

{password pass="ipc_guest2" text="Please insert Password."}

2011 Scientific Performance

At the end of 2011 there were 26 PhD holding members and 71 researchers and post-graduation students working at the Institute, which in that year were responsible for the publication of 54 articles in peer-reviewed, 16 chapters of internationally edited books, 6 PhD and 34 MSc theses. Additionally, 86 communications were presented in international scientific conferences and 4 patents were granted to, or applied for, by members of IPC. This output is consistent with the trend of the last years, albeit with some variations from year to year. Concurrently, there was an undeniable consolidation of the international visibility of the members of the Institute, as a result of increasing editorial activities, of the consistent organization of scientific events and invitations for conferences and of the award of international prizes.

Books:

1.

Gaspar-Cunha, A.; Covas J. A.;
Optimization in Polymer Processing
Nova Publisher, (ISBN: 978-1-61122-818-2), 2011.

1.

Gaspar-Cunha, A.; Takahashi R.; Schaefer G.; Costa, L. A.
Soft computing in industrial applications
Springer-Verlag, (ISBN: ISBN 978-3-642-20504-0), 2011.

Book Chapters:

1.

Bernardo, C.A.; Simões C. L.

Life Cycle Assessment of composite, steel and aluminium outdoor lighting columns: a comparative
1st International Conference on Sustainable Intelligent Manufacturing, IST Press, Leiria, Portugal

1.

Costa, S.; Duarte, F.M.; Covas, J. A.

Using matlab to compute heat transfer In free form extrusion

MATLAB - A Ubiquitous Tool for the Practical Engineer, InTech 453-474, 2011, (ISBN: 978-953-30

<http://hdl.handle.net/1822/14967>

1.

Covas, J. A.; Gaspar-Cunha, A.

Introduction [to] "Optimization in polymer processing"

Optimization in Polymer Processing, Nova Science Publishers 1-7, 2011, (ISBN: 978-1-61122-818

<http://hdl.handle.net/1822/14740>

1.

Covas, J. A.; Gaspar-Cunha, A.

Polymer extrusion: setting the operating conditions and defining the screw geometry

Optimization in Polymer Processing (cap. 5), Nova Science Publishers 87-113, 2011, (ISBN: 978-1

<http://hdl.handle.net/1822/14741>

1.

Denchev Z.; Viana, J.C.

X-Ray Scattering Studies Multiphase Polymer Systems in: Handbook of Multiphase Polymer Systems
Handbook of Multiphase Polymer Systems, John Wiley & Sons Volume 1 667-701, 2011, (ISBN: 0

<http://hdl.handle.net/1822/13727>

1.

Francisco, J. F; Nunes, J. P.; Bernardo, C.A.; Marques, A. T.

Thermoplastic Matrix Composites from Towpregs

Advances In Composite Materials - Analysis Of Natural And Man-Made Materials, InTech, Rijeka,

1.

Gaspar-Cunha, A.; Covas, J. A.; Vergnes, B.; Françoise B.

Reactive extrusion : optimization of representative processes

Optimization in Polymer Processing (cap. 6), Nova Science Publishers 115-143, 2011, (ISBN: 978

<http://hdl.handle.net/1822/14743>

1.

Gaspar-Cunha, A.; Ferreira, J. C.; Covas, J. A.; Fonseca, C. M.

Extending optimization algorithms to complex engineering problems

Optimization in Polymer Processing (cap. 4), Nova Science Publishers 59-83, 2011, (ISBN: 978-1-

<http://hdl.handle.net/1822/14742>

1.

Machado, A.V.; Antunes, C.; Duin, M. van;

Phase inversion of EPDM/PP blends : effect of viscosity ratio

Novel Trends in Rheology IV, Springer, x 1375 240-247, 2011, (ISBN: 978-0-7354-0935-4)

<http://hdl.handle.net/1822/14694>

1.

Machado, A.V.; Covas J. A.; Pessan L. A.; Larocca N.

