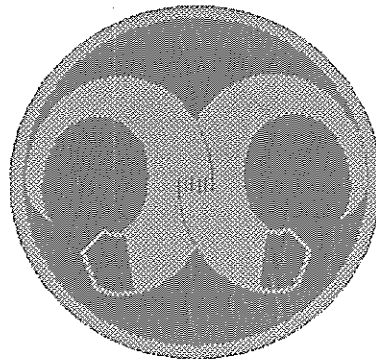


VLACHOPOULOS

PPS-TOKYO'93

THE POLYMER  
PROCESSING SOCIETY  
PPS-REGIONAL MEETING  
OF  
ASIA/AUSTRALIA  
TOKYO, JAPAN  
October 9-11, 1993

ABSTRACTS



Cosponsored by  
Japan Society of Polymer Processing  
The Society of Rheology, Japan  
Society of Plastics Engineers, Japan  
The Precise Measurement Technique Promoting Foundation  
Kogakuin University

## PPS ORGANIZATION

1993-1995

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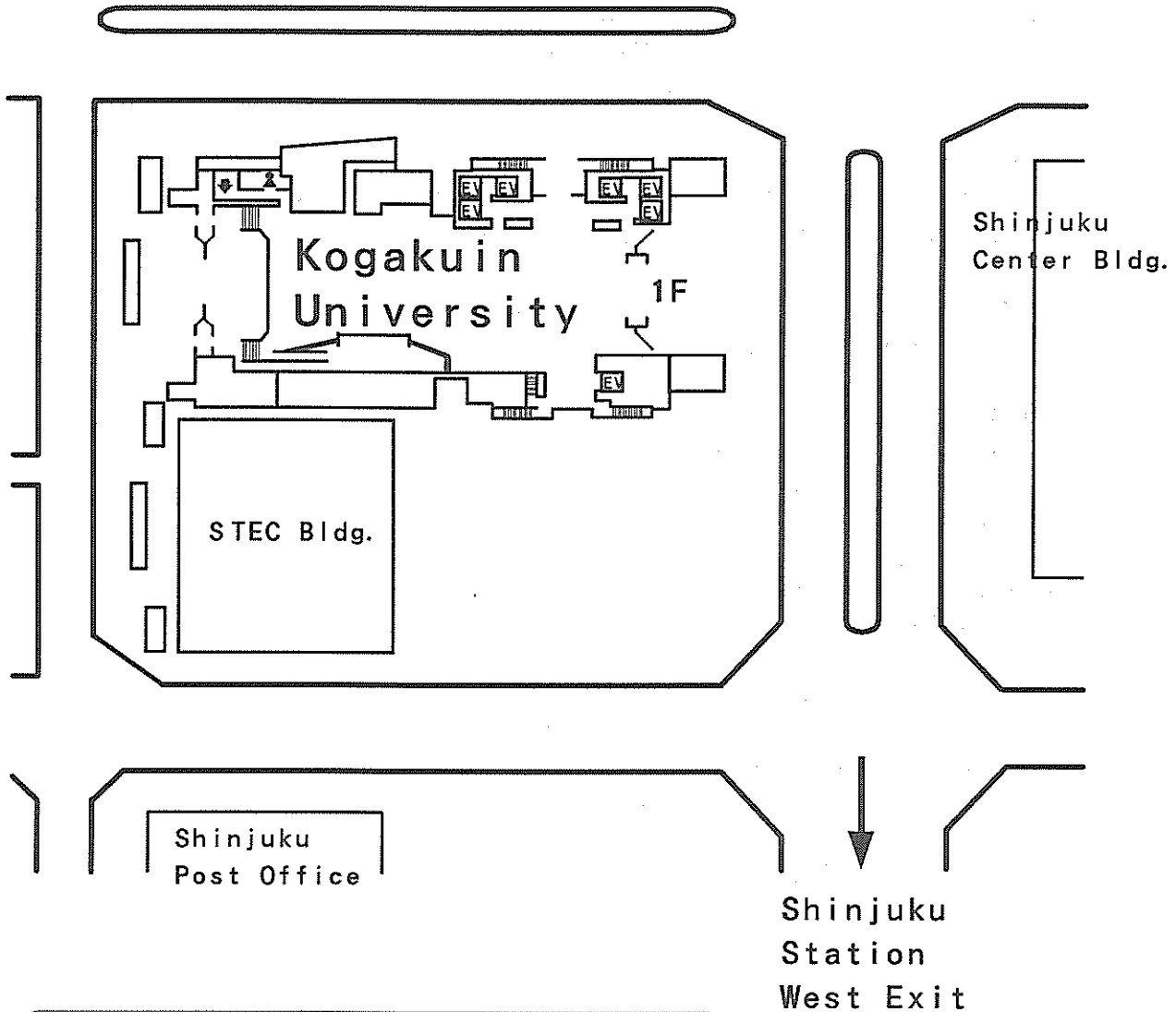
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# Keio Plaza Hotel

