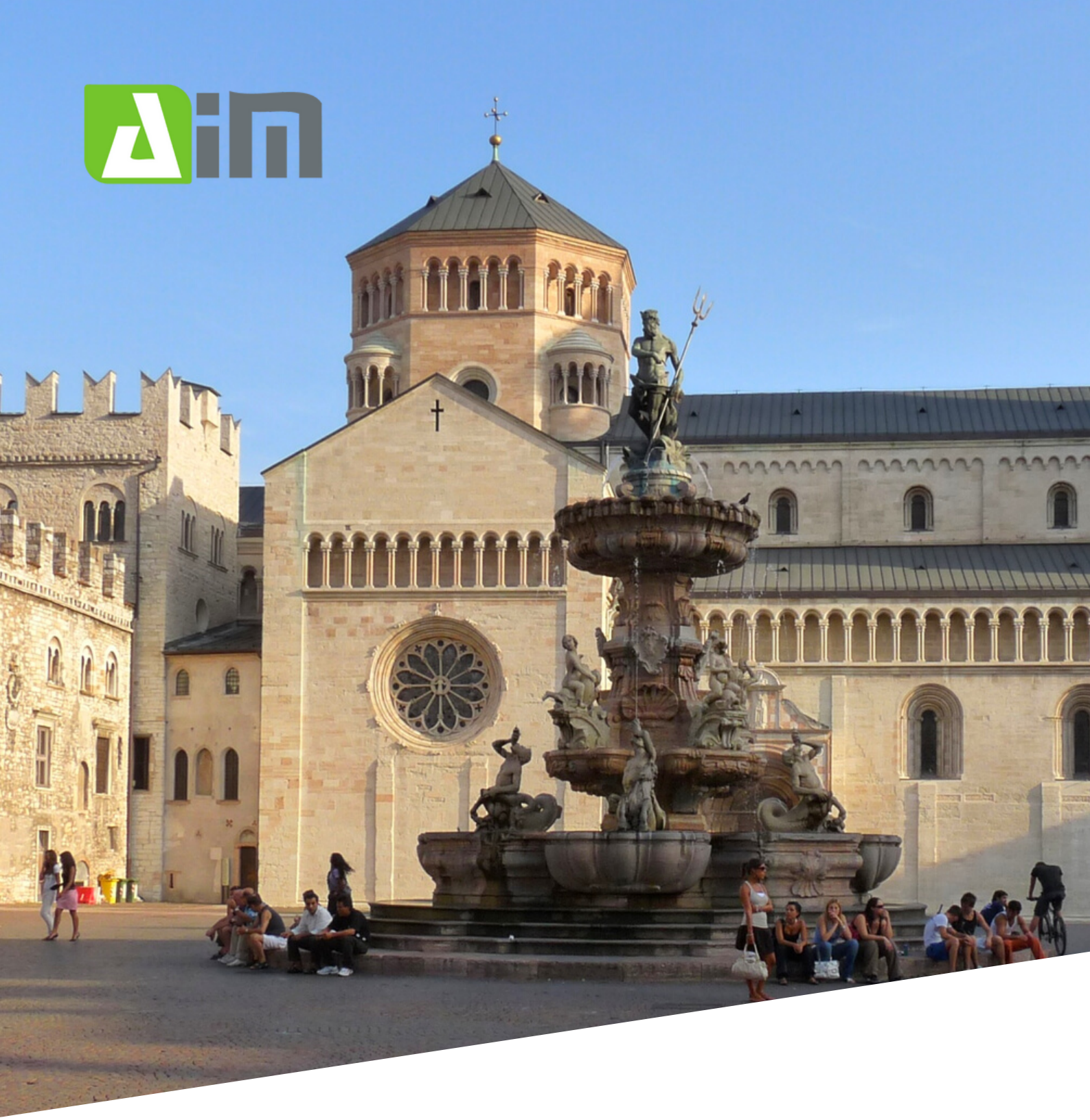

ASSOCIAZIONE ITALIANA DI SCIENZA E TECNOLOGIA DELLE MACROMOLECOLE

XXIV CONVEGNO NAZIONALE

TRENTO, 4-7 SETTEMBRE 2022

PROGRAMMA

Associazione Italiana
di Scienza e Tecnologia delle Macromolecole

ASSOCIAZIONE ITALIANA DI SCIENZA E TECNOLOGIA DELLE MACROMOLECOLE

XXIV CONVEGNO NAZIONALE

TRENTO, 4-7 SETTEMBRE 2022

CON IL PATROCINIO DI

UNIVERSITÀ DI TRENTO
Dipartimento di Ingegneria Industriale
AIMAT
ASSOCIAZIONE ITALIANA D'INGEGNERIA DEI MATERIALI
INSTM
FEDERCHIMICA
PLASTICSEUROPE ITALIA
Associazione nazionale produttori di materie plastiche

