

## POSTER SESSION –

Remark : The first number corresponds to the place where the Poster is on show

**Thursday, August 31, 2006**

### Applications/Structures

**1/(463) Microwave studies of polyvinyl-acetate-based phantom for applications in medical imaging**

G. Bindu, Anil Lonappan, Vinu Thomas, C. K. Aanandan, K. T. Mathew\*, Cochin Univ. Science and Technology, India

**2/(293) Composite grid shells : conception and prototype**

C. Douthe, O. Baverel, J-F. Caron, LAMI-ENPC, Marne-la-Vallée, France

**3/(184) Analysis of a composite multi-layer hydrogen storage spherical tank reinforced by a liner under pressure**

A. Hocine\*, Bezazi A. \*\*+, Boubakar L. \*\*\*, Benamar A. \*\*\*\*, \* Univ. Hassiba Benbouali of Chlef, Algérie, \*\*+ Univ. Bristol, UK, \*\*\* Univ. Franche-Comté, Besançon, France, \*\*\*\* ENSET, Oran, Algérie

**4/(519) Design of long fibres laminated composite structures**

Y. Duplessis Kergomard\*, C. Landry\*\*\*, J. Renard\* et A. Thionnet\* \*\*, \*Centre des Matériaux P.M Fourt, Evry, \*\*Univ. Bourgogne, Dijon, \*\*\*CETIM de Nantes, France

**5/(123) Glass reinforced plastics for radioengineering applications**

V. Sokolov, N. Trofimov, I. Simonov-Yemelyanov, S. Shalgunov, NPO Stekloplastic, Moscow region, Russia

**6/(327) Study the risk of potential electrostatic brush discharges occur in thermoplastic matrix composite pressure gas cylinders**

J. Goncalves<sup>1</sup>, J.G. Rocha<sup>2</sup>, S. Lanceros-Mendez<sup>1</sup>, J.P. Nunes<sup>3</sup>, P.J. Antunes<sup>3</sup>, F.W.J. van Hattum<sup>3</sup>, <sup>1</sup>Dept. Physics, Minho Univ., Braga, Portugal, <sup>2</sup>Instrumentation Electronics Dept., Minho Univ., Guimaraes, Portugal, <sup>3</sup>Polymer Engineering Dept., Minho Univ., Guimaraes, Portugal,

### Carbon/Carbon Composites

**7/(423) Modeling of heat transfer in porous C/C composite reinforced with woven fabric**

B. Tomkova<sup>1</sup>, P. Tomek<sup>2</sup>, <sup>1</sup>Dept. Textile Mat'ls, <sup>2</sup>Dept. Modelling Processes, Technical Univ. Liberec, Czech Republic

**8/(119) Measurement of the fracture shear strength at carbon fibre/carbon matrix interfaces using a single-fibre pull-out testing method**

D. Jehl, M.A. Dourges, G. Chollon, P. Weisbecker, R. Pailler, A. Guette, LCTS–Univ. Bordeaux 1, France

**9/(385) Simulation of C/C composites ablation using a VOF method with moving reactive interface**

Y. Aspa<sup>1</sup>, J. Lachaud, G.L. Vignoles, M. Quintard, <sup>1</sup>Institut Mécanique Fluides Toulouse, LCTS–Univ. Bordeaux 1, France

### Civil Engineering

**10/(802) Applications of fiber reinforced polymer composites PRF in structural and civil engineering**

R. Benzaid\*, N.E. Chikh\*\*, \* Univ. Jijel, \*\* Univ. of Constantine, Algérie

**11/(021) Interfacial stresses in concrete beams strengthened**

E. Adda Bedia, A. Tounsi, S. Benyoucef, S.A Metah, Univ. Sidi Bel Abbes, Algérie

**12/(429) Long-term behaviour of CFRP laminates for the rehabilitation of concrete structures**

S. Cabral-Fonseca<sup>1</sup>, J. P. Nunes<sup>2</sup>, M.P. Rodrigues<sup>3</sup>, M.I. Eusébio<sup>4</sup>, <sup>1,3,4</sup> Laboratório Nacional de Engenharia Civil, Lisbon, Portugal, <sup>2</sup> University of Minho, Guimarães, Portugal

