



5th International Conference on NANOSTRUCTURED POLYMERS AND NANOCOMPOSITES

PARIS - FRANCE

April 15-17, 2009

Arts et Métiers ParisTech

Grand Amphithéâtre

Bld. de l'Hôpital (Metro Place d'Italie)



PROGRAMME

WEDNESDAY APRIL 15th

8:00 Welcome – Registration

9:45 Opening Session

J.F. BAUMARD National Institute of Chemistry CNRS / **J. KENNY** President ECNP and **J.F. GERARD** Vice-President ECNP

Chair: **J. KENNY** University Perugia (Italy) / **J.F. GERARD** Université de Lyon (France)

10:00 Opening Lecture : J.M. LEHN – Nobel Prize - ISIS Université de Strasbourg

Dynamers: Dynamic molecular and supramolecular polymers

10:40 *Amphiphilic block versus 'block-like' copolymers: synthesis, micellization and pigment stabilization*

B. Dervaux, P. Du Prez, Ghent University, Ghent, Belgium.

11:00 *Construction of functional hybrid materials by the nanobuilding block approach*

L. Rozes, Université Pierre et Marie Paris, France

11:20 *Nanostructured Polymer Composite Nanoparticles Prepared in a single step via Simultaneous ROMP and ATRP in Dispersed Media*

V. Héroguez, C. Airaud, E. Ibarboure, Université Bordeaux 1-ENSCP, Pessac, France

11:40 *Functional block copolymers for nanostructured and functional thin films by combination of CRP and click reactions*

J. Stadermann, S. Fleischmann, H. Komber, C. Tock, **B. Voit**, Leibniz Institute of Polymer Research, Dresden, Germany

12:00 **Invited Lecture : L. BERGLUND – KTH University Stockholm (Sweden)**

Nanostructured cellulose materials for novel functionalities

12 :30 Lunch

Chair: **B. VOIT** Institute für Polymerforschung Dresden (Germany) / **C. GALIOTIS** FORTH-ICEHT (Greece)

14:00 Invited Lecture : G. REITER Freiburg University (Germany)

Cloning Polymer Single Crystals via Self-seeding

14:30 *Surface Nanostructuring by polymer and block copolymer self-assembly*

N. Blondiaux, A. M. Popa, F. Montagne, M. Giazzon, M. Liley, R. Pugin, Swiss Center for Electronics and Microtechnology, Neuchâtel, Switzerland

14:50 *Polymer Brushes for Functional Surface Sensors*

M. Stamm, S. Gupta, L. Ionov, P. Uhlmann, Leibniz-Institut für Polymerforschung, Dresden, Germany

15:10 *Wettability, surface morphology and biofouling release of nanofilled silicone-based marine coatings*

A. Beigbeder, M. Jeusette, R. Mincheva, M. Claes, P. Brocorens, R. Lazzaroni, **P. Dubois**, University of Mons-Hainaut, Belgium

15:30 *Silver- and gold-epoxy nanostructured coatings: preparation and characterization*

M. Sangermano, Y. Yagci, Politecnico di Torino, Italy

15:50 *Transparent electrodes based on carbon nanotubes: from networks to self sorted thin films*

L. Valentini, S. Bittolo Bon, M. Cardinali, D. Bagnis, J. M. Kenny, University of Perugia, Terni, Italy

16:10 *Novel nanophasic amphiphilic polymer conetworks as new material platform for speciality nanohybrids*

I. Belan, C. Fodor, P. Mezey, G. Kali, A. Domján, R. Thomann, R. Mülhaupt, Institute of Materials and Environmental, Budapest, Hungary

16:30 Coffee break

17:00 Poster Session

18:30 Wine & Cheese

THURSDAY APRIL 16th

Chair: **X. COLIN Arts&Métiers ParisTech (France) / M. STAMM IPF Dresden (Germany)**

9:00 Invited Lecture : J.S. ROMAN CSIC Madrid (Spain)

Relation of composition and microstructure with the bioactivity of biomedical polymers: A useful way to modulate the targeting and controlled release of polymer drugs

9:30 *Comparative study of smart composites based on magnetic nanoparticles and stimuli responsive polymers*
R. Turcu, A. Nan, O. Pana, I. Craciunescu, C. Leostean, I. Bratu, S. Macavei, National Institute R&D of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

9:50 *Tailored polymer-based nanofibers and nanotubes. From Preparation to Applications*
J. Martín, Y. Maiz, **C. Mijangos**, Institute de Ciencia y Tecnología de Polímeros, Madrid, Spain

10:10 *From elaboration to physical properties analysis of ferroelectric hybrid nanocomposites*

J.F. Capsal, **E. Dantras**, L. Laffont, C. Lacabanne, Université Paul Sabatier, Toulouse, France.

