

TOP

11TH INTERNATIONAL CONFERENCE

SCIENTIFIC PROGRAM

11th International Conference on Times of Polymers
(TOP) and Composites
June 11th-15th, 2023
Ischia – Italy

Chaired by

Domenico Acierno

Alberto D'Amore

Luigi Grassia

Giuseppe Mensitieri

Monday, June 11th

08:50	OPENING SESSION - D. ACIERNO, A. D'AMORE, L. GRASSIA, G. MENSITERI	
09:00	INVITED LECTURE - A. MAFFEZOLI University of Salento, Italy	Finite element modeling of voids development in autoclave cured composites
09:30	L. MISHNAEVSKY JR. Technical University of Denmark, Denmark	Advanced polymer composites for wind turbine blades: Lifetime and sustainability problem
09:50	D. RIGOTTI University of Trento, Italy	PVC-coated electrical cables from waste to resource
10:10	A. RIGAIL Espol Polythenic University, Ecuador	Processability characteristics of biocomposite from recycled high-density polyethylene and brewers' spent grain
10:30	R. VERDE University of Campania "Vanvitelli", Italy	Residual stress in polymeric composites during curing
10:50	COFFEE BREAK	
11:10	INVITED LECTURE - G. B. MCKENNA North Carolina State University, USA	Ultrastable Glasses Challenge the Ideal Glass Transition
11:40	A. DLUGAJ Leibniz-Institut für Verbundwerkstoffe , Germany	Characterization of Sequential Trial-Curable Off-Stoichiometric Amine-Epoxy Thermosets with Ionic Liquids
12:00	J. GONZALES-BENITO University Carlos III of Madrid, Spain	Effect of Collector Rotational Speed on Morphology and Structure of Solution Blow Spun Polylactic Acid (PLA)
12:20	J. WANG Borealis Polyolefine GmbH - Austria	Recyclable solutions for sterilizable packaging based on transparent polypropylene impact copolymer
12:40	A. CHERVANYOV University of Münster, Germany	Conductivity of diblock copolymer system filled with conductive fillers
13:00	LUNCH	
15:00	INVITED LECTURE - S. C. JANA University of Akron, USA	3-D Printing Assisted Multifunctional Porous Materials For Advanced Applications
15:30	H. ASKANIAN SIGMA Clermont, France	TERMINUS project; Toward unlocking recycling and reuse of flexible multi-layer and multi-compound packaging
15:50	E. TAMBURRI Università degli Studi di Roma "Tor Vergata" - Italy	3D Extrusion and Stereolithography Printing Methods for Producing Multifunctional Polymer Composites
16:10	D. OLMOS University Carlos III of Madrid, Spain	Design and Implementation of 3D Printable Nozzle for the Manufacture of Polymer-based Materials by Solution Blow Spinning
16:30	A. ANCUTA University POLITEHNICA of Bucharest - Romania	Structural optimization of a robot effector manufactured using 3D printing
16:50	COFFEE BREAK	
17:10	S. BRUZAUD University South Brittany, France	Tailor-made biosynthesis of polyhydroxyalkanoates: towards polymers with planned biodegradation
17:30	E. RICHAUD CNRS Cnam, HESAM - France	Water ageing of epoxies : effect of thermal oxidation
17:50	T. ISHIDA Nagoya University- Japan	Estimating Network Lifetime of AUN in Photo-aging by Kinetic modeling and "Degelation" model
18:10	N. DELPOUVE Université de Rouen Normandie, France	Amber Dating, always a big challenge: calorimetric protocol based on maturation
18:30	C. MATHIEU CNRS Cnam, HESAM - France	Ageing effect on the phase transition of poly(N-isopropylacrylamide)
18:50	A. KRAMAR Universidad Carlos III de Madrid, Spain	Electrokinetic properties of cellulose diacetate - influence of morphology and crystallinity on the zeta potential

