

32nd Polymer Processing Society Annual Meeting 2016 (PPS-32)

Lyon, France
25 - 29 July 2016

Volume 1 of 2

ISBN: 978-1-5108-4339-4

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by Polymer Processing Society
All rights reserved.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact Polymer Processing Society
at the address below.

Polymer Processing Society
810 E. 10th St.
Lawrence, KS 66044
USA

Phone: +1-800-627-0326
+1-785-865-9403
Fax: +1-785-843-6153

pps@allenpress.com

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

VOLUME 1

BLOW MOLDING, THERMOFORMING AND ROTOMOLDING

OPTIMIZATION OF THE IR-HEATING PHASE IN THERMOFORMING OF THERMOPLASTIC SHEETS: CHARACTERIZATION AND MODELLING	1
<i>B. Buffel, B. Van Mieghem, A. Van Bael, F. Desplentere</i>	
INVESTIGATION OF HALLOYSITE AS REINFORCEMENT FOR POLYETHYLENES IN ROTATIONAL MOULDING	6
<i>G. Hofler, R.J.T. Lin, K. Jayaraman</i>	
EFFECT OF MOLECULAR WEIGHT DISTRIBUTION ON THE THERMAL AND PHYSICAL-MECHANICAL PROPERTIES OF HIGH DENSITY POLYETHYLENE BLOW MOLDING GRADE	11
<i>A. Kamal, K. Ali</i>	
MODELLING AND PROTOTYPING OF THE CENTRIFUGAL CASTING PROCESS OF PARAFFIN-BASED THERMOPLASTIC POLYMERS	16
<i>D. Masato, G. Lucchetta</i>	

NANOCOMPOSITES AND FILLED POLYMERS

OPTIMIZATION AND MODELLING OF DELIGNIFICATION PROCESS FOR NANOCRYSTALLINE CELLULOSE PRODUCTION FROM RICE HUSK BIOMASS	21
<i>S. Islam, N. Kao, S.N. Bhattacharya, R. Gupta</i>	
POLYMER CARBON NANOTUBE COMPOSITES FOR THERMOELECTRIC APPLICATIONS	26
<i>J. Luo, P. Potschke, B. Krause</i>	
CRYSTALLINE NANOCCELLULOSE IN BIODEGRADABLE POLYESTER NANOCOMPOSITES PREPARED BY IN SITU POLYMERIZATION	31
<i>A. Clarke, A.A. Vasileiou, M. Kontopoulou</i>	
INFLUENCE OF NANOCCLAY ON MECHANICAL PROPERTIES OF GLASS FIBER REINFORCED POLYPROPYLENE COMPOSITES	36
<i>G.J. Pelaez, J.A. Sousa</i>	
IMPROVEMENT OF THE MECHANICAL AND ELECTRICAL PROPERTIES OF TECHNICAL THERMOPLASTICS BY UTILIZING 2ND GENERATION LAYERED SILICATES	41
<i>V. Altstadt, J. Breu</i>	
INFLUENCE OF GRAPHITE AND SEBS ADDITION ON THERMAL AND ELECTRICAL CONDUCTIVITY AND MECHANICAL PROPERTIES OF POLYPROPYLENE COMPOSITES	42
<i>B. Krause, A. Cohnen, P. Potschke, T. Hickmann, D. Koppler, B. Proksch, T. Kersting, C. Hopmann</i>	
MICROCAPSULES OF POLY(METHYL METHACRYLATE) CONTAINING EPOXY RESIN AND MULTI-WALLED CARBON NANOTUBES	47
<i>M.G. Icduygu, M. Asilturk, M.C. Altan</i>	
AC ELECTRICAL CONDUCTIVITY, SHIELDING EFFECTIVENESS AND VISCOELASTIC CHARACTERISTICS OF NANOCOMPOSITES BASED ON RTV SILICON RUBBER AND NANO GRAPHITE SHEETS/CARBON BLACK HYBRID SYSTEM	52
<i>A.A. Katbab, J. Jeddi</i>	
VISCOSITY AMPLIFICATION IN DILUTE SUSPENSIONS OF NON-SPHERICAL PARTICLES IN A NON-NEWTONIAN MATRIX FLUID	57
<i>J. Domurath, M. Saphiannikova, G. Ausias, J. Ferec, G. Heinrich</i>	
IMPACT OF SYNTHESIS TEMPERATURE ON STRUCTURE OF CARBON NANOTUBES AND MORPHOLOGICAL AND ELECTRICAL CHARACTERIZATION OF THEIR POLYMERIC NANOCOMPOSITES	58
<i>M. Arjmand, S.A. Mirkhani, P. Potschke, B. Krause, U. Sundararaj</i>	
LOCALIZATION OF MWCNTS IN EOC/COC BLENDS	63
<i>A. Hosseinpour, H. Nazockdast, A.A. Katbab, M. Mehranpour, S. Ghiassinejad</i>	

INFLUENCE OF FILLER DISPERSION AND INTERFACIAL RESISTANCE ON THERMAL CONDUCTIVITY OF POLYPROPYLENE/CARBON NANOTUBES SYSTEMS.....	68
<i>A. Patti, D. Acierno, P. Russo</i>	
EFFECT OF OMMT ON FIRE RESISTANCE OF EVA-BASED CERAMIFYING COMPOSITES	73
<i>X. Gong, Y. Shen, T. Wang</i>	
HOW TO EFFICIENTLY ENHANCE THE THERMAL CONDUCTIVITY OF POLY(VINYLIDENE FLUORIDE)-BASED COMPOSITES?	76
<i>Y. Wang, Y.J. Xiao, J.H. Yang</i>	
DETERMINATION OF THE OPTIMUM COUPLING AGENT CONTENT FOR COMPOSITES BASED ON HEMP AND HIGH DENSITY POLYETHYLENE	80
<i>D. Rodrigue, A. Kavianiboroujeni, A. Cloutier</i>	
FIBER LENGTH REDUCTION DURING SHEARING IN POLYMER PROCESSING.....	85
<i>E. Moritzer, G. Heiderich</i>	
THE RHEOLOGICAL AND THERMAL CONDUCTIVITY STUDY ON PA/COC BLEND FILLED BY BORON NITRIDE	90
<i>N. Ghahramani, S.A.S. Esfahani, M. Mehranpour, H. Nazockdast</i>	
MELT MIXING FUNCTIONALIZED GRAPHITE NANOPATES INTO PC/SAN BLENDS	95
<i>M.C. Paiva, E.P. Cunha, O. Voigt, M. Liebscher, F. Simon, J. Pionteck, P. Potschker</i>	
EFFECT OF CARBON NANO TUBE (CNT) ON PA6/PE BASE SHAPE MEMORY ALLOY	100
<i>S.A. Mohammadi, I. Ghasemi, M. Mehranpour</i>	
BIO-BASED EPOXY CLAY NANOCOMPOSITES	105
<i>A. Rigail-Cedeno, D.F. Schmidt</i>	
EFFECT OF DIFFERENT MINERAL FILLERS ON RHEOLOGICAL AND THERMAL PROPERTIES OF POLYLACTIDE/POLY(METHYL METHACRYLATE) BLENDS.....	109
<i>M. Gonzalez, S. Shahbikian, M.A. Huneault</i>	
NON-ISOTHERMAL CRYSTALLIZATION KINETICS OF CARBONACEOUS NANOFILLER REINFORCED POLY(BUTYLENE SUCCINATE) NANOCOMPOSITES.....	114
<i>S. Filizgok, M. Kodal, G. Ozkoc</i>	
INFLUENCE OF MIXING CONDITIONS ON CARBON NANOTUBE SHORTENING AND CURLING IN POLYCARBONATE COMPOSITES	119
<i>B. Krause, J. Carval, P. Potschke</i>	
PP/SWCNT COMPOSITES MODIFIED WITH IONIC LIQUID	124
<i>B. Krause, M. Predtechensky, E. Ilin, P. Potschke</i>	
THERMAL CONDUCTIVITY OF HYBRID FILLED HDPE NANOCOMPOSITES	129
<i>M.T. Muller, B. Krause, B. Kretzschmar, I. Jahn, P. Potschke</i>	
INVESTIGATION OF THE CORRELATION BETWEEN ADHESION STRENGTH AND THERMODYNAMIC WORK OF ADHESION ON SILICONE RUBBER-KEVLAR/RAYON FIBERS	134
<i>H. Sirin, M. Kodal, B. Karaagac, G. Ozkoc</i>	
SYNTHESIS AND PROPERTIES OF POSS MODIFIED PS MICROBEADS	138
<i>N.T. Kilic, G. Turgut, S.B.A. Yildirim, O. Yogurtcu, M. Kodal, G. Ozkoc</i>	
EFFECTS OF NANOCLAY CONTENT ON MELT FLOW RATE OF POLYAMIDE 12/CLAY NANOCOMPOSITES.....	143
<i>J. Stojic, P. Raos, T. Galeta</i>	
RELATIONSHIP BETWEEN CRYSTALLIZATION KINETICS AND INTERFACIAL INTERACTIONS IN PLA/POSS NANOCOMPOSITES	147
<i>M. Kodal, H. Sirin, G. Ozkoc</i>	
ORGANIC MODIFICATION OF MMT CLAY WITH POLYANILINE: EFFECT ON ELECTRICAL AND MORPHOLOGICAL PROPERTIES	151
<i>C.P. Presendo, W.A. Saade, W.M. Pachekoski, C. Dalmolin, D. Becker</i>	
RHEOLOGY AND PHYSICAL CHARACTERISATION OF GRAPHENE NANOPATELET/ POLY (BUTYLENE ADIPATE-CO-TEREPHTHALATE) NANOCOMPOSITES.....	156
<i>S. Kashi, R.K. Gupta, N. Kao, S.N. Bhattacharya</i>	
SYNERGISTIC EFFECT OF COMPATIBILIZER IN FLAME-RETARDANT POLYPROPYLENE COMPOUNDS.....	161
<i>B.C. Bonse, R.G. Bringel, A.C.B. Ferreira</i>	
ISOTHERMAL CRYSTALLIZATION BEHAVIOR AND MICROSTRUCTURE OF POLY(BUTYLENE SUCCINATE-CO-ADIPATE)/MODIFIED LAYERED DOUBLE HYDROXIDES NANOCOMPOSITES	165
<i>G.S. Tsai, Y.A. Chen, E.C. Chen, T.M. Wu</i>	

