered to access unconventional nanostructures	12:00	<u>Shrinivas Venkataraman</u> , Ashlynn L Z Lee, James L Hedrick and Yi Yan Yang (Singapore) 149
			<i>K. Akiyoshi, presiding</i>
3D11IL	Nanoscale Engineering of Polymer-Based Particles for Cargo Delivery	14:00	<u>Frank Caruso</u> (Australia) 150
3D13IL	Phospholipid polymer biomaterials open new biomedical engineering	14:40	<u>Kazuhiko Ishihara</u> (Japan) 151
			<i>Y. Ohya, presiding</i>
3D15	Development of three-dimensional skeletal muscle tissues using fibronectin-gelatin nanofilm cell coating	15:20	<u>Varvara GRIBOVA</u> , Michiya MATSUSAKI, Catherine PICART and Mitsuru AKASHI (Japan) 152
3D16	3D-Biopacemaker Tissues Derived from ES/iPS Cells by Cell Surface Coating with Layer-by-Layer Nano-ECM Films	15:40	<u>Michiya Matsusaki</u> , Yukihiko Saito, Kazufumi Nakamura, Hiroshi Ito and Mitsuru Akashi (Japan) 153
3D17	Self Healing Soft Bio-Nanocomposite Hydrogel Based on Laponite and Cryoprotective Polyampholyte	16:00	<u>Minkle Jain</u> and Kazuaki Matsumura (Japan) 154
			<i>J. Kobayashi, presiding</i>
3D18	Design of graft-copolymer-type biodegradable injectable polymers exhibiting temperature-responsive sol-gel transition for biomedical application	16:20	<u>Yuichi Ohya</u> , Masaya Umezaki, Yasuyuki Yoshida, Akihiro Takahashi and Akinori Kuzuya (Japan) 155
3D19	Injectable in situ forming chitosan-based hydrogels for biomedical applications.	16:40	<u>Titima Songkroh</u> , Hongguo Xie, Weiting Yu, Guojun Lv, Xiudong Liu, Lin Wang, Xiaoxi Xu, Guangwei Sun and Xiaojun Ma (China) 156

Thursday, December 4**S-4 Frontiers in Biomedical Polymers***K. Ishihara, presiding*

4D01IL	Applying Functionality from Nature to Synthetic Polymers	9:00	Rachel Letteri, Christian Santa, Matthew Skinner, and <u>Todd Emrick</u> (U.S.A.) 157
			<i>T. Miyata, presiding</i>
4D03IL	Redox Polymer Therapeutics	9:40	<u>Yukio Nagasaki</u> (Japan) 158
			<i>T. Goda, presiding</i>
4D05	Photocleavable MPC polymer nanoparticles for intracellular delivery of bioactive proteins	10:20	<u>Weixin Chen</u> , Yuuki Inoue and Kazuhiko Ishihara (Japan) 159
4D06	Ligand density effect on selective delivery in brain parenchyma through blood-brain barrier of glucose-linked polyion complex micelle system	10:40	<u>Yu Fukusato</u> , Yasutaka Anraku, Akihiro Mizoguchi, Takehiko Ishii, Yu Matsumoto, Kazuko Toh, Hiroya Kuwahara, Takanori Yokota and Kazunori Kataoka (Japan) 160
4D07	Effectiveness of paclitaxel-loaded polymeric micellar delivery systems for the treatment of prostate cancer, as determined by 2D and 3D cell models	11:00	<u>Alice W Du</u> , Hongxu Lu and Martina H Stenzel (Australia) 161
			<i>K. Matsumura, presiding</i>
4D08	Preparation of Cyclodextrin-based Polyrotaxane block Copolymers and Applications as Carrier for the Controlled Drug Release	11:20	<u>Lin Jiang</u> , Ze-guo Feng and Kohzo Ito (Japan) 162
4D09	Highly Stable Silica-containing Redox Nanoparticle As Efficient Oral Delivery Vehicles	11:40	<u>Yutaka Ikeda</u> , Md. Amran Hossain, Long Binh Vong and Yukio Nagasaki (Japan) 163
4D10	Gd3N@C80-containing nanoparticles as novel contrast agent for high performance magnetic resonance imaging	12:00	<u>Zhenyu Gao</u> , Yusuke Nakanishi, Shoko Noda, Hiroyuki Kimura, Yukichi Horiguchi, Haruka Omachi, Kei Nakai,

	Akira Matsumura, Hisanori Shinohara and Yukio Nagasaki (Japan) 164
	<i>Y. Nagasaki, presiding</i>
4D11IL	In Situ Forming Enzyme-Free Hydrogels via Ferromagnetic Beads-assisted Enzymatic Crosslinking for Therapeutic Applications
14:00	<u>Ki Dong Park</u> (Korea) 165
	<i>T. Aoyagi, presiding</i>
4D13IL	Targeted Chemo- and Molecular-Therapy by Self-Assembled Supramolecular Nanomedicines
14:40	<u>Kazunori Kataoka</u> (Japan) 166
	<i>Y. Ikeda, presiding</i>
4D15	<i>withdrawn</i>
15:20	
4D16	Super Effective pH sensitive carbonate apatite for intracellular regulation of cancer, ES/iPS cells: Advancing nanobiomaterial research towards biomedical engineering application
15:40	<u>Sharif Hossain</u> and Toshihiro Akaike (Japan) 168
4D17	Cell-recognizable Fc-chimeric protein-based biomaterials are novel tool for advancing stem cell technology and regenerative medicine
16:00	<u>Toshihiro Akaike</u> (Japan) 169
	<i>K. Nagase, presiding</i>
4D18	The relationship between water structure and blood compatibility in poly(2-methoxyethyl acrylate) (PMEA) analogues
16:20	<u>Kazuhiro Sato</u> , Shingo Kobayashi, Shogo Watahiki, Masahiko Oikawa, Takashi Hoshiba and Masaru Tanaka (Japan) 170
4D19	Synthesis of sequence-specific polymers via regioselective ROMP and biomaterial applications
16:40	<u>Shingo Kobayashi</u> , Kousaku Fukuda, Keisuke Herai, Maiko Kataoka, Kouhei Osawa and Masaru Tanaka (Japan) 171
4D20	Functional degradable biomaterials based on organocatalysis and substituted cyclic carbonates
17:00	<u>Kazuki Fukushima</u> , Yuto Inoue, Kohei Kishi, Takayuki Ota, Meng-Yu Tsai, Shunsuke Sato, Kodai Matsuzaki and Masaru Tanaka (Japan) 172

Friday, December 5

S-4 Frontiers in Biomedical Polymers

	<i>Y. Nagasaki, presiding</i>
5D03IL	Mechanical properties of polymer gels with controlled network structure
9:40	<u>Takamasa Sakai</u> (Japan) 173
	<i>A. Kikuchi, presiding</i>
5D05IL	Cell Membrane-Mimetic Interfaces for Biomaterials and Bioengineering
10:20	<u>Tatsuro Goda</u> (Japan) 174
	<i>K. Sumaru, presiding</i>
5D07	Disparate membrane interaction of structurally analogous synthetic polyampholytes with cryoprotective properties
11:00	<u>Robin Rajan</u> and Kazuaki Matsumura (Japan) 175
5D08	Separation of Biomolecules Through Hydrophobic Interaction on Thermoresponsive Poly(N-isopropylacrylamide) Modified Monolithic Capillaries
11:20	<u>Takuya KORIYAMA</u> , Taka-Aki ASOH, Ryo ISHIHARA and Akihiko KIKUCHI (Japan) 176
5D09	Peptide Biomarkers are Highly Purified from Blood with Subcritical Waters and Chaotropes: A New One-Step Diagnostic Basis.
11:40	<u>Hiroyuki KABATA</u> , Sanai TSUNOKUNI, Yukiko TENOKUCHI, Rena TSURUOKA and Kana KAWASAKI (Japan) 177

Room E

Wednesday, December 3

S-6 Polymers for Optics, Optoelectronics and Energy Conversion

	<i>S. Seki, presiding</i>
3E02	Electrochemical Fabrication of Organic and Hybrid

	9:20	Multilayers for Electronics
		<u>Mao Li</u> (China) 178
3E03	UPDATABLE 3D HOLOGRAPHIC DISPLAY SYSTEM: STRATEGY AND FUTURE PERSPECTIVES	
9:40	<u>Naoto Tsutsumi</u> , Kenji Kinashi, Yutaka Kawabe, Kazuhiro Tada, Kodai Fukuzawa, Toshiro Imai, Takao Sasaki, Takafumi Sassa, Takashi Fujihara and Masuki Kawamoto (Japan) 179	
3E04	Crystal structuring of poly(vinylidene fluoride) at the air-water interface from α phase to β phase	
10:00	<u>Huie Zhu</u> , Jun Matsui, Shunsuke Yamamoto, Tokuji Miyashita and Masaya Mitsuishi (Japan) 180	
	<i>H. Ohkita, presiding</i>	
3E05	Photon Upconversion Meets Supramolecular Self-Assembly	
10:20	<u>Nobuhiro Yanai</u> and Nobuo Kimizuka (Japan) 181	
3E06	Synthesis of Polymers with Perylene Diimide Derivatives and Characterization of Higher Order Structure in the Thin Film State	
10:40	<u>Tomoyasu Hirai</u> , Makoto Kido, Shiki Nojima, Noboru Ohta, Kevin White, Yuji Higaki, Ken Kojio and Atsushi Takahara (Japan) 182	
3E07	Solution-Processed p-channel Organic Field-Effect Transistor from Dithieno Thiophen-based small molecule	
11:00	<u>BO-CHIN CHANG</u> , CHIA-MING YEH, MING-CHOU CHEN and CHENG-LIANG LIU (Taiwan) 183	
3E08	Spray-Coating Organic Semiconductors for Organic Field Effect Transistors Application	
11:20	<u>Han-Wen Hsu</u> and Cheng-Liang Liu (Taiwan) 184	
3E09IL	Triple-junction Polymer Tandem Solar Cell with a Record-high Efficiency of 11.5%	
11:40	<u>Chun-Chao Chen</u> , Wei-Hsuan Chang, Jingbi You, Jing Gao, Zirou Hong and Yang Yang (U.S.A.) 185	
	<i>S. Seki, presiding</i>	
3E11IL	Excited state properties of linear pi-systems based supramolecular polymers and organogels	
14:00	<u>Ayyappanpillai Ajayaghosh</u> (India) 186	
3E13	Synthesis of Highly Pure, High-Molecular-Weight Conjugated Polymers by Direct Arylation Polycondensation for Improving the Performance of Organic Photovoltaics	
14:40	<u>Junpei Kuwabara</u> , Takeshi Yasuda, Seong Jib Choi, Wei Lu, Koutarou Yamazaki, Shigehiro Kagaya, Liyuan Han and Takaki Kanbara (Japan) 187	
3E14	Development of donor-acceptor type π -conjugated polymers with bis(1,3,4-thiadiazole) units for polymer solar cell application	
15:00	<u>Seiji Fukuta</u> , Tomoyuki Koganezawa, Mitsuru Ueda and Tomoya Higashihara (Japan) 188	
3E15IL	Organic and Hybrid Solar Cells for Next Generation Photovoltaics	
15:20	<u>Hiroshi Segawa</u> (Japan) 189	
	<i>H. Segawa, presiding</i>	
3E17	One-Dimensional Singlet Exciton Diffusion in Regioregular Poly(3-hexylthiophene) Films	
16:00	<u>Yasunari Tamai</u> , Yuu Matsuura, Hideo Ohkita, Hiroaki Benten and Shinzaburo Ito (Japan) 190	
3E18	Whispering Gallery Mode Photoemission from π -Conjugated Polymer Microspheres	
16:20	<u>Kenichi Tabata</u> , Daniel Braam, Soh Kushida, Liang Tong, Junpei Kuwabara, Takaki Kanbara, Axel Lorke and Yohei Yamamoto (Japan) 191	
3E19	Biodegradable polymer photoswitches for super-resolution fluorescent imaging	
16:40	<u>Ming-Qiang Zhu</u> (China) 192	

Thursday, December 4

S-6 Polymers for Optics, Optoelectronics and Energy Conversion

	<i>M. Watanabe, presiding</i>
4E02IL	Redox Polymers for Organic-Based Energy-Related Devices
9:20	<u>Hiroyuki Nishide</u> (Japan) 193
	<i>P. Jannasch, presiding</i>
4E04	Improving the performance of light-emitting electrochemical cells through electrolyte end-group modification
10:00	<u>Jonas Mindemark</u> , Shi Tang, Daniel Brandell and Ludvig Edman (Sweden) 194

