

5th International Congress Advances in the Packaging Industry "Sustainability: Products and Processes"



Milano (Italy)
March 27 - 28, 2025
Fondazione Cariplo

Organized by:



di
in
Università di Salerno
Dipartimento di
Ingegneria Industriale



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ABOUT GIFLEX

GIFLEX is the Association that brings together manufacturers of flexible packaging printed for packaging of food, pharmaceuticals, chemicals and other industrial applications.

The Group is integrated into the **Confindustria system**, through **Asso-grafici** (National Association of Printing and Paper Processing Industries) and, in Europe, is a member of **FPE (Flexible Packaging Europe)**.

Ever since its establishment in 1985, the Group has provided a reference and support to its members, bringing a wide range of services, such as: Information on the technical, regulatory and marketing aspects related to flexible packaging.

To better support associated companies, Giflex has produced several technical documents on the main requirements of flexible packaging.

There was also no shortage of economic studies in the sector to get a general picture of the market trend.

AIM OF THE CONGRESS

Following the success of the previous editions held in Naples in 2015 and 2022, in Milan in 2017 and the virtual edition in 2021, the 5th International Congress on "Advances in the Packaging Industry" will take place on March 27 and 28, 2025, in Milan, Italy. The Congress serves as a multidisciplinary forum for all those interested in advancements in the field of flexible packaging for food, pharmaceuticals, chemicals, and other industrial applications.

Academic and industry experts will cover a wide range of topics relevant to innovations and future challenges in packaging technology. The two-day Congress will feature two main sessions focused on Products and Processes.

We wish you a pleasant Congress and a nice stay in Milan!



INTERNATIONAL ORGANIZING COMMITTEE

CONGRESS CHAIRS

Loredana Incarnato, *University of Salerno, Italy*

Giuseppe Mensitieri, *CRdC President, University of Naples Federico II, Italy*

Alberto Palaveri, *Giflex President, Italy*

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Italo Vailati, *Giflex, Italy*

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Tim Claypole, *Welsh Centre for Printing and Coating, Swansea University, UK*

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Jean Paul Duquet, *FPE (Flexible Packaging Europe), Germany*

Paola Fabbri, *University of Bologna, Italy*

Maria Rosaria Milana, *Former Research Director, Responsible National Reference Laboratory for FCM, National Institute of Health (ISS), Italy*

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Giorgia Spigno, *Catholic University of Sacred Heart of Milan, Italy*

Elena Torrieri, *University of Naples Federico II, Italy*

Marta Zaccone, *Proplast, Italy*



PROGRAM

THURSDAY, MARCH 27

08.30 - 09.00 Registrations

09.00 - 09.15 WELCOME ADDRESSES

Loredana Incarnato, Alberto Palaveri

09.15 - 09.45 **KEYNOTE LECTURE**

Moderator: **Luigi De Nardo**

Coating technology as a key enabling technology for sustainable packaging solutions

Stefano Farris, *Department of Food, Nutrition and Environmental Sciences, University of Milan, Italy*

09.45 - 11.00 **ORAL PRESENTATIONS**

SESSION 1: ADVANCED TECHNOLOGIES FOR SMART AND FUNCTIONAL PACKAGING

Moderator: **Luigi De Nardo**

09.45 - 10.00 **BIO-BASED ANTIMICROBIAL FOOD PACKAGING COATINGS**

Lefteris Tourasanidis^a, George Gkikas^a, Maria Kaliva^{b,c}, Eleni Ouranou^d, Nikolaos Konios^{b,c}, Dimosthenis Chochlakis^d, Rosemary Antonomanolaki^e, Anna Psaroulaki^d, Maria Vamvakakib,^c

^a*Hatzopoulos S.A., Thessaloniki, Greece*, ^b*University of Crete, Department of Materials Science and Engineering, Greece*, ^c*Institute of Electronic Structure and Laser, Foundation of Research and Technology – Hellas, Greece*, ^d*University of Crete, Medical School, Greece*, ^e*Kolios S.A., Kilkis, Greece*

THURSDAY, MARCH 27

- 10.00 - 10.15 **FLEXIBLE PACKAGING BASED ON NO-MOLD COATINGS FOR BAKERY FOOD**
Design and development from lab-scale to industrial application
Chiara Ascione^a, Mariantonella Palermo^b, Mattia Fornaro^c,
Valentina Marturano^d, Pierfrancesco Cerruti^d, Mario Mensitieri^a
^aIcimensue Srl, Marcianise (CE), Italy, ^bTecnoalimenti SCpA, Milano, Italy, ^cDipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale (DICMAPI), Napoli, Italy, ^d Istituto per i Polimeri, Compositi e Biomateriali (IPCB-CNR), Pozzuoli, Italy
- 10.15 - 10.30 **POLYETHYLENE TEREPHTHALATE- AND PAPER-BASED FLEXIBLE PACKAGING MATERIALS FUNCTIONALIZED WITH SOL-GEL COATINGS**
Alexander Leo Bardenstein, Yukihiro Kusano, Claus Bischoff, Stanislav Landa, Anders Ask Carton
Danish Technological Institute, Centre for Plastic and Packaging Technology, Denmark
- 10.30 - 10.45 **INNOVATIVE WATER-BASED COATING FOR FLEXIBLE FILMS. Barrier solutions for sustainable packaging**
Matteo Cresci, Paolo Vacca, Alessandra Colombo, Gaetano Campanella, Carlo Alessio Cozzolino
SAES Getters S.p.A., Lainate (MI), Italy
- 10.45 - 11.00 **ADVANCED SUSTAINABLE SOLUTIONS FOR FLEXIBLE PACKAGING**
Pioneering adhesives and coatings for the future of flexible packaging
Valter Lamera, Alberto Spalluto, Roberto Pela
Henkel Italia srl, Italy

