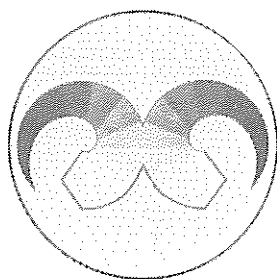


THE POLYMER PROCESSING SOCIETY

EXTENDED ABSTRACTS & FINAL PROGRAMME

EUROPE/AFRICA REGION MEETING
GOTHENBURG, SWEDEN
August 19-21, 1997
Conference of Polymer Processing



Organized by

Chalmers University of Technology
Department of Polymeric Materials
Gothenburg, Sweden

The conference is arranged in collaboration
with

Faculty of Technology Zlín
Helsinki University of Technology
Luleå University of Technology
Norwegian University of Science and
Technology
SINTEF
Swedish Institute for Fibre and Polymer
Research
Swedish National Testing and Research
Institute
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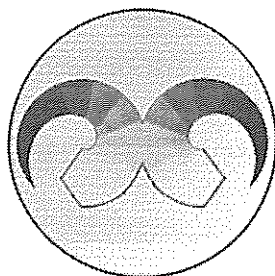
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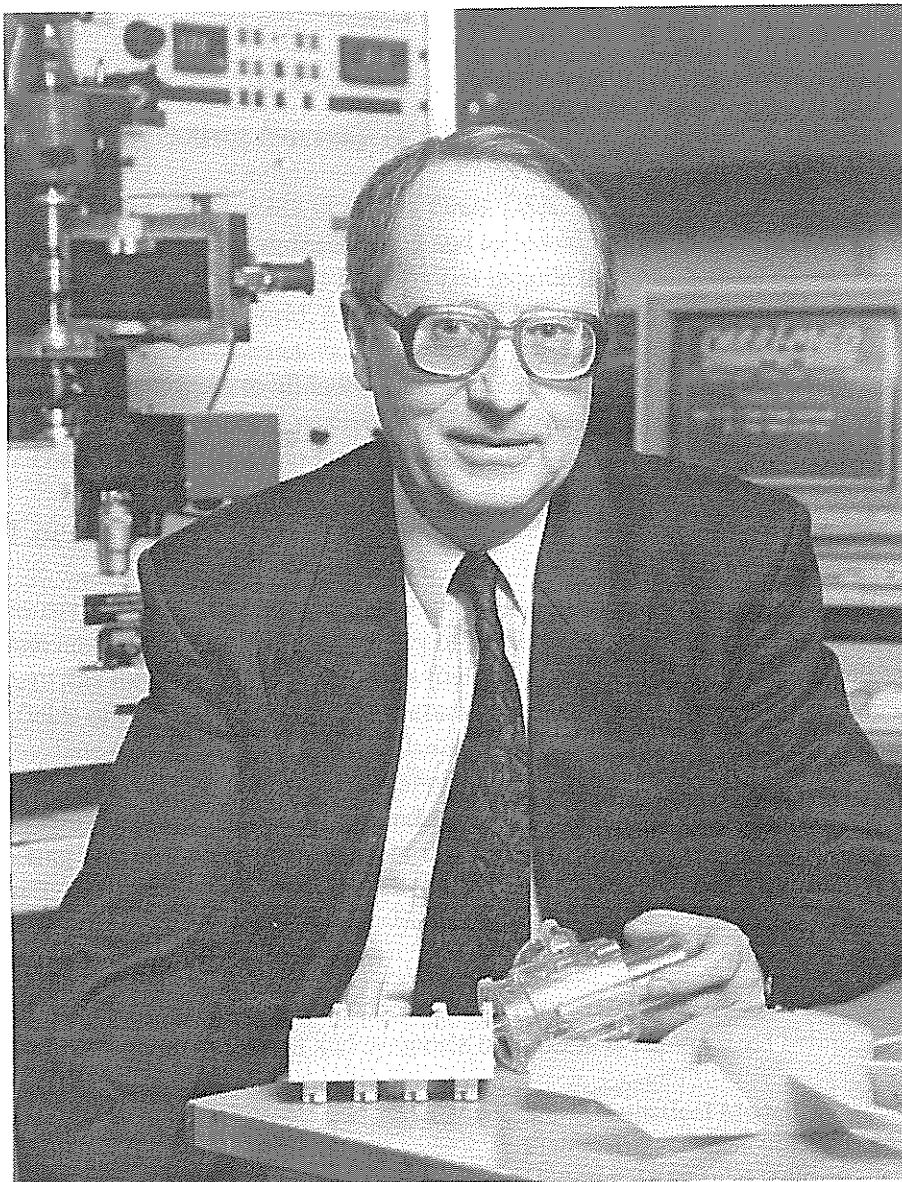
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Professor Carl Klason (1938 - 1997)

The organizers of this PPS Conference deeply regret having to announce the sudden and unexpected death of the Conference Chairman, Professor Carl Klason, Head of Department of Polymeric Materials at Chalmers University of Technology.

Carl Klason's death is a great loss to the polymer community. He will be remembered for his contributions to polymer processing which was his main scientific interest, as well as for his outstanding ability as teacher and mentor.

Jan-Fredrik Jansson
Co-Chairman

Johan Becker
Secretary

The Polymer Processing Society (PPS)

The PPS was founded in March 1985 in Akron, Ohio, USA. The goal of the PPS, as embodied in its constitution, is to foster scientific understanding and technical innovation in polymer processing. In addition to the annual conferences, the PPS activities include the arrangement of regional and local meetings in various parts of the world, publication of the journal "*International Polymer Processing*" and sponsorship of educational seminars.

Membership of the PPS is open to all individuals who feel the activities of the society advance their professional development. Members receive the Journal, *free of charge*, and attend the meetings at reduced fees. The annual membership fee is \$ 80 US.