4E05	Pyrolysis of polyimides to prepare highly active carbon-based Pt-free fuel cell catalysts <u>Yuta Nabae</u> , Masayuki Chokai, Takeo Ichihara, Tsutomu Aoki and Teruaki Hayakawa (Japan) 195	
4E06	Recent Innovations in Electro-optic Polymeric Materials and Chromophore Design <u>Andrew Spring</u> and Shiyoshi Yokoyama (Japan) 196 <i>M. Watanabe, presiding</i>	
4E07	11:00 <i>withdrawn</i>	
4E08	Polymer Electrolyte Fuel Cell Based on Acid-doped Polybenzimidazole <u>Tsuyohiko Fujigaya</u> , Akiyo Nagashima and Naotoshi Nakashima (Japan) 198	
4E09IL	Aromatic Polymers for Fuel Cell Membranes 11:40 <u>E. Annika Weiber</u> , Shogo Takamuku and <u>Patric Jannasch</u> (Sweden) 199 <i>H. Kikuchi, presiding</i>	
4E11IL	Recent progress of electro-optic polymers and optical modulators for telecommunications 14:00 <u>Shiyoshi Yokoyama</u> (Japan) 200	
4E13	Integration of EO polymers and silicon nitride waveguide for optical switching applications 14:40 <u>Masaaki Ishino</u> , Kazuhiro Yamamoto, Feng Qiu and Shiyoshi Yokoyama (Japan) 201	
4E14	Electro-optic Polymer / Titanium Dioxide Hybrid Modulators 15:00 <u>Feng Qiu</u> and Shiyoshi Yokoyama (Japan) 202	
4E15	Synthesis of end-cap EO polymer by ATRP 15:20 <u>Naoyuki Hayashi</u> , Andrew(Mark) Spring, Kazuhiro Yamamoto and Shiyoshi Yokoyama (Japan) 203	
4E16	reparation of the high-performance electro-optics polymer by the highly solubility chromophore 15:40 <u>Hiroki Miura</u> , Andrew M Spring, Kazuhiro Yamamoto and Shiyoshi Yokoyama (Japan) 204 <i>S. Yokoyama, presiding</i>	
4E17	Developing LSPR Bio-sensors via Direct Surface Modifications of Polymer Optical Fiber/Wave Guide 16:00 <u>Yan Jin</u> , Kok H Wong and Anthony M Granville (Australia) 205	
4E18IL	Is Polymer-Stabilized Blue Phase Liquid Crystal Ready for Prime Time? 16:20 Daming Xu, Fenglin Peng and <u>Shin-Tson Wu</u> (U.S.A.) . 206	
		<i>M. Shimomura, presiding</i>
5E15	A Self-Assembled Poly(Imidazole-Palladium) Catalyst for Coupling Reactions 15:20 <u>Md. Shaheen Sarkar</u> , Md. Lutfor Rahman and Yasuhiro Uozumi (Malaysia) 215	
5E16	Poly(amidoxime) chelating ligand for efficient removal of transition metals 15:40 <u>Md Lutfor Rahman</u> , Shaheen M Sarkar and Mashitah Mohd Yusoff (Malaysia) 216	
5E17	N-Glycans of lacquer laccase and stellacyanin analysed by mass spectroscopies 16:00 <u>Oyunjargal Tumurbaatar</u> , Surina Bo and Takashi Yoshida (Japan) 217 <i>B. Chu, presiding</i>	
5E18	Expanding the spectrum of monomers for redox-facilitated self-polymerization beyond dopamine and the catecholamine family 16:20 <u>Ka Wai Fan</u> , Martina H Stenzel and Anthony M Granville (Australia) 218	
5E19	Molecular Dynamic Simulation of Ion Transport - A guide for Molecular Designing of Polymer Electrolyte Membranes 16:40 <u>Xuan Zhang</u> , Yanli Pu, Tomoya Higashihara, Lianjun Wang and Mitsuru Ueda (China) 219	

Friday, December 5

S-5 Frontiers in Green Materials and Technology

	<i>H. Furukawa, presiding</i>	
5E01IL	Design and Properties of Biobased Elastomers Aiming at Engineering and Medical Applications 9:00 <u>Liqun Zhang</u> , H. L. Kang, R. G. Wang, J. C. Zhang, Z. Wang, J. J. Xue, X. X. Zhou, W. W. Lei and K. C. Hua (China) 207	
5E03IL	Slide-Ring Materials: Movable Cross-Links and Entropy of Rings 9:40 <u>Kohzo Ito</u> (Japan) 208 <i>L. Zhang, presiding</i>	
5E05IL	Green Development of Natural Rubber 10:20 <u>Krisda Suchiva</u> (Thailand) 209	
5E07	Nanomatrix Structure of Natural Rubber 11:00 Seiichi Kawahara, <u>Lina Fukuhara</u> and Yoshimasa Yamamoto (Japan) 210 <i>K. Suchiva, presiding</i>	
5E08	Bromination of Natural Rubber by Anodic Oxidation in Water Process in the Presence of Carbon Dioxide 11:20 <u>Yoshimasa Yamamoto</u> , Yudai Yamamura and Seiichi Kawahara (Japan) 211	
5E09	Biodegradable Thermoplastic Elastomers Synthesized from ϵ -Caprolactone and Lactide 11:40 <u>Yuushou Nakayama</u> , Kazuki Aihara, Ryo Tanaka, Zhengguo Cai and Takeshi Shiono (Japan) 212 <i>S. Kawahara, presiding</i>	
5E11IL	How can biomimetics contribute to sustainability ? 14:00 <u>Masatsugu Shimomura</u> (Japan) 213	
5E13IL	Structural Characterization of Cellulose Nano-Fibers with Applications to Separation Membranes for Water Purification 14:40 <u>Benjamin Chu</u> (U.S.A.) 214	

Room P

POSTER SESSIONS SCHEDULE

9:00 - 13:00	Mounting Posters
13:00 - 13:30	Obligation time for Group "a"
13:30 - 14:00	Obligation time for Group "b"
17:00 - 18:00	Removing Posters

● Notes:

For the assignment to Group "a" or "b", refer to the last letter of the poster ID code.

(e.g.) 3P-S5-001a: Dec.3, Selected Topic S5, Paper #001, Group "a"

Wednesday, December 3

S-5 Frontiers in Green Materials and Technology

3P-S5-001a	Polystyrene Photodegradation with a Titanium Dioxide/copper phthalocyanine/Poly(ethylene oxide)/Methyl Linoleate under fluorescent light <u>Kensuke Miyazaki</u> and Nakatani Hisayuki (Japan)220	220
3P-S5-002b	Degradation behavior of polystyrene/multiwall carbon nanotube composite <u>Masato Hamadate</u> , Ryouosaku Sato, Kensuke Miyazaki, Noriyasu Okazaki and Hisayuki Nakatani (Japan)221	221
3P-S5-003a	Utilization OF Waste Disposal Polypropylene Modified Palm Empty Bunch/Sodium Silicate As A Strong, Biodegradable and Fire Retardant Composite Materials <u>Ozi Saputra</u> and Ludfiaastu Rinawati (Indonesia)222	222
3P-S5-004b	Effects of chemical modifications on oil transport with open capillary channels mimicking animal <u>Shuto Ito</u> , Daisuke Ishi, Chihiro Urata and Atsushi Hozumi (Japan)223	223
3P-S5-005a	Optimization of Gel-like Capillaries mimicking Xylems of Tree for Long Distance Liquid Transport <u>Kohei Sugaya</u> and Daisuke Ishi (Japan)224	224
3P-S5-006b	Effect of glycerol content on physical properties of gelatin extracted from White perch Fish Scale <u>Nathawut Phreecha</u> and Watchanida Chinpa (Thailand)225	225
3P-S5-007a	Control of Catalytic Activity of Gold Nanoparticles in DNA Hybrid Hydrogel by Gel's Swelling/Shrinking <u>Yuxin Che</u> , Anatoly Zinchenko and Shizuaki Murata (Japan)226	226
3P-S5-008b	Preparation and permeation properties of cellulose acetate membranes blending-acetylated-Cyclodextrins <u>Yuma Yamamoto</u> , Hirohito Yamasaki, Toshiya Masuda and Hidetoshi Kita (Japan)227	227
3P-S5-009a	Enzymatic Synthesis of Non-natural Aminopolysaccharide by Thermostable Phosphorylase Catalysis <u>Riko Shimohigoshi</u> , Kazuya Yamamoto and Jun-ichi Kadokawa (Japan)228	228
3P-S5-010b	Production of highly dispersed cellulose nanofibers from mandarin (Citrus unshiu) peel wastes <u>Shou Hiasa</u> , Shinichiro Iwamoto, Takashi Endo and Yusuke Edashige (Japan)229	229
3P-S5-011a	One-pot enzymatic synthesis and functionalization of multiphase cellulose nanostructures <u>Yusuke Yataka</u> , Toshiki Sawada and Takeshi Serizawa (Japan)230	230
3P-S5-012b	Relationship between Mechanical Properties and Molecular Structures of P(3HBV-block-3HB) Copolymer Biosynthesized by <i>Wautersia eutropha</i> <u>Junya Yasui</u> , Risa Yamagishi and Takahiko Nakaoki (Japan)231	231
3P-S5-013a	Correlative analysis of mechanical properties and spectroscopic information of polyhydroxyalkanoate/polycaprolactone blends <u>Masakazu Nishida</u> , Hideyuki Shinzawa, Wataru Kanematsu, Takashi Ogura and Masahiro Nishida (Japan)232	232

S-7 Advances in Polymer and Hybrid Material Technology

3P-S7-016b	Polymer of Intrinsic Microporosity and Metal Organic Frameworks Mixed Matrix Membranes for Gas	
------------	--	--

	Separation <u>Kento Sakurai</u> , Behnam Ghalei and Easan Sivaniah (Japan)233	233
3P-S7-017a	Microstructure Control of Organic/Inorganic Composites via Aqueous Suspension Systems of Acrylic Latex and Inorganic Nanoparticles <u>Soichiro Kimura</u> , Tatsuya Wakako and Mitsuru Tanahashi (Japan)234	234
3P-S7-018b	Preparation of Photo-Responsive Polymer-Metal Hybrid Films with Homogeneously Dispersed Metal Nanoparticles and Their Patterning Properties <u>Nobuhiro Akioka</u> , Akifumi Kawamura, Tadashi Uragami and Takashi Miyata (Japan)235	235
3P-S7-019a	Synthesis of Metal Nanoparticle within Interlayer Space of Layered Compounds and their Spectroscopic Studies Kazuhiisa SASAKI, Shiori KAWAMURA, Fumiaki TAKAGI, Kenji SAITO, Masayuki YAGI and <u>Tatsuto YUI</u> (Japan)236	236
3P-S7-020b	Reduction in Thermal Expansion of Epoxy Resin via Uniform Dispersion of Silica Nanoparticles with Hydrophilic Surfaces <u>Mitsuru Tanahashi</u> and Kazuma Hirota (Japan)237	237
3P-S7-021a	Hybridization of partially exfoliated graphite with inorganic nanoparticle using supercritical fluid <u>Eisaku Sato</u> , Shoji Nozato, Akihiko Fujiwara, Makoto Takafuji, Akira Nakasuga and Hiroataka Ihara (Japan) 238	238
3P-S7-022b	Polymerizations of Functional Zinc-bisdithiocarbamate Complexes for Application as Highly Refractive Materials <u>Shintaro Nagayama</u> and Bungo Ochiai (Japan)239	239
3P-S7-023a	Preparation of imidazolium group-containing silsesquioxane ionic liquid by sol-gel method <u>Takuhiro Ishii</u> , Toshiaki Enoki, Tomonobu Mizumo, Joji Ohshita and Yoshiro Kaneko (Japan)240	240
3P-S7-024b	Induced chiral dye aggregates on gemini surfactant-silica hybrid twisted ribbons <u>Naoya Ryu</u> , Yutaka Okazaki, Emilie Pouget, Makoto Takafuji, Shoji Nagaoka, Reiko Oda and Hiroataka Ihara (Japan)241	241
3P-S7-025a	Synthesis of imido group-containing ladder-like polysilsesquioxanes and their properties <u>Shunya Miyauchi</u> , Tomoyuki Arake, Takuo Sugioka, Yasutaka Sumida, Toshiaki Enoki, Joji Ohshita and Yoshiro Kaneko (Japan)242	242
3P-S7-026b	Organic/Inorganic Hybrid Drug Carriers Based on Halloysite Nanotubes <u>Di Tao</u> , Wei Ma, Yuji Higaki and Atsushi Takahara (Japan)243	243
3P-S7-027a	Development of Hyaluronic Acid/Natural Inorganic Clay Nanocomposite Hydrogels for Controlled Drug Release aiming Cartilage Repair <u>Kyung-Lynne Park</u> , Wei Ma, Yuji Higaki and Atsushi Takahara (Japan)244	244
3P-S7-028b	Synthesis of high performance environmentally-degradable biopolyamides derived from itaconic acid and their composites with Montmorillonite <u>Mohammad Asif Ali</u> , Nupur Tandon, Seiji Tateyama and Tatsuo Kaneko (Japan)245	245
3P-S7-029a	Borazine-based polymers for functional materials and ceramics precursors <u>Yuko Uchimaru</u> , Hiroshi Yamashita and Li-Biao Han (Japan)246	246
3P-S7-030b	Effects of amine-functionalized carbon nanofiller type on the physical properties of epoxy nanocomposites <u>Mihye Seong</u> and Dae Su Kim (Korea)247	247
3P-S7-031a	Preparation and properties of cellulose silica hybrid films with cholesteric mesophase structure <u>You Toshima</u> , Tomoki Ogoshi and Tada-aki Yamagishi (Japan)248	248
3P-S7-032b	Physical properties of polypropylene/hydrophobized-cellulose composites <u>Songyi Jang</u> and Dae Su Kim (Korea)249	249
3P-S7-033a	Chiral inorganic materials transferred by the complexes consisted of comb-like polyethyleneimine and tartaric acid	

