

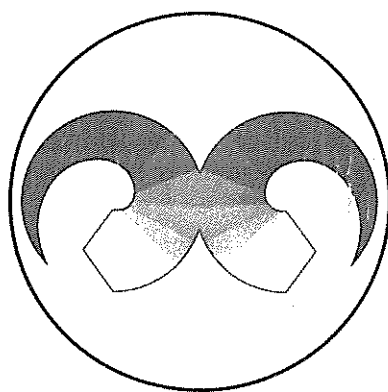
J. VLACHOPOULOS

**THE POLYMER
PROCESSING SOCIETY
INTERNATIONAL**

FIFTH ANNUAL MEETING

KYOTO, JAPAN
April 11-14, 1989

ABSTRACTS



Cosponsored by
**THE SOCIETY OF POLYMER SCIENCE, JAPAN
THE SOCIETY OF RHEOLOGY, JAPAN
SPE JAPAN SECTION**

PERIOD AND VENUE

Period : Tuesday, 11th April through Friday, 14th April, 1989

Venue : Kyoto International Conference Hall (KICH)

Takaragaike, Sakyo-ku, Kyoto 606, Japan

Phone : (075)791-3111

Fax : (075)711-1100

Telex : 5422-353 INTAL J

THE POLYMER PROCESSING SOCIETY, INTERNATIONAL (PPS)

The PPS was founded on March 28-29, 1985, at Akron, Ohio (USA). The audience at the Founding Meeting was composed of more than 200 internationally recognized experts from academic and industrial organizations; these experts enthusiastically approved of the objectives of the new society, and the society has grown at a rapid rate. The Second and Third Annual Meetings of the PPS were held in Montreal, Canada during April 1-4, 1986 and in Stuttgart, West Germany during April 7-10, 1987. The Fourth Annual Meeting was held in Orlando, USA with significant international participation in an excellent technical program, and attracted over 400 participants.

The goal of the PPS as embodied in its constitution is to foster scientific understanding and technical innovation in polymer processing by providing a discussion forum for the world-wide community of engineers and scientists in this field. The thematic range of the PPS encompasses all formulation, conversion and shaping operations applied to polymeric systems in the transformation from their monomeric forms to commercial products. In addition to the annual international conferences, the PPS activities include the arrangement of regional and local meetings, publication of a journal, and sponsorship of educational seminars.

Membership in the PPS is open to all research workers in the field, and to all individuals who feel the activities of the society advance their professional development.

FUTURE PPS ANNUAL MEETINGS

April 17 – 20, 1990 : Nice, France

Spring 1991 : Hamilton, Canada

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ORGANIZATIONS

POLYMER PROCESSING SOCIETY

Executive Committee

President	L. A. Utracki
President-Elect	H.-G. Fritz
Secretary	G. Vassilatos
Treasurer	J. F. Stevenson
Past President	J. L. White
Members-at-Large	J. F. Aggasant
	Y. Oyanagi

International Representatives

L. A. Goettler (USA)	H. Herrmann (W. Germany)
M. R. Kamal (Canada)	K. U. Kim (Korea)
T. Masuda (Japan)	Z. Tadmor (Israel)

CONFERENCE COMMITTEE

Chairman	Y. Oyanagi	
Co-Chairman	K. Ninomiya	
Program Chairman	S. Hoshino	
Secretary General	T. Masuda	
Treasurer	H. Takahashi	
Local Committee Chairman	K. Osaki	
Members	O. Amano	K. Funatsu
	H. Hojo	M. Horio
	K. Inoue	M. Kaji
	T. Kanamoto	S. Kase
	T. Kitao	K. Murakami
	S. Nagai	M. Nagasawa
	I. Ohno	S. Onogi
	K. Otani	T. Sakai
	Y. Shima	M. Takahashi
	M. Uchida	

LOCAL COMMITTEE

Chairman	K. Osaki	
Secretary	T. Takigawa	
Members	H. Hamada	T. Harada
	H. Hasegawa	K. Iisaka
	S. Kohjiya	K. Komaki
	K. Kubota	Z. Maekawa
	T. Matsumoto	K. Nakae
	N. Nemoto	H. Sugiyama
	H. Takahashi	M. Takahashi
	H. Yamane	

LADIES' COMMITTEE

Chairperson	H. Oyanagi	
Members	A. Hamada	N. Hasegawa
	K. Horio	T. Osaki
	S. Masuda	K. Matsumoto
	T. Nemoto	Y. Sugiyama
	J. Takahashi	M. Takigawa
	Y. White	A. Yamane

GENERAL SCHEDULE

Kyoto International Conference Hall (KICH)

Date	Room	9	10	11	12	13	14	15	16	17	18	19	20	21
April 11 (Tues.)	Lobby	Registration												
	Lounge				Reception									
	A							Opening Plenary Lecture Business Mtg.						
	Swan											Mixer		
April 12 (Wed.)	Lobby	Registration												
	B1	Oral Sessions			Oral Sessions									
	B2													
	C1													
	C2													
	157	Poster Session												
	E	Exhibition (SRJ)												
	Sakura	← Lunch →											Gion Corner	
	AP-1													
April 13 (Thurs.)	Lobby	Registration												
	B1	Oral Sessions			Oral Sessions									
	B2													
	C1													
	C2													
	157	Poster Session												
	E	Exhibition (SRJ)												
	Sakura	← Lunch →											Banquet (Kyoto Hotel)	
	AP-2													
April 14 (Fri.)	Lobby	Registration												
	B1	Oral Sessions			Oral Sessions									
	B2													
	C1													
	C2													
	E	Exhibition(SRJ)												
	Sakura	← Lunch →												
	Swan											Sayonara		
	AP-3													
April 15 (Sat.)		Excursion to Nara (Optional)												

GENERAL INFORMATION

Registration

The Registration Desk is open during the period of the Meeting.

Place:	Kyoto International Conference Hall (KICH)	
Hours:	Tuesday, 11th April	11:00 — 18:00
	Wednesday, 12th April	8:30 — 16:00
	Thursday, 13th April	8:30 — 16:00
	Friday, 14th April	8:30 — 12:00

For an on-site registration, please fill in the registration form and submit it to the Registration Desk. Payment should be made in Japanese Yen.

Registration Fee:

Active participants	
PPS member	¥35,000 each
Non-member*	¥55,000 each
Students	¥15,000 each
Accompanying persons	¥10,000 each
Banquet	¥10,000 X () person(s)

*To non-members: You are invited to join the PPS. If paying the membership dues of ¥5,000 for the next business year, you will save ¥15,000 of the conference fees. Please declare your intention on the Registration Form.

Name Cards

All the participants are requested to wear the PPS-5 name cards during the Meeting.

Language

The official language of the Symposium will be English, in which all information will be presented.

Information Desk

Information Desk is open during the Meeting.

Hours:	Tuesday, 11th April	13:00 — 17:00
	Wednesday, 12th April	9:00 — 17:00
	Thursday, 13th April	9:00 — 17:00
	Friday, 14th April	9:00 — 17:00

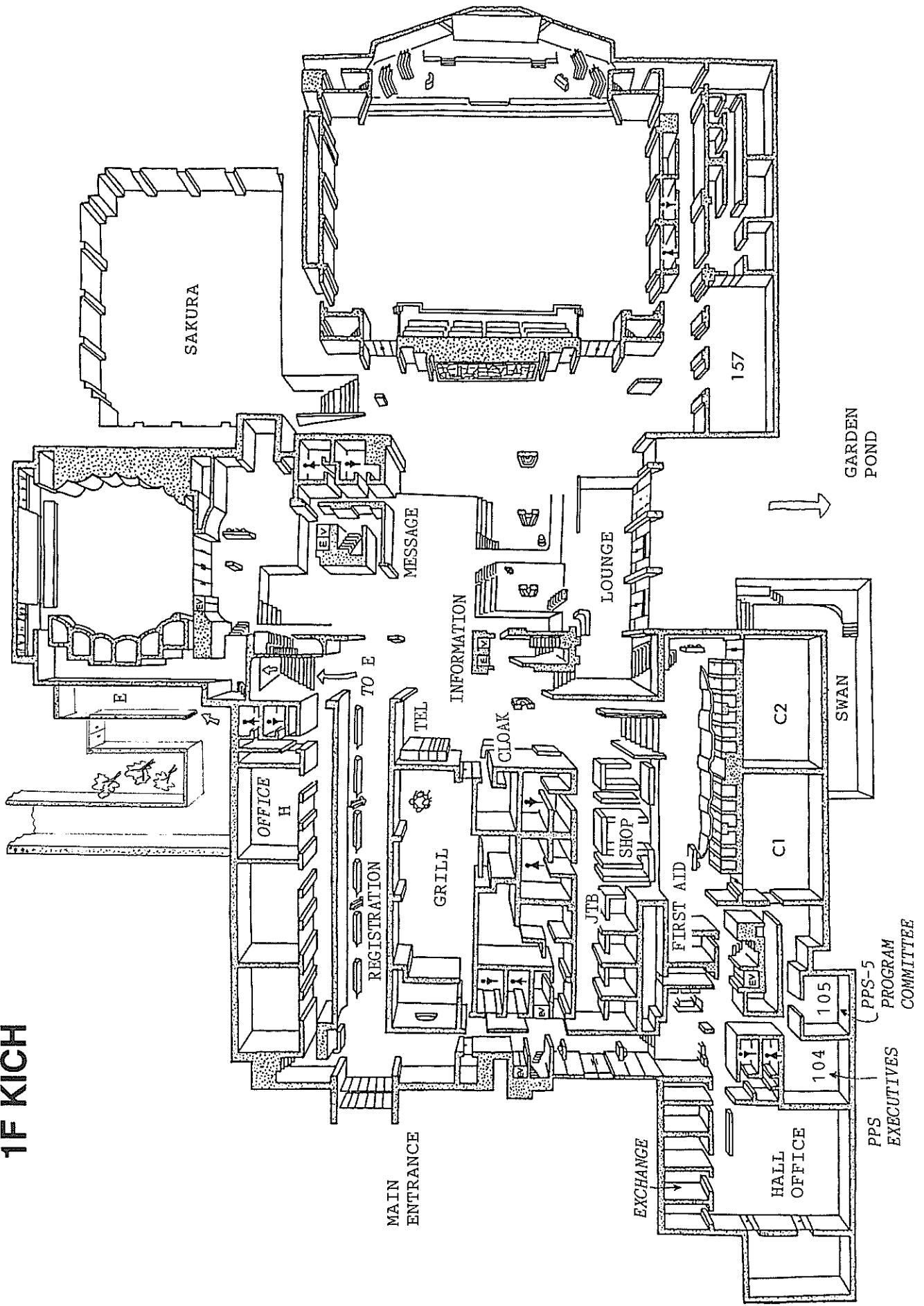
In addition to information on PPS-5, various services including first aid, lost and found, etc. will be available.

