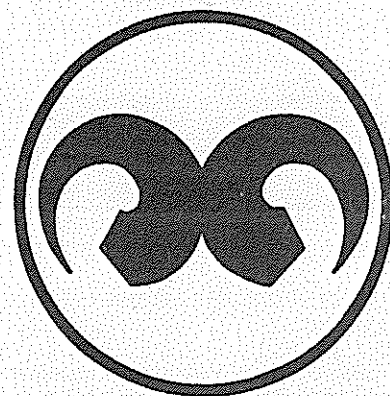


PPS-8

EIGHTH ANNUAL MEETING
NEW DELHI, INDIA
MARCH 24-27, 1992



abstracts

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Flow patterns above oscillating region of HDPE, microtome cut along
cylinder axis of HDPE solidified inside a capillary tube

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PREFACE

The concerted effort of the Symposia Organisers helped us in putting together an interesting programme for the Eighth Annual Meeting of the Polymer Processing Society (PPS-8). The technical programme has been divided into twelve symposia. Each symposium has one to three Keynote lectures and several oral as well as poster presentations. There is a total of 21 Keynotes lectures, 152 oral presentations and 48 posters. The extended abstracts of almost all the papers are presented in this Book of Abstracts. The abstracts have been arranged according to symposium numbers. The numbering system of the papers is according to the sequence of presentation during the conference. An author index has been included at the end. We would like to thank several of our colleagues at the National Chemical Laboratory, Pune and Indian Institute of Technology, Delhi who have made our task easier in compiling this volume.

We take this opportunity to thank all the authors for their contributions and for making PPS-8 a successful forum for interaction between scientists who would exchange research results and technical information related to various aspects of polymer processing.

Ashok Misra
Vikas M. Nadkarni
Technical Co-chairmen

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THE POLYMER PROCESSING SOCIETY

The Polymer Processing Society (PPS) was founded on March 28-29, 1985 in Akron, Ohio (USA). The audience of the Founding Meeting, more than 200 experts from all over the world, of both industrial companies and universities, enthusiastically approved the objectives of the new society.

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.

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. The benefits for members consist of obtaining the official PPS journal, *International Polymer Processing*, free of cost, and in the opportunity to attend the Annual Meetings for a reduced fee.

The annual meetings of PPS are held at locations in the three geographic regions, namely, America, Europe and Asia. Other PPS activities include the arrangement of regional and local meetings, publication of a journal, and sponsorship of educational seminars.

At present, the annual membership dues amount to US \$ 50. The payment may be sent to the following address for becoming a member:

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PPS-8 PROGRAMME AT A GLANCE

March 24 (Tues)	14:00	Convention Hall			
	15:30	Opening Ceremony			
March 25 (Wed)		Room I-A	Room I-C	Room III-A	Room III-B
	8:30	Symposium 6: 06-KN upto 06-08	Symposium 7: 07-KN1 upto 07-04 07-KN2 upto 07-08	Symposium 1: 01-KN upto 01-09	Symposium 3: 03-KN1 upto 03-03 03-KN2 upto 03-07
	12:10				
	13:30	Symposium 6: 06-09 upto 06-17	Symposium 7: 07-KN3 upto 07-16	Symposium 1: 01-10 upto 01-14	Symposium 3: 03-08 upto 03-14
	17:10				
	10:30	Room I-B			
	17:30	Posters: Symposia 1 to 6, P1-1 to P6-23			
March 26 (Thurs)		Room I-A	Room I-C	Room III-A	Room III-B
	8:30	Symposium 6: 06-KN2 upto 06-21	Symposium 7: 07-17 upto 07-19	Symposium 2: 02-KN upto 02-09	Symposium 8: 08-KN upto 08-08
	12:10	Symposium 5: 05-KN1 upto 05-04	Symposium 4: 04-KN1 upto 04-04		
	13:30	Symposium 5: 05-KN2 upto 05-08	Symposium 4: 04-KN2 upto 04-08	Symposium 2: 02-10 upto 02-14	Symposium 8: 08-09 upto 08-12
	15:10				
	15:30	Convention Hall			
	17:00	Special Session: Plastics: Shaping India's Future			
March 27 (Fri)		Room I-A	Room I-C	Room III-A	Room III-B
	8:30	Symposium 5: 05-KN3 upto 05-12	Symposium 4: 04-09 upto 04-12	Symposium 10: 10-KN1 upto 10-04 10-KN2 upto 10-08	Symposium 8: 08-13 upto 08-20
	12:10	Symposium 9: 09-KN upto 09-04	Symposium 12: 12-KN upto 12-04		
	13:30	Symposium 9: 09-05 upto 09-12	Symposium 12: 12-05 upto 12-12	Symposium 10: 10-KN3 upto 10-17	Symposium 11: 11-KN upto 11-08
	17:10				
	10:30	Room I-B			
	17:30	Posters: Symposia 7 to 12 P7-24 to P12-48			

Notes: (a) The presentation numbers differ from the paper numbers in second circular
(b) Time for key-note lecture is 40 mins and for other papers it is 20 mins.

WEDNESDAY, MARCH 25, 1992

MORNING SESSION

	ROOM I-A	ROOM I-C
	6.1 STRUCTURE DEVELOPMENT IN PROCESSING	7.1 POLYMER BLENDS AND ALLOYS
8:30	06-KN1 On the Route Towards X-D Fibres <i>P.J. Lemstra</i> , Y.T. Engelen, Eindhoven Univ. of Technology, The Netherlands	07-KN1 Structure and Properties of Polymer Blends with Dual Phase Continuity <i>J. Lyngaae-Jorgenson</i> , Technical Univ. of Denmark, Denmark
9:10	06-02 DSC and IR Spectroscopy Investigations of Polypropylene Fibres <i>E. Andreassen</i> , O. H��nde, Senter for Industri-forskning, Norway; M.D. Braathen, K. Grostad, O.J. Myhre, Statoil, Norway	07-02 Rheology and Scaling Analysis Near Phase Separation in a Polymer Blend (PS/PVME) <i>A. Ajji</i> , Univ. of Laval, Canada
9:30	06-03 Crazing and Necking in Isotactic Polypropylene <i>G. Fischer</i> , P. Eyerer, Stuttgart Univ., Germany	07-03 Rheological Behaviour of PP/PA Polymer Blends <i>Chr. Friedrich</i> , Universit��t Freiburg, Germany
9:50	06-04 Structure and Properties of Nucleated Random and Block Copolymers of Polypropylene <i>T. Sterzynski</i> , M. Lambla, H. Crozier, Univ. Louis Pasteur, France; M. Thomas, Neste Chemicals Int., Belgium	07-04 Properties of Blends of Polyamide-6 with Different Gamma Irradiation Modified Polyethylenes <i>A. Valenza</i> , E. Calderaro, G. Spadaro, Univ. di Palermo, Italy; D. Acierno, Univ. di Salerno, Italy
10:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
	6.2 STRUCTURE DEVELOPMENT IN PROCESSING	7.2 POLYMER BLENDS AND ALLOYS
10:30	06-05 Development of Transcrystallinity in Polymers: Theoretical and Experimental Aspects <i>N. Billon</i> , C. Magnet, J.M. Haudin, Ecole Nationale Sup��rieure des Mines de Paris, France	07-KN2 Development of Polymer Blend Morphology During Processing <i>L.A. Utracki</i> , Z. -H. Shi, National Research Council Canada, Canada
10:50	06-06 The Effect of Heat Curing on the Crystallization Kinetics of Polyphenylene Sulfide <i>S.K. Han</i> , J.Y. Jeon, I.H. Cha, K.Y. Lee, Y.S. Jo, Sunkyoung Industries, Republic of Korea	
11:10	06-07 Nonisothermal Crystallization Kinetics of Polyamide-6 <i>V. Brucato</i> , S. Piccarolo, Univ. di Palermo, Italy; G. Titomanlio, Univ. di Salerno Fisciano, Italy	07-06 Morphology and Phase Behaviour of Polymer Blends Based on Functionalized Polyolefins <i>M. Pracella</i> , P.L. Magagnini, M. Aglietto, Univ. of Pisa, Italy
11:30	06-08 Some Studies on the Crystallization and Melting Behaviour of Nylon 66 <i>C. Ramesh</i> , A. Keller, Univ. of Bristol, UK	07-07 Experimental Examination of Morphology Development During Blending in a Twin-screw Extruder <i>Z. -H. Shi</i> , P. Sammut, L.A. Utracki, National Res. Council, Canada; V. Bordereau, Rhone-Poulenc, France
11:50		07-08 Processing of Intractable Polymers Using Reactive Diluents <i>R.W. Venderbosch</i> , H.H. Linssen, M.C.M. van der Sanden, J. Bussink, H.E.H. Meijer, P.J. Lemstra, Eindhoven Univ. of Technology, The Netherlands
12:10	LUNCH, CONVENTION HALL LOUNGE, FIRST FLOOR	