10:30 *Comparison of rheological and electrical percolation of carbon black and multiwall carbon nanotubes in epoxy polymer systems*

J. Sumfleth, X. Cordobes Adroher, S.T. Buschhorn, K. Schulte, Technische Universität Hamburg-Harburg, Hamburg, Germany

10:50 **Coffee break**

11:20 *Molecular Dynamics of PEGylated Multifunctional Polyhedral Oligomeric Silsesquioxane*

J. Mijović, Polytechnic Institute of New York University, Brooklyn, USA

11:40 *Relaxation Behavior of Nanocomposites based on Polyethylene and Layered Double Hydroxide*

A. Schönhals, F. R. Costa, U. Wagenknecht, G. Heinrich, Federal Institute for Materials Research and Testing, Berlin, Germany

12:00 *Study of reinforcement and electrical percolation in nanocomposites based on multi-wall carbon nanotubes and a TPE block-copolymer (SEBS)*

J. G. Meier, M.-P. Brusel, N. Moussaif, C. Crespo, A. Benito, W. Maser, P. Castell, Instituto Tecnológico de Aragón, Zaragoza, Spain

12:20 *Dielectric monitoring of CNT network formation in curing thermosetting composites*

A. Battisti, A.A. Skordos, I. Partridge, Cranfield University, UK.

12:40 **Lunch**

Chair: **C. MIJANGOS CSIC Madrid (Spain) / J.P. PASCAULT IMP Université de Lyon (France)**

14:00 Invited Lecture : F. FAUPEL Technische Fakultät Universitaet Kiel (Germany)

Polymer-metal nanocomposites for functional applications

14:30 *Different routes to prepare nanocomposite foams in supercritical CO₂ : Role of processing and interfacial properties*

T.T.V. Ngo, R. Arioli, **J. Duchet-Rumeau**, J.F. Gérard, Université de Lyon, France.

14:50 *Clay Nanocomposites in Hydrocarbon Polymers: from nanostructures to material properties*

M. Galimberti, S. Giudice, P. Riccio, L. Giannini, V. Cipolletti, G. Guerra, Pirelli Tyre SpA, Milano, Italy

15:10 *Modification of isoprene rubber by in-situ silica generation*

M. Messori, F. Bignotti, R. De Santis, R. Taurino, Università degli Studi di Modena e Reggio Emilia, Modena, Italy

15:30 *Liquid sensing properties of melt processed polymer - carbon nanotube composites*

P. Pötschke, T. Villmow, K. Kobashi, T. Andres, H. Brüning, L. Häußler, D. Fischer, Leibniz-Institut für Polymerforschung, Dresden, Germany

15:50 *Thermodegradative and morphological behaviour of composites HDPE with surface treated hydroxyapatite*

C. Albano, L. Cataño, R. Perera, A. Karam, G. González, Universidad Central de Venezuela, Caracas, Venezuela

16:10 *lodegradation of PLA and PCL nanocomposites*

D. Tabuani, K. Fukushima, G. Camino, C. Abbate, M. Gennari, Consorzio Proplast, Alessandria, Italy

16:30 **Coffee break**

17:00 **Poster Session**

20:00 **Conference Dinner during a bateau-mouche trip on Seine River**

FRIDAY APRIL 17th

Chair: A. TCHARKHTCHI (ENSAM ParisTech Paris) / L. VALENTINI University Perugia – Trento (Italy)

9:00 Invited Lecture : R. IDEN Senior Vice President BASF Ludwigshafen (Germany)

Implementing the SusChem Research Agenda for Nanostructured Materials

9:30 *Poly(methylpentene)-silica nanocomposites*

A. Pegoretti, A. Dorigato, University of Trento, Italy

9:50 *Comparison of the fracture toughness and creep behaviour of PMMA composites containing chopped carbon fibers versus carbon nanofilaments*

H. Varela-Rizo, M. Weisenberger, D. R. Bortz, I. Martin-Gullon, University of Alicante, Spain

10:10 *Physical properties of polylactic acid blown films containing halloysite nanotubes*