Messages

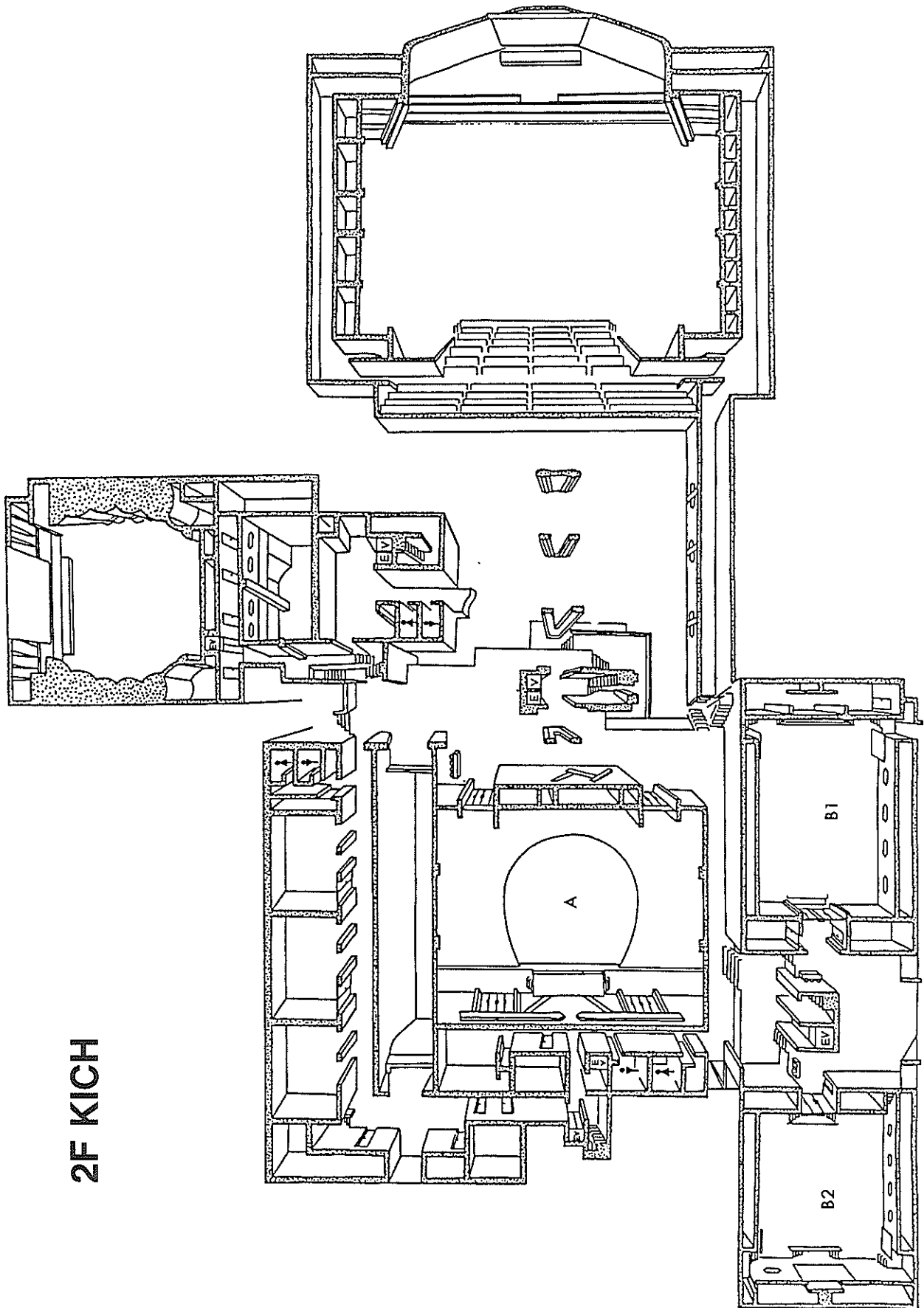
A message board is available in the KICH lobby.

Foreign Currency Exchange	Major banks handling foreign currencies are located in the downtown area. Banks are open from 9:00 to 15:00 on weekdays and to be closed on Saturday and Sunday. Major foreign currencies can also be exchanged at hotels and the KICH Office.	
Telephone & Telegram	Public telephones for domestic and international calls are available in the lobby area. For international telegrams, please inquire at the Information Desk.	
Transportation	Shuttle buses will be arranged to connect KICH and hotels. Public buses and taxis are also available. Detailed information will be given. The Reception Desk at the KICH entrance will help you for taxi.	
Travel Agency	Japan Travel Bureau (JTB) will open a desk in the lobby area for travel arrangements, and changes.	
Lunch Service, Restaurants & Coffee Shops	See Page 8 for restaurants in and around the KICH. Each registrant will have five beverage-tickets which can be used at beverage corner in the lounge. The meal-tickets, if you find them in your bag, are valid only at the restaurants in KICH.	
Exhibition	In conjunction with PPS-5, the Society of Rheology, Japan (SRJ) holds the exhibition "Apparatus and Software for Rheology and Polymer Processing". All participants are welcome to attend the Exhibition free of charge. Detailed information will be given in the Guide Book.	
Tourist Information Centers	Kyoto Tourist Information Center Kyoto Tower Bldg., in front of Kyoto Station	Phone: (075)371-5649
	Kyoto City Central Information Office Kawaramachi Oike	Phone: (075)231-1936
	Kyoto City Information Office Diagonally in front of Kyoto Station	Phone: (075)343-6655
Correspondence	Secretariat-PPS-5 (KYOTO) Research Center for Medical Polymers and Biomaterials Kyoto University Shogoin, Sakyo-ku, Kyoto 606, JAPAN Phone : +81(75)751-4113 Fax : +81(75)761-2872	

1F KICH



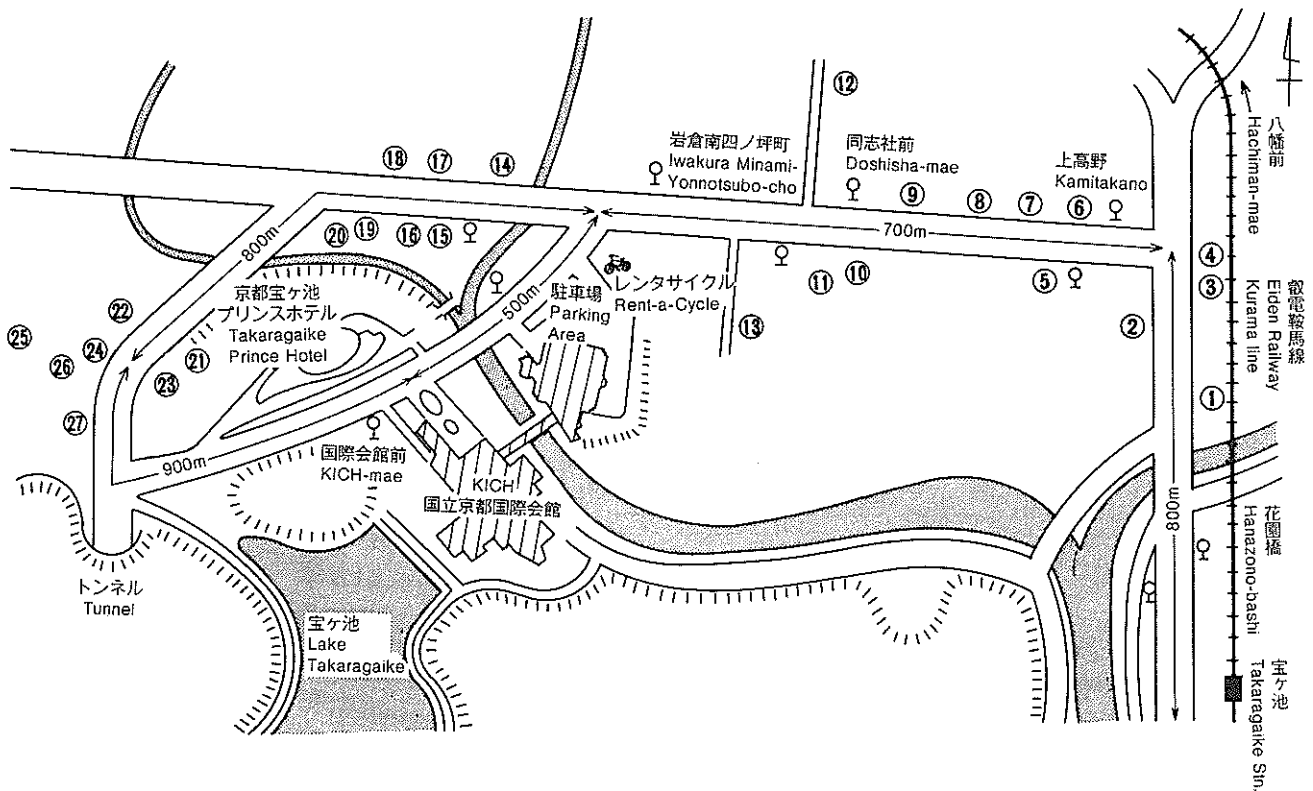
2F KICH



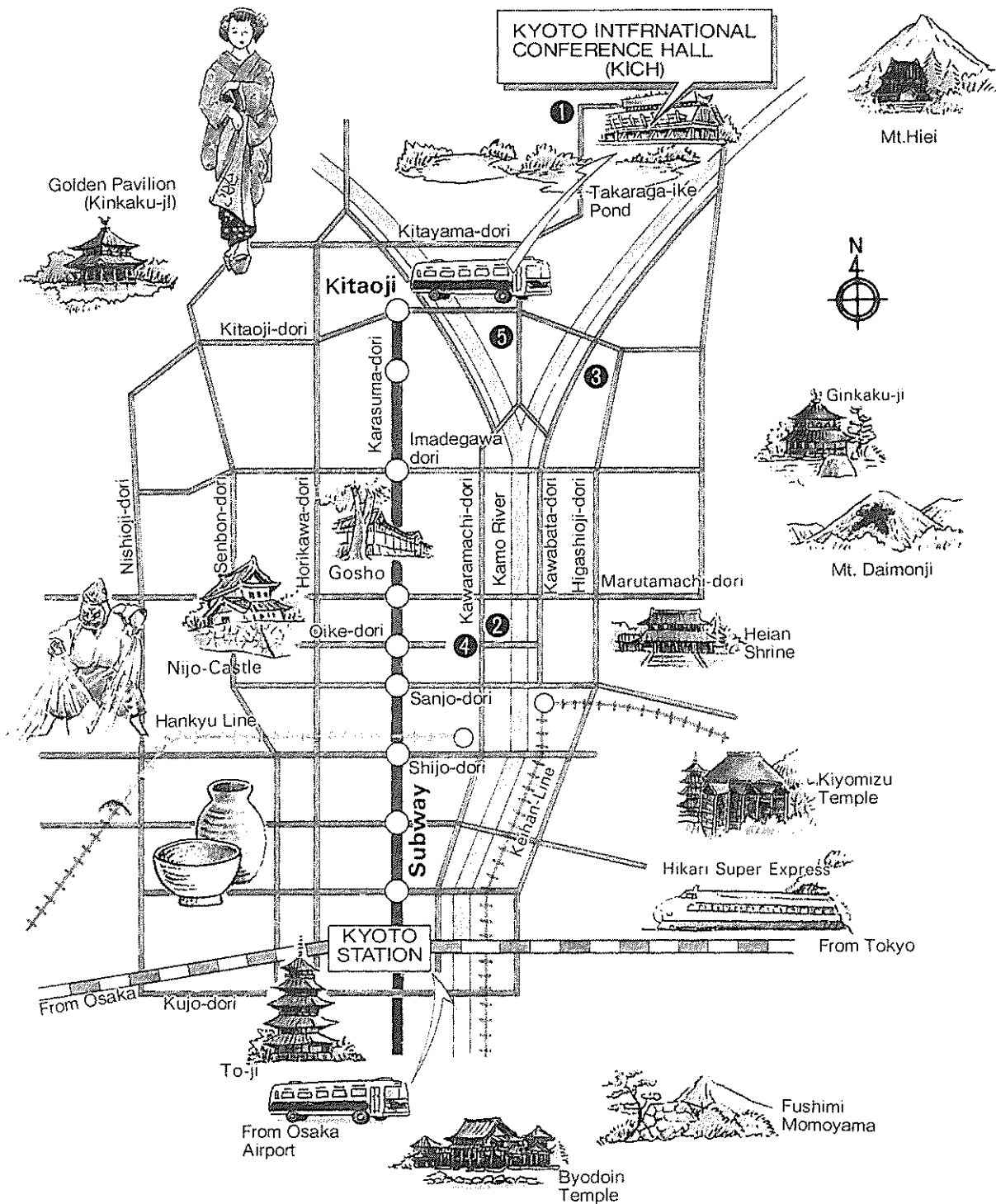
Restaurants in KICH

	LOCATION	OPEN	PRICE	MENU
Sakura (400 seats)	Basement	11:30 ~ 14:00	¥1,000	Lunch (fixed)
Grill (100 seats)	1st floor	10:00 ~ 17:00	¥1,000 ~ ¥3,000	Western
Snack (90 seats)	4th floor	10:00 ~ 16:00	¥500 ~ ¥1,000	Japanese, Western