11.00 - 11.30 **Coffee break**



THURSDAY, MARCH 27

11.30 - 12.00 KEYNOTE LECTURE

Moderator: **Italo Vailati**

Development of Active and Fully Compostable multilayer Packaging Films

Rafael Auras, *Ancor Endowed, Chair in Packaging Sustainability, School of Packaging, Michigan State University, USA*

12.00 - 13.30 ORAL PRESENTATIONS

SESSION 2: BIOBASED AND BIODEGRADABLE MATERIALS FOR PACKAGING

Moderator: **Italo Vailati**

12.00 - 12.15 DEVELOPMENT OF ACTIVE FILM BASED ON PBS/HOPS BY PRODUCT

Hops by product composition and film characterization-

Angela Borriello^a, Angela Marotta^b, Leandra Leto^c,
Benedetta Chiancone^c, Prospero Di Pierro^a,
Veronica Ambrogio^b, **Elena Torrieri**^a

^aUniversity of Naples Federico II, Dept. of Agricultural Sciences, Italy, ^bUniversity of Naples Federico II, Dept. of Chemical, Materials and Production Engineering (DICMAP), Italy, ^cUniversity of Parma, Dept. of Food and Drug, Italy

12.15 - 12.30 BIOPLASTIC PACKAGING FROM POTATO STARCH AND ONION/GARLIC PEELS

Mariana Vallejo^{a,b}, Paula Ferreira^{a,b}, José Oliveira^{a,c},
Idalina Gonçalves^{a,b}

^aCICECO – Aveiro Institute of Materials, University of Aveiro, Portugal, ^bMaterials and Ceramic Engineering Department, University of Aveiro, Portugal, ^cSchool of Design, Management and Production Technologies, University of Aveiro, Portugal

THURSDAY, MARCH 27

- 12.30 - 12.45 **PLA-BASED COMPOSITES LOADED WITH HAY FLOUR FOR SUSTAINABLE APPLICATIONS IN PACKAGING**
Francesco Musiari^a, **Corrado Sciancalepore**^{a,b},
Duccio Gallichi-Nottiani^{a,b}, Maria Grimaldi^{a,b}, Daniel Milanese^{a,b},
^a*Department of Engineering for Industrial Systems and Technologies, University of Parma, Italy*, ^b*National Interuniversity Consortium of Materials Science and Technology (INSTM), Florence, Italy*
- 12.45 - 13.00 **PHBV-BASED MATERIALS FOR FOOD PACKAGING APPLICATIONS**
Salvador García Chumillas^a, María Nicolás Liza^a,
Fuensanta Monzó Sánchez^b, Marianna Faraldi^c
^a*Cetec Biotechnology SL (CETBIO), Spain*, ^b*Centro Tecnológico del Calzado y del Plástico (CETEC), Spain*, ^c*Tecnoalimenti S.C.p.A., Italy*
- 13.00 - 13.15 **PROCESSING AND PROPERTY ASSESSMENT OF BIOBASED POLY (LACTIC ACID)/POLY (BUTYLENE SEBACATE) (PLA/PBSE) BINARY BLEND FILMS**
Vito Gigante^a, Laura Aliotta^a, Marilena Baiamonte^b,
Giuseppe Gallone^a, Luigi Botta^b, Andrea Lazzeri^a
^a*University of Pisa, Department of Civil and Industrial Engineering, Italy*, ^b*Department of Engineering, University of Palermo, Italy*
- 13.15 - 13.30 **OPTIMIZING HIGH-BARRIER PBS-BASED BLENDS FOR SUSTAINABLE FLEXIBLE PACKAGING: MORPHOLOGICAL, PROCESSING, AND FUNCTIONAL PERSPECTIVES**
Annalisa Apicella, Antonio Barbatto, Luciano Di Maio,
Loredana Incarnato
University of Salerno, Department of Industrial Engineering, Italy

13.30 - 14.30 Lunch



THURSDAY, MARCH 27

14.30 - 15.00 KEYNOTE LECTURE

Moderator: **Loredana Incarnato**

NEW TRENDS IN RISK ASSESSMENT AND SAFETY REGULATION ON FCM

Maria Rosaria Milana, *Former Research Director, National Institute of Health (ISS), Italy*

15.00 - 16.15 ORAL PRESENTATIONS

SESSION 3: HAZARD AND SAFETY ISSUES IN PACKAGING

Moderator: **Maria Rosaria Milana**

15.00 - 15.15 RISK ASSESSMENT OF MIGRATION IN RECYCLED POLYPROPYLENE

Paula Vera, Cristina Nerin, Elena Canellas

GUIA Group, Department of Analytical Chemistry, University of Zaragoza, Spain

15.15 - 15.30 UNTARGETED SCREENING OF PERFLUOROALKYL SUBSTANCES AND BISPHENOLS IN FOOD CONTACT MATERIALS

Marinella Vitulli, Filippo Pratesi, **Flavia Cozzolino**

Food Contact Center, Pistoia, Italy

15.30 - 15.45 TOXICOLOGICAL RISK ASSESSMENT OF NIAS

How to assess the substances potentially migrating from the packaging to the food