**13/(088) Mechanical effectiveness of composite materials in the containment of the columns**

F. Bentayeb, K. Ait Tahar, Univ. UMMTO, Tizi Ouzou, Algeria

**14/(804) Strength and toughness of undulatory-shaped steel wire reinforced concrete**

S. Abbasi, A. Shokri Majoulan, Islamic Azad Univ. Shabestar, Iran

**Ceramic Matrix Composites****15/(362) Some aspects about the processing of ceramic matrix composites (CMC) applied in automotive industry**

I. Milosan, Transilvania Univ. Brasov, Romania

**Damage****16/(401) Mechanical behaviour of unbalanced woven fabric composite up to first failure**

Y. Thollon, C. Hochard, LMA, Marseille, France

**17/(148) Compression after impact of composite structures with thermal shield**

C. Bouvet, S. Petit, A. Bergerot, J-J. Barrau, LGMT, Univ. Paul Sabatier, Toulouse, LMS, IPPT PAN, ENSAE, Toulouse, EADS Saint Médard en Jalles, France

**18/(700) Experimental analysis of the stacking sequence influence on fatigue damage evolution of GFRP laminates under 3-point bending test**

A. Bezazi\*, A. El Mahi\*\*, I. Gimenez\*\*\*, J-M. Berthelot\*\*\*\*, \*Univ. Bristol, UK, \*\*Univ. du Maine, Le Mans, France, \*\*\*CTTM, Le Mans, France, \*\*\*\*ISMANS, Le Mans, France

**19/(113) Carbon composites based on multi-axial multi-ply stitched performs : stiffness degradation and tensile strength evolution during fatigue**

K. Vallons, M. Zong, S. Lomov, I. Verpoest, K.U. Leuven, Belgium

**20/(528) Buckling of composite plates with special shaped cutouts**

J. Rezaeepazhand, A. Moein Darbari, Univ. Mashhad, Iran

**21/(515) A study of fracture toughness in syntactic epoxy foams**

C. Capela\*, J.D. Costa\*\*, J.A.M. Ferreira\*\*, \*Polytechnic Institute of Leiria, \*\* University of Coimbra, Portugal

**22/(803) Design and analysis of curved beams made of composite materials**

A. Leite, J. Travassos, ISEL, Lisboa, Portugal

**23/(441) Numerical aspects of laminate failure process simulation**

G.R. Kress, P. Ermanni, ETH Zurich, Switzerland

**24/(529) Stress concentration in composite plates with special shaped cutout**

J. Rezaeepazhand, M. Jafari, Univ. Mashhad, Iran

**25/(179) Finite element analyses of two and three dimensional crack problem in fiber metal laminated cylinder**

S.M. Khalili, S. Sadough-Vanini, A. Yeilaghi-Tamijani, Amirkabir Univ. of Technology, Tehran Polytechnic, Iran

## Durability

### **26/(381) Physico-chemical characterization of glass fibre/polyester resin for naval applications : accelerated ageing and natural ageing relationship**

N. Regnier, M. Fayos, N. Zeinou-Nisar, J. Dufay, P. Moreau, DGA, Arcueil, France

### **27/(069) Ageing effect on residual stresses field in composite laminate**

O. Sicot\*, X-L. Gong\*\*, X-J. Gong\*, \*ISAT, Nevers, France, \*\*UTT, Troyes, France

### **28/(055) B<sub>4</sub>C as the precursor of the healing in a SiC/SiC composite : behaviour under wet atmosphere**

E. Garitte, F. Rebillat & A. Guette, LCTS-Univ. Bordeaux 1, Pessac, France

### **29/(286) A new software for fatigue life prediction of composite materials**

A.P. Vassilopoulos, C. Derdas, C. Tzerbinos and V. Kostopoulos, Univ. Patras, Greece

### **30/(081) Compressive failure of NCF composites containing open and bolted holes**

C. Isaksson, A. Sjögren, Linköping Univ., Sweden

### **31/(500) Fire reaction assessment of epoxy polymer mortars modified with flame retardant systems**

M.C.S. Ribeiro<sup>1</sup>, J.A. Rodrigues<sup>1</sup>, A.J.M. Ferreira<sup>2</sup> and A.T. Marques<sup>2</sup>, <sup>1</sup>INEGI, Leça do Balio, Portugal, <sup>2</sup>FEUP- Univ. Porto, Portugal