P. Russo, D. Acierno, S. Cammarano, University of Naples "Federico II", Italy

10:30 *The effect of nanosilica spherical particles dimension on the polyamide 6 composites properties*

R. Jeziórska, B. Świerz-Motysia, M. Zielecka, Industrial Chemistry Research Institute, Warszawa, Poland

10:50 **Coffee break**

11:20 *Multiscale modeling applied to polymer-clay nanocomposites*

A. Danani, G. Scocchi, P. Posocco, S. Pricl, M. Fermeglia, SUPSI-ICIMSI, Manno, Switzerland

11:40 *Polymer and hybrid nanocomposite coatings*

O. Figovsky, L. Shapovalov, N. Blank, International Nanotechnology Research Center Polymate, Israel

12:00 *Use of Copolymer nanotechnologies to tailor applicative properties of thermosets and composites*

R. Inoubli, R. Barsotti, T. Fine, P. Gerard and J.P. Pascault, Arkema Co., Lacq, France

12:20 *Synthesized linear and star block copolymers and terpolymers based on Polystyrene under tension and compression: Tailoring of molecular parameters to mechanical behaviour*

G. Tsoukleri, G. Linardatos, J. Parthenios, C. Galiotis and C. Tsitsilianis, Foundation of Research and Technology-Hellas, Patras, Greece

12:40 **Lunch**

Chair: S. RUSSO Genoa University (Italy) / P. CASSAGNAU Université de Lyon (France)

14:00 Invited Lecture : U. WEISNER Cornell University (USA)

Merging Polymer Science with Inorganic Chemistry into Nanostructured Materials

14:30 *New Polyurethane Nanocomposites Containing Different Nanofillers With Enhanced Benefits*

S. A. Madbouly, **J.U. Otaigbe**, The University of Southern Mississippi, Hattiesburg, USA.

14:50 *Evidence of polyolefins/clay molecular interactions at the interface of nanocomposites*

S. Coiai, M. Bertoldo, E. Taburoni¹, E. Passaglia, **F. Ciardelli**, University of Pisa, Italy.

15:10 *Polymer/metal hybrid membranes: from in situ nanostructuring process to modulated functional properties*

S. Clémenson, **E. Espuche**, L. David, Université de Lyon, France

15:30 *Plastic Fiber Optic pH Sensors Based on Organic-Inorganic Sol-Gel Hybrids Entrapping Sensitive Dyes*

P. Fabbri, F. Pilati, L. Rovati, Università degli Studi di Modena e Reggio Emilia, Italy

15:50 *Hydrothermal ageing of epoxy resins reinforced with carbon nanofibers: applications as adhesives*