**Banquet** October 10, 18:00~20:00  
5F CONCORD BALL ROOM

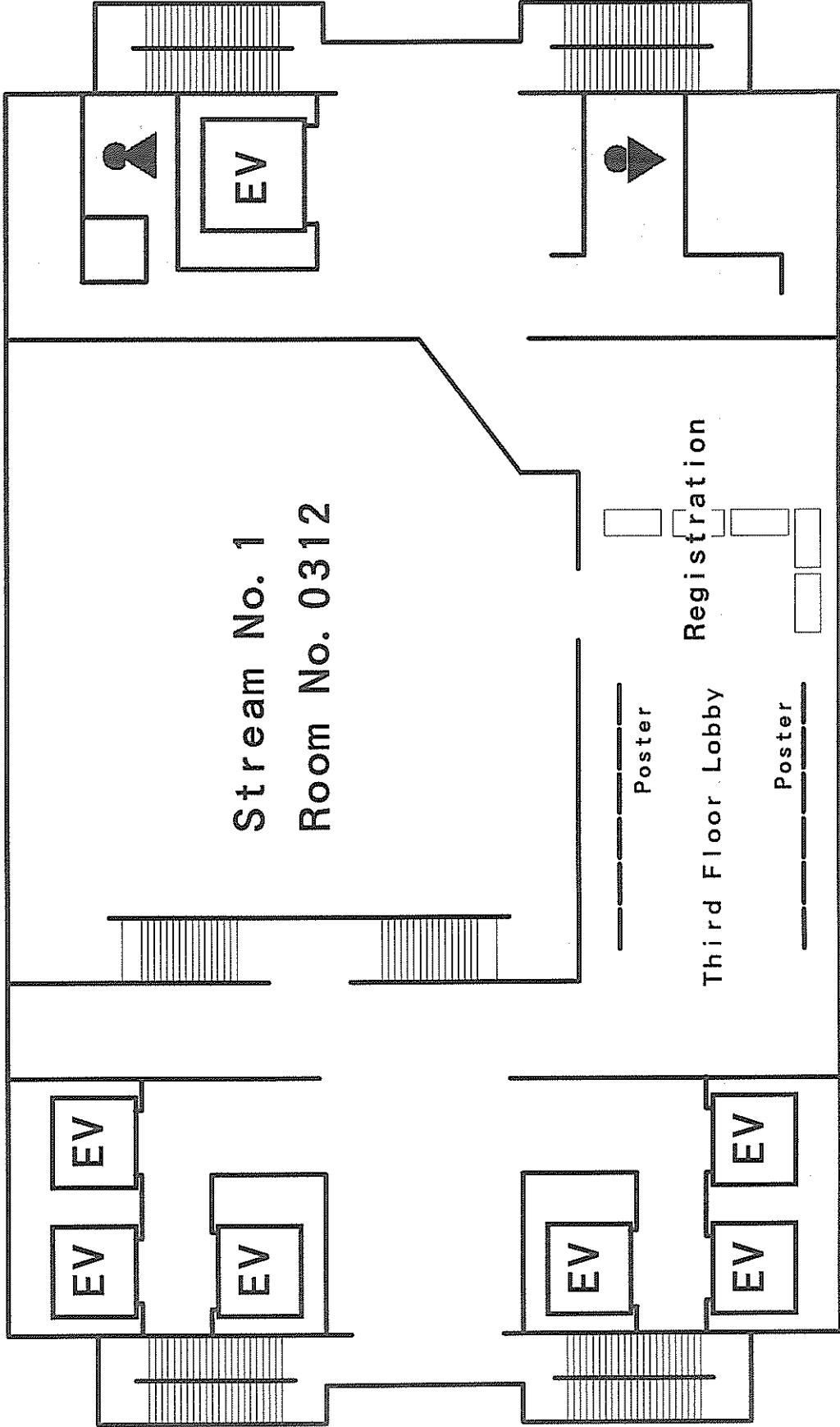
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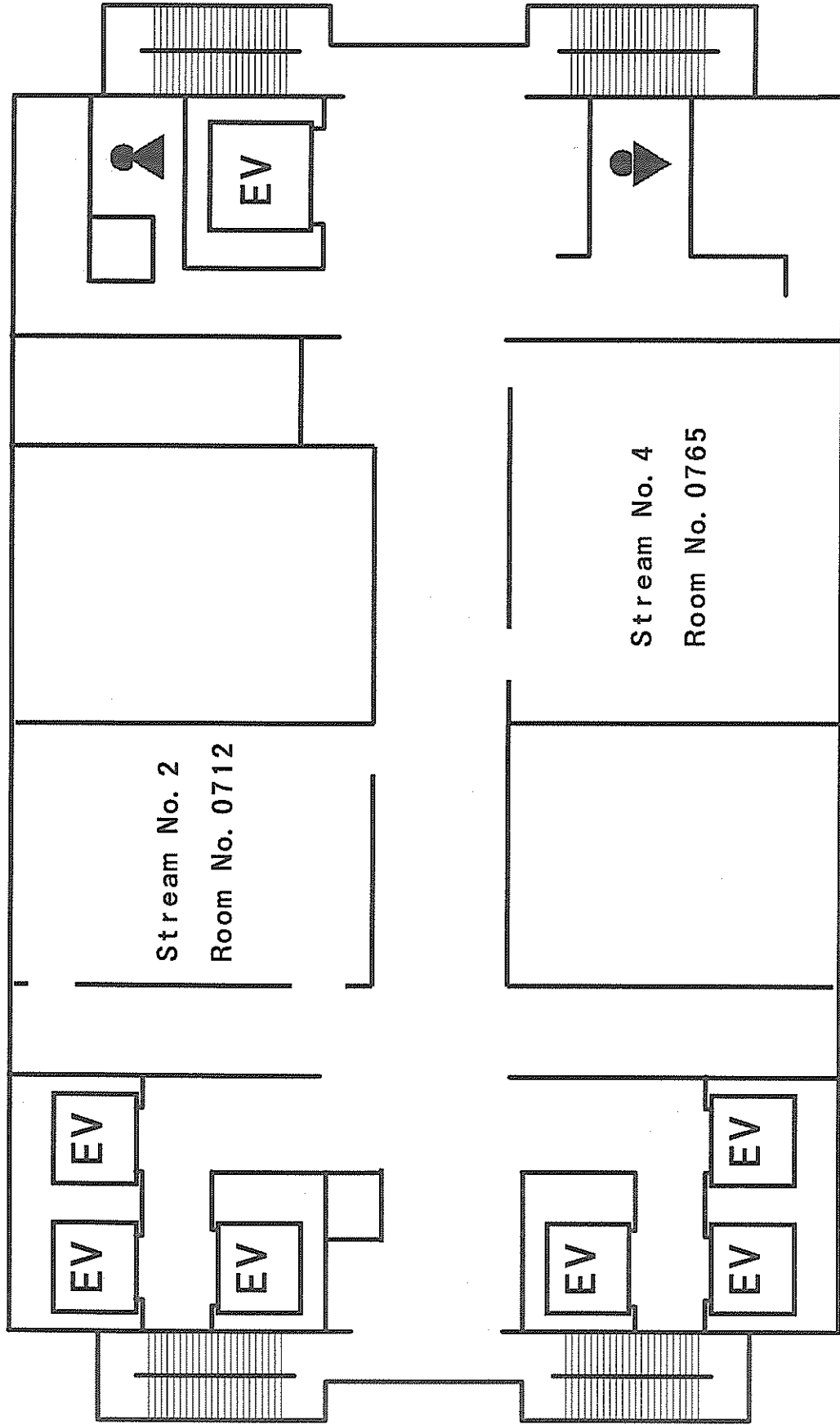
## Address