Restaurants and Coffee Shops around KICH



- | | | | | |
|----------------------------------|------------------------------------|------------------------|-------------------------------|-----------------------------------|
| ① 佳北 (R)
Kahoku | ⑦ カサグランデ (C)
Casa Grande | ⑬ じゅんさい (R)
Junsai | ⑮ ドルフ (R)
Dorf | ⑲ ビュタン (C)
Butin |
| ② ジョイみのきち (R)
Joy Minokichi | ⑧ クレープハウスユニ (C)
Crêpe House Uni | ⑭ ゴー (C)
Go | ⑯ ニフティ (C)
Nifty | ⑳ ホンキートンク (C)
Honky Tonk |
| ③ 笹喜 (R)
Sasaki | ⑨ アンジェ (C)
Ange | ⑮ 八十八騎 (R)
Todoroki | ㉑ ラボーム (C)
Lapaume | ㉒ 馬仙山 (R)
Basenzan |
| ④ トニーローマ (R)
Tony Roma's | ⑩ グリーンスポット (C)
Green Spot | ⑯ 京宴 (R)
kyoyen | ㉓ カフェビバーチェ (C)
Café Vivace | ㉔ 宝池ゴルフクラブ
Takaraike Golf Club |
| ⑤ イタリアントマト (R)
Italian Tomato | ⑪ フローティングハウス (C)
Floating House | ⑰ 石州 (C)
Seki Shu | ㉕ プロッサム (R)
Blossom | |
| ⑥ ピアンタ (C)
Pianta | ⑫ グリルタカラ (R)
Grill Takara | ⑰ 王将 (R)
Ohsho | | |
- (R) Restaurant (C) Coffee Shop ♀ Bus Stop



- (1) Takaragaike Prince Hotel
- (2) Kyoto Hotel
- (3) Holiday Inn Kyoto
- (4) Hotel Alpha Kyoto
- (5) Kyoto Prince Hotel

SOCIAL PROGRAM

- | | | |
|--------------------------------------|--|--------------------|
| 1. Welcome Reception | Tuesday, 11th April
12:00 — 14:00
Lounge, KICH
Japanese tea and snack; no alcoholic | No charge |
| 2. Mixer | Tuesday, 11th April
17:00 — 19:00
Swan, KICH
An informal mixer; open to all registered participants | No charge |
| 3. Visit to Gion Corner | Wednesday, 12th April
20:30 — 21:30
Yasaka-Kaikan Hall (Gion Corner)
Visit to a traditional Japanese art theater; performance of traditional Kyoto dance, puppet theater (Bunraku), music, flower arrangement, tea ceremony, and others. | ¥2,000 per person |
| 4. Banquet | Thursday, 13th April
19:00 — 21:00
Kyoto Hotel | ¥10,000 per person |
| 5. Closing Sayonara Party | Friday, 14th April
17:00 — 19:00
Swan, KICH | No charge |
| 6. Accompanying Person's Program | Registered family members can attend free of charge the following program. All tours will be with English-speaking guides. Detailed schedule will be informed at the time of registration. | |
| AP-1 Miyako Odori | Wednesday, 12th April
13:00 — 16:00
Enjoy the Cherry-blossom Dance at Gion Koubu Kaburenjo Theater. Traditional Kyoto Dance, presented only during April. | |
| AP-2 Kyoto Morning Tour | Thursday, 13th April
8:30 — 12:30
Visit Nijo Castle with gorgeous carvings, paintings and a garden, Kinkakuji Temple, a magnificent golden pavilion, and Kyoto Imperial Palace, the emperor's residence till 1868. | |
| AP-3 Traditional Art-and-Crafts Tour | Friday, 14th April
9:00 — 12:30
Visit Higashiyama Saihoji Temple, observe and participate in traditional tea ceremony and flower arrangement, and enjoy Japanese traditional-crafts at Dento-Sangyo-Kaikan (Kyoto Municipal Museum of Traditional Industry). | |
| 7. Post-Conference Excursion | Saturday, 15th April
8:30 - 17:00
Nara full-day tour
Kyoto → Byodoin Temple → Todaiji Temple → Kasuga Shrine → Deer Park → Kofukuji Temple → Kyoto | ¥9,500 per person |

SCIENTIFIC PROGRAM

Plenary Lecture

Processing—Structure—Property Relationships
Masao Horio (Japan)

Symposia and the Organizers

1. Injection and Compression Molding; H. Takahashi, D. Hullier, L. R. Schmidt
2. Extrusion; K. Otani, A. I. Isayev, F. Hensen
3. Blow Molding; Y. Saito, M. Cakmak, R. Hegele
4. Polymerization and Reactive Processings; S. Omi, J. T. Lindt, M. Lambla
5. Blending Mixing and Compounding; K. Inoue, D. Todd, Z. Tadmor
6. Fiber Spinning and Film Blowing; T. Kanai, S. Kurtz, W. Predohl
7. Rubber and Thermoplastic Elastomer Processing; S. Kimura, L. A. Goettler
8. Devolatilization, Foaming and Cellular Polymers; K. Funatsu, D. Sebastian, H. Meijer
9. Innovative Technologies; K. Nakayama, A. E. Zachariades, P. Lemstra
10. Rheology and Rheometry; T. Masuda, J. M. Starita
11. Structure Development in Processing; T. Masuko, J. L. White, G. Zachmann
12. Composites; Z. Maekawa, J. Seferis, D. R. Moore
13. Polymer Alloys, Blends and IPN's; T. Katsura, L. A. Utracki
14. Liquid Crystalline Polymers; S. Suzuki, D. R. Moore
15. Radiation Processing of Polymeric Systems; Y. Tabata, A. Singh, T. Czvikovszky

Instruction for Presentation

Oral Presentation

20 min will be allowed for each oral presentation, including time for discussion. Each session room will be provided with a slide projector and an overhead projector. Please use either of them at your presentation. Slides should be of a size of 50mm x 50mm and a thickness of less than 2mm. The slide projector is operated by a projectionist. The overhead projector must be operated by the speaker.

Speakers are kindly requested to get in touch with the reception desk of their session room at least 60 min before presentation of their papers and to give their slides and/or OHP information.

Speakers are requested to keep to the time assigned (20 min incl. discussion) for their talk.

Poster Presentation

Six hours a day of poster presentations from 10:00 to 16:00 are scheduled and the space available for each presentation is 180cm (w) x 90cm (h). Authors are requested to attend their booth from 13:00 to 14:00. During this time period, no oral sessions go on.

A poster board will be identified by the paper number. Posters for title, author(s), summaries, figures, photos, tables, maths, and so on, should be prepared by the author. It is recommended that figures and letters are large enough so that one can recognize them at a distance of about 1 meter. Fastening tools will be prepared by the Committee.

Posters can be put up between 9:00 and 10:00, and should be removed between 16:00 and 17:00.

PROGRAM AT A GLANCE

April 11 (Tues)	15:00 16:00	Room A			
		Plenary Lecture Processing - Structure - Property Relationships Masao Horio			
April 12 (Wed.)	09:00 12:00	Room B1	Room B2	Room C1	Room C2
		Symposium 1 Papers 01 - 01 ~ 01 - 08	Symposium 5 Papers 05 - 01 ~ 05 - 08	Symposium 12 Papers 12 - 01 ~ 12 - 08	Symposium 11 Papers 11 - 01 ~ 11 - 08
	14:00 18:00	Symposium 1 Papers 01 - 09 ~ 01 - 19	Symposium 5 Papers 05 - 09 ~ 05 - 11	Symposium 12 Papers 12 - 09 ~ 12 - 19	Symposium 11 Papers 11 - 09 ~ 11 - 17
			Symposium 7 Papers 07 - 01 ~ 07 - 07		Symposium 6 Papers 06 - 01 ~ 06 - 02
	10:00 16:00	Room 157			
		Posters 1P - 01 ~ 1P - 29			
April 13 (Thurs.)	09:00 14:00	Room B1	Room B2	Room C1	Room C2
		Symposium 1 Papers 01 - 20 ~ 01 - 27	Symposium 8 Papers 08 - 01 ~ 08 - 03	Symposium 12 Papers 12 - 20 ~ 12 - 23	Symposium 6 Papers 06 - 03 ~ 06 - 10
			Symposium 13 Papers 13 - 01 ~ 13 - 05	Symposium 4 Papers 04 - 01 ~ 04 - 02	
	14:00 18:00	Symposium 2 Papers 02 - 01 ~ 02 - 11	Symposium 13 Papers 13 - 06 ~ 13 - 16	Symposium 4 Papers 04 - 03 ~ 04 - 12	Symposium 6 Papers 06 - 11 ~ 06 - 14
				Symposium 14 Paper 14 - 01	Symposium 10 Papers 10 - 01 ~ 10 - 07
	10:00 16:00	Room 157			
Posters 2P - 01 ~ 2P - 36					
April 14 (Fri.)	09:00 12:00	Room B1	Room B2	Room C1	Room C2
		Symposium 2 Papers 02 - 12 ~ 02 - 19	Symposium 13 Papers 13 - 17 ~ 13 - 24	Symposium 14 Papers 14 - 02 ~ 14 - 09	Symposium 10 Papers 10 - 08 ~ 10 - 15
	13:00 17:00	Symposium 9 Papers 09 - 01 ~ 09 - 11	Symposium 13 Papers 13 - 25 ~ 13 - 34	Symposium 14 Papers 14 - 08 ~ 14 - 12	Symposium 10 Paper 10 - 16
				Symposium 3 Papers 03 - 01 ~ 03 - 08	Symposium 15 Papers 15 - 01 ~ 15 - 10

April 11, Opening Session

Lounge	
12:00—14:00	Reception
Room A	
14:00—15:00	Opening Ceremony
15:00—16:00	Plenary Lecture “Processing—Structure—Property Relationships” Masao Horio Department of Polymer Chemistry Faculty of Engineering Kyoto University Japan
16:00—17:00	PPS Business Meeting
Swan	
17:00—18:30	Mixer