Claudia Cusan, Alessia Sguazzin

S&C BEST Srl, Portogruaro (Venezia), Italy

15.45 - 16.00 EXPLORING SODA CONTAMINATION COMING FROM PAPER STRAWS

Elena Canellas, Cristina Nerin, Paula Vera

GUIA Group, Department of Analytical Chemistry, University of Zaragoza, Spain

THURSDAY, MARCH 27

- 16.00 - 16.15 **MOBILITY OF PFAS IN PACKAGING - FROM DESIGN TO END-OF-LIFE**
Enrico Nieddu, Andrea Vittadello, **Giulia Novello**,
Andrea Boscolo
Mérieux NutriSciences Italia, Resana (TV), Italy
- 16.15 - 18.00 ORAL PRESENTATIONS**
SESSION 4: INNOVATIVE MATERIALS AND TECHNOLOGY FOR FOOD PRESERVATION AND END-OF-WASTE MATERIALS VALORIZATION
Moderators: **Tim Claypole, Luciano Di Maio**
- 16.15 - 16.30 **NEW FLEXIBLE PACKAGING SOLUTION FOR SPACE MISSION**
A multidisciplinary approach for packaging in space food
Marco Scatto^a, Karen Venturini^a, Davide Sanna^b,
Antonio Gattulli^c
^aDepartment of Economics, Science, Engineering and Design, University of San Marino, ^bRelicta srl, Sassari, ^cSudAlimenta srl, Bari
- 16.30 - 16.45 **SMART PH-SENSITIVE INDICATORS BASED ON CURCUMIN AND LAMBRUSCO EXTRACT.**
A novel tool to track the freshness of pink shrimps
Gianluca Viscusi^a, Elena Lamberti^a, Federica Angilè^b,
Luca Di Stasio^c, Carmela Gerardi^b, Giovanna Giovinazzo^b,
Giovanni Vigliotta^c, Giuliana Gorrasi^a
^aUniversity of Salerno, Dept. of Industrial Engineering, Italy, ^bNational Research Council-Institute of Science of Food Production, Italy, ^cUniversity of Salerno, Dept. of Chemistry and Biology, Italy
- 16.45 - 17.00 **SUSTAINABLE PACKAGING: THE SHIFT FROM SYNTHETIC TO BIOBASED COLORANTS**
Kai Lankinen
Senior Lecturer, Tampere University of Applied Sciences, Degree Programme in Bioproduct Engineering, Finland



THURSDAY, MARCH 27

- 17.00 - 17.15 **DESIGN OF EQUILIBRIUM MODIFIED ATMOSPHERE PACKAGING: A GENERALIZED TOOLBOX**
Andrea Fiorati^a, Federico Florit^b, Luigi De Nardo^a
^aDepartment of Chemistry, Materials, and Chemical Engineering "G. Natta" Politecnico di Milano, Italy, ^bMassachusetts Institute of Technology, Department of Chemical Engineering, Cambridge, MA, USA
- 17.15 - 17.30 **POST-HOUSEHOLD RECYCLED LDPE FROM USED BEVERAGE CARTON FOR CONTACT-SENSITIVE PACKAGING**
Julien Davin
Saperatec GmbH, Germany
- 17.30 - 17.45 **TURNING WASTE INTO VALUE: EDIBLE COATINGS FROM AGRI-FOOD BY-PRODUCTS TO EXTEND FRESH PRODUCE SHELF-LIFE**
Francesca Vidotto^a, Cristiana Sbrana^a, **Andrea Cavallero^a**, Laryssa Peres Fabbri^a, Maria Grazia Caruso^a, Vito Gigante^b, Laura Aliotta^b, Morena Gabriele^a
^aNational Research Council - Institute of Agricultural Biology and Biotechnology, Pisa, Italy, ^bUniversity of Pisa, Department of Civil and Industrial Engineering, Italy
- 17.45 - 18.00 **BIO-BASED MATERIALS FOR ACTIVE FOOD PACKAGING**
Upcycling White Grape Pomace Extract into Chitosan-Based Films
Giulia Leni^a, Beatrice Sottini^b, Roberto Casalini^b, Andrea Fiorati^b, Luigi De Nardo^b, Tawanda Edzai Jeke^a, Giorgia Spigno^a, Andrea Bassani^a
^aUniversità Cattolica del Sacro Cuore, Department for Sustainable Food Process, Italy, ^bPolitecnico di Milano, Department of Chemistry, Materials, and Chemical Engineering "G. Natta", Italy

18.00 - 19.00 POSTER SESSION AND COCKTAIL

FRIDAY, MARCH 28

08.45 - 09.15 KEYNOTE LECTURE

Moderator: **Marta Zaccone**

WHAT FUTURE FOR BIOPLASTICS IN EUROPE? ADVANCING SUSTAINABLE PACKAGING SOLUTIONS

Andrea Lazzeri, *Department of Civil and Industrial Engineering, University of Pisa, Italy*

09.15 - 11.15 ORAL PRESENTATIONS

SESSION 5: CIRCULAR ECONOMY STRATEGIES: ECO-DESIGN, RECYCLING, PAPER-BASED SOLUTIONS, AND END-OF-LIFE MANAGEMENT

Moderator: **Marta Zaccone**

09.15 - 09.30 FIBRE-BASED PACKAGING AND BARRIER COATINGS INFLUENCE ON THE CONVERTING AND RECYCLING

Andrea Marinelli^a, Maria Vittoria Diamanti^a,
MariaPia Pedefferri^a, Barbara Del Curto^a
Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering "Giulio Natta", Italy

09.30 - 09.45 DEVELOPMENT OF MICROFIBRILLATED CELLULOSE FILMS FROM AGRI-FOOD WASTES AND PLANT RESIDUES FOR FOOD PACKAGING APPLICATIONS: AN IN-DEPTH PERFORMANCE ASSESSMENT