Department of Mechanical Engineering  
Kogakuin University  
1-24-2 Nishishinjuku, Shinjuku-ku,  
Tokyo, JAPAN 160  
Tel. +(81) 3-3342-1211  
Fax. +(81) 3-3342-1633

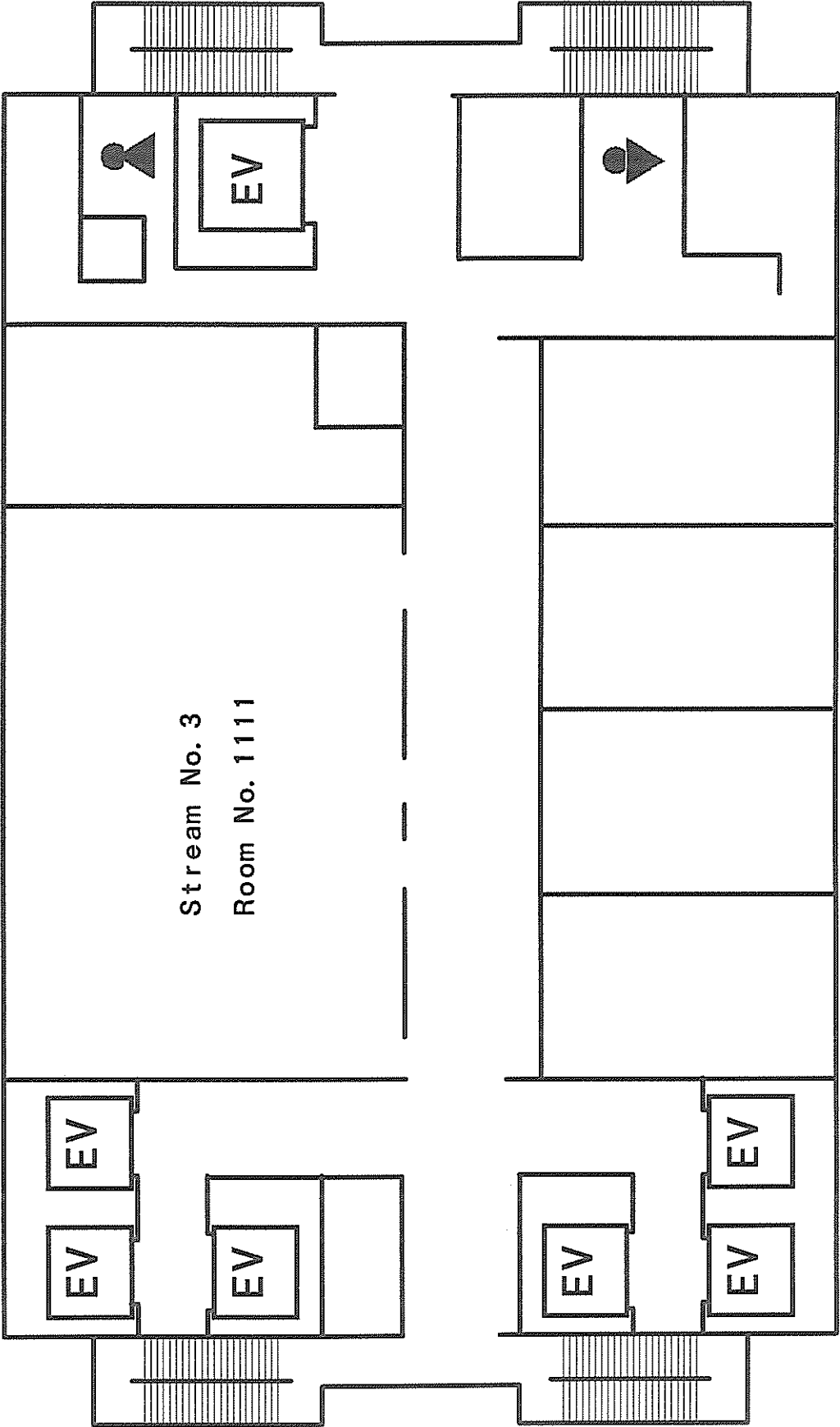
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# 11F



