Program APST 3

APST 3 - JKU Linz - Monday, September 09, 2013: Plenary Day

Where: lecture hall HS 19, Science Park 3, JKU Linz

Time	What Who	Title of Abstract
09:30	Official Opening	
09:40-10:20	Chair: C. Paulik - Keynote 1 / Maurits van Tol	Polyolefins for the 21st Century: Innovation, Performance and Efficiency
10:20-11:00	Chair: C. Paulik - Keynote 2 / Vincenzo Busico	Polyolefin catalysis: new approaches to old problems
11:00-11:20	Chair: C. Paulik - Lecture 1 / Béla Pukánszky	THE ROLE OF SOLUBILITY AND CRITICAL TEMPERATURES ON THE EFFICIENCY OF SORBITOL CLARIFIERS IN POLYPROPYLENE
11:20-11:40	Chair: C. Paulik - Lecture 2 / Wolfgang Kern	NANOPARTICLES BEARING A PHOTOREACTIVE SHELL: INTERACTIONS WITH POLYMERS AND POLYMER SURFACES
11:40-12:00	Chair: C. Paulik - Lecture 3 / Juraj Kosek	MODELING OF MORPHOLOGY EVOLUTION OF HIGH-IMPACT POLYSTYRENE DURING PHASE INVERSION
12:00-13:00	Lunch Break	
13:00-13:40	Chair: O. Brüggemann - Keynote 3 / Huiqi Zhang	CONTROLLED/"LIVING"RADICAL PRECIPITATION POLYMERIZATION FOR THE SYNTHESIS OF ADVANCED FUNCTIONAL POLYMERS
13:40-14:20	Chair: O. Brüggemann - Keynote 4 / Manfred Bochmann	The Chemistry of Catalyst Activation: Recent Results on Structure and Function of Methylaluminoxane
14:20-14:40	Chair: O. Brüggemann - Lecture 4 / Hans-Joachim Radusch	SELECTIVE LASER SINTERING WITH PROPYLENE COPOLYMERS AND POLYPROPYLENE BLENDS
14:40-15:00	Chair: O. Brüggemann - Lecture 5 / Walter Friesenbichler	EXTENSIONAL RHEOLOGY FOR MULTIPLE APPLICATIONS IN POLYMER PROCESSING
15:00-15:20	Chair: O. Brüggemann - Lecture 6 / Gerhard Eder	EXTENSION OF CLASSICAL NUCLEATION THEORIES: EXISTENCE OF STABLE CLUSTERS IN THE MELT STATE
15:20-15:40	Coffee Break	
15:40-16:20	Chair: Z. Major - Keynote 5 / Yonggang Huang	Mechanics of Stretchable Electronics
16:20-17:00	Chair: Z. Major - Keynote 6 / Hiroshi Ito	NOVEL PRECISE POYMER PROCESSING – Surface Fabrication and Its Properties in Micro- and Nano-scale Moulding –
17:00-19:00	Poster Reception & Informal Get Together & Poster Awards	-
19:00	Conference Dinner	-

APST 3 - JKU Linz - Tuesday, September 10, 2013: Parallel Sessions
Session Polymer Chemistry

