

# 8<sup>th</sup> ECNP Short Course & 3<sup>rd</sup> Young Polymer Scientists Conference

## Programme

### Sunday - 25/04/2010

- 14:00 – 15:00 Registration
- 15:00 – 16:00 Jean Francois Gerard, *INSA-Lyon, France* - **Rheology of dispersed nanofillers and nanotubes as a key issue for processing nanocomposites.**
- 16:00 – 17:00 Ignacio Martín-Gullón, *Univ. Alicante, Spain* - **How to predict and monitor the CNT/CNF dispersion on polymer nanocomposites**
- 17:00 – 17:20 Coffee break

### Session NT1 - Chairmen: Jean Francois Gerard & Raquel Verdejo

- 17:20-17:40 L. Peponi, A. Tercjak, D. Puglia, I. Mondragon, J.M. Kenny, *Univ. of Perugia, Italy* - **Block Copolymer as Templates for Nanocomposite Materials.**
- 17:40-18:00 E. Lizundia, J.R. Sarasua, *Univ. of the Basque Country (EHU-UPV), Spain* - **Thermal Degradation Kinetics of Poly (L-Lactide)/Multiwall Carbon Nanotube.**
- 18:00-18:20 M. Monti, M. Natali, J.M. Kenny, L. Torre, *Univ. of Perugia, Italy* - **Nanostructured Polymers for Damage Sensing in Fiber Reinforced Composites.**
- 18:20-18:40 M. Bernal, A. Mortamet, A.J. Ryan, M.A. López-Manchado, R. Verdejo, *Institute of Polymer Science and Technology (CSIC), Spain* - **Study of the Effect of Carbon Nanofillers on Polyurethane Foams.**
- 18:40-19:00 J. Albuerne, A. Boschetti-de-Fierro, V. Abetz, *Institute of Polymer Research (GKSS), Germany* - **Grafting of Polystyrene from Commercial Multiwall Carbon Nanotubes and Their Nanocomposites with a Styrene-Butadiene Block Copolymer.**
- 19:00-19:20 M.d.M. Salinas-Ruiz, A.A. Skordos, I.K. Partridge, *Cranfield University, UK* - **Toughened Adhesive Containing Nanotubes: Mechanical and Electrical Performance.**

### Monday 26/04/2010

- 9:00 – 10:00 Luc Averous, *Univ. Strasbourg, France* - **Nano-biocomposites based on starch.**

**Session Bio1** - Chairmen: Luc Averous & Rebeca Hernandez

- 10:00-10:20 D.T.-J. Barone, Z. Luklinska, O. Persenaire, J.-M. Raquez, M. Anseauc, P. Dubois, *University of Mons, Belgium* - **Bioactivity of Novel Bioresorbable Poly(L,L-Lactide)/Pseudowollastonite-Based Composites in Osseo Integration.**
- 10:20-10:40 S. Galland, H. Nilsson, K. Gamstedt, T. Iversen, L. Berglund, *Royal Institute of Technology (KTH), Sweden* - **Compression Moulding of All-Cellulose Composites.**
- 10:40-11:00 J.J. Kochumalayil, H. Sehaqui, Q. Zhou, L.A. Berglund, *Royal Institute of Technology (KTH), Sweden* - **Tamarind Seed Xyloglucan: A Promising Biopolymer Matrix for Bioinspired Nanocomposite Materials.**
- 11:00-11:20 N. Bitinis, M.A. Lopez-Manchado, R. Verdejo, *Institute of Polymer Science and Technology (CSIC), Spain* - **Polylactic Acid / Natural Rubber Blends Compatibilized with Organoclays.**
- 11:20 – 11:40 Coffee break

**Session Surf** - Chairmen: Ignacio Martin-Gullon & Javier Sacristan

- 11:40-12:00 S. Berger, L. Schellkopf, M. Stamm, K.-J. Eichhorn, L. Ionov, A. Synytska, *Leibniz Institute of Polymer Research Dresden, Germany* - **Novel Functional Surfaces and Interfaces Based on Smart Janus Particles.**
- 12:00-12:20 J.K.G. Bunk, C. Chaiyasorn, A. Drechsler, J.-U. Sommer, M. Stamm, *Leibniz Institute of Polymer Research Dresden, Germany* - **Polymer-Solid Contacts: Interfaces and Interphases B2 Model Polymer-Solid Interphases: Structure, Properties and Simulations.**
- 12:20-12:40 A. Förster, A. Caspari, O. Kobsch, C. Bellmann, K. Grundke, M. Stamm, M. Heller, L. Völkel, *Leibniz Institute of Polymer Research Dresden, Germany* - **Anionic Surfactants for Defect Suppression in 193-nm Lithography: Study of the Adsorption Mechanism by Ellipsometry, Zeta Potential and Contact Angle Measurements**
- 12:40-13:00 M. Gnauck, A. Rollberg, M. Messerschmidt, P. Uhlmann, M. Stamm, *Leibniz Institute of Polymer Research Dresden, Germany* - **Novel Synthesis of Switchable Polymer Brushes by Controlled Radical Polymerisation**
- 13:00-13:20 S. Napolitano, M. Wübbenhorst, *Katholieke Universiteit Leuven, Belgium* - **Glass Transition, Thermal Expansivity, and Kinetics of Film Formation of Polymer on Non-Attractive Interfaces.**
- 13:20-13:40 A. Rollberg, M. Gnauck, P. Uhlmann, M. Stamm, *Leibniz Institute of Polymer Research Dresden, Germany* - **Synthesis and Application of Innovative Switchable Core-Shell-Nanoparticles.**
- 13:40 – 15:00 Lunch
- 15:00 – 16:00 Iñaki Mondragón, *Univ. Basque Country, Spain* - **Role of bioresources on bionanocomposites.**

