PPS-12

Twelfth International Annual Meeting

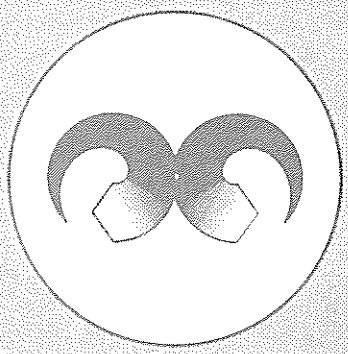
SORRENTO, ITALY

MAY 27-31, 1996

EXTENDED ABSTRACTS

&

FINAL PROGRAM



THE POLYMER PROCESSING SOCIETY

Organized by:

Department of Materials and Production Engineering
University of Naples
*
Institute of Chemical Technologies-Terni
University of Perugia
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Department of Chemical and Food Engineering
University of Salerno
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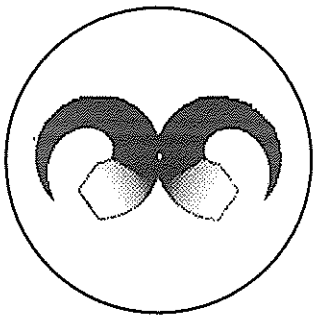

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PPS 12 is sponsorized by
National Research Council of Italy,
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TECHNICAL PROGRAM

The meeting consists in 13 symposia covering the different aspects of the processing of polymeric materials. Each symposium features keynote lectures by world renowned researchers, followed by contributed papers. Poster sessions on each topic are also organized in order to accommodate the large number of contributions received. The list of symposia and symposia organizers is summarized below:

1. Rheology and Rheometry

T. Masuda, Japan
B. Mena, Mexico
J. Mewis, Belgium

2. Mixing and Compounding

H.G. Fritz, Germany
T. Sakai, Japan
J.L. White, USA

3. Polymerization and Reactive Processing

S.C. Kim, Korea
M. Lambla, France
R. Williams, Argentina

4. Blends and Alloys

L.A. Goettler, USA
T. Inoue, Japan
P.J. Lemstra, Netherlands

5. Fibers and Films

G.A. Campbell, USA
T. Kikutani, Japan
A. Ziabicki, Poland

6. Extrusion

J.T. Lindt USA
W. Michaeli, Germany

7. Injection and Free Surface Molding

S.F. Bush, UK
A. I. Isayev, USA

8. Processing of Liquid Crystal Polymers

G. Marrucci, Italy
K. Wissburn, USA
Y. Yang, China

9. Processing of Composites

L.A. Berglund, Sweden
John Halpin, USA
J.D. Nam , Korea

10. Reprocessing, Recycling and Environmental Impact

W. Baker, Canada
H. Hamada, Japan
O. Laguna, Spain

11. Morphology and Structure Development, Characterization and Analysis

H.J. Kriegl, Austria
J. Mijovic, USA
V. Nadkarni, India

12. Mathematical Modeling

J.-F. Agassant, France
J.M. Castro, USA
R.I. Tanner, Australia

13. Welding, Joining

H. Potente, Germany
V.K. Stokes, USA

GENERAL INFORMATION

LOCATION

The 12th edition of the International Annual Polymer Processing Society will be held in Sorrento (Italy) at the Sorrento Palace Hotel in the spectacular scenery of the Mediterranean Sea. Sorrento is one of the most important tourist locations of the Mediterranean area and is located at about 50 Km to the South of Naples with excellent infrastructure for tourists and congress organization.
Hotel address: Via S. Antonio, 80067 Sorrento (NA); Tel +39 81 8784141; Fax: +39 81 8783933

HOW TO GET THERE:

By plane: Capodichino Airport (Naples)- Sorrento by bus (60 min)
A public bus service is available to Sorrento (piazza Tasso), the departures from Capodichino are at 9:00AM, 2:00PM, 4:00PM, 7:00PM (Lit. 6.000)
On Sunday 26th and on Monday 27th, special buses will run directly from Capodichino Airport to the Sorrento Palace Hotel according to the following schedule: 10:30AM, 3:00PM, 8:00PM, 11:45PM (Lit. 20.000 or $ 15)

By train: Naples-Sorrento: 90 min.
Naples Central Station: you can take from Central Station (piazza Garibaldi) the local rail road service "Circumvesuviana" directed to Sorrento which runs approximately every twenty minutes until 11.00 PM.
Naples Mergellina Station: from this station you can easily walk to the small harbor where you can take hydrofoils to Sorrento.

By hydrofoil: Naples Sorrento: 45 min.
Naples Mergellina small harbor: 9:05 AM, 5:45 PM
Molo Beverello (downtown Naples): 7:45* AM, 9:45 AM, 11:05* AM, 1:05 PM, 3:05 PM, 7:50* PM. You can reach this port by taxi either from Capodichino Airport or from the above train stations.
*Sunday excluded

Climate

At the end of May, climate in Sorrento is usually very pleasant: sunny and warm (23°C/27°C). Light clothing and swimsuits will thus be useful.

SOCIAL ACTIVITIES

Welcome Party

A Welcome Party will take place Monday May 27 at 6.30PM after the Opening Session and the Plenary lecture.

Congress Banquet

A typical Mediterranean banquet will take place at the Sorrento Palace Hotel on Thursday May 30 at 8.00PM. Tickets for this event will be sold at the Registration Desk (70$).

Excursions

The Gulf of Sorrento is plenty of tourist attractions and many local travel agencies organize tours on a regular basis. In any case visits to several of the most interesting places around Sorrento will be organized by the travel agency for participants and accompanying people during the congress. A minimum of 25 people is required for the excursions and prices indicated below do not include lunch.

Capri

A short sail across the bay will take you to the legendary isle of Capri. The island has been renowned for its beauty since Roman times and at one point was the local point of the whole Roman Empire. The visit to Dr Axel Munthe's "Villa San Michele" (the famous Swedish author-physician) is also included.
Suggested price £ 54.000

Pompei

Pompei, destroyed in 79 AD by the eruption of Vesuvius, laid covered in lava until excavations started in 1784. These excavations have unfolded an amazing picture of life during that period, which will be fully explained by the tour guide.
Suggested price £ 54.500

Vesuvius/Herculaneum

Mount Vesuvius was the cause of Pompeii's destruction. The coach will take a scenic route up to a height of 3.500 ft. from where you can walk to the crater. A smaller town situated close to Pompei, Herculaneum was the second town to be destroyed by the eruption of Vesuvius.
Suggested price £ 52.000

Positano/Amalfi/Ravello

Considered by many as one of the most scenic routes in the whole of Europe, you will drive towards the romantic town of Positano, pass through enchanting cliff-top villages perched high above the sparkling sea and backed by dramatic rock formations steeply terraced with groves of vines and citrus fruits to arrive to Amalfi.
Suggested price £ 33.000

Naples
The history of Naples in every period can be seen in its monuments, churches, palazzi, squares, and streets all testifying an intense cultural tradition and centuries of fascinating history stretching back into the mists of legend. The palace of the National Archeological Museum (1585) became a museum during the Bourbon period (1734-1860); its priceless collection of sculptures, bronzes, ceramics, paintings, mosaics, jewelry and other works of art represents the most important periods and aspects of the ancient civilizations.
Suggested price £ 56.500

Post congress excursions: No arrange has been made. They can be organized directly at the travel agency desk.

SCIENTIFIC PROGRAM

Opening Session

Monday May 27th

5.00 PM: Welcome Address

Prof. J. M. Kenny, University of Perugia
Prof. L. Nicolais, University of Naples
Prof. F. Tessitore, President of the University of Naples
Prof. G. Calzoni, President of the University of Perugia
Prof. G. Donzí, President of the University of Salerno

5.30 PM: Plenary lecture **Rheology and Morphology of Complex Systems**
Prof. G. Marrucci University of Naples

6.30 PM Welcome Party

Language

The conference language is English. No arrangements will be made for simultaneous translation.

Presentations

Twenty minutes will be allowed for each oral presentations, including time for discussion. Each session room will be provided with both slide and overhead projectors. Slides should be of a size of 50 mm x 50 mm and a thickness of less than 3 mm. The slide projector is operated by a projectionist, and speakers are kindly requested to bring their slides to the reception desk at least 8:30 for the morning presentations and 13:00 for the afternoon presentations. The overhead projector must be operated by the speaker.

Eight hours a day of poster presentations from 9/00 to 17/00 are scheduled in the same area assigned for coffee break and industrial exhibition, the space available for each presentation is 140 cm (w) x 100 cm (h). Authors are requested to attend their booth during coffee break

Abstracts

An Abstracts Book will be published which includes the summaries of Plenary, Key-note, and Contributed Papers. It will be distributed to the participants at the Registration Desk.

Publication

No special arrangements will be made for the publication of the papers. The Polymer Processing Society welcomes submitted papers for publication in the official PPS-Journal " International Polymer Processing".

Exhibition

An industrial exhibition will run simultaneously with the conference from Tuesday May 28th to Thursday May 31st. Potential exhibitors are encouraged to display novel and innovative contributions to all aspects of polymer materials and processing technology. The exhibition represents a unique opportunity to suppliers as a forum in which to display the state of the art in plastics processing equipment, raw materials and polymer related software packages.

PPS 12: PROGRAM AT A GLANCE

Monday, May 27 4.30 PM		Room A : Opening Session Plenary Lecture			
		Room A	**Room B**	**Room C**	**Room D**
Tuesday May 28	morning	8. Processing of Liquid Crystal Polymers	2. Mixing and Compounding 6. Extrusion	5. Fibers and Films	10. Reprocessing, Recycling and Environmental Impact
	afternoon	8. Processing of Liquid Crystal Polymers 1. Rheology and Rheometry	2. Mixing and Compounding 6. Extrusion	5. Fibers and Films	12. Mathematical Modeling
Wednesday May 29	morning	1. Rheology and Rheometry	6. Extrusion	9. Processing of Composites	3. Polymerization and Reactive Processing
	afternoon	4. Blends and Alloys	6. Extrusion	9. Processing of Composites	12. Mathematical Modeling
Thursday May 30	morning	1. Rheology and Rheometry	7. Injection and Free Surface Molding	11. Morphology and Structure Development, Characterization and Analysis	3. Polymerization and Reactive Processing
	afternoon	4. Blends and Alloys	7. Injection and Free Surface Molding	11. Morphology and Structure Development, Characterization and Analysis	12. Mathematical Modeling
Friday May 31	morning	4. Blends and Alloys	13. Welding, Joining	11. Morphology and Structure Development, Characterization and Analysis	9. Processing of Composites