Polymer blend compatibilization by copolymers and functional polymers

Encyclopedia of Polymer Blends, Wiley-VCH, Weinheim 2 315-356, 2011, (ISBN: 978-3-527-31930-0)

1.

Mould, S. T.; Pereira, S. P.; Nóbrega, J.M.; Machado, A.V.; Covas, J. A.

On-line rheometry: a tool to monitor polymer nanocomposites production

Novel Trends in Rheology IV, Springer, 147-155, 2011, (ISBN: 978-0-7354-0935-4)

1.

Nóbrega, J. M.; Carneiro, O. S.

Automatic design of extrusion dies and calibration/cooling systems

Optimization in Polymer Processing, Nova Science Publishers, Inc. 145-167, 2011, (ISBN: 978-1-60649-145-0)

<http://hdl.handle.net/1822/15539>

1.

Santos, R.M.; Cramez, M. C.; Botelho M. G.; Machado, A.V.

Natural and accelerated weathering of Acrylonitrile-Butadiene-Styrene (ABS)

5th European weathering symposium EWS, Gesellschaft fur-Umweltsimulation, Munich 275-285, 2005

1.

Veloso F.; Sampaio, A. M.; Chaves F.; Simões, R.

A creative solution for rapid and inexpensive model-making in product design processes

Innovative developments in virtual and physical prototyping, CRC press, 423, 2011, (ISBN: 978-0-

1.

Viana J. C; Ribeiro C.;

Optimization of injection moulded polymer automotive components

New Trends and Developments in Automotive System Engineering, InTech, Rijeka 65-100, 2011,

1.

Vicente, A. A.; Cerqueira, M. A.; Hilliou, L.; Rocha, C.

Protein-based resins for food packaging

Multifunctional and nanoreinforced polymers for food packaging, Woodhead Publishing 610-638, 2

<http://hdl.handle.net/1822/13224>

PhD Theses:

1.

Domingues, Natália Lage

Automatic design of polymer processing equipment

Tese de doutoramento em Ciência e Engenharia de Polímeros e Compósitos, 2011.

1.

Fernandéz-Lopéz, Helena

Remote Vital Signs Monitoring Based on Wireless Sensor Networks

Tese de Doutorado em Líderes para Indústrias Tecnológicas, 2011.

1.

Motovilin, Mladen Feodorov

Development and investigation of new hybrid composite materials based on oriented blends of the

Tese de Doutorado em Ciência e Engenharia de Polímeros e Compósitos, 2011.

<http://hdl.handle.net/1822/14250>

1.

Moura, Isabel Gonçalves de

Development of biodegradable materials by reactive extrusion

Tese de Doutorado em Ciência e Engenharia de Polímeros e Compósitos, 2011.

1.

Selada, António Cordeiro Baptista

Evaluation of subtractive microtechnologies for injection micromoulding

Tese Doutorado em Ciência e Engenharia de Polímeros e Compósitos, 2011.

1.

Todorov, Lyudmil Valentinov

Multiscale morphology evolution of PET and its nanocomposites under deformation

Tese de Doutoramento em Ciência e Engenharia de Polímeros e Compósitos, 2011.

MSc Theses:

1. Alexandre José Fernandes Rodrigues
Otimização da produção de perfis pultrudidos em poliéster reforçado com fibras de vidro
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Ana Laura Peixoto de Almeida da Silva
Processamento e estudo da adesão de peças bi-material com a combinação termoplástico/LSR
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Ana Lima
Synthesis and Characterization of Bionanocomposites for Packaging Applications
Dissertação de Mestrado, 2011.

1. Ana Nunes
Preparação e caracterização de nanocompósitos à base de PMMA para próteses dentárias
Dissertação de Mestrado, 2011.

1. Andreia Fernandes
Degradação Controlada de EPM no fundido
Dissertação de Mestrado, 2011.

1. Armando Mota
Novo conceito de eléctrodo passivo Quasi-seco para EEG
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Bou Sing Hau
Design & Modeling of a MEMS Contact-mode
Piezoresistive Detector for Pull-in Acceleration
Sensing
Dissertação de Mestrado, 2011.