INFLUENCE OF GRAPHENE NANOPATELETS ON THE PROPERTIES OF PLASTICIZED POLY (LACTIC ACID) NANOCOMPOSITES	168
<i>J.A. Da Silva, W.M. Pachekoski, D. Becker</i>	
CHARACTERIZATION OF NANOCOMPOSITES FOR HYDROGEN STORAGE	173
<i>A.D. Oliveira, C.A.G. Beatrice, F.R. Passador, L.A. Pessan</i>	
POLYMER NANOCOMPOSITES FOR HYDROGEN STORAGE	178
<i>C.A.G. Beatrice, A.D. Oliveira, F.R. Passador, L.A. Pessan</i>	
INFLUENCE OF MATRIX CRYSTALLINITY ON ELECTRICAL PERCOLATION OF MULTIWALLED CARBON NANOTUBES IN POLYPROPYLENE	183
<i>M. Gultner, L. Haubler, P. Potschke</i>	
LARGELY IMPROVED TOUGHNESS OF IMMISCIBLE BLEND ACHIEVED BY ADDING CHEMICALLY MODIFIED GRAPHENE OXIDE	188
<i>W.B. Huang, T.T. Zhang, H.J. Mao, N. Zhang, T. Huang, J.H. Yang, Y. Wang</i>	
INFLUENCE OF PLASTICIZER AND DISPERSION METHODS ON THE PROPERTIES OF POLY (VINYL CHLORIDE) AND CLAY NANOCOMPOSITES	192
<i>D. Becker, S. Bohn, P.S. Balzer</i>	
THERMAL HISTORY EFFECTS ON MOISTURE ABSORPTION OF FIBER-REINFORCED POLYMER COMPOSITES	197
<i>Y.K. Hamidi, L. Aktas, M.C. Altan</i>	
CRYSTALLIZATION KINETICS OF POLY (1, 4-BUTYLENE ADIPATE)/ORGANICALLY-MODIFIED LAYERED ZINC PHENYLPHOSPHONATE NANOCOMPOSITES	202
<i>Y.A. Chen, T.M. Wu</i>	
SYNTHESIS OF GRAPHENE NANORIBBON/REDUCED GRAPHENE OXIDE/POLYPYRROLE NANOCOMPOSITES AS ELECTRODE FOR SUPERCAPACITOR	206
<i>C.Y. Wang, T.M. Wu</i>	
COMPARISON ANALYSIS OF DIELECTRIC PROPERTIES OF LLDPE BASED COMPOUNDS FILLED BY HALLOYSITE NANOTUBES AND MONTMORILLONITE	211
<i>P. Kadlec, M. Cermak, R. Polansky</i>	
INVESTIGATION OF POLYPYRROLE/MOLYBDENUM TRIOXIDE/GRAPHENE NANORIBBON NANOCOMPOSITE WITH HIGH ELECTROCHEMICAL CAPACITY PERFORMANCE FOR ELECTRODE MATERIAL OF SUPERCAPACITOR	216
<i>F.H. Hsu, T.M. Wu</i>	
OXIDIZATION OF CARBON NANOFIBER AND ITS EFFECT ON TENSILE PROPERTIES OF PA11 MATRIX COMPOSITE REINFORCED WITH CARBON NANOFIBER	220
<i>K. Enomoto, Y. Takahashi</i>	
PREPARATION AND CHARACTERIZATION OF POLYETHYLENE NANOCOMPOSITES WITH CLAY AND SILVER NANOPARTICLES	224
<i>W.L. Oliani, H.F.R. Ferreto, L.G.H. Komatsu, A.B. Lugao, V.K. Rangari, N. Lincopan, D.F. Parra</i>	
EFFECT OF ADDITIVES ON MWCNT DISPERSION AND ELECTRICAL PERCOLATION IN POLYAMIDE 12 COMPOSITES	229
<i>R. Socher, B. Krause, P. Potschke</i>	
EFFECT OF PROCESSING SEQUENCE ON THE MECHANICAL AND TRIBOLOGICAL PROPERTIES OF TERNARY NANOCOMPOSITES (VGCF-X/PA6/HDPE)	234
<i>Y. Osada, Y. Nishitani, T. Kitano</i>	
CHARACTERIZATION OF ORGANICALLY MODIFIED LAYERED ZINC PHENYLPHOSPHONATE/ POLY(BUTYLENE SUCCINATE/ADIPATE) NANOCOMPOSITES	239
<i>D.L. Kuo, T.M. Wu</i>	

EXTRUSION AND EXTRUSION PROCESSES

EXPERIMENTAL AND THEORETICAL STUDY ON STARVE FED SINGLE SCREW EXTRUSION OF POLYMER BLENDS	243
<i>K.J. Wilczynski, A. Nastaj, A. Lewandowski, K. Wilczynski</i>	
SYNTHESIS AND TRIBOLOGICAL INVESTIGATION OF PVD HARD COATINGS DEPOSITED VIA HYBRID DCMS/HPPMS FOR APPLICATION IN PLASTICS PROCESSING	247
<i>K. Bobzin, T. Brogelmann, N.C. Kruppe, M. Naderi</i>	
DEVELOPMENT OF A METHOD FOR A REALISTICALLY AND REPRODUCIBLE CONTAMINATION OF POLYMER MELT FILTERS	252
<i>V. Schoppner, P. Meilwes</i>	

TURN-KEY EXTRUSION LINES FOR HIGHLY-FILLED COMPOUNDS: COMPOUNDING OF CACO₃ FORMULATIONS	257
<i>R. Kretz, M. Thummert</i>	
OPPORTUNITIES AND CHALLENGES OF PROFILE EXTRUSION DIES PRODUCED BY ADDITIVE MANUFACTURING PROCESSES	260
<i>C. Hopmann, N. Yesildag, C. Windeck, S. Bremen, K. Wissenbach, S. Merkt</i>	
GROOVE GEOMETRY AND BULK MATERIAL PROPERTIES IMPACTING ON PRESSURE BUILD-UP IN SINGLE SCREW EXTRUDERS	265
<i>M. Dungen, M. Muller, M. Koch</i>	
FIRST INSIGHT INTO THE HIGH SPEED EXTRUSION OF POLYCARBONATE	270
<i>V. Schoppner, M. Pohl</i>	
STUDY OF THE RHEOLOGICAL BEHAVIOR OF POLYPROPYLENE/POLYETHYLENE EXTRUDED MIXTURE USING AN INSTRUMENTED DIE	275
<i>G.E.H. Sleiman, I. Petit, N. Allanic, S. Belhabib, Y. Madec, J. Launay, R. Deterre</i>	
WASTED TIRE GROUND RUBBER/ WOOD FLOUR OPTIMIZED RATIO TOWARD THE HIGH MECHANICAL PROPERTIES IN POLYPROPYLENE COMPOSITE	280
<i>R. Thongthanom, H. Manuspiya</i>	
ELECTRIFICATION OF POLYMERS DURING CAPILLARY EXTRUSION	285
<i>A. Perolo, A. Castiglioni, D. Ferri</i>	
SHELL-MIMICKING STRUCTURE OF POLYLACTIDE FABRICATED THROUGH LAYER-ASSEMBLY EXTRUSION: TOWARD HIGH STRENGTH AND TOUGHNESS	290
<i>L. Yi, J. Shen, S. Guo</i>	

POLYMER BLEND AND ALLOYS

TRANSFORMATION OF HOMOCRYSTALLITE/STEREOCOMPLEX CRYSTALLITE OF PLLA/PDLA BLENDED FILAMENT DURING THE HEATING PROCESS	294
<i>H.C. Ko, T.W. Shyr</i>	
EFFECTS OF REACTIVE POLYMER AS MODIFIER ON IMPACT STRENGTH AND HYDROLYTIC STABILITY OF PC/ABS BLEND	298
<i>K. Nishino, Y. Shindo, T. Takayama, H. Ito</i>	
SYNTHESIS OF POLY(ETHYLENE TEREPHTHALATE-CO-NAPHTHALENE) TO ACHIEVE THE HOT FILL PROPERTIES	299
<i>A. Atiyeh, S.N.M. Abdollah, A.A.S. Reza, K. Ali</i>	
MORPHOLOGY-RHEOLOGY RELATIONSHIP IN THERMOPLASTIC STARCH/ POLYLACTIC ACID BLENDS	304
<i>M. Esmaili, G. Pircheraghi, R. Bagheri</i>	
INDUCING CONDUCTIVITY IN IMMISCIBLE PS/PP BLENDS BY A PERCOLATED POLYANILINE/PA FILLER SELECTIVELY LOCALISED BY SPECIFIC INTERACTIONS	308
<i>A. Bharati, P. Hejmady, R. Cardinaels, J.W. Seo, P. Moldenaers</i>	
DEVELOPMENT OF HIGH-PERFORMANCE THERMOPLASTIC PPS/PES BLENDS AS MATRICES IN FIBER REINFORCED COMPOSITES	313
<i>T. Kroob, M. Gurka, U. Breuer</i>	
ENHANCEMENT OF IMPACT STRENGTH AT AMBIENT AND LOW TEMPERATURE FOR POLYCARBONATE-BASED POLYMER ALLOY WITHOUT REDUCTION OF FLEXURAL MODULUS	318
<i>T. Saito, Y. Hao, N. Sumiya, T. Moriyama</i>	
PRODUCTION OF PBT/PC PARTICLE SYSTEMS BY WET GRINDING	322
<i>J. Schmidt, S. Romeis, W. Peukert</i>	
ENHANCEMENT OF IMPACT STRENGTH OF PA11 BY DISPERSING PBS PARTICLES WITHOUT REDUCTION OF FLEXURAL MODULUS	327
<i>T. Moriyama, N. Sumiya, T. Saito, Y. Hao</i>	
HIGH PERFORMANCE MILLIMETER WAVE ABSORBERS DERIVED FROM UNEVEN DISTRIBUTION OF CONDUCTING AND MAGNETIC ENGINEERED NANOPARTICLES IN BIPHASIC POLYMERIC BLENDS	332
<i>S.P. Pawar, M. Gandhi, S. Bose</i>	
COMBINED EFFECTS OF ULTRAFINE FULL-VULCANIZED POWDERED RUBBER AND β NUCLEATING AGENT ON MECHANICAL PROPERTIES AND HEAT DISTORTION TEMPERATURE OF ISOTACTIC POLYPROPYLENE	336
<i>Y. Zhu, Q. Fu</i>	

