The 10th Pacific Polymer Conference (PPC 10)

Scientific Program

Main Hall

Wednesday, December 5 (morning)

9:00 **Opening Ceremony**

Plenary Lecture

Y. Okamoto, presiding

9:50 5M01PL Polymer Synthesis Using Olefin Metathesis Catalysts
Robert H. Grubbs (U.S.A.) 1

T. Kajiyama, presiding

10:40 5M02PL Nascent Morphology of In-Reactor Polyolefin Blends and the Influence of Phase Separation and Shear on the Crystallization Morphology
Charles C. Han (China) 2

H. Nishide, presiding

11:30 5M03PL Future Automotive Technologies for Sustainable Mobility
Shigeki Suzuki (Japan) 3

Room A

Wednesday, December 5 (afternoon)

S-10 Time-Related Characteristics in Polymers

Y. Takahashi, presiding

14:00 5A01IL Rheology and Dynamics of Entangled Polymer Chains: Self-Consistent Coarse-Graning of Length and Time Scales
Hiroshi Watanabe (Japan) 4

14:40 5A02IL Phase Behavior of Weakly-Interacting Block Copolymers
Hye Jeong Kim, Dong Hyun Lee and Jin Kon Kim (Korea) 5

T. Kawakatsu, presiding

15:20 5A03 Annealing and Crystallization Behaviors of Polymer Thin Films on Si Wafers Evaluated by Synchrotron Grazing-Incidence Small-Angle and Wide-Angle X-Ray Scattering Measurements
Sono Sasaki, Hiroyasu Masunaga, Hiroshi Okuda, Hiroo Tajiri, Katsuaki Inoue, Atsushi Takahara and Masaki Takata (Japan) 6

15:40 5A04 Effect of Composition Distribution on Viscoelastic Properties of Microphase-Separated ABA Triblock Copolymers
Yoshiaki Takahashi, Shinpei Tokuno, Atushi Noro, Atushi Takano and Yushu Matsushita (Japan) 7

16:00 5A05IL Rheology of Ultrarhin Polymer Films
Gregory B. McKenna, Paul A. O'Connell and Shanhong Xu (U.S.A.) 8

J. K. Kim, presiding

16:40 5A06IL Simulation Studies of Soft Matter: Generic Statistical Properties and Chemical Details
Kurt Kremer (Germany) 9

S-1 Frontier in Polymer Synthesis and Catalysis

K. Nozaki, presiding

17:20 5A07IL New Initiating and Catalytic Systems for Atom Transfer Radical Polymerization
Krzysztof Matyjaszewski (U.S.A.) 10

18:00 5A08 ESR Observation of Dynamics, Reactivity, Penultimate Unit Effects, and Structures of Propagating Radicals in Combination with Controlled Radical Polymerization Methods
Atsushi Kajiwara (Japan) 11

Thursday, December 6 (morning)

A. Kajiwara, presiding

9:00 6A01 Polymerization of Methyl Methacrylate, Styrene and Vinyl Acetate Mediated by Ruthenium(II) Complexes with Labile Ligands
Alexandrova Larissa, Olvera-Mancilla Jessica, Diaz-Camacho Francisco, Vazquez-Lopez Gabriel and Le Lagadec Ronan (Mexico) 12

9:20 6A02 Ligand Effect on Fe-Mediated ATRP
Han Hong, Rudhramyna Gnaneshwar, Kai Shuang Lim and Christina Chai (Singapore) 13

9:40 6A03 Novel Poly-Dentated Ligands for Cu-Mediated ATRP
Yeap Hung Ng, Han Hong and Christina Chai (Singapore) 14

M. A. Hillmyer, presiding

10:00 6A04 Synthesis and Characterization of Photosensitized Star Polymers by Controlled Radical Polymerization
Kyung-Youl Baek, Adila Rani and Seung Sang Hwang (Korea) 15

10:20 6A05 New Architectural Polymers by Controlled Radical Polymerization
Zi-Chen Li (China) 16

10:40 6A06 Mechanism and Applications of Z-RAFT Star Polymerization
Philipp Vana, Daniel Boschmann, Martin Maenz, Marco Drache, Markus Froehlich and Gerhard Zifferer (Germany) 17

M. Okubo, presiding

11:00 6A07 An Efficient Route to Cyclic Polymers by ATRP-RCM Process
Kaoru Adachi and Yasuyuki Tezuka (Japan) 18

11:20 6A08 Facile Synthesis and Application of Polythiourethane-Graft-Poly(methacrylate)
Bungo Ochiai and Takeshi Endo (Japan) 19

11:40 6A09IL Organic Dispersions of Block Copolymer Micelles Generated *in situ via* RAFT-Mediated Polymerization in a Selective Solvent
Bernadette Charleux, Lisa Houillot, Chuong Bui, Maud Save, Cēline Farcet, Claudine Moire, Jacques-Antoine Raust and Ivan Rodriguez (France) 20

Thursday, December 6 (afternoon)