## Bio-composites

### **32/(800) Dental composites based on urethane macromonomers and morphogenesis of the polymeric network**

T. Buruiana<sup>1</sup>, E. C. Buruiana<sup>1</sup>, V. Pohoata<sup>2</sup>, L. Hahui<sup>1</sup>, M. Moldovan<sup>3</sup>, A. Colceriu<sup>3</sup>, <sup>1</sup>Petru Poni Institute, Iasi, Romania, <sup>2</sup>Al. I. Cuza Univ. Iasi, Romania, <sup>3</sup>Raluca Ripan Institute, Cluj-Napoca, Romania

## Ecocomposites

### **33/(448) Mechanical characterisation of vegetal natural fibres reinforcing composite materials**

C. Romao\*, J.L. Esteves\*\*, \* IPV- Viseu, Portugal, \*\* FEUP, Univ. Porto, Portugal

### **34/(434) The influence of fibre-surface treatment methods on mechanical properties of sisal fibres reinforced composites**

R. Ntenga\*, J. A. Atangana<sup>+</sup>, A. Beakou\*, L. O. Ayina<sup>+</sup>, + Univ. Douala, Cameroun, \* Labo. Mécanique et Ingénieries, Campus de Clermont-Ferrand/ Les Cézeaux, Aubière, France

### **35/(432) Plastic deformation behaviour of textile green composites using a plain woven ramie fabric**

R. Nakamura, Sreekala, M.S., Koichi Goda, J. Ohgi and H. Jouyou\*\*, Yamaguchi Univ., Japan, \*\*TOSCO Research Center, Mihara, Hiroshima, Japan

### **36/(319) New eco-friendly hybrid composite materials for civil construction**

R. Eires, J. P. Nunes<sup>2</sup>, R. Figueiro<sup>3</sup>, S. Jalali<sup>1</sup>, A. Camoes<sup>1</sup>, <sup>1</sup>Civil Eng. Dept. Univ. Minho, Guimaraes, <sup>2</sup>Polymer Eng. Dept. Univ. Minho, Guimaraes, <sup>3</sup>Textile Eng. Dept. Univ. Minho, Guimaraes, Portugal

### **37/(266) Physical and mechanical characterization of technical Palm Doum fibres**

F. Zbidi, M..Zidi and S. Sghaier, National Engineering School of Monastir, Tunisia

### **38/(169) Thermophysical properties of natural fibre polymer composite materials**

A. Boudenne<sup>1</sup>, M. Idicula<sup>2</sup>, L. Ibois<sup>1</sup>, S. Thomas<sup>2</sup>, Y. Candau<sup>1</sup>, <sup>1</sup>CERTES, Univ. Paris XII, Créteil, France, Mahatma Gandhi Univ., Kerala, India,

**39/(812) Effect of chemical treatment on the mechanical properties of vegetal alfa fibers**

L. Benhamadouche, H. Osmani, S. Mouhoubi, Univ. Ferhat Abbas, Sétif, Algérie

**40/(821) Kenaf fiber/polypropylene composites as potential material for partitioning panels in building**

D. Dimeski<sup>1</sup>, Z. Manov<sup>2</sup>, V. Srebrenkoska, A. Grozdanov<sup>3</sup>, G. Bogoeva-Gaceva<sup>3</sup>, M. Avella<sup>4</sup>, V. Zucchini<sup>3</sup>,  
<sup>1</sup>EUROKIMPOZIT, Prilep, R. Macedonia, <sup>2</sup>USKIM-ZIMRANT Skopje, R. Macedonia, <sup>3</sup>Faculty Technology & Metallurgy, Skopje, R. Macedonia, <sup>4</sup>ICTP-CNR, Napoli, Italy, <sup>5</sup>KEFI SpA, Gustalla, Italy

**41/(819) Poly(hydroxybutyrate-co-valerate) rice straw composites. Thermal and mechanical properties**

A. Buzarovska, G. Bogoeva-Gaceva, M. Avella\*, M. Erico\*, G. Gentile\*, A. Grozdanov, St Cyril & Methodius Univ., Skopje, Macedonia, \*ICTP, Pozzuoli, Italy

**Fracture****42/(112) Fracture angle and critical stress of anisotropic materials under biaxial loading**

W-K. Lim, H-S. Cho, W-K. Jeong, MyongJi Univ., Yongin, South Korea

**43/(367) Taking into account of the uncertainties in the failure criteria of composite materials**

H. Dehmous<sup>1,2</sup>, M. Karama<sup>1</sup>, K. Ait Tahar<sup>2</sup>, H. Weleman<sup>1</sup>, ENI Tarbes, France, Univ. UMMTO, Tizi Ouzou, Algérie