SOSTENITORI

AQUAFIL
Anton Paar
LS analytica
MP strumenti
SHAREBOT
Röchling
RUBBER CONVERSION
UFI FILTERS
Waters™
TA Instruments

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FRANCESCO VALENTINI, UNIVERSITÀ DI TRENTO

sessione 1	Design molecolare e supramolecolare
sessione 2	Struttura, reologia e proprietà dei polimeri
sessione 3	Materiali polimerici nanostrutturati, ibridi e compositi
sessione 4	Polimeri per nuove sfide: energia, salute, agroalimentare, ambiente e sostenibilità

Domenica 04/09	
18.00	Registrazione e welcome cocktail (c/o Grand Hotel Trento)

Lunedì 05/09		
8.00-9.00	Registrazione partecipanti	
	Sala Clesio	**Sala Madruzzo**
9.00-9.20	Apertura lavori	
9.20-10.00	**PL1 - V. Altstädt** (University of Bayreuth) - Microplastic - formation and degradation	
10.00-10.30	KN 2.1 - **C. Gualandi** (University of Bologna) - Self-diagnostic polymers based on luminescent probes	KN 1.1 - **N. Tirelli** (Istituto Italiano di Tecnologia, Laboratory of Polymers and Biomaterials) - Multi-responsive oxidation-sensitive polymers
10.30-10.45	O 2.1 - **A. Arkhangelskiy** (University of Trento) - Atmospheric plasma deposition of natural derived polymers	O 1.1 - **D. Martella** (University of Florence) - Photoresponsive artificial muscles based on liquid crystalline networks
10.45-11.00	O 2.2 - **R. Suriano** (Politecnico di Milano) - Development of a photocurable nanocomposite for stereolithography of electrically conductive systems	O 1.2 - **M. Bertoldo** (University of Ferrara) - Polyester-urethane coatings based on hydrolyzed cutin from tomato peel by-products
11.00-11.30	coffee break	
11.30-11.45	O 2.3 - **D. Perin** (University of Trento) - Development of innovative thermoplastic self-healing polymer blends for structural composites	O 4.1 - **A. Barbato** (University of Salerno) - Development of eco-sustainable multilayer films by functionalization with PVOH/PLA+wax bio-coatings
11.45-12.00	O 2.4 - **L. Saitta** (University of Catania) - Fully-Recyclable Epoxy Matrix for Epoxy Composites: a Cradle-to Cradle approach	O 4.2 - **A. Cozzolino** (University of Salerno) - Innovative polymeric membrane for environmental applications
12.00-12.15	O 2.5 - **V. Di Lisio** (Donostia International Physics Center) - Accessing deep glassy states in poly(tert-butylstyrene) nanospheres through physical aging	O 4.3 - **F. Valentini** (University of Trento) - Investigation and improvement of the fire behaviour of EPDM/NBR panels with paraffin for thermal energy storage applications
12.15-12.30	O 2.6 - **M. Fiorini** (University of Bologna) - Patient specific implants manufactured by arburg plastics freeformer	O 4.4 - **M. Bianchi** (University of Trento) - Multifunctional EPDM/paraffin foams coupling shape memory behavior and TES properties
12.30-12.45	O 2.7 - **M. Zaccone** (Proplast) - Correlazione tra conducibilità elettrica, struttura cristallina e morfologia di nanocompositi PP/CNT	O 4.5 - **S. Coiai** (CNR Institute of chemistry of organometallic compounds - ICCOM) - Rosmarinic acid-modified layered double hydroxide as an antioxidant and antibacterial additive of polymeric materials