October 9, (Sat) Room No. 0312

Opening Ceremony and Plenary Lectures

- 14:30-15:00 Greeting: Dr. K.Hongo(President of Kogakuin University)  
15:00-17:00 Plenary Lectures  
15:00-16:00 Recent Technological Developments of Polymer Processing in Japan.  
Prof. Y.Oyanagi (Kogakuin University)  
16:00-17:00 Visible Technology in Polymer Processing.  
Prof. F.Zhu (Beijing Institute of Chemical Technology, China)

October 10, (Sun) Third Floor Lobby

Poster Session

15:00-17:30 Posters

- 12-01 Effects of Inorganic Fillers on the Properties of Agricultural Films.  
L.Yingjun and L.Wei (Scientific Research Institute of Plastics Processing and Application, China)
- 12-02 Influence of N-Acetyl Glycine on the Kinetics of the Ceric Ion Initiated Graft Copolymerization of Acrylonitrile and Methyl Methacrylate onto Jute Fibers.  
B.C.Singh and C.M.Patra (Utkal University, India)
- 12-03 Characterization of Polypropylene and Polypropylene-Polyethylene Blends by Crystallization Behavior.  
J.Luo and D.Xu (Chinese Academy of Sciences, China)
- 12-04 Morphology Formation during Drawing of Polypropylene/Poly (1-butene) Blends.  
T.Aoike, H.Uehara, T.Kanamoto (Science University of Tokyo) and R.S.Porter (University of Massachusetts, U.S.A.)
- 12-05 Self-Hardening in Oriented Polyethylene Films.  
M.Suto, T.Kanamoto (Science University of Tokyo) and R.S.Porter (University of Massachusetts, U.S.A.)
- 12-06 Gel Spinning and Drawing of Gel Films of Poly(vinyl alcohol).  
M.Kobayashi, S.Sano, T.Kameda and T.Kanamoto (Science University of Tokyo)
- 12-07 Thermotropically Smectic Polysalts.  
S.Ujije and K.Iimura (Science University of Tokyo)
- 12-08 Analysis of Post-Filling Process during Injection Compression Molding.  
S.Yang and M.Horng (National Taiwan University, R.O.C.)
- 12-09 Cavity Pressure Control of Injection Mold Filling.  
F.Gao (Moldflow Pty. Ltd., Australia),  
W.L.Patterson and M.R.Kamal (McGill University, Canada)
- 12-10 Study on Flow Behavior of Elastomers.  
K.Kubota, A.Tanaka, K.Yoshiwara and Y.Oyanagi (Kogakuin University)



October 10 (Sunday) Stream No. 1 (Room No. 0312)

Joint Session of Injection Molding, Compression Molding, Sensing and Automation

- 9:00- 9:30  
KN01-01 Formulation of Mathematical Models for Predicting Heat Generation of Epoxy Molding Compounds. 8  
J.Saeki (Hitachi Ltd.) and R.Schwarz (Siemens AG, Germany)
- 9:30-10:00  
KN01-02 Realtime Visualization of Molecular Orientation of Polymer Melt in Injection Molding Process.  
Y.Kurosaki and I.Satoh (Tokyo Institute of Technology)
- 10:00-10:30  
01-03 Flow and Solidification of Material in Injection Molding of Ceramics.  
K.Kato, R.H.Chen and K.Ishihara (Tokyo Institute of Technology)
- 11:00-11:30  
01-04 Study on Solidified Behavior of Molded Resin in Cavity.  
A.Cui, M.Konno and N.Nishiwaki (Tokyo University of Agriculture and Technology)
- 11:30-12:00  
01-05 Weld Line Strength of Thermoplastics Using Simultaneous Composite Injection Molding.  
H.Hamada, H.Takashima, Z.Maekawa (Kyoto Institute of Technology), H.Kajiura (Matsusita Electric Works Ltd.), K.Tomari (Osaka Municipal Technology research Institute), S.Sawada, R.Nakano (Toray Industries, Inc.), W.Mizuno (Toyama Municipal Technology Research Institute), and S.Hayasaki (Toyo Machinery & Metal Co.)
- 12:00-12:30  
01-06 Visual Analysis of Fiber Orientation Process Using Glass-Inserted Mold and Fiber Tracing System.  
H.Yokoi, Y.Murata (University of Tokyo), M.Nagaya (Fanuc Ltd.) and H.Harada (Sekisui Chemical Co.)
- 14:00-14:30  
KN01-07 Injection Molding of Rubber Compounds.  
A.I.Isayev (University of Akron, U.S.A.)
- 14:30-15:00  
KN01-08 Prediction of Fiber Orientation in Flow Fields. -A New Approach-  
T.Matsuoka (Toyota Central Research and Development Labs., Inc.)
- 15:00-15:30  
01-09 Flow Characteristics of Compression Molded Stampable Sheet during Manufacture of Components with Rib Structure.  
S.Yamaguchi, H.Hamada, Z.Maekawa (Kyoto Institute of Technology) and M.Koshimoto (Idemitsu Petrochemical Co.)
- 16:00-16:30  
01-10 Comparative Studies of Mold Filling Simulations Based on Velocity and Pressure Formulations.  
S.C.Chen (Chung Yuan University, R.O.C.) and A.Davidoff (Cisigraph Co., France)
- 16:30-17:00  
01-11 Post-Filling Simulation, Mold Cooling and Part Warpage.  
A.Davidoff, H.Bung, F.Jacque (Cisigraph Co., France) and S.C.Chen (Chung Yuan University, R.O.C.)
- 17:00-17:30  
01-12 Influences of the Injected Resin Temperature Variation on the Quality of Moldings.  
M.Konno, A.Cui and N.Nishiwaki (Tokyo University of Agriculture and Technology)