POLY(LACTIC ACID)/POLY(VINYL ALCOHOL)-CHITOSAN OBTAINED BY MELTING PROCESSING	340
<i>R. Grande, A.J.F. Carvalho</i>	
THE STUDY OF RHEOLOGY AND MORPHOLOGY OF HIGH DENSITY POLY ETHYLENE (HDPE)/ ETHYLENE,1- OCTENE COPOLYMER (EOC)/NANO SILICA NANOCOMPOSITES	344
<i>K. Samira, J. Azizeh, N. Hossein</i>	

POLYMER FOAMS AND LIGHTWEIGHT STRUCTURES

THE EFFECT OF MELT/GAS MIXTURE COMPRESSIBILITY ON THE CELL-NUCLEATION BEHAVIORS IN HIGH-PRESSURE FOAM INJECTION MOLDING	349
<i>V. Shaayegan, G. Wang, C.B. Park</i>	
A NEW FOAM INJECTION MOLDING TECHNOLOGY - USE NON-SUPERCRITICAL FLUIDS AS PHYSICAL BLOWING AGENTS	354
<i>L. Wang, A. Yusa, S. Yamamoto, H. Goto, H. Uezono, F. Asaoka, S. Ishihara, Y. Hikima, M. Ohshima</i>	
HYSTERESIS MEASUREMENTS AS A TOOL TO MONITOR THE NON-LINEAR MECHANICAL DEFORMATION BEHAVIOR OF BEAD FOAMS UNDER FATIGUE LOADING	360
<i>J.H. Keller, V. Altstaedt</i>	
PHYSICAL FOAM EXTRUSION OF POLYOLEFIN/CYCLOOLEFIN COPOLYMER BLENDS	365
<i>M. Walluch, A. Uray, C. Holzer, G.R. Langecker</i>	
WELDING QUALITY IN POLYMER BEAD FOAMS: AN IN SITU SEM STUDY	370
<i>J. Gensel, C. Pawelski, V. Altstadt</i>	
IN-SITU OBSERVATION OF ONE-SHOT CHEMICAL FOAMING PROCESS BY X-RAY TRANSMISSION IMAGING	375
<i>J. Tateishi, N. Taniguchi, T. Nishiwaki, S.K. Sukumaran, M. Sugimoto</i>	
REDUCING THE THERMAL CONDUCTIVITY OF POLYMERIC FOAMS MADE FROM POLYSTYRENE/EXPANDED GRAPHITE	377
<i>M.P. Tran, P. Gong, C. Detrembleur, J.M. Thomassin, P. Buahom, M. Saniei, S. Kenig, C. Park</i>	
FOAMING BEHAVIOR OF NOVATEIN AND BLENDS WITH POLYETHYLENE COMPATIBILISED BY MALEIC ANHYDRIDE	383
<i>C. Gavin, M.C. Lay, C.J.R. Verbeek</i>	
PREPARATION AND PROPERTIES OF LOW DENSITY POLYETHYLENE-ACTIVATED CARBON COMPOSITE FOAMS	388
<i>D. Aussawasathien, K. Jariyakun, T. Pomrawan, K. Hrimchum, R. Yeetsorn, W. Prissanaroon-Ouajai</i>	
LASER TRANSMISSION WELDING OF FOAMED THERMOPLASTIC INJECTION MOULDED PARTS	393
<i>C. Hopmann, S. Kreimeier, M. Schongart</i>	
NATURAL UNIDIRECTIONAL SHEET PROCESSES FOR FIBRE REINFORCED BIOPLASTICS	398
<i>A.A. Ouali, R. Rinberg, W. Nendel, L. Kroll, C. Siegel, B. Buchelt, A. Wagenfuhr, K. Trommler, K. Schreiter, R. John, S. Spange</i>	
DEVELOPMENT OF THERMALLY CONDUCTIVE POLYMER MATRIX COMPOSITE FOAMS VIA SUPERCRITICAL CO₂ FOAMING	402
<i>Y. Guo, M. Chu, S.N. Leung</i>	
EFFECTS OF SATURATION TEMPERATURE/PRESSURE ON MELTING BEHAVIOR AND CELL STRUCTURE OF EXPANDED POLYETHYLENE BEAD	407
<i>P. Guo, Y. Xu, M. Lu, S. Zhang</i>	
DEPRESSURIZATION AND WARPAGE IN GLASSY PMDI FOAMS	412
<i>K.N. Long, C.C. Roberts, L.A. Mondy, R.R. Rao</i>	
PREPARATION AND CHARACTERIZATION OF CONDUCTIVE FOAMS BASED ON PBS, CARBON NANOFIBERS AND EXPANDED GRAPHITE NANOCOMPOSITES	417
<i>L. Cafiero, M. Oliviero, G. Landi, L. Sorrentino, A. Sorrentino, H.C. Neitzert, S. Iannace</i>	
EFFECT OF FOAMING CONDITIONS ON PLA/STARCH/NANO CALCIUM CARBONATE NANOCOMPOSITE FOAMS STRUCTURE	422
<i>J. Javadi, E.V. Nasab, H. Garmabi</i>	
MECHANICAL AND THERMAL PROPERTIES OF CARBON FOAMS WITH RESPECT TO CELL MORPHOLOGY OF THE PRECURSOR FOAM	426
<i>S.A. Song, S.S. Kim</i>	
EFFECT OF PROCESSING CONDITIONS ON THE CELL MORPHOLOGY DISTRIBUTION IN FOAMED INJECTION MOLDED PLA SAMPLES	430
<i>V. Volpe, M. De Filitto, V. Klofacova, F. De Santis, R. Pantani</i>	

ARTIFICIAL AGING AND FAILURE MODES OF TPU-METAL HYBRID COMPOSITES	435
<i>J.A. Puentes, A. Leuteritz, I. Kuehnert</i>	
MATHEMATICAL MODELING AND VISUAL OBSERVATION OF A CHEMICAL BATCH FOAMING AND CROSSLINKING OF POLYMER SYSTEM	436
<i>T. Shigeta, S. Ishihara, M. Ohshima</i>	
PROPERTIES AND STRUCTURE ANALYSIS OF POLYMER COMPOSITIONS OBTAINED IN CELLULAR INJECTION MOLDING PROCESS	442
<i>A. Tor-Swiatek</i>	

BIOPOLYMERS AND POLYMER FROM RENEWABLE RESOURCES

REACTIVE EXTRUSION OF POLY (LACTIC ACID): EFFECT OF COAGENT TYPE ON THE RHEOLOGICAL AND THERMAL PROPERTIES	448
<i>P. Tiwary, K. Dawidziuk, M. Kontopoulou</i>	
INNOVATIVE PHOSPHATE-FREE ALTERNATIVES FOR SILICATE RESINS APPLIED IN SEWER REHABILITATION	453
<i>M. Kapietz, S. Grishchuk, B. Wetzel</i>	
FUNCTIONALISATION OF WOOD PARTICLES, CELLULOSE AND HEMICELLULOSE USING REACTIVE EXTRUSION	458
<i>M. Gaugler, A.A. Vaidya, D.A. Smith</i>	
CELLULOSE-XYLOGLUCAN COMPOSITE FILM PROCESSING USING IONIC LIQUIDS AS CO-SOLVENTS	463
<i>A. Bendaoud, J.E. Maigret, E. Leroy, B. Cathala, D. Lourdin</i>	
EFFECTS OF EPOXY-POSS NANOPARTICLES ON THE PROPERTIES OF PLA/TPU BLENDS	467
<i>N.T. Kilic, B.N. Can, M. Kodal, G. Ozkoc</i>	
MODELING APPROACH FOR THE DEGRADATION MECHANISMS OF PLA RESULTING FROM PROCESSING	471
<i>M. Dungen, S. Keller, M. Koch</i>	
COMPATIBILIZING EFFECTS OF ITACONIC ANHYDRIDE ON BLENDS BETWEEN POLY(LACTIC ACID) AND NOVATEIN® THERMOPLASTIC PROTEIN	476
<i>A. Walallavita, C.J.R. Verbeek, M. Lay</i>	
PREPARATION AND CHARACTERIZATION OF MODIFIED-TiO₂/PLA NANOCOMPOSITE FILMS WITH ENHANCED MICROSTRUCTURE, PHOTO-DEGRADABILITY AND ANTIBACTERIAL PROPERTIES	477
<i>K.R. Tabriz, A.A. Katbab</i>	
AN INVESTIGATION BETWEEN HIGH AND LOW PRESSURE PROCESSES FOR NANOCRYSTALLINE CELLULOSE PRODUCTION FROM AGRO-WASTE BIOMASS	482
<i>S. Islam, N. Kao, S.N. Bhattacharya, R. Gupta</i>	
INFLUENCE OF PROCESS ROUTE ON THE MECHANICAL PROPERTIES OF POLYMER BASED INTRAVAGINAL DRUG DELIVERY SYSTEMS	487
<i>K. Eggenreich, S. Schrank, G. Koscher, K. Nickisch, E. Roblegg, J. Khinast</i>	
ELECTROSPUN CORE-SHELL NANOFIBERS BASED ON THERMOPLASTIC URETHANE ELASTOMER AND GELATIN: EVOLUTION OF CELL BEHAVIOR	492
<i>M.J. Menarbabzari, A.A. Katbab</i>	
OPPORTUNITIES AND ISSUES IN EXTRUDING BIODEGRADABLE POLYESTER BLENDS FOR PACKAGING	496
<i>M.B. Colielli, P. Cinelli, S.M.K. Fehri, N. Mallegni, V. Gigante, L. Aliotta, A. Lazzari</i>	
COMBINATION OF SONICATION AND HYDROTHERMAL FOR DEPOLYMERISATION OF CELLULOSE IN IONIC LIQUID PRESSURIZED WITH CO₂ AND N₂	501
<i>S. Sumarno, M.N. Eka, T.P. Novarita</i>	
THE CHITOSAN DEGRADATION BY OZONATION PROCESS TO PRODUCE GLUCOSAMINE AND OLIGOMERS CHITOSAN	506
<i>E. Savitri, E. Purwanto</i>	
MECHANICAL AND DURABILITY PROPERTIES OF SOFT PVC PLASTICIZED BY CARDANOL DERIVATIVES	511
<i>A. Greco, F. Ferrari, A. Maffezzoli</i>	
MECHANICAL AND RHEOLOGICAL PROPERTIES OF DIFFERENT PLASTICIZED POLY(LACTIC ACID) GRADES FILLED WITH TALC	516
<i>J. Seesorn, M. Seadan, Y.K. Wee, S. Suttiruengwong</i>	