12.45-13.00	O 2.8 - **G. Bernagozzi** (Politecnico di Torino) - material and process optimization for 3D printing of polypropylene-based compounds	O 4.6 - **M. Monti** (Proplast) - Sviluppo di compositi a matrice di PET riciclato
13.00-14.30	lunch	
14.30-15.00	KN 2.2 - **A. Lazzeri** (University of Pisa) - Effect of temperature and plasticizer content on activation volume of plasticized poly(3-hydroxybutyrate-3-hydroxyvalerate) (PHB-HV)	KN 4.1 - **E. Dalcanale** (University of Parma) - Phenoxy resin-based vitrimers as reprocessable epoxy thermosets
15.00-15.15	O 2.9 - **L. Mazzocchetti** (University of Bologna) - Exploiting rubber-based nanofibrous components for structural modification of CFRPs	O 4.7 - **M. Coletti** (Waters – TA Instruments) - Evaluating dynamic mechanical characteristics, and heat generation in silica 'green tire recipe' and conventional carbon black filled rubber
15.15-15.30	O 2.10 - **R. Puglisi** (CNR Institute of Polymers, Composites and Biomaterials - IPCB) - Coating di nanomagnetite con network imprintati per la rimozione di inquinanti emergenti delle acque	O 4.8 - **G. Belletti** (University of Ferrara) - Preparation and application on paper of poly(lactic acid) water-based dispersions coatings
15.30-15.45	O 2.11 - **S. De Luca** (University of Parma) - 3D printing of PBS-based biocomposite filament	O 4.9 - **D. Comoretto** (University of Genoa) - Polymer and hybrid nanostructures for sustainable photonics
15.45-16.00	O 2.12 - **M. Scoti** (Università di Napoli Federico II) - Structure and morphology of crystalline block copolymers	O 4.10 - **F. Cravero** (Politecnico di Torino) - Proposal of mechanical recycling and feasible applications for disposable surgical masks
16.00-16.30	coffee break	
16.30-16.45	O 2.13 - **R. Arrigo** (Politecnico di Torino) - Effect of the elongational flow on mechanical properties and thermal conductivity of polypropylene boron nitride composite fibers	O 4.11 - **A. Escher** (University of Genoa) - Planar photonic crystal as colorimetric sensors for smart packaging
16.45-17.00	O 2.14 - **A. Sorze** (University of Trento) - Novel biodegradable hydrogel composites to promote plant growth and forest protection	O 4.12 - **E. Lamberti** (University of Salerno) - Hemp fibers modified with graphite oxide as green and efficient system for the removal of dyes from aqueous solutions
17.00-17.15	O 2.15 - **S. Bronco** (CNR - Institute for chemical and physical processes IPCF) - Aging and degradation phenomena induced by marine environment on commercial plastics: an in-situ experiment	O 4.13 - **V. Castelvetro** (University of Pisa) - Reversibility of polyethylene crosslinking by Diels Alder mechanism
17.15-17.30	O 2.16 - **E. Podda** (Università del Piemonte Orientale) - Self-healing and shape-memory hydrogels obtained by free radical micellar polymerization	O 4.14 - **M. Morreale** (Università degli studi di Enna-Kore) - Compositi verdi a base di PLA ottenuti da scarti agricoli o marini
17.45	**evento giovani**	