1. Bruno Miguel Vieira Fernandes
Sistema de monitorização e gestão de sinais vitais baseado em dispositivos móveis
Mestrado Integrado em Engenharia Electrónica Industrial, 2011.

1. Carlos Eduardo Ferreira Gonçalves
Development and improvement of one component polyurethane aerosol valves and new adapter sy
Mestrado Integrado em Engenharia de Polímeros , 2011.

1. Daniel Andrés Laguado Escobar
Utilization of birefringence and dichroism for the Off-line and In-line monitoring of polymer film extr
Tese de Mestrado EURHEO, 2011.

1. Daniel Ferreira Carmo Correia
Study of the processing and properties of mixtures of recycled plastics for outdoor applications
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Eunice Paula Freitas Cunha
Funcionalização Química de Nanotubos de Carbono e Formação de Grafeno
Mestrado em Micro/Nano Tecnologias, 2011.

1. Fang Liu
Screening of Commercial Starches for Textile Coating Applications
Tese de Mestrado EURHEO, 2011.

1. Fantina Lima Rosa Esteves
Production and characterization of structural foams for application with hybrid moulds
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Fernando José Pirotta
Integrating waste-to-energy in small islands communities: the Maltese case study
Mestrado em Gestão Ambiental, 2011.

1. Guillaume de Barros
Processamento e estudo da adesão de peças bi-material com a combinação termoplástico/LSR
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Hadi Goldansaz
A Finite volume solver on collocated unstructured grids to model flow of Newtonian fluids
Tese de Mestrado EURHEO, 2011

1. Hugo João Queirós da Rocha
Design de um chassis em estrutura sandwich para um veículo eléctrico
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Ivo David Ribeiro de Moraes
Studies in Multi-Material Injection Molding
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Joana Isabel Oliveira Fernandes
Desenvolvimento de um papel funcional com polímeros naturais e nanocargas de carbono
Dissertação de Mestrado, 2011.

1. João Filipe Cunha São Bento
Caracterização de superfícies de fratura em materiais poliméricos
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. José Miguel Campos Boucinha
Relatório de Sustentabilidade da Universidade do Minho
Dissertação de Mestrado, 2011.

1. Lígia Maria Alves de Sousa e Silva
Inkjet Printing – Impressão de circuitos condutores flexíveis
Mestrado em Micro/Nano Tecnologias, 2011.

1. Manuel Filipe Martins de Castro
Projecto e Desenvolvimento de Embalagens Alimentares Sujeitas ao Processo de Esterilização
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Miguel Venâncio Lopes
Inkjet Printing – Impressão de circuitos condutores flexíveis
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Minh Ngoc Tran
Optimization and Optical characterization of active Surface Plasmon Resonance nanocomposite thin films
Dissertação, 2011.

1. Nuno João Teixeira Monteiro
Caracterização Avançada de Ligantes Betuminosos
tese de mestrado, 2011.

1. Pelin Gören
Caracterização térmica, mecânica e ótica de nanocompósitos de PET/TiO₂
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Ricardo Alexandre Arede Paiva
Desenvolvimento de equipamentos e ferramentas para Nylon Vacuum Casting
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Salman Shahid
Rheology as a probe to assess the degradation of ethylene propylene copolymers
Dissertação de Mestrado, 2011.

1. Simão Pedro Salgado Bernardes Pereira
Parallelization of flow modelling code on a GPU
Mestrado Integrado em Engenharia de Polímeros, 2011

1. Vânia Manuela Lemos Oliveira
Injection moulding of flax fibres reinforced polypropylene: relationship to processing, mechanical p
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Vitor Duarte Cadilha
Development and optimization of one component polyurethane foam gun
Mestrado Integrado em Engenharia de Polímeros, 2011.