BIODEGRADABLE POLYESTERS REINFORCED WITH EUCALYPTUS FIBER: EFFECT OF REACTIVE AGENTS	521
<i>P. Nanthanon, M. Seadan, S. Pivsa-Art, H. Hiroyuki, S. Suttiruengwong</i>	
PROPERTIES AND PROCESSING OF PLA/ETHER-AMIDE COPOLYMER BLENDS	526
<i>T. Jauzein, M.A. Huneault, M.C. Heuzey</i>	
SOL-GEL TRANSITION AND SCALING LAWS FOR α-CARRAGEENAN IN AQUEOUS SOLUTION	528
<i>S. Liu, L. Li</i>	
PROCESSING OF CASSAVA PULP TO GLUCOSE AND OLIGOSACCHARIDES BY SONICATION PROCESS	532
<i>C.E. Lusiani, E.O. Ningrum, P.N. Trisanti, S. Sumarno</i>	
PRODUCTION OF HYDROGEL WOUND DRESSING WITH NEOMYCIN USING DIFFERENT GAMMA RADIATION DOSES	537
<i>A.T. Zafalon, V.J. dos Santos, D.F. Parra, A.B. Lugao</i>	
TAILORING THE OXYGEN GAS BARRIER PROPERTY IN BIODEGRADABLE POLY(PROPYLENE CARBONATE) COMPOSITES	542
<i>Y. Shen, T. Wang</i>	
BIO-BASED THERMOPLASTIC ELASTOMER CONTAINING POLYLACTIDE AND NATURAL RUBBER VIA ADMICELLAR POLYMERIZATION	545
<i>P. Tiewtragool, R. Magaraphan</i>	
WELDING OF BIO-BASED PLASTICS FOR APPLICATIONS IN THE FIELD OF INJECTION MOULDING	550
<i>C. Hopmann, M. Facklam, M. Schongart</i>	
ASSESSMENT OF STRUCTURAL CHANGES AND RHEOLOGICAL BEHAVIOR OF POTATO AND PEA STARCHES UNDER EXTRUSION CONDITIONS	555
<i>N. Logie, G.V. Della, N. Descamps, J. Soulestin, M. Collinet</i>	
THE EFFECTS OF GAMMA IRRADIATION ON THE MECHANICAL AND THERMAL PROPERTIES OF POLY(LACTIC ACID)	560
<i>M. Kodal, A. Elchekwis, G. Ozkoc</i>	
ELECTROCATALYTIC BEHAVIOR OF CHITOSAN/POLYANILINE NANOCOMPOSITE PREPARED VIA DIFFERENT ACIDIC AQUEOUS SOLUTIONS FOR BIOSENSING	565
<i>C.F. Li, T.M. Wu</i>	
IMPROVEMENT OF MECHANICAL PROPERTIES DUE TO INCREASED FIBRE MATRIX ADHESION IN FLAX FIBRE REINFORCED POLYPROPYLENE	569
<i>A. Malfatti, L. Steuernagel, D. Meiners</i>	
EFFECT OF SORBITOL/GLYCEROL RATIO ON HYDROGEN BOND FORMATION AND CRYSTALLIZATION OF CO-PLASTICIZED STARCH	574
<i>M. Esmaeili, G. Pircheraghi, R. Bagheri</i>	
PBAT/THERMOPLASTIC STARCH BLENDS: ‘EFFECTS OF OXIDIZED STARCH AND COMPATIBILIZER CONTENT’	578
<i>B.N. Can, G. Ozkoc</i>	
PREPARATION OF PLLA/PDLA BLENDS WITH HIGH STEREOCOMPLEX CRYSTALS CONTENT THROUGH AN EFFICIENT THERMAL TREATMENT METHOD	583
<i>Z.C. Zhang, G.J. Zhong, Z.M. Li</i>	
INFLUENCE OF INITIAL FIBER LENGTH ON THE MECHANICAL AND TRIBOLOGICAL PROPERTIES OF HEMP FIBER REINFORCED PLANTS-DERIVED POLYAMIDE 1010 BIOMASS COMPOSITES	588
<i>Y. Nishitani, J. Mukaida, T. Yamanaka, T. Kajiyama, T. Kitano</i>	
PREPARATION AND CHARACTERIZATION OF POLYSACCHARIDE HYDROGELS BASED ON MODIFIED STARCH	593
<i>J. Park, J. Lee</i>	
A NEW PROCESS FOR THE PREPARATION OF COMPOSITES AND NANOCOMPOSITES OF CELLULOSE PULP AND CELLULOSE NANOFIBERS FOR RIGID PANELS FABRICATION	597
<i>E.M.S. Chiromito, E. Trovatti, A.J.F. Carvalho</i>	
PREPARATION OF NATURAL RUBBER (NR) /POLYCAPROLACTONE (PCL) BIO-BASED SHAPE MEMORY POLYMER BLENDS	602
<i>S.M. Lai, J.L. Liu, C.C. Wang, W.L. Liao, Y.T. He, Y.W. Huang, H.J. Yeh, D.T. Luo, C.N. Chang</i>	

PROCESS MODELING AND SIMULATION

INVESTIGATION OF THE KNIFE-OVER-ROLL COATING PROCESS FOR PLASTISOLS COATING APPLICATIONS	607
<i>Y. Abdesselam, Y. Demay, R. Castellani, J.F. Agassant, R. Peres, D. Gourdin</i>	
EFFECT OF CRYSTALLIZATION ON PEEK BEARING COMPONENTS	612
<i>R.P. Schaake, J. Fan, J.J. Weigand, J.L. Williams, A.M. Rhoades</i>	
MODELING AND OPTIMIZATION OF MELT FILTRATION SYSTEMS IN POLYMER RECYCLING	616
<i>S. Pachner, M. Aigner, J. Miethlinger</i>	
ENHANCED SHRINKAGE PREDICTION CONSIDERING COOLING RATE EFFECTS ON PVT	621
<i>F.S. Costa, P.S. Cook, Z. Zuo</i>	
EROSION IN EXTRUDER FLOWS: ANALYTICAL AND NUMERICAL STUDY	626
<i>M. Kaufman, P.S. Fodor</i>	
A SEMI-MECHANISTIC MODEL FOR POLYURETHANE CURE THERMOKINETICS : APPLICATION TO A NATURAL RUBBER BASED THERMOSET	631
<i>T.K.N. Tran, G. Colomines, A. Nourry, J.F. Pilard, R. Deterre, E. Leroy</i>	
APPLICATION OF THE LEAST SQUARE FINITE ELEMENT METHOD IN THE INTERFACE CAPTURING OF A TWO-PHASE FLOW	636
<i>M. Mostafaiyan, S. Wiessner, G. Heinrich</i>	
CAVITY DEPENDENCE OF CORE PENETRATION IN CO-INJECTION MULTI-CAVITY MOLDING	642
<i>C.T. Huang, C.C. Hsu, R.Y. Chang, S.C. Tseng</i>	
PREDICTION OF CROSS-SECTIONAL SHAPE AT DIE EXIT ON FILM CASTING PROCESS BY VISCOELASTIC FLOW SIMULATION	647
<i>S. Tanoue, H. Uematsu, Y. Iemoto</i>	
EXPERIMENTAL CHARACTERISATION AND IDENTIFICATION OF ELASTIC-VISCOPLASTIC POLYMER PROPERTIES USED IN HOT EMBOSsing PROCESS	651
<i>G. Cheng, T. Barriere, J.C. Gelin, M. Sahli</i>	
EXPERIMENTAL STUDY OF POLYMER DEGASSING IN AN AGITATOR VESSEL	656
<i>S. Hirschfeld, O. Wunsch</i>	
INVESTIGATION OF THE INFLUENCE OF MATERIAL AND PELLET SHAPE ON THE DISSIPATION IN THE SOLIDS CONVEYING ZONE OF SINGLE-SCREW EXTRUDERS BASED ON THE DISCRETE ELEMENT METHOD (DEM)	661
<i>J. Trippe, V. Schoppner</i>	
ANALYSIS OF PELLET DIAMETER AND INORGANIC FILLER INFLUENCES ON THE POLYMER MELTING BEHAVIOR IN PLANETARY ROLLER EXTRUDERS	666
<i>J. Rudloff, M. Lang, K. Kretschmer, P. Heidemeyer, M. Bastian, M. Koch</i>	