Where: lecture room S3 055

Time	What / Who	Title of Abstract
09:00-09:15	Chair: W. Kern - Keynote 7 / Franz Stelzer	Applications of Metathesis Reactions in Polymer Chemistry
09:15-09:30		
09:30-09:45		
09:45-10:00	Chair: W. Kern - Lecture C1 / Khalid Kabel	SYNTHESIS AND EVALUATION OF PAMAM DENDRIMER AND PDPF-b-POP BLOCK COPOLYMERS AS ASPHALTENE INHIBITOR/DISPERSANT
10:00-10:15	Chair: W. Kern - Lecture C2 / Nermen Hefiny	IMPROVEMENT OF TONER INK MATERIALS BY POLYMER-WAX NANOPARTICLES
10:15-10:30	Chair: W. Kern - Lecture C3 / Martin Fimberger	POLY(2-OXAZOLINE)-BASED TOOLKIT FOR HIGH-RESOLUTION-PHOTORESISTS WITH TAILOR-MADE ADHESION
10:30-10:45	Chair: W. Kern - Lecture C4 / Frank Wiesbrock	POLY(2-OXAZOLINE)S AS ADDITIVES IN POLYOLEFIN COMPOUNDS WITH ANTIMICROBIALLY ACTIVE SURFACES
10:45-11:00	Chair: W. Kern - Lecture C5 / Kentaro Taki	Rapid Production of Ultralow Dielectric Constant Porous Polyimide Films via CO2-tert-amine Zwitterion Induced Phase Separation and Subsequent Photopolymerization
11:00-11:30	Coffee Break	
11:30-11:45		
11:45-12:00		
12:00-12:15		
12:15-12:30	Chair: W. Kern - Lecture C6 / Ian Teasdale	CONTROLLING THE SIZE, FUNCTIONALITY, STRUCTURE AND BIODEGRADABILITY OF POLYPHOSPHAZENES
12:30-12:45	Chair: W. Kern - Lecture C7 / Lucas Sternbauer	DETERMINATION OF POLYMER ADDITIVES BY MICROWAVE ASSISTED EXTRACTION AND HIGH TEMPERATURE GAS CHROMATOGRAPHY / MASS SPECTROMETRY
12:45-13:00	Chair: W. Kern - Lecture C8 / Andreas Weber	THERMOTROPIC OVERHEATING PROTECTION GLAZINGS
13:00-14:00	Coffee Break	
14:00-14:15		
14:15-14:30		
14:30-14:45		
14:45-15:00	Chair: H. Radusch - Lecture C9 / Elisabeth Rossegger	STRUCTURAL PROPERTIES OF POLY(2-AZANORBORNENE)S
15:00-15:15	Chair: H. Radusch - Lecture C10 / Roberta Pellecchia	PARALLEL MULTISTEP POLYMERISATION REACTORS (PDR): A CLEAR BENEFIT FOR OUR POLYMERISATION RESEARCH
15:15-15:30	Chair: H. Radusch - Lecture C11 / Rebecca Kramer	EVALUATION AND CHARACTERIZATION OF THE BARRIER PROPERTIES OF MULTILAYER POLYOLEFINIC COMPOSITES
15:30-16:00	Coffee Break	
16:00-16:15	Chair: H. Radusch - Lecture C12 / Manuela List	POLYMERIZATION OF ETHYLENE AND VINYLMELAMINES WITH ZIEGLER-NATTA-CATALYST AND METALLOCENES
16:15-16:30	Chair: H. Radusch - Lecture C13 / Thomas Höchfurtner	Influence of co-catalyst type in Ziegler Natta ethene polymerization on the formation of active sites, polymerization rate and molecular weight
16:30-16:45	Chair: H. Radusch - Lecture C14 / Leonhard Mayrhofer	OBSERVATION OF SINGLE PARTICLE GAS-PHASE ETHYLENE HOMO-POLYMERIZATION WITH 4th GENERATION ZIEGLER-NATTA CATALYST IN A MICROREACTOR
16:45-17:00	Chair: H. Radusch - Lecture C15 / Razilya Khusnulina	FILLERS IN COSMETICS
17:00-17:15		
17:15-17:30		
17:30	Closing and Reception	

APST 3 - JKU Linz - Tuesday, September 10, 2013: Parallel Sessions
Session Polymer Characterisation