1. Zenamarkos Bantie Sendekie
Filament Extrusion of
Acetoxypopyl Cellulose (APC) Melt
Tese de Mestrado EURHEO, 2011.

Publications in Peer-reviewed Journals:

1. Afonso, J. A.; Silva, H. D.; Macedo, P.; Rocha L.A.
An enhanced reservation-based MAC Protocol for IEEE 802.15.4 networks
Sensors 11(4) 3852-3873, 2011.
<http://hdl.handle.net/1822/12124>

1. Antunes, C.; Duin, M. van; Machado, A.V.
Morphology and phase inversion of EPDM/PP blends – effect of viscosity and elasticity
Polymer Testing 30(8) 907-915, 2011.
<http://hdl.handle.net/1822/14851>

1. Antunes, C.; Machado, A.V.; Duin, M. van
Morphology development and phase inversion during dynamic vulcanisation of EPDM/PP blends
European Polymer Journal 47, 1447-1459, 2011.
<http://hdl.handle.net/1822/14702>

1. Arezes, P.M.; Bernardo, C.A.; Mateus, O. A.
Measurement strategies for occupational noise exposure assessment: A comparison study in different environments
International Journal of Industrial Ergonomics (2011), doi:10.1016/j.ergon.2011.10.005

1. Bessada, R.; Silva, G.; Paiva, M.C.; Machado, A.V.
Functionalization of PET and PA6.6 woven fabrics
Applied Surface Science 257(18) 7944-7951, 2011.
<http://hdl.handle.net/1822/12383>

1. Cabral-Fonseca, S.; Nunes, J. P.; Rodrigues, M. P.; Eusébio, M. I.
Durability of carbon fibre reinforced polymer laminates
used to reinforced concrete structures
Science and Engineering of Composite Materials 18, 201-207, 2011.

1. Cardoso P.; Silva J.; Klosterman D.; Covas J. A.; Van Hattum, F.W.J.; Simões, R.; Lanceros-Men
The influence of the dispersion method on the electrical properties of vapor-grown carbon nanofiber
Nanoscale Research Letters 6, 370-, 2011

<http://hdl.handle.net/1822/15389>.

1. Carneiro, O. S.; Covas, J. A.; Reis, R.; Brulé, B.; Flat, Jean-Jacques
The effect of processing conditions on the characteristics of electrically conductive thermoplastic c
Journal of Thermoplastic Composite Materials 24(6) 1-47, 2011.

<http://hdl.handle.net/1822/14983>

1. Cho, S.; Hong, J. S.; Lee, S. J.; Ahn, K. H.; Covas, J. A.; Maia, J. M.
Morphology and rheology of polypropylene/polystyrene/clay nanocomposites in batch and continu
Macromolecular Materials and Engineering 296(3-4) 341-348, 2011.

<http://hdl.handle.net/1822/15176>

1. Correia, M. S.; Miranda, A. S.; Oliveira, M. C.; Capela, C. A.; Pouzada, A.S.
Analysis of friction in the ejection of thermoplastic mouldings
International Journal of Advanced Manufacturing Technology [num] -, 2011.

<http://hdl.handle.net/1822/13812>

1. Costa, M. F.; Gaspar-Cunha, A.; Mendes, F.
Multi-objective memetic algorithm : comparing artificial neural networks and pattern search filter m
International Transactions in Operational Research (2010), 1 – 21. 18(2) 183-203, 2011.

<http://hdl.handle.net/1822/14653>

1. Covas, J. A.; Almeida, M.F.; Machado, A.V.; Larocca, N.M.; Pessan, L.A.
Nanoclays dispersion in a PA6/PP blend by twin screw compounding
Macromolecular Symposia 301(1) 55-62, 2011.

<http://hdl.handle.net/1822/14689>

1. Denchev Z.; Motovilin M.; Dencheva, N.V.
On the structure-properties relationship in montmorillonite-filled polyamide 6 nanocomposites
Journal of Applied Polymer Science 120[num] 3304-3315, 2011.
<http://hdl.handle.net/1822/13553>

1. Dencheva, N.V.; Pouzada, A.S.; Kearns, M. P.; Denchev, Z. Z.; Oliveira, M. J.
Mechanical properties of polyamide 6 reinforced microfibrillar composites
Polymer Composites 32[3] 407-417, 2011.
<http://hdl.handle.net/1822/13563>

1. Dias R. A.; Cretu, E.; Wolffenbuttel, R. F.; Rocha, L. A.
Pull-in-based μ
Sensors and Actuators, A: Physical 172, 47-53, 2011.