Daniele Carullo^a, Tommaso Bellesia^a, Andrea Fachin^a,
Maral Soltanzadeh^a, Giorgio Innocenzo Ascrizzi^b,
Laura Piazza^b, Stefano Farris^a
^a*Department of Food, Environmental and Nutritional Sciences (DeFENS), Food Packaging Laboratory, University of Milan, Italy,*
^b*Department of Environmental Science and Policy (ESP), University of Milan, Italy*



FRIDAY, MARCH 28

- 09.45 - 10.00 **EVALUATION OF POST-INDUSTRIAL POLYETHYLENE TEREPHTHALATE RECYCLATES (RPET) OBTAINED FROM MULTI-LAYER POLYETHYLENE TEREPHTHALATE (PET)/ POLYETHYLENE (PE) SHEETS**
Isabela F. A. Daras^a; Srishti Singh^a; Tiago Vieira^a; Joel Pereira^b; Patrícia Guerreiro^b; Clara Sousa^a; **Fátima Poças^{a,b}**
^a*Universidade Católica Portuguesa, CBQF Centro de Biotecnologia e Química Fina-Laboratório Associado, Escola Superior de Biotecnologia, Porto, Portugal*, ^b*CINATE, Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Porto, Portugal*
- 10.00 - 10.15 **STUDY ON RECYCLABILITY OF POLYETHYLENE-POLYAMIDE FILMS**
Sergio Manuel Espinosa Martínez
UBE Corporation Europe S.A.U, Performance Polymers R&D Department, Spain
Moderator: **Jean Paul Duquet**
- 10.15 - 10.30 **ADVANCING FLEXIBLE PACKAGING RECYCLABILITY TESTING LEARNINGS FROM CEFLEX TESTING PROGRAMME TO ENHANCE RECYCLABILITY TESTING METHODOLOGIES**
Dennis Bankmann^a, **Maria Teresa Scrivani^b**
^a*Stichting CEFLEX, The Netherlands*, ^b*Consorzio Proplast, Alessandria, Italy*
- 10.30 - 10.45 **IMPROVING BIOPLASTICS BIODEGRADATION IN COMPOSTING BIOFAST: STRATEGIES TO ACCELERATE THE BIODEGRADATION OF BIOPLASTICS IN INDUSTRIAL COMPOSTING**
Giovanni Gadaleta^a, Johana Carolina Andrade-Chapal^a, Karen Gutiérrez-Silva^b, María Mozo-Toledo^a, Ángela Navarro-Calderón^a
^a*AIMPLAS - Plastics Technology Centre, Biodegradability and Compostability Laboratory, Spain*, ^b*Universitat de València, Research Group of Materials Technology and Sustainability (MATS), Spain*

FRIDAY, MARCH 28

10.45 - 11.00 **IMPROVEMENT IN SOLVENT RECOVERY TECHNOLOGY FOR-SOLVENT BASED PRINTING, LAMINATING AND CONVERTING PROCESSES**

Stefano Capelli

Brofind S.p.A., Milan, Italy

11.00 - 11.15 **BRINGING FOOD PACKAGING TOWARDS A CIRCULAR ECONOMY**

An innovative approach for the Flexible Packaging Market

Laura Evangelio Araujo

Dow Chemical Iberica, Tarragona, Spain

11.15 - 11.45 Coffee break

11.45 - 12.15 KEYNOTE LECTURE

Moderator: **Jean Paul Duquet**

LEADING THE CHANGE IN FLEXIBLE PACKAGING: INTRODUCING LCA GUIDELINES AND PAVING THE PATH FORWARD

Patricia Granados, *Senior Expert, Footprinting Quantis, Germany*

12.15 - 13.15 ROUND TABLE: INDUSTRIAL CHALLENGES AND PERSPECTIVE

Moderator: **Giuseppe Mensitieri**

Speakers:

Michele Guala, *CEO Gualapack*

Guido Aufdemkamp, *Executive Director of FPE (Flexible Packaging Europe)*

Gabriele Mei, *CEO Lyondell Basell*

Gianluca Capra, *Business Development Manager South Europe, NatureWorks*

Dario Dainelli, *Managing Director, PolicyRegulatory*

13.15 - 13.30 CONCLUSIONS

Giuseppe Mensitieri



POSTER SESSION

- 1 - **RELIABILITY OF MONO-PE PACKAGING FOR CHEMICALS: a combined mixture design study**
Silvia Barbi, Francesco Barbieri, Monia Montorsi
University of Modena and Reggio Emilia, Dept. of Sciences and Methods for Engineering, Italy

- 2 - **PARTIAL DEGRADABILITY OF CELLULOSE ACETATE IN COMPOSTING: Consequences in terms of Life Cycle Assessment**
Sabino De Gisi^a, Giovanni Gadaleta^b, Luciano Di Maio^a
^aUniversity of Salerno, Dept. of Industrial Engineering, Italy, ^bAIMPLAS - Plastics Technology Centre, Biodegradability and Compostability Laboratory, Spain