**44/(475) Edge effect study on G947/M18 composite laminate**

L. Lagunegrand, H. Wagnier, J.C. Wahl, T. Lorriot, IUT Bordeaux, France

**Functional Composites****45/(047) Vibration analyses of functionally graded plate by using of boundary element method**

A. Sadough Vanini, S. Akhshick, M. Pazoki, Amirkabir Univ. Technology (Tehran Polytechnic), Iran

**Impact****46/(345) Dynamic behaviour of fiber-reinforced composites plates under low velocity impact**

R. Tiberkak,<sup>a</sup>, S. Rechak<sup>b</sup>, and M. Bachene<sup>c</sup>,<sup>a</sup>Univ. Saad Dahleb, Blida, Algérie, <sup>b</sup>Ecole Nationale Polytechnique, Alger, Algérie, <sup>c</sup> Univ. Médéa, Algérie

**Interfaces****47/(265) In situ compatibilized interface and fracture mechanism : interfacial adhesion between semi-crystalline polymers (polypropylene and Nylon 6)**

Y. Seo, H. Kim, S. Kim, T. Kang, Seoul National Univ., Korea

**48/(127) Application of the rule of mixture for basalt fiber hybrid polymer composites considering fiber-matrix interfacial adhesion**

T. Czigan, Budapest Univ. Technology and Economics, Hungary

**49/(172) Quantitative evaluation of interfacial transverse strength in the Broutman test**

S. Kimura, J. Koyanagi and H. Kawada, Waseda Univ., Tokyo, Japan

**50/(023) Bond behaviour of FRP bars in a concrete resin matrix**

J.T. San Jose<sup>a,b</sup>, A.J.M. Ferreira<sup>c</sup>,<sup>a,b</sup> LABEIN, Derio (Vizcaya), Spain, <sup>b</sup>UPV-EHU Basque Country Univ., Bilbao, Spain, <sup>c</sup> FEUP, Univ. Porto, Portugal

## Joining/Joints

### 51/(218) Bearing failure of composite bolted joints : effects of drilling defects

G. Gohorianu, F. Lachaud, R. Piquet, J-J. Barrau, ENSICA, Toulouse, France

## Matrix Properties

### 52/(813) FE analysis of hysteresis type heat generation in a polymer plate subjected to a rolling steel ball

F. David, V. Karoly, K. Friedrich\*, Budapest Univ. Hungary, \*Univ. Kaiserslautern, Germany

### 53/(095) Energy limit of linear viscoelastic behaviour of polymers

O. Starkova, J. Jansons, A. Aniskevich, Univ. Latvia, Riga, Latvia

## Metal Matrix Composites

### 54/(473) Fabrication of Cu-SiC composites using electroless-copper-plated SiC particles

K. Euh, J-M. Lee, and S. B. Kang, Energy Materials Research Center, Changwon, Korea

### 55/(472) Thermal conductivity of plasma-sprayed Al-SiC composites

K. Euh, J-M. Lee, and S. B. Kang, Energy Materials Research Center, Changwon, Korea

### 56/(480) Numerical simulation of the infiltration of fibrous performs by a liquid metal : extension from pure metal to alloy

E. Lacoste, A. Cantarel, M. Danis, LGM2B, IUT Bordeaux, France

## Modeling/Finite Element Analyses

### 57/(053) Iosipescu shear test on carbon/epoxy composites

V. Cazajus, S. Mistou and M. Karama, ENIT, Tarbes, France

### 58/(450) A coherent mode conversion in 2D acoustic superlattices of altered phase

J. Kapelewski, Bogdan Lila, Military Univ. Technology, Warsaw, Poland

### 59/(402) Identification of elasto-plastic mechanical properties for bimetallic sheets by hybrid-inverse approach

X.H. Lin, Lin<sup>a</sup>, Y.Q. Wang<sup>a</sup>, Y.L. Kang<sup>a</sup>, Q.H. Qin<sup>a,b</sup>, H.L.Zhang<sup>a</sup>, <sup>a</sup>Tianjin Univ., PR China, <sup>b</sup>Australian National Univ., Canberra, Australia