	<u>Dong-Dong Yao</u> and Ren-Hua Jin (Japan)250		Form Interparticle Bondings by UV Irradiation <u>Takumi Moriyama</u> , Akifumi Kawamura, Tadashi Uragami and Takashi Miyata (Japan)268
	G-4 Functional Polymers		
3P-G4-036b	The study of new surface modification effect by Side Chain Crystalline Block Copolymer <u>Ryoko Nakano</u> , Hiroshi Sekiguchi and Shigeru Yao (Japan)251	3P-G4-054b	Tunable Polymeric Nanoparticles Consisting of Temperature Responsive Copolymers <u>Yohei Kotsuchibashi</u> , Mitsuhiro Ebara, Ravin Narain and Takao Aoyagi (Japan)269
3P-G4-037a	Control of Biodegradability of Triple-Mixed Biodegradable Aliphatic Polyester Films with Baked Calcium Oxide Micro-powder <u>Haiyan He</u> , Momoko Kawasaki, Shunsuke Yoshida, Michinori Karikomi, Takao Kimura and Shigeaki Maruo (Japan)252	3P-G4-055a	Preparation and characterization of transformable thermo-responsive core-corona type nanoparticles <u>Takuma SUZUKI</u> , Takuya MATSUYAMA, Taka-Aki ASOH, Ryo ISHIHARA and Akihiko KIKUCHI (Japan)270
3P-G4-038b	Controlled Release of Medicine from Supramolecular Hydrogels <u>Masahiro Suzuki</u> , Ryosuke Ebina and Kenji Hanabusa (Japan)253	3P-G4-056b	Development of Helical Supramolecular Polymer as Liquid Crystalline Dopants <u>Keiichi Yano</u> , Yoshimitsu Itoh and Takuzo Aida (Japan)271
3P-G4-039a	Fabrication of Metal/Titanium Oxide Hybrid Nanotubes in Supramolecular Gels <u>Shin Oi</u> , Yukie Kato, Kenji Hanabusa and Masahiro Suzuki (Japan)254	3P-G4-057a	Preparation and Characterization of Photosensitive Self-Assembled Monolayers using Photodegradable 2-Nitrophenethyl Linker <u>Michiko ITO</u> , Daiki SATO, Tomoya YAMADA and Kazuo YAMAGUCHI (Japan)272
3P-G4-040b	Application of L-Lysine Hydrogelators to Cell Culture Materials <u>Masahiro Suzuki</u> , Masaki Nasu and Kenji Hanabusa (Japan)255	3P-G4-058b	Poly[α -(aminomethyl)acrylate]: Acid-/thermo-responsive polymer based on β -amino acid ester bearing polymerizable vinyl group <u>Yasuhiro Kohsaka</u> , Yusuke Matsumoto and Tatsuki Kitayama (Japan)273
3P-G4-041a	Semiconducting Poly(2-methylaniline) Coated Polystyrene Microspheres and Their Electrorheological Characteristics <u>Seung Hyuk Kwon</u> and Hyoung Jin Choi (Korea)256	3P-G4-059a	Conformational Analysis and Electric Structure of Poly(L-glutamate) Containing a 4-(Carbazol-9-yl)phenyl Group <u>Shogo Itazawa</u> , Takayuki Uchida and Toshihiro Hiejima (Japan)274
3P-G4-042b	Synthesis of redox-responsive micro-gel particles composed of three-armed oligo(ethylene glycol) and their degradation and release of immobilized protein <u>Koya Yamawaki</u> , Taka-Aki Asoh, Ryo Ishihara and Akihiko Kikuchi (Japan)257	3P-G4-060b	Solubilization of carbon nanomaterials into solvents with novel polymerizable surfactants <u>Yuichi Funasaki</u> , Takafumi Honjo, Kazuki Houe and Tatsuo Maruyama (Japan)275
3P-G4-043a	Electronic properties of poly(ferrocenylsilane) dissolved in an ionic liquid Kazumu Furuta and <u>Yukihito Matsuura</u> (Japan)258	3P-G4-061a	Cyclodextrin polymer adsorbents for removal of endotoxin from bio-products <u>Masayo Sakata</u> , Kasane Kimura, Taku Matsuo and Masami Todokoro (Japan)276
3P-G4-044b	Doped Spirofluorenes for a Perovskite-Sensitized Solar Cell <u>Ryosuke Takahashi</u> , Kenichi Oyaizu and Hiroyuki Nishide (Japan)259	3P-G4-062b	Selective calcium ion sensors based on polyacrylic acid and its gels carrying an aggregation-induced emissive fluorophore <u>Hanako Hasebe</u> , Fumitaka Ishiwari, Takao Someya and Takanori Fukushima (Japan)277
3P-G4-045a	Homopolymers of Poly(cyclopentadithiophene-vinylene) by Ring-opening Metathesis Polymerization and McMurry Coupling <u>Shu-Wei Chang</u> and Masaki Horie (Taiwan)260	3P-G4-063a	Oxygen-Binding Cobalt-Picket Fence Porphyrin and its Polymeric Complex for a Rechargeable Air Battery <u>Ryutaro Kembo</u> , Kenichi Oyaizu and Hiroyuki Nishide (Japan)278
3P-G4-046b	Synthesis and Chromism of π Conjugated Polymers Incorporated with Bis-spirocyclic Derivatives <u>Michihito Yoshida</u> and Makoto Miyasaka (Japan)261	3P-G4-064b	Synthesis and Optical Properties of BODIPY Oligomers Linked by Aromatic Ring <u>Sousuke Saino</u> and Tatsuya Nabeshima (Japan)279
3P-G4-047a	Selective Introduction of Element Blocks onto Photo-irradiated Areas based on Reaction Development Patterning <u>Kyosuke WATANABE</u> , Akio TAKAHASHI and Toshiyuki OYAMA (Japan)262	3P-G4-065a	Chromatographic separation of DNA from bio-product solution by cellulose beads grafted with cationic linear polymer <u>Eri Ikegami</u> , Yusuke Goto and Masayo Sakata (Japan)280
3P-G4-048b	Material Sensing of Heart Cells <u>Andrew H Gibbons</u> , Orsolya Lang, Yoji Kojima and Easan Sivaniah (Japan)263	3P-G4-066b	Design of multiblock copolymers and autonomous viscoelastic oscillation of the solution <u>Michika Onoda</u> , Takeshi Ueki, Mitsuhiro Shibayama and Ryo Yoshida (Japan)281
3P-G4-049a	Synthesis of thermoresponsive polymer having ester groups in polymer back bone and ability of coacervate formation. <u>Syuuhei Komatsu</u> , Taka-Aki Asoh, Ryo Ishihara and Akihiko Kikuchi (Japan)264	3P-G4-067a	Enzyme-responsive supramolecular gelator as an anticancer agent <u>Akiko Tanaka</u> , Yuki Fukuoka, Takafumi Honjo, Daisuke Koda, Masahiro Goto and Tatsuo Maruyama (Japan) 282
3P-G4-050b	Loading and release of hydrophobic drugs from alkylated alginate gel beads <u>Yoshie Katsumata</u> , Yurie Ono, Taka-Aki Asoh, Ryo Ishihara and Akihiko Kikuchi (Japan)265	3P-G4-068b	Novel method to quantitate a small amount of amino groups on solid surfaces using fluorescent compounds <u>Saori Shiota</u> , Ayane Shimomura, Takashi Nishino, Akio Ojida and Tatsuo Maruyama (Japan)283
3P-G4-051a	Synthesis of organic sulfur materials with allyl compounds with polar group and their electrochemical properties in organic electrolyte system <u>Ai Kobashi</u> , Kanae Itaoka, Kazuhiro Yamabuki, Nobuko Yoshimoto and Hiromori Tsutsumi (Japan)266	3P-G4-069a	Evaluation of protein adsorption behavior onto thermoresponsive polymer- brush modified surfaces with immobilized metal ion affinity ligands. <u>Masaki Ishikawa</u> , Takuya Koriyama, Taka-Aki Asho, Ryo Ishihara and Akihiko Kikuchi (Japan)284
3P-G4-052b	Preparation of Stimuli-Responsive Gel Particle Films That Exhibited Structural Color <u>Yuriko Nishimura</u> , Akifumi Kawamura, Tadashi Uragami and Takashi Miyata (Japan)267	3P-G4-070b	Effects on the Orientation of the Photopolymerizable Diacetylene Molecule by Electro spray
3P-G4-053a	Preparation of Photo-responsive Polymer Particles That		

	<u>Hikaru Watanabe</u> , Yuki Obata, Eri Nasuno, Ken-ichi Iimura and Norihiro Kato (Japan)285				inhomogeneous structure of peroxide crosslinked acrylonitrile butadiene rubber
3P-G4-071a	Photoformation of Surface Relief Using Photopolymerizable Anthracene Film				<u>Keiko Ohyama</u> , Hiroaki Ono, Hirotada Fujiwara and Shin Nishimura (Japan)303
3P-G4-072b	High performance photorefractive device using main-chain triphenylamine polymer		3P-G4-089a		Evaluation of viscoelastic properties of rubber materials for hydrogen gas seal after high-pressure hydrogen cycle exposure
3P-G4-073a	New way to immobilization of N-hydroxyphthalimide on polymeric carriers				<u>Hirotada Fujiwara</u> , Hiroaki Ono and Shin Nishimura (Japan)304
3P-G4-074b	Permeation of 2D Polymer Membranes (1) Oxygen permselectivity through 2D polymer surface-modified membranes with 2D surface modifiers				G-6 Bio-Related Polymers
3P-G4-075a	Anisotropic Ion Conduction by Designing Polymer Interfaces Using the Langmuir-Blodgett Technique.		3P-G6-092b		Azide-Bearing Silk as a Clickable Biopolymer Produced by in Vivo Incorporation of Unnatural Amino Acids
3P-G4-076b	Molecular recognition behavior of amphiphilic polymer-grafted silica microspheres in HPLC				<u>Hidetoshi Teramoto</u> and Katsura Kojima (Japan)305
3P-G4-077a	Stimuli-responsive color changes in boronic acid and amine-containing thin films		3P-G6-094b		PGAIC, novel bio-inspired plastics with anti-infective, wide-applicable coating performance
3P-G4-078b	Single component self-standing films based on carbazole terminated polyhedral octasilicate-core dendrimers				<u>Makoto Ashiuchi</u> , Shota Oike, Shigeo Shibatani, Hirofumi Hakuba, Nogih Oka and Ryo Hirata (Japan)306
3P-G4-079a	Fluorinated polyhedral oligomeric silsesquioxane oil: synthesis, characterization and applications		3P-G6-095a		Novel Superabsorbent Hydrogels from <i>Ocimum canum</i> Sims.
3P-G4-080b	Directional Photo-manipulation of Breath Figure Arrays				<u>Dr. Malinee Chaisupakitsin</u> and Natchawisa Ratsamepong (Thailand)307
3P-G4-081a	Entrapment-Release Property under Simultaneous Functions of Ion Complexation and Thermal Responsiveness		3P-G6-096b		Preparation of poly(ϵ -caprolactone) film with locally and remotely activated shape-memory property and its application in controlling cell orientation
3P-G4-082b	SPEEK Membrane Surface Modification with Heterocyclic Brushes by Grafting Onto Method for Proton Exchange Membrane Fuel Cell				<u>Qinghui Shou</u> , Koichiro Uto, Wei-Chih Lin, Mitsuhiro Ebara and Takao Aoyagi (Japan)308
3P-G4-083a	Hydrophobic and Hydrophilic Crosslinkers in a Single Polymer Matrices Approach to Obtain Nanogel		3P-G6-097a		Palladium-catalyzed glycosylation for the synthesis of glycolipid-based building blocks used in carbohydrate materials
3P-G4-084b	New Thienothiadiazole-Based Conjugated Polymers for Electrochromic Applications				<u>Gefei Li</u> , Masato Noguchi and Shin-ichiro Shoda (Japan)309
3P-G4-085a	β -Phase Transformation of Poly(Vinylidene Fluoride) Nanosphere and their Colloidal Crystallization		3P-G6-098b		Design of redox polymer-silica nanohybrid materials for effective treatment of chronic renal failure
3P-G4-086b	Whispering Gallery Mode Photoemission from Highly Fluorescent π -conjugated Polymer Spheres				<u>Takuma Matsumura</u> , Tatsuya Yaguchi, Toru Yoshitomi, Yutaka Ikeda, Atsushi Ueda, Aki Hirayama and Yukio Nagasaki (Japan)310
3P-G4-087a	The effect of local structure on volume increment of acrylonitrile butadiene rubber after high-pressure hydrogen exposure		3P-G6-099a		Biocompatible Water-Soluble Polyion Complex with Galactose Shells
3P-G4-088b	Influence of high-pressure hydrogen exposure on the				<u>Ryusuke Enomoto</u> , Yukie Osako, Kazuhiko Ishihara and Shin-ichi Yusa (Japan)311
			3P-G6-100b		Stabilization of higher-order structure of polypeptides by dynamic thiol / thioester exchange on their side-chains
					<u>Yuki Inoue</u> , Hisanori Shibasaki, Akio Takahashi and Toshiyuki Oyama (Japan)312
			3P-G6-101a		Effect of Acid Hydrolysis on the Preparation of Banana Starch Nanocrystals as Reinforcing Filler
					<u>Jittiporn Saeng-on</u> and Duangdao Aht-Ong (Thailand)313
			3P-G6-102b		Degradation profile of polyesters by a biodegradable plastic-degrading enzyme of a yeast isolated from plant
					<u>Azusa SAIKA</u> , Shun SATO, Yukiko SHINOZAKI, Ken SUZUKI, Takashi WATANABE, Hiroshi HABE, Tomotake MORITA and Hiroko KITAMOTO (Japan)314
			3P-G6-103a		Structure-activity relationship of glycodendrimers with sulfated oligosaccharides
					<u>Shuqin Han</u> and Takashi Yoshida (Japan)315
			3P-G6-104b		Plasma-polymerized films of amphiphilic molecules with antioxidant ability and corrosion protection ability
					<u>Ryohei Kawamura</u> , Daisuke Ishii, Hiroshi Suzuki, Yasuharu Takaku, Takahiko Hariyama and Masatsugu Shimomura (Japan)316
			3P-G6-105a		Lignin and protein - A new index for molecular conformation of lignins -
					<u>Yukiko Kawamura</u> and Masamitsu Funaoka (Japan)317
			3P-G6-106b		A novel process for selective control of C ₂ -aryl ethers, the most frequent interunit linkages
					<u>Haruka Mizutani</u> and Masamitsu Funaoka (Japan)318
			3P-G6-107a		Molecular design of thermoresponsive core-corona type nanospheres with well-defined corona layer for diagnosis
					<u>Takuya Matsuyama</u> , Taka-Aki Asoh, Ryo Ishihara and Akihiko Kikuchi (Japan)319
			3P-G6-108b		Synthesis and anti-thrombotic evaluation of novel