1. Dias, R. A.; Cretu, E.; Wolffenbuttel, R. F.; Rocha, L.A.
Squeeze-film damper design with air channels : experimental verification
Procedia Engineering 22, -, 2011.

1. Dias, R. A.; Mol, L.; Wolffenbuttel, R. F.; Cretu, E.; Rocha, L. A.
Design of a time-based microG accelerometer
IEEE Sensors Journal 11(8) 1677-1683, 2011.
<http://hdl.handle.net/1822/14656>

1. Fernandes, C.; Gaspar-Cunha, A.; Pontes, A. J.; Viana J. C.;
Using multi-objective evolutionary algorithms for optimization of the cooling system in polymer injection
International Polymer Processing, 1-43, 2011.
<http://hdl.handle.net/1822/14683>

1. Ferreira, A.; Costa, P.; Carvalho H. M.; Nóbrega, J.M.; Sencadas, V.; Lanceros-Méndez, S.
Extrusion of poly(vinylidene fluoride) filaments : effect of the processing conditions and conductive
Journal of Polymer Research 18(6) 1653-1658, 2011.
<http://hdl.handle.net/1822/11965>

1. Ferreira, V.; Santos, L.; Franzen, M.; Ghouati, O.; Simões, R.J.
Estimating local part thickness in midplane meshes for finite element analysis
International Journal of Mathematics and Computers in Simulation 5(5) 69-76, 2011.
<http://hdl.handle.net/1822/12000>

1. Gomes, M.; Domenico, M.; Pontes, A.J.; Viana, J.C.
Co-injection molding of immiscible polymers : skin-core structure and adhesion studies
Polymer Engineering and Science 51(12) 2398-2407, 2011.
<http://hdl.handle.net/1822/15636>

1. Leite, J. L.; Salmoria, G.; Paggi, R. A.; Ahrens, C.; Pouzada, A.S.
Microstructural characterization and mechanical properties of functionally graded PA12/HDPE part
International Journal of Advanced Manufacturing Technology-, 2011.
<http://hdl.handle.net/1822/13876>

1. Lima, P.; Fonseca, C.; Vaz, F.; Machado, A.V.; Pedrosa, P.
Plasma surface activation and TiN coating of a TPV substrate for biomedical applications
Plasma Processes and Polymers 8(12) 1174-1183, 2011.
<http://hdl.handle.net/1822/14700>

1. Lobo, L.S.; Figueiredo, L.S.; Bernardo, C.A.
Carbon formation and gasification on metals. Bulk diffusion mechanism: a reassessment
Catalysis Today 178(1) 110-116, 2011.

1. Machado, A.V.; Neves, I. C.; Botelho, G.; Silva, M. M.; Fonseca, A. Maurício C.
Stability of nanocomposites of poly(ϵ)
Journal of Polymer Research-, 2011.
<http://hdl.handle.net/1822/12357>

1. Magalhães, R.; Durães, N.; Silva, J.; Silva, M. A.; Sencadas, V.; Botelho, G.; Gómez-Ribelles, J.;
The role of solvent evaporation in the microstructure of electroactive β -poly(vinylidene fluoride) me
Soft Materials 9(1) 1-14, 2011.
<http://hdl.handle.net/1822/12479>

1. Marques S.M.; Tavares C.J.; Lanceros-Mendez S; Denchev Z.Z.;
X-ray scattering experiments on sputtered titanium dioxide coatings onto PVDF polymers for self-cleaning
Journal of Applied Polymer Science 119[2] 726-731, 2011.
<http://hdl.handle.net/1822/13014>

1. Martinho, P.G.; Netto, A. S.; Ahrens, C.; Salmoria, G.; Pouzada, A.S.
Hybrid moulds with epoxy-based composites : effects of materials and processing on shrinkage and warpage
International Polymer Processing 26(3) 256-264, 2011.
<http://hdl.handle.net/1822/13113>

1. Martins, J.; Cruz, V. S.; Paiva, M.C.
Flow activation volume in composites of polystyrene and multiwall carbon nanotubes with and without
Macromolecules 44(24) 9804-9813, 2011.
<http://hdl.handle.net/1822/14698>

1. Mendes, A.A.; Cunha, A.M.; Bernardo, C.A.
Study of the degradation mechanisms of polyethylene during reprocessing
Polymer Degradation and Stability 96, 1125-1133, 2011.