- 3 - **CIRCULAR ECONOMY EXPERT IN SUSTAINABLE PLASTIC PRODUCT: THE CIRCVET PROJECT**
Marta Zaccone^a, Susana Remotti^a, Carlos Agustí^b, Mario Monzón^c, Rui Tocha^d, Torsten Urban^e, Annabelle Sion^f, Saint-Clair Lefevre^g, Karolis Skebas^h, Zivile Satieneⁱ, Jurgita Mikutavičienė^j, Alessandro Rossi^k, Milena Bigatto^l
^aPROPLAST, Alessandria, Italy, ^bAIJU, Instituto Tecnológico de Producto Infantil y Ocio, Ibi, Alicante, Spain, ^cUniversidad De Las Palmas De Gran Canaria, Spain, ^dCENTIMFE, Centro Tecnológico da Indústria de Moldes, Ferramentas Especiais e Plásticos, M.nha Grande, Portugal, ^eGemeinnützige KIMW-Qualifizierungs, Luedenscheid, Germany, ^fPOLYMERIS, Oyonnax Cedex, France, ^gInfinitivity Design Labs, Laussonne, France, ^hLINPRA, Vilnius, Lithuania, ⁱAPRC, Alytus vocational training centre, Lithuania, ^jVPM, Visagino Technologijos Ir Verslo Profesinio Mokymo Centras, Visaginas, Lithuania, ^kUniversità degli Studi di Trento, Italy, ^lHIT, Hub Innovazione Trentino, Italy

POSTER SESSION

- 4 - FUNCTIONAL UPCYCLING OF POST-CONSUMER PLASTIC FILMS**
Transforming Waste into High-Value Secondary Raw Materials
Emilia Garofalo^a, Luciano Di Maio^a, Paola Scarfato^b,
Antonio Protopapa^c, **Loredana Incarnato^a**
^aUniversity of Salerno, Dept. of Industrial Engineering, Italy, ^bUniversity of Salerno, Dept. of Civil Engineering, Italy, ^cCOREPLA-Italian Consortium for the Collection and Recycling of Plastic Packages, Italy
- 5 - EXPLORING OLIVE KERNEL POWDER AS A FILLER IN PBAT BIOCOPPOSITES FOR PACKAGING APPLICATIONS**
Luigi Botta^a, Marilena Baiamonte^a, Luca Settanni^b, Raimondo Gaglio^b
^aUniversity of Palermo, Dept. of Engineering, Italy, ^bUniversity of Palermo, Dept. of Agricultural, Food and Forest Sciences, Italy
- 6 - PLA-PET COPOLYMER FOR FOOD PACKAGING APPLICATION**
Silvia Carichino^a, Onofrio Losito^b, Francesca Lionetto^a,
Lucia D'Accolti^b, Anna Moscatello^c, Carola Esposito Corcione^a,
Alfonso Maffezzoli^a
^aUniversity of Salento, Dept. Innovation Engineering, Italy, ^bUniversity of Bari Aldo Moro, Dept. of Chemistry, Italy, ^cAlpak srl, Taurisano, Italy
- 7 - INSECT PROTEIN-BASED BIOPLASTICS**
Black Soldier Fly as sustainable source of raw materials
Francesco Iannielli^a, Margherita Izzic^c, Carmen Scieuzo^{a,b},
Andrea Brattelli^c, Rosanna Salvia^{a,b}, Maria Chiara Sportelli^c,
Luigi Gentile^c, Rosaria Anna Picca^c, Nicola Cioffi^c, Patrizia Falabella^{a,b}
^aUniversity of Basilicata, Dept. of Basic and Applied Sciences, Italy, ^bSpin-Off XFlies s.r.l., University of Basilicata, Italy, ^cUniversity of Bari Aldo Moro, Chemistry Dept., Italy



POSTER SESSION

- 8 - RHEOLOGICAL AND MECHANICAL PROPERTIES AND FILMABILITY OF A BIOCOMPOSITE MADE OF A BIODEGRADABLE POLYMER AND TOMATO BY-PRODUCTS FOR PACKAGING APPLICATION
F.P. La Mantia^{a,b}, M. Cascone^c, G. Balsamo^a, A. Balloni^c, M.C. Citarrella^a
^aINSTM, Consorzio Nazionale Interuniversitario di Scienza e Tecnologia dei Materiali, Firenze, Italy, ^bDipartimento di Ingegneria, Università di Palermo, Italy, ^cAgriplast SpA, Italy
- 9 - NON-VOLATILE COMPOUNDS IN PBAT FOOD PACKAGING MATERIAL
Antía Lestido-Cardama^{a,b,c}, Carlos Vivanco Gil^{a,b}, Ronan Cariou^b, Patricia Vázquez Loureiro^{a,b,c}, Letricia Barbosa-Pereira^{a,b}, Raquel Sendón^{a,b}, Juana Bustos^d, Alba Arroyo^d, Perfecto Paseiro Losada^a, Ana Rodríguez Bernaldo de Quirós^{a,b}
^aFoodChemPack Research Group, Department of Analytical Chemistry, Nutrition and Food Science, Faculty of Pharmacy, University of Santiago de Compostela, Spain, ^bInstituto de Materiales (iMATUS), University of Santiago de Compostela, Spain, ^cOniris, INRAE, LABERCA, Nantes, France; ^dNational Food Center, Spanish Agency of Food Safety and Nutrition, Majadahonda, Spain
- 10 - TOWARDS VALORIZATION AND SUSTAINABLE PACKAGING. ACTIVE FILMS ENRICHED WITH CHERRY BY-PRODUCTS
Sandra Mariño-Cortegoso^{ab}, Lucía Jorge Cabaleiro^a, Ana Rodríguez-Bernaldo de Quirós^{ab}, Raquel Sendón^{ab}, Letricia Barbosa-Pereira^{ab}, Antía Lestido-Cardama^{a,b}
^aUniversity of Santiago de Compostela, FoodChemPack research group, Dept. of Analytical Chemistry and Food Science, Santiago de Compostela, Spain, ^bUniversity of Santiago de Compostela, Instituto de Materiales (iMATUS), Santiago de Compostela, Spain