	PHEMA analogs having different side-chain structures <u>Sanqi Gan</u> , Shingo Kobayashi and Masaru Tanaka (Japan) 320	3P-G6-122b	Activation of a Doxorubicin Prodrug with β -galactosidase@PICsomes for Anti-Tumor Therapy <u>Yasutaka Anraku</u> , Ling Xiao, Horacio Cabral, Daiki Sueyoshi, Shigeto Fukushima, Mako Kamiya, Yasuteru Urano, Akihiro Kishimura, Nobuhiro Nishiyama and Kazunori Kataoka (Japan) 334
3P-G6-109a	Synthesis of novel polymers having precisely placed tetrahydrofurfuryl side-chain branches via regioselective ring-opening metathesis polymerization and their blood compatibility evaluation <u>Maiko Kataoka</u> , Yukihisa Iwata, Shingo Kobayashi and Masaru Tanaka (Japan) 321	3P-G6-123a	Effects of UV rays upon spider silk <u>Takashi Matsuhira</u> and Shigeyoshi Osaki (Japan) 335
3P-G6-110b	Preparation and characterization of the hydrolytic enzyme incorporated nonwoven fabric. <u>Kentaro Ichiki</u> , Syuhei Koeda, Tosihisa Mizuno, Norihiko Iwanaga, Akiko Obata and Toshihiro Kasuga (Japan) 322	3P-G6-124b	Synthesis and blood-compatibility evaluation of novel PMEA analogs having precisely placed side-chain branches. <u>Keisuke Herai</u> , Kousaku Fukuda, Shingo Kobayashi and Masaru Tanaka (Japan) 336
3P-G6-111a	Design of polyplex micelles with ATP-responsive cross-linker for gene delivery -Optimization of introduction ratio of phenylboronic acid and gluconic acid derivative into cationic segments of PEG block cations for increased stability- <u>Naoto Yoshinaga</u> , Takehiko Ishii, Taisuke Endo, Mitsuru Naito, Satoshi Uchida, Kensuke Osada and Kazunori Kataoka (Japan) 323	3P-G6-125a	Development of Amphiphilic Oligo(ethylene glycol)s with Geometric Structures <u>Adam M. Wawro</u> , Takahiro Muraoka and Kazushi Kinbara (Japan) 337
3P-G6-112b	Immobilization of photosystem I into silica/polymer hybrid gels <u>Shuhei Koeda</u> , Toshihisa Mizuno, Tomoyasu Noji, Keisuke Kawakami, Takehisa Dewa, Toshiki Tanaka, Mamoru Nango, Shigeru Itoh, Kazunori Sugiyasu and Masayuki Takeuchi (Japan) 324	3P-G6-126b	Simultaneous delivery of antigen with pH-sensitive polymer-modified liposomes and cytokine gene with lipoplexes for efficient induction of antitumor immune responses <u>Yuuhei Kanda</u> , Eiji Yuba, Kikuya Sugiura, Naoki Sakaguchi, Atsushi Harada and Kenji Kono (Japan) 338
3P-G6-113a	Solubilization of membrane proteins using the polyethylene glycol-appended PG-surfactant <u>Tomoyuki Suzuki</u> , Shuhei Koeda, Keisuke Kawakami, Tomoyasu Noji, Takahisa Dewa, Toshiki Tanaka and Toshihisa Mizuno (Japan) 325	3P-G6-127a	Topological Study of Block Amphiphilic Molecules <u>Rui Li</u> , Takahiro Muraoka and Kazushi Kinbara (Japan) 339
3P-G6-114b	Design of novel PG-surfactants showing antibacterial activity <u>Masahide Shibata</u> , Shuhei Koeda, Ryogo Mitsuhashi, Atsushi Miyagawa, Hatsuo Yamamura, Toshiki Tanaka and Mizuno Toshihisa (Japan) 326	3P-G6-128b	Design of ATP-responsive Molecular Glue <u>Mizuki Sasaki</u> , Kou Okuro and Takuzo Aida (Japan) 340
3P-G6-115a	Synthesis of pH-sensitive hyaluronic acid derivatives and their application to anticancer drug delivery <u>Maiko Miyazaki</u> , Eiji Yuba, Hiroshi Hayashi, Atsushi Harada and Kenji Kono (Japan) 327	3P-G6-129a	Native and modified starch as a filler for rubber blends. <u>Jan Oravec</u> , Jozef Preto Preto, Pavol Melus, Ivan Chodak, Andrea Oravcova Oravcova and Alena Knazeova (Slovak Republic) 341
3P-G6-116b	Thermoresponsive Copolymer Brushes Possessing Quaternary Amine Moieties for Effective Protein Adsorption Chromatography Matrices <u>Kenichi Nagase</u> , Mike Given, Saori Kimura, Jun Kobayashi, Akihiko Kikuchi, Yoshikatsu Akiyama, Dirk W. Grijpma, Hideko Kanazawa and Teruo Okano (Japan) 328	3P-G6-130b	Synthesis and Characterization of Phosphoryl Serine-derived Polymers for Anti-inflammatory. <u>Yasyguri Nakagawa</u> , Atsuhiko Saito, Mitsuhiro Ebara and Takao Aoyagi (Japan) 342
3P-G6-117a	Manipulating the antigen-specific immune responses by particulate adjuvants consisting of amphiphilic poly(amino acid) <u>Takami Akagi</u> , Fumiaki Shima and Mitsuru Akashi (Japan) 329	3P-G6-131a	Growth factor-free, porous tissue adhesive films with angiogenic activity <u>Keiko Yoshizawa</u> , Ryo Mizuta and Tetsushi Taguchi (Japan) 343
3P-G6-118b	Design of poly(oxazoline)-based polyplex micelles with core protective palisades formed by thermo-responsive segments. <u>Shigehito Osawa</u> , Kensuke Osada, Shigehiro Hiki, Takehiko Ishii and Kazunori Kataoka (Japan) 330	3P-G6-132b	Enhanced interfacial strength of surgical sealants composed of hydrophobically modified, cod-derived gelatins and PEG-based crosslinker <u>Ryo Mizuta</u> , Temmei Ito, Keiko Yoshizawa, Mikio Kajiyama, Toshimasa Akiyama, Katsuhiko Kamiya and Tetsushi Taguchi (Japan) 344
3P-G6-119a	Cholesterol-modified siRNA loaded stimuli-responsive polyion complex micelle for siRNA delivery system <u>Mitsuru Naito</u> , Takehiko Ishii, Akira Matsumoto, Kanjiro Miyata, Yuji Miyahara and Kazunori Kataoka (Japan) 331	3P-G6-133a	Design of novel artificial matrix to protect the graft cells and to enhance the cell ability <u>Tadashi Nakaji-Hirabayashi</u> , Kurumi Fujimoto and Hiromi Kitano (Japan) 345
3P-G6-120b	Delivery of multi-glucose polymers conjugated antibody across the blood-brain barrier <u>Akihiro Mizoguchi</u> , Yasutaka Anraku, Yu Fukusato, Hiroya Kuwahara, Takanori Yokota and Kazunori Kataoka (Japan) 332	3P-G6-134b	Chimeric protein-immobilized substrate for the culture of hiPSC maintained the pluripotency <u>Saki Furukawa</u> , Hiromi Kitano and Tadashi Nakaji-Hirabayashi (Japan) 346
3P-G6-121a	Polymeric micelles loaded with platinum anticancer drugs target preangiogenic micrometastatic niches associated with inflammation <u>Hailiang Wu</u> , Horacio Cabral, Kazuko Toh, Peng Mi, Yu Matsumoto, Jooyeon AHN, Hiroaki Kinoh, Nobuhiro Nishiyama, Yutaka Miura and Kazunori Kataoka (Japan) 333	3P-G6-135a	Cellulosic Smart Bundled Gel Fiber with Switchable Properties for Biomaterials Applications <u>Young-Jin Kim</u> , Yuta Takahashi, Norihiro Kato and Yukiko T. Matsunaga (Japan) 347
		3P-G6-136b	Synthesis, characterization and optimization of Polyhydroxibutirates from microbiological strains using statistical tools. <u>M. E. Lozano Pérez</u> , J. R. Cerna Cortez, J. L. Gárate Morales, R. Aguilar Sánchez and A. Lóez García (Mexico) 348
		Thursday, December 4	
		S-1 Progress in Synthetic Polymer Chemistry	
		4P-S1-001a	Synthesis of Fluorene-based π -Conjugated Polymers via Sequential Bromination and Direct Arylation Polycondensation <u>Hitoshi Saito</u> , Junpei Kuwabara and Takaki Kanbara (Japan) 349
		4P-S1-002b	Preparation and Characterization of Alternating Copolymers Containing Fluorene and Thiophene