SCIENTIFIC PROGRAM

Tuesday, May 28, Morning

TIME	ROOM A	ROOM B
	PROCESSING OF LIQUID CRYSTAL POLYMERS I	**MIXING AND COMPOUNDING I**
8.30	KN 8.1 Unusual Properties of Blends of Poly (Ethylene Terephthalate) with a Liquid Crystalline Polyester **G.-P. Chang-Chien,** Cheng-Shiu College of Technology, Taiwan, R.O.C., **M. M. Denn,** University of California, Berkeley, and Lawrence Berkeley National Laboratory, California, U.S.A.	KN2.1 Dynamics of Liquid-Liquid Mixing **H.E.H. Meijer, V.V. Meleshko, T. Krasnoploskaya, G.W.M. Peters,** CPC, Eindhoven University of Technology, THE NETHERLANDS
9.10	8.4 Interfacial Adhesion and Deformation of a Thermotropic Liquid Crystalline Polymer Phase Dispersed in Nylons **Y. Seo, K.U. Kim,** Seoul, Korea Institute of Science and Technology, Seoul, KOREA	2.10 Investigation of Dispersive and Distributive Mixing Sections in Extrusion **P.J. Gramann, T.A. Osswald,** University of Wisconsin-Madison, U.S.A., **M. del Pilar Noriega,** ICIPC, Medellin, COLOMBIA
9.30	8.5 In Situ Compatibilized PP/LCP Blends **F.-C. Chang,** National Chiao-Tung University, Taiwan, R.O.C.	2.11 Boundary integral simulation of non-linear flows in polymer mixing **B.A. Davis, T.A. Osswald,** University of Wisconsin-Madison, U.S.A.
9.50	8.10 Effects of Liquid Crystalline Structure Formation on the Curing Kinetics of an Epoxy Resin **J. Liu, C. Wang, G.A. Campbell,** Clarkson University, Potsdam, NY, **J.D. Earls, R.D. Priester,** The Dow Chemical Co., Freeport, TX, U.S.A.	2.3 Study of Chaotic Mixing in Single-Screw Extruders Due to Spatially-Periodic-Barriers **T.H. Lee, S.J. Kim, T.H. Kwon,** Pohang University of Science and Technology, KOREA
10.10	8.12 Gas Transport through Blends of Polyolefin and Liquid Crystalline Polymer in Multilayer Structures **E. Suokas,** VTT Chemical Technology, Tampere, **C. Bergström, T. Heiskanen,** Optatech Corporation, Espoo, FINLAND	2.1 Effect of Process Conditions on the Drop in Instrinsic Viscosity of PET During Direct Extrusion on a Twin Screw Extruder **S.Nagae, K. Nagura, N. Yamagiwa, Y. Yamane, K. Miyake and K. Inoue,** Kobe Steel Ltd., Hyogo-Ken, JAPAN
10.30	**COFFEE BREAK**	**COFFEE BREAK**
	PROCESSING OF LIQUID CRYSTAL POLYMERS II	**EXTRUSION I**
11.00	8.1 Thermal Transitions Important to the Processing of Thermotropic Liquid Crystalline Polymers **M.A. McLeod, D.G. Baird,** Virginia Tech, Blacksburg, VA, U.S.A.	6.4 A Throughput Model for Grooved Bush Extruders **H. Potente, V. Schöppner,** University of Paderborn, GERMANY
11.20	8.2 Do We Need to Randomize the LCP's at Processing? **V.G. Kulichikhin, S.V. Kotomin, A.K. Tereshin,** Institute of Petrochemical Synthesis, Moscow, RUSSIA	6.9 Non-Isothermal Non-Newtonian Simulation for a Modular List/Buss Kokneter and Comparison to Experiment **M.-Y. Lyu, J.L. White,** University of Akron, U.S.A.
11.40	8.9 Processing, Properties and Applications of Fibers from Thermotropic Liquid Crystalline Copolyesters **G. Farrow,** Hoechst Celanese Corporation, Charlotte, NC, U.S.A	6.27 Simulation of Polymer Flow in Co-Rotating Twin-Screw Extruders **P. Häring, H.-G. Fritz,** Universitat Stuttgart, GERMANY
12.00	8.6 Orientation Dynamics of a Polymer Liquid Crystal Monolayer **P.L. Maffettone, M. Grosso, S. Crescitelli,** Università di Napoli, ITALY **M.C. Friedenberg, G.C. Fuller, C.W. Frank, C.R. Robertson,** Stanford University, CA, U.S.A.	6.22 An Experimental and Numerical Study of Flow in a ZSK Twin Screw Extruder **A. Kiani, J.E. Curry P. Heidmeyer, U. Burkhardt,** Werner & Pfleiderer, Stuttgart, **M. Stephan, O. Franzheim,** Institute of Polymer Research Dresden, **H. Baetz, R. Pallas, A. Zeuner,** Institute for Radiation Protection Physics, Dresden, GERMANY
12.20	8.7 A New Technique to Reduce Anisotropy in Injection Molded Thermotropic Liquid Crystalline Polymers **D. Boles, M. Cakmak,** University of Akron, OH, U.S.A.	6.25 Flow Visualisation and Image Analysis of Convergent Flows in Extrusion **P.D. Coates, C. Nakason, M. Kamala, M. Martyn, P. Olley,** University of Bradford, UK
12.40	8.3 The Flow-Induced Textures of Liquid Crystalline Cellulosic Polymers **P. Navard, E.Peuvrel-Disdier, J.B. Riti, T. Cidade, V. Tsakalos,** Ecole des Mines de Paris, Sophia-Antipolis, FRANCE.	6.12 Visual Experimental and Theoretical Study on Channels Filled Partially of Solid Conveying and Melting Process in Twin Screw Extruder **F. Zhu, T. Liu, Y. Guo, Z. Zhou, Z. Chen,** Beijing University of Chemical Technology, CHINA

Tuesday, May 28, Morning

TIME	ROOM C	ROOM D
	FIBERS AND FILMS III	**REPROCESSING, RECYCLING AND ENVIRONMENTAL IMPACT I**
8.30	KN5.2 Investigation of Structural Evolution During the Melt Spinning Using on-Line SAXS-WAXS Techniques **M. Cakmak,** University of Akron, OH, U.S.A.	KN10.1 Recycling of Heterogeneous Post -Consumers Plastics **F.P. La Mantia,** Università di Palermo, ITALY
9.10	5.17 Study of the Film Casting of a Viscoelastic Fluid **D. Silagy, Y. Demay, J-F Agassant,** Ecole des Mines de Paris, Sophia Antipolis, FRANCE	10.1 Evaluation of Modified Ground Rubber Tire Crumb in Rubber Formulations **W.E. Baker,** Queen's University, Kingston, **P. Vibien, M.D. Burgoyne, J. Fisher,** National Rubber Co., Toronto, CANADA
9.30	5.21 Heat Exchange in Film Casting of Thermoplastic Polymers: Modeling and Experimental Determinations **C.C. Ammirati, L. Di Maio, G. Cuccurullo, D. Acierno,** University of Salerno, ITALY	10.2 Possibilities of Recycling in Extrusion: Conventional, Reactive, Degradative Processes **W. Michaeli, K. Breyer, J.v. Marwick, K. Regel,** IKV, Aachen, GERMANY
9.50	5.18 Structure Development in Cast-Film Extrusion of Polypropylene **F. Jay, J.M. Haudin, B. Monasse,** Ecole des Mines de Paris, Sophia Antipolis, FRANCE	10.4 Processing of Composite Material Using Bagasse **I. Fukumoto, S. Mekaru,** University of the Ryukyus, Nishihara Okinawa, JAPAN
10.10	5.13 On-Line Birefringence Measurement in Film Blowing of a Linear Low Density Polyethylene **A. Ghaneh-Fard, P.G. Lafleur, P.J. Carreau,** Ecole Polytechnique, Montréal, CANADA	10.6 Recycling PET Bottle Scraps in Extrusion Blow Molding **G. Giannotta,** EniChem-Istituto G. Donegani, Novara, ITALY
10.30	**COFFEE BREAK**	**COFFEE BREAK**
	FIBERS AND FILMS IV	**REPROCESSING, RECYCLING AND ENVIRONMENTAL IMPACT II**
11.00	5.2 The Effects of Drawing Conditions in the Double Bubble Process on the Properties of Bopp Films **H. Benkreira,** University of Bradford, UK	KN10.2 Material Recyclability of Waste Cord of Synthetic Fibers **T. Kimura,** Fukui University, JAPAN
11.20	5.6 A Chain-Intrinsic Flourescence Study of Orientation-Strain Behavior in Uniaxially Drown Poly (Ethylene Therephthalate Film) **B. Clauss, D. Salem,** TRI/Pricenton, NJ, U.S.A.	
11.40	5.9 Manufacture-Induced Inaccuracies of Spinning Dies - Influence on the Cross Fineness and Structure Unevennesses of PA 6 and PET Multifilament Yarns **R. Beyreuther, H. Brunig, H.Hofmann,** Institute of Polymer Research Dresden, GERMANY	10.7 Processing of Recycled EPS Foam **L. Hornberger, T. Hight, A. Walawalker,** Santa Clara University, U.S.A.
12.00	5.15 Biochemical Active Polymer Films for Food Products Packaging **V.A. Goldade, A. Makarevich, L. Pinchuk, I. Ukhartseva, E. Parkalova,** Metal-Polymer Research Institute, Gomel, REPUBLIC OF BELARUS	10.9 Polymer Packaging as an Environmental Benefactor **S.F. Bush, J.D. Tonkin,** UMIST, Manchester, ENGLAND
12.20	5.16 Research of Structure and Adsorption Characteristics of Polymeric Fibrous Fibrous Filtering Materials **V.A. Goldade, L.S. Pinchuk, A.V. Makarevich, V.G. Plevachuk,** Metal-Polymer Research Institute, Gomel, REPUBLIC OF BELARUS	10.10 Recycled Polypropylene: the Possibility of Use in Food Packaging **L. Incarnato, L. Di Maio, D. Acierno,** Università di Salerno, **M. Denaro,** Istituto Superiore di Sanità, Roma, ITALY
12.40	5.10 Microporous Polyethylene Films **G. Elyashevich, E.Yu. Rosova, E.A. Karpov, O.V. Kudasheva,** Institute of Macromolecular Compounds, Russian Academy of Sciences, St. Petersburg, RUSSIA	Reactive Processing with Applications in Virgin and Recycled Plastics **C.L. Beatty,** Dept. of Materials Sci. & Enge., Ganesville, U.S.A.