### 60/(087) Approach simplified for the determination of the elastic moduli of a hybrid composite UD

H. Dehmous, K. Ait Tahar\*, M. Karam, ENIT Tarbes, France, \*Univ. of Tizi Ouzou, Algeria

### 61/(391) A phenomenological constitutive model of ferroelectrics with gradual domain switching

L. Yu, S-W. Yu, X-Q. Feng, Tsinghua Univ. Beijing, China

### 62/(132) Modelling the nonlinear shear stress-strain response of glass fibre-reinforced composites

I. De Baere, W. van Paepegem, J. Degrieck, Ghent Univ., Belgium

### 63/(117) Concentric cylinder model for predicting transient hygro-elastic stress concentration

F. Jacquemin, S. Fréour and R. Guillén, Univ. Nantes, Saint Nazaire, France

## Multi Materials

### **64/(479) Preliminary multimaterial bonded parts design method based on semi finished standard products : application to a HSM machine tool structural element**

P. Etchart, M. Danis, H. Wagnier, P. Joyot, LGM2B, IUT Bordeaux 1, LIPSI-ESTIA, Bidart, France

## Nanocomposites

### **65/(496) Isolation, characterization and modification of smectite from Indian clay as a reinforcement in polymer-nanoclay composites**

S. Manocha, NIKESH A. Patel, Sardar Patel Univ., Vallabh Vidyanagar, India

### **66/(520) Influence of manufacturing and surface modification on the toughness properties of epoxy nanocomposites**

M. Battistella<sup>1</sup>, B. Fiedler<sup>2</sup>, F.H. Gojny<sup>2</sup>, M. Quaresimin<sup>1</sup>, K. Schulte<sup>2</sup>, M.H.G. Wichmann<sup>2</sup>, <sup>1</sup>Univ. Padova, Italy, <sup>2</sup>TU Hamburg-Harburg, Germany

### **67/(386) Behaviors of polymer nanocomposites under shear loading**

J.Y. Park, Minnesota State Univ., USA

### **68/(282) On the improvement of fracture behaviour of unidirectional CFRP laminates by the use of multi-wall CNTs as matrix dopants**

P. Tsotra<sup>1</sup>, P. Karappapas<sup>1</sup>, A. Vouliotis<sup>1</sup>, T. Loutas<sup>1,2</sup>, A. Miaris<sup>1</sup>, S. Tsantzas<sup>1,2</sup>, V. Kostopoulos<sup>1,2</sup>, Univ. Patras, Greece, Foundation of Research and Technology Hellas, Greece

### **69/(143) Elasticity and strength of nano-fibre reinforced composites from first principles**

M. Cerny, J. Pokluda, Brno Univ. Technology, Czech Republic

### **70/(138) The impact of electron treatment on the strength properties of PA6 matrix nanocomposites**

L. Meszaros Tibo, T. Czvikovszky, Budapest Univ. Technology and Economics, Hungary,

### **71/(114) Granular nano-composites with amorphous structure**

A. Ponomarenko, V. Shevchenko, Y. Kalinin\*, O. Figovsky\*\*, Russian Academy of Sciences, \*Voronezh State Technical Univ., Russia, \*\*Israeli Research Center Polymate, Haifa, Israel

### **72/(074) Development of polymer composite reinforced with nano-diamonds and clays**

V. Karbushev<sup>1</sup>, V.Popov<sup>1</sup>, A. Semakov<sup>1</sup>, I. Konstantinov<sup>1</sup>, T.George<sup>3</sup>, V.Kulichikhin<sup>2</sup>, <sup>1</sup> Moscow State Institute of Steel and Alloys, Russia, <sup>2</sup> A.V.Topchiev Institute of Petrochemical Synthesis, Moscow. Russia, <sup>3</sup> Univ. Missouri St.Louis, USA

### **73/(347) Polymer nanofibers as reinforcement materials for composites**

P.J. Novo, P.J. Bartolo, Polytechnic Institute of Leiria, Caldas da Rainha, Portugal

### **74/(335) Optical, structural and morphological properties of nanostructured porous thin films of CuInS<sub>2</sub> fabricated using glancing angle deposition**

F. Chaffar Akkari, M.Kanzari and B.Rezig, ENIT, Tunis, Tunisia

## Machining

### **75/(145) Cutting forces in machining of unidirectional FRP composites**

G. Venugopal Rao, P. Mahajan\* and N. Bhatnagar, Indian Institute of Technology Delhi, India

### **76/(098) Laser machining of carbon reinforced polymer by microsecond laser pulses**

C. Lopez-Gascon<sup>1</sup>, A.J. Garcia<sup>2</sup>, M.P. Villar<sup>2</sup>, D. Araujo<sup>2</sup>, C. Estepa<sup>1</sup>, J.I. Pena<sup>1</sup>, R. Garcia<sup>2</sup>, J.C. Diez<sup>1</sup>, <sup>1</sup>CSIC- Univ. Zaragoza, Spain, <sup>2</sup>Univ. Cadiz, Pto Real, Spain