VOLUME 2

MODELING DEVOLATILIZATION IN SINGLE- AND MULTI-SCREW EXTRUDERS	671
<i>C. Marschik, B. Low-Baselli, J. Miethlinger</i>	
TEMPERATURE DEPENDENCE OF THE HYDRODYNAMIC CHARACTERISTICS OF THE FLOW OF THE POLYMER MELT IN THE CONVERGING CHANNELS	676
<i>A. Kuznetsov, K. Koshelev, M. Tolstykh, J.C. Naud, G. Pyshnograï</i>	
POLYMER FILM PRODUCTION AND RHEOLOGICAL CHARACTERISTICS OF FORMING SOLUTIONS	681
<i>G. Pyshnograï, J.C. Naud, J. Tegubova, O. Kondratieva</i>	
BEHAVIOUR OF THE THERMAL CONDUCTIVITY OF AMORPHOUS POLYMERS	686
<i>W.N. dos Santos</i>	
UNUSUAL PVT-BEHAVIOR OF AMORPHOUS POLYMERS UNDER PROCESSING CONDITIONS AND CONSEQUENCES FOR THE PROCESS SIMULATION	690
<i>R. Forstner, R. Freytag, J. Jil-Perez, C. Maticka</i>	

PROCESS MONITORING, CONTROL AND SENSORS

ONLINE ESTIMATION OF PERMEABILITY IN RESIN TRANSFER MOLDING USING PARALLEL-PLATE CAPACITOR	694
<i>T.H. Chiu, K.H. Wang, Y. Yao, W. Qi</i>	

AN APPROACH TO NON-DESTRUCTIVE TESTING OF AGED POLYMERS	699
<i>E. Moritzer, M. Huttner, B. Henning, M. Webersen</i>	
COMPENSATING VISCOSITY FLUCTUATIONS IN INJECTION MOULDING	704
<i>M. Theunissen, C. Hopmann, J. Heinisch</i>	
SWELLING AND DRYING PROCESS IN IONIC HYDROGELS FOR LOW AND HIGH PH USING FLUORESCENCE TECHNIQUE	709
<i>D.K. Aktas</i>	
ON THE EXPLOITATION OF OPTICAL SIGNAL FROM RAMAN SPECTROSCOPY FOR IN-SITU CONVERSION MONITORING OF EMULSION POLYMERIZATION	713
<i>E. Dropsit, D. Chapron, P. Bourson, S. Hoppe, A. Durand</i>	
APPLICATION OF SELF-TUNING PI CONTROLLER TO RESIN TRANSFER MOLDING	718
<i>K.H. Wang, Y.C. Chuang, Y. Yao</i>	
DEVELOPMENT OF A NOVEL AND ADAPTABLE INJECTION UNIT FOR AN AUTOMATED AND QUALITY CONTROLLED MANUFACTURING OF RTM PARTS FOR AEROSPACE APPLICATIONS	723
<i>C. Hopmann, M.L. Fecher, A. Boettcher, K. Fischer, L. Winkelmann</i>	
SPATIALLY RESOLVED TEMPERATURE MEASUREMENT IN INJECTION MOULDING USING ULTRASOUND TOMOGRAPHY	728
<i>C. Hopmann, J. Wipperfurth, M. Schongart</i>	
TENSILE IMPACT TESTING ON POLYMER MATERIALS CONSIDERING THE FORCE-OSCILLATION PHENOMENON	733
<i>C. Hopmann, J. Klein, M. Schongart</i>	

REACTIVE PROCESSING

NEW UNDERSTANDING ON THE FORMATION OF PHASE STRUCTURE OF THERMOPLASTIC VULCANIZATE (TPV) DURING DYNAMIC VULCANIZATION	738
<i>M. Tian, H. Wu, N. Ning, H. Tian, Y. Wu, L. Zhang</i>	
INNOREX – EUROPEAN PROJECT REVEALS IMPACT OF MICROWAVE AND ULTRASOUND ENERGY ON POLYMERIZATION OF PLA VIA REACTIVE EXTRUSION	743
<i>B. Bergmann, J. Diemert, J.M. Raquez, T. Hielscher, M. Reichmann, C. David, S. Dubey, C.L. Fernandez</i>	
AN ENGINEERING APPROACH TO IMPROVE THE PREDICTION OF MELT FLOW BEHAVIOUR FOR INJECTION MOULDED RUBBER PARTS	748
<i>A.A. El Sayed, R. Iervolino</i>	
REACTIVE COMPOUNDING OF POLY(DIMETHYLSILOXANE-UREA) COPOLYMER BASED MASTERBATCH COLORANTS	753
<i>H.J. Radusch, M. Huebner, F. Roeber, A. Wutzler</i>	
ELECTRON INDUCED REACTIVE PROCESSING OF POLYPROPYLENE/ETHYLENE OCTENE COPOLYMER BLENDS – A NEW METHOD TO PRODUCE TOUGHENED POLYPROPYLENE	758
<i>C. Zschech, U. Gohs, G. Heinrich</i>	
MICRO-COMPOUNDING AS RELIABLE SCREENING OF REACTIVE EXTRUSION (REX) PROCESSES	762
<i>B. Scholtens, T. Loontjens, G. Ozkoc</i>	
IMPROVING THE ACTUATED PERFORMANCE OF GRAPHENE/DIELECTRIC ELASTOMERS COMPOSITES BY USING SOME NEW METHODS	767
<i>N. Ning, Q. Ma, S. Liu, X. Zan, M. Tian, L. Zhang</i>	
REACTIVE EXTRUSION OF PLA/PC BLENDS AND COMPOSITES	772
<i>V. Gigante, M.B. Coltelli, V.T. Phuong, P. Cinelli, A. Lazzeri</i>	
THE INTERPLAY BETWEEN MOLECULAR DYNAMICS AND REACTION KINETICS DURING CURING REACTIONS	776
<i>J.E.K. Schawe</i>	
PRODUCTION OF CFRP COMPONENTS WITH CLEAR SURFACE LAYER IN THE PU SPRAY IMPREGNATION PROCESS	781
<i>C. Hopmann, C. Karatzias, R. Wagner, A. Bottcher, K. Fischer</i>	

RHEOLOGY AND RHEOMETRY

LOW-FIELD RHEONMR: NEWLY DEVELOPED COMBINATION OF RHEOLOGY AND TIME DOMAIN-NMR TO CORRELATE MECHANICAL PROPERTIES WITH MOLECULAR DYNAMICS IN POLYMER MELTS	786
<i>V. Rantsch, M.B. Ozen, K.F. Rantsch, G. Guthausen, M. Wilhelm</i>	
ELONGATIONAL RHEOLOGY OF GLASS-FIBER AND NATURAL-FIBER-REINFORCED POLYPROPYLENES WITH A NOVEL ONLINE RHEOMETER	791
<i>H.J. Luger, T. Kopplmayr, L. Sobczak, A. Haider, J. Miethlinger</i>	
MEASURING THE EFFECTS OF FILLER VARIATIONS ON COMPOUND VISCOELASTIC PROPERTIES AS MEASURED BY THE CAPILLARY RHEOMETER AND THE RPA	796
<i>J.S. Dick, E. Norton, T. Xue</i>	
PROCESSABILITY AND RHEOLOGICAL PROPERTIES OF EXTENSIVELY RECYCLED HIGH DENSITY POLYETHYLENE (HDPE)	801
<i>P. Oblak, J. Gonzalez-Gutierrez, B. Zupancic, A. Aulova, I. Emri</i>	
EFFECT OF THE WAVE LENGTH AND THE INTENSITY OF UV LED ON UV-CURABLE LSR	806
<i>J. Tae, K. Yim, J.B. Kwak, J. Gim, B. Rhee</i>	
RHEOLOGICAL ANALYSIS OF 3D PRINTABILITY OF ALGINATE HYDROGEL	807
<i>H. Li, L. Li</i>	
STRAIN RECOVERY OF POLYOLEFIN POLYMER BLENDS BASED ON PP/HDPE	811
<i>S.S. Saeed, S.A. Saeed</i>	
DYNAMIC HETEROGENEITY OF PMMA/PVDF BLENDS: COMPOSITION DEPENDENCE AND ROLE OF INTERPHASE	816
<i>B. Lu, K. Lamnawar, A. Maazouz</i>	
RHEOLOGICAL CHARACTERIZATION OF MACROMOLECULAR COLLOIDAL GELS AS SIMULANT OF BRONCHIAL MUCUS	817
<i>O. Lafforgue, S. Poncet, I. Seyssiecq, J. Favier</i>	
RHEOLOGICAL BEHAVIOR MODELLING FOR THE COPOLYMER HYDROGENATED POLY (ISOPRENE-CO-STYRENE) SOLUTIONS	822
<i>I. Stanciu</i>	
RHEOLOGICAL PROPERTIES OF GRAPHENE/NYLON 6 NANOCOMPOSITES PREPARED BY MASTERBATCH MELT MIXING	826
<i>C.M. Wu, S.S. Cheong, W.Y. Lai, T.H. Chang</i>	