WEDNESDAY, MARCH 25, 1992

MORNING SESSION

	ROOM III-A	ROOM III-B
	1.1 POLYMERIZATION & REACTIVE PROCESSING	3.1 MOLDING TECHNOLOGIES
8:30	01-KN New Results in Free Radical Grafting of Polyolefins in the Melt <i>M. Lamba</i> , Ecole d' Application des Hauts Polymers, France; <i>J.J. Flaf</i> , ATOCHEM (LEM), France	03-KN1 Recent Developments in Injection & Blow Molding Simulation <i>M.R. Kamal</i> , McGill Univ., Canada
9:10	01-02 Comparison of Grafting Dynamics in Melt Reaction Systems and a Model System <i>J.B. Felmine</i> , <i>K.E. Oliphant</i> , <i>K.E. Russell</i> , <i>W.E. Baker</i> , Queen's Univ., Canada	03-02 Glass-Inserted Visual Mold as a Practical Experimental Tool for the Analysis of Injection Molding Phenomena <i>H. Yokoi</i> , <i>Y. Murata</i> , Univ. of Tokyo, Japan
9:30	01-03 Dynamic Crosslinking of EP-Rubber with Organosilanes <i>R. Anderlik</i> , <i>H.G. Fritz</i> , Univ. of Stuttgart, Germany	03-03 Melt Temperature Development In Injection Molding <i>N. Dontula</i> , <i>G.A. Campbell</i> , Clarkson Univ., USA
9:50	01-04 Some Industrial Applications of Reactive Extruded Products <i>A.M. Adur</i> , B P Chemicals, USA	
10:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
	1.2 POLYMERIZATION & REACTIVE PROCESSING	3.2 MOLDING TECHNOLOGIES
10:30	01-05 Mass Transfer In Stagnant Polymeric Films at Reduced Pressures <i>T.M.X. Polzat</i> , <i>C.D. Denson</i> , Univ. of Delaware, USA	03-KN2 Extrusion Die Design Determines the Product Quality in Extrusion Blow Moulding Technology <i>H.G. Fritz</i> , <i>S. Fang</i> , Univ., of Stuttgart, Germany
10:50	01-06 Modelling of the Solid-state Polymerization of Nylon 6 <i>A. Kaushik</i> , <i>S.K. Gupta</i> , Indian Institute of Tech., Kanpur, India	
11:10	01-07 Enhancement of Polymerization Rates for Rigid Rodlike Molecules by Shearing <i>U.S. Agarwal</i> , <i>D.V. Khakhar</i> , Indian Institute of Tech., Bombay, India	03-05 Simulation of the Plasticating Process by Injection Moulding & Comparison with Experimental Values <i>H. Potente</i> , <i>H. Schulte</i> , <i>N. Effen</i> , Univ. of Paderborn, Germany
11:30	01-08 Processing Characteristics of Multifunctional Acrylates: Network Formation Studies by DSC <i>A.K. Banthia</i> , <i>A. Thakur</i> , Indian Institute of Tech., Kharagpur, India	03-06 Reactive Multi-component Transfer Molding <i>G.W.M. Peters</i> , Eindhoven Univ. of Tech., The Netherlands; <i>P. Schoone</i> , Philips CF, The Netherlands
11:50	01-09 Phase Separation and Shrinkage During Reactive Processing of Epoxy Resin <i>S.C. Kim</i> , KAIST, Korea	03-07 Multilayer Injection Moulding: Particle Tracking <i>W.F. Zoetelief</i> , <i>G.W.M. Peters</i> , Eindhoven Univ. of Technology, The Netherlands
12:10	LUNCH, CONVENTION HALL LOUNGE, FIRST FLOOR	

WEDNESDAY, MARCH 25, 1992

AFTERNOON SESSION

	ROOM I-A	ROOM I-C
	6.3 STRUCTURE DEVELOPMENT IN PROCESSING	7.3 POLYMER BLENDS AND ALLOYS
13:30	06-09 Development of Phase Morphology during Blending in Twin Screw Extruders S. Lim, J.L. White, Univ. of Akron, USA	07-KN3 Hydrogen Bonding Interaction Between Polymer-Polymer Blends Xi Xu, Chengdu Univ. of Science & Technology, China
13:50	06-10 Stability Analysis of Lamellar Structures Encountered in Morphology Developments of Blends A.K. Ghosh, Indian Institute of Tech., Delhi, India; J.T. Lindt, Univ. of Pittsburgh, USA	
14:10	06-11 Structure-development During Processing of Multiphase Polymers A.J. Ryan, University of Manchester, UMIST, UK	07-10 Enhanced Miscibility of Polymer Blends by Chemical Modification of their Constituents F. Sanchez, E. Sanchez, J. Cardoso, O. Manero, Instituto de Investigaciones en Materiales, Mexico
14:30	06-12 Structure Development in Melt-mixing of Poly (tetrafluoroethylene-co-propylene) with Poly (ethylene-co-tetrafluoroethylene) I. Seki, M. Nakahashi, H. Yagyu, Hitachi Cable Ltd., T. Inoue, Tokyo Inst. of Technology, Japan	07-11 Studies on Compatibility and Impact Modification of PVC by EPDM C. Brahatheeswaran, A.P. Das, J.S. Anand, Cental Inst. of Plastics Engg. and Tech., India
14:50	06-13 Hydrostatic Extrusion of UHMWPE Rods Heat-treated Under High Pressure K. Nakayama, A. Kaito, Research Inst. for Polymers and Textiles, Japan	07-12 Effect of Ethylene-propylene Copolymer Molecular Parameters on Fluidity and Paintability of PP/EPR Blends F. Milani, Enichem Polimeri-Research Centre, Italy
15:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
	6.4 STRUCTURE DEVELOPMENT IN PROCESSING	7.4 POLYMER BLENDS AND ALLOYS
15:30	06-14 Ultra-drawing of Polytetrafluoroethylene (PTFE) Reactor Powder H. Okuyama, T. Kanamoto, Science Univ. of Tokyo, Japan; R.S. Porter, Univ. of Massachusetts, USA	07-13 Interfacial Crosslinking in Immiscible Plastic-rubber Blends, Based on Polyacrylic Acid and Polychloroprene P. Ramesh, S.K. De, Indian Institute of Tech., Kharagpur, India
15:50	06-15 Structure Development in Fluoropolymer Composites Processed by Powder Metallurgical Technique S. Radhakrishnan, National Chemical Laboratory, India; R. Joseph, National Aeronautical Laboratory, India	07-14 Structure and Mechanical Properties of Polyurethane Blends T. Takigawa, M. Oodate, T. Masuda, Kyoto Univ., Japan
16:10	06-16 Role of Heat Transfer During Crystallization of Semicrystalline Polymers M. Erhun, S.G. Advani, Univ. of Delaware, USA	07-15 Investigation on Multiphase Polymeric Systems of Poly (vinyl Chloride)/Ethylene-Propylene-Diene Rubber-gp-(styrene-co-acrylonitrile) Blends K. Sudhakar, R.P. Singh, Indian Institute of Tech., Kharagpur, India
16:50	Shear Effect on Polypropylene Crystallization: Morphological and Kinetic Features A. Larsen, S.I., Norway B. Monasse, Ecole des Mines de Paris, France	07-16 Nylon-6/Acrylic Elastomers Toughened Alloys: Alloying Through Reactive Compatibilization Y.P. Singh, D.P. Shah, B.V. Ankleshwaria, M.H. Mehta Gujrat State Fertilizer Corp., India

