

## Poster Programme

### ESIS 2008

- [P001] **Instrumented impact tests on polymeric materials**  
A. Calzolari\*, M. Bronzoni; *CEAST SpA, Italy*
- [P002] **Influence of the temperature on the fracture behaviour of ethylene-propylene block copolymers**  
A. Salazar\*<sup>1</sup>, J. Rodriguez<sup>1</sup>, O.O. Santana<sup>1,2</sup>, A. Martínez<sup>1</sup>; <sup>1</sup>*Universidad Rey Juan Carlos, Spain*; <sup>2</sup>*Universitat Politècnica de Catalunya, Spain*
- [P003] **Optimization of the taper angle on adhesive single-lap joints**  
P.N. Reis<sup>1</sup>, A.M. Amaro\*<sup>2</sup>, A.M. Magalhães<sup>3</sup>, M.F.S.F. de Moura<sup>4</sup>, R.D.S.G. Campilho<sup>4</sup>, <sup>1</sup>*University of Beira Interior, Portugal*; <sup>2</sup>*CEMUC-University of Coimbra, Portugal*; <sup>3</sup>*Instituto Superior de Engenharia do Porto, Portugal*; <sup>4</sup>*University of Porto, Portugal*
- [P004] **Intralaminar toughness characterization of unidirectional CFRP composites**  
R.D.S.G. Campilho<sup>1</sup>, A.M. Amaro\*<sup>2</sup>, M.F.S.F. de Moura<sup>1</sup>, P.N.B. Reis<sup>3</sup>; <sup>1</sup>*FEUP, Portugal*; <sup>2</sup>*University of Coimbra, Portugal*; <sup>3</sup>*University of Beira Interior, Portugal*
- [P005] **Transition in the double-edge-notch-tension (DENT) test of polymeric films**  
R.K.Y. Li\*, Y.L. Yuan; *City University of Hong Kong, China*
- [P006] **The effects of test rate on the mode II and mixed-mode fracture behaviour of adhesively-bonded joints**  
B.R.K. Blackman\*, A.J. Kinloch, F.S. Rodriguez-Sanchez, W.S. Teo; *Imperial College London, United Kingdom*
- [P007] **Adhesion of spray applied fire resistive materials**  
C. White\*, K. Tan, D.L. Hunston; *National Institute of Standards & Technology, United States*
- [P008] **Effect of carbon black content on the fracture behaviour of natural rubber**  
E. Cordublas, C. Marano, M. Rink\*; *Politecnico di Milano, Italy*
- [P009] **Viscoelastic effects in the essential work of fracture test**  
F. Meneghello, C. Marano\*, M. Rink; *Politecnico di Milano, Italy*
- [P010] **Nanoindentation, nanoscratch and fragmentation tests applied to PVC films with organic-inorganic coatings**  
L.A. Fasce<sup>1</sup>, V. Pettarin<sup>1</sup>, C. Marano\*<sup>2</sup>, M. Rink<sup>2</sup>, P.M. Frontini<sup>1</sup>; <sup>1</sup>*Universidad Nacional de Mar del Plata, Argentina*; <sup>2</sup>*Politecnico di Milano, Italy*
- [P011] **Torsion testing of CFRP laminate tubes**  
G. Minak, D. Ghelli\*, A. Zucchelli; *University of Bologna, Italy*
- [P012] **Influence of strain history on the durability of polymeric sealants**  
D.L. Hunston\*, K.T. Tan, C.C. White; *National Institute of Standards and Technology, United States*
- [P013] **Fatigue behaviour of woven carbon/epoxy composites used as aircraft structural components**  
D. Turan\*, A. Karci; *Anadolu University, Turkey*
- [P014] **Impact fracture toughness of high-density polyethylene (HDPE) - Effects of**

**material parameters and moulding conditions**

E. Andreassen<sup>\*1</sup>, A.-M. Persson<sup>1</sup>, K. Nord-Varhaug<sup>2</sup>, E.L. Hinrichsen<sup>1</sup>; <sup>1</sup>*SINTEF, Norway*; <sup>2</sup>*Borealis, Norway*