Martedì 06/09		
	Sala Clesio	**Sala Madruzzo**
9.00-9.40	**PL2 - J.-F. Gérard** (Université de Lyon) - Design of advanced polymer materials from combination with ionic liquids and metal-oxo clusters	
9.40-10.10	KN 3.1 - **F. P. La Mantia** (University of Palermo and INSTM) - Decarbonization of plastics	KN 4.2 - **A. Maffezzoli** (University of Salento) - Model nanoparticles for laboratory studies on living systems
10.10-10.25	O 3.1 - **M. Sangermano** (Politecnico di Torino) - Frontal photopolymerization of fully bio-based epoxy composites	O 4.15 - **E. Battaglini** (University of Bologna) - Sealing behavior of amorphous and semi-crystalline fully bio-based poly(butylene 2,5-furanoate)
10.25-10.40	O 3.2 - **M. Bernardo** (University of Catania) - Simultaneous improvement of gas permeability and selectivity of a polymer matrix hosting selected ionic liquids	O 4.16 - **E. Togliatti** (University of Parma) - Design of mechanical properties of poly(butylene-adipate-terephthalate) reinforced with zein-TiO_2 complex
10.40-10.55	O 3.3 - **L. Mirizzi** (University of Milano-Bicocca) - Hybrid Al_2O_3@POSS nanofiller for the production of thermal conductive rubber nanocomposites	O 4.17 - **E. Sturabotti** (Sapienza Università di Roma) - Synthesis of novel hyaluronic acid sulfonated hydrogels using safe reactants: a chemical and biological characterization
10.55-11.30	coffee break	
11.30-11.45	O 3.4 - **A. Gobetti** (University of Brescia) - Caratterizzazione di materiali polimerici additivati con scoria d'acciaio da forno elettrico ad arco	O 4.18 - **M. Salzano de Luna** (Università di Napoli Federico II) - High performance chitosan-based aerogels for air and water purification
11.45-12.00	O 3.5 - **S. Matta** (Politecnico di Torino) - Polymer composites containing different types of Biochar: novel fire retardant systems	O 4.19 - **F. Samperi** (CNR Institute of Polymers, Composites and Biomaterials - IPCB) - VOCs and additives in Italian PET-bottles. Studies on potential functional aldehydes scavengers
12.00-12.15	O 3.6 - **A. Zambotti** (University of Trento) - Polymer-derived ceramic technology - A flexible pathway to porous ceramics synthesis	O 4.20 - **A. A. Scamporrino** (CNR Institute of Polymers, Composites and Biomaterials - IPCB) - Strategia per lo scale-up sostenibile di criopura
12.15-12.30	O 3.7 - **G. Curcuruto** (CNR Institute of Polymers, Composites and Biomaterials) - Nanofertilizzanti alternativi: smart nanocompositi di chitosano/alginato caricate con nanoparticelle di ossido di rame	O 4.21 - **S. Scurti** (University of Bologna) - Effect of highly electron donor copolymeric stabilizers in redox nanocatalysis
12.30-12.45	O 3.8 - **S. Santi** (University of Trento) - Novel electrospun poly(lactic acid)/polybutylene furanoate) biobased blends	O 4.22 - **E. Spessot** (University of Trento) - Modelling a dynamic printability window on polysaccharides blend inks for extrusion bioprinting

12.45-13.00	O 3.9 - **F. Galvagnini** (University of Trento) - Development and characterization of PP/HGM/PCM syntactic foams for thermal energy storage applications	O 4.23 - **G. Ronconi** (University of Ferrara) - Pretensioning effects on continuous flax fibre reinforced polylactic acid
13.00-14.30	lunch	
14.30-15.00	KN 3.2 - **R. Chiarcos** (Università del Piemonte Orientale) - Polydispersity effect in grafting to reactions	KN 4.3 - **P. Fabbri** (University of Bologna) - Levulinic acid-based ketal–esters: a step forward in the transition from plasticizers to bioplasticizers
15.00-15.15	O 3.10 - **M. R. Acocella** (University of Salerno) - Carbon black functionalization as efficient tool to improve the cristallization rate of biodegradable polyesters nanocomposites	O 4.24 - **A. Donghi** (Sharebot srl) - La stampa 3D oggi e domani
15.15-15.30	O 3.11 - **A. Lanfranchi** (University of Genoa) - All polymer multilayer photonic aegises against near-infrared irradiation heating	O 4.25 - **M. Colonna** (University of Bologna) - A novel approach for the recovery and the recycling of polymeric materials from sport equipment
15.30-15.45	O 3.12 - **L. Simonini** (University of Trento) - Investigation of the interfacial self-healing properties of polycaprolactone coated glass fibers/epoxy composites	O 4.26 **G. Pascuzzi** (Politecnico di Milano) - Gel polymer electrolyte based on lignin for potassium batteries
15.45-16.15	coffee break	
16.15-18.30	**Sessione poster**	
20.00	Cena sociale	

