



HAL
open science

From hidden shear-elasticity to opto and thermo-elasticity in confined polymer melts and viscous liquids

Laurence Noirez

► **To cite this version:**

Laurence Noirez. From hidden shear-elasticity to opto and thermo-elasticity in confined polymer melt-sand viscous liquids. TOP 2021 - 10th International conference on times of polymers and composites, Sep 2021, Ischia, Italy. hal-03742107

HAL Id: hal-03742107

<https://hal.science/hal-03742107>

Submitted on 2 Aug 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



X INTERNATIONAL CONFERENCE
Times of Polymers (TOP) & Composites
From Aerospace to Nanotechnology
September 5th – 9th 2021, Ischia – ITALY

PROGRAM

CHAired BY

Domenico ACIERNO
CRdc Tecnologie scarl Naples

Alberto D'AMORE
University of Campania "Luigi Vanvitelli"

Luigi GRASSIA
University of Campania "Luigi Vanvitelli"

Giuseppe MENSITIERI
University of Naples "Federico II"

Tuesday, 7th September 2021 - Room Pitecusa

09:00	INVITED LECTURE - Daniele Cangialosi Materials Physics Center, Spain	Clear-cut evidence of polymer desorption by fast scanning calorimetry	Chairman: A Lyulin
09:30	Haron Mahmood University of Trento, Italy	Intrinsic self-healing of epoxy/carbon laminates using different forms of healing agents – A comparison	
09:45	Valentina Mazzanti University of Ferrara, Italy	Processing-Properties Correlation for a Rubber Toughened Wood Plastic Composite	
10:00	Laura Mazzocchetti University of Bologna, Italy	A Thermoplastic Elastomeric Nanofibrous Membrane as CFRP Modifier to Boost both Delamination and Damping Performance	
10:15	Dagmar Merinska Tomas Bata University in Zlin, Czech Republic	Preparation of Polymer / Magnetizable Filler Composites	
10:30	COFFEE BREAK		
11:00	INVITED LECTURE - Laurence NOIREZ Université Paris-Saclay, France	From Hidden Shear-Elasticity to Opto- and Thermo-Elasticity in Confined Polymer Melts and Viscous Liquids	M.R. Noble Session Chairman: A. D'Amore
11:30	Alexander Semenov CNRS - France	Stress Fluctuations in Glass-Forming Systems: Elastic Response and Long-Range Correlations	
11:45	Michael Meurer University of Applied Sciences Bonn-Rhein-Sieg, Germany	RheoTack - a new comprehensive tack test method for adhesives tapes	
12:00	Krzysztof Wilczyński Warsaw University of Technology, Poland	Rheology for Modeling of Extrusion of Wood Plastic Composites	
12:15	Saray Perez Robles University of Campania, Italy	Effect on the thermo-gelation process of the degree and molar substitution of HPMC polymer hydrogels	
12:30	Lorenzo Malagutti University of Ferrara, Italy	A MATLAB – based Software for Estimating Measurement Uncertainties in Capillary Viscometry	
12:45	LUNCH		
15:00	Raffaella Ferraioli University of Salerno, Italy	A preliminary study on recyclability of plastic wastes recovered from urban collection	Chairman: D. Merinska
15:15	Alessandro Sorze University of Trento, Italy	EVALUATION OF THE SALT LEACHING METHOD FOR THE PRODUCTION OF POLYETHYLENE FOAMS FOR THERMAL ENERGY STORAGE APPLICATIONS	
15:30	Salomone Rita University of Salerno Italy	Morphology of microinjection molded iPP parts in controlled conditions	
15:45	Cesare Signorini University of Modena and Reggio Emilia, Italy	Experimental and theoretical investigation of the mechanical properties of PHBH biopolymer for additive manufacturing	
16:00	Gediminas Monastyerckis Kaunas University of Technology, Lithuania	MXene Coated Multifunctional Composites for Aerospace Application	
16:15	Rosalba Liguori University of Salerno, Italy	Polymer Insulator Processing–Organic Transistor Performance Relationship Investigated through Admittance Spectroscopy	
16:30	Mariano Palomba CNR, Italy	Functional Polymeric Coatings for CsI(Tl) Scintillators	
16:45	Krzysztof Polaczek Cracow University of Technology, Poland	Open-cell spray polyurethane foams of low density modified with bio-polyol from used cooking oil	
17:00	Grazia Totaro University of Bologna, Italy	Enzymatic degradation of polyester and polyurethane-based adhesives.	
17:15 18:30	POSTER SESSION AND COFFEE BREAK		