Chairman: A. D'AMORE

Chairman: L. GRASSIA

Chairman: E. RICHAUD

Chairman: S. NAPOLITANO

Tuesday, June 12th

09:00	INVITED LECTURE - A. LAZZERI University of Pisa, Italy	Effect of crystallinity and plasticizer content on the evaluation of activation volume through stress relaxation tests	Chairman: S. L. SIMON
09:30	Y. LEEM Hokkaido University, Japan	Microstructural analysis based on gas isotherms of N ₂ , H ₂ O and CO ₂ and 3D imaging using X-ray CT into extruded polystyrene foam adding graphite	
09:50	A. SORZE University of Trento, Italy	NOVEL SUPERABSORBENT XANTHAN-BASED HYDROGEL COMPOSITES FOR FORESTRY APPLICATION	
10:10	O. VETTERLI ETH Zurich, Switzerland	PET-GF composite processing via reactive extrusion & solid state polymerization	
10:30	D. PERIN University of Trento, Italy	Enhancing Self-Healing Properties in Polyamide 6 (PA6)/Cyclic Olefinic Copolymer (COC) Polymer Blends for Structural Composites	
10:50	COFFEE BREAK		
11:10	INVITED LECTURE - S. S. NAPOLITANO Université libre de Bruxelles, Belgium	Equilibration pathways beyond density fluctuations: the Slow Arrhenius Process	Chairman: G. B. MCKENNA
11:40	CHUN LI Université libre de Bruxelles, Belgium	A Molecular Dynamics Study of the Molecular Origin of the Slow Arrhenius Process	
12:00	A. SEMENOV University of Strasbourg, France	Capillary thinning and stability of polymer solution threads	
12:20	HASSAN OMAR Federal Institute for Materials Research and Testing (BAM), Germany	Growth Kinetics and Molecular Mobility of the Adsorbed Layer of Poly(bisphenol-A Carbonate) (PBAC), Polysulfone (PSU), and Poly (2-Vinyl Pyridine) (P2VP)	
12:40	S. SANTI University of Trento, Italy	PURE POLY(PENTAMETHYLENE 2,5-FURANOATE) AND POLY(BUTYLENE 2,5-FURANOATE) ELECTROSPUN MATS: CHARACTERIZATION AND APPLICATIONS	
13:00	C. IDRES Université de Bejaia, Algeria	INFLUENCE OF GREEN CHEMICAL TREATMENTS ON MORPHOLOGY AND MECHANICAL PROPERTIES OF POLY(3-HYDROXYBUTYRATE-CO-3-HYDROXYHEXANOATE)-AGAVE AMERICANA FIBERS BICOMPOSITES	
13:20	LUNCH		
15:00	INVITED LECTURE - L. SIMONINI University of Trento, Italy	Evaluation of interfacial self-healing in multifunctional composites	Chairman: A. MAFFEZZOLI
15:30	G. CIARLEGLIO Sapienza University of Rome, Italy	Electrospray Fabrication of pH-Responsive Microspheres for the Delivery of Ozoile	
15:50	B. PALUCCI CNR - Italy	Bio-based thermosetting resins from waste cooking oil	
16:10	R. LONGO University of Salerno, Italy	AFM investigation as a key analysis to determine the drug location in electrospun drug delivery systems	
16:30	M. PAGLIERO University of Genoa, Italy	Effect of preparation parameters on the structure of PVDF hollow fiber membranes	
16:50	COFFEE BREAK		
17:10	G. GRECO University of Salento, Italy	NOVEL SUPERCAPACITOR BASED ON PEDOT:PSS / GRAPHENE OXIDE NANOCOMPOSITE	Chairman: V. GINZBURG
17:30	M. BIANCHI University of Trento, Itali	Elastocaloric Properties and Refrigeration Potential of Natural Rubber Nanocomposites Description	
17:50	P. WISNIEWSKA Gdansk University of Technology, Poland	Expecting Higher Performance from Waste Polymer based Composites: Electrical Conductivity and Fire Resistance	
18:10	L. LAMBERTINI Sapienza University of Rome, Italy	Numerical relaxation analysis of carbon fiber reinforced polymers	
18:30	M. DALLE DONNE University of Bologna, Italy	NBR-rich nanofibrous membranes for hindering composite delamination: comparison of the performance obtained using liquid and photocrosslinked rubber	
18:50	D. TORTORICI Sapienza University of Rome, Italy	Solvolytic process for recycling carbon fibers from epoxy-based composites	