	Derivatives		
4P-S1-003a	<u>Chin-Yang Yu</u> and Wei-Lun Lin (Taiwan)350 Structural Control of One-handed Helical Foldamer Consisting of C ₂ -Chiral Spirobifluorene and Oligothiophene and Its Applicable Usage <u>Hiromitsu Sogawa</u> , Hitoshi Okuda and Toshikazu Takata (Japan)351	4P-S1-020b	combined olefin metathesis and Wittig-type coupling <u>Takashi Fujio</u> , Akiko Inagaki and Kotohiro Nomura (Japan)367
4P-S1-004b	Ru-Catalyzed Polycondensation of Phenylpyridine Derivatives and Aromatic Dihalides Through C-H Activation Process <u>Akira Yamashita</u> , Hiroki Nishiyama, Shinsuke Inagi and Ikuyoshi Tomita (Japan)352	4P-S1-021a	Precise synthesis of thiophene containing linear/star conjugated polymers by olefin metathesis <u>Tomohiro Miwata</u> , Kenji Takamizu, Yuko Matsusaka, Yves Geerts, Akiko Inagaki and Kotohiro Nomura (Japan)368
4P-S1-005a	Synthesis of π -Conjugated Polymer Thin Films by Electropolymerization of Functional Thiophene Oligomers via Titanacycle Intermediates <u>Hidenari Kanetaka</u> , Shiori Kawamata, Hiroki Nishiyama, Shinsuke Inagi and Ikuyoshi Tomita (Japan)353	4P-S1-022b	Helix-Sense-Selective Polymerization of 3,5-Bis(hydroxymethyl)phenylacetylenes Bearing Functional Aryl Groups and the Optically Active Helix Transformation of the Optically Inactive Polymers by Chiral Solvation <u>Zhichun Shi</u> , Masahiro Teraguchi, Toshiki Aoki and Takashi Kaneko (Japan)369
4P-S1-006b	Reactivity and Properties of Cross-linked Polymers Containing Diarylbibenzofuranone in Hard or Soft Domains Prepared by Sol-gel Method <u>Takahiro Kosuge</u> , Keiichi Imato, Tomoyuki Ohishi, Raita Goseki and Hideyuki Otsuka (Japan)354	4P-S1-023a	Development of New Initiating Systems for Pd-mediated Polymerization of Alkyl Diazoacetates. <u>Kazuki Yamashita</u> , Junya Kawamata, Hiroaki Shimomoto, Tomomichi Itoh and Eiji Ihara (Japan)370
4P-S1-007a	Mechanochromic Property of Polymers with Diarylbibenzofuranone Functionality in the Center of Structures <u>Hironori Oka</u> , Keiichi Imato, Tomoya Sato, Tomoyuki Ohishi, Raita Goseki and Hideyuki Otsuka (Japan)355	4P-S1-023a	Attempts to control polymerization of diazocarbonyl compounds: Polymerization of alkyl diazoacetates using π -allylPd-based initiating systems in the presence of various additives <u>Moemi Nakajima</u> , Hiroaki Shimomoto, Tomomichi Itoh and Eiji Ihara (Japan)371
4P-S1-008b	Initiation of radical polymerization by brief exposure to ultrahigh temperature <u>Keigo Kinoshita</u> and Shigeru Deguchi (Japan)356	4P-S1-024b	Pd-initiated Polymerization of Cyclophosphazene-containing Diazoacetates <u>Hironori Asano</u> , Hiroaki Shimomoto, Tomomichi Itoh and Eiji Ihara (Japan)372
4P-S1-009a	RAFT-mediated emulsion polymerization of chloroprene <u>Yuhei Ishigaki</u> and Hideharu Mori (Japan)357	4P-S1-025a	Pd-initiated Polymerization of Pyrene-containing Diazoacetates and Photophysical Properties of the Resulting Polymers <u>Tatsuya Oda</u> , Hiroaki Shimomoto, Tomomichi Itoh, Eiji Ihara, Yukihide Ishibashi and Tsuyoshi Asahi (Japan)373
4P-S1-010b	Initiation of Cationic Polymerization by Benzyl Cation <u>Li Lin</u> , Guang Y Zhang and Takuji Hirose (Japan)358	4P-S1-026b	Synthesis and Proton Conductivity of Poly(substituted methylene)s with Phosphonyl and Sulfonyl Groups <u>Akira Oda</u> , Motoki Kanayama, Hiroaki Shimomoto, Tomomichi Itoh, Eiji Ihara, Naohiro Hoshikawa, Akihiko Koiwai and Naoki Hasegawa (Japan)374
4P-S1-011a	Functional Degradable Polymers of Various Sequences by Controlled Cationic Copolymerization of Aldehydes and Vinyl Ethers with Functional Moieties <u>Suzuka Matsumoto</u> , Arihiro Kanazawa, Shokyoku Kanaoka and Sadahito Aoshima (Japan)359	4P-S1-027a	Development of New Synthetic Method for Poly(arylene vinylene)s: Transition-metal-catalyzed Polycondensation of Arylene Bis(diazoacetate)s <u>Hiroaki Shimomoto</u> , Takaaki Moriya, Tomomichi Itoh and Eiji Ihara (Japan)375
4P-S1-012b	Fast and Quantitative Synthesis of Core Cross-Linked Star Poly(alkoxystyrene)s with Low Polydispersity via Living Cationic Polymerization <u>Tomoya Yoshizaki</u> , Arihiro Kanazawa, Shokyoku Kanaoka and Sadahito Aoshima (Japan)360	S-2 Progress in Polymer Physics	
4P-S1-013a	Facile Synthesis for Multibranch Copolymers Based on Selective Initiation of Acetals of Monomers and/or Polymers in Controlled Cationic Polymerization <u>Norifumi Yokoyama</u> , Arihiro Kanazawa, Shokyoku Kanaoka and Sadahito Aoshima (Japan)361	4P-S2-030b	Dilute solution properties of ring polystyrenes with multi-legs <u>Yuya Doi</u> , Atsushi Takano, Yoshiaki Takahashi and Yushu Matsushita (Japan)376
4P-S1-014b	Star Polymer Synthesis by “Docking” of Linear Living Polymers to Well-Defined Reactive Microgel: A New Strategy for Better Structure Control <u>Tatsuya Suzuki</u> , Arihiro Kanazawa, Shokyoku Kanaoka and Sadahito Aoshima (Japan)362	4P-S2-031a	Stress distribution of filler-reinforced rubber investigated by nano-palpatation atomic force microscope <u>Ken Nakajima</u> , Xiaobin Liang, Makiko Ito and So Fujinami (Japan)377
4P-S1-015a	Transmutable Linear and Star Copolymers with Acid-Labile “Cut Lines”, Sequences, and/or Networks: Innovative Design, Precision Synthesis, and Acid-Triggered Transformation <u>Marie Kawamura</u> , Arihiro Kanazawa, Syokyoku Kanaoka and Sadahito Aoshima (Japan)363	4P-S2-032b	Capturing Mechanical Behavior of a Single Polymer Chain via Internal Fracture Analysis of Double Network Hydrogels <u>Tasuku Nakajima</u> , Takahiro Matsuda, Takayuki Kurokawa, Takamasa Sakai, Ung-il Chung and Jian Ping Gong (Japan)378
4P-S1-016b	Precision Synthesis of Polymer-Supported Catalysts using Polymer Gels or Star Polymers with Microgel Core and Controlled Cationic Polymerization <u>Ryohei Saitoh</u> , Arihiro Kanazawa, Shokyoku Kanaoka and Sadahito Aoshima (Japan)364	4P-S2-033a	High-strength Poly(vinyl alcohol) with Young’s modulus over 140GPa prepared throughout Freeze/thaw cycle method <u>Naohiro Onjo</u> , Taishi Fukumori and Takahiko Nakaoki (Japan)379
4P-S1-017a	Precise Synthesis of New Cyclic Olefin Copolymers by Ethylene Copolymerizations using Nonbridged Half-Titanocene Catalysts <u>Srisuda Patamma</u> and Kotohiro Nomura (Japan)365	4P-S2-034b	Temperature changes in molecular conformation and intermolecular interactions of poly(dialkylsilane) in solution <u>Jiang Xinyue</u> , Terao Ken, Chung Woojung and Naito Masanobu (Japan)380
4P-S1-018b	Synthesis of End-Functionalized Poly(arylene vinylene)s by Acyclic Diene Metathesis (ADMET) Condensation and Chain Transfer Reaction <u>Tomonari Miyashita</u> , Akiko Inagaki and Kotohiro Nomura (Japan)366	4P-S2-035a	Dielectric Study on the Dynamics of Polar Guest Molecules in sPS Cocrystals <u>Hideo Kobayashi</u> , Sho Akazawa, Osamu Urakawa, Fumitoshi Kaneko and Tadashi Inoue (Japan)381
4P-S1-019a	Precise synthesis of star-shaped conjugated molecules by		

4P-S2-036b	Nanocrystallization Phase Separation: New Route on Fabrication Methodology of Mesoporous Polymers <u>Sadaki Samitsu</u> , Mohan Raj Krishnan, Yoshihisa Fujii and Izumi Ichinose (Japan)382	4P-G1-055a	Synthesis and Adhesion Behavior of Chemically Cross-linked Polymers Having Thermally Induced Radical Crossover Units <u>Keita Akamine</u> , Yuji Higaki, Hideyuki Otsuka, Ken Kojio and Atsushi Takahara (Japan)399
4P-S2-037a	Removal of chromium ions from aqueous medium with grafted polyethylene films <u>Yuji Kimura</u> , Hiromichi Asamoto, Kazunori Yamada and Hiroaki Minamisawa (Japan)383	4P-G1-056b	Synthesis and Self-Assembly of Polystyrene- <i>b</i> -Hyperbranched Polyamide and Polystyrene- <i>b</i> -Linear Polyamide <u>Yoshihiro Ohta</u> , Chih-Feng Huang, Yi-Huan Lee, Chi-An Dai and Tsutomu Yokozawa (Japan)400
G-1 Polymer Synthesis and Reactions			
4P-G1-040b	Improving the Understanding and Control of Polymer Synthesis Using Real-Time In Situ FTIR <u>Yuki Hara</u> , Jennifer Andrews and Laurent Zoppi (Japan)384	4P-G1-057a	Isotactic-specific radical polymerization of N-vinyl-2-pyrrolidone <u>Tomohiro Hirano</u> , Yuya Miyamoto, Shinya Amano, Kazuya Tatsumi, Miyuki Oshimura and Koichi Ute (Japan)401
4P-G1-041a	Synthesis of cyclic block copolymer via end-rotaxanation of linear polymer directed towards linear-cyclic polymer topology conversion <u>Stephanie Valentina</u> , Takahiro Ogawa, Kazuko Nakazono, Satoshi Uchida and Toshikazu Takata (Japan)385	4P-G1-058b	Synthesis and Characterization of Main- and Side-Chain-Sequenced Polymers from Maleimide-Functionalized Sequence-Regulated Acrylate/Styrene Trimers <u>Takamasa Soejima</u> , Kotaro Satoh and Masami Kamigaito (Japan)402
4P-G1-042b	Synthesis and Characterization of GAP-HTPB-GAP Copolymers as for energetic binder <u>Yadollah Bayat</u> , Mostafa Ghorbani, Mahvash Mossahebi Mohammadi and Melika Ghorbanian (Iran)386	4P-G1-059a	Unidirectional and Bidirectional Transfer of Catalyst in Catalyst-Transfer Condensation Polymerization <u>Masataka Nojima</u> , Koichiro Mikami, Yui Masumoto, Yoshihide Mizukoshi, Hajime Satho, Yoshihiro Ohta, Masanobu Uchiyama and Tsutomu Yokozawa (Japan)403
4P-G1-043a	Study of radical polymerization mechanism of acrylamide derivatives in the presence of Li salts <u>Yoshitaka Kurano</u> , Yohei Miwa, Miyuki Oshimura, Tomohiro Hirano and Koichi Ute (Japan)387	4P-G1-060b	Analysis of monomer sequence of copolymers obtained by partial hydrolysis of poly(benzyl methacrylate) <u>Chihlung Chiu</u> , Manato Harada, Tomohiro Hirano and Koichi Ute (Taiwan)404
4P-G1-044b	Precise synthesis, assembled structure, and chiroptical properties of zwitterionic block copolymers by RAFT polymerization of a lysine-containing acrylamide <u>YEHAN Qiao</u> , KAZUHIRO Nakabayashi and HIDEHARU Mori (Japan)388	4P-G1-061a	Stereospecific radical polymerization of methacrylamide derivatives <u>Junpei Hahimoto</u> , Tadashi Segata, Miyuki Oshimura, Tomohiro Hirano and Koichi Ute (Japan)405
4P-G1-045a	Precise Synthesis of Cationic Polymers by RAFT Polymerization of N-Vinyltriazolium Salt Derivatives <u>Akiko Umeda</u> , Kazuhiro Nakabayashi and Hideharu Mori (Japan)389	4P-G1-062b	Functionalization of Polyesters by transesterification in the Presence of Dilithium tetra-tert-Butylzincate <u>Yuki Oda</u> , Ryo Okazaki, Miyuki Oshimura, Tomohiro Hirano and Koichi Ute (Japan)406
4P-G1-046b	Synthesis of amino acid-based star polymers with dual-stimuli-responsive property and end-group modifications <u>Mai Nakayama</u> , Kazuhiro Nakabayashi and Hideharu Mori (Japan)390	4P-G1-063a	Polyisoprene modified silica particles by surface initiated living anionic polymerization and properties of the composites therefrom <u>Takazumi TAWA</u> , Kyoko TAKAHASHI, Kaoru ADACHI and Yasuhisa TSUKAHARA (Japan)407
4P-G1-047a	In Situ Various Block Copolymer Self-Assemblies via RAFT Aqueous Dispersion Polymerization <u>Ma'Radzi Akmal Hadi</u> , Sugihara Shinji, Ida Shota and Maeda Yasushi (Japan)391	4P-G1-064b	Solid polymer electrolytes for lithium ion batteries Andreas Bergfelt and <u>Tim Bowden</u> (Sweden)408
4P-G1-048b	Analysis of monomer sequence of copolymers obtained by polymer reactions of isotactic and syndiotactic poly(benzyl methacrylate)s <u>Mingyeh Chuang</u> , Yuchin Hsu, Chihlung Chiu, Kouji Funaoka, Tomohiro Hirano and Koichi Ute (Japan)392	4P-G1-065a	Synthesis of Optically-Active Poly(mandelic acid)s Obtained by Direct Polycondensation Using Onium Salt Catalysts <u>Takahiro Hiura</u> , Miyuki Oshimura, Akinori Saito, Makoto Fukuoka, Yusuke Hemmi, Hikaru Momose, Tomohiro Hirano and Koichi Ute (Japan)409
4P-G1-049a	Synthesis of (A- <i>b</i> -B) _n Star-Shaped Block Copolymers and Their Microphase-separated Structures <u>Hisanori Uematsu</u> , Yoshihito Ishida and Atsushi Kameyama (Japan)393	4P-G1-066b	Synthesis of Self-standing 2D Polymer Membranes (6) 2D polycondensation of columnar supramolecular polymers prepared by highly selective photocyclic aromatization of cis-cisoidal poly(phenylacetylene) membranes <u>Yuya Katsushika</u> , Kyohei Yamashita, Mari Miyata, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki and Kenichi Shinohara (Japan)410
4P-G1-050b	pH-Sensitive C-ON Bond Homolysis of Alkoxyamines of Imidazole Series: a Theoretical Study <u>Dmitriy Parkhomenko</u> , Mariya Edeleva, Vitaly Kiselev and Elena Bagryanskaya (Russia)394	4P-G1-067a	N-Containing 1,7-octadiyne derivatives for living cyclopolymerization using Grubbs catalysts <u>Jung-Ah Song</u> and Tae-Lim Choi (Korea)411
4P-G1-051a	Control of end-functionalized polyesters by mean of AA+BB polycondensation with a solid-phase reagents <u>Toshihiko Sugiura</u> , Yoshihiro Ohta and Tsutomu Yokozawa (Japan)395	4P-G1-068b	Preparation of a Library of Poly(N-sulfonylimidates) by Cu-Catalyzed Multicomponent Polymerization Hyunseok Kim and <u>Tae-Lim Choi</u> (Korea)412
4P-G1-052b	Preparation of polymer brushes with well-controlled stereoregularity by using a living anionic polymerization method and characterization of its hierarchical structure. <u>Masanao Sato</u> , Kevin L. White, Yuji Higaki, Ken Kojio, Tomoyasu Hirai and atsushi Takahara (Japan)396	4P-G1-069a	Tandem Ring Opening/Ring Closing Metathesis Polymerization & Multiple Olefin Metathesis Polymerization with Dicycloalkene derivatives <u>Ho-keun Lee</u> and Tae-Lim Choi (Korea)413
4P-G1-053a	Preparation of polyureas from aliphatic diamines and carbon dioxide using ionic liquids <u>Masaru Yoneyama</u> and Hiroki Hashizume (Japan)397	4P-G1-070b	One-Shot Synthesis/in Situ Fabrication of Polyacetylene Block-Like Copolymer Nanostructures by Ring Opening Metathesis Polymerization <u>Suyong Shin</u> , Ki-Young Yoon and Tae-Lim Choi (Korea)414
4P-G1-054b	Living Cationic Polymerization via Thioether-Mediated Degenerative Chain Transfer <u>Mineto Uchiyama</u> , Kotaro Satoh and Masami Kamigaito (Japan)398		

