



FIRST CIRCULARITY CONFERENCE

Re-Thinking Packaging for *Circular* and *Sustainable* Food Supply Chains of the *Future*

26-29 September 2021

On-line



European Commission

Horizon 2020
European Union funding
for research & innovation

CONFERENCE PROGRAM^(*)

Sunday, September 26th

- 17:00 – 17:15** **Opening/Greetings (Milena Corredig, Aarhus University, Chair of CA19124)**
- 17:15 – 18:00** Prologue Talk 1: "Microplastics an invisible risk" **Margherita Ferrante** (University of Catania, Italy)
- 18:00 – 18:45** Prologue Talk 2: "Everything connects us to the Ocean" **Andrea Morello** (Sea Shepherd Italia)

Monday, September 27th

- 09:00 – 09:30** **Greetings (Pierpaolo Limone, Rector of the University of Foggia)**
- 09:30 – 10:00** **Session 1A (Chair: Giancarlo Colelli)**
Keynote 1: "Packaging requirements for reducing food losses" Victor Rodov (ARO Volcani Institute, Israel)
- 10:00 – 10:15** Impact of different packaging strategies on the shelf-life of semi-hard cheese - **Ana G. Azevedo**, Portugal (130)
- 10:15 – 10:30** Effects of retail compostable packages on retaining fruit and vegetable quality - **Ron Porat**, Israel (053)
- 10:30 – 10:45** Tailor-made packaging strategies to extend the shelf life of fresh pork belly - **Begonya Marcos-Muntal**, Spain (083)
- 10:45 – 11:00** The applicability of PHBV thermoformed trays to pack fresh food products under modified atmosphere packaging - **An Vermeulen**, Belgium (113)
- 11:00 – 11:30** **Coffee break**
- 11:30 – 12:00** **Session 2A (Chair: Matthijs Dekker)**
Keynote 2: "Active and intelligent packaging as tool to improve food quality and safety" Rafael Gavara (CSIC-IATA, Spain)
- 12:00 – 12:15** A novel breathable package system to improve the fresh fig (*Ficus carica* 'Dottato') shelf life – **Attilio Matera**, Italy (070)
- 12:15 – 12:30** Bioactive antioxidant coating for active poly(lactic acid) film packaging- polyphenols affect coating structure and their release in a food simulant – **Frédéric Debeaufort**, France (052)
- 12:30 – 13:30** **Stakeholder Forum (Chair: Emmanouil Tsochatzis)**
Introduction: "Towards sustainable food packaging legislation from the prospective of EU policymakers" Anna Trubetskaya (University of Limerick, Ireland)
Forum contributors:
Bastiaan Schupp, DG Health and Food Safety - European Commission
Eddo Hoekstra, JRC, EURL-FCM - European Commission
- 13:30 – 14:30** **Lunch break**
- 14:30 – 15:00** **Poster session**
- 15:00 – 15:30** **Session 3A (Chair: Loredana Incarnato)**
Keynote 3: "Challenges on obtaining high oxygen and water barrier compostable films" Rafael Auras (Michigan State University, USA)
- 15:30 – 15:45** Organocatalytic acetylation of pea starch - **Natalia Prieto Vidal**, Denmark (99)
- 15:45 – 16:00** Design and development of innovative high performance PVOH/PLA bio-coatings for food packaging - **Annalisa Apicella**, Italy (098)
- 16:00 – 16:15** Improving starch-based biomaterial properties by addition of spent frying potato oil - **Silvia Petronilho**, Portugal (090)
- 16:15 – 16:30** Multilayer barrier paperboard based on nanocellulose and biodegradable thermoplastics - **Johanna Lahti**, Finland (134)

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- 16:30 – 16:45 NeoPalea: bio-based material for packaging applications - Leonardo Conti, Italy (054)
16:45 – 17:00 Investigation of stereocomplexed poly(lactide acid)/layered double hydroxides for high-performance mono-material packaging solutions – Qi Chen, Denmark (128)

17:00 – 17:30 **Coffee break**

Session 2B (Begonya Marcos-Muntal)

- 17:30 – 17:45 Use of gallic acid based oxygen scavenger to prevent the discoloration of processed meat products under industrial conditions - Selcuk Yildirim, Switzerland (116)
17:45 – 18:00 Influence of an innovative, biodegradable multilayer active packaging on “pesto” sauce characteristics during storage – Virginia Glicerina, Italy (097)
18:00 – 18:15 Bioactive complexes of chitosan and green coffee bean or artichoke extracts for food packaging applications - Ramune Rutkaite, Lithuania (105)
18:15 – 18:30 Diffusion of thyme, cinnamon and oregano essential oils in different nanocellulose matrices – Sara Casalini, Italy (059)

Tuesday, September 28th

Session 4 (Chair: Elena Arranz)