Tuesday, May 28, Afternoon

TIME	ROOM A	ROOM B
	RHEOLOGY AND RHEOMETRY I AND PROCESSING OF LIQUID CRYSTAL POLYMERS III	**MIXING AND COMPOUNDING II**
14.30	KN1.3 The Importance of Initial Domain Size in the Low-Shear-Rate Liquid-Crystal-Polymer Rheology **I.J. Chung, K.M. Kim,** Korea Advanced Institute of Science and Technology, Taejon, KOREA	KN2.2 Three-Dimensional Simulation and its Application to Performance Evaluation of Various Twin Screw Extruders **K. Funatsu, L. J. Liu, H. Higashi,** Kyushu University, Fukuoka, JAPAN
15.10	8.8 Isothermal Elongational Behavior of Liquid Crystalline Polymers and LCPs Based Blends **F.P. La Mantia,** Università di Palermo, **M. Paci, P.L. Magagnini,** Università di Pisa, ITALY	2.5 Mixing Materials of Different Viscosity Levels in a Modular Co-Rotating Twin Screw Extruders **S.H. Lee, J.L. White,** University of Akron, U.S.A.
15.30	8.11 Textural Patterns and Light Scattering from Nematic Solutions of a Rodlike Polymer During and on Cessation of Flow **S. Vijaykumar, G.C. Berry,** Carnegie Mellon University, Pittsburgh, PA, **M. Srinivasarao,** North Carolina State University, Raleygh, NC, U.S.A.	2.8 Development of the Morphology of an Immiscible Binary Blend During Twin-Screw Extrusion **D. Bourry, B.D. Favis,** CRASP, Ecole Polytechnique de Montréal, CANADA
15.50	8.13 The Influence of Crystallization on the Rheological Behaviour of HBA/HNA Copolymers **H.C. Langelaan, A.D. Gotsis,** Delft University of Technology, THE NETHERLANDS	2.7 The Influence of Maturation and Prevulcanization on Processability Determined by DSR Stress Relaxometer **I. Soos,** Taurus Rubber Co., Budapest, HUNGARY
16.10	**COFFEE BREAK**	**COFFEE BREAK**
	RHEOLOGY AND RHEOMETRY II	**MIXING AND COMPOUNDING III**
16.40	8.16 Rheology and Flow Induced Microstructural Changes in Polymer Blends Containing Liquid Crystalline Polymers. **Norman J. Wagner,** Center for Molecular andEngineering Thermodynamics University of Delaware Newark, DE, USA	KN 2.3 Influence of Matrix Infiltration on Aggiomerate Dispersibility **H. Yamada, D.L. Feke, I. Manas-Zloczower,** Case Western Reserve University, Cleveland, OH, U.S.A.
17.00	1.4 The Application of On-Line Rheometry of Polymer Melts **F. S. Baker, I. Shekhtmeyster,** Rheometrics Scientific, Piscataway, N.J., U.S.A.	
17.20	1.14 Rheological Characterization of Melamine Formaldehyde Resins by Torsional Braid Analysis (TBA) **P.-O. Hagstrand, C. Klason,** Chalmers University of Tecnology, Gothenburg, SWEDEN	2.4 Improving Compounding with Fillers **D.B. Todd,** Polymer Processing Institute (at Stevens), U.S.A.
17.40	1.17 A Viscosity Correlation for Polymer Solutions and Melts **M.D. Bullwinkel, G.A. Campbell,** Clarkson University, **P.C. Sukanek,** University of Mississippi, U.S.A.	2.2 Interactions Between Fillers and Polymers During Pan-Milling Process **X. Xu, J. Cao, Q. Wang, G. Li,** Chengdu University of Science and Technology, CHINA
18.00	1.16 Relevance of the Viscoelastic Functions for the Melt Stretching Orientation of Polystyrene **P. Lomellini, C. Maestrini,** Enichem Research Center, Mantova, ITALY	2.6 The Morphology and Copolymer Formation of Semi Miscible Polymer Blends in the Twin-Screw Extruder **H.S. Song, H.J. Lee, S.M. Park, J.Y. Hwang,** Hanwha Group Research & Engineering Center, KOREA

Tuesday, May 28, Afternoon

TIME	ROOM C	ROOM D
	FIBERS AND FILMS I	**MATHEMATICAL MODELLING I**
14.30	KN5.1 Constitutive Equations of Polymer Materials: a Bottle-Neck of Modelling Engineering Processes **A. Ziabicki,** Polish Academy of Sciences, Warsaw, POLAND	KN12.1 Numerical and Experimental Analysis of Viscoelastic Flows of Polymer Melts **F.P.T. Baaijens, J. Schoonen, G.W.M. Peters, H.E.H. Meijer,** Eindhoven University of Technology, THE NETHERLANDS
14.50	5.7 High Filament Velocities in the Underpressure Spunbonding Process-Realized with the Help of a Fiber Spinning Model **H. Brünig, R. Beyreuther,** Institute of Polymer Research Dresden, GERMANY	
15.10	5.23 Precise Measurement of Neck-Like Deformation Profiles in High-Speed Melt Spinning of Various Polyesters **T. Kikutani, N. Ogawa, N. Okui,** Tokyo Institute of Technology, JAPAN	12.1 Some Finite Volume Computational Methods for Viscoelastic Flows **R.I. Tanner, N. Phan-Thien, S. C. Xue,** University of Sydney, AUSTRALIA
15.30	5.1 Studies on the Melt Spinning Process of Rectangular PET Fibers - Shape Change During the Spin Line **Y. W. Noh, S.Y. Kim,** Seoul National University, KOREA	12.4 A Non-Equilibrium Statistical Theory of Glass Transition in Amourphous Polymers (3) Thermodynamic Approach to Transition and Relaxation **Mingshi Song, Ying Lu,** Beijing University of Chemical Tecnology , CHINA
15.50	5.14 Structure and Properties of Biochemically Treated Polyamide Fibres **D.V. Meshkov, E.V. Pisanova,** Metal-Polymer Research Institute, Gomel, A.I. Sviridenok, Department of Resources Saving, Academy of Sciences, Grodno, REPUBLIC OF BELARUS	12.17 Modeling of Non-Isothermal Viscoelastic Flows **G.W.M. Peters, F.P.T. Baaijiens,** Eindhoven University of Technology, THE NETHERLANDS
16.10	**COFFEE BREAK**	**COFFEE BREAK**
	FIBERS AND FILMS II	**MATHEMATICAL MODELLING II**
16.40	KN5.3 Poly (P-Phenylenebenzobisoxazole) Fiber **K. Yabuki,** Toyobo Research Institute, Katata, JAPAN	12.2 How CFD Can Help the Analysis of Capillary Data **G. Besana, G. Ajroldi,** Ausimont Research and Development Center, Bollate, A. Servida, Università di Genova, **M. Morbidelli,** Politecnico di Milano, ITALY
17.00		12.22 Fully 3d Finite Element Simulation of Mold Filling Process **T. Coupez, E. Pichelin,** CEMEF, Ecole des Mines de Paris, Sophia Antipolis, FRANCE
17.20	5.11 Structure-Properties Relationship in Spun Fibers of Poly(Ethylene Terephthalate): Comparisons Between Samples Obtained by Terephthalic Acid or Dimethyl Terephthalate Processes **G. Guerra,** Università di Salerno, **G. Russo, L. Parravicini, F. Auriemma, V. Petraccone,** Università di Napoli, **R. Bianchi, G. Di Dino, V.M. Vitagliano,** Centro Ricerche Montefibre, Acerra-Naples, ITALY	12.9 A Model for the Crystallization of PET in Injection Molding **O. Verhoyen, R. Legras, F. Dupret,** Catholic University of Louvain, BELGIUM
17.40	5.5 Stable Fiber Crystals in Drawn Polyethylene Films **H.Shii,** The Furukawa Electric Co., Yokohama, JAPAN	12.6 Modeling of Foam Growth of Thermoplastics with Application to the Physical Expansion of Novel Foamable Polypropylene Polymers **L.A. Costa, F. D'Oria, A. Vezzoli,** Montell R&D Center, Bollate, ITALY
18.00	5.3 Anticorrosive Polymer Films Modified by Volatile Corrosion Inhibitors Belonging to Polynitrogenous Heterocycles **A.V. Makarevich, I.V. Tsarenko, L.S. Pinchuk,** Metal-Polymer Research Institute, Gomel, REPUBLIC OF BELARUS	

Wednesday, May 29, Morning

TIME	ROOM A	ROOM B
	RHEOLOGY AND RHEOMETRY III	**EXTRUSION II**
8.30	KN1.1 Squeezing Flow Rheometry to Determine Viscosity, Wall Slip and Yield Stresses of Polymer Melts **M. Laun,** BASF, Ludwigshafen/Rhein, GERMANY	KN 6.1 Quality-Functions for the Optimization of Single-Screw Plasticating Units **H. Potente, M. Zelleröhr,** University of Paderborn, GERMANY
9.10	1.15 On the Relation Between Slip and Melt Fracture in the Flow of LLDPE Melts through Capillaries **J.Perez-Gonzalez, L. De Vargas,** Instituto Politécnico Nacional, **O. Manero,** UNAM, MEXICO	6.17 Screw Geometry and Melt Flow Behavior in Single Screw Extrusion **C. Wang, G.A. Campbell,** Clarkson University, Potsdam, U.S.A.
9.30	1.26 Extrudate Swell and Isothermal Melt Spinning Analysis of LLDPE Using the Wagner Constitutive Equation **R. Fulchiron,** Université Claude Bernard Lyon I, Villeurbane, **P. Revenu, B.S. Kim, C. Carrot, J. Guillet,** Université Jean Monnet, Saint-Etienne, FRANCE	6.2 Application of Genetic Algorithms to Single Screw Extrusion **A.G. Cunha, P. Oliveira, J.A. Covas,** University of Minho, PORTUGAL
9.50	1.21 Analysis of a Filament Stretching Rheometer **M.I. Kolte, H.K. Rasmussen, O. Hassager,** Technical University of Denmark, Lyngby, DENMARK	6.21 An Experimental and Numerical Investigation of Water Flow in an Underwater Pelletizer **A. Kiani, J. Bartl, R. Sauter, R. Munz, P. Heidemeyer,** Werner & Pfleiderer, Stuttgart, GERMANY
10.10	1.22 Elongational Properties of Vegetable Oils, Dairy Products and Food Rheology **A. Alcocer, J. Cruz-Mena, B. Mena,** UNAM, MEXICO **R.R. Huilgol,** The Flinders University of South Australia, Adelaide, AUSTRALIA	
10.30	**COFFEE BREAK**	**COFFEE BREAK**
	RHEOLOGY AND RHEOMETRY IV	**EXTRUSION III**
11.00	1.20 Progress and Limitations of Spectrum Determination for Polymeric Materials **H.H. Winter,** University of Massachusetts at Amherst, U.S.A.	6.18 Extrusion of Rubber Compounds: Influence of Process Parameters and Physical Characteristics of the Rubber Compound on the Heat Transfer and the Thermal Properties **R. Uphus,** Deutsches Institut für Kautschuktechnologie, Hannover, GERMANY
11.20	1.9 Relaxation Spectum of Polymers - Measurements and a New Approach to Calculations **A. Ya. Malkin,** Research Institute for Plastics, Moscow, RUSSIA	6.1 Study on Self-Reinforced HDPE by Continuous Melt Extrusion **H. Huang, Y. Peng,Y. Yi,** South China University of Technology, Guangzhou, CHINA
11.40	1.8 Multiple Branches and Time-Dependent Viscoelastic Properties of Rubber-Plasticizer System at Semidilute Region **N. Nakajima, S. Okuno,** University of Akron, U.S.A.	6.3 Single Screw Extrusion in High Viscosity PA Fiber Spinning **H. Langhorst,** Du Pont de Nemours, Östringen, GERMANY
12.00	1.11 Evaluation of Constitutive Equations for Polymer Melts and Solutions in Complex Flows **J.F.M. Schoonen, G.W.M. Peters, F.P.T. Baaijens, H.E.H. Meijer,** Eindhoven University of Tecnology, THE NETHERLANDS	6.13 Real-Time Morphology in Polymer Blends Inside a Twin Screw Extruder a New Innovative Approach **M. Stephan, O. Franzheim, T. Rische,** Institute of Polymer Research Dresden, **P. Heidemeyer, U. Burckhardt, A. Kiani,** Werner & Pfleider Gmbh, Stuttgart, GERMANY
12.20	1.5 Elastic Effects in Nearly Viscometric Flows Characterized by the Deborah Number **C.L. Lauridsen, E.M. Kjaer,** Technical University of Denmark, Lyngby, DENMARK	6.10 Optimized Processing of Polypropylene on Adiabatic Extruders **W. Imping,** Barmag AG, Remscheid, GERMANY
12.40	1.24 Molecular Weight Distributions from Linear Viscoelastic Properties in Linear Flexible Polymers **M.R. Nobile, F. Cocchini,** Università di Salerno, ITALY **J.V. Lawler,** Hoechst Celanase Corporation, Summit, NJ, U.S.A.	6.5 Long-Term Stress Embrittlement in Extrusion Grade ABS **R.S. Dave, C.G. Schmid,** BAYER Corporation, Springfield, MA, U.S.A.