Where: lecture hall HS 19

Time	What / Who	Title of Abstract
09:00-09:15		
09:15-09:30		
09:30-09:45		
09:45-10:00	Chair: B. Pukánszky - Lecture A1 / Stefan Gabriel	MALDI MASS SPECTROMETRY OF POLYMERS USING IONIC MATRICES FOR THE DRIED DROPLET SAMPLE PREPARATION
10:00-10:15	Chair: B. Pukánszky - Lecture A2 / Peter Montag	High temperature LC of complex polyolefins mixtures
10:15-10:30	Chair: B. Pukánszky - Lecture A3 / Zengrong Zhang	POWERFUL ON-LINE FTIR DETECTION IN POLYOLEFIN FRACTIONATION
10:30-10:45	Chair: B. Pukánszky - Lecture A4 / Christian Kneidinger	A NEW MODEL EXPERIMENT TO CHARACTERIZE THE MELTING PROZESS IN SINGLE SCREW EXTRUDERS
10:45-11:00	Chair: B. Pukánszky - Lecture A5 / Matthias Mihalic	INVESTIGATION OF PARTIAL MISCIBILITY OF PP/PE BLENDS USING THE RELAXATION TIME SPECTRUM
11:00-11:30	Coffee Break	
11:30-11:45		
11:45-12:00	Chair: B. Pukánszky - Keynote 8 / Jaime Bonilla Rios	
12:00-12:15		
12:15-12:30	Chair: B. Pukánszky - Lecture A6 / Andreas Moser	Time-temperature superposition of thermoplastic polymeric materials
12:30-12:45	Chair: B. Pukánszky - Lecture A7 / Franz Hiptmair	EFFECT OF PARTICLE ALIGNMENT INDUCED ANISOTROPY ON THE MECHANICAL PROPERTIES OF MAGNETOELASTOMERS
12:45-13:00	Chair: B. Pukánszky - Lecture A8 / János Móczó	EFFECT OF FIBER CHARACTERISTICS ON THE MICROMECHANICAL DEFORMATION PROCESSES IN FIBER REINFORCED COMPOSITES
13:00-14:00	Coffee Break	
14:00-14:15	Chair: G. Eder - Lecture A9 / Vikas Mittal	CHARACTERIZATION OF INTERFACIAL INTERACTIONS AND MORPHOLOGY OF PE-CPE NANOCOMPOSITES WITH GRAPHENE
14:15-14:30	Chair: G. Eder - Lecture A10 / Károly Renner	THE ROLE OF DEFORMATION PROCESSES IN THE IMPACT RESISTANCE OF PP/WOOD COMPOSITES
14:30-14:45	Chair: G. Eder - Lecture A11 / Michaela Kersch	INVESTIGATION OF THE INFLUENCE OF SOLUBLE NUCLEATING AGENTS ON THE MECHANICAL PROPERTIES OF ISOTACTIC POLYPROPYLENE
14:45-15:00	Chair: G. Eder - Lecture A12 / Markus Povacz	EFFECT OF PIGMENT CONCENTRATION ON OPTICAL AND MECHANICAL PROPERTIES OF POLYPROPYLENE ABSORBER MATERIALS
15:00-15:15	Chair: G. Eder - Lecture A13 / Kathrina Schöfberger	SPECTROSCOPICAL AND THERMOANALYTICAL CHARACTERIZATION OF DEFORMED BETA-NUCLEATED POLYPROPYLENE
15:15-15:30	Chair: G. Eder - Lecture A14 / Krisztina Vincze-Minya	POLARIZED μ-RAMAN IMAGING SPECTROSCOPY FOR THE ESTIMATION OF CRYSTALLINITY AND ORIENTATION OF iPP FILMS
15:30-16:00	Coffee Break	
16:00-16:15	Chair: G. Eder - Lecture A15 / Florian Arbeiter	Comparison of fracture times of PE-HD pressure pipes and PP-Multilayer pipes using Linear Elastic Fracture Mechanics
16:15-16:30	Chair: G. Eder - Lecture A16 / Luca Boragno	Effect of i-PP beta phase content on mechanical properties related to pipe applications
16:30-16:45	Chair: G. Eder - Lecture A17 / Andreas Frank	THE CYCLIC CRB TEST ON ITS WAY TO STANDARDIZATION
16:45-17:00	Chair: G. Eder - Lecture A18 / Klemens Grabmayer	ACCELERATED AGING TESTING OF POLYMERIC MATERIALS USING MICRO-SIZED SPECIMENS
17:00-17:15	Chair: G. Eder - Lecture A19 / Anna Maria Hartl	Characterisation of Quasi-brittle Failure Behaviour of Polypropylene Pipe Materials
17:15-17:30	Chair: G. Eder - Lecture A20 / Paul Franz Schöffl	SLOW CRACK GROWTH BEHAVIOUR AND FAILURE MECHANISMS OF PE 100 PIPE GRADE MATERIALS EXPOSED TO LIQUID HYDROCARBON ENVIRONMENT
17:30	Closing and Reception	

APST 3 - JKU Linz - Tuesday, September 10, 2013: Parallel Sessions
Session Polymer Engineering