Wednesday, June 13th

09:00	INVITED LECTURE - J. KIM Inha University, South Korea	Biobased resins for all-green natural fiber-reinforced polymer composites	Chairman: A. LAZZERI
09:30	E. MACCAFERRI University of Bologna, Italy	Toughened CFRPs via PEO nanofibers: effect of water ageing on delamination	
09:50	M. REZA SAEB Gdansk University of Technology, Poland	Future Wave in Technology to Pave Roads – Role of Ground Tire Rubber as a Modifier	
10:10	M. KACI Université de Bejaia, Algeria	ECO-FRIENDLY CHEMICAL MODIFICATION OF AGAVE AMERICANA FIBERS FOR BIOCOMPOSITE PROPERTIES ENHANCEMENT	
10:30	A. DORIGATO University of Trento, Italy	Novel Polyamide 6 (PA6)/Polycaprolactone (PCL) Thermoplastic Self-Healing Polymer Blends for Structural Composites	
10:50	COFFEE BREAK		
11:10	INVITED LECTURE - V. GINZBURG Michigan State University, USA	Modeling of real-life and computer experiments on volume relaxation using a "two-state, two-timescale" (TS2) theory	Chairman: L. NOIREZ
11:40	Y. W. KWON Naval Postgraduate School, USA	Recent Advances in Failure Modeling and Criteria for Fibrous Composite Structures	
12:00	I. VOZNIAK Polish Academy of Sciences, Poland	Foaming of all-polymer nanocomposites	
12:20	O. V. LEBEDEV Russian Academy of Sciences, Russia	Solid-state processing of nascent disentangled UHMWPE reactor powders mixed with carbon nanoparticles	
12:40	N. PATSALIDIS The Cyprus Institute, Cyprus	Properties of Polymer/Alumina Interfaces via a Hierarchical Multi-Scale Computational Methodology	
13:00	LUNCH		
15:00	POSTER SESSION WITH COFFEE		
16:30	INVITED LECTURE - S. L. SIMON North Carolina State University - USA	The Glass Transition of Co-Amorphous Molecular Glasses	Chairman: G. MENSITIERI
17:00	INVITED LECTURE - L. NOIREZ Université Paris-Saclay, France	Collective effects in liquids and melts: what Rheology says and what it does not say...	
17:30	S. SHEIKO University of North Carolina at Chapel Hill, USA	Architectural programming of polymer viscoelasticity	
17:50	S. COREZZI University of Perugia, Italy	Universal glass-forming behavior: New insights from chemical vitrification	
18:10	A. BALDANZA University of Salerno, Italy	NETGP-NRHB model: Prediction of solubility and permeability of binary gas mixtures in glassy polymers in presence of specific interactions	
18:30	L. MAZZOCCHETTI University of Bologna, Italy	Rubber containing nanofibers and their ability in structural modification of CFRPs: a summary	
18:50	F. MOLLICA University of Ferrara, Italy	Finite element modelling and experimental validation of thermal conduction through syntactic foams containing phase change microcapsules	

POSTER SESSION

Place	PID	Title	Topic	Presenter
1	18	Valorization of plastic HDPE and cork wastes in the design of composite materials	composites	Svetlana Petlitckaia
2	30	Smoke emission of new cork-based composites produced with plastic wastes	composites	Toussaint Barboni
3	41	Development of recycled PET core materials for the manufacturing of fiber reinforced polymeric composites in sandwich form	composites	Gulnur Baser
4	43	Rheological, mechanical and thermal properties of plasticized polyhydroxyalkanoate composites	composites	Remo Merijs-Meri
5	51	3D printed watch straps manufactured with TPU materials and the influence of infill printing characteristics on the mechanical tensile behavior	composites	Gabriel Giga
6	52	Comparative study of the mechanical compression and tensile behavior of specimens produced with FDM and SLA technology	composites	Gabriel Giga
7	72	Gravure printed composites based on Lithium Manganese Oxide: a study case for Li-ion batteries manufacturing	composites	Maria Montanino
8	74	Preliminary design of a lightweight composite backing structure for a satellite antenna	composites	Emil Nutu
9	79	Dynamic Mechanical Properties of 3D Printable Graphene-Polymer Composite as Bipolar Plates in Fuel Cell Applications	composites	Abel García-Bernabé
10	84	Evaluation of the effect of recycling of carbon fibers for polypropylene reinforcement	composites	Loris Giorgini
11	85	Investigation and optimisation of CFRP recycling by pyrogasification process	composites	Tommaso Amadori
12	87	Polyurethane Seating Structure for Aviation Applications	composites	Carl-Christoph Höhne
13	88	Recycling and Circularity of Aircraft Composites	composites	Carl-Christoph Höhne
14	91	Life cycle assessment: Comparison of thermoset wing panels for aircraft applications	composites	Thomas Reichert
15	104	Fabrication of Silver Nanoparticles in Hydrogel Networks: a novel Sustainable Approach	composites	Cleofe Palocci