Wednesday, May 29, Morning

TIME	ROOM C	ROOM D
	PROCESING OF COMPOSITES I	**POLYMERIZATION AND REACTIVE PROCESSING I**
8.30	KN9.1 Processing of Thermoplastic Composites Using Reactive Solvents **T. Peijs, R.W. Venderbosch, A. Saalbrink, H.E.H. Meijer, P.J. Lemstra,** Eindhoven University of Technology, THE NETHERLANDS	KN3.1 Copoly (Isocyanurate-Urea) Formed by Reaction Injection Moulding: a Time Resolved Study **A.J. Ryan, J.L. Stanford, M.J. Elwell, S.Naylor,** UMIST, Manchester, **A.N. Wilkinson,** Manchester Metropolitan University, **B. U. Komanschek,** EPRSC Daresbury Laboratory, Warrington, UK
9.10	9.1 New Moulding Machine for Long Fibre Reinforced Thermoplastic Pellet **T. Tanaka, H. Funahashi, K. Takahashi,** Kobe Steel, JAPAN	3.2 Phase Separation During Curing of Epoxy/Polyimide and Dicyanate/Polyimide **J.W. Park, Y. S. Kim, S.C. Kim,** Korea Advanced Institute of Science and Technology,Taejon, KOREA
9.30	9.7 Production and Processing of Vapour Grown Carbon Fibres-Polycarbonate Composites **O.S. Carneiro, G. Caldeira, J.A. Covas, C.A. Bernardo, F.W.J. van Hattum,** Universidade do Minho, PORTUGAL, **R.L. Alig, M.L. Lake,** Applied Sciences, Cedarville,OH, U.S.A.	3.6 In-Mold Process Control of Epoxy Composite Towards Microdielectric Measurements **F. Stephan, A. Fit, X. Duteurtre,** Renault, Rueil-Malmaison, and Seram, Paris, FRANCE
9.50	9.8 Residual Stress Measurements of Continuous Fibre Reinforced Thermoplastic Composites **M. Pelto, P. Jarvela,** Tampere University of Technology, **P. Peltonen,** Upofloor Oy, Nokya, **S. Loytonen,** Nokia Tyres, Nokia, FINLAND	3.5 Reactive Preparation of PPE/PA-6 Blends Via Application of $\mathcal{E}$-Caprolactam as a Reactive Solvent **I. Chorvath, H.E.H. Meijer, P.J. Lemstra,** Eindhoven University of Technology, M.D.M. Mertens, DSM Research, Geleen, THE NETHERLANDS
10.10	9.19 Effect of Moulding Pressure on Mechanical Properties of Glass Mat Reinforced Thermoplastics (GMT) **A. Hedberg, M. L. Ericson, L. Berglund,** Lulea University of Technology, SWEDEN	3.8 Processing of (In)Tractable Polymers Using Reactive Solvents: Morphology Fixation Via Addition of Crosslinking-Agents or Block Copolymers **J.G.P. Goossens, H.E.H. Meijer, PJ. Lemstra,** Eindhoven University of Technology, THE NETHERLANDS
10.30	**COFFEE BREAK**	**COFFEE BREAK**
	PROCESSING OF COMPOSITES II	**POLYMERIZATION AND REACTIVE PROCESSING II**
11.00	9.3 Flow and Fiber Orientation Calculation in Injection Molding of ReinforcedThermoplastics **B. Souloumiac, M. Vincent,** Ecole des Mines de Paris, Sophia -Antipolis, FRANCE	3.9 Compatibilizing of Hetereogeneous Polymer Blends by Copolymers and Reactive Agents **H.-J. Radusch, J. Ding, K. Tikuye,** Martin-Luther University Halle-Wittemberg, GERMANY
11.20	9.9 Microstructure Measurement of Short Fiber Reinforced Composites Using Automated Image Analysis **J.A. Noble,** University of Oxford, ENGLAND, **E.W. Liang,** GE Corporate Research and Development, Schenectady, NY, U.S.A.	3.10 Toughening of Brittle Amorphous Polymers Using Reactive Solvents **B.J.P. Jansen, H.E.H. Meijer, P.J. Lemstra,** Eindhoven University of Technology, THE NETHERLANDS
11.40	9.11 A Round-Robin Comparison on the Fiber Orientation Measurements of Short Fiber Reinforced Composites **E.W. Liang,** GE Corporate Research and Development, Schenectady, NY, U.S.A., **J.A. Noble,** Oxford University, ENGLAND, **C.L. Tucker III, K.F. Heitzamann,** University of Illinois, **J.F. O'Gara,** GM Research and Development Center, Warren, MI, U.S.A.	3.18 UV Processing of Thermoset Resins for Stereolithography **A.M. Maffezzoli,** University of Lecce, ITALY
12.00	9.13 A Differential Model for the Flow of Short Fibers Composites **A. Poitou, F. Meslin,** ENS de Cachan, Cachan, FRANCE	3.19 Theoretical Study of Thermal Cross-Polymerization of Diacetylene-Containing Polymers **E. Sansores, R. Salcedo, S. Fomine, L. Fomina,** IIM- UNAM, MEXICO
12.20	9.15 Tensile and Flexural Properties of Injection Molded Short Glass Fiber/Calcite Particle/ABS Terpolymer Composites **S.-Y. Fu, B. Lauke,** Institute for Polymer Research Dresden, GERMANY	3.7 Residence Time Distribution of Multiphasic Polymeric Systems in Screw Extruders **G.-H. Hu, I. Kadri, M. Lambla,** Institute Charles Sadron, Strasbourg, FRANCE
12.40	9.24 Effect of Surface Treatment on the Rheological and Mechanical Properties of Glass Fiber Reinforced Polypropylenes **T. Kitano, Y. Nagatsuka,** National Institute of Materials and Chemical Research, **K. Nakamura,** Nihon Glass Fiber Co., JAPAN, **P. Saha,** Technical University of Brno, Zlin, CZECH REPUBLIC	3.12 Flow Analysis and Molecular Weight Prediction of Polymethyl Methacrylate During Polymerization in a Model Twin Screw Extruder **L.-L. Chu, K. Min,** University of Akron, OH, U.S.A.

Wednesday, May 29, Afternoon

TIME	ROOM A	ROOM B
	BLENDS AND ALLOYS I	**EXTRUSION IV**
14.30	KN4.1 Compatibilization of Blends: the Effect of Reaction Rate **A. Nakayama, T. Inoue, A. Hirao,** Tokyo Institute of Technology, JAPAN **P. Guégan, A. Khandpur, C.W. Macosko,** University of Minnesota, U.S.A	KN 6.2 In-Process Monitoring of Extrusion of Filled Polymers **P.D. Coates, M. Woodhead,** University of Bradford, **D. Barnwell, K. Martin,** Raychem Corporate Technology Europe, Swindon, UK
15.10	4.1 Structure Development in Reactive PC-PBT Blends **A.N. Wilkinson, S.B. Tattum, D. Cole,** Manchester Metropolitan University, **A.J. Ryan,** UMIST, Manchester, UK	6.19 Oscillatory Die for Extrusion of Polymeric and Waste Materials - Application to Composite Materials Using Natural Fibers **W. Franco, J.A. Gutierrez, B. Mena,** UNAM, **J.R. Herrera,** Instituto Tecnologico de Zacatepec, **A. Marquez-Lucero,** Centro de Investigacion Cientifica de Yucatan, MEXICO
15.30	4.10 Effect of End-Functionalized Reactive Compatibilizers on Morphology of Immiscible Polymer Blends **K. Char, B.I. Ahn,** Seoul National University, KOREA	6.6 Consequent Use of Energy Elasticity of Steel Leads to New Solutions in Extrusion Die Design **H. Gross,** Kunststoff-Verfahrenstechnik, Rossdorf, GERMANY
15.50	4.16 Influence of the Addition of Carboxyl-Modified EVOH on Processing-Structure-Properties Relationships on Nylon 6/EVOH Blends **P. Laurienzo, M. Malinconico,** IRTEMP-CNR, Arco Felice-Napoli, **D. Acierno, G. Demma, L. Incarnato, P. Russo,** Università di Salerno, **M. Pracella,** CSPIM-CNR, Pisa, **M. Zendron,** Sniaricerche, Pisticci Scalo-Matera, ITALY	6.14 A Study of Profile Die Extrusion **J.F. Gobeau, T. Coupez, J.F. Agassant, B. Vergnes,** Ecole des Mines de Paris, Sophia-Antipolis, FRANCE
16.10	**COFFEE BREAK**	**COFFEE BREAK**
	BLENDS AND ALLOYS II	**EXTRUSION V**
16.40	4.22 Reactive Blending for Improving Interfacial Behavior **L. Nicolais,** Università Di Napoli, **G. Amendola, G. Giannotta, E. Occhiello, F. Garbassi,** Enichem S.P.A., ITALY	6.28 Multi-Layer Extrusion Heads Design: Power Cables Applications **A. Bareggi,** Pirelli Cavi s.p.a., Milano, ITALY
17.00	4.27 Effects of Acrylic Groups on the Compatibilization of PA 6/LLDPE Blends **A. Valenza, G. Spadaro,** Università di Palermo, ITALY	6.11 Experimental Investigation of Instabilities in a Coextrusion Process **L. Celarier, C. Carrot, J.P. Puaux,** Université Jean Monnet, Saint-Etienne, FRANCE
17.20	4.9 Light Scattering Study of the Phase Separation Between Thermosetting Resins and Polymers **P. Navard, P. Keates, J. Maugey, T. Butdova,** Ecole des Mines de Paris, Sophia-Antipolis, FRANCE	6.8 An Extruder Concept for the Future - Energy Saving and Maintenance Free **J. Wortberg, R. Michels,** University of Essen, GERMANY
17.40	4.28 PET - TLCP Alloying, Applyingthe Solid State Polyaddition Technology **H. Al Ghatta, S. Cobror,** SINCO Engineering S.P.A., Pozzilli (IS) ITALY	6.20 Filtration with the Rotary Disk Technology - Higher Efficiency Because of Constant Process Production **D. Gneuß,** Gneuß Kunststofftechnik GmbH, Bad Oeynhausen, GERMANY