October 10 (Sun) Stream No. 2 (Room No. 0712)

Session of Novel Processing Technology

- 9:00- 9:30 KN04-01 Toyota High Productivity Powder Slush Molding Technology for Automotive Interior Parts.  
N.Murase, N.Takeda, N.Takasugi and M.Iwakiri (Toyota Motor Co.)
- 9:30-10:00 04-02 A Composite by All Polyolefinic Materials for Car Interior Uses.  
Y.Niki (Mitsui Petrochemical Inds.)
- 10:00-10:30 04-03 Gas-Assist Injection (CINPRES).  
A.Kaneishi (Mitsubishi Gas Chemical Co.)
- 11:00-11:30 04-04 Numerical Analyses and Experimental Studies of the Co-injection Molding Process.  
S.C.Chen and K.F.Hsu (Chung Yuan University, R.O.C.)
- 11:30-12:00 04-05 Shear Controlled Orientation Injection Molding "SCORIM."  
T.Fujishiro (Mitsubishi Gas Chemical Co.)
- 12:00-12:30 04-06 Injection-Compression Molding.  
T.Abe and T.Tanaka (Idemitsu Petrochemical Co.)
- 14:00-14:30 04-07 New Molding Method for Excellent Appearance.  
H.Yamaki and A.Wada (Asahi Chemical Industry Co.)
- 14:30-15:00 04-08 Blow Molding Simulations by The 2D/3D Finite-Element Method. Results of Experiments and Analyses.  
S.Kanazawa, T.Hoshina, A.Kodama, Y.Nagai and M.Inaba (Showa Denko Co.)
- 15:00-15:30 04-09 Development of PVDF Multi-Layer Tank by Rotational Molding Processing.  
K.Abe and T.Ozu (Mitsubishi Petrochemical Co.)

Session of Plastics Recycling and Degradable Plastics

- 16:00-16:30 11-01 Preparation and Processability of Biodegradable Poly(Lactic Acid) Obtained from a Melt Polymerization Process.  
R.Miyoshi, Y.Sumihira, K.Yokota and T.Sakai (The Japan Steel Works Ltd)
- 16:30-17:00 11-02 Extrusion Technology for 500kV XLPE Insulated Power Cable by Computer Simulation.  
K.Otani (ITB) and I.Klein (Scientific Process & Research Inc. U.S.A.)
- 17:00-17:30 11-03 New Technology of Wasted Rubber and Tires Processing Including Textile Fiber Containing Rubbers.  
L.L.Pavlovsky and M.A.Markevitch (USSR Academy of Sciences, USSR)

October 10 (Sun) Stream No. 3 (Room No. 1111)

Session of Polymer Blends, Alloys, and Reactive Processing

- 9:00- 9:30  
KN07-01 Characterization and Processing of In-situ Composites of Thermotropic Liquid Crystalline Polymers in Isotropic Polymers.  
K.U.Kim and S.M.Hong (Korea Institute of Science and Technology, Korea)
- 9:30-10:00  
KN07-02 Compatibilizers for Melt Blending:  
Pre-made vs. In-situ Formed Block Copolymers.  
A.Nakayama, P.Guegan, C.W.Macosko and T.Inoue (Tokyo Institute of Technology)
- 10:00-10:30  
07-03 Processing Polymer Blends by Photo-Crosslink.  
Q.Tran-Cong, A.Imagawa, (Kyoto Institute of Technology),  
R.Kawakubo (Toyo Rubber Co.) and M.Imura (Mizuno Co.)
- 11:00-11:30  
07-04 High Temperature Resistant Polymer Blends.  
M.Weber (BASF AG. Germany)
- 11:30-12:00  
07-05 Beneficial Effects of E-GMA Copolymers on Reactive Blending of PC/PET.  
N.Yamaguchi, K.Chikanari and T.Ohmae (Sumitomo Chemical Co.)
- 12:00-12:30  
07-06 Miscibility Re-investigation of Poly(Ethylene Oxide)-Poly(Vinyl Acetate) and Poly(Ethylene Oxide)-Poly(Methyl Methacrylate) Blends.  
B.Li, X.Liu and D.Xu (Academia Sinica, China)
- 14:00-14:30  
KN07-07 Analysis of Flow During Polymerization of Methyl Methacrylate in a Model Twin Screw Extruder.  
K.Min and L.L.Chu (The University of Akron, U.S.A.)
- 14:30-15:00  
07-08 Improvement of Continuous Mixers for Compounding of Polyolefins with Fine Particle Inorganic Filler.  
Y.Kuroda, K.Inoue, R.Minato and Y.Yamane (Kobe Steel Ltd.)
- 15:00-15:30  
07-09 Melt Index, Resin Density, Thermal and Rheological Properties of PP/PE Binary System with Blend Ratio of PE Less Than 30%.  
A.C-Y Wong and Y.C:Tsui (University of Hong Kong, Hong Kong)
- 16:00-16:30  
07-10 Toughness/Fracture Morphology Study of Rubber/Thermoplastic/Epoxy Alloys.  
A.C.Street, T.Kitano, T.Ougizawa, S.Horiuchi (National Institute of Materials and Chemical Research) and M.Hojo (Kyoto University)
- 16:30-17:00  
07-11 The Effect of Temperature on Bending Properties of Injection Molded PC/PBT Blend.  
S.Miyaji, G.O.Shonaike, H.Hamada and Z.Maekawa (Kyoto Institute of Technology)
- 17:00-17:30  
07-12 Phase Separation and Dissolution Kinetics of PC/SAN Blend.  
M.Okamoto (Toyobo Co.) and T.Inoue (Tokyo Institute of Technology)