Where: lecture hall HS 18

Time	What / Who	Title of Abstract
09:00-09:15	Chair: J. Kosek - Lecture E1 / Michael Aigner	Optimizing the extrusion process to improve melt quality
09:15-09:30	Chair: J. Kosek - Lecture E2 / Christoph Burgstaller	INFLUENCE OF COMPATIBILIZER TYPE ON THE PROPERTIES OF PE-PA6-BLENDS
09:30-09:45	Chair: J. Kosek - Lecture E3 / Velichko Hristov	COMPOUNDING KNOW-WHY: OPTIMIZATION OF PROCESSING CONDITIONS OF PP-TALC COMPOSITES.
09:45-10:00	Chair: J. Kosek - Lecture E4 / Thomas Köpplmayr	VISCOELASTIC TWO-PHASE FLOWS OF POLYMER MELTS
10:00-10:15	Chair: J. Kosek - Lecture E5 / Manuel Längauer	Influences of the geometry of pellets and solids-conveying zone in PP-single screw extrusion on processing conditions and output
10:15-10:30	Chair: J. Kosek - Lecture E6 / Martin Machado	COHESIVE MODELING OF SINGLE-LAP-JOINT ASSEMBLIES FOR CARBON FIBER TAPES
10:30-10:45	Chair: J. Kosek - Lecture E7 / Daniela Mileva	Cooling rate effects on crystal modification development and post-crystallization effects in β-nucleated polypropylene
10:45-11:00	Chair: J. Kosek - Lecture E8 / Michael Matthias Nardai	IMPACT OF CONCENTRATION, SIZE AND SHAPE ON INTERPOLYMERIC CONTACT PROBABILITIES
11:00-11:30	Coffee Break	
11:30-11:45		
11:45-12:00		
12:00-12:15		
12:15-12:30	Chair: J. Kosek - Lecture E9 / Gerald Polt	THE THERMAL STABILITY OF DISLOCATIONS IN α - PHASE POLYPROPYLENE
12:30-12:45	Chair: J. Kosek - Lecture E10 / Florian Spieckermann	Rate Mechanism and Dislocation Generation in Polyethylene
12:45-13:00	Chair: J. Kosek - Lecture E11 / Daniel Tscharnuter	Nonlinear viscoelastic response of polyoxymethylene
13:00-14:00	Coffee Break	
14:00-14:15	Chair: W. Friesenbichler - Keynote 9 / Chris Rauwendaal	Barrier Screws – More than 50 Years since Maillefer's first Development
14:15-14:30		
14:30-14:45		
14:45-15:00	Chair: W. Friesenbichler - Lecture E12 / Jingbo Wang	Effects of nucleating agents and processing conditions on the transparency of polypropylene copolymers
15:00-15:15	Chair: W. Friesenbichler - Lecture E13 / Ramune Zykaite	COMPARISON OF INTERFACIAL SHEAR STRENGTH CHARACTERISED USING FIBRE DEBOND AND MECHANICAL TESTING IN POLYPROPYLENE BASALT FIBER COMPOSITES
15:15-15:30	Chair: W. Friesenbichler - Lecture E14 / Pablo I. Aguayo	STUDIES ON THE FLUIDIZATION REGIMES IN A GAS PHASE POLYMERIZATION REACTOR BY COMPUTATIONAL FLUID DYNAMICS
15:30-16:00	Coffee Break	
16:00-16:15	Chair: W. Friesenbichler - Lecture E15 / Arash Alizadeh	COSOLUBILITY EFFECT DURING GAS PHASE ETHYLENE POLYMERIZATION ON SUPPORTED CATALYST: FROM EXPERIMENTAL TO MODELING ANALYSIS
16:15-16:30	Chair: W. Friesenbichler - Lecture E16 / Muhammad A. Bashir	PARTIAL MOLAR VOLUMES OF α-OLEFINS IN SEMI-CRYSTALLINE POLYOLEFINS
16:30-16:45	Chair: W. Friesenbichler - Lecture E17 / Stephan Eisenhaber	Shielding effects in surface initiated Z-RAFT polymerization studied by Monte Carlo simulation
16:45-17:00	Chair: W. Friesenbichler - Lecture E18 / Vasileios Touloupidis	SOFTWARE TOOL FOR CATALYST CHARACTERIZATION
17:00-17:15		
17:15-17:30		
17:30	Closing and Reception	

POSTERS

Session Polymer Chemistry

PC 1	Helena HENKE	BIODEGRADABLE POLYPHOSPHAZENE MOLECULAR BRUSHES
PC 2	Anne BORNSCHLEGEL	POLYPHOSPHAZENES WITH pH-TRIGGERED DEGRADATION AND DRUG RELEASE
PC 3	Andrea EDER	POLYMERIZATION OF ETHYLENE AND VINYLMELAMINES WITH ZIEGLER-NATTA-CATALYST
PC 4	Wolfgang GNONG	COMPERATIVE STUDY OF TWO NOVEL MELAMINE BASED POLYOLEFIN ANTIOXIDANTS
PC 5	Michael HESCHIK	COPOLYMERIZATION OF VINYLMELAMINES WITH COMMON MONOMERS AND CHARACTERIZATION OF THE PRODUCTS
PC 6	Thomas J. HINTERBERGER	INCREASING THE LONG-TERM STABILITY OF THE THERMAL INSULATION OF HEATING PIPES
PC 7	Thomas J. HINTERBERGER	INVESTIGATION OF VOLATILE DEGRADATION PRODUCTS OF STABILIZERS USED IN POLYMERIC MATERIALS IN THE PRESENCE OF FILLERS
PC 8	Aitziber ITURMENDI	THERMORESPONSIVE MOLECULAR BRUSHES BASED ON POLYPHOSPHAZENES
PC 9	Christine KLEIN	LINKING ANTIOXIDANTS TO MULTI WALL CARBON NANOTUBES