Wednesday, 8th September 2021 - Room Pitecusa

09:00	INVITED LECTURE - L. Incarnato University of Salerno, Italy	Food Packaging Trends: Innovation, Sustainability and Safety	Chairman: M. Iannone
09:30	Julian Rech Hochschule Bonn-Rhein-Sieg, Germany	Elementary Volume Concept (EVC)	
09:45	Carol Winnifred Rodricks Weizmann Institute of Science, Israel	Polymer beads as interfacial obstacles in fibre composites	
10:00	Corrado Sciacalepore University of Parma, Italy	Novel PBAT-based biocomposites reinforced with bioresorbable phosphate glass micro-particles	
10:15	Laura Simonini University of Trento, Italy	GRAPHENE COATINGS FOR GLASS FIBERS THROUGH TRIBOELECTRIFICATION	
10:30	COFFEE BREAK		
11:00	INVITED LECTURE - Alexey V. Lyulin Eindhoven Univ. Technol, Netherlands	Molecular-Dynamics Modelling of Nafion Membranes	Chairman: L. Noirez
11:30	Camille Gillet Université de Toulouse, France	Chemical behaviour of water absorption in a carbon/epoxy 3D woven composite	
11:45	Oleg Lebedev Russian Academy of Sciences, Russia	Migration of electroconductive carbon nanoparticles in polymer composites melts	
12:00	Daiva Zeleniakienė Kaunas University of Technology, Lithuania	Mechanical Properties of Multifunctional Composites with MXene Nanofillers and Nanolayers	
12:15	Giulia Fredi University of Trento Italy	Furanoate polyesters/poly(lactide)/reduced graphene oxide nanocomposite films: thermomechanical and gas permeation properties	
12:30	Oleh Shpotyuk Jan Dlugosz University in Czestochowa, Poland	Volumetric nanostructurization in glassy arsenoselenides driven by high-energy mechanical dry- and wet-milling	
12:45	LUNCH		
15:00	INVITED LECTURE - Andrea Lazzeri University of Pisa, Italy	Estimation of the elastic modulus of RAF, MAF and crystal phases for different biopolymers and their blends.	Chairman: A. Semenov
15:30	Emmanuel Richaud Arts et Metiers ParisTech, France	Thermal Degradation of Fluorosilicone Elastomers	
15:45	Sarah Hettal ENSAM / PIMM, France	Radiochemical Ageing of ATH filled Silane-Crosslinked Polyethylene	
16:00	Francesco Galvagnini University of Trento, Italy	Thermo-mechanical behavior of syntactic foams with thermal energy storage/release capability	
16:15	Chiara Pasini University of Brescia, Italy	Bioresorbable Core-shell Scaffolds for Bone Tissue Replacement	
16:30	COFFEE BREAK		
17:00	Fanon JULIENNE PIMM, Arts et Métiers, France	Degradation of PVDF-HFP matrix	Chairman: L. Grassia
17:15	Jacopo Ortolani University of Bologna, Italy	Polyamide nanofibres impregnated with nitrile rubber for enhancing CFRP delamination resistance	
17:30	Gianluca Viscusi University of Salerno Italy	Design and characterization of lightweight green composites obtained from natural resources for high-performance use in transport structures	
17:45	Michele Iannone Alenia, Italy	Algorithms for Flaw Detection by SHM with Static Sensors approach	
18:00	Andrea Dorigato University of Trento, Italy	Thermo-mechanical, fracture and heat storage properties of multifunctional carbon/epoxy laminates	
18:15	CLOSING REMARKS		
20:30	GALA DINNER		