## October 10 (Sun) Stream No. 4 (Room No. 0765)

### Session of Polymer Composites

- 9:00- 9:30 Overview and System Analysis of Thermoplastic Composites Technologies.  
KN08-01 T.Matsuo (Kyoto Institute of Technology)
- 9:30-10:00 Mechanical Properties of Glass Fiber Reinforced Thermoplastic Composites.  
08-02 M.Matsuda, G.O.Shonaike, H.Hamada and Z.Maekawa  
(Kyoto Institute of Technology)
- 10:00-10:30 The Effect of Surface Treatment of Fiber on FR-Polycarbonate Moldings.  
08-03 K.Tomari, T.Harada and N.Ikuta (Osaka Municipal Technical  
Research Institute)
- 11:00-11:30 Application of Braiding Technique to Near-Net-Shape Preform.  
08-04 A.Fujita, H.Hamada, Z.Maekawa (Kyoto Institute of Technology) and  
T.Uozumi (Murata Machinery Ltd.)
- 11:30-12:00 Impregnation Behavior in Structural Resin Transfer Molding.  
08-05 N.Ikegawa (Matsushita Electric Works Co.), H.Hamada and Z.Maekawa  
(Kyoto Institute of Technology)
- 12:00-12:30 The Dependence of Thermal Properties of Reinforced Composites on  
08-06 Different Cooling Conditions.  
G.O.Shonaike, M.Matsuda, H.Hamada and Z.Maekawa (Kyoto Institute  
of Technology)
- 13:30-14:00 Structural Analysis System for Deep Drawn ACM Products.  
08-09 Y.Ashibe, D.Sokoloski and A.Yoshii (Sumitomo Heavy Industries, Ltd)
- 14:00-14:30 Molding and Properties of Thermosetting Resin/Thermoplastic  
08-07 Resin Hybrid Type Carbon Fiber Reinforced Plastic (HCFRP).  
K.Hasegawa, A.Kaji and A.Fukuda (Osaka Municipal Technical  
Research Institute)
- 14:30-15:00 An Investigation and Examination on the Properties of the Graphite Modified Resin.  
08-08 P.Y.Nan and C.Hai-tao (Zhejiang Institute of Technology, China)

### Session of Extrusion, Fibers and Films

- 15:00-15:30 Continuous Polymerization of Polysulfone-Caprolactam Solutions in  
KN02-01 a Twin Screw Extruder and Subsequent Melt Spinning to Blend Fibers.  
J.L.White and H.Kye (The University of Akron, U.S.A.)
- 16:00-16:30 2-Dimensional Flow Analysis for a Reactive Processing in the Twin  
KN02-02 Screw Extruder.  
T.Fukuoka (Sekisui Chemical Co.) and  
K.Min (The University of Akron, U.S.A.)
- 16:30-17:00 Die Pressure Prediction for a Foam Extrusion Process Using  
02-03 a Finite Difference Computing Method.  
F.S.Lai, and H.H.Tseng (University of Massachusetts Lowell, U.S.A.)
- 17:00-17:30 The Study on Disc Mixing Extruder.  
02-04 X.Ping and F.Zhu (Beijing Institute of Chemical Technology, China)

## October 11 (Mon) Stream No. 1 (Room No. 0312)

### Joint Session of Injection Molding, Compression Molding, Sensing and Automation

- 9:00- 9:30 Applications of Dynamic Visualization Techniques inside an Injection Mold. \*  
KN01-13 H.Yokoi (University of Tokyo)
- 9:30-10:00 Ultrasonic Techniques in Injection Processing.  
KN01-14 N.Nishiwaki (Tokyo University of Agriculture and Technology)
- 10:00-10:30 Adaptive Holding Pressure Control Based on Prediction of Polymer  
01-15 Behavior in a Mold Cavity.  
K.Yakemoto, Z.Maekawa, H.Hamada (Kyoto Institute of Technology),  
T.Sakai and T.Shiroganeya (The Japan Steel Works Ltd.)
- 11:00-11:30 Measurement of the Shear Stress Distributions on a Mold Cavity Wall  
01-16 during Filling Process.  
H.Yokoi, N.Masuda and R.Kosaki (University of Tokyo)
- 11:30-12:00 Boundary Element Method for the Flow Simulation of Injection  
01-17 Molding Process of Thin Cavities. Part 1: Formulation.  
Y.Wu and P.wang (Chengdu University, China)
- 12:00-12:30 Boundary Element Method for the Flow Simulation of Injection  
01-18 Molding Process of Thin Cavities.  
Part 2: Experimental Verification.  
Y.Wu and P.Wang (Chengdu University, China)