April 12, Morning Sessions

	B1	B2
	Symposium 1. Injection and Compression Molding Organizers: H. Takahashi, L. R. Schmidt, D. Huilier	Symposium 5. Blending, Mixing and Compounding Organizers: K. Inoue, D. Todd, Z. Tadmor
9:00	K01-01 Fiber Orientation Predictions for Simple Injection Moldings <u>C. L. Tucker III</u> (U. of Illinois, USA)	K05-01 Towards the Flexible and Intelligent Compounding Plant <u>H. Herrmann</u> (Werner & Pfleiderer, W. Germany)
9:20	01-02 Simulation of Injection Molding Process <u>V. W. Wang</u> (Advanced CAE Tech., USA)	05-02 Ionomer Based on Poly (Styrene-co-Maleic Anhydride) <u>X. Xu</u> , L. Li and Z. Wang (Shanghai Jiao Tong U., China)
9:40	01-03 Modelling of Injection Moulding: Some Problems <u>S. M. Richardson</u> (Imperial College, UK)	05-03 Ultrasonic Absorption and Visco-Relaxation Study of Poly (Ethylene Glycol) Aqueous Solutions <u>S. K. Hassun</u> (U. of Al-Mustansiriyyah, Iraq)
10:00	01-04 Numerical Simulation of Injection Molding Processes S. Nakazawa, M. Murakami* and N. Narazaki** (MARC Analysis Research, USA, *Japan Information Processing Service, Japan and **Mitsubishi Gas Chemical, Japan)	05-04 State of Dispersion — Mechanical Properties Correlation in Small Particle Filled Polymer Composites <u>Y. Suetsugu</u> (Idemitsu Petrochemical, Japan)
10:20	— Break —	
10:40	01-05 Theoretical Fundamentals of Low-Pressure Injection Moulding of Pastes (Plastisoles) M. L. Friedman, A. Z. Petrosyan*, G. R. Mkrtchyan (Sci. Research Inst. for Plastics and *State Pedagogical Inst., USSR)	05-05 Rheological and Mechanical Properties of Glass Fiber Reinforced PP Modified with Maleic Anhydride K. U. Kim and T. S. Park (KAIST, Korea)
11:00	01-06 A Simple Mould-Filling Model Including the Equation of State <u>G. Nijman</u> and J. L. Havinga (U. Twente, Netherlands)	05-06 Observation and Analysis of Carbon Black Dispersion in Simple Shear Flows S.-P. Rwei, S. W. Horwatt, D. L. Foke and I. Manas-Zloczower (Case Western Reserve U., USA)
11:20	01-07 Numerical Prediction of Fiber Orientation in Injection Molding <u>M. Ogishita</u> , Y. Kawamura and M. Kimoto (Mitsubishi Plastics Ind., Japan)	05-07 Characterization of Dispersion Quality with Rheological Properties of a Pigmented Polymer Melt <u>T. Hertlein</u> and H.-G. Fritz (U. of Stuttgart, W. Germany)
11:40	01-08 Fiber Orientation Analysis in Injection Molding T. Matsuoka, J. Takabatake, A. Koiwai, Y. Inou and H. Takahashi (Toyota Central Research & Development Lab., Japan)	05-08 On the Modelling of Continuous Mixers. The Buss Cokneader P. H. M. Elemans and H. E. H. Meijer* (Eindhoven U. of Technology and *DSM Research B.V., Netherlands)
12:00	— Lunch —	
10:00 16:00	Poster Presentations (Rm. 157)	

April 12, Morning Sessions

	C1	C2
	Symposium 12. Composites Organizers: Z. Maekawa, J. Seferis, D. R. Moore	Symposium 11. Structure Development in Processing Organizers: T. Masuko, J. L. White, G. Zachmann
9:00	12-01 Synthesis and Formulation of Resin Systems for Advanced Composites K. S. Jagadeesh and Siddaramaiah (Sri Jayachamarajendra College of Eng., India)	K11-01 The Role of Molecular Rigidity in Processing Polymer Fluids A. Ziabicki (Polish Academy of Sci., Poland)
9:20	12-02 Thermal and Rheological Cure Studies of Thermosetting Systems Used to Produce Advanced Composites P. S. Gill, G. Dallas and W. J. Sichina (du Pont, USA)	11-02 Properties of Rolled Multilayer Sheets II. Structure and Properties of Rolled PVDF Sheets K. Takahashi, S. Kunimura, S. Nakayama, H. Shimizu*, A. Kaito* and K. Nakayama* (Fujikura and *Research Inst. for Polymers and Textiles, Japan)
9:40	12-03 Thermorheological Analysis of Highly Loaded Polymeric Composites Filled with Glass Beads O. Lepez, P. A. Tanguy, L. Choplin and F. Versyp (U. Laval, Canada)	11-03 Structure Development in Uni- and Biaxially Stretched Poly Ether Ether Ketone Films M. Cakmak, M. Simhambhatla and Y. D. Wang (U. of Akron, USA)
10:00	12-04 Recent Developments in BMI Thermosetting Systems M. Carrega (Rhône-Poulenc, France)	11-04 Modelling of the Asymmetric Membrane Formation H. Yamane, M. Tabata, Y. Kimura and T. Kitao (Kyoto Inst. of Tech., Japan)
10:20	— Break —	
10:40	12-05 Crystallization Kinetics of PEEK Matrix Composites J. C. Seferis (U. of Washington, USA)	K11-05 Polymer Processing by Diffraction Analysis of Micro-paracrystals and their Thermodynamics R. Hosemann (Bundesanstalt für Materialforschung und -prüfung, W. Germany)
11:00	12-06 The Influence of Processing on Fibre Orientation and Creep of Short Carbon Fibre-Reinforced LDPE and PC H. Bertilsson, B. Franzén, C. Klason and J. Kubát and T. Kitano* (Chalmers U. of Tech., Sweden and *Research Inst. for Polymers and Textiles, Japan)	11-06 Enhancement of Fiber Structure Development in the High Speed Threadline J. A. Cuculo, P. A. Tucker, G. Y. Chen, C. Y. Lin and J. Denton (North Carolina State U., USA)
11:20	12-07 Rheology and Fiber Degradation in Shear Flow of Carbon Fibre-Reinforced Polypropylene Melts T. Kitano, H. Sakai* and T. Nishimura* (Research Inst. for Polymers and Textiles and *Industrial Research Inst. of Nagano, Japan)	11-07 Structure Development in Melt Spinning Aromatic Polycondensates: Poly Ether Ether Ketone, Polyetherimide, Polyarylate, and Poly-P-Phenylene Sulfide S. S. Song, J. L. White and M. Cakmak (U. of Akron, USA)
11:40	12-08 Kinetics of Wetting of Fibrous Surfaces by Polymer Melts J. J. Elmendorp and F. During (Shell Research B.V., Netherlands)	11-08 The Relation of the Tensile Properties to the Molecular Draw Ratio of Ultradrawn Ultra High Molecular Weight Polyethylene A. E. Zachariades and T. Kanamoto* (IBM, USA and *Sci. U. of Tokyo, Japan)
12:00	— Lunch —	
10:00 16:00	Poster Presentations (Rm. 157)	

April 12, Afternoon Sessions

	B1	B2
	Symposium 1. (Continued)	Symposium 5. (Continued)
14:00	K01-09 Simulation of Stamping of Long Glass Fibers Reinforced Thermoplastic Sheet R. Ducloux, A. Poitou, M. Vincent and J. E. Agassant (Ecole Nationale Supérieure des Mines de Paris, France)	K05-09 Effect of Geometry on Mixing Behavior in an Internal Mixer K. Min (U. of Akron, USA)
14:20	01-10 Compression Molding of Sheet Molding Compounds (SMC) in Molds with Substructures J. Kim, J. D. Fan, Y.-T. Im and L. J. Lee (Ohio State U., USA)	05-10 Modelling Flow and Experimental Studies of Flow and Mixing in Elastomers in an Internal Mixer J. K. Kim and J. L. White (U. of Akron, USA)
14:40	01-11 Injection Moulding: An Overview of the Different Post-Filling Stage Simulation Attempts and Critical Suggestions D. Huilier, J. Terrisse and J. Ladeveze (Ecole d'Application des Hauts Polymères, France)	05-11 Modelling Flow, Mixing and Dispersion in Twin Rotor Mixers and Extruders B. David, T. Sapir and Z. Tadmor (Technion, Israel)
	Symposium 1. (Continued)	Symposium 7. Rubber and Thermoplastic Elastomer Processing Organizers: S. Kimura, L. A. Goettler
15:00	01-12 Computer Simulation of the Post-Filling Phases in Thermoplastics Injection Molding M. R. Kamal, E. Chu and J. Cascio (McGill U., Canada)	K07-01 Flow Analysis in an Internal Mixer: Part I K. Yagii and K. Kawanishi (Japan Synthetic Rubber, Japan)
15:20	01-13 Computer Simulation of PVT Behavior and Stress Relaxation in Injection Molding K. Tada (PDC R&D Consortium, Japan)	07-02 Flow Analysis in an Internal Mixer: Part II K. Kawanishi and K. Yagii (Japan Synthetic Rubber, Japan)
15:40	— Break —	
16:00	01-14 Thermal Analysis of PC Optical Memory Disk Substrate T. Kanai and K. Shimizu (Idemitsu Petrochemical, Japan)	K07-03 Characterization and Processability of Gum Elastomers N. Nakajima (U. of Akron, USA)
16:20	01-15 Polypropylene Injection Molding. Packing Stage Simulation G. Titomanlio, S. Mazzullo*, M. Saiu and S. Piccarolo (Viale delle Scienze and *Centro Ricerche "G. Natta", Italy)	07-04 Study on Injection Molding Simulation of Elastomers A. Tanaka, A. Inatani, K. Kubota and Y. Oyanagi (Kogakuin U., Japan)
16:40	01-16 Approximations in Thermoplastics Injection Molding Art T. Shibayama (Nagoya Municipal Industrial Research Inst., Japan)	07-05 Comparison of Rubber Properties in Transfer and Compression Molding B. Dinzbarg and R. Bond (CR Industries, USA)
17:00	01-17 Distortion of Circular Polymer Disk in Injection Moulding Processing K. Kato, N. Ootake, T. Nakabayashi and Z. X. She (Tokyo Inst. of Technology, Japan)	07-06 Studies on the Dynamically Vulcanized of Poly (Vinyl Chloride) and Rubber, Part IV: Co-Crosslinking of PVC and NBR with TMTD and TCY N. Luo, Y. X. Zhang* and X. C. Xu (Northwest Inst. of Light Industry and *Northwest China Mechanical Rubber Goods Research Inst., China)
	Symposium 1. (Continued)	Symposium 7. (Continued)
17:20	01-18 Analysis and Verification of Warping and Local Shrinkage in Injection Molding Products K. Kayano, N. Narazaki, S. Nakazawa* and S. Kijima** (Mitsubishi Gas Chemical, Japan, *MARC Analysis Research, USA and **Japan Information Processing Service, Japan)	07-07 The Control of the Degree of Crosslinking of Transpolyisoprene and its Mechanical Properties R. Yan, Z. Xue, T. Cheng, W. Zhai and X. Tian (Academia Sinica, China)
17:40	01-19 Precise Aspherical Plastic Lens Molding for Home-Use Electronic Appliances M. Takagi, M. Muranaka, Y. Noro, T. Maruyama, H. Inage and K. Wada (Hitachi, Japan)	
18:00		