1. Michelangelli, O. P.; Yamanoi, M.; Gaspar-Cunha, A.; Covas, J. A.
Modelling pellet flow in single extrusion with DEM
Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering
<http://hdl.handle.net/1822/15179>

1. Moreira, R.; Chenlo, F.; Torres, M. D.; Prieto, D. M; Sousa, A. M.; Hilliou, L.; Gonçalves, M. P.; Blázquez
Drying kinetics of biofilms obtained from chestnut starch and carrageenan with and without glycerol
Drying Technology 29(9) 1058-1065, 2011.
<http://hdl.handle.net/1822/13446>

1. Motovilina, M.; Denchev, Z.Z.; Dencheva, N. V.
On the structure-properties relationship in montmorillonite-filled polyamide 6 nanocomposites
Journal of Applied Polymer Science 120, 3304-3315, 2011.

<http://hdl.handle.net/1822/13553>

1. Mould, S. T.; Barbas, J. M.; Machado, A.V.; Nóbrega, J.M.; Covas, J. A.
Measuring the rheological properties of polymer melts with on-line rotational rheometry
Polymer Testing 30[num] 602-610, 2011.

<http://hdl.handle.net/1822/14699>

1. Moura, I.; Machado, A.V.; Duarte, F.M.; Nogueira, R.
Biodegradability assessment of aliphatic polyesters-based blends using standard methods
Journal of Applied Polymer Science 119(6) 3338-3346, 2011.

1. Moura, I.; Nogueira, R.; Bounor-Legare, V.; Machado, A.V.
Biobased grafted polyesters prepared by in situ ring-opening polymerization.
Reactive and Functional Polymers 71(7) 694-703, 2011.

<http://hdl.handle.net/1822/14664>

1. Oliveira, M.; Ribeiro, D.; Nóbrega, J.M.; Machado, A.V.; Brito, A.G.; Nogueira, R.
Removal of phosphorus from water using active barriers: Al₂O₃ immobilized on to polyolefins
Environmental Technology 32(9) 989-995, 2011.

<http://hdl.handle.net/1822/14799>

1. Potschke, P.; Kobashi, K.; Villmow, T.; Andres, T.; Paiva, M.C.; Covas, J. A.
Liquid sensing properties of melt processed polypropylene/poly(ϵ -caprolactone) blends containing
Composites Science and Technology 71(12) 1451-1460, 2011.

<http://hdl.handle.net/1822/13103>

1. Rocha, L. A.; Silva, C.; Cerqueira, M. F.; Ribeiro, J. F.; Gonçalves, L. M.; Pontes, A. J.; Viana J. C.
A microinjected 3-axis thermal accelerometer
Procedia Engineering 22[num] -, 2011.

1. Rocha, L.A. ; Dias, R. A.; Mol, L.; Cretu, E.; Wolffenbuttel, R. F.
Auto-calibration of capacitive MEMS accelerometers based on pull-in voltage

Microsystems Technology 17(3) 429-436, 2011.

1. Santos, I.; Tavares, J. M.; Rocha, L. A.
Concept selection in the development of medical devices: the case of the smart stent-graft
Journal of Medical Devices, Transactions of the ASME 5(2) 27510-27510, 2011.
<http://hdl.handle.net/1822/14658>

1. Selada, A.; Manaia, A.; Vieira, M. T.; Pouzada, A.S.

Effect of LBM and large-area EBM finishing on micro-injection moulding surfaces

Int. J. Adv. Manuf.