- [P015] **A determination and estimation of fracture toughness of woven glass/epoxy composites**  
M.E. Toygar<sup>\*</sup>, B. Uyulgan; *Dokuz Eylül University, Turkey*
- [P016] **The role of the volume change in the ductile/brittle transition of PA11**  
G.B. Boisot<sup>\*1,2</sup>, L.L. Laiarinandrasana<sup>2</sup>, C.F. Fond<sup>3</sup>, G.H. Hochstetter<sup>1</sup>; *Arkema, France*; <sup>2</sup>*Ecole des Mines de Paris, France*; <sup>3</sup>*Institut Charles Sadron, France*
- [P017] **Contribution of moisture diffusion, viscoelasticity and thermal aging to the adhesion degradation of polymer/metal interface**  
M.H. Shirangi<sup>\*1,2</sup>, M. Koyuncu<sup>1</sup>, J. Auersperg<sup>2</sup>, H. Walter<sup>2</sup>, A. Fischer<sup>1</sup>, W.H. Muller<sup>3</sup>; <sup>1</sup>*Robert Bosch GmbH, Germany*; <sup>2</sup>*Fraunhofer Institut IZM, Germany*; <sup>3</sup>*Technical University of Berlin, Germany*
- [P018] **Effect of the brush-like nano-reinforcement on the properties of polymer matrix composites**  
I.A. Guz<sup>\*1</sup>, A.A. Rodger<sup>1</sup>, J.J. Rushchitsky<sup>2</sup>, A.N. Guz<sup>2</sup>; <sup>1</sup>*University of Aberdeen, United Kingdom*; <sup>2</sup>*Timoshenko Institute of Mechanics, Ukraine*
- [P019] **Elastic flexural behaviour of functionally graded composite structures**  
M. Kashtalyan<sup>\*</sup>, M. Menshykova, I.A. Guz; *University of Aberdeen, United Kingdom*
- [P020] **Heterophasic propylene-copolymer-talc-composite materials – toughness properties in dependence on shape and amount of talc**  
I. Kotter<sup>\*1</sup>, J. Schöne<sup>1</sup>, W. Grellmann<sup>1</sup>, T. Mecklenburg<sup>2</sup>; <sup>1</sup>*Martin-Luther-University Halle-Wittenberg, Germany*; <sup>2</sup>*Basell Polyolefins, Germany*
- [P021] **Effects of Al<sub>2</sub>O<sub>3</sub> nanoparticles inclusion on shear strength of polyimide adhesives**  
M. Hosaka<sup>\*1,2</sup>, K. Naito<sup>2</sup>, Y. Kogo<sup>1</sup>, Y. Kagawa<sup>2</sup>; <sup>1</sup>*Tokyo University of Science, Japan*; <sup>2</sup>*National Institute for Material Science, Japan*
- [P022] **Test methods to assess the lifetime of polyolefins for water and gas distribution systems**  
J.A.C. Atteck<sup>\*1</sup>, J.P. Dear<sup>1</sup>, J.-L. Costa<sup>2</sup>, A. Carin<sup>2</sup>, J.-P. Michel<sup>2</sup>; <sup>1</sup>*Imperial College London, United Kingdom*; <sup>2</sup>*Ineos Polyolefins, Belgium*
- [P023] **Dynamic strain measurements of composite materials using embedded fibre Bragg grating sensors**  
J. Frieden<sup>\*</sup>, J. Cugnoni, Th. Gmür, J. Botsis; *EPFL, Switzerland*
- [P024] **Effect of the water absorption on the fracture toughness of poly(styrene-co-allyl alcohol)/ epoxy blends**  
A. Salazar, S. Gonzalez, J. Rodríguez<sup>\*</sup>; *Universidad Rey Juan Carlos, Spain*
- [P025] **The effect of humidity levels on the fracture behaviour of co-cured composite joints**  
J. Mohan, D. Carroll, N. Murphy, A. Ivankovic<sup>\*</sup>, D. Dowling; *University College Dublin, Ireland*
- [P026] **An experimental and numerical investigation into the effect of bond thickness and width on the fracture toughness, GIC, of adhesively bonded joints**