## Processing/Manufacturing

### 77/(809) Fluorescence study of film formation from PS-TiO<sub>2</sub> composites

S. Ugur<sup>1</sup>, Ö. Pekcan<sup>2</sup>, <sup>1</sup>Istanbul Technical Univ. Turkey, <sup>2</sup>Isik Univ. Istanbul, Turkey

### 78/(331) Mechanical properties of polyamide-66 with kaolin and short glass fibre addition compounds

A. Mimaroglu, H. Unal, A. Ozel, Univ. of Sakarya, Adapzari, Turkey

### 79/(397) Modulation of fibre/matrix interfaces in C/C composites

M. Rollin, R. Pailler, LCTS-Univ. Bordeaux 1, France

### 80/(435) An investigation of stamp-formed polypropylene based textile composites

F. Baudry, M.D. Wakeman, P. Blanchard, J-A. E. Manson, Ecole Polytechnique Fédérale de Lausanne, CH

### 81/(604) Study for manufacturing a box corner obtained by resin film infusion process

J. L. Torres, P. Marguerès, F. Collombet, IUT Paul Sabatier, Toulouse, France

### 82/(062) Using friction cladding for producing composite coatings with nano-reinforcements

V.A. Popov<sup>1</sup>, L.S. Belevsky<sup>2</sup>, E.L. Belevskaya<sup>2</sup>, Ia.M. Gordon<sup>3</sup>, A.A.Aksenov<sup>1</sup>, A.S. Prosviryakov<sup>1</sup>, S.A. Tulupov<sup>1</sup>, <sup>1</sup>Moscow State Institute of Steel and Alloys, Russia, <sup>2</sup>Magnitogorsk State Technical Univ., Magnitogorsk, Russia, <sup>3</sup>“Hatch”, Mississauga, Ontario, Canada

### 83/(336) Effect of processing conditions on mechanical properties of long fiber reinforced thermoplastic composites

D.L. Krasteva, F.W.J. van Hattum, J. C. Viana, Univ. Minho, Guimarães, Portugal

### 84/(320) Electron beam for curing of polymeric matrix

D.A. Nishitsuji<sup>1</sup>, G. Marinucci<sup>2</sup>, M.C. Evora<sup>3</sup>, L.G. de Andrade e Silva<sup>2</sup>, <sup>1</sup>Centro Tecnológico da Marinha, Sao Paulo, Brasil, <sup>2</sup>Instituto de Pesquisas Energeticas e Nucleares, Sao Paulo, Brasil, <sup>3</sup>Instituto de Estudos Avançados/CTA, Sao José dos Campos, Brasil

### 85/(189) Variability in liquid composite moulding techniques : neural networks and real time flow control

N.C. Correia, R. Oliveira, A. Nicolau, INEGI CEMACOM, Porto, Portugal

### 86/(155) Filament winding with increased efficiency

R. Schledjewski, Institut für Verbundwerkstoffe GmbH, Kaiserslautern, Germany

### 87/(141) Structure-process coupled optimization of liquid composite moulding

C.H. Park<sup>a</sup>, A. Saouab<sup>a</sup>, J. Bréard<sup>a</sup>, R. Le Riche<sup>b</sup>, <sup>a</sup>Université du Havre, <sup>b</sup>Ecole des Mines de Saint-Etienne, France

### 88/(115) Dielectric properties in the process of curing of polymer composites with ferroelectric fillers

S. Shevchenko, N. Kholmogorova, A. Ponomarenko, O. Figovsky\*, Russian Academy of Sciences, Moscow, Russia, \* Israeli Research Center Polymate, Haifa, Israel

## Processing/Microstructure/Properties Relationships

### 89/(415) Structure-property relationships in glass reinforced polyamide : the effects of average fibre diameter and diameter distribution

J.L. Thomason, Owens Corning Science & Technology Centre, Battice, Belgium

**90/(182) Effect of temperature on the transient hygroscopic distribution in the balanced laminates ( $\theta/\theta$ ),**