POSTER SESSION

11 - OPTIMIZING BIO-BASED PLASTIC PRODUCTION: A comparative study of casting and extrusion methods

Jéssica Fernanda Pereira, Sandra Andre Cruz

Chemistry Department, Center for Exact Sciences, Federal University of Sao Carlos (UFSCar), Sao Carlos, Brazil

12 - PLASTIC BLENDS FROM POTATO BY-PRODUCTS

Franco Dominici^a, Michela Soccio^b, Riccardo Zuppiroli^b, Nadia Lotti^b, Florian Zikeli^a, **Luigi Torre**^a, Debora Puglia^a

^aUniversity of Perugia, Department of Civil and Environmental Engineering (DICA), Terni, Italy, ^bUniversity of Bologna, Department of Civil, Chemical, Environmental and Materials Engineering, Bologna, Italy

13 - OPTIMUM FORMULATION DESIGN OF PBS/GLOCHIDS BIOCOMPOSITES FOR AGRI-FOOD APPLICATIONS

Filomena Marchetta^a, Luciano Di Maio^a, Sabino De Gisi^a,

Paola Scarfato^b

^aUniversity of Salerno, Dept. of Industrial Engineering, Italy, ^bUniversity of Salerno, Dept. of Civil Engineering, Italy

14 - DEVELOPMENT OF PBSA COMPOSITES WITH RED GRAPE SKINS POWDER

Giulia Leni^a, **Tawanda Jeke**^a, Andrea Bassani^a, Yana Madonna^a, Carmen Minichiello^b, Andrea Saccani^b, Laura Sisti^b, Giorgia Spigno^a

^aUniversità Cattolica del Sacro Cuore, Department for Sustainable Food Process, Italy, ^bUniversità di Bologna, Department of Civil, Chemical, Environmental, and Materials Engineering, Italy



POSTER SESSION

15 - SAFETY OF PBSA AN PBAT FOR FOOD PACKAGING: IDENTIFICATION OF SEMIVOLATILE COMPOUNDS BY GC-MS

Carlos Vivanco Gil^{a,b}, Antía Lestido-Cardama^{a,b},
Letricia Barbosa Pereira^{a,b}, Raquel Sendón^{a,b}, Juana Bustos^c,
Ana Gasco^c, Perfecto Paseiro Losada^a, Ana Rodríguez Bernaldo de Quirósa,^b
^a*Department of Analytical Chemistry, Nutrition and Food Science, Faculty of Pharmacy, University of Santiago de Compostela, Spain*, ^b*Instituto de Materiales (iMATUS), University of Santiago de Compostela, Spain*, ^c*National Food Center, Spanish Agency of Food Safety and Nutrition, Majadahonda, Spain*

16 - HRT™ FOR SOLVENT RECOVERY PLANT. The new invention for Activated Carbon Regeneration

William Boarolo
Engineering Process Construction srl, Novate Milanese, Italy

17 - BIOINSPIRED HYBRID COATING VIA SOL-GEL SYNTHESIS

Filippo Ghisoni^a, Raffaele Perrotta^b, Andrea Fiorati^{a,c},
Mikael Hedenqvist^b, Luigi De Nardo^{a,c}
^a*Department of Chemistry, Materials and Chemical Engineering "G. Natta", Politecnico di Milano, Italy*, ^b*Department of Fibre and Polymer Technology, School of Engineering Sciences in Chemistry, Biotechnology and Health, KTH Royal Institute of Technology, Stockholm, Sweden*, ^c*National Interuniversity Consortium of Materials Science and Technology (INSTM), Florence, Italy*

18 - GELATIN-BASED COATINGS FROM FISH INDUSTRY RESIDUES FOR ENHANCED GAS BARRIER PROPERTIES OF PLA FLEXIBLE PACKAGING

Ilaria Poncini^a, Federica Turrini^b, Francesco Iannacchino^b,
Raffaella Boggia^b, **Marco Monti**^a
^a*Proplast, Alessandria, Italy*, ^b*University of Genova, Dept. of Pharmacy, Genova, Italy*

POSTER SESSION

19 - SUPPORTING TECHNICAL DOCUMENTATION FOR FOOD CONTACT MATERIALS (FCM): CAST PROJECT

Cinzia Gesumundo^a, Maria Rosaria Milana^b, Silvia Giamberardini^a, Fabiana Vanni, Giorgio Padula^a, Roberta Feliciani^a, Massimo Denaro^a, Marco De Felice^a, Veruscka Mannoni^a

^a*Istituto Superiore di Sanità, Roma, Italy*, ^b*Former Istituto Superiore di Sanità, Roma, Italy*

20 - FOOD CONTACT MATERIALS (FCM)

Effect of Measurement of Uncertainty on Compliance with the Regulation (EU) 10/2011

Veruscka Mannoni, Marco De Felice, Cinzia Gesumundo, Silvia Giamberardini, Giorgio Padula, Fabiana Vanni, Roberta Feliciani, Massimo Denaro, Patrizia Stefanelli
Istituto Superiore di Sanità, Rome, Italy

21 - INNOVATIVE ECO-FRIENDLY MATERIALS IN FOOD CONTACT. OVERALL MIGRATION

Giorgio Padula^a, Marco De Felice^a, Cinzia Gesumundo^a, Silvia Giamberardini^a, Veruscka Mannoni^a, Roberta Feliciani^b, Massimo Denaro^b, Maria Rosaria Milana^c, Fabiana Vanni^a

^a*Istituto Superiore di Sanità, Dipartimento Ambiente e Salute, Italy*, ^b*Istituto Superiore di Sanità, Organismo Notificato 0373, Italy*, ^c*Former Istituto Superiore di Sanità, Italy*