WEDNESDAY, MARCH 25, 1992

AFTERNOON SESSION

	ROOM III-A	ROOM III-B
	1.3 POLYMERIZATION & REACTIVE PROCESSING	3.3 MOLDING TECHNOLOGIES
13:30	01-10 Structure Development in Dynamic Vulcanization of Two-Phase Polymer Blends A. Nakayama, Y. Kikuchi, T. Inoue, Tokyo Inst. of Tech., Japan; M. Okamoto, Toyobo Co., Japan	03-08 Numerical Simulation of Thermal Stresses in Moulded Parts F. Boitout, M. Vincent, J.F. Agassant, Centre de Mise en Forme des Matériaux, CNRS, France
13:50	01-11 Reactive Blending of Polyamide 6 and Polycarbonate: Effects of Polyamide 6 Terminal Groups A. Valenza, F.P. La Mantia, Univ. di Palermo, Italy; E. Gattiglia, A. Turturo, CNR Inst., Italy	03-09 Simulation of Warpage Caused by Thermal and Geometric Asymmetries in Injection Molded Articles J.X. Rietveld, S.J. Liu, Univ. of Wisconsin-Madison, USA
14:10	01-12 Ozone Peptization of Butyl Rubber in a Twinscrew Extruder D. Padliya, Polysar Rubber Corp., Canada	03-10 Numerical Simulation of the Physical Aging of Injection Molded Products L.W. Caspers, G.G.J. Schennink, Eindhoven Univ. of Technology, The Netherlands
14:30	01-13 Processing, Morphology and Properties of a Novel Matrix for Structural Reaction Injection Moulding, SRIM A.J. Ryan, J.L. Stanford, X.Q. Tao, University of Manchester and UMIST., UK	03-11 Properties of Elongational Flow Injection—Molded Polyethylene: Influence of the Processing Parameters and Molecular Weight E. Lopez Cabarcos, Univ. of Complutense, Spain; F.J. Balta Calleja, Inst. de Estructura de la Materia, Spain R.K. Bayer, H.G. Zachmann, Inst. Tech. Makromol. Chemie, Germany
14:50	01-14 Oxidation and Crosslinking in Polyethylene Processing C. Andrei, Petrobrazi S.A., Romania	
15:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
		3.4 MOLDING TECHNOLOGIES
15:30		03-12 Comparison Between Experiment and Simulation for the Gas-Assisted Injection Molding Process H. Potente, M. Hansen, Univ. of Paderborn, Germany
15:50		03-13 Numerical Simulation of Gas-Assisted Injection Molding Filling L.S. Tung, AC Technology, USA K.K. Wang, Cornell Univ., USA
16:10		03-14 Taking Partly Solidification in Flow and Heat Transfer Calculation of Injection Molding Filling Process K. Zhou, H. Chen, Beijing Inst. of Chem. Tech., China

POSTER PRESENTATIONS, ROOM I-B, MAIN CONVENTION HALL, FIRST FLOOR

WEDNESDAY MARCH 25

- P1-01 Diffusion-limited polymerization of rigid rod-like molecules in solutions
U.S. Agarwal, D.V. Khakhar, Indian Institute of Technology Bombay, India
- P1-02 Effect of impurities in ϵ -caprolactum on potassium permanganate number and on polymerization rate
T. Manabe, R. Kumar, R. Jalan, Modipon Ltd., India
- P1-03 Influence of aromatic and aliphatic domains on the properties of polyesters
B. Sundaram, A.V. Pradhan, Univ. of Bombay, India
- P1-04 Gel formation kinetics in polyurethane acrylate cured by UV radiation
Ge Jiaxin, Wang Mingjun, Shanghai Jiao Tong Univ., China
- P1-05 Structure-property relationship in interconnected in-situ sequential IPNs of polyurethanes and polystyrene
S.B. Pandit, V.M. Nadkarni, National Chemical Laboratory, India
- P2-06 Capillary rheometric characterization, blending and moulding of polymer
A. Göttfert, K.H. Moos, V. Schulze, Göttfert Werkstoff-Prüfmaschinen GmbH, Germany
- P2-07 Laser-Doppler anemometry & flow birefringence in polymer melt rheology
R. Subramanian, J.J.C. Picot, Univ. of New Brunswick, Canada
- P2-08 A new molecular theory of viscoelasticity with shear yielding and thinning for particle-filled polymer liquid & solutions
M.S. Song, Beijing Institute of Chemical Technology, China
- P2-09 A conformation tensor rheological model for fibre-filled thermoplastics
T. Ghosh, M. Grmela, P. Carreau, Ecole Polytechnique de Montreal, Canada
- P2-10 Approximate method of molecular weight determination for HDPE from polyethylene composites produced in polymerization
V.A. Optov, G.P. Belov, Institute of Chemical Physics, Russia
- P2-11 An analysis of the rheological behaviour of neoprene and acrylic rubbers
Nalini R. Kumar Indian Institute of Technology (Kharagpur), India
- P2-12 Melt rheological behaviour of short sisal fibre reinforced polyethylene composites
K. Joseph, Sabu Thomas, Mahatma Gandhi University
C. Pavithran, Regional Research Lab. (Trivandrum), India
- P2-13 Rheological behaviour of surface treated mica-epoxy resin suspensions
R. Anand Kumar, N.K. Jha, Pushpa Bajaj, Indian Institute of Technology Delhi, India
- P3-14 Development of a three-dimensional visual mold
H. Yokoi, Y. Murata, Univ. of Tokyo; H. Watanabe, Munekata Co. Ltd; Y. Utaka, Sumitomo Heavy Industries Ltd; H. Umeyama, Toppan Printing Co. Ltd., Japan
- P4-15 Blending of elastomers 2: Influence of compatibilizing agents on flow visualization studies of an internal mixer
D.K. Setua, DMSRDE, India;
J.L. White, Univ. of Akron, USA