April 12, Afternoon Sessions

	C1	C2
	Symposium 12. (Continued)	Symposium 11. (Continued)
14:00	K12-09 Studies of the Structure and Composition of Continuous Fiber Reinforced Thermoplastic Polymers H. G. Zachmann (U. Hamburg, W. Germany)	K11-09 Development of Critical Matrix Structure in Composite Processing J. C. Seferis (U. of Washington, USA)
14:20	12-10 Influence of Particle Dimensions of the Young's Modulus of Filled Polymers Due to Processing Conditions D. Heikens and P. Vollenberg* (Eindhoven U. of Tech. and Dow Chemical, Netherlands)	11-10 On-Line Wide Angle X-Ray Scattering Diffraction Studies on Melt Spinning of Different Polypropylenes Using Synchrotron Radiation M. Cakmak*, A. Teitge, H. G. Zachmann and J. L. White* (U. Hamburg, W. Germany and *U. of Akron, USA)
14:40	12-11 Effects of Fibre-Resin Distribution on the Mechanical Properties of Continuous Fibre-Epoxy Unidirectional Laminates I.K. Partridge, J. P. Chubb and J. A. M. Jaussaud (Cranfield Inst. of Tech., UK)	11-11 Development and Function of the Hard Segment Domain Morphology in Diamin Extended MDI-Polyurethans R. Bonart and M. Fenzi (U. Regensburg, W. Germany)
	Symposium 12. (Continued)	Symposium 11. (Continued)
15:00	12-12 A Study on FRTP of Higher Strength Reinforced with Longer Fibers T. Azuma, K. Suwa and J. Murakami (Research Lab. of Plastics Technology, Japan)	11-12 Polymer Processing — Process Condition, Structure Development, and Final Component Properties W. Michaeli, G. Menges, H. Ries, P. Heidemeyer and U. Berghaus (IKV, W. Germany)
15:20	12-13 Effects of Processing on Mechanical Performances of Long Fiber Reinforced Thermoplastics T. Vu-Khanh and J. Denault (NRCC, Canada)	11-13 Extrusion of Polyamide 11 Pipes B. Monasse, N. Conte, P. Duffo, J. M. Haudin, J. J. Labaig* and B. Gourdon* (Ecole Nationale Supérieure des Mines de Paris and *ATOCHEM, France)
15:40	— Break —	
16:00	12-14 Impact Failure Mechanisms of Carbon Fibre Thermoplastic Composites A. D. Curson, D. C. Leach and D. R. Moore (ICI, UK)	11-14 Flow Induced Textiles in Multiphase Polymers F. Ehtaiatkar, M. J. Folkes and S. C. Steadman (Brunel U., UK)
16:20	12-15 The Anisotropy and Frequency Dependence of Damping in Short Glass Fibre Reinforced Polypropylene S. Wray, J. N. Ashton and H. El-Sobky (UMIST, UK)	11-15 On the Mechanism of Knit-Line Formation in Injection Molding S. Piccarolo, M. Saiu, G. Titomanlio and V. Brucato (U. di Palermo Viale delle Scienze, Italy)
16:40	12-16 Impact Performance of Composites P. E. Reed (U. of London, UK)	11-16 Structure Formation in Elogational Flow Injection Molded Polyethylene Relating to Material Properties F. J. Baltá Calleja (CSIC, Spain)
17:00	12-17 Properties and Fracture Morphologies of Carbon Fiber Reinforced Poly (Methyl Methacrylate) Composites R. Jin, L. Yang* and T. Shi** (Hefei U. of Tech., *Hefei Union U. and **Shanghai Shu Guang Chem. Works, China)	11-17 Residual Stresses Prediction in Plastics Forming M. I. Liou and T. Ho (Ohio State U., USA)
	Symposium 12. (Continued)	Symposium 6. Fiber Spinning and Film Blowing Organizers: T. Kanai, S. Kurtz, W. Predohl
17:20	12-18 Compounding of Wood Fibers with Polyethylene: Studies on Mechanical Properties R. G. Raj and B. V. Kokta (U. du Québec, Canada)	K06-01 Reflections on Asymptotic Analyses for Fibers and Films M. M. Denn (U. of California, USA)
17:40	12-19 Phenolic Composites — The Safer Reinforced Plastics S. Rajan, P. Sridharan and G. R. Murthy (Bakelite Hylam, India)	06-02 Measurement of Diameter and Temperature Profiles in the Vicinity of Neck-like Deformation in High-Speed Melt Spinning Process T. Kikutani, T. Matsui, A. Takaku and J. Shimizu (Tokyo Inst. of Tech., Japan)
18:00		

April 13, Morning Sessions

	B1	B2
	Symposium 1. (Continued)	Symposium 8. Devolatilization, Foaming and Cellular Polymers Organizers: K. Funatsu, D. Sebastian, H. Meijer
9:00	K01-20 Temperature Measurements of Polymer Melts in the Heating Barrel during Injection <u>O. Amano</u> and S. Utsugi (Nippon Petrochemicals, Japan)	08-01 Study in Polyurethane-Modified Isocyanurate Foam L. Zhu (Jiangsu Provincial Research Inst. of Chem. Industry, China)
9:20	01-21 Plasticating and Mixing Performance of Injection Molding Screws K. A. Fraser and <u>L. R. Schmidt</u> (General Electric, USA)	08-02 Morphological Study of Cyanoethyl Cellulose Oriented Film Y. Huang (Academia sinica, China)
9:40	01-22 A Study of Grooved Feeding Section in the Injection Molding Process K. Nakamura and T. Sakai (Japan Steel Works, Japan)	K08-03 A Novel Process to Form Integral Skin Layer in Rigid PVC Form Extrusion <u>K. U. Kim</u> and B. C. Kim (KAIST, Korea)
	Symposium 1. (Continued)	Symposium 13. Polymer Alloys, Blends and IPN's Organizers: T. Katsura, L. A. Utracki
10:00	10-23 An Experimental Database for the Validation of Injection Molding Computer Simulations <u>L. R. Schmidt</u> and J. L. Maxam (General Electric, USA)	K13-01 Microphase Behavior of Block Copolymer-Homopolymer Blends <u>D. R. Paul</u> (U. of Texas, USA)
10:20	— Break —	
10:40	01-24 The Effect of Molding Conditions on the Surface Profile of the Injection-Molded Plastic Lens S. Takatani, M. Sanou, Y. Yamamoto and S. Etoh (Mitsubishi Electric, Japan)	K13-02 Birefringence-Free Polymer Blends and their Cooperative Chain Relaxation Behavior M. Takahashi, M. Matsuura, H. Saito, and <u>T. Inoue</u> (Tokyo Inst. of Tech., Japan)
11:00	01-25 The Significance of Rheology in CAE Injection Mold Design Softwares <u>K. Palit</u> (David Sarnoff Research Center, USA)	13-03 Morphology Control of Polymer Blends. I. A-B Block Copolymer / A Homopolymer Binary Blends and A-B/A/B Ternary Blends T. Hashimoto, H. Hasegawa and H. Tanaka (Kyoto U., Japan)
	Symposium 1 (Continued)	Symposium 13. (Continued)
11:20	01-26 The Effect of the Holding Pressure and the Thermodynamic Behavior of Thermotropic Copolyesters on the Microstructure of Injection Molded Specimens <u>E. Suokas</u> and P. Törmälä (Tampere U. of Tech., Finland)	13-04 Miscibility and LCST Behavior of Polyisoprene (IR) with Various Poly (cis-Butadiene-co-1,2-Vinylbutadiene) (V-BR) Random Copolymers Blends S. Akiyama, S. Kawahara and A. Ueda* (Tokyo U. of Agriculture and Tech. and *Nippon Zeon, Japan)
11:40	01-27 A Comparison of Mechanical Properties and Structure of Glass Fiber Reinforced Polybutylene Terephthalate Plaques Moulded by Conventional and Oscillation Packing Pressure Techniques S. J. Partridge and M. W. Darlington (Cranfield Inst. of Tech., UK)	13-05 Miscibility and Phase Separation in Polymer Blends <u>H. W. Kammer</u> and J. Kressler (U. of Tech., E. Germany)
12:00	— Lunch —	
10:00 16:00	Poster Presentations (Rm. 157)	

April 13, Morning Sessions

	C1	C2
	Symposium 12. (Continued)	Symposium 6. (Continued)
9:00	K12-20 Prediction of Fibre Content Distribution in Compression Molded Fibre-Reinforced Thermoplastics H. Hojo, S. H. Kim, N. J. Baek* and E. G. Kim (Tohoku U., Japan and *Pusan National U., Korea)	K06-03 Numerical Modelling and Transfer Function Estimation of Unsteady Melt Spinning Process K. Toriumi (Shinshu U., Japan)
9:20	12-21 Expression Method of Fiber Oriented Distribution in Composite Materials Z. Maekawa, H. Hamada, A. Yokoyama and S. Yamada* (Kyoto Inst. of Tech., and *Osaka Municipal Technical Research Inst., Japan)	06-04 Supermolecular Structure and Some Properties of Poly (Ethylene Terephthalate) Filaments Spun at Ultra High Speed Melt Spinning Method K. Kamide and T. Kuriki (Asahi Chemical Industry, Japan)
9:40	12-22 Mold Filling Analysis of Structural Reaction Injection Molding (SRIM) and Resin Transfer Molding (RTM) L. Trevino, K. Rupel, L. J. Lee and M. J. Liou (Ohio State U., USA)	06-05 A Revisit to the Resonance Theory J. C. Hyun (Korea U., Korea)
	Symposium 12. (Continued)	Symposium 6. (Continued)
10:00	12-23 Modelling of Behaviour of Laminates Based on a Thermoplastic Matrix A. Cervenka (Shell Research, UK)	06-06 Plastic Optical Fiber Using Polycarbonate Core T. Arashi, N. Ueno, T. Oshimi, T. Kanai and S. Suzuki (Idemitsu Petrochemical Co., Ltd., Japan)
10:20	— Break —	
10:40	12-24 Simulation of Resin Transfer Molding: Isothermal Filling in Layered Reinforcements C. A. Fracchia and C. L. Tucker III (U. of Illinois, USA)	06-07 Studies on the Frozen Internal Stress of Polyacrylonitrile Fibers and its Relation to their Mechanical Behavior C. Wu, B. Qian and H. Hwang (China Textile U., China)
11:00	12-25 Quantitative Estimation of Structural Parameters of Dispersely-Filled Polymer Composites, Prepared by Different Types of Technological Conditions Yu. M. Tovmasyan, V. A. Topolkaraev and Al. Al. Berlin (USSR Academy of Science, USSR)	06-08 Studies on the Silk-like Polyester Filaments J. Q. Cheng and R. Wei (Swzhou Inst. of Silk Textile Tech., China)
	Symposium 4. Polymerization and Reactive Processing Organizers: S. Omi, J. T. Lindt, M. Lambla	Symposium 6. (Continued)
11:20	K04-01 Reactive Processing of ϵ-Caprolactam S. Hoshino*, E. Kamei and M. Nishiyama (Ube Industries and *Ube Scientific Analysis Lab., Japan)	06-09 Plane Extension of Rubber Membrane S. Kase (Kyoto Inst. of Tech., Japan)
11:40	04-02 Reaction Injection Molding of Polyureas K. J. Wang and L. J. Lee (Ohio State U., USA)	06-10 Hydrodynamic Problems of Fibre Spinning and Film Forming V. M. Entov and A. L. Yarin (Acad. Sci. USSR, USSR)
12:00	— Lunch —	
10:00 16:00	Poster Presentations (Rm. 157)	