22 - MIGRATION FROM PLASTIC FOOD CONTACT MATERIALS. NIAS AND OLIGOMERS

Fabiana Vanni^a, Marco De Felice^a, Cinzia Gesumundo^a, Silvia Giamberardini^a, Veruscka Mannoni^a, Giorgio Padula^a, Serena Abbaleo^b, Federico Ruberti^b, Giorgio Fedrizzi^b, Maria Rosaria Milana^c, Simonetta Menotta^b

^a*Istituto Superiore di Sanità, Roma, Italy*, ^b*IZSLER, Reparto Chimico degli Alimenti, Bologna, Italy*, ^c*Former Istituto Superiore di Sanità, Roma, Italy*



POSTER SESSION

23 - THE BENEFITS OF FLEXO PLATE MICROCELL PATTERNING

Laura Wood^{a,b}, Tim Clappole^a

^aSwansea University, Department of Mechanical Engineering, United Kingdom, ^bAliArian, United Kingdom

24 - THE INTERACTION BETWEEN ETHANOL AND ETHYL ACETATE IN THE COMBUSTION OF THEIR MIXTURES IN AIR

Valeria Di Sarli^a, Francesco Cammarota^a, Benedetta Anna De Liso^b, Ernesto Salzano^b

^aConsiglio Nazionale delle Ricerche, Istituto di Scienze e Tecnologie per l'Energia e la Mobilità Sostenibili, Napoli, Italy

^bAlma Mater Studiorum - Università di Bologna, Dipartimento di Ingegneria Civile, Chimica, Ambientale e dei Materiali, Italy

25 - BISPHENOL A DIGLYCIDYL ETHER BEHAVIOUR DURING DIGESTION.

First approach using a semi-dynamic in vitro protocol

L. Pazos-Soto^{a,b}, A. Lestido-Cardama^{a,b}, J. Bustos^c, P. Paseiro-Losada^a, A. Rodríguez-Bernaldo de Quirós^{a,b}, R. Sendón^{a,b}, L. Barbosa-Pereira^{a,b}

^aFoodChemPack Research Group, Department of Analytical Chemistry, Nutrition and Food Science, Faculty of Pharmacy, University of Santiago de Compostela, Spain, ^biMATUS, University of Santiago de Compostela, Spain, ^cNational Food Centre, Spanish Agency for Food Safety and Nutrition, Majadahonda, Spain

26 - DESIGNING ECO-FRIENDLY COATINGS TO EXTEND THE SHELF LIFE OF POST-HARVEST FRUITS AND VEGETABLES

Laura Aliotta^a, Vito Gigante^a, Bianca Dal Pont^a, Morena Gabriele^b, Andrea Lazzeri

^aUniversity of Pisa, Department of Civil and Industrial Engineering, Pisa, Italy, ^bNational Research Council - Institute of Agricultural Biology and Biotechnology (IBBA -CNR), Pisa, Italy

POSTER SESSION

27 - EXTRACTION OF BIOACTIVE MOLECULES FROM AGRO-WASTE FOR FUNCTIONAL COATINGS IN SUSTAINABLE FOOD PRESERVATION

Andrea Cavallero^a, Cristiana Sbrana^a, Laryssa Peres Fabbri^a, Maria Grazia Caruso^a, Vito Gigante^b, Laura Aliotta^b, Morena Gabriele^a
^aNational Research Council - Institute of Agricultural Biology and Biotechnology, Pisa, Italy, ^bUniversity of Pisa, Department of Civil and Industrial Engineering, Italy

28 - UPCYCLING TOMATO PLANT WASTE INTO SUSTAINABLE AND BIODEGRADABLE 3D-PRINTED FOOD PACKAGING

Maria Clara Citarrella^{a,b}, Emmanuel Fortunato Gulino^{a,b}, Roberto Scaffaro^{a,b}
^aUniversity of Palermo, Dept. of Engineering, Italy, ^bINSTM, Consorzio Nazionale Interuniversitario di Scienza e Tecnologia dei Materiali, Firenze, Italy

29 - 360° SHELF LIFE OF STRACCHINO CHEESE: INTEGRATING PCA AND DATA FUSION FOR MULTI-TECHNIQUE SPOILAGE ANALYSIS

Muhammad Rehan Khan^a, Lisa Rita Magnaghi^{b,c}, Guglielmo Emanuele Franceschi^b, Luca Zignego^d, Elena Bancalari^d, Marcello Alinovi^d, Massimiliano Rinaldi^d, Raffaella Biesuz^{b,c}, Lucia Vannini^{a,e}, Lorenzo Siroli^{a,e}
^aDepartment of Agricultural and Food Sciences, University of Bologna, Cesena, Italy, ^bDepartment of Chemistry, University of Pavia, Italy, ^cINSTM, Unità di Ricerca di Pavia, Italy, ^dDepartment of Food and Drug, University of Parma, Italy, ^eInterdepartmental Centre for Agri-Food Industrial Research, Campus of Food Science, University of Bologna, Cesena, Italy



POSTER SESSION

30 - PHYSICAL AND TECHNOLOGICAL PROPERTIES OF ALGINATE-BASED EDIBLE COATING

Francesca Malvano, Donatella Albanese

University of Salerno, Department of Industrial Engineering, Italy

31 - SUSTAINABLE PACKAGING SOLUTIONS FOR MEAT PRODUCTS. IMPACT ON SHELF-LIFE, QUALITY, AND SAFETY OF SALAMI

Giulia Leni^a, Laura Principato^b, Cansu Ekin Gumus-Bonacina^{a,c},
Roberta Galli^a, Giorgia Spigno^a