- P4-16 Study of dispersive mixing of PP/EVA blend in die zone of an extruder
A.K. Ghosh, S. Rajesh, A.K. Gupta, Indian Institute of Technology Delhi, India
- P4-17 A model for fibre length degradation during extrusion of fibre-reinforced thermoplastics
R.K. Mittal, V.B. Gupta, Indian Institute of Technology Delhi, India
- P4-18 The analysis of flow field in counter-rotating non-intermeshing (matched) wave twin-screw extruder
X. Geng, W. Fang, Beijing Institute of Chemical Technology, China
- P5-19 A study on structure and properties of polyester filaments drawn with a long heating tube
Z. Melfang, C. Yanmo, Z. Yu, Z. Ji., China Textile Univ., China
- P5-20 Network structure of poly (ethylene terephthalate) fibres melt spun at different speeds and non-birefringent flow-drawn films
J. Radhakrishnan, V.B. Gupta, Indian Institute of Technology Delhi, India
- P5-21 Study on neck-drawing of ultra-high molecular weight polyethylene (UHMWPE) gel fibres
Y. Nianci, G. Bai, Z. Yi, Z. Pinwen, China Textile Univ., China
- P6-22 Determining dynamic mechanical properties of polymers using Fourier transform mechanical analysis
S.N. Ganeriwala, Philip Morris, U.S.A.
- P6-23 Thermal analysis of reaction injection molded segmented polyamides
P.D. Coates, I. Dawood, A.F. Johnson, S.D. Long, P. Patrick, S.W. Tsui, N. Tucker, S.S. Wong, Univ. of Bradford, U.K.

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MORNING SESSION

	ROOM I-A	ROOM I-C
	6.5 STRUCTURE DEVELOPMENT IN PROCESSING	7.5 POLYMER BLENDS AND ALLOYS
8:30	06-KN2 Processing-structure, Properties Relations in Blends with Thermotropic liquid Crystalline Polymers <i>D. Acierno, Univ. di Salerno, Italy</i>	07-17 Deformation and Toughness of Polymeric Systems <i>M.C.M. van der Sanden, R.G.M. Schulkes, R.W. Venderbosch, H.E.H. Meijer, P.J. Lemstra, Eindhoven Univ. of Tech., The Netherlands</i>
8:50		07-18 Viscoelastic Properties of Partially Miscible Blends of Poly (Ether-Ether-Ketone) and Polyethersulfone <i>T.M. Malik, ABF Goodrich Co., USA</i>
9:10	06-19 On the Fine Structure of Shish-Kebabs in Injection Moulded Polyethylene <i>J.M. Salazar, Instituto de Estructura de la Materia, Spain; J. Peterman, Technische Univ. Hamburg, Germany</i>	07-19 Effect of Glass Fibre on the Dynamic Mechanical and Thermal Properties of Composites Based on PBT/ Polyolefin Blends <i>M. Joshi, S.N. Maiti, A. Misra, Indian Institute of Tech., Delhi, India</i>
9:30	06-20 Melt Flow-Induced Anisotropy in Amorphous Polymers <i>C. Courmier, PSA, France; J. Ladeveza, R. Muller, J.J. Pesce, EAHP, France</i>	
9:50	06-21 A New Model for Glass Transition Phenomenon <i>S.N. Ganeriwala Philip Morris Research Centre, USA</i>	
10:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
	5.1 FIBRES AND FILMS	4.1 EXTRUSION, MIXING AND COMPOUNDING
10:30	05-KN1 Double Bubble Tubular Film Extrusion <i>J.L. White Univ. of Akron, USA</i>	04-KN1 Development of Phase Morphology in Heterogeneous Blends during Compounding in Single-and Twin-Screw Extruders <i>L.A. Goettler, Monsanto Chemical Company, USA</i>
11:10	05-02 Biaxially Oriented Polypropylene Foam Film: Main Properties <i>J. Raukola, H. Kontiainen, A. Savolainen Tampere Univ. of Technology, Finland</i>	04-02 Blending of Elastomers 1: Flow Visulization and Phase Morphology in Blending Binary and Ternary Systems in an Internal Mixer <i>D.K. Setua, Defence Materials and Stores Rs. & Div. Estt., India; J.L. White, Univ. of Akron, USA</i>
11:30	05-03 Effect of Processing Temperature on the Barrier Properties of Blown Films from HDPE-PP Blends <i>R. Rangaprasad, D.D. Kale, Univ. of Bombay, India</i>	04-03 Mixing of Immiscible Liquids <i>J.M.H. Janssen, G.W.M. Peters, H.E.H. Meijer Eindhoven Univ. of Tech., The Netherlands</i>
11:50	05-04 Polymer Blend Filaments of Nylon 6 and Nylon 66 <i>K.N. Bhaumik, B.L. Deopura, V. K. Srivastava, Indian Institute of Tech., Delhi, India</i>	04-04 Extrusion of a Rubber Compound through a Profile die: 3-D Simulation and Experiments <i>S. d'Halewyn, J.F. Agassant, B. Vergnes, Ecole des Mines de Paris, France; M.F. Boube, Hutchinson, France</i>
12:10	LUNCH, CONVENTION HALL LOUNGE, FIRST FLOOR	

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	ROOM III-A	ROOM III-B
	2.1 RHEOLOGY & RHEOMETRY	8.1 POLYMER COMPOSITES
8:30	02-KN Extrusion of Rigid PVC Profiles: Rheology and Die Design <i>P.J. Carreau, P.G. Lafleur, M.A. Huneault, Ecole Polytechnique de Montreal, Canada; V.P. Gupta, Synergistics Industries Ltd., Canada</i>	08-KN Fabrication of Three Dimensional Fabric Composites and their Mechanical Properties <i>T. Kitano, Research Institute for Polymers & Textiles, MITI, Japan</i>
9:10	02-02 Flow of Viscoplastic Materials through Extrusion Dies <i>E. Mitsoulis, S.S. Abdali, Univ. of Ottawa, Canada; N.C. Markatos, National Tech. Univ. of Athens, Greece</i>	08-02 A Knitted Reinforcement and its Applications <i>J. Sarlin, M. Epstein, M. Karttune, S. Nurmi, Technical Research Centre of Finland, Finland</i>
9:30	02-03 Flow Characteristics of Epoxy Compounds for Low Pressure Transfer Molding <i>J. Saeki, Hitachi Ltd., Japan</i>	08-03 Fibre Glass Fabric Reinforced FRP Honeycomb Sandwich Structures: Processing Characterization <i>S.N. Paul, D.D. Srivastava, R.K. Gupta, M.N. Saraf, Defence Materials & Stores Res. & Dev. Estt., India</i>
9:50	02-04 Melt Rheology as a Powerful Tool to Study Crosslinking of Ethylene Vinyl Acetate and Ethylene Methyl Acrylate Copolymers through Ester Group Exchange <i>J. Bonetti, M.F. Llauro, R. Petiaud, M. Bert, Ph. Cassagnau, A. Michel, CNRS Laboratoire des Matériaux Organiques, France</i>	08-04 The Product Quality and Formability of Fibre Reinforced Thermoplastic Sheets <i>D. Bhattacharya, C.R. Burt, T.A. Martin, Univ. of Auckland, New Zealand</i>
10:10	TEA/COFFEE BREAK, CONVENTIONAL HALL LOUNGE, FIRST FLOOR	
	2.2 RHEOLOGY & RHEOMETRY	8.2 POLYMER COMPOSITES
10:30	02-05 Dynamic Mechanical Spectrometry of Polymer Melts: Relations with Molecular Structure & Transient Rheometry <i>H.C. Booij, J.H.M. Palmen, DSM Research, The Netherlands</i>	08-05 Visualization of Strain Fields in Angle-Ply Graphite-PEEK Specimens during Loading <i>F. Bertolino, F. Ginesu, P. Priolo, Cagliari Univ. Italy</i>
10:50	02-06 Determination of Discrete Relaxation Spectra from Dynamic Experiments <i>C. Carrot, J. Guillet, J.P. Piaux, P. Revenu, Univ. of Jean Monnet, France</i>	08-06 Effect of Processing Parameters on the Mechanical Properties of Short Kevlar Fibre Thermoplastic Polyurethane Composites <i>S.K.N. Kuffy, G.B. Nando, Indian Institute of Technology, Kharagpur, India</i>
11:10	02-07 Dynamic Behavior of Heterogeneous Agglomerates at Supercritical Stresses <i>S.W. Horwath, I. Manas-Zloczower, D.L. Foke, Case Western Reserve Univ., USA</i>	08-07 Continuous Thermoplastic Glass Fibre Reinforced Prepreg by Melt Impregnation <i>P. Pelttonen, K. Lähteen Korva, P.K. Järvelä, P. Tormala, Tampere Univ. of Technology, Finland</i>
11:30	02-08 Internal Stress Measurement of Polymers Using a Modified Strain Transient Dip Test-towards Better Understanding of the Viscoelastic Nature of Polymers <i>S.H. Teoh, A. N. Poo, G.B. Ong, National Univ. of Singapore, Singapore</i>	08-08 Matrix Additives and Processing Conditions Influence on the Morphology and Mechanical Properties of PET/glass Fibre Composites <i>C. Gauthier, J. Chauchard, B. Chabert, J.P. Trotignon, V. Lamblin, A. Boudet, Université «Claude Bernard», France</i>
11:50	02-09 A New Shear Elongational Viscometer <i>J. Gama, E. Geffroy, F. Nunez, R. Zenit, A. Von-Ziegler, B. Mena, National Univ. of Mexico, Mexico</i>	
12:10	LUNCH, CONVENTION HALL LOUNGE, FIRST FLOOR	