Meeting Location

Gothenburg is easy to access by air. The Gothenburg International Airport is about half an hour from the meeting site and hotels. Chalmers University of Technology in Gothenburg on the west coast of Sweden - where this meeting is to be held - was founded in 1829. It offers 4.5 year MSc programmes in all principal fields of technology and in architecture as well as shorter BEng programmes. PhD degrees and the intermediate degree of Licentiate are also awarded. Two thirds of Chalmers' annual turnover is spent on research activities of both basic and applied nature.

Since the 1st of July 1994, Chalmers is a foundation university.

The PPS-meeting will take place in the halls of the School of Mechanical and Vehicular Engineering at Hörsalsvägen 7.

Technical Programme

A list of symposia and symposia organizers is summarized below:

1. Extrusion Processes

Ion Postoaca, Lund, Sweden
Anthony J. Ryan, Manchester, UK
Petr Sáva, Zlín, Czech Republic
Bruno Vergnes, Paris, France

2. Compounding, Blending, Reactive Extrusion

Hans Bertilsson, Gothenburg, Sweden
Paula Moldenaers, Leuven, Belgium
Jukka V. Seppälä, Helsinki, Finland
Arthur N. Wilkinson, Manchester, UK

3. Moulding Processes

Valeriu V. Jinescu, Bucharest, Romania
Carl Klason, Gothenburg, Sweden
G.W.M. Peters, Eindhoven, Netherlands

4. Rheology and Rheometry

Jørgen H. Lyngaae-Jørgensen, Copenhagen, Denmark
Takeshi Kitano, Tsukuba, Japan
Alexander Ya. Malkin, Moscow, Russia

5. Mathematical Modelling

Staffan Toll, Gothenburg, Sweden
Giuseppe Titomanlio, Salerno, Italy
John Vlachopoulos, Hamilton, Canada

6. Composite Processing

Lars Berglund, Luleå, Sweden
Jan-A Månsson, Lausanne, Switzerland

7. Recycling Processes

Antal Boldizar, Borås, Sweden
Francesco P. La Mantia, Palermo, Italy
Hroar R. Skov, Copenhagen, Denmark

8. Rubber Processing

Bengt Stenberg, Stockholm, Sweden
Sture Persson, Ersmark, Sweden
Jan Asplund, Trelleborg, Sweden

Conference Committee

Chairman: C. Klason, Chalmers University of Technology
Co-Chairman: J.-F. Jansson, The Royal Institute of Technology
Secretary: J. Becker, Chalmers University of Technology

Organizing Committee

L. Berglund, Luleå University of Technology
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C.-G. Gustafson, Norwegian Univ. of Science and Technology
J. Kubát, Chalmers University of Technology
J. H. Lyngaae-Jørgensen, Technical University of Denmark
F. Maurer, Chalmers University of Technology
I. Postoaca, TetraPak Converting Technologies AB
P. Sáva, Faculty of Technology Zlín, Czech Republic
J. Seppälä, Helsinki University of Technology, Finland
R. Shishoo, Swedish Institute for Fibre and Polymer Research
H. R. Skov, Hexagon Chemistry Consultants, Denmark
A. Stori, SINTEF, Norway
S. Toll, Chalmers University of Technology
V. Verijenko, University of Natal, South Africa

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L. Nicholais, Italy	H. Potente, Germany
P. Sáva, Czech Republic	K. Suchiva, Thailand
S.H. Teoh, Singapore	X. Xu, China

Registration and Opening Ceremony at Palmstedtsalen, Sven Hultins gata 2

Tuesday, August 19, 1997	
Registration at Palmstedtsalen 09.00-10.00	Registration will take place at the hall "Palmstedtsalen", Sven Hultins gata 2. After lunch the registration office is moved to the School of Mechanical and Vehicular Design Building, Hörsalsvägen 7
10.00-10.15 Opening Ceremony	Jan-Fredrik Jansson <i>Address of Welcome</i> Josef Kubát <i>Carl Klason in memorial</i> Sung Chul Kim <i>Opening of the Meeting</i>
10.15-11.00 Plenary lecture I	Kent Abbås <i>Processing of New Generations of Polyolefins</i>
11.00-11.45 Plenary lecture II in honour of Professor Morand Lambla	Gyo-Hua Hu <i>Recent Developments of Reactive Extrusion</i>
11.45-12.30 Keynote lecture	Stephen F. Bush <i>Long-Glass Fibre Reinforcement of Thermoplastics: Results from Injection and Blow Moulding Sheet and Pipe Extrusion</i>

Lunch is served at 12.45 (Tuesday, Wednesday and Thursday) to all participants at Restaurant Entré, Sven Hultins gata 4, entrance from the plaza.

Conference Schedule

Monday, August 18

Registration for the pre-meeting tours, Hotel Panorama 08.00 - 09.30
Pre-Meeting Tour 09.30 - 16.00
Welcome Party at Hotel Panorama 18.00 - 20.00

Tuesday, August 19

Registration, Chalmers University of Technology, Hörsalsvägen 7 08.00 - 10.00
Opening Session and Plenary Lectures 10.00 - 12.30
Lunch 12.30 - 13.30
Afternoon Session 13.40 - 16.45
Poster Session with Refreshments 16.10 - 17.30
Reception at Börsen (the City Hall) 19.00 - 20.00

Wednesday, August 20

Morning Session 08.15 - 12.35
Lunch 12.35 - 13.30
Poster Session 13.30 - 14.30
Afternoon Session 14.30 - 17.30

Banquet at Park Avenue Hotel 19.30 - 23.00

Thursday, August 21

Morning Session 08.25 - 12.40
Lunch 12.40 - 13.40
Afternoon Session 13.40 - 15.20

Registration Fees

Proceedings, welcome party, luncheons and coffee are included in the registration fee.