Mercoledì 07/09		
	Sala Clesio	
9.00-9.40	**PL3 - A. Albunia** (Borealis Polyolefine GmbH) - Transforming the polyolefine industry for sustainable living: an insight into the Borealis journey	
9.40-10.10	KN 3.3 - **A. Vitale** (Politecnico di Torino) - Green electrospinning of liquid polybutadienes and their in-situ photo-crosslinking for the fabrication of rubber nanofibrous membranes	
10.10-10.25	O 3.13 - **E. Maccaferri** (University of Bologna) - Self-sensing aluminum/GFRP composite laminate via integration of P(VDF-TRFE) nanofibers	
10.25-10.40	O 3.14 - **F. Cicogna** (CNR Institute of chemistry of organometallic compounds - ICCOM) - Carbon fiber reinforced polylactic acid composites	
10.40-10.55	O 3.15 - **H. Megahd** (University of Genoa) - Polymer photonic crystal chemical sensors	
10.55-11.30	coffee break	
11.30-11.45	O 3.16 - **C. Ciarlantini** (Sapienza Università di Roma) - Biomimetic scaffolds based on polysaccharides for tissue engineering	
11.45-12.00	O 3.17 - **P. Lova** (University of Genoa) - Porous hybrid polymer-inorganic photonic crystals for sensing and photocatalysis	
12.00-12.15	O 3.18 - **G. Pecorini** (University of Pisa) - Additive manufacturing of poly(lactide-co-glycolide) scaffolds loaded with bioactive agents for bone tissue engineering	
12.15-12.30	O 3.19 - **J. Ortolani** (University of Bologna) - Polyethylene oxide (PEO) nanofibrous membrane for enhancing matrix toughness in CFRP laminates – PEO new application field	
12.30-13.30	Conclusione lavori/premiazioni	
13.30	lunch	

Contributi poster (Sala Hinderbach)

P 1	**S. Alfano** (Sapienza Università di Roma) - Influence of monomeric composition on properties of MMC-produced polyhydroxyalkanoates
P 2	**R. Arrigo** (Politecnico di Torino) - Time-resolved mechanical spectroscopy of epoxidized natural rubber/SiO_2 composite
P 3	**R. Arrigo** (Politecnico di Torino) - Uv-led curable coatings containing porcupine-like carbon structures: thermal, dynamic-mechanical and electrical properties
P 4	**R. Arrigo** (Politecnico di Torino) - Bionanocomposites for industrial applications: structure–property relationships
P 5	**S. Bagatella** (Politecnico di Milano) - Manifattura additiva e caratterizzazione di compositi termicamente conduttivi a matrice polimerica
P 6	**V. Bottau** (University of Bologna) - Ottimizzazione della dispersione di pigmenti in plastisol
P 7	**B. Brugnoli** (Sapienza Università di Roma) - Naked eye detection of phenolic molecules based on polydiacetylene/ α-cyclodextrins inclusion complex
P 8	**M. Castellano** (University of Genoa) - Curcumin-loaded chitosan-collagen electrospun wound healing patches
P 9	**A. Frache** (Politecnico di Torino) - Recycled PP for 3D printing: material and processing optimization through design of experiment
P 10	**G. Fredi** (University of Trento) - In-situ anionic polymerization of ε-caprolactam for polyamide6-based single-polymer composites
P 11	**C. Gnoffo** (Politecnico di Torino) - Effect of the elongational flow on morphology and properties of nanocomposites containing ldhs
P 12	**M. L. Graziano** (University of Salerno) - Valorizzazione degli scarti della filiera corilicola come materiale da imballaggio alimentare
P 13	**L. Guida** (Politecnico di Milano) - Liquid Deposition Modeling for 3D printing of taylor-made micro and nano composites
P 14	**P. Kianfar** (Politecnico di Torino) - Shape stabilization of PEO-based electrospun materials by photo-induced crosslinking
P 15	**F. P. La Mantia** (University of Palermo and INSTM) - Green Biocomposites Reinforced with Waste Hazelnut Shells: Com-pression and Injection Moulding Process