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	ROOM I-A	ROOM I-C
	5.2 FIBRES AND FILMS	4.2 EXTRUSION MIXING AND COMPOUNDING
13:30	05-KN2 Crystallization and Shrinkage Characteristics of Axially-Oriented PET Fibres & Films <i>V.B. Gupta</i> , Indian Institute of Tech., Delhi, India	04-KN2 Modelling of Flow in Co-rotating Twin-Screw Extruders: Application to Mixing Operations <i>B. Vergnes, J.F. Agassant</i> Ecole des Mines de Paris, France
14:10	05-06 Preparation of High Modulus Fibres from ultra-high Molecular Weight Poly (Ethylene Terephthalate) <i>M. Ito, Y. Wakayama, T. Kanamoto</i> , Science Univ. of Tokyo, Japan	04-06 Basis of the Design of Tightly Intermeshing Co-rotating Twin-Screw Extruders (ZSK) <i>H. Potente, J. Ansahl</i> Univ. of Paderborn, Germany
14:30	05-07 The Structure and Property of PET/PEG/ PET-PEG Blend Fibre in Drawing <i>L. Gu, X. Zhen, J. Dong</i> , China Textile Univ., China	04-07 The Investigation on the Melt Pumping Mechanism of Counter-Rotating Intermeshing Twin Screw Extruders <i>X. Geng, R. Sang</i> , Beijing Institute of Chemical Technology, China
14:50	05-08 Effect of Heating Tube in Spinning and its Subsequent Influence on the Structure and Properties of Drawn PEEK Fibers <i>A.K. Mukhopadhyay, Y. Ohkoshi, A. Konda</i> , Shinshu Univ., Japan	04-08 A Model for Single-Screw Plasticating Extrusion <i>K. Wilczynski</i> , Warsaw Univ. of Tech., Poland
15:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
15:30 to 17:00	Special Session by Indian Plastic Industry "PLASTICS: SHAPING INDIA'S FUTURE" <i>Speakers</i> Dr. N.M. Dhuldhoya, Polyolefin Industries Ltd., India "Polymers Adding a 4th Dimension to Our Future". Mr. Hasnukh Shah, Indian Petrochemicals Corp. Ltd. (title to be announced)	

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AFTERNOON SESSION

	ROOM III-A	ROOM III-B
	2.3 RHEOLOGY & RHEOMETRY	8.3 POLYMER COMPOSITES
13:30	02-10 Flow of Non-Newtonian Fluids through Porous Media <i>R.P. Chhabra</i> , Indian Institute of Tech., Kanpur, India	08-09 Processing of Highly Reinforced Composites <i>R.K. Upadhyay</i> , General Electric, USA
13:50	02-11 An Experimental/Numerical Study of Viscoelastic Flow in Fibrous Beds <i>K.K. Talwar</i> , B. Khomami, Washington Univ., USA	08-10 Experimental and Analytical Techniques for the Evaluation of Residual Stresses in Composite Laminates due to Autoclave or Press Curing Processes <i>V. Giavotto</i> , C. Caprile, G. Sala, Politecnico di Milano, Italy
14:10	02-12 Constitutive Equation for Elongational Flow of Polymer Melts <i>A.K. Babel</i> , B. Cao, G.A. Campbell, Clarkson Univ., USA	08-11 Effect of Reactive Diluents on Physical & Mechanical Properties of Tetra Functional Epoxy Composites <i>Siddaramaiah</i> , K.S. Jagadeesh, S J College of Engineering, India
14:30	02-13 Non-Linear Strain Measures for Extensional and Shearing Flows of Polymer Melts <i>J. Schaeffer</i> , M. H. Wagner, Univ. of Stuttgart, Germany	08-12 The Effect of the Temperature on the Strength of Composite Pin Loaded Joints <i>C. Scarponi</i> , A. Mannini, Univ. of Rome, Italy
14:50	02-14 Non-Linear Shear and Elongational Properties of PMMA/Latex Polymer Blends <i>G. Marin</i> , T. Andriatsarafa, Univ. de Pau et des Pays de l' Adour, France	
15:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
15:30 to 17:00	Special Session by Indian Plastic Industry "PLASTICS: SHAPING INDIA'S FUTURE" <i>Speakers</i> Dr. N.M. Dhuldhoya, Polyolefin Industries Ltd., India "Polymers Adding a 4th Dimension to Our Future". Mr. Hasmukh Shah, Indian Petrochemicals Corp. Ltd. (title to be announced)	