### Session of Novel Processing Technology

- 14:00-14:30 The Molecular Structure Effect of Liquid Crystalline Polymers on  
KN06-01 the Physical and Mechanical Properties of Polymer Blends.  
I.J.Chung, S.K.Kwon, (The Korea Advanced Institute of Science and  
Technology, Korea) B.Y.Shin (Yeungnam University, Korea)
- 14:30-15:00 Structures and Phase Transition of Thermotropic Liquid Crystalline Polyesters.  
KN06-02 K.Yonetake (Yamagata University)
- 15:00-15:30 Novel Thermotropic Liquid Crystalline Polymers.  
KN06-03 M.Matsumoto and T.Kashimura (Kuraray Co.)
- 15:30-16:00 Orientation and Properties of Extrudates for Polycarbonate/  
06-04 Liquid-Crystalline Polymer Blends.  
Y.S.Kim and J.W.Lee (Sogang University, Korea)
- 16:00-16:30 An Investigation on Phenomena of Melt Thickening of Polyether  
06-05 Sulfone (PES) during Processing.  
R.Huang and K.Qi (Cheng du University, China)
- 16:30-17:00 Preparation of the Membrane Grade of Poly(Aryl Ether Ketone Sulfones) Copolymers.  
06-06 G.Jiixin, M.Jun, W.Mingjun and Z.Wenxuan (Shanghai Jiao Tong  
University, China)
- 17:00-17:30 Compatibilizing Effect of a Poly(Ester Imide) in Blends of  
06-07 Poly(Ether Imide) and a Liquid Crystalline Polymer.  
Y.Seo, S.M.Hong, S.Lee, S.S.Hwang, T.S.Park and K.U.Kim  
(Korea Institute of Science and Technology, Korea)

October 11 (Mon) Stream No. 2 (Room No. 0712)

Session of Rheological Properties and Data-Base

- 9:00- 9:30  
KN09-01 Some Correlations of Rheological, Thermal and PVT Properties for Polymer-Process Simulation.  
C.A.Hieber (Cornell University, U.S.A.)
- 9:30-10:00  
KN09-02 Numerical Evaluation of Suitable Constitutive Equations for Solving Engineering Flow Analysis.  
K.Funatsu (Kyusyu University)
- 10:00-10:30  
09-03 Conventional Determination Methods of the Parameters for Injection Molding Simulation.  
M.Takahashi, K.Kinoshita and K.Iida (Dainippon Ink and Chemicals Inc.)
- 11:00-11:30  
09-04 A Study of Normal Forces Generated in the Flow between Two Rollers Rotating at Relatively Different Speeds.  
T.Sekino, T.Hasegawa and T.Narumi (Niigata University)
- 11:30-12:00  
09-05 Viscoelastic Unstable Flow Properties and Shear Heating Behaviors of Various Polymer Melts.  
K.Iwakura, S.Nosaka, K.Koyama H.Takeda (Yamagata University) and K.Tobo (Plamedia Research Co.)
- 12:00-12:30  
09-06 Elongational Viscosity Measurements of Spherical Glass Filled High Density Polyethylene Composites.  
M.Kobayashi, K.Minagawa, H.Takeda, K.Iwakura and K.Koyama (Yamagata University)
- 14:00-14:30  
KN09-07 Applicability of Differential Constitutive Equations to Polymer Liquids.  
M.Takahashi and T.Masuda (Kyoto University)
- 14:30-15:00  
09-08 Uniaxial and Biaxial Extensional Flow Properties of Polymer Melts.  
M.Takahashi, T.Takigawa, T.Masuda (Kyoto University) and T.Isaki (Mitsui Toatsu Chemicals Co.)
- 15:00-15:30  
09-09 Shear Stress Development Caused by Stepwise Increase or Decrease of Shear Rate in Couette Flows.  
T.Narumi, T.Hasegawa (Niigata University) and K.Yamada (Tokyo Institute of Technology)
- 15:30-16:00  
09-10 Transient Viscometric Behavior of Liquid Crystalline Hydroxypropyl Cellulose Solutions.  
S.Suto and N.Yamanashi (Yamagata University)
- 16:00-16:30  
09-11 The Importance of "Elasticity Number" in the Characterization of Rubber.  
I.Soos (TAURUS Hungarian Rubber Works, Hungary) and Y.Nagase (Hiroshima University)
- 16:30-17:00  
09-12 Study on the Rheological Behavior for Polymer Melts.  
2: A Molecular Theory of Viscoelasticity with Entanglement Effects.  
M.S.Song, and X.D.Song (Beijing Institute of Chemical Technology, China)