POSTERS

Session Polymer Characterisation

PA 1	Umit ALKAN	THE EFFECTS OF ELECTRICAL DISCHARGE ON THE MECHANICAL PROPERTIES OF LDPE/GLASS FIBER COMPOSITES
PA 2	Isabelle BERGER	THE EFFECT OF FIBER TWISTING ON THE MECHANICAL BEHAVIOUR OF BIAXIAL BRAIDED COMPOSITES
PA 3	Josef CHMELAR	EQUILIBIRUM SORPTION IN POLYETHYLENE POWDERS
PA 4	Matthias ECKERSTORFER	DEVELOPMENT OF A MAGNETOELASTOMERIC DEMONSTRATOR
PA 5	Tomas GREGOR	POLYMER STRUCTURE INVESTIGATION WITH MICRO-TOMOGRAPHY
PA 6	Zsuzsanna HORVÁTH	EFFECT OF THE MOLECULAR STRUCTURE OF THE POLYMER AND NUCLEATION ON THE OPTICAL PROPERTIES OF POLYPROPYLENE HOMO- AND COPOLYMERS
PA 7	Ljiljana JEREMIC	CHARACTERISATION OF THE CHEMICAL COMPOSITION DISTRIBUTION OF UNIMODAL AND MULTIMODAL POLYETHYLENES
PA 8	Sibylle JILG	COMBINED INFLUENCE OF PRESSURE AND SHEAR RATE ON THE CRYSTALLISATION BEHAVIOUR OF iPPs
PA 9	Jaroslav KUCERA	RELAXATION OF INTERNAL STRESS IN PP-RC PIPE
PA 10	Zoltán LINK	PP/WOOD/ELASTOMER HYBRID COMPOSITES WITH CONTROLLED STRUCTURE
PA 11	Roman RITTBERGER	DETERMINATION OF SURFACE TENSION AND DENSITY OF POLYMER MELTS: A NEW TECHNIQUE USING PARALLEL DISKS (RHEOMETER)
PA 12	Bedřich ŠIŠKA	RHEOLOGICAL CHARACTERIZATION OF HOT MELTS BASED ON VINYL ACETATE COPOLYMER
PA 13	Klara SMOLNA	MORPHOLOGY OF HIGH-IMPACT POLYPROPYLENE
PA 14	Krisztina VINCZE-MINYA	SCANNING FORCE MICROSCOPY AND POLARIZED CONFOCAL- RAMAN MICROSCOPY FOR IN-SITU CHARACTERIZATION OF UNIAXIALLY STRETCHED ETHYLENE BASED THERMOPLASTIC ELASTOMERS
PA 15	Manuela LIST	TESTING AND OPTIMIZING OF VARIOUS ANALYTICAL METHODS FOR THE MIGRATION OF POLYOLS USED IN THE MANUFACTURE OF WATER BASED UV-CURABLE INKS

POSTERS

Session Polymer Engineering

PE 1	Michael AIGNER	VERIFICATION OF THE MELTING BEHAVIOUR IN A SINGLE SCREW PLASTICIZATION UNIT
PE 2	Pavel FERKL	HEAT TRANSFER MODELING IN POLYMERIC FOAMS
PE 3	Robert GERSTMAYR	MECHANICAL BEHAVIOR OF COMPOSITE SANDWICH MATERIALS LOADED UNDER FOUR POINT BENDING
PE 4	Antonis GITSAS	EFFECTS OF POLYMORPHISM ON THE BOPP PROCESSING
PE 5	Jürgen HOLZWEBER	DEVELOPING OF A BIOCOMPATIBLE MOUTHPIECE USING VARIOUS POLYMERIC MATERIALS
PE 6	Juraj KOSEK	FOULING OF EMULSIONS SIMULATED BY DISCRETE ELEMENT MODELING
PE 7	Martín MACHADO	NUMERICAL DESIGN AND MECHANICAL PERFORMANCE OF INJECTED MOLDED CARBON FIBER/PEEK GEARS
PE 8	Bianca PURGLEITNER	INVESTIGATIONS ON ABRASIVE WEAR OF FILLED PP COMPOUNDS WITH A NOVEL CAPILLARY SLIT DIE
PE 9	Philipp PICHLER	HYPERELASTIC MATERIAL MODELS FOR THE NUMERICAL SIMULATION OF SEALS IN A HYDROGEN FUELING PROCESS