ELASTOMERS AND THERMOPLASTIC ELASTOMERS

THE EFFECT OF LIPID ABSORPTION ON THE MECHANICAL PROPERTIES OF POLY(STYRENE-BLOCK-ISOBUTYLENE-BLOCK-STYRENE) FOR USE IN BIOMEDICAL APPLICATIONS	831
<i>A. Damley-Strnad, M. Fittipaldi, B. Morales, L.R. Grace</i>	
NOVEL SILICONE THERMOPLASTIC ELASTOMERS WITH TAILORED PERMEATION PROPERTIES	836
<i>G. Riess, K. Berger, W. Kern</i>	
CHARACTERIZATION OF THE TEMPERATURE PROFILE DURING DOSING UNDER STEADY STATE CONDITIONS BY MEANS OF A SPECIALLY DESIGNED TEST STAND	841
<i>R.C. Kerschbaumer, B. Lechner, G. Graninger, W. Friesenbichler</i>	
TWO-COMPONENT INJECTION MOULDING OF THERMOPLASTICS WITH THERMOSET RUBBERS: PROCESS DEVELOPMENT	846
<i>G.J. Bex, J. De Keyzer, F. Desplentere, A. Van Bael</i>	
THE RECENT DEVELOPMENTS IN TIRE UNIFORMITY	851
<i>K. Koca, M. Kodal, H. Gerengi, G. Ozkoc</i>	

FIBER, FILMS, AND MEMBRANES

THE EFFECT OF ADDITIVES ON HIGH TEMPERATURE WATER RETENTION AND THERMAL STABILITY OF PFSA POLYMER COMPOSITES	855
<i>B. Agrawal, M. Willert-Porada</i>	
EFFECT OF BLENDING HIGH AND LOW STEREO-REGULARITY COMPONENTS ON CRYSTALLIZATION AND MELTING BEHAVIORS IN THE POLYPROPYLENE FIBERS	860
<i>K. Kawai, W. Takarada, T. Kikutani</i>	

A NEW PROCESS TO CONVERT PROTON EXCHANGE MEMBRANES INTO HIGH PERFORMANCES AND RELIABLE HYBRID MEMBRANES FOR FUEL CELL	864
<i>J.P.C. Fernandes, L. Gonon, V.H. Mareau, H. Mendil-Jakani</i>	
USING CHEMICAL SYNTHESIS METHOD TO DEVELOP THE POLYAMIDE 6 FILAMENT KNITTED FABRIC WITH ANTI-MOSQUITO, ANTI-UV, AND COOLING FUNCTIONS	865
<i>C.P. Chin, J.Y. Liu, K.B. Cheng, J.T. Chang, F.L. Huang</i>	
STRUCTURE AND PROPERTIES OF MELT-SPUN FIBERS OF POLYETHYLENE BLENDED WITH CELLULOSE FIBERS	870
<i>Y. Sekiguchi, W. Takarada, T. Kikutani</i>	
STRUCTURAL CHARACTERIZATION BY X-RAY SCATTERING OF PET FILM BY NEAR MELTING POINT STRETCHING	875
<i>A. Tanimura, K. Horinouchi, J. Inagaki, K. Funaki, T. Shimizu, Y. Numata, K. Ito</i>	
POLYMER STRUCTURE EFFECTS ON CRYSTALLIZATION AND PROPERTIES IN POLYPROPYLENE FILM CASTING	880
<i>M. Gahleitner, D. Mileva, D. Gloger, R. Androsch, D. Tranchida</i>	
VISUALIZATION OF A PILLAR-SHAPED FIBER BUNDLE IN A MODEL NEEDLE-PUNCHED NONWOVEN FABRIC USING X-RAY MICRO COMPUTED TOMOGRAPHY	885
<i>T. Ishikawa, K.H. Kim, Y. Ohkoshi</i>	
ELECTROSPINNING OF PVAAQ SOLUTIONS WITH ZNO NANOPARTICLES AND ANTIBACTERIAL PROPERTIES OF THE ELECTROSPUN MATS.....	890
<i>M. Sugimoto, T. Jammongkan, Y. Takatsuka, T. Hara, S.K. Sukumaran, K. Koyama</i>	
ANALYSIS ON CRYSTALLIZATION BEHAVIOR OF ORIENTED POLY(ETHYLENE TEREPHTHALATE) FIBERS AND FILMS.....	892
<i>S. Shibata, W. Takarada, T. Kikutani</i>	
PREPARATION OF SUPERHYDROPHOBIC/SUPEROLEOPHIC ELECTROSPINNING FIBER	896
<i>F. Qiu, Z. Wei, X. Wang, J. Yang</i>	
EFFECTS OF MOLECULAR WEIGHT DISTRIBUTION AND STEREOREGULARITY ON MECHANICAL PROPERTIES AND STRUCTURE OF ISOTACTIC POLYPROPYLENE (IPP) FIBER.....	900
<i>T. Kunimitsu, K. Toyoda, T. Ikaga, K.H. Kim, Y. Ohkoshi, K. Koike</i>	
AFM-RAMAN CO-LOCALIZATION SETUP: ADVANCED CHARACTERIZATION TECHNIQUE FOR POLYMERS	904
<i>J.P.C. Fernandes, V.H. Mareau, L. Gonon</i>	
CORN-BRAN: ALTERNATIVE CELLULOSIC FILLER FOR POLYPROPYLENE	909
<i>B.N. Can, A. Kuman, C. Gozutok, G. Ozkoc</i>	
INTERFACIAL STRENGTH OF TWARON FIBER/PCL COMPOSITE MATERIALS.....	914
<i>J.C. Chen, C.M. Wu, Y.A. Teng, J.M. Wang</i>	
INFLUENCES OF DEPOSITION TIME OF ARC ION PLATED DIAMOND-LIKED CARBON FILMS ON THE POLYAMIDE 66 FABRIC	919
<i>C.P. Chin, K.B. Cheng, C.C. Chang, J.Y. Liu, J.T. Chang, F.L. Huang</i>	

INJECTION MOLDING AND MOLD

DESIGN AND SIMULATION OF CONFORMAL COOLING CHANNELS IN SLM PRODUCED INJECTION MOLDS: EFFECTS ON PROCESS AND PRODUCT QUALITY	924
<i>W. Six, R. Appermont, F. Desplentere, J. Dekeyzer, A. Van Bael</i>	
EXPERIMENTAL STUDIES AND NUMERICAL SIMULATION OF THE FOAM INJECTION MOLDING PROCESS USING GAS-COUNTER PRESSURE.....	929
<i>V. Shaayegan, C.B. Park, F. Costa, S. Han</i>	
INJECTION MOLDING OF MICRO AND NANOSTRUCTURED SURFACES FROM LIQUID SILICONE RUBBER	934
<i>M.D.J. Vega, S. Johnston, J. Mead, C. Barry</i>	
MELT PROCESSED AND SELF-REINFORCED ULTRAHIGH MOLECULAR WEIGHT POLYETHYLENE USED FOR TOTAL JOINT REPLACEMENT.....	939
<i>Y.F. Huang, J.Z. Xu, Z.M. Li</i>	
EFFECTS OF FAST MOLD TEMPERATURE EVOLUTION ON MICRO FEATURES REPLICATION QUALITY DURING INJECTION MOLDING	943
<i>S. Liparoti, M. Calaon, V. Speranza, G. Tosello, R. Pantani, N.H. Hansen, G. Titomanlio</i>	
EXPERIMENTAL INVESTIGATIONS ON THE FIBRE LENGTH DEGRADATION IN INJECTION MOULDS.....	948
<i>E. Moritzner, Y. Martin</i>	