Registration before May 30, 1997

PPS Members SEK 2100
Non-members SEK 2600
Students SEK 945

Registration after May 30, 1997

PPS Members SEK 2400
Non-members SEK 2900
Students SEK 945

Non-members are automatically enrolled as PPS-members for a year by using the SEK 500 difference between member and non-member registration fee, unless they decline in writing

Visit Tour (including lunch), Monday, August 18, 1997 SEK 210

Programme for Accompanying Persons SEK 630

Banquet on Wednesday, August 20, 1997 SEK 550

	TIME	ROOM H4	ROOM H5
		Symposium #1 Extrusion Processes	Symposium #2 Compounding, Blending, Reactive Extrusion
Tuesday Afternoon August 19	13:40	KN 1:1 Recent Advances in Understanding of Extruder Dynamics - Fluid and Solid Transport Gregory A. Campbell	2:1 Twin-Screw-Extrusion Looking at details with modern sensors Anderlik, Hoffmann, Rädle
	14.05		2:2 Experimental and Theoretical Study of the Transesterification of EVA in aTwin Screw Extruder F.Berzin, B. Vergnes
	14.35	1:1 Creep, Recovery and Stress Relaxation of Polyolefin Films and Fibres - Some Examples of the Interaction Between Material Parameters and Processing Conditions E. Andreassen, S.S. Eggen, E.L. Hinrichsen, B. Jansen, O.J. Myhre	KN 2:2 Reactively Compatibilized Polymer Blends: Molecular and Morphological Characterization of the Interphase G. Groeninckx, K. Dedecker
	15.00	1:2 Investigating Viscous Fluid Flow in Batch and Continuous Processing Geometries A.M. Harries, D.P. Bruce, M.P. Wilson, S.C. Generalis	
	15.25	Coffee	Coffee
	15.50	1:3 The influence of quenching Air on Fiber Formation and Fiber Properties in the Melt Spinning Process H. Brüning, H. Hofman, R. Beyreuther	2:3 A novel on-ligne technique for measurement the residence time distribution in screw extruders G.-H. Hu, I. Kadri
	16.15	1:4 Solving Extrusion Problems - Comparison Between Theoretical and Experimental Approaches J.A. Covas, A.G. Cunha, P. Oliveira	2:4 On the Compatibilization of PE/LCP Blends by PE-g-LCP Copolymers F.P. La Mantia, R. Scaffaro, P.L. Magagnini, M. Paci, D. Sek, L.I. Minkova, Ts. Miteva
	16.40-17.40	Poster Session A Refreshments	Poster Session A Refreshments
	19.00-20.00	Reception at Börsen (Free)	Reception at Börsen (Free)

	Time	ROOM H6	ROOM H7
		Symposium #3 Moulding Processes	Symposium #6 Composite Processing
Tuesday Afternoon August 19	13.40	3:1 Influence of Progress Parameters on the Evaluation of the Crosslink Density of an Injection Moulded Silicone Network M. Barbaroux, G. Reginier	KN 6:1 Processing and Properties of Polymer Nanocomposites E. Giannelis
	14.05	3:2 Evaluation of the Thermal Behaviour of Injection Moulds I. Barros, J.C.F. Teixeira, S.F.C.F. Teixeira, A.M.Cunha	
	14.35	3:3 High Cooling Rates and Pressure Effects on Polymer Solidification V. Brucato, S.Piccarolo, V. La Carrubba, G. Titomanlio	6:1 Carbon Fiber/Dicyanate Composites with Morphology Gradient Sung Chul Kim
	15.00	3:4 Shrinkage of Injection Moulded Fibre Composites K.M.B. Jansen, D.J. van Dijk	6:2 Influence of Flow on Mechanical Properties During Compression Moulding of GMT Greger Nilsson, Mats Ericson
	15.25	Coffee	Coffee
	15.50	3:5 Shrinkage anisotropy in Semi-Crystalline materials K.M.B. Jansen, D.J. van Dijk	6:3 Squeeze Flow of a Compression Moulding Composite R. Törnqvist, A. Luciani, P.Sunderland, J.-A. Manson
	16.15	3:6 Improving the Quality of In-Mould Surface-Decorated Parts by Injection Compression Moulding W. Michaeli, C. Brockmann	6:4 Meso-Scale Modelling of Flow Transverse to Arrays of Unidirectional Fiber Bundles T.D. Papathanasiou
	16.40-17.40	Poster Session A Refreshments	Poster Session A Refreshments
	19.00-20.00	Reception at Börsen (Free)	Reception at Börsen (Free)