4P-G1-071a	Thermoresponsive Polymers of UCST Type for Biomedical Applications Fangyao Liu and Seema Agarwal (Germany)	415	<u>Kohsuke Minato</u> , Kazuaki Kato, Koichi Mayumi, Yasuhiro Sakai, Hideaki Yokoyama and Kohzo Ito (Japan)	433
G-2 Structures and Physical Properties of Polymers				
4P-G2-074b	Preparation and Characterization of Poly (Acrylonitrile-co-Methyl Methacrylate) and formation of Nanoparticles for the immobilization of proteins <u>Mohamed El-Aassar</u> , Mohamed Mohy Eldin, Ahmed Elzatahry and Mohsen Al-Sabah (Egypt, Arab Rep.)	416	4P-G2-092b	Structure of Polymer Spherulites Grown from Cavities <u>Masato Hashimoto</u> and Susumu Fujiwara (Japan)
4P-G2-075a	Reversibility of the aggregation process using thermosensitive polymers <u>Marcin Lemanowicz</u> , Wojciech Kuznik and Andrzej Gierczycki (Poland)	417	4P-G2-093a	Interesting Phase Behavior in Blends of Poly(L-lactic acid) and Poly(butylene succinate) <u>Xiaocan Zhang</u> and Qiang Liu (China)
4P-G2-076b	Systematical Conformation Search of Helical Dialkyloligosilane Nozomu Suzuki, Michiya Fujiki and <u>Julian Koe</u> (Japan)	418	4P-G2-094b	Improvement of antifouling property of polysulfone membrane using Poly(ethylene glycol) diamine as modifying agent Watchanida Chinpa and <u>Atjima Homjun</u> (Thailand) .
4P-G2-077a	<i>withdrawn</i>		4P-G2-095a	Molecular Aggregation Structure and Mechanical Properties of Multiblock Elastic Copolymers with Polyaromatic Moieties in the Main Chain <u>Yudai Kiyoshima</u> , Hirofumi Kabayama, Noboru Ohta, Yuji Higaki, Ken Kojio and Atsushi Takahara (Japan)
4P-G2-078b	Influence of alkyl chain length in acrylate monomers on the phase separation induced by photo-polymerization <u>Rie Kawakubo</u> , Hideyuki Nakanishi, Tomohisa Norisuye and Qui Tran-Cong-Miyata (Japan)	420	4P-G2-096b	Toughening of Gels by Introduction of Phase Separated Structure: Effect of Solvent Chemical Species <u>Koshiro SATO</u> , Toshiyuki HISAMATSU, Tasuku NAKAJIMA, Takayuki KUROKAWA and Jian Ping GONG (Japan)
4P-G2-079a	Effect of molding temperature and glycerol content on the properties of wheat gluten bioplastics. <u>Munlika Bootklad</u> and Asst. Prof. Dr. Kaewta Kaewtatip (Thailand)	421	4P-G2-097a	Influence of the Spacer on the Dilute Solution Properties of the Rod Brushes <u>Yuta Saito</u> , Kikuchi Moriya, Narumi Atsushi and Kawaguchi Seigou (Japan)
4P-G2-080b	Study on the Correlation between Entanglement Points' Density of Molecular Chains of PEM with Relative Humidity <u>Kenjiro Marui</u> , Isamu Riku and Koji Mimura (Japan)	422	4P-G2-098b	"Nonswellable" Hydrogel With Highly Elastic Deformability <u>Hiroyuki Kamata</u> , Ung-il Chung and Takamasa Sakai (Japan)
4P-G2-081a	Chiral Polymer and its Shear Piezoelectricity <u>Kazuhiro Tanimoto</u> , Yoshiro Tajitsu and Yuki Shiomi (Japan)	423	4P-G2-099a	Effect of solvents on hot-pressing hydrogelation process of poly(vinyl alcohol) <u>Tomoyo Sakaguchi</u> , Shusaku Nagano, Mitsuo Hara and Kazuaki Matsumura (Japan)
4P-G2-082b	Numerical Simulation of Mechanical Deformation Behavior of DN Gel under Cyclic Loading Condition <u>Isamu Riku</u> , Ryo Naruse and Koji Mimura (Japan) ..	424	4P-G2-100b	Mechanical Properties of Homogeneous Amphiphilic Co-networks <u>Shinji Kondo</u> , Ung-il Chung and Takamasa Sakai (Japan)
4P-G2-083a	Crystal structure of highly-stereoregular hydrogenated ring-opened polynorbornene <u>Yuki Nakama</u> , Shigetaka Hayano and Kohji Tashiro (Japan)	425	4P-G2-101a	Crystallization of Poly(L-lactic acid) at Different Interfaces <u>Futoshi MATSUDA</u> , Satoshi IRIE and Takashi SASAKI (Japan)
4P-G2-084b	Improvement of Piezoelectric Performance of Poly(lactic acid) Film using a Solid-State Extrusion Processing <u>Mitsunobu Yoshida</u> , Takayuki Onogi, Katsuki Onishi, Takuma Inagaki and Yoshiro Tajitsu (Japan)	426	4P-G2-102b	The fabrication of the porous structures using block copolymer and mixed solvents <u>Toshiharu Sanada</u> , Kohzo Ito and Hideaki Yokoyama (Japan)
4P-G2-085a	Thermally Stable Oil Gel from Partially Miscible Mixtures of Styrene-Butadiene-Styrene Triblock Copolymers and Poly(phenylene ether) <u>Koichi Kato</u> , Yasuhiro Matsuda and Shigeru Tasaka (Japan)	427	4P-G2-103a	Effects of the ring and backbone structures on molecular dynamics in polyrotaxanes and slide-ring materials <u>Tomoki Mizusawa</u> , Kazuaki Kato, Koichi Mayumi, Hideaki Yokoyama and Kohzo Ito (Japan)
4P-G2-086b	Network structure and mechanical properties of IPN gels prepared by click reaction and ring-opening polymerization <u>Kazumasa Moriyama</u> , Naofumi Naga, Megumi Kobayashi and Hidemitsu Furukawa (Japan)	428	4P-G2-104b	Synthesis and mechanical properties of slide-ring materials cross-linked via nanoparticles <u>Daisuke Matsui</u> , Kazuaki Kato, Koichi Mayumi, Yasuhiro Sakai, Hideaki Yokoyama and Kohzo Ito (Japan)
4P-G2-087a	Comparison the effect of coconut coir and commercial cellulose on the properties of the starch foam <u>Kaewta Kaewtatip</u> , Soraya Tumngong and Kanlaya Pornsuksomboon (Thailand)	429	4P-G2-105a	Evaluation of Physical Properties of Bio-related Polymers based on Energy Dissipation of a Quartz-crystal Microbalance <u>Shenyao Xue</u> , Shingo Kobayashi, Masaru Tanaka and Hiroyuki Furusawa (Japan)
4P-G2-088b	Synthesis and properties of ion-gels using thiol-ene reaction of joint and spacer molecules in an ionic liquid <u>Naofumi Naga</u> , Yuki Takimoto, Kensuke Fujiwara, Hidemitsu Furukawa, Satoru Imaizumi, Hisashi Kokubo and Masayoshi Watanabe (Japan)	430	4P-G2-106b	Effect of chain architecture of ester-polyol bearing secondary hydroxyl groups on network structure and mechanical properties of polyurethane elastomers <u>Shuhei Nozaki</u> , Suguru Motokucho, Kohji Yoshinaga, Tomoyasu Hirai, Yuji Higaki, Ken Kojio and Atsushi Takahara (Japan)
4P-G2-089a	Preparation of baked foams based on native starch and hydroxypropyld starch <u>Kanlaya Pornsuksomboon</u> and Asst. Prof. Dr. Kaewta Kaewtatip (Thailand)	431	4P-G2-107a	Effect of the density of ring components on the elasticity of slide-ring gels <u>Yoshinori Okabe</u> , Yuya Okazumi, Kazuaki Kato, Koichi Mayumi, Hideaki Yokoyama and Kohzo Ito (Japan) ..
4P-G2-090b	The correlation of microblock, phase morphology and mechanical loss in styrene-butadiene rubber <u>Xiaoyu Meng</u> , Xu Liu, Ziqing Cai, Chuanbo Cong and Qiong Zhou (China)	432	4P-G2-108b	Thermal Conductivity of Nano-porous Polymers <u>Motoi Shiraga</u> , Hideaki Yokoyama, Kohzo Ito, Yasuhiro Sakai and Kenji Sugiyama (Japan)
4P-G2-091a	Synthesis of Slide-Ring Material focusing on cross-linking bond		4P-G2-109a	Aggregation Structure and Photodynamics in

	Poly(3-hexylthiophene) Fiber Mat <u>Xiaotong Zhou</u> , Yudai Ogata, Daisuke Kawaguchi and Keiji Tanaka (Japan)	451
4P-G2-110b	Molecular dynamics and mechanical properties of slide-ring gels <u>Koichi Mayumi</u> and Kohzo Ito (Japan)	452
4P-G2-111a	Terahertz Time Domain Spectroscopy of Poly (Propylene Glycol)s <u>Shota Koda</u> , Tatsuya Mori and Seiji Kojima (Japan)	453
4P-G2-112b	Materials Analysis by using Small Angle X-ray Scattering Beamlines in Photon Factory <u>Hideaki Takagi</u> , Nobutaka Shimizu, Noriyuki Igarashi, Takeharu Mori, Shinya Saijo, Hiromasa Ohta, Ai Kamijo, Masanori Komuro and Masaharu Nomura (Japan) ...	454
4P-G2-113a	Tethering Effect on Thermal Properties of Poly(ethylene oxide) in Microphase-Separated Liquid Crystalline Amphiphilic Triblock Copolymer <u>Shingo Hadano</u> , Akihiro Shimamoto, Ayano Matsuo, Shigeru Watanabe, Motonori Komura and Tomokazu Iyoda (Japan)	455
4P-G2-114b	2-D and 3-D π -Conjugated Nano-Architectures Prepared by Soft Solution Processes Based on Equilibrium Polycondensation <u>Kaiyo Yanai</u> , Kento Sakamoto and Masashi Kunitake (Japan)	456
4P-G2-115a	Molecular assembly structure and solid-state emission behaviour of aminobenzopyranoxanthene dye. <u>Masaru Tanioka</u> , Shinichiro Kamino, Masashi Ueda, Daisuke Sawada and Shuichi Enomoto (Japan)	457
4P-G2-116b	Conformation of the Cellulose Chain in Ionic Liquids <u>Ayaka Maeda</u> and Takahiro Sato (Japan)	458
4P-G2-117a	Photo-switching mechanism of aminobenzopyrano-xanthene dyes: the relationship between the basicity of the spiro-ring moiety and photophysical properties. <u>Ayako Tohzaka</u> , Shinichiro Kamino, Masashi Ueda, Daisuke Sawada and Shuichi Enomoto (Japan)	459
4P-G2-118b	<i>withdrawn</i>	
4P-G2-119a	Surface modification of hetero-material substrates by plasma treatments for fibroblast cell culture. <u>Wei-Chih Lin</u> , Koichiro Uto, Qinghui Shou, Baiyao Xu, Mitsuhiro Ebara and Takao Aoyagi (Japan)	461
4P-G2-120b	Application of Polystyrene-block-poly(N-vinyl-2-pyrrolidone) Copolymers as Stabilizing Agent for Inorganic Nanoparticles <u>Marcelo (Alexandre) de Farias</u> and Maria (do Carmo) Gonçalves (Brazil)	462
4P-G2-121a	Towards Bi-Supramolecular Systems: Metal Nanoparticles with Liquid Crystal Polymers <u>Peter Ohlendorf</u> and Andreas Greiner (Germany)	463
4P-G2-122b	Formation of nanoscale networks: selectively swelling amphiphilic block copolymers with CO ₂ -expanded liquids <u>Lei Li</u> and Jianliang Gong (China)	464
4P-G2-123a	Thermal Conductivity of Deep Eutectic Ionic Liquid Based Nanofluids Containing Various Surfactant-Doped Polyaniline Nanoparticles <u>Tze Siong Chew</u> , Rusli Daik and Muhammad Azmi Abdul Hamid (Malaysia)	465

G-3 Polymer Processing

4P-G3-126b	Recycling of Poly Lactic Acid Reinforced with Calcium Carbonate by Multiple Processing <u>Samaneh Fazelinejad</u> , Dan Åkesson and Mikael Skrifvars (Sweden)	466
4P-G3-127a	Modification of chemically stable polymeric materials 45. Improvement in the adhesion and coating-printing properties of chemically stable polymeric materials and CFRP. <u>Hitoshi Kanazawa</u> , <u>Aya Inada</u> and Takuto Tanaka (Japan)	467
4P-G3-128b	Optimization Processing Conditions on High Density Polyethylene/Clay Nanocomposites Preparation in an Internal Batch Mixer using Box-Behnken Experimental	

Design <u>Onny Ujianto</u> , Margaret Jollands and Nhol Kao (Australia)	468
--	-----