S. G. Prolongo, M. R. Gude, **A. Ureña**, Universidad Rey Juan Carlos, Madrid, Spain

16:30 **Closing Session**

SELECTED PAPERS FOR POSTER PRESENTATIONS

- P1 : *A Theoretical Study on the Electronic, Optical, and Morphological Properties of the Polypyrrole-based Nanostructures*
D. Aksoy, E. Yildirim, M. Yurtsever, Istanbul Technical University, Department of Chemistry, Istanbul, Turkey.
- P2 : *Self-Organized PS-b-PLA Block Copolymers: Synthesis, Orientation, and Use as Precursors to Functional Mesoporous Polymers*
T. Antoun, B. Gorzolnik, P. Davidson, I. Beurroies, R. Denoyel, D. Grande, Institut de Chimie et des Matériaux Paris-Est – Université Paris XII, Thiais, France.
- P3 : *Layered silicate composites of polypyrrole-polydimethylsiloxane block copolymers*
E. Ateş, N. Kızılcan, Department of Chemistry, Istanbul Technical University, Istanbul, Turkey.
- P4 : *Improved Mechanical and Thermal Properties of Polyurethane Nanocomposite Coatings for Automotive Application*
M.A. Bahattab, A.A. Basfar, K.M. Idriss Ali, M. A. Alam, Polymer Center, Petroleum & Petrochemical Res. Inst, KACST, Riyadh, South Arabia
- P5 : *The life cycle analysis of the new synthesized polymer-amine derivative of phenol-formaldehyde resin*
W. M. Bajdur, Department of Technical Systems and Safety Work, Czestochowa University of Technology, Poland
- P6 : *Synthesis and characterization of polycyanurate / MWCNTs nanocomposites*
Liubov Bardash, Alexander Fainleib, Gisèle Boiteux, Gérard Seytre, Olga Grigoryeva, Institute of Macromolecular Chemistry, Kiev, Ukraine, Ingénierie des Matériaux Polymères, Université de Lyon, France
- P7 : *Electrospun Crosslinked Hydrogel Microactuators*
M. Bassil, M. Ibrahim, M. El Tahchi, S. Lanceros-Mendez, G. Boiteux, J. Davenas, Faculty of Sciences II, Lebanon / Université de Lyon, France / University of Minho, Braga, Portugal.
- P8 : *Nano- and microcapsules based on segmented polyurethanes for tuberculosis treatment by respiratory administration*
E.O. Batyrbekov, R.M. Iskakov, M. Kim, B.A. Zhubanov, Institute of Chemical Sciences, Kazakhstan
- P9 : *Nanocomposites materials containing cellulose microfibrils: Preparation and characterization*
A. Bendahou, H. Kaddami, A. Dufresne, The International School of Paper, Print Media, and Biomaterials, St. Martin d'Hères, France / Cadi Ayyad University, Marrakech, Morocco.
- P10 : *Tracing of polypropylene with Eu-doped Gd₂O₃ luminescent nanoparticles for automatic sorting of plastic wastes*
Feliks BEZATI, Mael LE BER, Nicolas CROWTHER, Valérie MASSARDIER, Ingénierie des Matériaux Polymères, Laboratoire de Physico-Chimie des Matériaux Luminescents, Université de Lyon / Nano-H SAS, Saint Quentin-Fallavier, France
- P11 : *Functionalization of Graphene Sheets through CF₄ Plasma Treatment and Subsequent Modification with Aliphatic Amines*
S. Bittolo Bon, L. Valentini, R. Verdejo, M. M. Bernal, M. A. Lopez-Manchado, J. M. Kenny, University of Perugia, Terni, Italy / Institute of Polymer Science and Technology, Madrid, Spain.
- P12 : *Carbon nanotubes and in-situ formed nanofibers in polypropylene*
B. Bodzay, K. Bocz, A. Toldy, B. B. Marosfői and G. Marosi, University of Technology and Economics, Department of Organic Chemistry and Technology / Department of Polymer Engineering, Budapest, Hungary.
- P13 : *Preparation and characterization of Pt/NaY-PVDF nanocomposites*
G. Botelho, I.C. Neves, A.M. Fonseca, M. Silva, R. Gonçalves, P. Martins, S. Lanceros Mendez, Dep. Química / Dep. Física, Universidade do Minho, Braga, Portugal
- P14 : *In-situ intercalative polyamidation of PA n,6 nanocomposites*
A. C. Boussia, S. N. Vouyiouka and C. D. Papaspyrides, Laboratory of Polymer Technology, National Technical University of Athens, Athens, Greece.