	Time	ROOM H4	ROOM H5
		Symposium #4 Rheology and Rheometry	Symposium #2 Compounding, Blending, Reactive Extrusion
Wednesday Morning August 20	8.15	4:1 Scaling Laws for the Drawability of Polymer Melts J. Kashta, K. Engelsing, H. Münstedt	2:9 Polymer Blends: Micromechanical and Microdielectric Transitions F. H. J. Maurer
	8.40	4:2 Elongational Flow Opto-Rheometry and its Application to some Crystalline Polymers. Tadao Kotaka, A. Kojima, H. Kubo, M. Okamoto	2:10 In-Situ Analysis of Microstructure in Blends with Combined Dichroism and SALS Measurements J. Mewis, H. Yang, P. Van Puyvelde, P. Moldenaers
	9.05	4:3 Morphological Simulation and Transient Shear Flow Behaviors of Liquid Crystalline Polymers H. Cho, T. K. Kim, K. M. Kim, S. O. Kim, I. J. Chung	2:11 Polyethylene/polyurethane blends obtained by reactive processing T. Nietsch, P. Cassagnau, M. Bert, A. Michel
	9.30	4:4 Characteristic Rheological Responses of Nematic and Cholesteric Phases of LCPs B. C. Kim, S. S. Hwang	KN 2:1 Effects of Reactive and Interacting Surface Active Compounds on the Phase Continuity in Polymer Blends Olli Ikkala
	9.55	Coffee	Coffee
	10.25	4:5 The Measurement of Extensional Properties by Means of a Modified Rotational Rheometer J. M. Maia, J. A. Covas, J. M. Nóbrega	2:12 Use of Maleic-anhydride Grafted Polyolefins in blends with Thermoplastic Polyurethanes P. Pötschke, K. Wallheinke, U. Mierau, H. Stutz
	10.50	4:6 Membrane-Inflation Rheometry - A New Way of Measuring Biaxial Deformation Behaviour at Process Relevant Conditions W. Michaeli, C. Detrois	2:6 Reaction Injection Moulding of Polyurethane and Vinyl Resin Interpenetrating Polymer Network C. P. Hu, L. H. Fan, Z. Q. Pan, Z. P. Zhang, S. K. Ying
	11.20	KN 4:2 Recent Ideas in Extensional Rheology Chris Petrie	2:7 The Effect of Thermal Annealing on the Morphology of Poly(urethane urea) Copolymers Formed by Reaction Injection Molding N. Luo, D.-N. Wang, S.-K. Ying
	12.10	4:7 Influence of the Entry Angle in the Flow of LLDPE Melts Through Capillaries J. Pérez-González, L. Pérez-Trejo, L. de Vargas	2:8 In-Situ Study on Phase Separation in Segmented Polyether Poly(urethane urea) Copolymers during RIM Polymerization S.-K. Ying, N. Luo, D.-N. Wang
	12.35	Lunch	Lunch
		ROOM H4 Symposium #4 Rheology and Rheometry	ROOM H8 Symposium #8 Rubber Processing
Wednesday Afternoon August 20	13.30	Poster Session B	Poster Session B
	13.40	4:17 A Recursive Model for Rheotens Test V. Rauschenberger, H. M. Laun	
	14.05	4:16 Experimental Approaches to the Investigation of Anisotropic Viscoelasticity of Homo- and Heterophase Polymer Systems V. Kulichikhin, A. Tereshin	
	14.30	4:8 Viscoelastic Predictive Laws of Linear Polyurethane: Rheological Changes During Bulk Polymerization P. Cassagnau, A. Michel, P. Revenu, C. Carrot, J. Guillet	KN 8:1 High lights in Rubber Technology Bengt Stenberg
	14.55	4:9 Fibril Formation and Relaxation in Immiscible Polymer Blends I. Vinckier, P. Moldenaers, J. Mewis	
	15.20	Coffee	Coffee
	15.50	KN 4:1 Flow-Induced Morphology and Structural Hysteresis in Model Blends P. Moldenaers, M. Minale, I. Vinckier	8:1 Effects of Structure and Molecular Weight of Rubber on the Content and Structure of Carbon-gel in the Black Filled Rubber Systems Masayoshi Ito
	16.15		8:2 Study of Polymer Filler Interaction for Producing New Materials for Ultra Low Rolling Resistance Tyres A. Proni, L. Merlo, R. Caretta
	16.40	4:10 Network Formation of Doped Polyaniline in Polyolefin Blends J. O. Tanner, O. T. Ikkala, P. J. Passiniemi, J.-E. Österholm	8:3 Fatigue in Rubber Rheology especially regarding Elasticity István Soós
	17.05	4:11 Constitution of the Top Layer of Plastics R. Sikora, E. Bociaga	8:4 Production of Protein Free Latex by Radiation Process S. Varghese, Y. Katsumura, F. Yoshii, K. Makuuchi
	19.30-23.00	Banquet. Ticket is needed	Banquet. Ticket is needed

	Time	ROOM H6	ROOM H7
		Symposium #3 Moulding Processes	Symposium #6 Composite Processing
Wednesday Morning August 20	8.15	3:7 Flow Induced Crystal Phase Modifications in the Nucleated Polypropylene Systems T. Sterzynski, B. Thiberoz, H. Øysæd, M. Augestad	6:6 Characterisation of Voids and Fibre Orientation States in Polymer Composites AR Clarke, NC Davidson, G Archenhold, M Enderby
	8.40	3:9 A study of the Weldline Strength in Gas Assist Injection Molding Thermoplastic S.-J. Liu, C.-Y. He	6:7 Flow, crystallization and fiber orientation modeling in the Push-Pull injection moulding process of reinforced thermoplastic A.S. Vintimiglia, N. Billon, M. Vinsent
	9.05	3:10 Process Optimization of the Rotational Molding Polyethylene S.-J. Liu, C.-C. Lai, S.-T. Lin	6:8 Crystallization and Matrix Orientation of Push-Pull Processed Samples T. Berland, E.L. Hinrichsen, Å.G. Larsen
	9.30	3:11 Crystallization of Polypropylene. Influence Factors and Consequences M. Gahleitner, C. Paulik, W. Neissl	6:9 Push-Pull Processing of Unreinforced and Shorter Fiber Reinforced Thermoplastic and LCP: Processing and Mechanical Properties A. Kech, H.-C. Ludwig, G.Fischer, P Eyerer, H. Becker
	9.55	Coffee	Coffee
	10.25	KN 3:2 Modelling and Numerical Simulation of Polymer Crystallization in Injection Moulding Process H. Ito, T. Kikutani, K. Tada, K. Koyama	KN 6:2 Current Issues in Resin Transfer Moulding Rikard Gebart
	11.20	3:12 The Measuring Depth of Infrared Radiation Thermometers in Polymer Processing W. Obendrauf, G.R. Langecker	6:10 Three Dimensional Continuous Fibre Reinforcing Method for Thermoplastic Pentti Järvelä
	11.45	3:13 Analysis of Shrinkage Development of Injection Moulded Samples R. Pantani, G. Titomanlio	6:11 Properties of Long-Glass-Fibre Polypropylene Produced by Diluting Melt-Impregnated Pellets by Neat Resin E.J. Pääkkönen, P. Peltonen, P.K. Järvelä
	12.10	3:14 Numerical simulation of Thermoforming Processes with Complex Geometries G. J. Nam, D. S. Son, J. W. Lee	6:12 Application of Micro-Wave Irradiation for Composite Processes. Takeshi Kitano, Edson G. Moreira, Petr Sába
	12.35	Lunch	Lunch
		ROOM H6	ROOM H7
		Symposium #3 Moulding Processes	Symposium #5 Mathematical Modelling
Wednesday Afternoon August 20	13:30-14:30	Poster Session B	Poster Session B
	14.3	KN 3:1 Finite Elements in 3D Mold Filling Simulation Thierry Coupes	5:1 Meso-Scale Modelling in Aligned, Short-Fiber-Reinforced Composites using the Boundary Element Method M.S. Ingber, T.D. Papathanasiou
	14.55		5:2 Compressibility of a Fibre Network of Mixed Fibre Diameters S. Lundström, N. Christophe, S. Toll
	15.2	Coffee	Coffee
	15.5	3:15 The influence of Processing Parameters on Mechanical Properties of Polyamide 6 Castings I. Catic, M. Serger, M. Miscevic, D. Lakatos	KN 5:2 Extensional Flows of Fibre Suspensions Geoff Gibson
	16.15	3:16 Visual Analysis of Sandwich Molding Process by Using Rotary Runner Exchanger Systems H. Yokoi, Y. Kanetoh	
	16.40	3:17 Dynamic Visualization of Three-Dimensional Flow in a Rib-Shaped Cavity H. Yokoi, S. Kushida, S. Matuzaka	5:3 The Role of Spectra in Modeling Polymeric Materials I. Emri
	17.05	3:18 Development of Visualization Mold for Observing IC Packaging Process along Thickness Direction M. Satoh, H. Yokoi	5:4 Comparison of Various Constitutive Models and Stick-Slip or No-Slip Boundary Conditions to Describe Spurt in Flow-Rate Controlled Extrusion Jaap den Doelder
	19:30-23.00	Banquet. Ticket is needed	Banquet. Ticket is needed