Wednesday, May 29, Afternoon

TIME	ROOM C	ROOM D
	PROCESSING OF COMPOSITES III	**MATHEMATICAL MODELLING III**
14.30	KN 9.5 Development of Long Fiber Reinforced Thermoplastic Composite through Pultrusion Process **J.W. Lee,** Sogang University, Seoul, KOREA	KN12.2 Numerical Simulation of Viscoelastic Fluid Flow Problems **A. Fortin,** Ecole Polytechnique de Montréal, **R. Guénette,** Université Laval, Ste-Foy, CANADA
15.10	9.4 The Effects of Matrix-Fibre Interfaces on Matrix Solidification in the Reactive Processing of Composites **J.L. Stanford, M.J. Elwell, S. Naylor, P.T. Draper, A.J. Ryan,** UMIST, Manchester, **A. N. Wilkinson,** Manchester Metropolitan University, **B.U. Komanschek,** EPSRC Daresbury Laboratory, Warrington, UK	12.7 Modelling the Thermal Behaviour of Moulds During the Injection Moulding Cycle **J.C.F. Teixeira, S.F.C.F. Teixeira, A.M. Cunha,** University of Minho, Guimaraes, PORTUGAL
15.30	9.5 Evolution of the Resin Temperature During Filling of a Steel LCM Mold **R. Gauvin, G. Lebrun, F. Trochu,** Ecole Polytechnique, Montreal, CANADA **K.N. Kendall,** Ford Motor Company, Dearborn, U.S.A.	12.15 Calculation and Optimisation of the Feeding System in Thermoplastics Injection **F. Dupret, N. Van Rutten,** Catholic University of Louvain, BELGIUM
15.50	9.16 Thermal Cycling of Epoxy/Carbon Fiber Composites up to the Glass Transition Temperature **J.-D. Nam, D.-W. Suh, S.-H. Lee,** SungKyunKwan University, Suwon, **K.-M. Jung, K.-J. Ahn,** Korean Air, Seoul, KOREA	12.14 Towards a 3-D Finite Element Model for the Gas-Assisted Injection Moulding Process **G.A.A.V. Haagh, C.M.J. Reijnierse, G.W.M. Peters, H.E.H. Meijier,** Eindhoven University of Technology, THE NETHERLANDS
16.10	**COFFEE BREAK**	**COFFEE BREAK**
	PROCESSING OF COMPOSITES IV	**MATHEMATICAL MODELLING IV**
16.40	9.20 A New Approach to Cure Optimisation for Polymer Composites **L.A. Strombeck,** Sedish Institute of Composites, Pitea, SWEDEN	12.16 Numerical Simulation of the Reaction Injection Molding (RIM) Process **O.Mal, F. Dupret,** Catholic University of Louvain, BELGIUM
17.00	9.21 Microwave Processing of Some Polymers and Composites **F. Boey, S.W. Lye, L.H.L. Chia,** Nanyang Technological University, SINGAPORE	12.8 Approximation Equations for Co-Rotating Twin Screw Extruders on the Basis of Physical Mathematical Models **H. Potente, U. Melisch,** University of Paderborn, GERMANY
17.20	9.10 Extrusion Coating of Plywood With Thermoplastics **J. Lampinen, O. Tervala, P.K. Jarvela,** Tampere University of Technology, **P.A. Jarvela,** VTT Chemical Technology, FINLAND	12.21 Comparison of Lagrangian and Eulerian Predictions of the Output of Extruders **G.A. Campbell, C. Wang,** Clarkson University, Potsdam, U.S.A.
17.40	9.6 Endoprosthesis Plastic Cups with Cartilage-Simulating Structure **L.S. Pinchuk, E.A. Tsvetkova, V.I. Nikolaev,** Metal-Polymer Research Institute, Gomel, REPUBLIC OF BELARUS	12.29 Optimized Design of the Calibrating and Cooling Units for Complex Window Frame Profiles **S. Fang, H.G. Fritz,** Universitat Stuttgart, GERMANY
18.00	9.17 A GMT Combined by Hybrid Fibre Structures **J.K. Sarlin, S. Niinviita, M-T. Tuomisto, A. Laine,** VTT Chemical Technology, Tampere, FINLAND	

Thursday, May 30, Morning

TIME	ROOM A	ROOM B
	RHEOLOGY AND RHEOMETRY V	**INJECTION AND FREE SURFACE MOLDING I**
8.30	KN1.2 Melt Rheology of Multi-Component Polymer Systems **Y. Aoki,** Mitsubishi Chemical Corporation, Yokkaichi, JAPAN	KN 7.1 Some New Results in Rotational Molding **J. Vlachopoulos, C. Bellehumeur, M. Kontopoulou, E. Takacs,** McMaster University, Hamilton, Ontario, CANADA
9.10	1.1 Rheology of Immiscible Polymer Blends **C. Lacroix, M. Aressy, P. J. Carreau,** Ecole Polytechnique of Montreal, CANADA	7.3 Relationship Between Morphology and Properties in Rotationally Moulded Polyethylene **M.J. Oliveira, M.C. Cramez,** University of Minho, PORTUGAL **R.J. Crawford,** Queen's University of Belfast, N. IRELAND
9.30	1.3 Rheological Behaviour of Heterogeneous Polymer Melts **H. Münstedt, J. Kaschta,** University of Erlangen-Nürnberg, GERMANY	7.1 Analytical Models for the Simultaneous Inflation and Extension of a Polymeric Tube **F. Schmidt,** Ecole des Mines d'Albi, **J.F. Agassant, M. Bellet,** Ecole des Mines de Paris, Sophia-Antipolis, FRANCE
9.50	1.25 High Speed Viscoelastic Flow Properties and Viscous Heating Behaviors in Processing of Reactive Polymer Blends **T. Nishio, T. Sanada,** Sumitomo Chemical Co., **S. Su, K. Iwakura,** Yamagata University, JAPAN	7.18 Intelligent Monitoring for 100% Automatic Inspection of Quality in Injection Moulding **P.D. Coates, A. Dawson, A. Key,** University of Bradford, **C. Peters, R. Jagger,** Birkbys Plastics Ltd, **R.G. Speight,** Moldflow, Pty, UK
10.10	1.2 Rheology at the Gel-Point in Crosslinking Polymerizations **A.J. Ryan,** J.L. Stanford, UMIST, Manchester, **I. Griffiths,** Victrex plc., Lancashire, UK	7.12 Visual Analysis of Reciprocating Plastication Process by Visual Heating Cylinder **H. Yokoi,** University of Tokyo, **M. Tatsuno,** Nissei Plastic Industrial Co., Nagano, JAPAN
10.30	**COFFEE BREAK**	**COFFEE BREAK**
	RHEOLOGY AND RHEOMETRY VI	**INJECTION AND FREE SURFACE MOLDING II**
11.00	1.18 Deformation and Breakup of Viscoelastic Drops Under Shear Flow **S. Guido, M. Villone,** Università degli Studi di Napoli "Federico II", ITALY	7.17 Numerical Simulation of the Blow Molding Process: Viscoelastic Behavior and Remeshing Techniques **A. Rodriguez-Villa, M. Bellet, J-F. Agassant,** Ecole des Mines de Paris, Valbonne, FRANCE
11.20	1.12 Polypropylene During Crystallization from the Melt as a Model for the Rheology of Molten Filled Polymers **K. Boutahar, C. Carrot, J. Guillet,** Université Jean Monnet, Saint-Etienne, FRANCE	7.16 Long-Fibre Reinforced Blow Mouldings **S.F. Bush, J.D. Tonkin,** UMIST, Manchester, ENGLAND
11.40	1.19 Rheological Models for Particle Filled Polymers **M. Sobhanie,** The Goodyear Tire & Rubber Company, Akron, **A.I. Isayev,** The University of Akron, U.S.A.	7.5 An Experimental Verification of the Filling Analysis **O. Amano,** Amano Molding Laboratory Ltd., Yokohama, JAPAN
12.00	1.13 Pressure Oscillations of HDPE/PA 11 Melts **V. Pavlinek, P. Saha,** Faculty of Technology, Zlin, CZECH REPUBLIC **J. Becker, C. Klason,** Chalmers University of Technology, Gothenburg, SWEDEN **T. Kitano,** National Institute of Materials and Chemical Research, Tsukuba, JAPAN	7.7 Contractation Pressure Loss; Influence of Temperature and Fibre Reinforcement **P. Brincat, W. Thompson,** Swinburne University of Techcnology, **C. Friedl,** Moldflow AUSTRALIA, **H. J. Park,** Sunkyong Industries, Suwon-Si, KOREA
12.20	1.10 Thixotropic Flow Behaviour of Alkyd Solutions **A. Kastànek,** SYNPO, Pardubice, CZECH REPUBLIC	7.8 Improvement of Polymer Behavior During the Filling Process of Injection Molding by Thermal Irradiation **T.Saito, Y. Kurosaki, I. Satoh,** Tokyo Institute of Technology, JAPAN
12.40	1.23 A Model for Zero Shear Viscosity **G. Locati,** EniChem SpA, Milano, **M. Pegoraro,** Polytechnic of Milan, ITALY	7.11 Measurement of Melt Pressure Distribution on Injection Mold Cavity Surface **Y. Murata, H. Yokoi,** University of Tokyo, **H. Kawasaki,** Toppan Printing Co., JAPAN

Thursday, May 30, Morning

TIME	ROOM C	ROOM D
	MORPHOLOGY AND STRUCTURE DEVELOPMENT I	**POLYMERIZATION AND REACTIVE PROCESSING III**
8.30	KN11.2 Morpholgy and Structure Development in Polymer Microlayered Systems **A. Hiltner, E.Baer,** Case Western Reserve University, Cleveland, U.S.A.	KN 3.2 Multislit Devolatilization of Polymers **G. Astarita,** Università di Napoli, ITALY
9.10	11.15 X-Ray Investigations of Bicomponent Injection Molded Polypropylene **P. Zipper, G. Gobec, J. Travas-Sejdic, D. Totev,** Graz University, **W. Geymayer,** Graz University of Technology, **F. Eigl,** Leoben University of Mining, AUSTRIA	3.17 The Effect of in Situ Generated Compatibilisers Produced by Reactive Compounding of Functionalised Polystyrenes and Polymethylmethacrylates **A. Stori,** SINTEF Materials Technology, Oslo, NORWAY
9.30	11.16 Particle Networks in Pigmented Waxes **J. Kaschta, H. Münstedt,** University of Erlangen-Nürnberg, GERMANY	3.21 Poly-(Lactide) as a Basis of Biodegradable Polymer Systems **S. Jacobsen, H.G. Fritz,** Universitat Stuttgart, GERMANY
9.50	11.21 Pressure Induced Disordering below the Glass Transition Temperature in Semi-Crystalline Polymers: Poly-4-methylpentene-1 and Syndiotactic Polystyrene **S. Rastogi,** Eindhoven University of Technology, THE NETHERLAND	3.22 Reactive Extrusion of Chemically Modified Polypropylene Homo- and Copolymers **U. Bolz, H.G. Fritz,** Universitat Stuttgart GERMANY
10.10	11.36 Modelling of Flexural and Tensile Fatigue Behaviour of Glass Fiber Reinforced Plastics **D'Amore, G. Caprino, F. Facciolo,** Università Di Napoli, ITALY	3.13 ^{13}C NMR Study of the Grafting of ^{13}C Labeled Maleic Anhydride onto PE, PP and EPM **M. van Duin, W. Heinen,** DSM Research, Geleen, **C.H. Rosemoeller, C.B. Wenzel, H.J.M. de Groot, J. Lugtenburg,** Leiden Institute of Chemistry, THE NETHERLANDS
10.30	**COFFEE BREAK**	**COFFEE BREAK**
	MORPHOLOGY AND STRUCTURE DEVELOPMENT II	**POLYMERIZATION AND REACTIVE PROCESSING IV**
11.00	11.19 Fracture Behavior of Epoxy Resins Modified with Amine Terminated Liquid Rubbers and Thermoplastics **M. Franco, R.Miner, M.A. Courcuera, I. Mondragon,** Universidad del Pais Vasco/Euskal Herriko Unib., San Sebastian, SPAIN	3.15 Reactive Extrusion of Polypropylene with Periodic Peroxide Injection **S.B. Dickson, C. Tzoganakis, H. Budman,** University of Waterloo, CANADA
11.20	11.6 Kinetic Analysis of the degradation processes of polymers and polymer composites **L. Torre, J.M. Kenny,** Institute of Chemical Technologies, University of Perugia, Terni, ITALY	3.4 Functionalization of Isotactic Polypropylene with Maleic Anhydride in Solid Phase **E. Borsig, M. Lazar, A. Fiedlerova, L. Hrckova,** Polymer Institute, Slovak Academy of Sciences, Bratislava, SLOVAK REPUBLIC, **M. Ratzsch, A. Hesse,** PCD Polymere GmbH, AUSTRIA
11.40	11.11 Microstructure and Thermal Behaviour of PEKEKK Particles Obtained by Precipitation Polycondensation **D.R. Rueda, M.G. Zolotukhin, M.E. Cagiao, F.J. Balta Calleja,** Instituto de Estructura de la Materia, Madrid, SPAIN	3.14 Chemical Modification of an Industrial Waste Polypropylene Coming from Polimerization Reactor. Its Use as Interfacial Agent in the Manufacture of Composite Materials Based on Polypropylene **J.M[a], G[a], Martinez, O. Laguna, E.P. Collar,** Instituto de Ciencia y Tecnologia de Polimeros, Madrid, SPAIN.
12.00	11.8 Reconsidering Standard Evaluation of Thermal Behaviour of Plastics **G. Locati,** Enichem, Milan, **S. Poggio, J. Rathenow,** Ceast, Turin, ITALY	3.24 The Effect of Processing on the Properties of Peroxide-Modified Composites of Polyethylene with Organic Filler **I. Chodák, Z. Nógellová,** Slovak Academy of Sciences, Bratislava, SLOVAKIA **B.V. Kokta,** University Quebec Trois-Rivieres, CANADA
12.20	11.27 Fracture Morphology and Crystallization of PA6/Ionomer Blends **S. Li, X. Xu,** Beijing University of Chemical Technology, CHINA, **Z. Xiong, X. Sun,** National Mechanical Structure Engineering Plastics Research Center, Chengdu, CHINA	3.25 A new type of modified polyethylene with improved release and low friction properties, **C. Bergstrom, A. Karhu,** Optatech Corporation, Espoo, FINLAND
12.40	11.35 Investigation of Low Energy, Low Temperature Polymer Transitions Using Dynamic Differential Scanning Calorimetry **U. Hess, B. Cassel, M. Di Vito, S. Cerizza,** Perkin-Elmer GmbH, GERMANY, Perkin-Elmer Corporation, U.S.A., Perkin-Elmer Italia S.p.A., ITALY	