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MORNING SESSION

	ROOM III-A	ROOM III-B
	10.1 NEW EMERGING TECHNOLOGIES	8.4 POLYMER COMPOSITES
8:30	10-KN1 Engineering and Design of Biodegradable Polymers for Environmental Compatibility <i>Ramani Narayan, Michigan State Univ., USA</i>	08-13 Modeling and Simulation of the Thermomechanical Behavior of Fibre Reinforced Composite Parts <i>S.C. Tseng, T.A. Osswald, Univ. of Wisconsin-Madison, USA</i>
8:50		08-14 Modelling Elastic Constants and Thermal Expansion of Short Fiber Composites <i>P. Schwarz, G. Fischer, C. Ludwig, P. Eyerer, Stuttgart Univ., Germany</i>
9:10	10-02 Polymerization of Olefins in the Presence of Starch or Cellulose <i>W. Kaminsky, H. Madler, H. Zielonka, Univ. of Hamburg, Germany</i>	08-15 Dynamic Impact Response of Sandwich Composite Panels <i>F. Serrania-Soto, Univ. of Mexico, Mexico</i> <i>P.E. Reed, Univ. of London, UK</i>
9:30	10-03 Prospects of Microbially Produced Poly (hydroxyalkanoates) <i>G.J.M de Koning, P.J. Lemstra, Eindhoven Univ. of Technology, The Netherlands</i>	08-16 Micromechanical Interpretation of the Work of Rupture of Short In a Tensile Test <i>M. Goel, Dept. of Science & Technology, India</i> <i>V.B. Gupta, R.K. Mittal, Indian Institute of Tech., Delhi, India</i>
9:50	10-04 Environmental Degradation of Polymers—a Chemist's view <i>G.L. Loomis, Warner Lambert Co., USA</i>	
10:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
	10.2 NEW EMERGING TECHNOLOGIES	8.5 POLYMER COMPOSITES
10:30	10-KN2 New and Unconventional Methods for Recycling Mixed Plastics Scrap <i>G. Menges, R. Fisher, V. Lackner, Institute für Kunststoffverarbeitung Aachen, Germany</i>	08-17 Modified Asbestos Fibers/HDPE Composites for Improved Mechanical Properties <i>A. Ait-Kadi, Q. Wang, S. Kaliaguine, Laval Univ. Canada</i>
10:50		08-18 Stampable Poised for Growth <i>S. Sundaram, CEAT Ltd., India</i>
11:10	10-06 Microcellular Plastics <i>Vipin Kumar, Univ. of Washington, USA</i>	08-19 Studies on Processibility of Different Epoxy hardener Systems for Fabrication of Composite Structures <i>J. Lahiri, K. Balakrishna, G. Farida, Univ. of Anantpur, DRDL, India</i>
11:30	10-07 Solid State Processing of UHMWPE by the CONFORM Process <i>J.J. Breukers, H.A.A.H. Bontjes, DSM Research, The Netherlands</i>	08-20 Heat Resistant Graphite Composites from a New Generation Cyclotriphosphazene based Thermoplastics <i>Devendra Kumar, Univ. of Delhi</i>
11:50	10-08 Processing and Properties of UHMW-PE <i>S. Paschalis, Polyolefins Industries Ltd, India</i>	08-21 Effect of Processing Parameters on the Mechanical Properties of Short Kevlar Fibre Thermoplastic Polyurethane composites <i>S.N.N. Kutty and G.B. Nanda, Indian Institute of Technology Kharagpur, India</i>
12:10	LUNCH, CONVENTION HALL LOUNGE, FIRST FLOOR	

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	ROOM I-A	ROOM I-C
	9.2 LIQUID CRYSTALLINE AND OTHER SPECIALITY POLYMERS	12.2 CAD/CAM MODELLING OF PROCESSING OPERATIONS
13:30	09-05 Thermotropic Co-Polyesters: Crystallization Kinetics N.N. Chavan, J. Mathew, R.S. Ghadage, A.K. Rath, S. Ponrathnam, National Chemical Laboratory, India	12-05 Computer Simulation of Mechanical Power Consumption in Melling Zone of Single Screw Extruder H. Han-xiong, P. Yu-cheng, South China Univ. of Technology, China
13:50	09-06 Thermal, Mechanical and Rheological Properties of Poly (phenylene sulfide)/Vectra-B Blends P.L. Magagnoli, S.De. Petris, M. Paci, M. Pracella, CNR, Italy L. Minkova, Bulgarian Academy of Sciences, Bulgaria A. Valenza, F.P. La Mantia, Univ. di Palermo, Italy	12-06 A Computer Model for the Simulation of Conventional and Barrier Screws P.G. Lafleur, K. Amellal, Ecole Polytechnique de Montreal, Canada
14:10	09-07 Laminates from LCP/Thermoplastic Blends S. Akhtar, National Chemical Laboratory, India A.I. Isayev, Univ. of Akron, USA	12-07 Thermo-Mechanical Model of Solid State Extrusion of Polyethylene B. Monasse, J.M. Haudin, Ecole des Mines de Paris, France J. Vlachopoulos, McMaster Univ., Canada
14:30	09-08 Processing and Mechanical Properties of Self-reinforcing Blends of Thermotropic Liquid Crystalline Polymer and Polycarbonate A. Misra, T. Abraham, Indian Institute of Tech., Delhi, India	12-08 Computer Aided Design of the Preform Dies for Flat Film Extrusion Y. Wang, H.Y. Tsay Tunghai Univ., Taiwan
15:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
	9.3 LIQUID CRYSTALLINE AND OTHER SPECIALITY POLYMERS	12.3 CAD/CAM MODELLING OF PROCESSING OPERATIONS
15:30	09-09 Effect of Ester and Ether Linkages on Sorption and Transport Properties of Polysulfones A.Y. Houde, S.S. Kulkarni, B.B. Idage, M.G. Kulkarni, National Chemical Laboratory, India	12-09 A Three-Layer Approach for CAE of Injection Molding K. Himasekhar, H.H. Chiang, W.R. Jong, N. Santhanam, L.S. Turg, V.W. Wang, AC Technology, USA K.K. Wang, Cornell Univ., USA
15:50	09-10 Studies on High Molecular Weight Fibre-forming Acrylonitrile Copolymers P. Bajaj, A.K. Gupta, D.K. Palwal, Indian Institute of Tech., Delhi, India	12-10 FEA Applied to Rubber P. Raos, Univ. of Zagreb, Yugoslavia W. Michaeli, U. Mohr-Matuschek, Institut für Kunststoffverarbeitung, Aachen, Germany
16:10	09-11 Enhanced Drag Reduction through Intermolecular Associations S.N. Shintre, S. Malik, National Chemical Laboratory, India	12-11 Multi-layering Technique in Computer-aided Rotational Moulding using Solvent-Silicone Rubber for Cosmetic Hand Prostheses S.H. Teoh, K.W. Guan, Y.S. Wong, A.Y.C. Nee, R.W.H. Pho, National Univ. of Singapore, Singapore
16:30	09-12 Rheology, Spinning and Monolithization of LC Polyester Fibres V.C. Kulichikhin, S.V. Kotomin, USSR Academy of Science A.V. Volokhina, Scientific and Research Institute, Russia	12-12 Design and Development of Injection Moulded Crank Chain Wheel Assembly for a Bicycle A. Gupta, A. Misra, R.K. Mittal, P.N. Rao, Indian Institute of Tech., Delhi, India