	Time	ROOM H4	ROOM H5
		Symposium #1 Extrusion Processes	Symposium #2 Compounding, Blending, Reactive Processes
Thursday Morning August 21	8.25	1:6 Processability of a new Generation Bomodal LLDPE Filmgrade from Borstar Process Svein Eggen, Ole Jan Myhre	2:13 Influence of Reactive Agents on Morphology Formation Mechanisms in Heterogeneous Polymer Blends H.-J. Radsch, T. Pham, J. Ding, B. Corley
	8.50	1:7 Structural and physical properties of Blown Film Made from Borstar Technology LLDPE Svein Eggen, Bjarne Jansen, Ole Jan Myhre, Erik Andreassen, Einar Hinrichsen	2:14 Ternary Blend Systems of Nylons, Liquid Crystalline Polymer and a Compatibilizer Y. Seo
	9.15	1:8 Experimental Studies and Flow Modelling for a Buss Kneader Min Young Lyu, James L. White	2:15 Free Radical Hydrosilylation of Polypropylene G. Shearer, C. Tzoganakis
	9.40	1:9 Numerical Simulation of Multi-Layer Extrudate Swell through Annular Die for Polymer Melts Kazumori Funatsu, Keishi Matsunaga	2:16 Reactive Compatibilization of Heterogeneous EPM/Nylon 6 Blends by the Addition of a Compatibilizer Precursor EPM-g-MA S. Thomas, G. Groeninckx
	10.05	1:10 Blown Films made from Polyethylene: the Impact of Metallocene- Technology A. Mayer	
	10.30	Coffee	Coffee
	11.00	1:11 Development of a Simulation Program for the Blown Film Extrusion Process W. Michaeli, J. Hauck	2:18 Melting, Reaktion and Recrystallisation In a Reactive PC-PBT Blend A.N. Wilkinson, S.B. Tattum, A.J. Ryan
	11.25	1:12 Power Requirement in Melting and Melt Conveying Sections of Single Screw Plasticating Units H. Potente, Ch. Obermann	2:19 Co-Continuous Morphologies on polymer Blends: a Model R.C. Willemse, A. P. de Boer, J. van Dam, A.D. Gotsis
	11.50	1:13 Computer Aided Simulation and design of Profile Extrusion Dies J. Sienz, I. Szarvasy, J. Pittman, E. Hinton, R. Sander	2:20 Melt Processability of Doped Polyaniline; Plasticizers Bonded Due to Molecular Recognition O.T. Ikkala, T. Vikki, P. Passiniemi, L. Ahjopalo, L.-O. Pietilä
	12.15	1:14 Polyolefin Phase Filled with Flow-Induced Heterogeneous Polymer Fibers H. Shii, F. Iwase	2:21 Interfacial tension of Polypropylene/Polyamide Blends Modified by Hyperbranched Polymers G. Jannerfeldt, L. Boogh, A. Luciani, J.-A. E. Manson
	12.40	Lunch	Lunch
	Time	ROOM H4	ROOM H5
		Symposium #1 Extrusion Processes	Symposium #4 Rheology and Rheometry
Thursday Afternoon August 21	13.40	1:15 Maddock Mixer. A Flow-Thermodynamic Study C. Klason, E. Eklund, I. Postolaca	4:12 Rheological Evidence on Order-Disorder Transitions in Comb-Like Copolymers Obtained by Hydrogen Bonding between Homopolymers and End-Functionalized Oligomer J. Ruokolainen, M. Torkkeli, R. Serimaa, G. Brinke, Olli Ikkala
	14.05	1:16 A Rational Approach to Fault Diagnosis Trouble Shooting in Plastics Extrusion J. Vlachopoulos	4:13 Prediction of Melt Flow Rate (MFR) of Bimodal Polyethylene's Based on MFR of their Components B. Hagström
	14.30	1:17 Experimental and Theoretical Study for the Melt Spinning of rectangular PET Fibers Young Wook Noh, Sang Yong Kim	4:14 An Ultrasound Virtual Instrument Approach Towards Melt Flow Rate Measurement E.C. Brown, T. Collins, P. Olley, P.D. Coates
	14.55	1:18 Sintered Polymer Filter Media L.S. Pinchuk, U.S. Choi, Yu.V. Gromyko, B.G. Ahn	4:15 The effect of Pressure on Polymer Melt Viscosity S.Chakravorty, M.Rides, C.R.G Allen, C.S. Brown
	15.20	Closing Remarks	Closing Remarks
	15.20	Coffee	Coffee