^aUniversità Cattolica del Sacro Cuore, Department for Sustainable Food Process, Italy, ^bInnovhub Stazioni Sperimentali per l'Industria S.r.l., ^cAnkara University, Department of Food Engineering, Turkiye

32 - HEAT-ASSISTED SOLUTION BLOW SPINNING FOR ACTIVE PACKAGING: ONE-STEP FABRICATION OF CROSSLINKED POLYVINYL ALCOHOL FIBERS WITH ENCAPSULATED ANTIMICROBIAL AGENTS

Emmanuel Fortunato Gulino, Roberto Scaffaro

University of Palermo, Department Engineering, Italy

33 - ISSUE OF NANOCELLULOSE MIGRATION IN FOOD PACKAGING AND REGULATORY IMPLICATIONS

Mohammed Dilsad Ansari^a, Carlo Punta^a, Luigi de Nardo^a,
Laura Principato^b

^aPolitecnico di Milano, Department of Chemistry, Materials, and Chemical Engineering "G. Natta", Milan, Italy, ^bInnovhub Stazioni Sperimentali per l'Industria S.r.l, Milan, Italy

POSTER SESSION

34 - MULTIFUNCTIONAL BIO-COATINGS FOR SUSTAINABLE PAPER-BASED FOOD PACKAGING SOLUTIONS

Antonio Barbato, Loredana Incarnato

University of Salerno, Dept. of Industrial Engineering, Italy

35 - MEASURABLE SUSTAINABILITY LCA GUIDELINES FOR FLEXIBLE PACKAGING ECO-DESIGN

Andrea Cassinari^a, Paola Riccardi^b, Maurizio Ambroggi^c, Rosi Barrale^d, Lorenzo Sacchi^e

^aGiflex Scientific Committees Coordinator, Italy, ^bSRCEngineering Srl, Chemical Office Manager, Italy, ^cSRCEngineering Srl, Sustainability Consultant, Italy,

^dGiflex Technical Committee Coordinator, ^eGiflex Sustainability Committee Coordinator

36 - TANNINS AS BIO-BASED ADDITIVES FOR SMART FOOD PACKAGING. Developing PHAs-tannin films with multifunctional properties

Martina Ferri^{a,b}, Kseniya Papchenko^c, Micaela Degli Esposti^{a,b*}, Gianluca Tondi^d, Maria Grazia De Angelis^c, Davide Morselli^{a,b*}, Paola Fabbri^{a,b}

^aUniversity Department of Civil, Chemical, Environmental and Materials Engineering (DICAM), University of Bologna, Italy, ^bNational Interuniversity Consortium of Materials Science and Technology (INSTM), Firenze, Italy,

^cInstitute for Materials and Processes, School of Engineering, University of Edinburgh, UK, ^dDepartment of Land, Environment, Agriculture and Forestry (TESAF), University of Padua, Italy



POSTER SESSION

37 - MECHANICAL RECYCLING OF POLYPROPYLENE FROM SURGICAL MASKS: VALORIZATION FOR APPLICATIONS IN CAST FILM EXTRUSION

Maria Chiara Riccelli^a, Annalisa Apicella^a, Antonio Barbato^a,

Loredana Incarnato^a

^aUniversity of Salerno, Dept. of Industrial Engineering, Italy

38 - BIODEGRADABLE PVA/STARCH FILMS WITH ZEOLITE ADDITIVE

Mattia Fornaro^a, Barbara Liguori^{a, b}, Giuseppe Mensitieri^{a, b},

Domenico Caputo^{a, b}

^aUniversity of Naples Federico II, Dept. of Chemical, Materials and Industrial Production Engineering, Italy, ^bNational Interuniversity Consortium of Materials Science and Technology (INSTM), Florence, Italy



GENERAL INFORMATION

DATES

Thursday 27 March, 2025

Friday 28 March, 2025

VENUE

Fondazione Cariplo Conference Center • Via Romagnosi, 8 - Milan (Italy)

REGISTRATION/ INFORMATION DESK AND CONGRESS SECRETARIAT

Location:

Conference Centre, ground floor

Opening time:

March 27: from h. 8.30 to 18.00

March 28: from h. 8.15 to 13.15

REGISTRATION FEES (VAT 22% included)

Giflex Members/ CNR Members/University Professors	€ 300,00
Non Members Giflex	€ 370,00
Students	€ 150,00
Social Dinner *	€ 100,00

*Social Dinner tickets purchasable upon availability

The registration fee includes

- Admission to the scientific sessions
- Congress badge and kit
- Certificate of attendance
- Coffee breaks, lunch and cocktail according to the program

Milano, (Italy)
March 27 - 28, 2025
Fondazione Cariplo



GENERAL INFORMATION

SOCIAL DINNER

Da Berti Restaurant

Via F. Algarotti, 22 - 20124 Milano
dress code: smart casual

TRANSFER

A bus will leave from NH Milano Touring (Via U. Tarchetti, 22) at 20:15

OFFICIAL LANGUAGE

The official language of the Congress will be English. No simultaneous translation will be provided.

SLIDES CENTER

All speakers should check and upload their presentation at the slides center located inside the Auditorium not less than 30 minutes before their session begins.

POSTER SESSION

The poster session will be available during the whole congress. Authors are kindly invited to be at their poster for poster discussion during the welcome cocktail on March 27 from 18.00 until 19.00 as per the programme schedule.



Milano, (Italy)
March 27 - 28, 2025
Fondazione Cariplo

ORGANIZING SECRETARIAT

mcm
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