- P15 : *Chemical Polymerization of Pyrrole on Magnetite Substrate*
D.V. Brezoi, Valahia University, Targoviste, Romania.
- P16 : *A novel organic/inorganic hybrid system nanoparticles-based for solar photochemical energy conversion*
R.M. Ion, **D.V. Brezoi**, A. Catangiu, R.C. Fierascu, Valahia University, Targovisteia / ICECHIM, Bucharest, Romania.
- P17: *Isothermal evolution of the conductivity of poly(methyl methacrylate)/multi-walled carbon nanotubes composites*
A.C. Brosse, S. Tencé-Girault, P. M. Piccione, L. Leibler, ESPCI, Paris / ARKEMA, Lacq, France
- P18 : *Piezoresistive Epoxy/CNT-Nanocomposites: Processing, Characterization and Applications*
S. T Buschhorn, M.H G Wichmann, J. Sumfleth, K. Schulte, Technische Universität Hamburg-Harburg, Institute of Polymers and Composites, Hamburg, Germany
- P19 : *Impact properties of nanocomposites based on modified polypropylene*
M. Ladra, **J. Cano**, A. Torres, S. García-Pardo, C. Ramírez,, Grupo de Polímeros. Universidad de A Coruña, Ferrol. Spain.
- P20 : *Rheology of polydimethylsiloxane / carbon nanotubes*
S. Marceau, Ph Dubois, R. Fulchiron, **Ph Cassagnau**, Laboratory of Polymeric and Composite Materials, University of Mons-Hainaut, Mons, Belgium / Université de Lyon, Ingénierie des Matériaux Polymères, Villeurbanne, France.
- P21 : *Nanomechanical and electrical characterization of a carbon nanofiber/epoxy composite*
R. Chaos-Morani, M.D. Escalera, A. Ureña, J.M. Kenny, Science and Engineering of Materials, Rey Juan Carlos University, Madrid, Spain / Civil and Environmental Engineering Department, University of Perugia, Terni, Italy
- P22 : *UV-cured Nanocomposites by Simultaneous Sol-gelProcess and Cationic Photopolymerization*
A. Chemtob, D.L. Versace, C. Belon, C. Crouxé-Barghorn, S. Rigolet, Laboratoire de Matériaux à Porosité Contrôlée, University of Haute-Alsace, Mulhouse, France
- P23 : *Metal nanoparticles deposited on multiple wall carbon nanotubes (MWCNT) by atmospheric plasma treatment.*
N. Claessens, F. Demoisson, .J. Guillot, J.J. Pireaux, F. Reniers, Service de Chimie Analytique et Chimie des Interfaces, Université Libre de Bruxelles, Belgium / Institut Carnot de Bourgogne, Dijon, France / Centre de Recherche Public-Gabriel Lippmann, Belvaux, Luxembourg / University de Namur, Research center in Physics of Matter and Radiation, Namur, Belgique.
- P24 : *Natural ageing of polyethylene-carbon black sheats used as protective barrier in cable-stayed bridges*
J. Tireau, L. Vouyovitch Van Schoors, K. Benzarti, **X. Colin**, LCPC / Arts et Métiers ParisTech, LIM, Paris, France
- P25 : *Organic-Inorganic photocured thiol-ene nanostructured coatings*
G. Colucci, M. Sangermano, Politecnico di Torino, Dipartimento di Scienza dei Materiali e Ingegneria Chimica, Torino, Italy
- P26 : *Effect of level of ceramic nanofillers on the mechanical and thermal behaviour of PLA and PLGA composites materials for medical implants*
B. Damadzadeh, H. Jabari, K. Airola, M. Skrifvars, School of Engineering, University of Borås, Sweden
- P27 : *Polymer / Metallic Nanowires Composites: Electrical Conduction versus Composition*
A. Lonjon, L. Laffont, P. Demont, **E. Dantras**, C. Lacabanne, Laboratoire de Physique des Polymères, Université Paul Sabatier, Toulouse, France
- P28 : *Combining carbon nanotubes and silver nanoparticles for multifunctional conductive and antibacterial polymer based nanocomposites*
M.Dottori, I.Armentano, E.Fortunati, J.M.Kenny, Interuniversity Consortium National Institute of Biostructures and Biosystems at Material Engineering Centre /Materials Engineering Center, INSTM, University of Perugia, Italy