V. Cooper, A. Ivankovic\*, A. Karac; *University College Dublin, Ireland*

- [P027] **Particle shape effect on fracture toughness of PP-based particulate composite**  
Z. Knesl<sup>\*1</sup>, P. Hutar<sup>1</sup>, Z. Majer<sup>1</sup>, L. Nahlik<sup>1</sup>; <sup>1</sup>*Institute of Physics of Materials, Czech Republic*; <sup>2</sup>*Brno University of Technology, Czech Republic*
- [P028] **The hygro-thermal response of a glass-epoxy single fibre composite using FBG distributed sensing and numerical modeling**  
M. Lai\*, J. Botsis, J. Cugnoni, D. Coric; *EPFL École Polytechnique Fédéral de Lausanne, Switzerland*
- [P029] **Fracture behaviour of poly(lactic acid) (PLA) and PLA/MMT nanocomposites**  
L. Nascimento, J. Gamez-Perez, E. Franco, M.L.I. Maspoch\*; *Universitat Politècnica de Catalunya, Spain*
- [P030] **Fracture mechanics investigations of short glass-fibre reinforced nylon 6/66 blends containing carbon black**  
M. Kroll<sup>\*1</sup>, S. Schumacher<sup>1</sup>, B. Langer<sup>2</sup>, W. Grellmann<sup>2</sup>; <sup>1</sup>*BASF Leuna GmbH, Germany*; <sup>2</sup>*Martin-Luther-University Halle-Wittenberg, Germany*
- [P031] **Crack propagation in the vicinity of interface between two elastic materials**  
L. Nahlik<sup>\*1,2</sup>, L. Sestakova<sup>1,2</sup>, P. Hutar<sup>1</sup>, Z. Knesl<sup>1</sup>; <sup>1</sup>*Academy of Sciences of the Czech Republic, Czech Republic*; <sup>2</sup>*Brno University of Technology, Czech Republic*
- [P032] **PC modification by reactive blending extrusion with PET: Fracture analysis using EWF approach**  
A. Al-Jabareen<sup>1</sup>, S. Illescas<sup>2</sup>, M. Sánchez-Soto<sup>2</sup>, O.O. Santana<sup>\*2</sup>; <sup>1</sup>*Al-Quds University, Jordan*; <sup>2</sup>*Univesitat Politècnica de Catalunya, Spain*
- [P033] **The static compressive and fatigue failures of fabric composites under the crimp angle variations**  
S.H. Yoo\*, J.H. Kim, Y.G. Ho, S.H. Chang; *Chung-Ang University, Korea*
- [P034] **Damage tolerance philosophy for bonded aircraft structures**  
R.C. Alderliesten, C.D. Rans\*; *Delft University of Technology, Netherlands*
- [P035] **Toughening mechanisms in thermoplastic starch/polyvinyl alcohol blends**  
C. Chaleat, P. Halley, R. Truss\*; *University of Queensland, Australia*
- [P036] **Filler networking and fracture behaviour of natural rubber / layered silicate nanocomposites**  
G.R. Ramorino\*, R.D.S. De Santis, T.R. Ricco; *University of Brescia, Italy*
- [P037] **Fracture toughness of a polymer bonded explosive**  
R.K. Govier\*; *AWE, United Kingdom*
- [P038] **Durability of poss-polyimide nanocomposites to hypervelocity impacts, atomic oxygen and elevated temperatures**  
R. Verker<sup>\*1,2</sup>, E. Grossman<sup>1</sup>, I. Gouzman<sup>1</sup>, N. Eliaz<sup>2</sup>; <sup>1</sup>*Soreq NRC, Israel*; <sup>2</sup>*Tel-Aviv University, Israel*
- [P039] **Deformation and fracture in isotactic polypropylene glass mat thermoplastic composites modified with montmorillonite clay**  
S. Dalle Vacche\*, C.J.G. Plummer, C. Houphouët-Boigny, J.-A.E. Manson; *Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland*

- [P040] **Determination of fracture mechanisms under tensile loading in a commercial available engineering thermoplastic material joined by fricriveting**  
S.T. Amancio\*, J.F. dos Santos, V. Ventzke; *GKSS Forschungszentrum GmbH, Germany*
- [P041] **Impact fracture behavior of PP/ash composites with different coupling agents**  
S. García Pardo\*<sup>1</sup>, E. Igarza<sup>2</sup>, V. Pettarín<sup>2</sup>, L. Barral Losada<sup>1</sup>, M. J. Abad<sup>1</sup>, C. Bernal<sup>3</sup>;  
<sup>1</sup>*Universidad A Coruña, Spain*; <sup>2</sup>*INTEMA (UNMdP-CONICET), Argentina*; <sup>3</sup>*INTECIN (UBA-CONICET), Argentina*
- [P042] **Influence of the geometry on the essential work of fracture of polypropylene materials**  
T. Koch\*, R. Lach, S. Seidler; *Vienna University of Technology, Austria*
- [P043] **Fracture toughness of clay/PMMA nanocomposites**  
V.R. Realinho, J.I. Velasco, M. Antunes, D. Arencón, A.B. Martínez\*; *Universidad Politécnica de Cataluña, Spain*
- [P044] **The angled crack problems in compression and tension**  
M. Watanabe; *Kinki University, Japan*
- [P045] **Fatigue crack propagation of PVC-U and PVC-M pipes in water environment**  
N. Samat\*<sup>1,3</sup>, A. Whittle<sup>2</sup>, M. Hoffman<sup>1</sup>; <sup>1</sup>*UNSW, Australia*; <sup>2</sup>*Iplex Pipelines Australia Ltd, Australia*; <sup>3</sup>*IUM, Malaysia*