Z. Sereir, E.A. Adda Bedia<sup>1</sup>, Univ. Sciences et Technologie d'Oran, Algérie, <sup>1</sup>Univ. de Sidi Bel Abbès

**91/(110) Effect of microstructural parameters and wear test conditions on wear behaviour of magnesium**

P. Abachi, A.Massoudi and K.Purazrang, Sharif Univ. Technology, Tehran, Iran

**92/(080) Hot formability of particle reinforced Ti-Alloys**

C. Poletti<sup>1</sup>, S. Kremmer<sup>2</sup>, H.P. Degischer<sup>1</sup>, <sup>1</sup>Vienna University of Technology, Austria, <sup>2</sup>BÖHLER Schmiedetechnik GmbH & CoKG, Kapfenberg, Austria

**93/(818) Structural changes in cyclically deformed cellulose characterized by in-situ synchrotron X-ray diffraction**

J. Keckes, Univ. Leoben, Austria, P. Boesecke, European Synchrotron Radiation Facility, Grenoble, France

**94/(125) Manufacturing and investigations of polypropylene homocomposites**

T. Bárány<sup>1</sup>, T. Czigány<sup>1</sup> and J. Karger-Kocsis<sup>2</sup>, <sup>1</sup>Budapest University of Technology and Economics, Hungary, <sup>2</sup>TU Kaiserslautern, Germany

**95/(523) Injection process parameter effects on foamed-plastic moulding**

S. Schedly, A. Chettah, J-P. Onteniente, H. Bonnefoy & M. Ichchou, Laboratoire Analyse des Contraintes Mécaniques, Charleville-Mézières, France

## **Sandwich**

**96/(390) Non-linear behaviour of laminated composites subjected to tensile loading**

M. Karama, L. Toubal, B. Lorrain, ENIT, Tarbes, France

**97/(122) Identification of shear modulus of sandwich composites in free vibration**

M. Assarar, A. El Mahi, J-M. Berthelot & Y. Sefrani, Univ. Maine, Le Mans, France

**98/(329) Multi-level modelization of low velocity, low energy impact on metalskinned sandwich structures**

C. Bouvet\*, B. Castanié\*, J-J. Barrau\*\*, P. Thevenet\*\*\*, \* IGMT, LMS Sup'Aéro, Toulouse, \*\*IGMT, Univ. Paul Sabatier, Toulouse, \*\*\*EADS CCR, Suresnes, France

**99/(040) Experimental study of local effects at core joints in sandwich beams**

A. Lyckegeard, E. Bozhevolnaya, Aalborg Univ., Denmark

**100/(382) Optimization of composite slab bridges**

J.F. Caron, R. Le Roy, O. Baverel, ENPC, Marne La Vallée, France

## **Sensors/Capacitors**

**101/(180) Analytical vibration analysis of functionally graded material beams with bonded piezoelectric sensors and actuators**

A. Yeilaghi-Tamijani, A. Gharib, A.R. Ohadi, S.A. Sadough-Vanini, M.R. Eslami, Amirkabir Univ. Technology, Tehran,

**102/(506) Simple lumped model application : damping of flexural and torsional vibration**

F. Youssef, M. Lagache, LOCIE-ESIGEC, Univ. Savoie, France

**103/(419) Active control of composite beam with bonded piezoelectric sensors and actuators**

A. Yeilaghi-Tamijani, A.Gharib, A.Sadough-Vanini, M.R. Eslami, Amirkabir Univ. of Technology, Tehran Polytechnic, Iran



**104/(334) Numerical investigation of the application of piezoelectric sensors for safety control of thermoplastic matrix composite gas cylinders**

B.P. Silva<sup>1</sup>, P.J. Antunes<sup>2</sup>, G.R. Dias<sup>2</sup>, J.P. Nunes<sup>2</sup>, <sup>1</sup>PIEP, Univ. of Minho, Guimaraes, Portugal, <sup>2</sup>Polymer Eng. Dept., Univ. of Minho, Guimaraes, Portugal

**105/(064) Estimation for composite external electrode of array-type multilayer ceramic capacitor for drop test reliability**

Y.H. Moon, Samsung Electro-Mechanics Co, Suwon-city, R.O. Korea

**106/(438) Analytical study of piezoelectric actuated laminates under transverse loadings**

M. Tahani, A. Naserian, Ferdowsi Univ. Mashhad, Iran

## **Thermal Properties**

**107/(014) Multiscale model for the effective thermal conductivity computation of stratified composite materials**

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