- P29 : *Simulation studies of transparent nanocomposites: embedded LaF₃ and LaPO₄ nanoparticles in poly (methyl methacrylate) for X-ray attenuation.*
F. El Haber, C. Andraud, X. Rocquefelte, G. Froyer, Institut des Matériaux Jean Rouxel, University of Nantes / Institut des Nanosciences de Paris, Université Pierre et Marie Curie, Paris, France.
- P30 : *Differential scanning calorimetry analysis of poly(3-hydroxybutyrate) nanocomposites*
M. Erceg, T. Kovačić, I. Klarić, Faculty of Chemistry and Technology, Department of Organic Technology, Split, Croatia
- P31 : *Visualization of the flow in a screw/barrel system: Real-time monitoring of polymer-clay mixing*
A. Esposito, J. Balcaen, J.Y. Charneau, J. Duchet-Rumeau, Ingénierie des Matériaux Polymères , Université de Lyon, INSA Lyon, Villeurbanne, France
- P32 : *Biodegradable polymer nanocomposite containing silver nanoparticles: material properties and antibacterial activity*
E. Fortunati, I. Armentano, S. Rinaldi, L. Latterini, F. Elisei, J.M. Kenny, Materials Engineering Center, INSTM, / Department of Chemistry, University of Perugia, Perugia, Italy
- P33 : *Flammability properties of a Zr-phosphate based nanocomposites*
A. Frache, J. Alongi, G. Camino, Dipartimento di Scienza dei Materiali e Ingegneria Chimica, Politecnico di Torino sede di Alessandria, Alessandria, Italy.
- P34 : *Nanocomposite elastomers with in situ formed silica*
M. Galimberti, M. Sestito, G. Lampignano, F. Negroni, M. Arimondi, L. Conzatti, Pirelli Tyre SpA, Milano / ISMAC-C.N.R., Genova, Italy
- P35 : *Synergic effect of small and high molecular weights of Polyamide-6 on the nanostructured morphology of Polyethylene and Polyamide-6 blend*
L. Gani, S. Tencé-Girault, M. Milléquant, S. Bizet, L. Leibler, Matière Molle et Chimie, ESPCI, Paris / ARKEMA, CERDATO, Serquigny, France
- P36 : *Chemical modification of inorganic surfaces by microwave assisted reactions*
N. García, E. Benito, J. Guzmán, P. Tiemblo. Instituto de Ciencia y Tecnología de Polímeros (CSIC), Madrid. Spain.
- P37 : *Influence of block-copolymers morphologies on the toughness of thermosetting systems used in the aeronautical composites industry*
F. Gille, F. Lortie, J.F. Gérard, J.P. Pascault, S. Bechtel, R. Inoubli, Université de Lyon, Ingénierie des Matériaux Polymères / EADS Innovation Works, Composites technologies Materials & Processes, Suresnes / ARKEMA, Centre de recherche LACQ, Lacq, France
- P38 : *Bionanocomposites based on polyester-grafted polysaccharide nanocrystals: reinforcement of mechanical properties*
A.L. Goffin, N. Schiltz, Y. Habibi, E. Duquesne, A. Dufresne, Ph. Dubois, Laboratory of Polymeric and Composite Materials, University of Mons, Mons, Belgium / Ecole Française de Papeterie et des Industries Graphiques, Institut National Polytechnique de Grenoble, Saint-Martin d'Hères, France
- P39 : *Temperature-dependent behavior of low and high molecular weight fractions of the thin P3HT films*
S. Grigorian, S. Joshi, T. Panzner, U. Pietsch, P. Pingel, D. Neher, M. Foster, U. Scherf, Institute of Physics, University of Siegen / Institute of Physics, University of Potsdam / Macromolecular Chemistry, University of Wuppertal, Germany
- P40 : *Dielectric properties of natural rubber-clay nanocomposites*
M. Hernández, M.A. López-Manchado, T.A. Ezquerro, J. Carretero-González, Universidad Simón Bolívar, Departamento de Mecánica, Caracas, Venezuela / Instituto de Ciencia y Tecnología de Polímeros, Madrid, Spain / Instituto de Estructura de la Materia, Madrid, Spain
- P41 : *Hybrid organic-inorganic polyester coatings: Impact of the synthesis route on the final physico-chemical properties*

Amélie HOUEL, Aurélie CHARLOT, Jocelyne GALY, Jean-François GERARD, Ingénierie des Matériaux Polymères, Université de Lyon / INSA Lyon, France

P42 : *Nanocomposites of EPDM/EPGM-g-MA/clay: Rheological properties*

M.N. Ichazo, M. Hernández, C. Rosales, K. Nuñez, Universidad Simón Bolívar, Departamento de Mecánica, Caracas, Venezuela

Relaxation phenomena in hybrid organic-inorganic polymer systems modified with collagen polymerized in situ.

P43 : **M. Iurzhenko**, Ye. Mamunya, G. Boiteux, G. Seytre, E. Lebedev, Institute of Macromolecular Chemistry of National Academy of Sciences of Ukraine, Kyiv, Ukraine / Université de Lyon, Ingénierie des Matériaux Polymères, Villeurbanne, France

P44 : *Synthesis of nanostructured hydroxyapatite filler for HAP/polymer nanocomposite*

Dj. Janackovic, P. Uskokovic, R. Petrovic, I. Balac, B. Jokic, Dj. Veljovic, I. Jankovic-Castvan, Z. Radovanovic, Faculty of Technology and Metallurgy / Faculty of Mechanical Engineering, University of Belgrade, Serbia

P45 : *Nano-objects self-assembled by amphiphilic liquid crystal block copolymers in aqueous solution*

Lin Jia, Amin Cao and Min-Hui Li, Institut Curie, Laboratoire Physico-Chimie Curie, Paris, France / Laboratory of Polymer Materials, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China.