Friday, December 5

S-3 Frontiers in Complex Macromolecular Systems

5P-S3-001a	UCST Responsive Micelles with Biocompatible Shells <u>Ami Fujihara</u> , Shin-ichi Yusa, Atsushi Maruyama, Naohiko Shimada and Kazuhiko Ishihara (Japan)	469
5P-S3-002b	Solubilization of Fullerene in Water Using Biocompatible Polymer <u>Tetsuya Ohata</u> , Shin-ichi Yusa, Kazuhiko Ishihara and Yasuhiko Iwasaki (Japan)	470
5P-S3-003a	Self-assembly of pseudorotaxane films with reversible crystal phases <u>Masaki Horie</u> , Ya-Ching Tsai and Kai-Jen Chen (Taiwan)	471
5P-S3-004b	Synthesis and Characterization of New Pseudorotaxanes Comprising Organometallic Complexes: Thermally and Photo-Induced Molecular Switches <u>Kai Jen Chen</u> and Masaki Horie (Taiwan)	472
5P-S3-005a	Full Color Fluorescence From RGB Trichromophoric Nanoparticle System Assisted by Dual-FRET in Aqueous Medium Towards Visual Bio-sensing <u>Jinjia XU</u> , Atsuro TAKAI and Masayuki TAKEUCHI (Japan)	473
5P-S3-006b	Macroscopically oriented photonic crystals based on a lamellar structure of inorganic nanosheets <u>Koki Sano</u> , Younsoo Kim, Mingjie Liu, Yasuhiro Ishida, Yasuo Ebina, Takayoshi Sasaki and Takuzo Aida (Japan)	474
5P-S3-007a	Preparation of Supramolecular Polymeric Materials by Vine-Twining Polymerization Using Primer-PolyTHF Conjugate <u>Shota Sasayama</u> , Kazuya Yamamoto, Tomonari Tanaka and Jun-ichi Kadokawa (Japan)	475
5P-S3-008b	Controlled radical copolymerization of vinyl monomers in a porous metal complex with coordinatively unsaturated sites <u>Shuto Mochizuki</u> , Susumu Kitagawa and Takashi Uemura (Japan)	476
5P-S3-009a	Synthesis of Self-standing 2D Polymer Membranes (5): Synthesis and permeation of 2D polymers by 2D polycondensation of imino groups in columnar cis-cisoidal poly(phenylacetylene) with different length of diamines <u>Mari Miyata</u> , Yuya Katsushika, Kyohei Yamashita, Masahiro Teraguchi, Takashi Kaneko, Toshiki Aoki and Kenichi Shinohara (Japan)	477
5P-S3-010b	Construction of Supramolecular polymers Based on Pillar[5]arene Using Dynamic Covalent Bonds <u>Kumiko Yoshikoshi</u> , Tomoki Ogoshi and Tada-aki Yamagishi (Japan)	478
5P-S3-011a	Supramolecular Assemblies Constructed from Monofunctionalized Planar-Chiral Pillar[5]arenes <u>Takuya Furuta</u> , Tomoki Ogoshi and Tada-aki Yamagishi (Japan)	479
5P-S3-012b	Synthesis of [2]Rotaxane Constructed from Liquid Pillar[5]arene <u>Yuko Tamura</u> , Tomoki Ogoshi, Takamichi Aoki and Tada-aki Yamagishi (Japan)	480
5P-S3-013a	Air-Stable Triplet-Triplet Annihilation-Based Photon Upconversion in Supramolecular Assemblies <u>Taku Ogawa</u> , Nobuhiro Yanai and Nobuo Kimizuka (Japan)	481
5P-S3-014b	Development of Supramolecular Polymers using Spiroborate-type Molecular Connecting Modules <u>Mizuki Nakatani</u> , Hiroko Kawanishi, Hiroshi Danjo, Toshifumi Miyazawa, Masatoshi Kawahata and Kentaro Yamaguchi (Japan)	482
5P-S3-015a	Control over pathway complexity in supramolecular polymerization through modulating energetic landscape by molecular design <u>Tomoya Fukui</u> , Soichiro Ogi, Kazunori Sugiyasu and	

	Masayuki Takeuchi (Japan)483	siRNA	
5P-S3-016b	Phase-Crossover Materials: Photo-induced Crystal-to-Ionic Liquid Phase Transition and Controlled Ionic Conductivity of Azobenzene Derivatives <u>Keita Ishiba</u> , Chie Chikara, Yasuhiro Toyama, Mika Kawakita, Masa-aki Morikawa, Teppei Yamada and Nobuo Kimizuka (Japan)484	5P-S4-035a	<u>Montira Tangsangasaksri</u> , Hiroyasu Takemoto, Mitsuru Naito, Xueying Liu, Nobuhiro Nishiyama, Kanjiro Miyata and Kazunori Kataoka (Japan)500
5P-S3-017a	Supramolecular Nanotubes Functioning as Artificial Chaperones and Drug Containers <u>Naohiro Kameta</u> , Mitsutoshi Masuda and Toshimi Shimizu (Japan)485	5P-S4-036b	pH-Triggered Mixed Micelle with High Stability for Cancer Therapy <u>Yi-Chun Chen</u> and Ging-Ho Hsiue (Taiwan)501
5P-S3-018b	Structural theory of peptidyl nano-fibers forming amyloids <u>Hisayuki Morii</u> , Masayuki Nara and Takashi Shimizu (Japan)486	5P-S4-037a	Engineered Films and Microcapsules Assembled from Metal-Phenolic Networks <u>Hiroataka Ejima</u> and Frank Caruso (Japan)502
5P-S3-019a	Mixed Polymer Aggregates Composed of Amphiphilic Polymer and Cholesterol-Containing Homopolymer <u>Sayaka Ohno</u> and Shin-ichi Yusa (Japan)487	5P-S4-037a	Synthesis of Redox/pH -Responsive Gel Particles for Intracellular Drug Delivery <u>Shunsuke Ueno</u> , Akifumi Kawamura, Tadashi Uragami and Takashi Miyata (Japan)503
5P-S3-020b	Biocompatible Polyion Complex Vesicles Covered with Phosphorylcholine Groups <u>Keita Nakai</u> , Shin-ichi Yusa and Kazuhiko Ishihara (Japan)488	5P-S4-038b	Design of Biologically Stimuli-Responsive Nanoparticles That Undergo Changes in Volume in Response to Target Biomolecules <u>Akifumi Kawamura</u> , Tadashi Uragami and Takashi Miyata (Japan)504
5P-S3-021a	Shape Recoverable Composite Gels Consisting of Polymer-Brush-Afforded Particles and Liquid Crystals <u>Yuki Kawata</u> , Takahiro Yamamoto, Hideyuki Kihara and Kohji Ohno (Japan)489	5P-S4-039a	Synthesis of Chitosan-based Nanogels due to the Formation of Hydrophilic Peptide Fiber Network for Protein Delivery Carrier <u>Kaori Fujii</u> , Daisuke Matsukuma and Hidenori Otsuka (Japan)505
5P-S3-022b	Fabrication of hierarchical hydrogels by electrophoretic microgel adhesion <u>Taka-Aki Asoh</u> and Akihiko Kikuchi (Japan)490	5P-S4-040b	DNA- Binding Properties of Polymeric Intercalators with Polymerized Metal-coordination Segment <u>Hirofumi Fujikura</u> , Riichi Takahashi, Daisuke Matsukuma and Hidenori Otsuka (Japan)506
5P-S3-023a	Effect of hydrophobic segments on orientation of the self-assembly of biodegradable block copolymers including a rigid motif at the block junction <u>Kodai MATSUZAKI</u> , Shunsuke SATO, Masaru TANAKA and Kazuki FUKUSHIMA (Japan)491	5P-S4-041a	Drug Release Behavior from Stimuli-Responsive Hydrogels with Controllable Molecular Recognition Sites <u>Kazuya Matsumoto</u> , Akifumi Kawamura, Tadashi Uragami and Takashi Miyata (Japan)507
5P-S3-024b	Picket Fence Polythiophene and its Diblock Copolymers that Afford Microphase Separations Comprising a Stacked and Isolated Polythiophene Ensemble <u>Chengjun Pan</u> , Kazunori Sugiyasu, Junko Aimi, Akira Sato and Masayuki Takeuchi (Japan)492	5P-S4-042b	Preparation of photodegradable hydrogels using activated-ester-type photocleavable crosslinker <u>Fumiki Yanagawa</u> , Shinji Sugiura, Toshiyuki Takagi, Kimio Sumaru and Toshiyuki Kanamori (Japan)508
5P-S3-025a	Effects of Crystallization and Phase Segregation on Nanopatterning of Polymer Blends Induced by Directional Solidification and Epitaxial Crystallization <u>Xin Zhang</u> , Hiroataka Ejima and Naoko Yoshie (Japan)493	5P-S4-043a	Photodegradable hydrogels for optical cell separation from three-dimensional environment <u>Masato Tamura</u> , Fumiki Yanagawa, Shinji Sugiura, Toshiyuki Takagi, Kimio Sumaru, Hirofumi Matsui and Toshiyuki Kanamori (Japan)509
5P-S3-026b	Structure-dependent Redox-activity of PEG-b-Poly(pyridine) and Its Application to Auto-reduction of Noble Metal Ions <u>Daisuke Matsukuma</u> , Akane Takagi, Yukie Maejima and Hidenori Otsuka (Japan)494	5P-S4-044b	Conventional control of gel-forming pH region of biodegradable temperature-responsive injectable polymers <u>Yasuyuki Yoshida</u> , Akinori Kuzuya and Yuichi Ohya (Japan)510
	S-4 Frontiers in Biomedical Polymers	5P-S4-045a	Development of a macromolecular prodrug-type injectable polymer system exhibiting temperature-responsive sol-gel transition and sustained drug release <u>Akihiro Takahashi</u> , Masaya Umezaki, Yasuyuki Yoshida, Akinori Kuzuya and Yuichi Ohya (Japan)511
5P-S4-029a	Phantom Liposomal Carrier with Photoclickable Molecular Glue <u>Tianqi Li</u> , Noriyuki Uchida, Kou Okuro and Takuzo Aida (Japan)495	5P-S4-046b	Microenvironment controllable 3-D MPC polymer hydrogels as cellular matrices <u>Haruka Oda</u> , Tomohiro Konno and Kazuhiko Ishihara (Japan)512
5P-S4-030b	Fabrication of Anisotropic Magnetic Polymer Nanoparticles for Intracellular Stirring Device <u>Kensuke Yoshie</u> , Yuuki Inoue and Kazuhiko Ishihara (Japan)496	5P-S4-047a	How do bioactive molecules affect cells immobilized in layer-by-layer phospholipid polymer hydrogels? <u>Botao Gao</u> , Tomohiro Konno and Kazuhiko Ishihara (Japan)513
5P-S4-031a	Block-type polymers composed of cytocompatible segment and pH responsible segment for developing quantum dots-based intracellular pH probe <u>Yihua Liu</u> , Yuuki Inoue and Kazuhiko Ishihara (Japan)497	5P-S4-048b	Easily functionalized water-soluble ABA-type triblock MPC polymer for preparing tunable hydrogels <u>Surasak Chantasirichot</u> , Yuuki Inoue and Kazuhiko Ishihara (Japan)514
5P-S4-032b	Cell Membrane-permeable and Cytocompatible MPC Polymer Nanoprobes Conjugated with Molecular Beacons <u>Xiaojie Lin</u> , Tomohiro konno and kazuhiko Ishihara (Japan)498	5P-S4-049a	Analysis of protein adsorption force generated at polymer surfaces for designing non-biofouling materials <u>Sho Sakata</u> , Yuuki Inoue and Kazuhiko Ishihara (Japan)515
5P-S4-033a	Oral Nanotherapeutics of Polymeric Redox Nanoparticle for Treatment of Colitis-Associated Colon Cancer <u>Long Binh Vong</u> , Toru Yoshitomi, Hirofumi Matsui and Yukio Nagasaki (Japan)499	5P-S4-050b	Analysis of Initial cell adhesion on phospholipid polymer brush surface unrecognized from proteins <u>Yuuki Inoue</u> and Kazuhiko Ishihara (Japan)516
5P-S4-034b	Development of Charge-conversion Polymer-installed Polymeric Micelles for Enhanced Endosomal Escape of	5P-S4-051a	Intercellular signaling proteins-immobilized MPC polymer brush surface for quantitative investigation of cell-cell interactions <u>Harue Togawa</u> , Yuuki Inoue and Kazuhiko Ishihara