April 13, Afternoon Sessions

	B1	B2
	Symposium 2. Extrusion Organizers: K. Otani, A. I. Isayev, F. Hensen	Symposium 13. (Continued)
14:00	K02-01 Three Dimensional Non-Isothermal Extrusion Flows A. Karagiannis, A. N. Hrymak and J. Vlachopoulos (McMaster U., Canada)	K13-06 Developments in the Thermodynamics of Blends L. A. Kleintjens and R. Koningsveld* (DSM Research and *Foundation ΣΤΤ, Netherlands)
14:20	02-02 Extrusion of Melts Containing Semi-Coherent Fiber Structures S. F. Bush (UMIST, UK)	13-07 PVT Measurements of Polymers and Polymer Mixtures: An Interpretation Using Molecular Models of the Liquid State D. J. Walsh, G. T. Dee and T. Ougizawa (du Pont, USA)
14:40	02-03 Innovative Extrusion Systems for Advanced Fiber + Film Products F. Hensen, K. Schäfer and E. Gathmann (Barmag, W. Germany)	13-08 Dynamics of Phase Separation in PS/PVME Blends Model and Experiments A. Aji, L. Choplin and R. E. Prud'homme (U. Laval, Canada)
15:00	02-04 Numerical Simulation of the Exit Flow for the Viscoelastic Fluid K. Funatsu, Y. Yoshida and T. Kajiwara (Kyushu U., Japan)	13-09 A Study on the Morphology and Properties of IPP/IIR X. Xu, H. Li and S. Guo (Chengdu U. of Sci. and Tech., China)
	Symposium 2. (Continued)	Symposium 13. (Continued)
15:20	02-05 Current Analysis of the Quality of Melt for Single Screw Extruders H. Potente and H. Kessler (U. of Paderborn, W. Germany)	13-10 Effect of Compatibilizer on PS/EPDM Blends K. U. Kim, E. J. Hwang and T. S. Park (KAIST, Korea)
15:40	— Break —	
16:00	02-06 Simulation of Flow in Pin Barrel Extruders and Buss Kokneaders R. Brzoskowski, T. Kumazawa and J. L. White (U. of Arkon, USA)	13-11 Crystallization, Miscibility, Phase Structure, Morphology and Properties in Polymer/Polymer Mixures E. Martuscelli (Istituto di Ricerche su Tecnologia dei Polimeri e Reologia, Italy)
16:20	02-07 Capillary Flow Properties of Elastomers Y. Oyanagi, A. Inatani, K. Kubota, A. Tanaka and K. Miyasaka* (Kogakuin U. and *Yokohama Rubber, Japan)	13-12 Effect of Blending on the Crystallization Behaviour of PET V. M. Nadkarni, V. L. Shingankuli and J. P. Jog (National Chem. Lab., India)
16:40	02-08 A Study on Melt Flow Fracture of Polymer Melt (II) Y. Oyanagi, K. Kubota and K. Ohji (Kougakuin U., Japan)	13-13 Compatibilization Effect of Great Copolymer for Polystyrene and Polyacrylate Rubber Blends C. P. Hu, S. C. Tang and S. K. Ying (East China U. of Chem. Tech., China)
17:00	02-09 Finite Element Modelling of Twin Screw Extruders K. T. Nguyen and J. T. Lindt (U. of Pittsburgh, USA)	13-14 New Polyester-Polystyrene Block Copolymers and their Influence on Phase Morphology and Mechanical Properties as Compatibilizing Agents M. Yoshida, J. J. Ma, K. Min, J. L. White and R. P. Quirk (U. of Akron, USA)
17:20	02-10 Polymer Melt Temperature Fluctuation in Single Screw Extrusion Process A. P. Plochocki and K. Wilczyński* (Stevens Inst. of Tech., USA and *Warsaw U. of Tech., Poland)	13-15 Investigations on PVC — EPDM Based Polyblends R. P. Singh and K. Sudhakar (IIT, India)
	Symposium 2. (Continued)	Symposium 13 (Continued)
17:40	02-11 Study of the Extrusion Process F. Zhu, N. Wang and L. Chen* (Beijing Inst. of Chem. Tech. and *Eastern China Inst. of Chem. Tech., China)	13-16 A Study on PVC/SMA Blend X. Xu, X. Chen and H. Li (Chengdu U. of Sci. and Tech., China)
18:00		

April 13, Afternoon Sessions

	C1	C2
	Symposium 4. (Continued)	Symposium 6. (Continued)
14:00	04-03 A Novel Method for Producing Toughened Polyamides N. Yamaguchi, J. Nambu, Y. Toyoshima, K. Mashita and T. Ohmae (Sumitomo Chemical, Japan)	06-11 Study on Dynamics of Double Bubble Tubular Film Process for Producing Biaxially Oriented Nylon 6 Film M. Takashige (Idemitsu Petrochemical, Japan)
14:20	K04-04 Continuous Reactive Processing of Vapor-Liquid Polymeric Systems J. T. Lindt (U. of Pittsburgh, USA)	06-12 Dynamics and Structure Development in Double Bubble Tubular Film Extrusion: Polyethylene Terephthalate, Poly-p-Phenylene Sulfide, and Polycarbonate H. J. Kang, J. L. White and M. Cakmak (U. of Akron, USA)
14:40	04-05 Exchange Reactions in Molten Polymers M. Lambla, S. Lorek, G. H. Hu and Y. Holl (Ecole d'Application des Hauts Polymères, France)	06-13 Simulation of Film Casting under Steady State T. Yamada, T. Matsuo and S. Kase* (Toyobo and *Kyoto Inst. of Tech., Japan)
15:00	04-06 Crosslinking of Linear and Branched Low-Density Polyethylenes by Radical Graft-Polymerized Organosilanes S. Ultsch and H.-G. Fritz (U. of Stuttgart, W. Germany)	06-14 Simulation of Film Casting Under Transient State S. Kase, T. Yamada* and T. Matsuo* (Kyoto Inst. of Tech. and *Toyobo, Japan)
	Symposium 4. (Continued)	Symposium 10. Rheology and Rheometry Organizers: T. Masuda, J. M. Starita
15:20	04-07 Gelation Models for Free Radical Crosslinking Copolymerizations Y. S. Yang and H. Alglave (NORSOLOR, France)	K10-01 Shear and Elongational Flow Properties of Entanglement Polymer Systems M. Takahashi and T. Masuda (Kyoto U., Japan)
15:40	— Break —	
16:00	04-08 Syntheses of Polyacetylene by Alkyl Aluminum and Titanate Having Long Alkyl Chains M. Soga, S. Hotta and N. Sonoda (Matsushita Electric Industrial, Japan)	10-02 Measuring the Gel Point by Dynamic Mechanical Methods H. H. Winter and J. Scanlan (U. of Massachusetts, USA)
16:20	04-09 Vitrification and Phase Separation during the Epoxy RIM Process D. H. Kim and S. C. Kim (KAIST, Korea)	10-03 Viscoelastic Properties of Acid Solutions of Chitosan T. Matsumoto and H. Zenkoh (Kyoto U., Japan)
16:40	04-10 New RIM Formulation Epoxy Based T. R. Cuadrado, J. F. MacGregor and A. E. Hamielec (McMaster U., Canada)	10-04 Viscoelasticity of Polymer Mixtures with Different Chain Architectures K. S. Choi and I. J. Chung (KAIST, Korea)
17:00	04-11 Studies on Epoxy RIM and SRIM H. Ogawa, Y. Tanaka and I. Souma (Gov. Industrial Research Inst. Osaka, Japan)	10-05 Experiment on Flow Characteristics of ABS Polymer Melt Using High-Shear-Rate Rheometer with Two Stage Capillary T. Jimma and M. Nagai (Tokyo Inst. of Tech., Japan)
17:20	K04-12 Expected Evolution and Application of RIM Materials for Small Quantity Production of Various Kinds of Products K. Suetsugu and J. Ikeda (Matsushita Electric Industrial, Japan)	10-06 Surface Appearance of ABS Molded Parts and Viscoelastic Properties Y. Saito, N. Ishiga and Y. Takeda (Mitsubishi Monsanto Chemical, Japan)
	Symposium 14. Liquid Crystalline Polymers Organizers: S. Suzuki, D. R. Moore	Symposium 10. (Continued)
17:40	K14-01 The "Kevlar" Story — An Advanced Materials Case History J. A. Fitzgerald, D. Tanner and B. R. Phillips (du Pont, USA)	10-07 Study on Melt Rheological Behavior of SBS F. Zeng (Huazhong U. of Sci and Tech., China)
18:00		

April 14, Morning Sessions

	B1	B2
	Symposium 2. (Continued)	Symposium 13. (Continued)
9:00	K02-12 The Influence of the Melting Zone and Melt Homogeneity in the Single Screw on Extrusion and Injection Molding T. Sakai (Japan Steel Works, Japan)	13-17 Stress Criteria for Crazing in Polymer Blends, Particle and Fibre Filled Polymers and Homogeneous Polymers D. Heikens (Eindhoven U. of Technology, Netherlands)
9:20	02-13 Extrusion and Process Control Requirements in the Cable Industry A. Sandt and Ph. de Boer (Nokia-Maillefer, Switzerland)	13-18 Polysulfone Blends with Polycarbonate and Poly (Methyl Methacrylate) R. Jin and Q. Cai (Hefei U. of Tech., China)
9:40	02-14 Extrusion of High Molecular Weight High Density Polyethylenes (HMW-HDPE): Changes in Molecular Structures S.-Y. Lai, A. W. de Groot, M. L. Jasek and W. Roberson (Dow Chemical, USA)	13-19 Yield and Fracture in Polycarbonate-Polyethylene Blends I. Partridge, C. Sanz and K. Bickerstaff (Cranfield Inst. of Tech., UK)
10:00	02-15 Finite Element Analysis of Flow in Screw Extrudes C. J. Rauwendaal and A. Muller (Raychem, USA)	13-20 Blending of Liquid Crystalline Polymer with Polyamides and High Density Polyethylene T. Harada, K. Tomari, S. Tonogai, S. Nagai and K. Yamaoka* (Osaka Municipal Technical Research Inst. and *KCK, Japan)
10:20	— Break —	
10:40	02-16 Theoretical and Experimental Studies of Flow of Polymer Melts in a Modular Intermeshing Co-Rotating Twin Screw Extruder Y. Wang, J. L. White and J. Kim (U. of Akron, USA)	13-21 Toughening of Nylon-6: Multicomponent System of Nylon -6/EPDM Rubber Blends YP Singh, DP Shah, BV Ankleshwaria and MH Mehta (Gujarat State Fertilizers, India)
11:00	02-17 Modelling the Flow and Mixing Characteristics of a Tangential Counter-Rotating Twin Screw Extruder M. H. Kim and J. L. White (U. of Akron, USA)	13-22 Studies on Polymer Blend of Polyamide/Polypropylene L. Yinxi, K. Kubota, S. Amano, and Y. Oyanagi (Kogakuin U., Japan)
11:20	02-18 Statistical Procedure to Identify Sources of Extrusion Line Variation J. F. Stevenson (GenCorp Research, USA)	13-23 Chain Entanglement and Brittle/Ductile Behavior of Polymer Glasses and Miscible Blends S. Wu (du Pont, USA)
11:40	02-19 Coextruded PET Cast-Film and Sheet for Rigid Packaging F. Hensen, K. Schäfer and H. Bongaerts (Barmag, W. Germany)	13-24 Morphology and Rheological Properties of Polyamide/Styrene-Acrylonitrile Copolymer Blends S. Maeda and T. Masuda* (Ube Industries and *Kyoto U., Japan)
12:00	— Lunch —	

April 14, Morning Sessions

	C1	C2
	Symposium 14. (Continued)	Symposium 10. (Continued)
9:00	K14-02 Diminished Mechanical Anisotropy in Injection Moldings of Novel Liquid Crystalline Polymers <u>K. Fujiwara</u> and S. Suzuki (Idemitsu Petrochemical, Japan)	10-08 Shear Modification of Low-Density Polyethylene M. Rokudai (Tosoh, Japan)
9:20	14-03 Relationship between Molecular Orientation and Mechanical Properties of Nematic Thermotropic Polyester K. Sato, <u>S. Suzuki</u> and M. Nakamichi (Idemitsu Petrochemical, Japan)	10-09 Flow Curve — Molecular Weight Distribution Relationship: General Solution of the Inverse Problem <u>A. Ya. Malkin</u> , A. E. Teishev (Research Inst. of Plastics, USSR)
9:40	14-04 Time-Dependent Rheological Behavior of Polymeric Liquid Crystalline Blends <u>P. J. Carreau</u> and T. M. Malik (Ecole Polytech. de Montreal, Canada)	10-10 Continuous On-Line Monitoring of Polymer Melt Flow J. M. Starita (Rheometrics, USA)
10:00	14-05 The Influence of Fibre Reinforcement of the Mechanical Anisotropy of Liquid Crystal Polymers R. A. Chivers and <u>D. R. Moore</u> (ICI, UK)	10-11 Can the Doi & Edwards Model Predict Molecular Orientation ? G. Nijman (Vredestein Tyres, Netherlands)
10:20	— Break —	
10:40	14-06 The Structure and Flow Behaviour of Thermotropic Liquid Crystal Polymers M. R. Mackley and T. M. Nicholson (U. of Cambridge, UK)	10-12 Flow through Mixers: A New Field of Application for the Finite Element Method <u>P. A. Tanguy</u> , R. Lacroix and F. H. Bertrand (U. Laval, Canada)
11:00	14-07 Melt Viscosity and Domains in Polystyrene and Liquid Crystal Copolyester Extrusion Blends <u>S. K. Ahuja</u> (Xerox, USA)	10-13 A Comparison of Two Decoupled Methods for the Numerical Simulation of Viscoelastic Fluid Flows A. Fortin, P. A. Tanguy* and M. Fortin* (Ecole Polytech. de Montréal and *U. Laval, Canada)
11:20	14-08 Engineering Thermoplastic Reinforced by Liquid Crystalline Polymers <u>A. I. Isayev</u> (U. of Akron, USA)	10-14 A Viscoelastic Merging Flow T. Nishimura and K. Nakamura* (Kyoto Inst. of Tech. and *Osaka U., Japan)
11:40	14-09 Viscometry and Polarized Microscopy of Lyotropic Liquid Crystalline Blend System: Hydroxypropyl Cellulose/Ethyl Cellulose/m-Cresol S. Suto, T. Sugiura, and M. Kosaka (Yamagata U., Japan)	10-15 Numerical Simulation of the Entry Flow for the Viscoelastic Fluid <u>T. Kajiwara</u> , Y. Kuwano and K. Funatsu (Kyushu U., Japan)
12:00	— Lunch —	