P 16	**F. P. La Mantia** (University of Palermo and INSTM) - Un approccio verde per il riciclo di cd e dvd
P 17	**H. Mahmood** (University of Trento) - Investigation of recycled polyvinyl chloride reiforcement for property enhancement of polyurethane foam core fiber reinforced epoxy sandwich composites
P 18	**G. Malucelli** (Politecnico di Torino) - UV-led curable acrylic films containing phosphate glass powder: effect of the filler loading on the thermal, optical, mechanical and flame retardant properties
P 19	**G. Malucelli** (Politecnico di Torino) - Rheological, mechanical, thermal and electrical properties of UHMWPE/CNC composites
P 20	**G. Malucelli** (Politecnico di Torino) - Electron-beam-induced grafting of chitosan onto HDPE/AtZ composites for biomedical applications
P 21	**G. Malucelli** (Politecnico di Torino) - High density polyethylene composites containing alumina-toughened zirconia particles: mechanical and tribological behavior
P 22	**G. Malucelli** (Politecnico di Torino) - Influence of different dry-mixing techniques on the mechanical, thermal and electrical behavior of ultra high molecular weight polyethylene/exhausted tire carbon composites
P 23	**G. Malucelli** (Politecnico di Torino) - Investigation of epoxy-acrylate soybean oil as a bio-enhancer for 3D printing application
P 24	**G. Malucelli** (Politecnico di Torino) - Evaluation of a biobased resin with micro- or nanocrystalline cellulose for 3D-printing application
P 25	**G. Malucelli** (Politecnico di Torino) - Synthesis and characterization of uv-curable nanocellulose/ZnO/AlN acrylic flexible films: thermal, dynamic mechanical and piezoelectric response
P 26	**G. Malucelli** (Politecnico di Torino) - Frontal polymerization and geopolymerization, the first example: organic-inorganic hybrid materials
P 27	**G. Malucelli** (Politecnico di Torino) - High frequency electromagnetic shielding by biochar-based composites
P 28	**E. Manarin** (Politecnico di Milano) - Biobased epoxy resins from cardanol for potassium-ion conducting gel polymer electrolytes
P 29	**V. Mazzanti** (University of Ferrara) - Mechanical and thermal properties improvement of FDM-3D printed ABS through copper electroplating
P 30	**D. Milanese** (University of Parma) - Tunable FDM 3D printing of flexible poly(butylene adipate terephthalate)-based biocomposite filaments
P 31	**M. Morreale** (Università degli studi di Enna-Kore) - Green composites a base di hedysarum coronarium ottenuti per stampaggio a compressione e fused deposition modeling

P 32	**P. Natali** (University of Bologna) - Thermoplastic composites reinforced with recycled carbon fibers for 3D printing
P 33	**G. Rizzo** (University of Catania) - Sustainable functionalization of unsaturated polyester resin: new recycling strategy
P 34	**M. Fiorini** (University of Bologna) -Polylactide stereocomplex formation. A combined rheo-Raman study
P 35	**F. Prandi** (University of Bologna) - effects of continuous compression moulding on VOC content in hdpe matrices
P 36	**D. Rigotti** (University of Trento) - Development of recycling treatments for polymeric waste: solutions for a circular economy
P 37	**L. A. Rocchi** (Sapienza University of Rome) - Conformational transition of PLLA prior to cold crystallization
P 38	**M. Salzano de Luna** (University of Naples Federico II) - Life cycle assessment of pla-based green composites filled with natural fibers
P 39	**G. Scalzo** (CNR Institute of Polymers, Composites and Biomaterials - IPCB) - Design e sintesi di liquidi ionici ad attività antibatterica
P 40	**S. Scurti** (University of Bologna) - Intumescent flame inhibitor surface coating based on phosphorylated-pva for cfrps
P 41	**S. Vicini** (University of Genoa) - Electrospun PVA-based fibers embedding gold nanoparticles with tailored shape and plasmonic properties
P 42	**M. Zaccone** (Proplast) - Valorization of waste and by-products of the fishing industrial value chain in liguria region: the ecoefishent project
P 43	**D. Zampino** (CNR Institute of Polymers, Composites and Biomaterials - IPCB) - Antibacterial pvc blends based on imidazolium ionic liquids
P 44	**A. Costanzo** (University of Genoa) - The Role of Molar Mass in Achieving Isotropy and Inter-Layer Strength in Mat-Ex Printed Polylactic Acid
P 45	**F. P. La Mantia** (University of Palermo and INSTM) - Biodegradable polymers for a sustainable packaging: permeability and optical properties
P 46	**L. Fambri** (University of Trento) - Evidence of Plastic and Microplastic in the fresh waters of Lake Garda - 12 months of seabin monitoring