	Time	ROOM H6	ROOM H7
		Symposium #7 Recycling processes	Symposium #5 Mathematical Modelling
Thursday Morning August 21	8.25	7:1 Effect of Impurities on Durability and Reliability of Recycled Glass Fibre Reinforced Polyamide 66 from Automotive Applications P.-A. Eriksson, A.-C. Albertsson, J.-A. E. Månson	5:5 Thermoforming of Foam Sheet R. Akkerman
	8.50	7:3 Competition between Degradation and Regeneration During Processing of Recycled PET. Effect of Processing Conditions M. Paci, F. Batini, P. Magagnini, F.P. La Mantia	5:6 An Asymptotic Solution for Injection Mould Filling Gunnar Aronsson
	9.15	KN 7:1 Reduce, Reuse, Recycle - Opportunities for Returnable Packaging Kerstin Gustavsson	5:7 Three-Dimensional Flow Modelling in Plastics Processing E. Mitsoulis, H.Q. Luo, K.R.J. Ellwood
	9.40		5:8 Numerical and Experimental Study of the Feeding Systems in Injection Molding N. Van Rutten, V. Verhoyen, F. Dupret
	10.05		
	10.30	Coffee	Coffee
	11.00	7:4 Recycling of Engineering Plastics L. Xiaodong, H. Bertilsson	KN 5:1 Numerical Prediction of the Moulding of Composite Parts F. Dupret, V. Verleye, B. Languillier
	11.25	7:5 Progress and Difficulties in Plastics Recycling Through Dissolution and Reprecipitation C. D. Papaspyrides	
	11.50	KN 7:2 The Environmental Implications of Polymer Recycling Ian Boustead	5:10 Converging Flow Analysis Revisited C. Carrot, J. Guillet
	12.15		
		Lunch	Lunch
		ROOM H6	ROOM H7
		Symposium #7 Recycling Processes	Symposium #6 Composite Processing
Thursday Afternoon August 21	13.40	7:7 Effect of Elastomeric and Plastomeric Tougheners on Different Properties of Recycled Polyethylene A. Akbar Yosefi, A. Ait-Kadi, C. Roy	6:13 Composite Based on Glass Fiber-Phenolic Resin A. Vazquez, J. Clario, L. Manfredi
	14.05	Closing Remarks	6:14 Preparation and Properties of Sol-Gel Derived Poly(vinyl alcohol)/WO₃ Hybrids S. Yano, T. Ohtaka, M. Kodomari, K. Iwata, Kimio Kurita
	14.30		6:15 Mechanical Properties of Matrix-Modified C/C Composites T. J. Kang, Y. W. Jeong
	14.55		6:16 A Criterion for Maximum Resin Flow for the Application of RTM Process M.-K. Um, S.-K. Lee, E.-J. Jun
	15.20		Closing Remarks
	15.20	Coffee	Coffee

Poster Papers Tuesday - Poster Session A

Symposium: Extrusion Processes #1

- 1:p:1 Modelling of Solid Conveying, Melting and Pressure/Fill Factors Distributions in a Modular Co-Rotating Twin Screw Extruder S. Bawiskar, J. L. White
- 1:p:2 Flow Visualisation in Co-Rotating Twin-Screw Extruders O.S. Carneiro, G. Caldeira, J.A. Covas
- 1:p:3 Application of Digital Image Technique to Polymer Extrudates J. David, P. Filip, P. Sáha
- 1:p:4 Lubrication and Slip Flow During Extrusion of A Plasticized PVC Compound in the Presence of Lead Stabilizer I. Fras, P. Cassagnau, A. Michel
- 1:p:5 Influence of the Processing Parameters on both Rheological Behavior and slow Crack Growth resistance of Polyethylene Gas Pipes D. Gueugnaud, P. Blouet, A. Ouakka, K. Dang Van
- 1:p:6 The Thermal Nonhomogeneity in the Extruder Screw Channel V.V. Jinescu, N. Teodorescu, C. V. Jinescu
- 1:p:7 Design of Egan and Maddock Dispersive Mixers in Plasticating Extrusion C. Klason, V.V. Jinescu, I. Postoaca, C. V. Jinescu
- 1:p:8 Adsorptional Biocidal Polymeric Filtering Materials for Water Purification A.V. Makarevich, I.Yu. Ukhartseva, V.G. Plevachuk, A.G. Kravtsov, L.S. Pinchuk
- 1:p:9 A Processing Comparison of LLDPE and EPE Resins in Film Extrusion A. Mayer
- 1:p:10 Structural Change of High-Speed Spun Poly(ethylene 2,6-naphthalene dicarboxylate) Fibers on Annealing K. Miyata, H. Ito, T. Kikutani, N. Okui
- 1:p:11 Enhanced Gas-Barrier on PET Films for Packaging Using Silicon Oxide Plasma Coating A. Saraceno, V. Pische
- 1:p:12 Heat Transfer in three-Layer Film Blowing J. Stasiak
- 1:p:13 Evaluation of Profile Die Design Strategies J. Svabik, T. Mikulenska, M. Manas, J.W. Busby
- 1:p:14 Fibre Spinning of Recycled PP C. Christiani, M. Thilén, R. Shishoo, C. Klason
- 2:p:16 Investigation of Methenebutanoic Diacid Grafting to Polyethylene During Reactive Extrusion S.S. Pesetskii, B. Jurkowski, Yu.M. Krivoguz, R. Urbanovicz
- 2:p:19 Investigation of the phase Morphology and the Interface in Reactively Compatibilizer Polyamide/Polypropylene Blends V. Schiepers, G. Groeninckx
- 2:p:20 Dynamic Vulkanisation with Reactive Extrusion R. Schnabel, L.Q. Hung
- 2:p:22 Morphology and Physical-Mechanical Characterization Of Blends Between PP (Ti-Based Catalysts) and EPM (metallocene Catalysts) P. Sgarzi, P. Ferrari, G. Collina, R. Corrieri
- 2:p:23 Mechanical and Electrical Properties of Short Fibre Reinforced PP/PANI-Complex-Blends R. Taipalus, T. Harmia, K. Friedrich
- 2:p:24 Coalescence in Immiscible Polymer Blends K. Wallheinke, P. Pötschke, C.W. Macosko, H. Stutz
- 2:p:25 Use of Oxazoline-Functionalized Polyolefines and Elastomers for Compatibilization of Polyolefin-Based Blends C. Vocke, U. Anttila, M. Heino, P. Heitaaja, J. Seppälä
- 2:p:26 Radiation Processing of Syntetic Elastomers with some Polyolefins. Part I. Gel Content T. Zaharescu, S. Jipa, C. Podina
- 2:p:27 Radiation Processing of Syntetic Elastomers with some Polyolefins. Part II. Oxidation Stability T. Zaharescu, S. Jipa, C. Podina, I. Mihalcea
- 2:p:28 Radiation Processability of EPDM T. Zaharescu, C. Podina
- 2:p:29 Modelling of Fracture Toughness of Immiscible Thermoplastic Blends T. Harmia