EFFECTS OF DIFFERENT MOLD COATINGS ON POLYMER FILLING FLOW IN THIN-WALL INJECTION MOLDING	953
<i>M. Sorgato, D. Masato, G. Lucchetta</i>	
MORPHOLOGY AND ELECTRICAL PROPERTIES OF INJECTION-MOLDED PP CARBON-BASED NANOCOMPOSITES	958
<i>M. Zaccone, I. Armentano, L. Torre, F. Cesano, S. Cravanzola, D. Scarano, A. Frache, M. Monti</i>	
MODULAR TECHNOLOGICAL INSERTS FOR INJECTION MOLDING MACHINES	963
<i>D. Schneider</i>	
INDUCTION HEATING SIMULATION AND VALIDATION FOR THE PLASTIC INJECTION MOLDING PROCESS	968
<i>C. Kietzmann, G. Rigoni, L. Chen, S. Quilliet</i>	
TAKING INTO ACCOUNT NORMAL STRESSES DURING SIMULATION OF THERMOPLASTIC INJECTION MOLDING	973
<i>A. Bakharev, D. Astbury, S. Ray, F.S. Costa, R. Speight</i>	
SIMULATION OF THE INFLUENCE OF THERMAL PROPERTIES OF THE MOULD STEEL ON THE INJECTION MOULDING PROCESS	978
<i>T. Lucyshyn, L.V.D.E. d'Avernas, C. Holzer</i>	
MOLECULAR ORIENTATION AND RESIDUAL STRESSES IMPACT ON OPTICAL PROPERTIES OF PLASTIC LENSES	983
<i>S. Schneidmadel, M. Koch, X. Qin</i>	
THE INFLUENCE OF POLYMER VISCOELASTICITY ON THE OPTICAL FEATURES DURING AN OPTICAL LENS DEVELOPMENT	988
<i>G.G. Lin, D.L. Lai, C.T. Huang, J. Wang, Y.J. Chang, R.Y. Chang</i>	
DESIGN AND FABRICATION OF INJECTION MOLD USING GYPSUM	993
<i>C.C. Lin, B.Y. Lee, J.Y. Chen, G.H. Lee</i>	
MORPHOLOGY AND MECHANICAL PROPERTIES OF MICRO-INJECTION MOLDED POLYMER PRODUCTS	998
<i>S.W. Wang, Q. Li, C.Y. Shen, G.H. Hu</i>	
MEASUREMENT OF FIBER ORIENTATION DISTRIBUTION IN INJECTION-MOLDED COMPOSITES WITH HIGH FILLER CONTENT	1002
<i>S. Hamanaka, K. Yamashita, C. Nonomura, T.B.N. Thi, T. Wakano, A. Yokoyama</i>	
KNOWLEDGE-BASED APPROACH FOR AN AUTOMATIC RHEOLOGICAL OPTIMIZATION OF INJECTION-MOLDED PARTS	1007
<i>A. Porsch, R. Andrae, P. Kohler, J. Wortberg</i>	
INVESTIGATION OF NANOPARTICLES EMITTED WHEN INJECTION MOLDING NEAT AND ADDITIVE-FILLED POLYPROPYLENE AND POLYCARBONATE	1012
<i>M. Theriault, S. Yoeuth, J. Matar, J. Martin, D. Bello, C. Barry</i>	
COMPLEX INJECTION MOULDED COMPONENTS - BRIDGING THE KNOWLEDGE GAP	1017
<i>T. Meyer, P. Sherratt, A. Harland, C. Holmes, T. Lucas, B. Haworth</i>	
STUDY ON THE FIBER BREAKAGE HISTORY THROUGH A BARRIER STRUCTURE SCREW IN INJECTION MOLDING	1022
<i>C.T. Huang, H.C. Tseng, R.Y. Chang, S.J. Hwang</i>	
MICRO INJECTION MOLDING: INVESTIGATION OF INTERFACIAL FRACTURE BEHAVIOR	1027
<i>M. Fischer, I. Kuehnert</i>	
INFLUENCE OF PROCESSING CONDITIONS AND FILLER TYPE ON THE CRYSTALLINITY OF PLA COMPOUNDS	1028
<i>G.A. Pacher, T. Hutterer, G.R. Berger, W. Friesenbichler</i>	
ADVANCED FIBER ORIENTATION PREDICTION FOR HIGH FILLER CONTENT SHORT-FIBER/THERMOPLASTIC COMPOSITES	1033
<i>T.B.N. Thi, A. Yokoyama, S. Hamanaka, K. Yamashita, C. Nonomura</i>	
EFFECTS OF ENVIRONMENTAL AGING IN POLYPROPYLENE OBTAINED BY INJECTION MOLDING	1038
<i>R.S.G. Romano, W.L. Oliani, D.F. Parra, H.F.R. Ferreto, A.B. Lugao</i>	
A STUDY ON MANUFACTURING THERMOPLASTIC CFRP PRODUCTS USING INJECTION/COMPRESSION MOLDING PROCESS	1043
<i>E. Jeong, J. Kim, K. Yoon, S. Lee, J. Son, S. Lee</i>	
DEVELOPMENT OF A HIGHLY SEGMENTED TEMPERATURE CONTROL IN INJECTION MOULDING FOR REDUCED WARPAGE AND INCREASED PROCESS STABILITY	1048
<i>M. Theunissen, C. Hopmann, P. Nikoleizig, M. Schmitz</i>	

PRODUCTION OF PLASTICS PARTS WITH PARTIALLY OR FULLY METALLIC SURFACES USING THE IN-MOULD-METAL-SPRAYING (IMMS).....	1053
<i>C. Hopmann, M. Theunissen, S. Katmer, P. Ochotta, K. Bobzin, M. Ote, T.F. Linke, X. Liao</i>	

MIXING AND COMPOUNDING

THE ZSK AT 60: A RETROSPECTIVE OF TECHNOLOGY DEVELOPMENT WITH A VIEW TO THE FUTURE AND GROWTH OF NON-TRADITIONAL APPLICATIONS	1058
<i>P. Andersen</i>	
AN INVESTIGATION ON DISPERSION STATE OF GRAPHENE IN POLYPROPYLENE/GRAPHITE NANOCOMPOSITE WITH EXTENSIONAL FLOW MIXING	1063
<i>K. Matsumoto, Y. Nakade, K. Sugimoto, T. Tanaka</i>	
THERMAL DIFFUSIVITY BEHAVIOR OF THE HIGH DENSITY POLYETHYLENE WITH THE ADDITION OF PIGMENTATION MASTERBATCHES.....	1068
<i>C.L.J. Felipe, M.P.J. Alberto</i>	
SCALE UP OF POLYPROPYLENE/CARBON NANOTUBES NANOCOMPOSITES: DISPERSION IMPROVEMENT BY MEANS OF SIMULATION SOFTWARE	1073
<i>L. Roca, B. Galindo</i>	
COMPRESSION PROPERTIES OF THE INORGANIC FILLER-THERMOPLASTIC COMPOSITES.....	1076
<i>Y. Sano, T. Tanaka, M. Betsudan</i>	
MODELLING MECHANICAL PROPERTIES OF GLASS AND BASALT FIBER FILLED THERMOPLASTICS.....	1081
<i>M. Bruchmuller, S. Schneidmadel, J. Geis, M. Koch</i>	
PROCESSING AND PROPERTIES OF PLA-HA NANOCOMPOSITES: THE EFFECT OF PARTICLE MORPHOLOGY AND DISPERSANTS.....	1086
<i>M.M. Tomczynska, M. Ward, G.Y.H. Choong, K. Walton, D.S.A. De Focatiis, D.M. Grant, D.J. Irvine, A.J. Parsons</i>	
A NEW SAMPLE PREPARATION METHOD TO INVESTIGATE MELTING PHENOMENA WITHIN A PARTLY FILLED MELTING ZONE OF CO-ROTATING TWIN SCREW EXTRUDERS	1091
<i>V. Schoppner, K.J. Scharr, T.T. Westhues</i>	
INVESTIGATING THE IMPACT OF OPERATING CONDITIONS ON THE EXTENT OF ADDITIVE MIXING DURING THERMOPLASTIC POLYMER EXTRUSION.....	1096
<i>D. Stratiychuk-Dear, K. Looney, P. Oliver, S. Blackburn, M. Simmons</i>	
INFLUENCE OF COMPOUNDING TECHNOLOGY ON RHEOLOGICAL, THERMAL AND MECHANICAL BEHAVIOR OF BLAST FURNACE SLAG FILLED POLYSTYRENE COMPOUNDS.....	1101
<i>A. Mostafa, G. Pacher, T. Lucyshyn, C. Holzer, H. Flachberger, E. Krischey, B. Fritz, S. Laske</i>	
PROPERTIES OF POLYAMIDE 6-GRAPHENE-COMPOSITES PRODUCED AND PROCESSED ON INDUSTRIAL SCALE	1105
<i>C. Hopmann, M. Adamy, C. Windeck, N. Yesildag</i>	
MECHANICAL PROPERTIES OF POLYPROPYLENE/RECYCLE POLYPROPYLENE BLEND PREPARED BY MELT COMPOUNDING	1110
<i>J. Nithinkarnjanatham, A. Khongrit, S. Hadsadee, N. Jongjaihon, N. Thammachot</i>	

MORPHOLOGY AND STRUCTURE DEVELOPMENT

ENHANCING THE CONDUCTIVITY OF CARBON NANOTUBE FILLED BLENDS BY TUNING THEIR PHASE SEPARATED MORPHOLOGY WITH A RANDOM OR BLOCK COPOLYMER.....	1115
<i>R. Cardinaels, A. Bharati, J.W. Seo, M. Wubbenhorst, P. Moldenaers</i>	
MORPHOLOGY AND STRUCTURE DEVELOPMENT DURING INJECTION MOLDING WITH FAST MOLD TEMPERATURE EVOLUTION.....	1120
<i>V. Speranza, S. Liparoti, R. Pantani, G. Titomanlio</i>	
STRUCTURAL RECOVERY MECHANISM OF MULTI-WALLED CARBON NANOTUBE IN A SIMPLE SHEAR FLOW	1125
<i>S. Ghiassinejad, B. Ranjbar, A. Hosseinpour, A. Katbab, H. Nazockdast</i>	
NUMERICAL AND MORPHOLOGICAL STUDIES OF MICRO INJECTION MOLDED PLASTIC MICRO GEARS	1130
<i>R. El Otmani, M.R. Kamal, S. Derdouri, M. Boutaous</i>	

THERMO-OPTICAL CHARACTERIZATION OF POLYESTER FIBER IN REAL TIME VIA QUANTITATIVE CROSS-POLARIZED OPTICAL MICROSCOPY	1135
<i>S.V. Canevarolo, L.A. Bicalho, J.M.J. Silva</i>	
FATIGUE CRACK PROPAGATION BEHAVIOR OF SIMULTANEOUSLY TOUGHENED AND ELECTRICALLY CONDUCTIVE MULTI-FUNCTIONAL EPOXY COMPOSITES	1140
<i>G. Bakis, A.Bruckner, R. Zeiler, H. Deutges, V. Altstadt</i>	
THE EFFECT OF INJECTION MOULDING TEMPERATURE ON PET PARTICLES/FIBRILS IN BLENDS AND MFCS	1145
<i>M. Kuzmanovic, L. Delva, L. Cardon, K. Ragaert</i>	
COMMERCIAL PLASTICS: TERTIARY LEVEL POSTGRADUATE EDUCATION IN NEW ZEALAND	1147
<i>N.R. Edmonds, J. McKee, P.N. Plimmer</i>	
STRUCTURE CONSTRUCTION OF AMORPHOUS POLYMER AT LONG TIME REGION AND THEIR MECHANICAL PROPERTIES	1151
<i>N. Oda, R. Nakano, H. Sekiguchi, S. Yao</i>	
DMBS-INDUCED NUCLEATION OF ISOTACTIC POLYPROPYLENE UNDER HIGH PRESSURE IN ISOTHERMAL AND NON-ISOTHERMAL CONDITIONS	1152
<i>P. Sowinski, E. Piorkowska, S.A.E. Boyer, J.M. Haudin</i>	
STRUCTURAL EVOLUTION OF POLYPROPYLENE DURING CREEP: AN IN-SITU STUDY BY SYNCHROTRON SMALL ANGLE X-RAY SCATTERING	1155
<i>B. Chang, K. Schneider, G. Heinrich</i>	
THE EFFECT OF PDLA ON THE CRYSTALLIZATION AND MORPHOLOGY OF PLLA	1159
<i>W.B. Liaw, T.H. Huang, S.Y. Chang</i>	