Thursday, May 30, Afternoon

TIME	ROOM A	ROOM B
	BLENDS AND ALLOYS	**INJECTION AND FREE SURFACE MOLDING III**
14.30	4.2 Morphology Development in PC/ABS Blends During Injection Molding by Shear-Dependent Spinodal Decomposition Mechanism **M. Okamoto, T. Inoue,** Tokyo Institute of Technology, JAPAN	KN 7.2 Prediction of Local Morphology and Stiffness of Injecion Moulded Parts of Polypropylene **E. Hinrichsen, A. Larsen,** SINTEF, Oslo, NORWAY **L. Tamic,** Bolloré Technologies, Quimper, FRANCE **M. Augestad, K. Kleveland, M. Seim,** Borealis, Rønningen, NORWAY **P. Barham, G. Goldbeck-Wood,** University of Bristol, UK **J-M Haudin, F. Jay, B. Monasse,** CEMEF, Ecole des Mines de Paris, Valbonne, FRANCE **J. Bitsch, L. Skjold Fredriksen,** Superfos Emballage, DENMARK **V. Brucato, S. Piccarolo,** University of Palermo, **V. Speranza, G. Titomanlio,** University of Salerno, ITALY
14.50	4.4 Rheological Behaviors of Newtonian/Non-Newtonian Polymer Blends with Morphology Evolution under Steady and Transient Shear Flows **O.Ok Park, H.M. Lee,** Korea Advanced Institute of Science and Technology, Taejon, KOREA	
15.10	4.13 Morphology and Coalescence in Blends of TPU and Polyolefins **K. Wallheinke, P. Pötschke,** Institute of Polymer Research Dresden, **H. Stutz,** BASF AG, Ludwigshafen, GERMANY	7.22 Statistical Approach of the Impact Behavior of Injection Molded Short Fiber Reinforced Polymers **S. Barbosa, J.M. Kenny,** Università di Perugia, Terni, ITALY
15.30	4.14 Coalescence Phenomena in Transient Shear Flow of a Model Polymer Blend **N. Grizzuti,** Università degli Studi di Napoli Federico II, ITALY	7.19 Consistent Melt Production through the Use of Taguchi Methods in Injection Moulding Quality Control **N. Khoshooee, P.D. Coates,** University of Bradford, UK
15.50	4.20 Modelling of the Formation of Co-Continuous Morphologies in Polymer Blends **R.C. Willemse, A. Posthuma de Boer, A.D. Gotsis,** Delft University of Technology, THE NETHERLANDS	7.6 Impact Performance of Injection Moulded PP Plates **J.C. Viana, A.M Cunha,** University of Minho, PORTUGAL
16.10	**COFFEE BREAK**	**COFFEE BREAK**
	BLENDS AND ALLOYS IV	**INJECTION AND FREE SURFACE MOLDING IV**
16.40	4.25 Coextruded Films of Modified Polyethylenes and their Blends **S. Sanchez,** CIQA, Saltillo, **C. Guerrero,** DIMAT-FIME-UANL, Monterrey, MEXICO	7.21 Product Shrinkage in Injection Moulding **K.M.B. Jansen, F.J. van der Veen, T. Groen, D. van Dijk,** Twente University, THE NETHERLANDS
17.00	4.21 Viscoelastic Properties of Polystyrene-Polyethylene Blends: Interfacial Tension Measurement Using the Breaking Thread Method and Predictions with an Emulsion Model **N. Mekhilef, P.J. Carreau, B.D. Favis,** Ecole Polytechnique of Montreal, CANADA	7.2 The Importance of Gate Geometry and Mold Elasticity on the Shrinkage Distribution of a Molded Part **V. Leo, C. Cuvelliez,** Solvay Research & Technology, Bruxelles, BELGIUM
17.20	4.29 New Ecological Polyester Resins with Reduced Flammability and Smoke Evolution Capacity **E. Kicko-Walczak, E. Grzywa,** Industrial Chemistry Research Institute, Warszawa, POLAND	7.9 Measurement of in-Mold Separating Process Between Molded Sample and Cavity Surface by Integrated Thermocouple Sensor **H. Yokoi, S. Nishiuchi,** University of Tokyo, JAPAN
17.40	4.8 Flow-Induced Structures in Immiscible Polymer Blends: Small-Angle Light Scattering Characterization **E. Peuvrel-Disdier,P. Navard, D. Rusu,** Ecole des Mines de Paris, Sophia-Antipolis, FRANCE	7.15 Crystallization Kinetics of Homo and Heterophasic PP for Use in Injection Molding. Part 1: Quiescent Conditions **B. De Carvalho, R.E.S. Bretas,** Department of Materials Engineering-UFSCar, Sao Carlos, BRASIL

Thursday, May 30, Afternoon

TIME	ROOM C	ROOM D
	MORPHOLOGY AND STRUCTURE DEVELOPMENT III	**MATHEMATICAL MODELLING V**
14.30	11.9 The Effects of Processing Conditions and Service Environment on the Structure - Property Relations of Bismaleimide Composite Matrices **R.J. Morgan, J.K. Choi, L. Drzal, A. Lee, E. Shin, M. Wilenski,** Michigan State University, U.S.A.	KN12.3 Simulation of Thermoset Injection Molding **H.T. Chiu, S.C. Chen, L. James Lee,** The Ohio State University, Columbus, OH, U.S.A.
14.50	11.5 Simultaneous Synchrotron SAXS/FT-IR: a Probe for Reaction Kinetics and Structure Development During Reactive Polymer Processing **M.J Elwell, S. Naylor, P.T. Draper, J.L. Stanford, A.J. Ryan,** UMIST, Manchester, **G.E. Derbyshire, B.U. Komanschek, D. Bogg,** EPSRC Daresbury Laboratory, Warrington, UK **W. Bras,** AMOLF, Amsterdam, THE NETHERLANDS	
15.10	11.20 Impedance Spectroscopy of Reactive Polymers **J. Mijovic,** Polytechnic University, Brooklyn, U.S.A., **F. Bellucci, L. Nicodemo, T. Monetta, L. Nicolais,** Università di Napoli, **J.M. Kenny,** Università di Perugia, Terni, ITALY	12.5 Computer Prediction of Wall Thickness Distributions in Injection Blow Moulded PET Bottles **R.J. Crawford, J. Mc Evoy, C.G. Armstrong,** Queen's University, Belfast, N. IRELAND
15.30	11.14 Dielectric Properties of Polymers for the Optimization of Microwave Curing **D. Acierno, M. Frigione, V. Fiumara, V. Pierro, I.M. Pinto,** Università di Salerno, ITALY	12.19 Viscoelastic Modelling of Blade Coating **E. Mitsoulis, T.V. Phan,** University of Ottawa, CANADA
15.50	11.7 Use of Spin-Lattice Relaxation Times, $T_{1\rho}$ and T_1 for Nano-Scale Probe of Structural Heterogeneity in Microcrystalline Polymers **S-Y Kwak, J.-J. Kim,** Korea Institute of Science and Technology, Seoul, KOREA **N. Nakajima,** the University of Akron, U.S.A.	12.26 Numerical Simulation of an Optical Fiber Forming Process **C.-C. Tsai, T.-J. Liu,** National Taing Hua University, Taiwan, R.O.C. **Y.-H. Chang, W.T.W. Taeng,** Industrial Technology Research Institute, Taiwan, ROC
16.10	**COFFEE BREAK**	**COFFEE BREAK**
	MORPHOLOGY AND STRUCTURE DEVELOPMENT IV	**MATHEMATICAL MODELLING VI**
16.40	11.18 Dynamics of Polymer Blends Morphology **A.K. Ghosh, P. Khandelwal,** Indian Institute of Technology, New Delhi, INDIA	12.25 Simulation of Ultrasonic Devulcanization of Tire Rubbers **A.I. Isayev, S.P. Yushanov, D. Schworm, A. Tukachinsky,** University of Akron, U.S.A
17.00	11.24 Characterization of Branched Polymers by Rheological Measurements **Z. Dobkowski,** Industrial Chemistry Research Institute, Warszawa, POLAND	12.24 Filtration Law of Polymer Flow Through Porous Medium **O. Gipouloux,** Equipe d'Analyse Numérique, Univerité de Saint Etienne, FRANCE **A.M. Zine,** Ecole Centrale De Lyon Ecuuly Cedex, FRANCE
17.20	11.29 Effects Superposition in the Field of Polimeric Materials **V.V. Jinescu,** Polytechnic University Bucharest, ROMANIA	12.23 Rheological Properties and States of Particle Orientation in Talc Filled Thermoplastic Compounds **C.H. Suh, K.J. Kim, J.L. White,** University of Akron, U.S.A.
17.40	11.17 Surface Interactions in Non- Isothermal Polymer Flows **R.W. Peterson,** Process Research Specialist 3m, St. Paul, U.S.A.	12.10 Particle Size Distribution in Fluidized Beds for Polymerization **Hong H. Lee, D.Y. Khang,** Seoul National University, KOREA