April 14, Afternoon Sessions

	B1	B2
	Symposium 9. Innovative Technologies Organizers: K. Nakayama, A. E. Zachariades, P. Lemstra	Symposium 13. (Continued)
13:00	09-01 High Modulus Thermotropic polyarylates T. Inoue and T. Tanaka (Research Association for Polymer Basic Tech., Japan)	K13-25 The Relation between Rheological Behavior and Structure of ABS Polymers Y. Aoki (Mitsubishi Monsanto Chemical, Japan)
	Symposium 9. (Continued)	Symposium 13. (Continued)
13:20	09-02 Ultra-Drawing of Poly (Vinyl Alcohol) from Single Crystals and Gels T. Kanamoto, S. Kiyooka, Y. Tajima and H. Sano* (Sci. U. of Tokyo and *Kuraray, Japan)	13-26 Rheological Behavior of LLDPE/PC Blends; Part I: Capillary Flow L. A. Utracki and P. Sammut (NRCC, Canada)
13:40	09-03 Drawing of Acetone Treated Poly (Ethylene Terephthalate) M. Ito and T. Kanamoto (Sci. U. of Tokyo, Japan)	13-27 Extensional Flow of Polystyrene/Polyethylene Blends and Alloys L. A. Utracki and P. Sammut (NRCC, Canada)
	Symposium 9. (Continued)	Symposium 13. (Continued)
14:00	K09-04 Recent Developments in Fibre/Microstructure Management by Multi Live-Feed Moulding P. S. Allan and M. J. Bevis (U. of West London, UK)	13-28 Effect of Tapered Diblock Copolymers on Rheological and Mechanical Properties of HDPE/HIPS Blends A. Ait-Kadi, A. Ajji, R. Fayt* and R. Jerome* (U. Laval, Canada and *U. de Liège, Belgium)
14:20	09-05 Solid State Forming of Acetabular Cups B. Monasse, M. Laugier, J. M. Haudin and J. L. Chenot (Ecole Nationale Supérieure des Mines de Paris, France)	13-29 Micromechanics of Viscosity Reduction during the Extrusion of Polypropylene — Polystyrene Blends A. Cohen (Dow Chemical, USA)
14:40	— Break —	
15:00	09-06 Fundamental Studies of Heat Transfer and Warpage of Parts in Rotational Molding of Polyethylene Parts K. Iwakura, Y. Ohta, C. H. Chen and J. L. White (U. of Akron, USA)	13-30 Tailoring Diffusion, Adsorption and Flow of Macromolecules for Improving Polymer Blends Properties and Processing Ph. Teyssié (U. of Liège, Belgium)
15:20	09-07 A New DIE Technology — A Key for Homogenous Products A. Savolainen, K. Kirjavainen, J. Suomi and H. Kontinen (Tampere U. of Technology, Finland)	13-31 An Investigation of the Rheological Properties and Electrical Conductivity of Polymeric Systems with Carbon Black K. Uesugi, T. Fukuda and T. Amari* (Furukawa Electric and *Chiba U., Japan)
15:40	K09-08 Radio Frequency and Microwave Processing of Epox-/Glass Braid Composites D. Wingard and C. L. Beatty (U. of Florida, USA)	13-32 Investigation on the Properties of Co-Crosslinked Blends of Poly (Vinylchloride) with Polyethylene B. Chang, M. Song, J. Zheng, J. Chen, B. Cai*, D. Qu* and F. Sun* (Nankai U. and *Tianjin U., China)
16:00	09-09 Visual Analysis of Plasticating Process in Injection Molding Machine by Using a Glass-Inserted Heating Cylinder H. Yokoi, S. Hayasaka* and H. Takahashi* (U. of Tokyo and *Toyo Machinery & Metal, Japan)	13-33 Polybutadiene-Based Polyurethane/Epoxy Simultaneous Interpenetrating Networks D. M. Jia and J. Pan (South China U. of Tech., China)
16:20	09-10 Measurement of Mold Melt-Temperature Profiles along Cavity Thickness H. Yokoi, Y. Murata and H. Takakoshi* (U. of Tokyo and *Yamaha Motor, Japan)	13-34 Structure and Properties of Polybutadiene-Based Polyurethane/Poly (Styrene-Acrylonitrile-Divinylbenzene) Simultaneous Interpenetrating Networks D. M. Jia, Y. Chen and S. Y. Wu (South China U. of Tech., China)
16:40	09-11 Study on Flow Behavior and its Injection Molding Simulation of Plastics Involved Metal Powders K. Ainoya, K. Kubota and Y. Oyanagi (Kogakuin U., Japan)	
17:00		

April 14, Afternoon Sessions

	C1	C2
	Symposium 14. (Continued)	Symposium 10. (Continued)
13:00	14-10 Characterization of a Thermotropic LCP Fiber <u>J. Sarlin</u> and <u>P. Törmälä</u> (Tampere U. of Tech., Finland)	10-16 Study on the Ultimate Fracture and Failure of Polymeric Materials. 1. A Kinetic Model Theory of Creep Tensile Strength for Polymers <u>M. S. Song</u> (Beijing Institute of Chem. Tech., China)
	Symposium 14. (Continued)	Symposium 15. Radiation Processing of Polymeric Systems Organizers: Y. Tabata, A. Singh, T. Czvikovszky
13:20	14-11 The Application of Liquid Crystal Polymer Properties <u>M. K. Cox</u> (ICI Japan, Japan)	15-01 Recent Development of Polymer Preparation and Processing by Radiation <u>S. Machi</u> (Japan Atomic Energy Research Inst., Japan)
13:40	14-12 Processing of Liquid Crystal Polymers <u>H. Geijselaers</u> and <u>J. Kingma</u> (DSM Research, Netherlands)	15-02 Energy and Charge Transfer Processes in Polymeric Systems <u>Y. Tabata</u> and <u>S. Hayashi</u> (U. of Tokyo, Japan)
	Symposium 3. Blow Molding Organizers: Y. Saito, M. Cakmak, R. Hegele	Symposium 15. (Continued)
14:00	K03-01 Analysis and Control of the Blow Molding Process <u>M. R. Kamal</u> and <u>Ky T. Nguyen</u> (McGill U., Canada)	15-03 Radiation Resistance of Polymer Materials <u>T. Seguchi</u> and <u>T. Sasuga</u> (Japan Atomic Energy Research Inst., Japan)
14:20	03-02 Measurement and Computer Simulation of the Blow Molding <u>S. Takeishi</u> , <u>M. Ishinabe</u> and <u>M. Yamada</u> (Toyo Seikan Group, Japan)	15-04 Radiation Resistance of Polypropylene Materials: A Characterization of Morphology-Mechanical Property Relationship <u>T. Kagiya</u> , <u>S. Nishimoto</u> , <u>K. Kitamura</u> and <u>Y. Watanabe*</u> (Kyoto U. and *Research Inst. of Polymers and Textiles, Japan)
14:40	— Break —	
15:00	03-03 Development of Versatile Engineering Blow Molding Machine <u>A. Ota</u> (Placo, Japan)	15-05 A Study of Polyethylene Crosslinking Induced by 10-MeV Electrons <u>Y. Sze</u> , <u>V. J. Lopata*</u> , <u>W. Kremers*</u> and <u>A. Singh*</u> (City Polytech. of Hong Kong, Hong Kong and *Atomic Energy of Canada, Canada)
15:20	K03-04 Extrusion Blow Molding: Parison Properties Determine the Quality of Blow Molded Parts <u>H. G. Fritz</u> , <u>H. Kiaser</u> and <u>G. Ritzau</u> (U. Stuttgart, W. Germany)	15-06 Radiation Effects on Polymer Blends <u>N. Overbergh</u> and <u>J. G. M. Van Gisbergen</u> (Eindhoven U. of Tech., Netherlands)
15:40	03-05 Prediction of Blow Molding Processability from Uniaxial Elongational Viscosity <u>M. Shinohara</u> (Idemitsu Petrochemical, Japan)	15-07 Decay of Peroxy Radicals in Irradiated Polypropylene <u>H. Kashiwabara</u> , <u>Y. Hori</u> and <u>S. Shimada</u> (Nagoya Inst. of Technology, Japan)
16:00	03-06 An Engineering Approach for Predicting Blow Molded Thickness Based on Finite Element Generated "Primitive Shape" Solutions <u>H. F. Neid</u> (General Electric, USA)	15-08 On the Acceleration Ageing of Polymers <u>T. Shi</u> , <u>R. Jin*</u> and <u>Z. Shi**</u> (Shanghai Shu Guang Chemical Works, *Hefei Polytech. U. and **Shanghai Inst. of Building Materials, China)
16:20	03-07 3-D Finite Element Simulation of Blow Molding <u>H. G. de Lorenzi</u> , <u>H. F. Nied</u> and <u>C. A. Taylor</u> (General Electric, USA)	15-09 Some Aspects of Radiation Polymerization <u>A. Singh</u> , <u>C. B. Saunders</u> , <u>W. Kremers</u> and <u>V. J. Lopata</u> (Atomic Energy of Canada, Canada)
16:40	03-08 Development of a Saddle-Type Plastic Fuel Tank and Near-Future Blow Molding Technology <u>M. Sasaki</u> , <u>K. Ozaki</u> , <u>H. Kondo</u> , <u>J. Ohno</u> , <u>Y. Sato</u> , <u>K. Sugie</u> , <u>Y. Tateoka</u> and <u>M. Yoshioka</u> (Nissan Motor, Japan)	15-10 New Penetrating Sources of Radiation for High Dose Applications <u>J. McKeown</u> and <u>J. Ungrin</u> (Atomic Energy of Canada, Canada)