Symposium: Compounding, Blending, Reactive Extrusion #2

- 2:p:1 Rheological Properties of particle Filled Thermoplastics and High Rubber Content Reactive Thermoplastic Blends at Very Low Shear Stresses T. Araki, J.L. White
- 2:p:2 Crystallizable Copolymers as obtained by Reactive melt-Extrusion of Aliphatic and Aromatic Polyamides: Characterization of the Semicrystalline Morphology using Time-Resolved SAXS and WAXS, and TEM K. Eersels, G. Groeninckx, H. Reynaers
- 2:p:3 X-ray Analysis of the Influence of Isotactic Polypropylene on the Crystallinity of Poly- α -butene G. Ferrara, G. Collina, H. Gabaldi
- 2:p:4 A Comparative study upon PP/EPM systems: Innovative Metallocene Based Blends versus Traditional PP/EPM Materials G. Ferrari, P. Sgarzi, G. Collina, R. Corrieri
- 2:p:5 Mechanical Properties of Plasticized Poly(vinylchloride): Effect of Flake-like Fillers Orientation and Drawing During Extrusion I. Fras, M. Boudeulle, P. Cassagnau, A. Michel
- 2:p:6 Blends of Syndiotactic Polystyrene with Poly(phenylene ether) G. Giannotta, R. Po, L. Abbondanza, G. Marra, N. Gazzarata, G.M. Deagostini, F. Garbassi
- 2:p:7 Super-Tough Ternary Blends Based on Special Morphology M.T. Heino, O.T. Ikkala, R.M. Holsti-Miettinen, J.V. Seppälä
- 2:p:9 Novel Thermoplastic Blends and Composites based on Biodegradable Poly(ester-urethanes) J. Kylmä, M. Hiljanen-Vainio, M. Heino, J.V. Seppälä
- 2:p:10 Interfacial Modification of Polyester/Olefin Elastomer Blends: Relation Between Melt Compounding, Rubber Phase Morphology and Mechanical Deformation Behaviour W. Loyens, G. Groeninckx
- 2:p:11 Steric Stabilization of Polymer Blends During Flow J. Lyngaae-Jørgensen
- 2:p:14 The influence of mechanical stimulation on physical aging in PEO/ α -PMMA amorphous blends in the T_g -region V. Pelisek, R.W. Rychwalski, P. Sáha
- 2:p:15 Formation of Blend Compositions on Polyamide 6 and Functionalized Polyolefines Base and their Properties S.S. Pesetskii, A.A. Bogoslavsky, V.N. Filippov, O.A. Makarenko

Symposium: Moulding Processes #3

- 3:p:1 Modelling of Injection Moulding of the Strengthened Polyethylene Articles A.L. Tchernykh, V.V. Kuznetsov, V.I. Gerasimov, Yu.V. Kazankov
- 3:p:2 Rotational Molding of Polyethylene Integral Foams D.M. Jahr, T-E. Bonsak, T. M. Klaveness
- 3:p:3 The drying of Thin Polymer Films used in Microlithography G. Jinescu, P. Vasilescu, D. V. Nicolau
- 3:p:4 Pressure and Temperature Dependence of Thermal Conductivity of Polymers T. Kikuchi, Y.-I. Masubuchi, J.-I. Takimoto, K. Koyama