**Session Bio2** - Chairmen: Luc Averous & Sylvain Galland

- 16:00-16:20 M. Salajkova, Q. Zhou, L.A. Berglund, *Royal Institute of Technology (KTH), Sweden* - **Electrically Conductive Composite Films Based on Cellulose Nanofibres and Carbon Nanotubes.**
- 16:20-16:40 H. Sehaqui, Q. Zhou, L. Berglund, *Royal Institute of Technology (KTH), Sweden* - **Controlling Properties of Native Cellulose Aerogels and Biofoams.**
- 16:40-17:00 T. Yang, L. Berglund, A. Hult, *Royal Institute of Technology (KTH), Sweden* - **Mechanical Properties of Hydrogels: From Ipn's to Fiber Reinforced Networks.**
- 17:00-17:20 R. Kisiel, A. Schönhals, M. Pastorzak, M. Kozanecki, L. Okrasa, J. Ulanski, *University of Lodz, Poland* - **Fast Dielectric Relaxations in Temperature-Sensitive Hydrogels Synthesized from Poly(Vinylmethylether).**
- 17:20-17:40 F.C. Basurto, D. García-López, N. Villarreal-Bastardo, J.C. Merino, J.M. Pastor, *University of Valladolid. Spain* - **Improving Properties of ABS-Sepiolite Nanocomposites.**
- 17:40 – 18:00 Coffee break

**Session NT2** - Chairmen: Iñaki Mondragón & Mandy Gnauck

- 18:00-18:20 S. Akbar, E. Beyou, P. Cassagnau, P. Chaumont, *Université de Lyon, France* - **Surface Modification of Multiwalled Carbon Nanotubes through Polyethylene Grafting.**
- 18:20-18:40 R. Chaos-Morán, M. Campo, M.D. Escalera, A. Ureña, *Rey Juan Carlos University, Spain* - **Evaluation of Different Oxidation Media for Carbon Nanofiber Oxidative Functionalitation.**
- 18:40-19:00 H. Varela-Rizo, S. Bittolo-Bon, L. Valentini, I. Rodriguez-Pastor, J.M. Kenny, I. Martín-Gullón, *University of Alicante, Spain* - **Characterization of Melt-Compounded, Solvent Processed and In-Situ Polymerized CNF/PMMA Nanocomposites.**
- 19:00-19:20 E. Hebda, K. Pielichowski, *Cracow University of Technology, Poland* - **Intercalation/Exfoliation Routes to Graphite Nanosheets.**
- 19:20-19:40 R.Y. Suckeveriene, M. Narkis, Y. Cohen, E. Zelikman, *Technion-IIT, Israel* - **Investigation of Hybrid Polyaniline/Cnt Nano-Composites Using an Inverse Emulsion Polymerization Technique.**
- 21:00 Conference Dinner - Rest. Nina

**Tuesday 27/04/2010**

- 9:00 – 10:00 Pilar Tiemblo, *Institute of Polymer Science and Technology (CSIC), Spain* - **Structure, Properties and Some Applications of Polymer Based Composites in the Boundary between the Solid and the Liquid-like.**

**Session Aplic&Charac** - Chairmen: Pilar Tiemblo & Manuel Oliveira

- 10:00-10:20 S. Kummer, J. Müller, D. Fischer, *Leibniz Institute of Polymer Research Dresden, Germany* - **In-Line Monitoring of Extrusion Processes with Nir Und Ultrasonic Measurements.**
- 10:20-10:40 S.T. Mould, J.M. Barbas, J.M. Nóbrega, A.V. Machado, J.A. Covas, *University of Minho, Portugal* - **On-Line Rheometry to Monitor Nanocomposites Production: From the Lab to the Industrial Scale.**
- 10:40-11:00 J. Müller, S. Kummer, D. Fischer, E. Masarati, *Leibniz Institute of Polymer Research Dresden, Germany* - **Scale-up Trials of an in-Line Process Monitoring System for Polymer Nanocomposites to an Industrial Extruder.**
- 11:00-11:20 M. Rubio, R. Hernández, A. Nogales, D. López, *Institute of Polymer Science and Technology (CSIC), Spain* - **WAXD and SAXS Study of Blends of a Metallo-Organic Polymer of [Fe(II)(4-Octadecyl-1,2,4-triazole)<sub>3</sub>(ClO<sub>4</sub>)<sub>2</sub>]<sub>n</sub> and Isotactic Polystyrene.**
- 11:20 – 11:40 Coffee break & Poster Session