17:00

April 12, Poster Session

Rm. 157, 10:00 — 16:00

1P-01 Simulation of Injection Mold Cooling by Boundary Element Method T. Matsuoka, A. Koiwai, J. Takabatake and H. Takahashi (Toyota Central Research and Development Lab., Japan)	1P-11 Unstable Flow Mechanism of Molten Polymer at High Shear Rate in Injection Molding K. Iwakura, T. Abe, M. Takita, T. Masuko and H. Kobayashi* (Yamagata U. and *Polyplastics, Japan)	1P-21 An investigation of the Characteristics for the Low Temperature Pyrolysis of the Polyacrylonitrile Fibers by the Method of DSC G. Zhao (Academia Sinica, China)
1P-02 Cooling Analysis in Injection Molding Y. Fujita, S. Kijima, S. Nakazawa* and N. Narazaki** (Japan Information Processing Service, Japan, *MARC Analysis Research, USA and **Mitsubishi Gas Chemical, Japan)	1P-12 Rheology and Curing in Reactive Processing A. Ya. Malkin (Research Inst. of Plastics, USSR)	1P-22 The Relation between the Particle Packing Morphology and Processability of Filled Polymer F. Cai and R. Jing* (Huazhong U. of Sci. and Tech. and *Beijing Inst. of Chem. Tech., China)
1P-03 Rheological Behavior, Modification and Microstructure Development of Polymers by Extremely High Shear Rate Processing H. Takahashi, T. Matsuoka, T. Ohta, A. Koiwai, K. Fukumori, T. Kurauchi and O. Kamigaito (Toyota Central Research and Development Lab., Japan)	1P-13 Direct Twin Screw Extrusion of Undried Polyethylene Terephthalate Polymer T. Sakai, N. Hashimoto and N. Shimizu (Japan Steel Works, Japan)	1P-23 Orientation Distribution of the Molecules and of the Crystal Lamellae Surfaces in Differently Processed Poly(Ethylene Terephthalate) S. Röber and H. G. Zachmann (U. Hamburg, W. Germany)
1P-04 P-V-T Inter-Relationships and its Application Study to Injection Molding Process K. Kubota, K. Ainoya, A. Tanaka and Y. Oyanagi (Kogakuin U., Japan)	1P-14 A Streamlined Injection Molding of Thermosets with Multi-Nozzle and Mini-Runner Mold System M. Tanaka, T. Kuri and K. Koyama* (Daiso, and *Meisei Kinzoku Kogyosho, Japan)	1P-24 Measurement of Surface Orientation by Polarized Reflection Spectroscopy A. Kaito and K. Nakayama (Research Inst. for Polymers and Textiles, Japan)
1P-05 High-Productive Molding Process of Aspherical Plastic Lens for Projection TV M. Muranaka, Y. Noro, K. Wada, M. Takeshita, I. Yoshizaki and S. Kato (Hitachi, Japan)	1P-15 Dynamic Scheme of the Polymerization of Caprolactam N. S. Huang and Z. L. Tang (China Textile U., China)	1P-25 A Theoretical Approach to Hydrogen Bond Strength Distribution in Some Polyurethanes D. Chen, H. Zhou and T. Sun (China Textile U., China)
1P-06 The Influence of Process Parameters on the Molecular Orientation in Injection Moulded Products G. Nijman (U. Twente, Netherlands)	1P-16 Behavior of Twin Screw Extruder on Various Screw Designs J. Ishibashi (Toshiba Machine, Japan)	1P-26 Structure Development in Processing Beta-Phase Isotactic Polypropylene G.-Y. Shi (Academia Sinica, China)
1P-07 Viscosity Measurement of Molten Polymers in Injection Mold T. Fukushima and K. Kenmochi (Matsushita Electric Ind., Japan)	1P-17 Experimental Result on Intermeshing Co-Rotating Twin Screw Extruder M. Miyazawa (Ikegai, Japan)	1P-27 Sorption of Water Vapor in Injection-Molded Nylon Sheets K. Mise, T. Takekawa, T. Uyeda, H. Odani and S. Kimura* (Kyoto U. and *Japan Synthetic Rubber, Japan)
1P-08 Properties of Weldline in Injection Moldings K. Tomari, T. Harada, S. Tonogai, H. Hamada* and Z. Maekawa* (Osaka Municipal Technical Research Inst. and *Kyoto Inst. of Tech., Japan)	1P-18 Spinning and Properties of Blend Polyester Fibers Comprising Various Poly (Oxyethylene) Derivatives Y.-M. Zhao, H.-Q. Zhuang, J.-H. Zhou and Y. Kimura* (South China U. of Sci. and Tech., China and *Kyoto Inst. of Tech., Japan)	1P-28 Study of Structure-Property Relation of Electrical Conductive HDPE Composites M. Q. Zhang, H. M. Zeng and N. B. Jian (Zhongshan U., China)
1P-09 Sprue-Runner-Gate Calculations in Thermoplastics Injection Molding T. Shibayama (Nagoya Municipal Industrial Research Inst., Japan)	1P-19 Structure Development and Characterization of Preoxidized Polyacrylonitrile Fibers for Flame Retardant Application C. Wu, Z. Wu and Y. Hwang (China Textile U., China)	1P-29 Studies of the Interfacial Morphology of Fiber-Polyetheretherketone Z. Y. Zhang and H. M. Zeng (Zhongshan U., China)
1P-10 Quality Control Engineering in Thermoplastics Injection Molding T. Shibayama (Nagoya Municipal Industrial Research Inst., Japan)	1P-20 A Study on the Thermal Stabilization of Polyacrylonitrile Fibers Pretreated with Cuprous Chloride by In-Situ FTIR Method G. Zhao and B. Chen (Academia Sinica, China)	

April 13, Poster Session [I]

Rm. 157 10:00 — 16:00

2P-01 Computational Modeling of the Melt-Fluted Screw in Extruders F. Zu and J. Xu* (Beijing Inst. of Chem. Tech. and *Jiangsu Inst. of Chem. Tech., China)	2P-11 A New Polymer-Switch Controlling the Temperature R. Yan, Z. Yue, X. Tian, Z. Xue and W. Zhai (Academia Sinica, China)	2P-21 Dynamic Mechanical Properties of Simultaneous Interpenetrating Polymer Networks of Epoxy Resin / Bismaleimide-Allylester Copolymer K. Iisaka, S. Etoh and A. Fukami (Mitsubishi Electric, Japan)
2P-02 Initial Research of the Theory of Solid Bed Breaking-Up F. Zu and Y. Zhao (Beijing Inst. of Chem. Tech., China)	2P-12 The Molecular Theory and Elasticity for Polyurethane Elastomers (TPUE) at Large Deformations M. S. Song and Y. D. Shen (Beijing Inst. of Chem. Tech., China)	2P-22 Taguchi Design in Process Controls in Extrusion and Injection Molding Operations of Polyblends S. K. Ahuja (Xerox, USA)
2P-03 Study of Polymer Melt Behavior in Coat-Hanger Die with Drop-Shaped Cross Section's Manifold P.-S. Chen and S.-Y. Wu* (Shen-Bao Canned Food and *South China U. of Tech., China)	2P-13 Testing the Processability of Polymers with Computer Aided Rheometers H. Lüben (Brabender, W. Germany)	2P-23 Structure-Property Relationships of PPS/PES Blends C. Yang, H. M. Zeng and H. Y. Luo (Zhongshan U., China)
2P-04 Research of Instable Interface Mechanism in Coextrusion J. H. Chen and H. L. Ren (South China U. of Tech., China)	2P-14 The Relation Between Filler Particle Size Distribution and Rheological Properties of Filled Polymer R. Jin and F. Cai* (Beijing Inst. of Chem. Tech. and *Huazhong U. of Sci. and Tech., China)	2P-24 Optimization of Processing Conditions in Injection Molding by Empirical Model-Building Techniques C. C. Chang, T. L. Lin and F. S. Lai (U. of Lowell, USA)
2P-05 Numerical Simulation of a Profile Die with Imagery Network Approach J. Qu and Y. Peng (South China U. of Tech., China)	2P-15 The Thixotropic Kinetic Theory of Polymer Materials F. Cai and R. Jin* (Huazhong U. of Sci. and Tech. and *Beijing Inst. of Chem. Tech., China)	2P-25 Study on the Castor Oil Modified Urethane Copolymer Network X. Yu, K. Geng* and Q. Chen (Nanjing U. and * Hebei Teacher's College, China)
2P-06 Numerical Design of the Main Geometrical Parameters of a Profile Die J. Qu and Y. Peng (South China U. of Tech., China)	2P-16 The Thixotropic Behavior of Filled Polymer R. Jin and F. Cai* (Beijing Inst. of Chem. Tech. and *Huazhong U. of Sci. and Tech., China)	2P-26 Effect of EVA on Polyoxymethylene-Polyethylene Incompatible Blends Q. Cai, S. Zhu, R. Jin and J. Zou (Hefei U. of Tech., China)
2P-07 Optimization of a Coathanger Die with Imagery Network Approach (INA) J. Qu and H. Ren (South China U. of Tech., China)	2P-17 Flow Instability in Dynamic Viscoelastic Measurements of Polymer Melts K. Yoshikawa, N. Toneaki, Y. Moteki, M. Takahashi* and T. Masuda* (Showa Denko and *Kyoto U., Japan)	2P-27 A Study on High Density Polyethylene/Polydimethylsiloxane Blends Q. Zheng, W. Mao and X. Xu (Chengdu U. of Sci. and Tech., China)
2P-08 Computer Aided Design of Single Screw Extruders P. G. Lafleur and K. Amellal (Ecole Polytech. de Montréal, Canada)	2P-18 Effect of Dispersion of Particles on Viscoelasticity of CaCO₃-Filled Polypropylene Melts L. Li and T. Masuda (Kyoto U., Japan)	2P-28 Molecular Weight Effects of PP on Physical Properties of Ultradrawn Gel Films of UHMWPE/PP Blends B. S. Kim, J. H. Lee and H. K. Choi (Yeungnam U., Korea)
2P-09 Vacuum Formed Examples of Ceramic Porous Mold T. Nakagawa, A. Yanagisawa*, H. Noguchi and K. Nishikawa** (U. of Tokyo, *Nippon Inst. of Tech. and **Sintokogio, Japan)	2P-19 Studies on the Dynamically Vulcanized Blends of Poly (Vinyl Chloride) and Rubber. Part III: PVC/NBR-18 Thermoplastic Vulcanizates N. Luo and Y. X. Zhang* (Northwest Inst. of Light Industry and *Northwest China Mechanical Rubber Goods Research Inst., China)	2P-29 A Study on Poly (Methyl Methacrylate-co-Methacrylic Acid) / Poly (Ethylene Oxide) Blend Complexes X. Xu and Q. Wang (Chengdu U. of Sci. and Tech., China)
2P-10 Engineering Plastic (EP) Multi-Layer Blow Molding Machine A. Iwawaki and S. Araki (Ishikawajima-Harima Heavy Industries, Japan)	2P-20 Structure-Property Relationships in Ethylene-Propylene-Diene Rubber and Saturated Polyurethane Rubber Blends W. Jiang, A. Liu*, B. Chen and N. Bai (South China U. of Tech. and *Wuhan Inst. of Chem. Tech., China)	2P-30 Morphology Control of Polymer Blends. II. A-B Block Copolymer/C Homopolymer Blends H. Hasegawa, N. Iizuka and T. Hashimoto (Kyoto U., Japan)

(Continued)

April 13, Poster Session [II]

Rm. 157 10:00 — 16:00

2P-31 Morphology Control of Polymer Blends. III. A-r-B Random Copolymer/A homopolymer Blends M. Takenaka, H. Jinnai and T. Hashimoto (Kyoto U., Japan)	2P-33 Processing-Morphology Relationships of Compatibilized Polyolefin/Polyamide Blends: Effect of a Compatibilizer as a Function of Blend Composition and Viscosity J. M. Wills, V. Caldas and B. D. Favis (NRCC, Canada)	2P-35 Thermal Analysis of Thermotropic Polyesters under High Pressures Y. Maeda (Research Inst. for Polymers and Textiles, Japan)
2P-32 Studies of Structure and Behaviour of Crystalline – Semicrystalline and Crystalline – Amorphous Blends System (IPP/PE and IPP/EPDM) Z. Zhang, L. Mao and S. Ying (East China U. of Chem. Tech., China)	2P-34 The Structure and Phase Behavior of Polysiloxanes with Cholesteric Group in Side Chain E. Zhou and S. Yan (Academia Sinica, China)	2P-36 Synthesis, Spinning and Properties of a New Liquid-Crystal Semirigid Copolyester F. P. La Mantia, M. Saiu, P. L. Magagnini*, M. Paci*, A. Roggero** and U. Pedretti** (U. di Palermo, *U. di Pisa and **Eniricerche SpA, Italy)