Symposium: Rheology and Rheometry #4

- 4:p:3 Peculiarities of Rheological Behavior of Modified Polyolefines
I.Yu. Gorbunova, M.L. Kerber, S.I. Vladimirova
- 4:p:4 Development in On-Line Rheometry for Polymer Processing
N. Gustavsson
- 4:p:5 The Use of Rheology in Polymer Development E.-L. Heino
- 4:p:6 Some Difficulties in Estimating Reliable Rheological Behaviour
of S-PVC E.L. Hinrichsen, P. Thorsteinsen
- 4:p:7 Recoverable Compliance of LDPE and LLDPE Melts
J. Kaschta, C. Gabriel, H. Münsterdt
- 4:p:8 Viscosity of a Molten Bisphenol-A Epoxy Resin and Factors
Determining It A. Kastanek, M. Bohdanecky
- 4:p:9 Influence of some low molecular weight Organic Substances on
Pressure Oscillations in High Density Polyethylene Capillary
Flow L. Keyzlarová, J. Kubát, P. Sába
- 4:p:10 Rheological Properties of High Density Polyethylene/Paraffin
Systems T. Kitano, H. Sun, M. Ahamad, D. H. Kim
- 4:p:11 Impregnation of Unwoven Material by Polymers with Yield
Stress V. Kulichikhin, S. Kotomin, S. Antonov, G. Kulichikhin, M.
Kerber
- 4:p:12 Evaluation of Rheological Properties of Non-Newtonian Fluids
in Internal Mixers: An Indirect Method Based on Power Law
Model J.G. Mallette, R. R. Soberanis
- 4:p:13 Effect of Filler Concentration on the Elasticity of Filled
Polypropylene Melts J. Mikesova, I. Fortelny
- 4:p:14 Flow Visualisation of Polymer Melts Using a Variable
Geometry Cell C. Nakason, M. Kamala, M. Martyn, P. Olley,
C. Parminter, P.D. Coates
- 4:p:15 Crystallisation from the Melt at High Supercooling in Finely
Dispersing Polymer Blends: Viscoelastic Study I. Pesneau,
P. Cassagnau, R. Fulchiron, A. Michel
- 4:p:16 Rheological properties of SMC During non Iso-thermal
Compression Moulding C.F. Vahlund, B.R. Gebart
- 4:p:17 The Use of Differential Scanning Calorimetry (DSC) towards
Parameters Describing Physical Ageing J. Vernel,
R. Rychwalski, J.M. Hutchinson
- 4:p:18 In Line, On Line and Off Line Rheometry of Filled
Polyethylene Melts M. Woodhead, A.L. Kelly, P.D. Coates
- 4:p:19 Control of Rheological and Mechanical Properties of
Polyacrylate Blends D.N. Yemelyanov, V.A. Myachev
- 4:p:20 Rheological Behaviour of Metal Powder Suspensions at High
Shear Rates B. Zdrzilová, P. Sába, T. Kitano, J. Becker
- 4:p:21 Rheokinetic Behaviour of Melamine-Formaldehyde Resins
P.-O. Hagstrand, C. Klason, L. Svensson

Symposium: Mathematical Modelling #5

- 5:p:1 On a Nonlinear Differential Equation in Polymer Physics
M. Fialka, S. Vasút
- 5:p:2 3D Simulation on Twin-screw Extruders. K. Funatsu, L. Liu,
M. Yoshinaga
- 5:p:3 On Modelling Adhesion of Monofibre-Thermoplast Contact
Using AFM-Data V.V. Meshkov, S.A. Chizhik, A.I. Sviridenok
- 5:p:4 Flow Visualization and Finite Element Simulation of Polymer
Flow in a Stacked-Type Spiral Die J. Perdikoulis, C. Tzoganakis
- 5:p:5 Modeling of the Crystallization Kinetics of Non-Degraded and
Degraded Polymer R. Sciamanna, C. Albano, E. Mora, S. Parada
- 5:p:6 Nonlinear Phenomenological Description of Polymeric Fluids by
a Simple Constitutive Equation Y. Seo, S. J. Kwak, K. U. Kim

Symposium: Composite Processing #6

- 6:p:1 Ultrasonic Method for the determination of Absorbed Dose off
irradiation and Thermorelaxation Stresses in Heat-Shrinkable
Polymer Composites
V. Kalkis, J. Zicans, M. Kalnins
- 6:p:3 Composites on the Base of Thermoplastic Polymers and
Disperse Wood Waste St.M. Maskavs, M. Kalnins, S. Reikmane
- 6:p:5 Effect of Processing Condition on Electrical Properties and
their Thermal Stability for Three Component Composites
Polymer-Barium Titanate-Carbon Black A.T. Ponomarenko,
I.A. Tchmutin, V.G. Shevchenko, C. Klason, D. McQueen
- 6:p:7 Producing of Ultra-High-Molecular-Weight-Polyethylene Based
Highly Loaded Functional Materials I.N. Ponomarev, O.A.
Lapshova, M.L. Kerber, E.S. Grinenko

- 6:p:8 Processing and Characterization of Highly Filled Composite
Fibers V.G. Shevchenko, A.T. Ponomarenko, A.V. Buts,
N.E. Kazantseva, I.A. Tchmutin, C. Klason
- 6:p:9 Polymer Compositions of Biocide Effect D.N. Yemelyanov, Z.G.
Chernorukova, N.Yu. Novospasskaya, I.P. Lisova, A.I. Charov
- 6:p:10 Molecular Structure and Physical Properties of an
Epoxy/Bismaleimide IPN System P. Musto, E. Martuscelli,
G. Ragosta, P. Russo, G. Scarinzi

Symposium: Recycling Processes #7

- 7:p:1 Utilization of Plastic Wastes: HDPE C. Albano, G. Sánchez,
A. Ismayel
- 7:p:2 Plastic Wastes Recycling: LDPE C. Albano, R. Sciamanna,
A. Ramos, A. Silveira
- 7:p:3 Noise and Vibration Reducing by Utilizing Polymer Materials
S. Vasut, P. Bris, V. Fiser, D. Gerza
- 7:p:4 Reprocessing of a Nylon Based Blend
F.P. La Mantia, A. Valenza, C.A. Bernardo,
J.A. Covas, M. Kozłowski, R. Steller, M. Bryjak
- 7:p:5 New Routes of Compatibilisation of Recycled Plastic Waste
Mixtures
V. Khunova, Z. Tartakowski, C. L. Beatty

Symposium: Rubber Processing #8

- 8:p:2 High Pressure Vulcanisation - a Novel Technique for
Crosslinking of Rubber Materials M. Bellander, B. Stenberg,
S. Persson
- 8:p:3 An Elektrorheological Damper Prototype P. Nordberg,
B. Stenberg, M. Lizell, J. Asplund
- 8:p:4 Some Aspects of Polymer and Rubber Grinding E. Prut
- 8:p:5 Influence of Rubber Properties on the Structure of
Thermoplastic Elastomers E. Prut, N. Yerina