16	112	Development of Recycled PET Core Materials for the Manufacturing of Fiber Reinforced Polymeric Composites in Sandwich Form	composites	Gülnur Başer
17	114	Flexible Screen-printed Thermoelectric materials based on PEDOT:PSS/DWCNT Composites	composites	Anna De Girolamo Del Mauro
18	22	Facile and effective method for the preparation of sodium alginate/TiO ₂ bio-composite films for different applications	nanocomposites	Cecilia Mortalò
19	38	Morphological and Mechanical Characterization of Polyamide11/Sepiolite Nanocomposites	nanocomposites	Sofia Fares
20	44	Development and characterization of ethylene-octene copolymer nanocomposites with hybrid MWCNT- Fe ₃ O ₄ fillers	nanocomposites	Janis Zicans
21	53	Physico-chemical and antimicrobial features of magnesium doped hydroxyapatite nanoparticles in polymer matrix	nanocomposites	Gabriel Giga
22	54	Development and characterisation of silver doped hydroxyapatite/chitosan nanobiocomposites	nanocomposites	Gabriel Giga
23	60	Milling-driven volumetric nanostructurization in glassy-crystalline As ₇₀ Se ₃₀ characterized in terms of modified Positronics approach	nanocomposites	Oleh Shpotyuk
24	75	Control of 3D printing parameters to design the response of heating polymers	nanocomposites	Francesca Aliberti
25	76	Nanocomposites for load-bearing structures heatable through joule heating	nanocomposites	Luigi Vertuccio
26	81	Simulation and Experimental Comparison of Joule-Heating Effect in Carbon-based Epoxy Resin	nanocomposites	Vittorio Romano
27	109	Preparation of High-Quality Graphene by Aqueous Polymer Assisted Mechanical Exfoliating of Graphite	nanocomposites	Jianan Zhang
28	110	Antibacterial Properties of Innovative Nanofibrous Membranes Produced via Coaxial Electrospinning	nanocomposites	Patrizia Lamberti
29	113	Preparation and Electrochemical Properties of Phytic Acid /Poly(M-Phenylenediamine) Modified Nano-SiO ₂ /Epoxy Hybrid Emulsion	nanocomposites	Jianjun Yang
30	10	Preparation and Characterization of Amphoteric Microgels Based on Acrylamide Derivatives	polymer chemistry	Sarkyt Kudaibergenov
31	19	Dynamic Mechanical Analysis of Poly(Vinyl Alcohol)-Based Hydrogels with Boric Acid as Cross-linker	polymer chemistry	Lucia Lambertini

32	25	Fractionation and Characterization of Commercial Low Acyl Gellan Gum	polymer chemistry	Gulnur S. Tatykhanova
33	27	Comparative Study of Gellan Gum Derived from Domestic Raw Materials of Kazakhstan and Commercial Gellan	polymer chemistry	Gulnur S. Tatykhanova
34	28	Characterization of Sequential Trial-Curable Off-Stoichiometric Amine-Epoxy Thermosets with Ionic Liquids	polymer chemistry	Anna Maria Dlugaj
35	32	The Effect of Crosslinking Density on the Dynamic Behaviour of Thermo-Responsive Poly(N-Isopropylacrylamide) Hydrogels	polymer chemistry	Gianluca Ciarleglio
36	40	Synthesis of composite hydrogels for enhanced oil recovery	polymer chemistry	Alexey Shakhvorostov
37	45	Sustainable materials for corrosion protection on aircraft structures	polymer chemistry	Marianna Orrico
38	67	Changes in Molecular Characteristics and Hydrolysis of the Polystyrene and Polyester Matrices Upon Photochemical Transformation of Diketone Dopants: Effects on Dopants Concentration	polymer chemistry	Martin Danko
39	93	Si/Polymer materials prepared by sol-gel route: Study of release and antibacterial activity loaded with natural drug	polymer chemistry	Veronica Viola
40	94	Filling fresh metakaolin-based geopolymer paste with wood ashes: Chemical and mechanical characterization	polymer chemistry	Veronica Viola
41	99	Aerogel-like material based on hyperbranched polymethylethoxysiloxane containing polyethylene oxide substituents	polymer chemistry	Aleksandra Bystrova
42	106	Exploring Volatile Organic Compounds in Polyurethane Foams Used for Sound Absorption panels: A Comprehensive Survey	polymer chemistry	Rosana Nogueira
43	107	Polyurethane foam raw materials – Assessment of the volatile profile	polymer chemistry	Bruno Godinho
44	116	Biopolymer-based nanogels synthesis, characterization and stability for doxorubicin encapsulation and delivery	polymer chemistry	Karla Gricelda
45	35	Characterization of grapeseed oil loaded chitosan edible films	polymer physics	Gabor Zsivanovits
46	37	Alginate-based emulsion micro-spheres as 5-Fluorouracil carriers	polymer physics	Maria Marudova
47	48	Compatibilization of polymer blends under conditions of high pressure and shear deformation	polymer physics	Iurii Vozniak