T. Kitayama, presiding

14:00 6A10 Compartmentalization, Partitioning and Interface Effects in Nitroxide-Mediated Polymerization in Dispersed Systems
Per B. Zetterlund, Tadashi Nakamura, Md. Nur Alam, Junpei Wakamatsu and Masayoshi Okubo (Japan) 21

14:20 6A11 Kinetic Features of ATRP in Miniemulsion: Confined Space Effect and Segregation Effect
Yasuyuki Kagawa, Per B. Zetterlund and Masayoshi Okubo (Japan) 22

14:40 6A12IL Functional Self-Assembled Block Copolymers through Precision Polymer Synthesis
Marc A. Hillmyer (U.S.A.) 23

B. Charleux, presiding

15:20 6A13 Isotactic-Specific Anionic Polymerization of Methacrylates with Ultimate Stereoregulation
Takehiro Kitaura and Tatsuki Kitayama (Japan) 24

15:40 6A14IL Base-Stabilized Living Cationic Polymerization: Heterogeneous Living Polymerization with Iron Oxides and Selective Synthesis of Star-Shaped Polymers
Sadahito Aoshima and Shokyoku Kanaoka (Japan) 25

16:20 6A15 Controlled/Living Cationic Polymerization of Naturally-Occurring Monomers
Kotaro Satoh, Hiroko Sugiyama, Shoichi Saitoh and Masami Kamigaito (Japan) 26

J. C. Stevens, presiding

16:40 6A16 Precise Synthesis of Cycloolefin Copolymers Using ansa-Fluorenylamidodimethyltitanium-based Catalysts
Zhengguo Cai, Ryotaro Harada, Yuushou Nakayama and Takeshi Shiono (Japan) 27

17:00 6A17 Synthesis of Highly Thermostable Polymers from Commodity Vinyl Monomers with Ti-Based Catalysts
The Ban Hoang, Yasuo Tsunogae, Shuichi Nojima and Takeshi Shiono (Japan) . 28

T. Shiono, presiding

17:20 6A18 Unprecedented Copolymerization of α-Olefins and Cyclic Olefins Catalyzed by Well-Defined Scandium Alkyl Complexes
Xiaofang Li and Zhaomin Hou (Japan) 29

Friday, December 7 (morning)

K. Kimura, presiding

T. Takata, presiding

M. Kamigaito, presiding

Room B

Wednesday, December 5 (afternoon)

S-8 Polymers for Energy and Environment

S. Hayase, presiding

S. Yanagida, presiding

K. Miyatake, presiding

Thursday, December 6 (morning)

Thursday, December 6 (afternoon)

Friday, December 7 (morning)

Room C

Wednesday, December 5 (afternoon)

S-5 Polymers for Bio-Medical-Technologies

Thursday, December 6 (morning)

S-9 Surface and Interface of Polymers

Thursday, December 6 (afternoon)

T. Seki, presiding

16:00 6C14 Surface Science of Fluorous Polyoxetanes and Polyurethanes with Co-Polyoxetane Soft Blocks: From Contact Antimicrobials to Unusual Wetting Behavior
Kenneth J. Wynne, Pinar Kurt, Kennard Brunson, Umit Makal, Lynn Wood and Dennis Ohman (U.S.A.) 96

16:20 6C15IL Wettability and Tribology of Hydrophilic Polymer Brushes at Liquid Interfaces
Atsushi Takahara, Yuki Terayama, Yasuhiro Matsuda, Zhe Wang and Motoyasu Kobayashi (Japan) 97

K. Kurihara, presiding

17:00 6C16IL Friction and Lubrication in Thin Layers of Thermoreversible Polymer Gels: Response to Ambient Conditions
Jianjun Li and Eugenia Kumacheva (Canada) 98

17:40 6C17 Molecular Dynamics Simulation Study of a Chain Dynamics in the rAdhesion Process between Polymeric Materials
Hiroshi Morita and Masao Doi (Japan) 99

18:00 6C18 Enhancement of Wear Resistance in Hydorophilic Cross-Linked Polyelectrolyte Brushes under a Wet Condition
Motoyasu Kobayashi, Yasuhiro Matsuda, Masataka Kaido, Atsushi Suzuki, Kazuhiko Ishihara and Atsushi Takahara (Japan) 100

Friday, December 7 (morning)

J. Zhao, presiding

9:00 7C01 Microphase-Separated Structure of Polyurethanes in Confinement State
Ken Kojio, Juli Kobayashi, Yoshitaka Mitsui, Yusuke Uchiba, Suguru Motokucho and Mutsuhisa Furukawa (Japan) 101

9:20 7C02 Precise Evaluation of Polymer Degradation with Atomic Force Microscopy and Indentation
Akihiro Koike (Japan) 102

9:40 7C03 Effect of Process Parameters on the Morphology of Electrospun Polymeric Nanofibers
Erkan Biber, Gungor Gunduz, Uner Colak and Bora Mavis (Turkey) 103