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AFTERNOON SESSION

	ROOM III-A	ROOM III-B
	10.3 NEW EMERGING TECHNOLOGIES	11.1 PROCESS CONTROL, SENSORS, STATISTICAL CONTROL
13:30	10-KN3 Advanced Resist Systems Incorporating Chemical Amplification for Deep UV Lithography <i>H. Ito</i> , IBM Research, USA	11-KN Issues on Sensory and Process Control of Injection Molding <i>K.K. Wang</i> , Cornell Univ., USA
14:10	10-10 Polymer Processing for the Leading Edge Microlithography <i>O. Nalamasu</i> , M. Cheng, E. Reichmanis, L.F. Thompson; AT&T Bell Laboratories, USA	11-02 An Auto Adaptive Command on Plastic Injection Molding <i>P. Devos</i> , F. Laurent, J. Pabiot, M. Ryckebusch, Ecole des Mines de Douai, France
14:30	10-11 Oxidative Degradation of Polymers Induced by Ionizing Radiation <i>R.L. Clough</i> , K.T. Gillen, Sandia National Laboratories, USA	11-03 Adaptive Process Control in Injection Moulding: Holding Pressure Control Adapted to Polymer Temperature Variation <i>K. Yakemoto</i> , T. Sakai, T. Shiroganeya, Japan Steel Works Ltd, Japan Z. Maekawa, H. Hamada, Kyoto Inst. of Tech. Japan
14:50	10-12 Electron Beam Processing of Fibre-Reinforced Composites <i>A. Singh</i> , C.B. Saunders, T. Czikovszky, AECL Research, Canada	11-04 In Situ Measurement of Process Stream Temperatures with an IR Pyrometer During the Injection Moulding Cycle <i>J.X. Rietveld</i> , G. Lai, Univ. of Wisconsin-Madison, USA
15:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
	10.4 NEW EMERGING TECHNOLOGIES	11.2 PROCESS CONTROL, SENSORS, STATISTICAL CONTROL
15:30	10-13 On the Characteristics of the KMnO_4 Impregnated PAN Precursor <i>R.B. Mathur</i> , J. Mittal, O.P. Bahl, National Phy. Lab., India N.K. Sandle, Indian Institute of Tech. Delhi, India	11-05 Multivariable Temperature Control of Plasticating Extruders with State Space Models <i>F. Dörscheidt</i> , T. Schumann, S. Dormeier, Univ. of Paderborn, Germany
15:50	10-14 Study on the Preparation of Homogeneous Solution of UHMWPE in Kerosene <i>Y. Nianci</i> , Gu Bai, Y. Wang, China Textile Univ., China	11-06 Part-to-part Control Strategies for Polymer Cyclic Processes <i>A.L. Wright</i> , P.A.S. Ralston, K.E. Stoll, D.O. Harper, Univ. of Louisville, USA
16:10	10-15 Radiation Crosslinking of PVC Compounds using Multi-Functional Monomers <i>N.K. Gupta</i> , K.K. Jain, D.A. Dabholkar, Shiram Inst. for Ind. Research, India	11-07 Rheological Online Process Control-the Real Time Problem <i>A. Göttfert</i> , Göttfert Werkstoff-Prüfmaschinen, Germany
16:30	10-16 Antistatic Coatings of conducting Polypyrrole on Sensitized Insulating Surfaces <i>S.K. Dhawan</i> , D.C. Trivedi, Central Electrochemical Res. Institute, India	11-08 Online Monitoring of Polypropylene Viscosity During Extrusion <i>R. Gendron</i> , M.M. Dumoulin, J. Tatibouet, L. Piche, A. Hamel, National Research Council, Canada
16:50	10-17 Solid State Processing of Aramid Fibers <i>S.V. Kotomin</i> , Russian Academy of Sci., Russia G.I. Kudryavtsev, A.V. Volokhina, A.V. Tokarev, Sci. Res. Inst., Russia	

POSTER PRESENTATIONS, ROOM I-B, MAIN CONVENTION HALL, FIRST FLOOR

FRIDAY MARCH 27

- P7-24 Compatibilization of polycarbonate-polyethylene blends
N.Mekhilef, A. Ajji, A.Ait-kadi, Univ. of Laval, Canada
- P7-25 Structure and properties of bisphenol A polycarbonate/poly (ethylene-co-acrylic acid) blend
L. Cai, Xi Xu, Chengdu Univ., China
- P7-26 Morphology-Melt rheological properties correlation in polymer blends
A.K. Gupta, K.R. Srinivasan, B.K. Ratnam, Indian Institute of Technology Delhi, India
- P7-27 A study on crystallization kinetics of blends of polypropylene with polyethylene
C. Yanmo, Z. Meifang, Z. Yu, W. Yuzhen, China Textile Univ.;
J. Luo, D. Xu, X. Li, Acad. Sci., China
- P7-28 Studies on nylon-6/polypropylene blends
R. Rajesh, S. Muralikrishnan, K.S. Jagadeesh, S.J. College of Engineering;
Ravishankar, Sri Ram Fibers, India
- P7-29 HDPE/Nylon 6 blends to enhance the barrier resistance of blow moulded products
P. Poomalai, A.P. Das, J.S. Anand, CIPET (Madras), India
- P7-30 Investigation of multiphase polymeric systems of poly (vinyl chloride): PVC/chlororubber-20-g-(ethyl acrylate-co-acrylonitrile (2:1) and PVC/chlororubber-20-g (styrene-co-vinylacetate-co-acrylonitrile (1:1:1)) blends and their relative performance
Y.P. Singh, GSFC; S. Shaw, Cosmo Films; R.P. Singh, Indian Institute of Technology (Kharagpur), India
- P7-31 Miscibility behavior of natural rubber-ethylene-vinyl acetate co-polymer blends
A.T. Koshy, S. Thomas, Mahatma Gandhi Univ. (Kottayam);
B. Kuriakose, S. varghese, Rubber Research Inst., India
- P8-32 Effects of surface treatments on the properties of a one polymer composite: interfacial behaviour & strength
A. Rochette, A. Ajji, R.E. Prud'homme, Univ. of Laval, Canada
- P8-33 Short glass fibre reinforced composites based on Nylon 6 & ABS blends
K. Kannan, A Misra, Indian Institute of Technology Delhi, India
- P8-34 Modification of diglycidyl ether of bisphenol A(DGEBA) epoxy resin with carboxy terminated butadiene (CTBN) to enhance its toughness
U.K. Saroop, Shriram Institute for Industrial Research, India
- P8-35 Barium ferrite-polymer magnetic composites
Diana Andrei, Georgeta Andrei, ICECHIM, Analytical Department, Bucharest, Romania
- P8-36 Internal Stress in mica-filled epoxy resin
C. Brahatheeswaran, CIPET;
V.B. Gupta, Indian Institute of Technology Delhi, India
- P8-37 Electromagnetic interference (EMI) shielding effectiveness of electrically conductive polychloroprene filled with short carbon fibre
P.B. Jana, S.K. Dey, Indian Institute of Technology Kharagpur, India