Techn., 52(1-4) 171-182, 2011

<http://hdl.handle.net/1822/12621>

1. Sepúlveda, A.T.; Fachin, F.; Guzmán -Villoria, R.; Wardle, B. L.; Viana J. C.; Pontes, A. J.; Rocha
Nanocomposite flexible pressure sensor for biomedical applications
Procedia Engineering 22 -, 2011.
1. Silva, J.; Ribeiro, S; Lanceros-Méndez, S.; Simões, R.
The influence of matrix mediated hopping conductivity, filler concentration, aspect ratio and orientation
Composites Science and Technology 71(71) 643-646, 2011.
<http://hdl.handle.net/1822/12001>
1. Silva, J.; Simões, R.; Lanceros-Méndez, S.; Vaia, R.;
Applying complex network theory to the understanding of high aspect ratio carbon filled composites
Europhysics Letters 93(3) 37005-, 2011.
<http://hdl.handle.net/1822/11999>

1. Simões C. L.; Xará S. M.; Bernardo C.A.

A

pplying the lca methodology to two r

Waste Management & Research, vol. 29

(4),

1. Simões, C. L.; Xará, S. M.; Bernardo, C.A.
Influence of the impact assessment method on the conclusions of a life cycle assessment study: a
Waste Management and Research 29(10) 1018-1026, 2011.
<http://hdl.handle.net/1822/15097>
1. Souza, H. K.; Hilliou, L.; Bastos, M.; Gonçalves, M.P.;
Effect of molecular weight and chemical structure on thermal and rheological properties of gelling h
Carbohydrate Polymers 85(2) 429-438, 2011.
<http://hdl.handle.net/1822/13447>
1. Teixeira, C.; Covas, J. A.; Stutzle, T.; Gaspar-Cunha, A.
Engineering an efficient two-phase local search algorithm for the co-rotating twin-screw extruder c
International Transactions in Operational Research (2010), 1 – 21. 18(2) 271-291, 2011.
<http://hdl.handle.net/1822/13196>
1. Teixeira, C.; Covas, J. A.; Stützle, T.; Gaspar-Cunha, A.
Multi-objective ant colony optimization for the twin-screw configuration problem
Engineering Optimization, -, 2011.
<http://hdl.handle.net/1822/15249>
1. Todorov, L.; Martins, C.I.; Viana, J.C.
Structural Development of Poly(ethylene terephthalate)
During Uniaxial Stretching Above the Glass-Transition
Temperature: Study of the Statistical Influence of the
Stretching Variables

Journal of Applied Polymer Science 120 1253-1265, 2011.

1. Van Hattum, F.W.J.; Regel F.; Labordus M.;
Cost reduction in manufacturing of aerospace composites
Plastics, Rubber and Composites 40(2) 93-99, 2011.

1. Yamanoi M.; Michelangelli, O. P.; Maia J. M.
Linear and non-linear dynamics of entangled linear polymer melts by modified tunable coarse-grain
Journal of Chemical Physics 135(4) 044904-1-044904-9, 2011.

1. Yamanoi M.; Michelangelli, O. P.; Maia J. M.
Stokesian Dynamics simulation of the role of hydrodynamic interactions on the behavior of a single
Journal of Non-Newtonian Fluid Mechanics 166(9) 469-477, 2011.

Patents:

1. Azenha, J.; Alexandra, S.; Viana J. C.; Ribeiro, C.; Teixeira, D.
An injection moulding device for making articles from two injection moulded parts and method for m
Patent no. 10382009.8, 2011.

1. Denchev Z.; Tomanova M.; Cunha A. M.;
Process for preparation of alkyl- and alkoxyalkyl α
Patente internacional, 2011.

1. Nóbrega, J.M.; E. Pessoa; J A Covas
Method for preparing coated binder units and device for use therein
Int. Patent WO/2011/067354, 2011.

1. Nóbrega, J.M.; E. Pessoa; J A Covas, S. Nigen-Chaidron
Method For Preparing Coated Binder Unit
Int Patent WO/2009/153324, 2011