**Session Hybrids1** - Chairmen: Jose Kenny & Julio Albuerne

- 11:40-12:00 L. del-Valle-Carrandi, S. Barbosa-Fernandez, A. Glaria, L.M. Liz-Marzán, A. Alegría, J. Colmenero, *Centro de Física de Materiales- Universidad del País Vasco (CSIC-UPV/EHU), Spain* - **Nanocomposites Based on Nanostructured Diblock Copolymers (Nano<sup>2</sup>).**
- 12:00-12:20 J. Gutiérrez, A. Tercjak, I. Mondragon, *Univ. Basque Country, Spain* - **Conductive Properties of TiO<sub>2</sub>/Ps-B-Peo Nanocomposites.**
- 12:20-12:40 S. Ibrahim, B. Voit, *Leibniz Institute of Polymer Research Dresden, Germany* - **Gold Nanoparticles Protected by Amphiphilic Well-Defined Block Copolymers.**
- 12:40-13:00 Y. Lamy, F. Lortie, D. Portinha, J.-P. Pascault, J.-F. Gérard, C. Peyre, C. Wojciechowski, S. Guyon, P. Gérard, *Université de Lyon, France* - **Nanostructuring of Unsaturated Polyester Resins by Block Copolymers: Application to Smc Composites.**
- 13:00-13:20 S. Cadra, A. Balland-Longeau, J. Thibonnet, *CEA-DAM Le Ripault, France* - **Development of Novel Metal-Containing Monomers Based on Hydroxy and Oxime Chelation: Application to the Elaboration of Doped Materials for Laser Targets and Investigation of Their Nanostructure.**
- 13:20-13:40 H. Elsayed, B. Voit, *Leibniz Institute of Polymer Research Dresden, Germany* - **Preparation and Characterization of Hyperbranched Aliphatic-Aromatic Polyester/TiO<sub>2</sub> Nanocomposites.**
- 13:40-14:00 C. Echeverria, C. Mijangos, *Institute of Polymer Science and Technology (CSIC), Spain* - **From Chemistry of Poly(Acrylamide/Acrylic Acid) UCST-Like Microgels to Optical Applications.**
- 14:00 – 15:00 Lunch

15:00 – 16:00 Giovanni Camino and Daniela Tabuani, *Univ. Torino, Italy* - **New technologies for nanocomposites preparation.**

**Session Resins** - Chairmen: Giovanni Camino & MDM Salinas

16:00-16:20 M. Natali, M. Monti, L. Torre, J.M. Kenny, *Univ. of Perugia, Italy* - **Nanostructured Ablative Thermal Protection Systems.**

16:20-16:40 M.A. Aravand, M.A. Semsarzadeh, *Katholieke Universiteit Leuven, Belgium* - **Transitional Phase Inversion Method in Preparation of Solid Cured Nano-Epoxy Particles.**

16:40-17:00 A.S. Thelakkadan, G. Coletti, F. Guastavino, A. Fina, *University of Genova, Italy* - **Electrical Insulation Properties of Epoxy Nanocomposite Resins.**

17:00-17:20 V. Marchante, A. Marcilla, M. Beltrán, F.M. Martínez-Verdú, *University of Alicante, Spain* - **Nanopigments: A New Kind of Colorant.**

17:20 – 17:40 Coffee break & Poster Session

**Session Films&Therm – Chairmen:** Carmen Mijangos & Simone Napolitano

17:40-18:00 L. Augry, J. Duchet-Rumeau, A. Charlot, J.-F. Gerard, *Université de Lyon, France* - **Control and Adjustment of the Morphology of Plasticised PVC-Based Nanocomposite Films: Role on the Final Properties.**

18:00-18:20 K. Dal-Pont, E. Espuche, J.-F. Gérard, *Université de Lyon, France* - **Modification of ZrP Lamellar Nanofillers: Consequences on the Morphology and Gas Transport Properties of Rubber-Based-Nanocomposites.**

18:20-18:40 A. Bragaru, I. Kleps, M. Miu, M. Simion, M. Danila, L. Cortojan, F. Craciunoiu, T. Ignat, M. Leca, *IMT Bucharest, Romania* - **Nanocomposite Membrane Based on Platinum Nanoparticles Dispersed in Polymeric Matrix.**

18:40-19:00 M. Oliveira, A.V. Machado, R. Nogueira, *University of Minho, Portugal* - **Hybrid Nanocomposite Based on PP-g-MA.**

19:00-19:20 W. Bahloul, V. Bounor-Legaré, P. Cassagnau, O. Oddes, B. Vergnes, *IMP-CNRS, France* - **Experiments, Characterisation and Modelling of In Situ PP/TiO<sub>2</sub> Nanocomposites.**

19:20-19:40 R. Avolio, M. Avella, D. Capitani, M.E. Errico, G. Gentile, *Institute of Polymer Science and Technology (CNR), Italy* - **PMMA Based Nanocomposites: Structure/Properties Relationships.**

19:40 – 20:00 Award and Closing