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	ROOM III-A	ROOM III-B
	10.3 NEW EMERGING TECHNOLOGIES	11.1 PROCESS CONTROL, SENSORS, STATISTICAL CONTROL
13:30	10-KN3 Advanced Resist Systems Incorporating Chemical Amplification for Deep UV Lithography <i>H. Ito</i> , IBM Research, USA	11-KN Issues on Sensory and Process Control of Injection Molding <i>K.K. Wang</i> , Cornell Univ., USA
14:10	10-10 Polymer Processing for the Leading Edge Microlithography <i>O. Nalamasu</i> , M. Cheng, E. Reichmanis, L.F. Thompson; AT&T Bell Laboratories, USA	11-02 An Auto Adaptive Command on Plastic Injection Molding <i>P. Devos</i> , F. Laurent, J. Pabiot, M. Ryckebusch, Ecole des Mines de Douai, France
14:30	10-11 Oxidative Degradation of Polymers Induced by Ionizing Radiation <i>R.L. Clough</i> , K.T. Gillen, Sandia National Laboratories, USA	11-03 Adaptive Process Control in Injection Moulding: Holding Pressure Control Adapted to Polymer Temperature Variation <i>K. Yakemoto</i> , T. Sakai, T. Shiroganeya, Japan Steel Works Ltd, Japan Z. Maekawa, H. Hamada, Kyoto Inst. of Tech. Japan
14:50	10-12 Electron Beam Processing of Fibre-Reinforced Composites <i>A. Singh</i> , C.B. Saunders, T. Czikovszky, AECL Research, Canada	11-04 In Situ Measurement of Process Stream Temperatures with an IR Pyrometer During the Injection Moulding Cycle <i>J.X. Rietveld</i> , G. Lai, Univ. of Wisconsin-Madison, USA
15:10	TEA/COFFEE BREAK, CONVENTION HALL LOUNGE, FIRST FLOOR	
	10.4 NEW EMERGING TECHNOLOGIES	11.2 PROCESS CONTROL, SENSORS, STATISTICAL CONTROL
15:30	10-13 On the Characteristics of the KMnO_4 Impregnated PAN Precursor <i>R.B. Mathur</i> , J. Mittal, O.P. Bahl, National Phy. Lab., India N.K. Sandle, Indian Institute of Tech. Delhi, India	11-05 Multivariable Temperature Control of Plasticating Extruders with State Space Models <i>F. Dörscheidt</i> , T. Schumann, S. Dormeier, Univ. of Paderborn, Germany
15:50	10-14 Study on the Preparation of Homogeneous Solution of UHMWPE in Kerosene <i>Y. Nianci</i> , Gu Bai, Y. Wang, China Textile Univ., China	11-06 Part-to-part Control Strategies for Polymer Cyclic Processes <i>A.L. Wright</i> , P.A.S. Ralston, K.E. Stoll, D.O. Harper, Univ. of Louisville, USA
16:10	10-15 Radiation Crosslinking of PVC Compounds using Multi-Functional Monomers <i>N.K. Gupta</i> , K.K. Jain, D.A. Dabholkar, Shiram Inst. for Ind. Research, India	11-07 Rheological Online Process Control-the Real Time Problem <i>A. Göttfert</i> , Göttfert Werkstoff-Prüfmaschinen, Germany
16:30	10-16 Antistatic Coatings of conducting Polypyrrole on Sensitized Insulating Surfaces <i>S.K. Dhawan</i> , D.C. Trivedi, Central Electrochemical Res. Institute, India	11-08 Online Monitoring of Polypropylene Viscosity During Extrusion <i>R. Gendron</i> , M.M. Dumoulin, J. Tatibouet, L. Piche, A. Hamel, National Research Council, Canada
16:50	10-17 Solid State Processing of Aramid Fibers <i>S.V. Kotomin</i> , Russian Academy of Sci., Russia G.I. Kudryavtsev, A.V. Volokhina, A.V. Tokarev, Sci. Res. Inst., Russia	

POSTER PRESENTATIONS, ROOM I-B, MAIN CONVENTION HALL, FIRST FLOOR

FRIDAY MARCH 27

- P7-24 Compatibilization of polycarbonate-polyethylene blends
N.Mekhilef, A. Ajji, A.Ait-kadi, Univ. of Laval, Canada
- P7-25 Structure and properties of bisphenol A polycarbonate/poly (ethylene-co-acrylic acid) blend
L. Cai, Xi Xu, Chengdu Univ., China
- P7-26 Morphology-Melt rheological properties correlation in polymer blends
A.K. Gupta, K.R. Srinivasan, B.K. Ratnam, Indian Institute of Technology Delhi, India
- P7-27 A study on crystallization kinetics of blends of polypropylene with polyethylene
C. Yanmo, Z. Meifang, Z. Yu, W. Yuzhen, China Textile Univ.;
J. Luo, D. Xu, X. Li, Acad. Sci., China
- P7-28 Studies on nylon-6/polypropylene blends
R. Rajesh, S. Muralikrishnan, K.S. Jagadeesh, S.J. College of Engineering;
Ravishankar, Sri Ram Fibers, India
- P7-29 HDPE/Nylon 6 blends to enhance the barrier resistance of blow moulded products
P. Poomalai, A.P. Das, J.S. Anand, CIPET (Madras), India
- P7-30 Investigation of multiphase polymeric systems of poly (vinyl chloride): PVC/chlororubber-20-g-(ethyl acrylate-co-acrylonitrile (2:1) and PVC/chlororubber-20-g (styrene-co-vinylacetate-co-acrylonitrile (1:1:1)) blends and their relative performance
Y.P. Singh, GSFC; S. Shaw, Cosmo Films; R.P. Singh, Indian Institute of Technology (Kharagpur), India
- P7-31 Miscibility behavior of natural rubber-ethylene-vinyl acetate co-polymer blends
A.T. Koshy, S. Thomas, Mahatma Gandhi Univ. (Kottayam);
B. Kuriakose, S. varghese, Rubber Research Inst., India
- P8-32 Effects of surface treatments on the properties of a one polymer composite: interfacial behaviour & strength
A. Rochette, A. Ajji, R.E. Prud'homme, Univ. of Laval, Canada
- P8-33 Short glass fibre reinforced composites based on Nylon 6 & ABS blends
K. Kannan, A Misra, Indian Institute of Technology Delhi, India
- P8-34 Modification of diglycidyl ether of bisphenol A(DGEBA) epoxy resin with carboxy terminated butadiene (CTBN) to enhance its toughness
U.K. Saroop, Shriram Institute for Industrial Research, India
- P8-35 Barium ferrite-polymer magnetic composites
Diana Andrei, Georgeta Andrei, ICECHIM, Analytical Department, Bucharest, Romania
- P8-36 Internal Stress in mica-filled epoxy resin
C. Brahatheeswaran, CIPET;
V.B. Gupta, Indian Institute of Technology Delhi, India
- P8-37 Electromagnetic interference (EMI) shielding effectiveness of electrically conductive polychloroprene filled with short carbon fibre
P.B. Jana, S.K. Dey, Indian Institute of Technology Kharagpur, India

- P8-38 Ultrasonic investigation of multiphase polymeric systems and composites
R.P. Singh, Indian Institute of Technology Kharagpur, India
- P8-39 Mechanical properties of PP/Jute-fibre reinforced composites compared to PP/glass-fibre composites: Effect of moisture absorption on tensile strength
D. Basu, A.N. Banerjee, Univ. of Calcutta;
A. Misra, Indian Institute of Technology, Delhi, India
- P8-40 Physical and mechanical properties of short sisal fibre reinforced polyethylene composites.
K. Joseph, S. Thomas, Mahatma Gandhi Univ;
C. Pavithran, Regional Research Laboratory (Trivandrum), India
- P8-41 Stress relaxation behaviour of short sisal fibre reinforced natural rubber composites
S. Varghese, B. Kuriakose, Rubber Research Institute of India;
S. Thomas, A.T. Koshy, Mahatma Gandhi Univ. (Kottayam), India
- P9-42 Liquid crystalline properties of random & ordered copolyesters
P.K. Kaicker, S. Tyagi, J.P. Singhal, R.K. Goyal, Shriram Institute for Industrial Research, India
- P9-43 Studies on fiber formation of thermotropic copolyesters
S. Mehta, B.L. Deopura, Indian Institute of Technology, Delhi, India
- P9-44 Polyacetylene: some ways of increasing the stability of its properties
G.P. Belov, D.G. Belov, G.I. Kozub, Institute of Chemical Physics (Moscow), Russia
- P9-45 Composition based on polyethylene and polyacetylene
V.N. Noskova, P.E. Matkovskii, *G.P. Belov*, L.N. Raspopov, Institute of Chemical Physics, Russia
- P9-46 Fibre spinning of liquid crystalline polymers: A steady state and linear stability analysis
S. Ramlingam, R.C. Armstrong, Massachusetts Institute of Technology, USA
- P10-47 Porous biaxially drawn UHMW-PE films
H.M. Fortuin, DSM Research BV, The Netherlands
- P12-48 Modelling of the dynamics of freon-11 blown polyurethane foam formation
S.A. Baser, D.V. Khakhar, Indian Institute of Technology, (Bombay), India