K. Tanaka, presiding

10:00 7C04 Analysis of Anisotropic Structure in a Dip-Coated Film of Linear Poly(ethylene imine) by Infrared Multiple-Angle Incidence Resolution Spectrometry
Hiroyuki Kakuda, Tetsuo Okada and Takeshi Hasegawa (Japan) 104

10:20 7C06 Wood-Substituted Composites from Polyvinylchloride and Various Types of Woodflours
Silawan Chonsaranon (Thailand) 105

E. Kumacheva, presiding

10:40 7C07 Synthesis and Characterization of Poly (styrene-co-acrylonitrile) Brushes on Silica Nanoparticles through Surface-Initiated Polymerization
Shanmugharaj Andikkadu Masilamani, Motokoba Kobayashi and Atsushi Takahara (Japan) 106

11:00 7C08 Swelling of Poly(methyl methacrylate) at the Interface with Non-Solvents
Keiji Tanaka, Yoshihisa Fujii, Masahiro Hino and Toshihiko Nagamura (Japan) 107

11:20 7C09 Nanorheology of Dioctyl Phthalate Confined between Surfaces Coated with Long Hydrocarbon Chains
Yoshisada Kayano, Hiroshi Sakuma and Kazue Kurihara (Japan) 108

11:40 7C10 Structural Transition and Controlled Salt-Release of Strong Polyelectrolyte Brushes at the Air/Water Interface
Ploysai Kaewsaiha and Hideki Matsuoka (Thailand) 109

Room D

Wednesday, December 5 (afternoon)

S-2 Organic/Inorganic Polymer Hybrids

Y. Chujo, presiding

14:00 5D01IL Perfect and Nearly Perfect Silsesquioxane for Polyfunctional Nanoparticles and Nanocomposites, and Janus Cubes
Richard M. Laine, M. Roll, M. Asuncion, S. Sulaimann, C. Brick, K. Takahashi, D. Bartz, D.J. Krug and V. Popova (U.S.A.) 110

Thursday, December 6 (morning)

Thursday, December 6 (afternoon)

S-3 Advanced Polymer Gels

K. Haraguchi, presiding

H. Furukawa, presiding

T. Miyata, presiding

K. Sumaru, presiding

R. Yoshida, presiding

Friday, December 7 (morning)

K. Haraguchi, presiding

M. Watanabe, presiding

K. Sada, presiding

J. P. Gong, presiding

Room E

Wednesday, December 5 (afternoon)

S-4 Supramolecular Polymers

A. Harada, presiding

S. Kimura, presiding

T. Sato, presiding

T. Takata, presiding

Thursday, December 6 (morning)

A. Harada, presiding

S-6 Green Polymers

M. Kunioka, presiding

T. Iwata, presiding

F. Kawai, presiding

Thursday, December 6 (afternoon)

Friday, December 7 (morning)

Room P1

● POSTER SESSIONS SCHEDULE (see Note 1)

9:30 - 12:00	Mounting Posters
12:30 - 13:15	Obligation time for Group “a” (see Note 2)
13:15 - 14:00	Obligation time for Group “b” (see Note 2)
18:00 - 18:30	Removing Posters

● Notes:
1) There are TWO Poster Session Rooms: This is the program for Room P1.
2) For the assignment to Group "a" or "b", refer to the last letter of the poster ID code.
(example) 5P1S2-001a: Dec. 5, Poster Session Room P1, Selected Topic S2, Paper #001, Group "a"

Wednesday, December 5 (afternoon)

S-2 Organic/Inorganic Polymer Hybrids

S-4 Supramolecular Polymers

S-5 Polymers for Bio-Medical-Technologies

G-4 High Performance Polymers

G-5 Bio-Related Polymers

Thursday, December 6 (afternoon)

S-1 Frontier in Polymer Synthesis and Catalysis

S-6 Green Polymers

G-1 Polymer Synthesis and Reactions

Room P2

● POSTER SESSIONS SCHEDULE (see Note 1)

9:30 - 12:00	Mounting Posters
12:30 - 13:15	Obligation time for Group “a” (see Note 2)
13:15 - 14:00	Obligation time for Group “b” (see Note 2)
18:00 - 18:30	Removing Posters

● Notes:
1) There are TWO Poster Session Rooms: This is the program for Room P2.
2) For the assignment to Group "a" or "b", refer to the last letter of the poster ID code.
(example) 5P2S8-100b: Dec. 5, Poster Session Room P2, Selected Topic S8, Paper #100, Group "b"

Wednesday, December 5 (afternoon)

S-8 Polymers for Energy and Environment

S-10 Time-Related Characteristics in Polymers

G-2 Structure and Physical Properties of Polymers

G-6 Polymer Processing

Thursday, December 6 (afternoon)

S-3 Advanced Polymer Gels

S-7 Polymers for Advanced Information and Electronics

S-9 Surface and Interface of Polymers

G-3 Functional Polymers