Poster Place	TITLE	AUTHOR
PS01	Electrospun membranes of poly(butylene succinate) and poly(butylene/2-butyl,2-ethyl-propylene succinate)	Raimondo, Marialuigia
PS02	Characterization of the thermal, structural and mechanical properties of recycled HDPE	Chrysafi, Iouliana
PS03	Thermal Properties of Graphene Nanoplatelets Reinforced Crosslinked and Short Chain Branched Polyethylenes for Geothermal Pipe Applications	Tarani, Evangelia
PS04	Thermomechanical characterization of E-glass fibre reinforced random polypropylene	Delli, Evangelia
PS05	Novel biobased polyester resins for wood applications: Morphological, thermal, and chemical characterization	Vourlias, George
PS06	Thermo-electric Properties of Poly(lactic) Acid filled with Carbon-based Particles: Experimental and Simulation Study	Romano, Vittorio
PS07	Durability of a Soya-Derived Flexible PU Foam for Mattresses: Effects of Different Artificial Aging	D'Arienzo, Lucia
PS08	Floating Microdisks Rotated by Molecular Motors	Nyrkova, Irina
PS09	Electrothermal Actuation and Release of Adhesiveness of Conductive Carbon Nanotube/Epoxy Composites by Joule Heating	Slobodian, Petr
PS10	Environmental Improvement Potential of Flexible Polyurethane Foam for Aviation Applications - A Case Example Analysis	Höhne, Carl-Christoph
PS11	Rigid polyurethane foams modified with bio-polyols and cellulose	Uram, Katarzyna
PS12	Investigation of curing profile, thermal degradation and structural characteristics of a commercial epoxy resin by means of TGA, DSC and FTIR techniques	Malletzidou, Lamprini
PS13	Thermal study and structural characterization of Hemp and PF and UF resins for Hemp-Based Panels	Kourtidou, Dimitra
PS14	The stickier, the slower: on the nonintuitive relation between adsorption rate and interfacial interactions	ZIJIAN, Song
PS15	Effect of Temperature on Cure Behavior and Physical Properties of Autoclaved Carbon Fiber/Epoxy Composite Laminates	Baghad, Abd
PS16	Transport properties of natural and artificial smart fabrics impregnated by graphene nanoplatelets.	Esposito Corcione, Carola
PS17	A Critical Evaluation of Mechanical and Fire Performance of Flax Fiber Epoxy Resin Composites	Benelli, Tiziana
PS18	Optimization of Pyro-gasification of Carbon Fiber Reinforced Polymers (CFRPs)	Montorsi, Francesco
PS19	Production of thermoplastic composite filaments for additive manufacturing using recycled Carbon Fibers	Giorgini, Loris
PS20	New Concept of Electronically and Protonic Conductive Polymer Structures for the Proton Exchange Membrane Water Electrolysis Produced by Additive Manufacturing	Maletzko, Annabelle
PS21	Environmental Improvement Potential of Flexible Polyurethane Foam for Aviation Applications - A Case Example Analysis	Höhne, Carl-Christoph
PS22	Continuous ultrasonic welding of thermoplastic composites - LCI Modelling for the Eco-Statement	Reichert, Thomas
PS23	Thermal and dielectric properties of 3D printed parts based on polylactic acid filled with carbon nanostructures	Romano, Vittorio
PS24	Development of PLA/Microcellulose Biocomposite Filaments for 3D Printing	Scarfato, Paolo
PS25	Viscoelastic behavior of structural epoxy resins loaded with different carbon nanostructured forms	Raimondo, Marialuigia



X INTERNATIONAL CONFERENCE

Times of Polymers (TOP) & Composites

From Aerospace to Nanotechnology

September 5th – 9th 2021, Ischia – ITALY



materials

www.topconference.it
info@topconference.it
timesofpolymers@gmail.com