5P-S4-052b	(Japan) 517 Synthesis and organocatalytic ring-opening polymerization of cyclic carbonyl monomers with an ether substituent <u>Takayuki OTA</u> , Meng-Yu TSAI, Kazuki FUKUSHIMA and Masaru TANAKA (Japan) 518	5P-S6-070b	Importance of quenching method in photoconductivity in triphenylamine-based photorefractive polymer composites <u>Sho Tsujimura</u> , Takashi Fujihara, Takafumi Sassa, Kenji Kinashi, Wataru Sakai, Koji Ishibashi and Naoto Tsutsumi (Japan) 534
5P-S4-053a	Synthesis of novel regioregular polymers having amide side-chains via regioselective ring-opening metathesis polymerization and their biocompatibility evaluation. Kohei Ohsawa, Shingo Kobayashi and <u>Masaru Tanaka</u> (Japan) 519	5P-S6-071a	Triplet Energy Migration and Photon Upconversion in Organic Crystals <u>Masanori Hosoyamada</u> , Nobuhiro Yanai and Nobuo Kimizuka (Japan) 535
5P-S4-054b	Synthesis of regioregular poly(3,4-dimethoxycyclooctene) via regioselective ring-opening metathesis polymerization and their antithrombotic evaluation. antithrombotic evaluation. <u>Kosaku Fukuda</u> , Keisuke Herai, Shingo Kobayashi and Masaru Tanaka (Japan) 520	5P-S6-072b	Development of high transparent conductive polymer thin film: PEDOT thin film based on cellulose sulfate <u>Maki Horikawa</u> , Shoji Nagaoka, Takanori Fujiki, Tomohiro Shirotsuki, Katsumasa Yamamoto, Hideo Sakurai, Makoto Takafuji and Hirotsugu Ihara (Japan) 536
5P-S4-055a	Surface modification of poly(vinyl alcohol) hydrogel by graft polymerization of betaine polymer <u>Yuki Hirano</u> , Takashi Hayami, Sachi Yoshikawa, Ryouichi Sirasaki, Koji Morimoto and Kazuaki Matsumura (Japan) 521	5P-S6-073a	Efficient Photon Upconversion in Fluorescent Ionic Liquids by Optimizing Dye Arrangements <u>Shota Hisamitsu</u> , Nobuhiro Yanai and Nobuo Kimizuka (Japan) 537
5P-S4-056b	Characterization of PIPAAm modified PDMS surfaces as temperature-responsive cell culture surfaces <u>Yoshikatsu Akiyama</u> , Miki Matsuyama, Naoya Takeda, Masayuki Yamato and Teruo Okano (Japan) 522	5P-S6-074b	Electrical and Optical Properties of Rare Earth Salt Doped PPV Derivatives Synthesized Via Microwave Irradiation Technique <u>Famiza Abdul Latif</u> , FITRAH HADIP and KAMARIAH MUDA (Malaysia) 538
5P-S4-057a	Interaction of fibroblast with polysaccharide composite films obtained by hot-press technique <u>Kazutoshi Iijima</u> , Yuna Tsuji, Atsushi Kakimoto, Rie Ninomiya, Takuya Iyoda, Fumio Fukai and Mineo Hashizume (Japan) 523	5P-S6-075a	Low-voltage organic thin film transistors based on high dielectric constant hybrid titanium oxide/silicon oxide dielectric <u>BO-XUAN Yang</u> , Chih-Yao Tseng, Cheng-Liang Liu and Anthony Shiao-Tseh Chiang (Taiwan) 539
5P-S4-058b	Evaluation of Degradation Behavior of Polysaccharide Composite Films Coated by Inorganic Substances <u>Keisuke Kawaguchi</u> , Kazutoshi Iijima and Mineo Hasizume (Japan) 524	5P-S6-076b	Insight into the Energy Loss in Organic Solar Cells Based on Benzotrithiophene Copolymers <u>Eman Rashid Al-Naamani</u> , Marina Ide, Akinori Saeki and Shuhei Seki (Japan) 540
5P-S4-059a	Fabrication and characterization of hyperthermia nanofiber meshes for cancer therapy <u>Niiyama Eri</u> , Uto Koichiro, Lee Chun-Man, Aoyagi Takao and Mitsuhiro Ebara (Japan) 525	5P-S6-077a	Synthesis, Characterization, and Photovoltaic Properties of Low-Band Gap Polymers with Deep HOMO Level <u>Hiroshi Otani</u> , Kazuhiro Nakabayashi and Hideharu Mori (Japan) 541
5P-S4-060b	Biocleavable cyclodextrin-based polyrotaxanes for the therapy of lysosomal storage disorders <u>Atsushi Tamura</u> and Nobuhiko Yui (Japan) 526	5P-S6-078b	Effect of the performance of flexible organic thin film solar cell upon bending <u>Daiki Kato</u> , Atsushi Aoki and Takayuki Abe (Japan) 542
5P-S4-061a	Interaction of antigen-loaded peptide nano-needles with cells <u>Tomonori Waku</u> , Saki Nishigaki, Shigeru Kunugi and Naoki Tanaka (Japan) 527	5P-S6-079a	Perovskites prepared upon a Polymer Scaffold for the sensitizer of solar cell <u>Daisuke Yokoyama</u> , Hirohumi Maruo, Kenichi Oyaizu and Hiroyuki Nishide (Japan) 543
5P-S4-062b	Inhibition of Bacterial Cell-Cell Communication Using Non-Woven Cyclodextrin-Immobilized Fiber Mats Prepared by Electrospinning <u>Chiaki Endo</u> , Eri Nasuno, Chigusa Okano, Takehiro Ogi, Ken-ichi Iimura and Norihiro Kato (Japan) 528	5P-S6-080b	High Efficient Perovskite Solar Cell by using Polymer as Scaffold for the Porous Layer <u>Youfeng Yue</u> , Yuki Kohara, Tomokazu Umeyama, Masateru Ito, Easan Sivaniah and Hiroshi Imahori (Japan) 544
5P-S4-063a	Hydrolysis of Signal Molecules for Bacterial Cell-Cell Communication Using Encapsulated Quorum Quenching Bacteria <u>Rei Kawakami</u> , Eri Nasuno, Ken-ichi Iimura, Tomohiro Morohoshi, Tsukasa Ikeda and Norihiro Kato (Japan) 529	5P-S6-081a	Limonene chirality transfer to poly(9,9-di-n-octyl-2,7-fluorene): Effects of good solvents and limonene purification <u>Nor Azura Abdul Rahim</u> and Michiya Fujiki (Japan) 545
5P-S4-064b	Function and Property of composite bone cement based on phosphorylated pullulan <u>Takumi Okihara</u> , Yasuhiro Yoshida, Akira Nakai, Shun Watanabe and Kenya Matsuo (Japan) 530	5P-S6-082b	Evaluation of optical propagation loss in electrospun nanofibers after mechanical drawing <u>Ryohei Kaminose</u> , Yuya Ishii, Shota Satozono and Mitsuo Fukuda (Japan) 546
5P-S4-065a	Photothermal property of nanocarbon complexes for nanobiotechnological applications <u>Eijiro Miyako</u> (Japan) 531	5P-S6-083a	Three-dimensional Photonic Lattice of Blue Phase I Observed by Confocal Laser Scanning Microscope <u>Ying Wen</u> , Yasushi Okumura, Hiroki Higuchi and Hirotsugu Kikuchi (Japan) 547
S-6 Polymers for Optics, Optoelectronics and Energy Conversion		5P-S6-084b	White-light-emitting Graphene Quantum Dots <u>Ryo Sekiya</u> , Yuichiro Uemura, Kaho Suzuki, Wataru Tada and Takeharu Haino (Japan) 548
5P-S6-068b	Preparation of Polymer with Different Peryleneimide Side Chain Length and Characterization of Its Crystalline Structure in Thin Film State <u>Makoto Kido</u> , Tomoyasu Hirai, Ryohei Ishige, Kevin White, Noboru Ohta, Yuji Higaki, Ken Kojio and Atsushi Takahara (Japan) 532	5P-S6-085a	Light Propagation Properties Using Polymer Nano-Assemblies on Metal Grating Surface <u>Kenya Indo</u> , Shimpei Morita, Shunsuke Yamamoto, Keiko Tawa, Junji Nishii, Tokuji Miyashita and Masaya Mitsuishi (Japan) 549
5P-S6-069a	Light-emitting Electrochemical Transistor Behavior Using Ruthenium Complex in Organic Solution Atsushi Aoki and <u>Motoyuki Nakano</u> (Japan) 533	5P-S6-086b	Photo-induced control of bending of polyester films derived from 3-hydroxycinnamic acid <u>SAKSHI RAWAT</u> , KATSUAKI YASAKI, SEIJI TATEYAMA and TATSUO KANEKO (Japan) 550
		5P-S6-087a	Development of Axial Chiral Dopants Bearing Phenanthryl Moieties for High Chiral Liquid Crystal

5P-S6-088b	<u>Daisuke Yoshizawa</u> , Hiroki Higuchi, Yasushi Okumura and Hirotsugu Kikuchi (Japan)551 Stability and electro-optical properties of polymer-stabilized liquid crystal blue phase by use of only bifunctional monomer with flexible spacer	
5P-S6-089a	<u>Hiroki Higuchi</u> , Yuma Takeuchi, Yasushi Okumura, Mitsuihiro Kouda, Ryoichi Akaishi, Takanori Matsuyama, Jun-ichi Matsumoto and Hirotsugu Kikuchi (Japan) .552 Fabrication of the metal structure through two-photon excitation in polymer matrix	
5P-S6-090b	<u>Ryotaro Nakamura</u> , Kenji Kinashi, Wataru Sakai and Naoto Tsutsumi (Japan)553 Ionic Transport Property and Battery Application for Polymer Electrolytes of Solvate Ionic Liquids Prepared by Self-assembly of Triblock Copolymers	
5P-S6-091a	<u>Ryosuke Kidoh</u> , Kaori Iwata, Yuzo Kitazawa, Satoru Imaizumi, Kazuhide Ueno, Kaoru Dokko and Masayoshi Watanabe (Japan)554 Polymer Electrolytes of Ionic Liquids Having Uniform Network Structures for Soft Actuators	
5P-S6-092b	<u>Ryo SANO</u> , Shunta ISHII, Ryoji USUI, Yuzo KITAZAWA, Hisashi KOKUBO and Masayoshi WATANABE (Japan)555 Development of interpenetrating polymer network electrolyte membrane with charge-transfer complex as polymer electrolyte membranes	
5P-S6-093a	<u>Masamichi Nishihara</u> , Liana Christiani and Kazunari Sasaki (Japan)556 Development of Modified Sulfonated Polyimide Charge-Transfer Film for High Temperature Polymer Electrolyte Fuel Cell Application	
5P-S6-094b	<u>Liana Christiani</u> , Masamichi Nishihara and Kazunari Sasaki (Japan)557 Liquid flow properties of alternating electric field driving electro-osmotic pumps with asymmetric track-etched membranes modified with polyelectrolyte	
5P-S6-095a	<u>Mayumi Daigo</u> , Yasushi Okumura, Hiroki Higuchi and Hirotsugu Kikuchi (Japan)558 Fabrication of organic ionic plastic crystalline electrolytes with magnesium ion conductivity	
5P-S6-096b	<u>Takahito Obora</u> and <u>Makoto Moriya</u> (Japan)559 THE EFFECT OF DOPANT CONCENTRATION ON THE IONIC CONDUCTIVITY OF LIQUID PMMA OLIGOMER	
5P-S6-097a	<u>NORASHIMA KAMALUDDIN</u> , FAMIZA ABDUL LATIF, CHAN CHIN HAN, RUHANI IBRAHIM, SHARIL FADLI MOHAMAD ZAMRI and FITRAH HADIP (Malaysia)560 Electrical properties investigation of newly synthesized PEMA Ionogels Composite	
	<u>Ruhani Ibrahim</u> , Famiza Abd. Latif, Yusairie Mohd, Mohd Azri Ab Rani, Norashima Kamaluddin and <u>Sharil Fadli Mohamad Zamri</u> (Malaysia)561	
	G-5 High Performance Polymers	
5P-G5-100b	Electrical and Morphological Characteristics of In-situ Polymerized Polypyrrole coated PET and Cotton Conductive <u>Amit Kumar</u> , Abhijeet Kumar, Sarita S Nair and D Kumar (India)562	
5P-G5-101a	Hyperbranched Polyimides Based on 4,4',4''-Triaminotriphenylmethane Usable as Separating Membranes <u>Petr Syseľ</u> and Evgenia Orlova (Czech Republic)563	
5P-G5-102b	Toughening of thermosetting resins composed of cyanate esters and benzoxazines by in situ polymerization method <u>Naohiro WADA</u> , Akio TAKAHASHI and Toshiyuki OYAMA (Japan)564	
5P-G5-103a	Characterization and Surface Mechanical Properties of Polyhedral Oligomeric Silsesquioxanes (POSS)-based Acrylic Hard Coatings <u>Patcharida Chouwatat</u> , Tomoyasu Hirai, Yuji Higaki, Ken Kojio, Masaya Kotaki, Masahiro Miyamoto, Riichi Nishimura and Atsushi Takahara (Japan)565	
5P-G5-104b	Synthesis and characterization of novel aromatic polyester including 2-(4-carboxyphenyl)benzo[d]oxazole-5-carboxylic acid <u>Fumi Shozui</u> , Ryotaro Nakaya, Takashi Ineyama and Keiichi Yokoyama (Japan)566	
5P-G5-105a	Synthesis of Bio-Based High-Performance Polyimide's from Microbial 4-Aminocinnamate Photodimers <u>JYOTI SINGH</u> , PHRUETCHIKA SUVANNASARA, AKIO MIYASATO, SEIJI TATEYAMA and TATSUO KANEKO (Japan)567	
5P-G5-106b	Ultrasonic Thermal Fusion of Thermoplastic Epoxy Composites <u>Yutaka Tsujimura</u> , Hirofumi Nishida, Jun Takahashi and Isamu Ohsawa (Japan)568	
5P-G5-107a	Thermal properties of composites of liquid-crystalline epoxy resin / BN particles with controlled reactivity and coverage on the surface <u>Akinori Okada</u> , Joji Kadota, Hiroshi Hirano, Takeshi Fujiwara, Junichi Inagaki, Yukito Yada and Yasuyuki Agari (Japan)569	
5P-G5-108b	Newly designed thermosetting resin based on silsesquioxane curable by ring-opening polymerization <u>Hirofumi Nishida</u> (Japan)570	
5P-G5-109a	New High refractive index coating materials consisting of titanium oxide oligomer and sulfur compounds <u>Yoshiyuki Yamaguchi</u> , Hirofumi Nishida and Tsutomu Yasui (Japan)571	
5P-G5-110b	Effect of Dopant Ratio on Polyaniline Coated Fiber Bragg Grating for pH Detection <u>Sook Wai Phang</u> , Yeong Siang Chiam, Wadi Harun Sulaiman and Seng Neon Gan (Malaysia)572	
5P-G5-111a	Durable Superhydrophobic Coating Materials <u>Jianwei Xu</u> and Hong Yan (Singapore)573	