Friday, May 31, Morning

TIME	ROOM A	ROOM B
	BLENDS AND ALLOYS V	**WELDING AND JOINING I**
8.30	KN4.2 Super-Tough Thermoset/Thermoplastic Alloys Via Reaction-Induced Spinodal Decomposition **M.Kuroda, T. Hirohata, T.Takiguchi, A.Nishimura,** Sumitomo Electric Industries Ltd., Osaka, JAPAN	KN13.1 Orbital Welding - the Logical Advancement of Linear Vibration Welding **W. Strohfuss,** Branson Ultraschall, Dietzenbach, GERMANY
9.10	4.18 Toughening of Polypropylene by Different Elastomeric Systems **Y. Yokoyama, T. Ricco,** University of Trento, ITALY	13.6 Process Control in the Vibration Welding Process **M. Uebbing,** RWTUV, Essen, GERMANY
9.30	4.19 Environmental Stress Cracking of Rubber-Modified Styrenic Polymers in Freon Vapor **K. Cho, M.S. Lee,** Pohang University of Science and Technology, KOREA	13.3 Quality Assurance in Ultrasonic Welding Using Statistical Process Models - Prediction of Weld Strength **W. Michaeli, W. Korte,** IKV, Aachen, GERMANY
9.50	4.26 Blends of Chitin and Chitosan with Polyamide 6 **V.A. Gonzalez, C. Guerrero,** DIMAT-FIME-UANL, Monterrey, MEXICO	13.8 Laser Butt Welding of Semi-Crystalline Thermoplastics **H. Potente, J. Korte,** University of Paderborn, GERMANY
10.10	4.12 Lignin Modified PVC **D. Feldman, D. Banu,** Concordia University, Montréal, CANADA **J. Lora,** Repap Technologies Inc., Valley Forge, PA, U.S.A.	13.2 Separation of Combined Materials for Recycling **T. Forss, B. Terselius,** Royal Institute of Technology, Stockholm, SWEDEN
10.30	**COFFEE BREAK**	**COFFEE BREAK**
	BLENDS AND ALLOYS VI	**WELDING AND JOINING II**
11.00	4.5 Draw Resonance of Bicomponent Blends in a Fiber Spinning Process **C.W. Park, D. Nguyen,** University of Florida, Gainesville, FL, U.S.A.	13.4 The Problem of Stress Cracking in Heated Tool Butt Welded Tail Lights Made of PMMA and ABS **H. Potente, A. Brüßel,** University of Paderborn, GERMANY
11.20	4.15 The Interfacial Interaction of Ultraviolet Irradiated HDPE /PA6 Blend **X. Xu, J. Lei,** Chengdu University of Science &Technlogy, CHINA	13.9 Bending Fatigue and Ratcheting of HDPE Pipe Joints **R.J. Scavuzzo, T. S. Srivatsan, H. Chen, P. Hu,** University of Akron, U.S.A.
11.40	4.3 Influence of Added Polymers on the Crystallization and Melting Behavior of Nylon 6,6 **P.S. Walia, R.K. Gupta,** West Virginia University, Morgantown, WV, U.S.A. **C.T. Kiang,** Fairway Filamentos, Santo Andre, BRAZIL	13.1 Morphology and Mechanical Properties of Injection-Molded Articles with Weld-Lines **J.K. Kim, J.H. Song, S.T. Chung, T.H. Kwon,** Pohang University of Science and Technology, KOREA
12.00	4.17 Thermoplastic Starch/Polyethylene Blends **N. St-Pierre, B.D. Favis, B.A. Ramsay, J.A. Ramsay, H. Verhoogt,** Ecole Polytechnique de Montréal, CANADA	13.10 Improvement of Adhesive Bonding of Semycrystalline Polymers by Different Surface Treatments **T. Zeiler, P. Pfeffer, M. Kürner H. Münstedt,** University of Erlangen-Nürnberg, GERMANY
12.20	4.23 The Role of Homo and Copolyacrylates in the Degradation of Nylon 6 **L.-C. Hu, T. Kitao,** Kyoto Institute of Technology, JAPAN	13.7 Welding of Ultra -High Molecular Weight Polyethylene Surface **Y.Q. Xue, T. Tervoort, P.J. Lemstra,** Eindhoven University of Technology, THE NETHERLANDS
12.40	4.6 Morphology Development by Combined Effect of Crystallization and Phase Separation in the Mixtures of Polystyrene and Tetramethyl-Bisphenol-a Polycarbonate **J. Kim,** Sungkyunkwan University, KOREA	

Friday, May 31, Morning

TIME	ROOM C	ROOM D
	MORPHOLOGY AND STRUCTURE DEVELOPMENT V	**PROCESSING OF COMPOSITES V**
8.30	KN11.1 Kinetics of Crystallization under Conditions of Heat Transfer **G. Eder,** Linz University, AUSTRIA	KN9.2 Virtual Processing of Polymeric Matrix Composites: Where We Have Been and Where We Need To Be **C.E. Browning,** Air Force Materials Directorate, **J.C. Halpin,** Wright Patterson Air Force Base, OH, U.S.A.
9.10	11.3 Crystallisation and Texture Development During the Processing of Polymer Films **N.J. Terrill, J.P.A. Fairclough, A.J. Ryan, R.J. Young,** Manchester Materials Science Centre, UMIST, **E. Towns-Andrews, B.U. Komanschek,** CCLRC Daresbury Laboratory, Warrington, UK	KN9.3 Evolution of Modeling and Simulation in the Processing of Advanced Composites **J.L.Kardos**, Washington University, St Louis, MO, U.S.A.
9.30	11.4 Crystallisation in Linear and Cyclic Poly(Ethylene Oxide): Implications for Chain Folding **J. Cooke, A. J. Ryan,** UMIST, Manchester, **T. Sun, Z. Yang, G. Yu, C. Booth,** University of Manchester, UK	
9.50	11.10 Experimental Observations and Modeling of Extended Chain Crystal Structure Development **T.C. Tsai, L. Mendes, M. Kakani, K.A. High, M.S. High, D.A. Tree,** Oklahoma State University, U.S.A.	KN9.4 Advanced Composites Integration and Consolidation **J.C. Seferis**, University of Washington, Seattle, WA, U.S.A.
10.10	11.12 Modelling the Microstructure Formation of Semicrystalline Thermoplastics in Injection Moulded Parts **W. Michaeli, J. Zachert,** IKV, Aachen, GERMANY	
10.30	**COFFEE BREAK**	**COFFEE BREAK**
	MORPHOLOGY AND STRUCTURE DEVELOPMENT VI	**PROCESSING OF COMPOSITES VI**
11.00	11.34 Non Isothermal Polymer Solidification Behaviour from Quench Experiments **S. Piccarolo, V. Brucato,** Università di Palermo, ITALY	9.25 Affordability of Aereospace Composite Structures **F.J. Doerner,** McDonnell Douglas Aereospace, St. Louis, MO, U.S.A.
11.20	11.23 Molecular Effect on Crystallization of Polypropylene Under Shear **F. Jay, J.M. Haudin, B. Monasse,** Ecole des Mines de Paris, Sophia Antipolis, FRANCE	9.26 An Organization and Requirements for the Development of Polymer Composites for Automotive Structural Application **G.B. Chapman,** Automotive Composites Consortium, Detroit, Mi, U.S.A.
11.40	11.26 Process Induced Phase Transitions in Mono and Multinucleated Polypropylene Systems **T. Sterzynski,** Université L. Pasteur, Strasbourg, FRANCE **H. Oysaed,** Borealis As , NORWAY	9.27 Application of Composites to Infrastructure in the U.S. **J.P. Mistretta,** Wright Patterson Air Force Base, OH, U.S.A.
12.00	11.30 Properties of Solid State Roll-Drawn and Extruded HDPE and PP **A. Ajji, N. Legros, M. Dumoulin,** Industrial Materials Institute, National Research Council, CANADA	9.12 Modelling 3D Flows for Resin Transfer Molding **B. Gardarein, T. Charvet,** Renault, Rueil Malmaison, **P. David,** CISI, FRANCE
12.20	11.2 Synthesis and Characterization of Microcrystalline Cellulose Powder **D. Siddaramaiah, T. Jeevananda,** S.J. College of Engineering, Mysore University, INDIA	9.14 Processing of Woven Preforms Based on Thermoplastic Fibers Reinforced with Liquid Crystalline Polymers **C.R. Robertson, R. Krishnaswamy, P. de Souza, D.G. Baird**, Virginia Tech, Blacksburg, VA, U.S.A.
12.40	11.37 Crystallization Behaviour of Biodegradable Polymers: Polylactide and Polyhydroxybutyrate **S. Iannace, L. Nicolais,** Università di Napoli, ITALY	9.18 Squeeze Flow of Polymers and Polymer Composites **H.E.N. Bersee,** Shell Research and Technology Centre, Amsterdam, THE NETHERLANDS

POSTER PRESENTATIONS

Posters sessions will run simultaneously with the corresponding sessions of oral presentations. A dedicated area for poster presentations will be organized in the same area of coffee breaks and industrial exhibitions. Although posters can be exhibited during the whole conference, authors are encouraged to stand by their posters during breaks of the corresponding symposia sessions.

1. RHEOLOGY AND RHEOMETRY

P1.1 Rheological Behaviour of PVC Plastisols on the Base of Emulsion and Microsuspension PVC
Z. Spehar, V. Rek, University of Zagreb, CROATIA
P1.2 Non-Linear Viscoelastic Properties of Well-Characterized Long Chain Branched Graft Copolymers
J. Sendorek, Bayer Rubber Inc. U.S.A.
P1.3 Dynamic Curing Optimization of HDPE / EPDM Blends by a Torque Rheometer
S. Mishra, North Maharashtra University, INDIA

2. MIXING AND COMPOUNDING

P2.1 An Economical Process from Polymerization and Processing to Recycling and Composting for Biodegradable Poly (lactic acid)
R. Miyoshi, N. Hashimoto, K. Koyanagi, Y. Sumihiro, T. Sakai, The Japan Steel Works, Hiroshima, JAPAN
P2.2 LCM-AX: Pomini's Co-Rotating Twin Screw Mixer
S. Canegallo, E. Del Monte, L. Pomini, Pomini Spa, Castellanza, VA, ITALY

3. POLYMERIZATION AND REACTIVE PROCESSING

P3.1 The Copolymerization Reaction Between Pure Terephthalic Acid (PTA), Ethylene Glycol (EG) and Pure Isophthalic Acid (PIA) and its Characterizazion.
Z. Duniani, Y. Meliana, I. Pasaribu, PERTAMINA, Jakarta, INDONESIA
P3.2 The Effects of Pressure Pulse on Mixing in Reaction Injection Molding
W. Wang, Beijing University of Chemical Technology, CHINA
P3.3 Investigation, Modeling and Simulation the Morphology Formation Process in Dynamic Vulcanized PP-Elastomer Blends
H.-J. Radusch, T. Pham, Martin Luther University Halle-Wittemberg, GERMANY
P3.4 Modified Silicone Rubbers by in-Situ Polymerization or Copolymerization Techniques
E. Ranucci, P. Ferruti, Università Di Brescia, **C. Della Volpe, C. Migliaresi,** Università di Trento, ITALY
P3.5 The Experimental Investigation on the Chemical Crosslinked Polyethylene Heatshrinkable Tubes
W. Daming, L. Wenbao, L. Ying, X. Shaohong, Beijing University of Chemical Technology, CHINA
P3.6 Influence of the Plasticizer and Elastomeric Modifiers Proportion on the Cure of Epoxy Resin Systems for Surface Coatings
J.M. Salla, J.M. Morancho, L.M. Marroyo, A. Cadenato, J.L. Martin, X. Ramis, Universitat Politècnica de Catalunya, Barcelona, SPAIN
P3.7 A New Type of TPE made by Solid State Grafting of Polyolefins
C. Bergstrom, Optatech Corporation, Espoo, **V. Lonnberg,** Technical Research Center of Finland, VTT, FINLAND