P46 : *Synthesis of hydroxyapatite filler doped with silicon for HA/polymer nanocomposites*

B. Jokic, Dj. Janackovic, P. Uskokovic, R. Petrovic, I. Balac, Dj. Veljovic, I. Jankovic-Castvan, Z. Radovanovic, Faculty of Technology and Metallurgy, Faculty of Mechanical Engineering, University of Belgrade, Serbia

P47 : *Self-assembly of polypeptide-surfactant complexes: Effect of surfactant branching and chain length*

S. Junnila, S. Hanski, R. Oakley, C. Faul, O. Ikkala, Department of Applied Physics, Helsinki University of Technology, Finland / School of Chemistry, University of Bristol, Bristol, United Kingdom

P48 : *Monitoring the changes in critical properties of nanoclay-reinforced PA6 during artificial aging*

P. Kiliaris, C.D. Paspaspyrides, R. Pfaendner, Laboratory of Polymer Technology, National Technical University of Athens, Greece / Ciba Lampertheim GmbH, Chemiestraße, Lampertheim, Germany

P49 : *Influence of volume-phase-transition on physical properties of PVME hydrogels*

M. Kozanecki, K. Koynov, M. Pastorczak, M. Kotowicz, J. Ulanski, H.J. Butt, Dept. Molecular Physics, Technical University Lodz – Poland / Max-Planck Institute Polymer Research, Mainz Germany

P50 : *Dispersability of carbon nanotubes in aqueous surfactant dispersions in dependence on ultrasonic treatment*

B. Krause, M. Mende, G. Petzold, P. Pötschke, Leibniz Institute of Polymer Research Dresden, Dresden, Germany

P51 : *Polyester block copolymers filled with Ti-based nanoparticles*

M. Kwiatkowska, P. Figiel, K. Kwiatkowski, Z. Roslaniec, A. Biedunkiewicz, Institute of Materials Science and Engineering, West Pomeranian University of Technology, Szczecin, Poland

P52 : *Properties of unmodified LDPE/organosilicate nanocomposites*

A. Giannakasi, G. Karadimos, K. Beltsios, **A. Ladavos**, School of Natural Resources and Enterprise Management / Department of Materials Science & Technology, University of Ioannina, Ioannina, Greece

P53 : *The influence of organo-clay on dispersion and electrical properties of PP/MWCNT/clay nanocomposites*

L. Volodymyr, Ye. Mamunya, G. Boiteux, N. Lebovka, J. Ulanski, L. Okrasa, E. Lebedev, G. Seytre, Institute of Macromolecular Chemistry, Kyiv, Ukraine / Université de Lyon, Ingénierie des Matériaux Polymères, France / Institute of Biocolloidal Chemistry named after F.D. Ovcharenko, NAS of Ukraine, Kyiv, Ukraine / Technical University of Lodz, Department of Molecular Physics, Lodz, Poland

P54 : *Smectic Polymer Vesicles*

M.N. Li, Institut Curie, Centre de Recherche, Université Pierre et Marie Curie, Paris, France

P55 : *The influence of ionic liquid and nanoclay on the physical properties of a polyethylene*

S. Livi, J. Duchet, J.F. Gérard, Université de Lyon - INSA Lyon, Ingénierie des Matériaux Polymères, France

- P56 : *Real time Crystallization of Organoclay Nanoparticles Filled Natural Rubber Under Stretching*
 J. Carretero-Gonzalez, R. Verdejo, S. Toki, B. S. Hsiao, E. P. Giannelis, **M. A. Lopez-Manchado**, Institute of Polymer Science and Technology, CSIC Madrid, Spain / Department of Chemistry, Stony Brook University, NY, USA / Department of Material Science and Engineering, Cornell University, Ithaca, NY, USA
- P57 : *Preparation and Characterization of High Molecular Weight Atactic Poly(vinyl alcohol)/Clay Nanocomposites by Electrospinning*
W.S. Lyoo, Y.J. Lee, J.W. Cha, E.J. Lee, Y.S. Chung, S.S. Han, S.K. Noh, Division of Advanced Organic Materials, School of Textiles, Yeungnam University, Gyeongsan / Department of Textile Engineering, Chunbuk National University, Jeonju / School of Display and Chemical Engineering, Yeungnam University, Gyeongsan, Korea
- P58 : *Preparation of Poly(vinyl pivalate/vinyl acetate) Particles Using Emulsion Copolymerization of Vinyl Pivalate and Vinyl Acetate*
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