48	49	Multiple-shape memory polymer blends formed by massive formation of interphases via ultrahigh plastic deformation	polymer physics	Alina Vozniak
49	58	Carbon Fibers Precursors from Lignin and Cellulose Acetate via Melt-spinning	polymer physics	Adriano Vignali
50	62	Thermoresponsivity of poly(N-isopropylacrylamide) microgels in water-trehalose solution and its relation to protein behaviour	polymer physics	Silvia Corezzi
51	68	The influence of confinement and residual stress on the slow Arrhenius process in polymer films	polymer physics	Kai Wang
52	82	Mechanical behavior of 3D-printed thermoplastic polyurethane structures emulating traditional foams	polymer physics	Paola Natali
53	101	Colloidal stability of chitosan/DNA polyelectrolyte complexes in presence of biological polyanions	polymer physics	Jesrael Luz Elena
54	111	Experimental research regarding the potential use of 1,3,5-Trinitro-1,3,5-triazinane (RDX) and (1,7)-Polyoxepan-2-one (PCL) mixture as a composite energetic material fabricated by fused filament fabrication (FFF) additive manufacturing technology	polymer physics	Adrian Rotariu
55	117	Effect of DNA's molecular weight on their solution viscosity, critical concentration and liquid crystals formation	polymer physics	Scarlett Elizabeth
56	119	Thermoforming of printed conductive silver on flexible substrates	polymer physics	Vincenza Antonucci
57	120	New Life Cycle Inventories of materials used in composite aircraft structures	composites	Gabriela Gromer

Monday - June 12th	
09:00	Alfonso Maffezzoli
09:30	Leon Mishnaevsky Jr.
09:50	Daniele Rigotti
10:10	Andres Rigail
10:30	Raffaele Verde
10:50	coffee break
11:10	Gregory B. McKenna
11:40	Anna Dlugaj
12:00	Javier González-Benito
12:20	Jingbo Wang
12:40	Alexander Chervanyov
13:00	lunch break
15:00	Sadhana C. Jana
15:30	Haroutioun Askanian
15:50	Emanuela Tamburri
16:10	Dania Olmos
16:30	ANCUTA Andrei
16:50	coffee break
17:10	Stéphane Bruzaud
17:30	Emmanuel Richaud
17:50	Takato Ishida
18:10	Nicolas Delpouve
18:30	Camille Mathieu
18:50	Ana Kramar

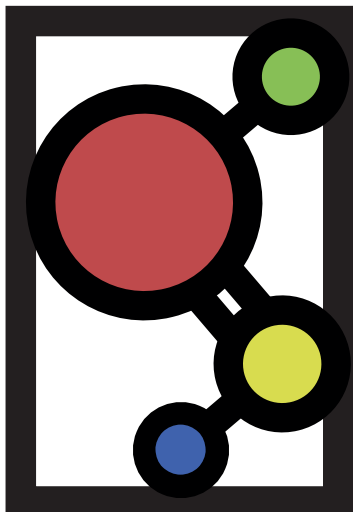
Tuesday - June 13th	
09:00	Andrea Lazzari
09:30	Yoobin Leem
09:50	Alessandro Sorze
10:10	Oliver Vetterli
10:30	Davide Perin
10:50	coffee break
11:10	Simone Napolitano
11:40	Chun Li
12:00	Alexander Semenov
12:20	Hassan Omar
12:40	Sofia Santi
13:00	Celia Idres
13:20	lunch break
15:00	Laura Simonini
15:30	Gianluca Ciarleglio
15:50	Benedetta Palucci
16:10	Raffaele Longo
16:30	Marcello Pagliero
16:50	coffee break
17:10	Giuseppe Greco
17:30	Marica Bianchi
17:50	Paulina Wisniewska
18:10	Lucia Lambertini
18:30	Matteo dalle Donne
18:50	Daniele Tortorici

Wednesday - June 14th	
09:00	Jaehwan Kim
09:30	Emanuele Maccaferri
09:50	Mohammad Reza Saeb
10:10	Mustapha Kaci
10:30	Andrea Dorigato
10:50	coffee break
11:10	Valeriy Ginzburg
11:40	Young Kwon
12:00	Iuri Vozniak
12:20	Oleg V. Lebedev
12:40	Nikolaos Patsalidis
13:00	lunch break
15:00	Poster Session with coffee
16:30	Sindee L. Simon
17:00	Laurence Noirez
17:30	Sergei Sheiko
17:50	Silvia Corezzi
18:10	Antonio Baldanza
18:30	Laura Mazzocchetti
18:50	Francesco Mollica

20:30 Gala Dinner

Thursday - June 15th	
09:00	Boat Tour of Ischia

composites
processing
polymer physics
polymer chemistry
nanocomposites
invited talk



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CONTACT

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