## October 11 (Mon) Stream No. 3 (Room No. 1111)

### Session of Product Evaluation and Structure Development

- 9:00- 9:30 KN10-01 Structural Characteristics of Poly(Ethylene 2,6-Naphthalate) and Polyether Imide Blends under Quiescent and Melt Spinning Conditions.  
J.C.Kim and M.Cakmak (The University of Akron, U.S.A.)
- 9:30-10:00 KN10-02 Deformation and Fracture of Polymer Alloy Systems.  
I.Narisawa and T.Kuriyama (Yamagata University)
- 10:00-10:30 KN10-03 Ultra-Drawing of Virgin Polymer Powders.  
T.Kanamoto (Science University of Tokyo)
- 11:00-11:30 10-04 Acoustic Microscopy of Injection-Molded Plastics.  
T.Kuriyama, I.Narisawa (Yamagata University) and  
T.Abe (Government Industrial Research and Institute, Tohoku)
- 11:30-12:00 10-05 Material Anisotropy and Warpage of Nylon 66 Composites.  
H.Kikuchi (DuPont Japan Co.) and K.Koyama (Yamagata University)
- 12:00-12:30 10-06 Sorption and Solvent Induced Crystallization in Poly-p-Phenylene Sulfide Films.  
H.Kang and K.J.Shon (Dankook University, Korea)
- 14:00-14:30 10-07 Evaluation for Adhesion of CFRP with Epoxy Resin by Applying C-Type Method.  
F.Ohishi and S.Andou (Kanagawa University)
- 14:30-15:00 10-08 Evaluation Method of Electrofusion Joint Strength on Polyethylene Pipes for Gas Distribution.  
H.Nishimura, M.Suyama, F.Inoue and T.Ishikawa (Osaka Gas Co.)
- 15:00-15:30 10-09 Generation Mechanism of Residual Stress in Thermosetting Resins due to Curing.  
M.Shimbo and Y.Miyano (Kanazawa Institute of Technology)

### Session of Blow Molding

- 15:30-16:00 KN03-01 Finite Element Analysis of Blow Molding.  
J.Vlachopoulos, K.Kouba and M.O.Ghafur (McMaster University, Canada)
- 16:00-16:30 KN03-02 Theoretical and Experimental Studies of the Blow Moulding Process.  
A.Garcia-Rejon (National Research Council Canada, Canada)
- 16:30-17:00 03-03 Numerical Simulation of Blow-Molding. -Viscoelastic Flow Analysis of Parison Formation.-  
S.Tanoue, Y.Kuwano, T.Kajiwara, K.Funatsu (Kyusyu University),  
K.Terada and M.Yamabe (Nissan Motor Co.)
- 17:00-17:30 03-04 Mathematical Modeling of the Blow Molding Process.  
W.Daming (Beijing Institute of Chemical Technology, China)  
B.V.Berdeishev, N.I.Basov and V.K.Skuratov (Moscow Institute of Chemical Machinery, Russia)

October 11 (Mon) Stream No. 4 (Room No. 0765)

Session of extrusion, Fibers and Films

- 9:00- 9:30 Melt Flow Particle Trajectory and Mixing in Extruders.  
KN02-05 G.A.Campbell and N.Dontula (Clarkson University, U.S.A. )
- 9:30-10:00 Analysis of Residence Time Distribution and Deformation Measure  
KN02-06 in Screw Extrusion Processes.  
T.H.Kwon and S.J.Kim (Pohang Institute of Science and Technology, Korea)
- 10:00-10:30 Development of a Hybridized Processing System Combined Reactive  
02-07 Extrusion with Injection Molding.  
S.Inoue, K.Nakamura, N.Murata, K.Shinobudani and T.Sakai  
(The Japan Steel Works, Ltd.)
- 11:00-11:30 High Weissenberg Number Simulation of Die Swell for Differential  
02-08 Type Viscoelastic Model.  
Y.Kuwano,(Nippon Petrochemicals Co.) T.Kajiwara and K.Funatsu (Kyusyu University)
- 11:30-12:00 Effects of LLDPE on Selecting Processing Parameters of an Extrusion Coating Line.  
02-09 A.C-Y Wong (University of Hong Kong, Hong Kong)
- 12:00-12:30 Structure and Properties of PP Blend Fibers.  
02-10 B.Liang and L.Pan (China Textile University, China)
- 14:00-14:30 Effect of the Control of Spinline Dynamics on Fiber Structure  
KN02-11 Formation in High-Speed Melt Spinning Process.  
T.Kikutani (Tokyo Institute of Technology)
- 14:30-15:00 Molecular Orientation and Strain-Induced Crystallization in the Melt Spinning  
02-12 of Poly(Butylene Terephthalate)/Poly(Bisphenol-A Carbonate) Blend.  
Y.Ohkoshi, T.Okuya, M.Nagura and A.Konda (Shinshu University)
- 15:00-15:30 Viscoelastic Analysis of Film Blowing.  
02-13 M.Shinohara (Idemitsu Petrochemical Co.),  
T.Kajiwara and K.Funatsu (Kyuusyu University))
- 15:30-16:00 The Draw Resonance in Two Layer Film Forming Process.  
02-14 M.Akatsu (Kureha Chemical Industry Co.) and K.Koyama (Yamagata University)
- 16:00-16:30 Analysis of a Bowing Phenomenon in the Tentering Process of Film.  
02-15 T.Yamada and C.Nonomura (Toyobo Co.)
- 16:30-17:00 A Theoretical and Experimental Study of Melt Conveying Characteristics  
02-16 in Co-Rotating Intermeshing Twin Screw Extruders.  
W.Kejian and F.Zhu (Beijing Institute of Chemical Technology,China)
- 17:00-17:30 The Study on the Relationship Between the Shape of Filling  
02-17 Materials and the Construction of Filling Gate of Extruder.  
L.Tinghua and F.Zhu (Beijing Institute of Chemical Technology,China)
- 17:30-18:00 The Cause of Forming a New Melt Defect "Watermelon Skin"  
02-18 Phenomenon and the Theory of Viscoelastic Normal Stress Wave.  
T.Mingyue (Shanghai No.19 Plastics Products Factory, China)
- 18:00-18:30 Cooling System of Large Plastics Mould and "Air Accumulation."  
02-19 T.Mingyue (Shanghai No.19 Plastics Products Factory, China)