RECYCLING, PLASTIC SOLUTIONS FOR ECO-CONCEPTION

DECROSSLINKING OF PEROXIDE CROSSLINKED HDPE IN ULTRASONIC TWIN SCREW EXTRUDER: SIMULATION AND EXPERIMENT	1164
<i>A.I. Isayev, K. Huang</i>	
MANUFACTURING AND CHARACTERISATION OF THERMOPLASTIC COMPOSITE OF HEMP SHIVES AND RECYCLED EXPANDED POLYSTYRENE	1169
<i>A. Almusawi, R. Lachat, K.E. Atcholi, B.S. Tie</i>	
EFFICIENCY OF RECYCLING POST-CONSUMER PLASTIC PACKAGES	1174
<i>E.U.T. van Velzen, M. Jansen, M.T. Brouwer, A. Feil, K. Molenveld, T. Pretz</i>	
THE EFFECT OF THE COMPATIBILIZER SEBS-G-GMA ON THE BLEND PP-PET: VIRGIN AND RECYCLED MATERIALS	1179
<i>K. Van Kets, N. Van Damme, L. Delva, K. Ragaert</i>	
ADSORPTION MECHANISMS OF EMULSIFIED CRUDE OIL DROPLETS ONTO HYDROPHILIC OPEN-CELL POLYMER FOAMS	1184
<i>P. Cherukupally, J.H. Hinestroza, R. Farnood, A.M. Bilton, C.B. Park</i>	
FABRICATION OF ADVANCED RECYCLING PROCESS CONSIDERED FROM THE PERSPECTIVE OF THE PHYSICAL DEGRADATION	1189
<i>A. Tominaga, H. Sekiguchi, R. Nakano, S. Yao, E. Takatori</i>	
MECHANICAL PROPERTIES OF VIRGIN ABS/POST-CONSUMER ABS BLENDS	1194
<i>A.M.C. de Souza, M.G. Cucchiara</i>	
EFFECTIVE PELLETIZING CONDITION OF RECYCLE CONTAINERS AND PACKAGE PLASTICS	1199
<i>N. Takenaka, A. Tominaga, R. Nakano, H. Sekiguchi, S. Yao</i>	
DEVULCANIZATION OF WASTE TIRE RUBBER BY MICROWAVES	1200
<i>F.D.B. de Sousa, C.H. Scuracchio, G.H. Hu, S. Hoppe</i>	
MECHANICAL JOINING OF METAL SHEETS AND CFRTP BY USING HIGH FREQUENCY INDUCTION HEATING	1204
<i>K. Kuwabara, T. Yasuhara</i>	

HIGH PERFORMANCE COMPOSITE PROCESSING

INVESTIGATION OF THE MATRIX INFLUENCE ON THE LAMINATE PROPERTIES OF EPOXY- AND POLYURETHANE-BASED CFRPS MANUFACTURED WITH HP-RTM-PROCESS	1209
<i>F. Behnisch, P. Rosenberg, K.A. Weidenmann, F. Henning</i>	

COMPRESSION MOULDING OF LFT COMPONENTS WITH INCREASED QUALITY BY VARIOTHERMAL MOULD TECHNOLOGY	1214
<i>C. Hopmann, C. Beste, A. Boettcher, K. Fischer</i>	
RHEOKINETIC STUDIES OF POLYAMIDE FOR IN-SITU MONITORING OF T-RTM PROCESS: RHEOLOGY COUPLED TO DIELECTRIC ANALYSIS AND FTIR SPECTROSCOPY	1219
<i>M. Dkier, K. Lammawar, A. Maazouz</i>	
ANALYSIS OF THE STATE OF TENSION AT THE BONDING AREA BETWEEN COMPONENTS OF A FULL THERMOPLASTIC HYBRID COMPOSITE.....	1225
<i>R. Giusti, G. Lucchetta</i>	
ENGINEERING PROPERTIES AND STRUCTURE OF REACTIVE MOLDED POLYMERS AND ITS FIBER REINFORCED COMPOSITES.....	1230
<i>H. Suenaga, A. Ishigami, K. Taki, T. Inoue, H. Ito</i>	
POLYPHENYLENE SULFIDE CONTAINING HYDROXYL: SYNTHESIS AND THE EFFECT ON THE MICROMECHANICAL PROPERTIES OF COMPOSITES POLYPHENYLENE SULFIDE/CARBON FIBER	1235
<i>H.H. Ren, G. Zhang, J. Yang</i>	
MECHANICAL PROPERTIES OF 3-DIMENSIONAL FRP PREPARED BY VARTM.....	1240
<i>Y.A. Kang, A.R. Kim</i>	

ADDITIVE MANUFACTURING FOR PLASTIC COMPONENTS

CROSS-LINKING OF LASER SINTERED POLYAMIDE 12 AND POLYETHYLENE PARTS BY GAMMA IRRADIATION	1242
<i>A. Wegner</i>	
3D PRINTING OF MAIZE PROTEIN BY FUSED DEPOSITION MODELING.....	1247
<i>L. Chaunier, E. Leroy, G.D. Valle, M. Dalgalarrodo, B. Bakan, D. Marion, B. Madec, D. Lourdin</i>	
VISCOELASTIC MODELLING OF GAS PORE COLLAPSE DURING POLYMER SINTERING.....	1252
<i>F. Wohlgemuth, I. Ali</i>	
EFFECT OF PARTICLE SIZE ON THE PROPERTIES OF HIGHLY-FILLED POLYMERS FOR FUSED FILAMENT FABRICATION.....	1257
<i>C. Kukla, J. Gonzalez-Gutierrez, I. Duretek, S. Schuschnigg, C. Holzer</i>	
INFLUENCE OF TEMPERATURE ON THE FLOWABILITY OF POLYMER POWDERS IN LASER SINTERING.....	1261
<i>M. Van den Eynde, L. Verbelen, P. Van Puyvelde</i>	
QUALITY IMPROVEMENT OF FDM PARTS BY PARAMETER OPTIMIZATION.....	1266
<i>F. Knoop, A. Kloke, V. Schoeppner</i>	
THE INFLUENCE OF PLA COMPOSITE FILAMENTS ON MOLDING PRODUCT MADE BY THREE-DIMENSIONAL PRINTING	1271
<i>K. Araki, G. Hamabe, K. Date, T. Tanaka</i>	
FDM BOND STRENGTH: EXPERIMENTS AND SIMULATIONS BASED ON HEALING MODELS.....	1276
<i>T.J. Coogan, D. Kazmer</i>	
NEW APPROACHES TOWARDS PRODUCTION OF POLYMER POWDERS FOR SELECTIVE LASER BEAM MELTING OF POLYMERS.....	1277
<i>J. Schmidt, M. Sachs, S. Fanselow, K.E. Wirth, W. Peukert</i>	
INSIGHTS INTO THE DEVELOPMENT OF A SHORT-FIBER REINFORCED POLYPROPYLENE FOR LASER SINTERING	1282
<i>R.G. Kleijnen, J.P.W. Sesseg, M. Schmid, K. Wegener</i>	
HIGHLY FILLED SELF-ASSEMBLED NANOCOMPOSITES CONTAINING LAYERED DOUBLE HYDROXIDES (LDH) NANOPARTICLES.....	1287
<i>N.M. Larocca, L.A. Pessan</i>	
PROCESS MONITORING BY THERMOGRAPHY DURING FUSED DEPOSITION MODELING.....	1291
<i>G. Traxler, T. Kopplmayr</i>	
LAYER STRENGTH OF FDM TYPE 3D PRINTED ARTICLE FOR NOZZLE TEMPERATURE AND FILAMENT MATERIAL	1296
<i>M.Y. Lyu, J.H. Park, S.J. Park, K.H. Lee</i>	

MICROTECHNOLOGY AND SMART MATERIALS

FABRICATION AND CHARACTERIZATION OF POLYMERIC ORIGAMI STRUCTURE FOR COMPRESSION PROPERTIES	1300
<i>M.A.E. Kshad, H.E. Naguib</i>	
CONDUCTING POLYMER HYDROGELS (CPHS) FOR ELECTRONIC SKIN APPLICATIONS	1305
<i>N. Khalili, R.H. Kwon, H.E. Naguib</i>	
MICRO-FDM PROCESS CAPABILITY AND COMPARISON WITH MICRO-INJECTION MOULDING	1310
<i>V. Basile, C. Pagano, I. Fassi</i>	
DESIGN AND NUMERICAL SIMULATION OF A PIEZOELEC HARVESTER USING PVDF POLYMER FOR KEYBOARD APPLICATION	1315
<i>M. Yessari, A. Hajjaji, A. Arbaoui</i>	
CRYSTALLINE SUPRAMOLECULAR INTERACTION OF CRYSTALLINE SIDE CHAIN AND ITS APPLICATION	1320
<i>R. Nakano, A. Maeda, H. Obuchi, Y. Tateishi, Y. Kanazawa, H. Sekiguchi, S. Yao</i>	
FRICITIONAL PROPERTIES OF PLANTS-DERIVED POLYAMIDE AGAINST SURFACE MICROSTRUCTURES OF METAL COUNTERPART FABRICATED BY FEMTOSECOND LASER	1325
<i>K. Nakamura, Y. Nishitani, T. Kitano</i>	

BIOBASED PLASTICS AND MATERIALS FOR RENEWABLE ENERGY

TUNING THE HYDROLYTIC DEGRADATION RATE OF POLY-LACTIC ACID (PLA) TO MORE DURABLE APPLICATIONS	1330
<i>V. Iozzino, H. Askanian, F. Leroux, V. Verney, R. Pantani</i>	
Author Index	