4. BLENDS AND ALLOYS

P4.1 Relation Between Surface and Bulk Morphology for an Immiscible PP/PET Blend after Melt Processing
G. Verfaillie, E. Ferain, R. Legras, Université Catholique de Louvain, BELGIUM
P4.2 X-Ray, TEM and DSC Structure Study of Compatibilized Polystyrene/Polypropylene Blends
D. Hlavatá, Z. Horak, V. Fort, A. Sikora, Z. Tuzar, Institute of Macromolecular Chemistry, Academy of Sciences, Prague, CZECH REPUBLIC
P4.3 Reactive Compatibilization of Polyolefins Using Low Molecular Weight Polybutadiene
Z. Krulis, Z. Horak, F. Lednicky, Institute of Macromolecular Chemistry, Academy of Sciences, Prague, **M. Sufcak,** Kralupy, CZECH REPUBLIC
P4.4 Effect of Phase Compatibility on the Morphology and Mechanics of PP/EPR-Blends
K. Bernreitner, M. Gahleitner, C, Paulik, W. Neißl, PCD Polymere GmbH, Linz, AUSTRIA
P4.5 Compatabilising Effect of Novacuurate in PET/LCP Blends
H. Zhang, I.M. Ward, University of Leeds, UK
P4.6 Investigation of Impact-Resistant Blend Materials on Polycarbonate Base
S.S. Pesetskii, V.N. Koval, V.D. Fedorov, Metal-Polymer Research Institute, Academy of Sciences, Gomel, REPUBLIC OF BELARUS
P4.7 Epoxy/Bismaleimide Thermosetting Blends: Dynamic Mechanical Behavior and Moisture Absorption
M. Abbate, E. Martuscelli, P. Musto, G. Ragosta, P. Russo, G. Scarinzi, Institute of Research and Technology of Plastic Materials - CNR, Arco Felice-Napoli, ITALY
P4.8 Influence of the Processing Conditions on the Morphology of PPS/LCP Blends
M. Scuccuglia, R.E.S. Bretas, UFSCar, Sao Carlos, BRASIL
P4.9 Suspension Polymerization of N-Butyl Acrylate onto Poly-L-Lactic Acid: Synthesis and Structure-Properties Relationships
M. Avella, M.E. Errico, B. Immirzi, M. Malinconico, E. Martuscelli, Institute of Research and Technology of Plastic Materials - CNR, Arco Felice-Napoli, ITALY
P4.10 Oxygen Permeation through Films of Polypropylene/Polyamide 6 Blends
G. Testa, A. Seves, Stazione Sperimentale Cellulosa, Carta e Fibre Tessili Vegetali ed Artificiali, Milano, **C. Citterio, M. Di Pasquantonio, P.L. Beltrame,** Universita' di Milano, ITALY
P4.11 Cure of Epoxy Resin-Rubber Systems: Thermal and Rheological Analysis

C. Dispenza, A. Valenza, G. Spadaro, Università di Palermo, ITALY
P.T. McGrail, ICI Wilton Research Support Group, Middlesbbrough, UK
P4.12 Enhanced Mechanical Properties of PP/EPDM Blends through Compatibilization
B.C. Kim, S.S. Hwang, K.Y. Ihm, Korea Institute of Science and Technology, Seoul, KOREA
P4.13 Morphology and Fracture Toughness of PE/PP Blends
U. Niebergall, B. Schurmann, BAM, Berlin, GERMANY
P4.14 PMMA/PPTA and PEMA/PPTA Microcomposites
M. Monleón Pradas, J.J. Gómez Ribelles, G. Schaber, I. Casasempere, F. Romero Colomer, Universidad Politécnica, Valencia, SPAIN
P4.15 Thermodynamics of Polymer Blends:the Molecular Weight Influence
P. Casarino, E. Pedemonte, Università di Genova, ITALY
P4.16 Crystallization Behaviour, Rheological and Mechanical Properties of Poly(Aryl Ether Ether Ketone)/Poly(Ether Imide) Blends
M. Frigione, C. Naddeo, D. Acierno, Università di Salerno, ITALY
P4.17 Mineral Reinforcement of Polypropylene/LLDPE Blends
F.A. Rasoul, E. Kosior, F. Cser, V. Narasimhan, RMIT University, AUSTRALIA
P4.18 Morphology and Mechanical Properties of PP Ternary Blends
N. Holz, G. Goizueta, N. Capiati, PLAPIQUI (UNS-CONICET), Bahia Blanca, ARGENTINA
P4.19 Functionalization of LLDPE by Reactive Processing and its Blending with Starch
D. Vega, M. Failla, M. Villar, E. Valles, Planta Piloto de Ingenieria Quimica, Bahia Blanca, ARGENTINA
P4.20 Compatibilizers in Polymer Blends - Modified Poly(Ethylene) and Poly(Monitaconates)
D. Radic, V. Villar, A. Opazo, L. Gargallo, Pontificia Universidad Catolica de Chile, CHILE, J.M. Kenny, Università degli Studi di Perugia, Terni, ITALY
P4.21 R. Sirisuk, A. Sirivat, Chulalongkorn University, THAILAND.
A. Jamieson, Case Western Reserve University, Cleveland, OH, U.S.A.
P4.22 Effect of Physical Aging on Tensile Creep of Poly(Methyl Methacrylate) and Poly (Styrene-Acrylonitrile) Blends
R. Khongkhanoi, A. Sirivat, Chulalongkorn University, THAILAND.
A. Jamieson, Case Western Reserve University, Ohio, U.S.A..

5. FIBRES AND FILMS

P5.1 Effect of Dynamic Crystallization Conditions and Annealing on Structure of Polyethylene Hard Elastic Films
E. Yu. Rosova, E.A. Karpov, V.K. Lavrentiev, G.K. Elyashevich, Institute of Macromolecular Compounds, Russian Academy of Sciences, St. Petersburg, RUSSIA
P5.2 Modeling of Processing of Carbon Fibres
S.Pejanovic, D. Skala, V. Pavlovic, University of Belgrade, YUGOSLAVIA
P5.3 Effect of Temperature, Relative Humidity, Thickness and Orientation on Gas Permeability of Polyamide Films
T. Guarini, A. Saraceno, Sniaricerche, Pisticci Scalo-Matera, ITALY
P5.4 Cooling During Blown Film Coextrusion
W.A. Anufrijew, Institute "Ukrniplastmasz" Kiev, UKRAINE
J. Stasiek, Metalchem, Torun, POLAND
P5.5 The Effects of Processing Conditions on the Structure-Property Relationships in a Block Copolymer Polypropylene Film
K.Burr, R.J. Young, UMIST, Manchester, UK

6. EXTRUSION

P6.1 The Successful Extrusion of UHMW-PE by Single-Screw Extruder
H. Jimin, X. Ping, H. Yadong, Z. Fuhua, Beijing University of Chemical Technology, CHINA
P6.2 A New Equipment for Expanding Chemical Crosslinked Polyethylene Heat-Shrinkable Tubes
H. Xu, W. Daming, L. Wembao, L. Ying, Beijing University of Chemical Technology, CHINA
P6.3 Thermal Conductivity of PE-LD Extruded Conventionally and Autothermally
B. Kowalska, Technical University of Lublin, POLAND
P6.4 Expert System for Troubleshooting In Thermoforming
I.Catic, M. Sercer, M. Slavica, Faculty of Mechanical Engineering, University of Zagreb, CROATIA
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H. Ito, Tsuruoka National College of Technology, T. Takahashi, J. Takimoto, K. Koyama, Yamagata University, K. Tada, Plamedia Research Corporation, Tokyo, A. Miyamoto, Mitsui Toatsu Chemical Inc., Yokohama, I. Tsujimura, Kaneka Corporation, Osaka, JAPAN
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L. Bingjian, Z. Jingying, Beijing University of Chemical Tecnology, CHINA
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H. Yokoi, University of Tokyo, K. Okada, Teijin Ltd., W. Shiraishi, Fanuc Ltd., JAPAN
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I. Parsamyan, N.M. Smirnova, G. Kulichikhin, Russian Accademy of Sciences, Moscow, B.K. Streletz, Research and Design Institute of Chemical Fibers, S.-Petersburg, RUSSIA, V.F. Shumsky, I.P. Getmanchuk, Ukranian Academy of Sciences, Sh. Kiev, UKRAINE
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A. Vazquez, M.M. Reboredo , M. Ambrustolo, S.M. Moschiar, INTEMA (UNMDP-CONICET), Mar De Plata - ARGENTINA
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M. Sitepu, University of Sumatera Utara, Medan, INDONESIA
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M. Bordi, G.L. Gigli, S.E. Barbosa, J.Kenny, Institute of Chemical Technologies, University of Perugia, Italy

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E. Martuscelli, P. Musto, B. Pascucci, G. Ragosta, Institute of Research and Technology of Plastic Materials, Arco Felice-Naples, D. Martorana, L. Zeloni, Centro Ricerche ELASIS, Pomigliano d'Arco-Naples, ITALY
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E. Mlecnik, Vrije Universiteit Brussel, BELGIUM, F.P. La Mantia, Universita' di Palermo, ITALY
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F. Avalos, M.A. Lopez-Manchado, Universidad de Coahuila, MEXICO
M. Arroyo, Instituto de Ciencia y Tecnologia de Polimeros, Madrid, SPAIN
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G. Ferrara, P. Sgarzi, Montell Polyolefins - Centro Ricerche"G. Natta", Ferrara, ITALY
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N.M. Neves, , A.S. Pouzada, Universidade do Minho, PORTUGAL
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G. Qinggen,W. Jing, East China University of Science and Technology, Shanghai, CHINA
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L. **Incarnato,** Università di Salerno, **D. Poletti, L. Arrivabene,** B.C.S. Instruments, Milano, ITALY
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K.H. **Lee,** Inha University, Inchon, **B.S. Jln,** Dongduk Womens University, Seoul, KOREA
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C. **Manfredi, M.A. Del Nobile,** Institute for Composite Materials Technology, CNR, Naples, **G. Mensitieri,** University of Naples, ITALY
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A. **Valenza, S. Piccarolo,** Università di Palermo, ITALY
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S. **Piccarolo, A. Martorana,** Università di Palermo, ITALY
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G. **Hitchcock,** V. Brucato, **S. Piccarolo,** Università di Palermo, ITALY.
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G. **Marino, A. D'Amore, J. Mijovic,** University of Naples, ITALY
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M.**Casini-Cherici,** NETZSCH Geraetebau GmbH, GERMANY, **C.Urso,** NETZSCH Italiana S.r.l., ITALY

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J.**Pittman, I. Farah,** University of Wales Swansea,UK
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G. **Jinescu,** Polytehnica University Bucharest, ROMANIA
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V. **Speranza, G. Titomanlio,** Università di Salerno, ITALY
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A. **Brandolin, M. Failla,** L. Quinzani, **C. Sarmoria, M. Villar,** UNS-CONICET, Bahia Blanca, ARGENTINA

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