- 09:00 – 09:30 **Keynote 4: "The challenge of NIAS migration from emerging food packaging materials" Cristina Nerin (University of Zaragoza, Spain)**
09:30 – 09:45 *Deactivation kinetics of inoculated SARS-CoV-2 on a patented cardboard activated with natural antimicrobials* - Lorenzo Siroli, Italy (103)
09:45 – 10:00 *Next generation screening methodologies for the advanced and comprehensive monitoring of intentionally and non-intentionally added substances in food contact materials* - Chrysoula Kanakaki, Greece (073)
10:00 – 10:15 *Urinary levels of endocrine-disrupting chemicals, including triclosan and 4-nonylphenol in School-Aged Children of Southern Italy population with a Plastic-Free Lifestyle* – Francesco Sessa, Italy (086)
10:13 – 10:30 *Microplastics releases by packaging, a new risk for consumers* – Eloise Pulvirenti, Italy (114)
10:30 – 10:45 *Chemical testing of mechanically recycled polyethylene terephthalate* – Emmanouil D. Tsochatzis, Denmark (055)
10:45 – 11:00 *Risk assessment in use of recycled polyethylene from post-consumer waste as food contact material* - Tanja Radusin, Norway (119)

11:00 – 11:30 **Coffee break**

Session 5 (Chair: Victoria Krauter)

- 11:30 – 12:00 **Keynote 5: "Consumer Trends and Perceptions toward Sustainable Packaging Solutions" Polymeros Chrysochou (Aarhus University, Denmark)**
12:00 – 12:15 *Science and media framing the future of plastics in a transition to the circular economy* - Ivanna Colijn, The Netherlands (102)
12:15 – 12:30 *Analysis of sustainable packaging attributes in the confectionary sector* - Anna-Sophia Bauer, Austria (112)
12:30 – 12:45 *Navigating sustainable packaging solutions for food waste minimization in downstream activities* – Carlos Martin-Rios, Switzerland (096)
12:45 – 13:00 *Sustainability message outlook impacts consumer response toward sustainable packaging* - Polymeros Chrysochou, Denmark (084)
13:00 – 13:15 *Twitter is garbage: what kind of packaging waste materials do people tweet about? Exploration of #zerowaste hashtag usage* - Greg Ganczewski, Poland (133)
13:15 – 13:30 *Intention to purchase milk packaged by biodegradable packaging: evidence from Italian consumers* – Antonella Cammarelle, Italy (068)

13:30 – 14:30 **Lunch break**

14:30 – 15:00 **Poster session**

Session 8 (Chair: Selcuk Yildirim)

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- 15:00 – 15:30** **Keynote 8: "Disposable or Returnable Packaging: searching optimal solution using fuzzy mathematical approach" Péter Böröcz (Széchenyi István University, Hungary)**
- 15:30 – 15:45** *Sense-Fruit: a fruit simulator for advanced monitoring of postharvest supply chains - Seraina Schudel, Switzerland (074)*
- 15:45 – 16:00** *The effect of transportation vibration to the microbiological status of bottled mineral water - Renáta Tihanyi-Kovács, Hungary (111)*
- 16:00 – 16:15** *Reducing food waste by quality controlled logistics using intelligent packaging - Matthijs Dekker, The Netherlands (075)*
- 16:15 – 16:30** **Session 3B (Chair: Selçuk Yildirim)**
Development of cellulose-based packaging films from the residues after alginate extraction - Vera Cebrián-Lloret, Spain (106)
- 16:30 – 16:45** *ByPro3D – Can agri-food and forest byproducts be reused in the ecological production of 3D food packaging? - Idalina Gonçalves, Portugal (088)*
- 16:45 – 17:00** *Functional biobased barriers for sustainable and renewable packaging materials – Samir Kopacic, Austria (062)*
- 17:00 – 17:30** **Coffee break**
- 17:30 – 17:45** **Session 2C (Chair: Fátima Poças)**
Polysaccharide-based active coatings for fresh and minimally processed fruits - Marina Ramos-Santonja, Spain (104)
- 17:45 – 18:00** *Design concept of an enzymatic time-temperature integrator device for chromatic quality prediction of cherries - Pedro D. Gaspar, Portugal (125)*
- 18:00 – 18:15** *Development of essential oil incorporated polymer PLA/PBAT active film for food packaging applications - Kalpani Y. Perera, Ireland (101)*
- 18:15 – 18:30** *When nanochemistry meets food packaging: development of active materials based on polyoxymetalates and nanocelluloses - Filomena Silva, Spain (107)*

Wednesday, September 29th

- 09:00 – 09:30** **Session 7 (Chair: Philip Scholten)**
Keynote 7: "One Bin To Rule Them All" Michael Shaver (University of Manchester, UK)
- 09:30 – 09:45** *Recycling of polypropylene by supercritical CO₂ for extraction of contaminants from beverage cups - Srishti Singh, Portugal (072)*
- 09:45 – 10:00** *Deinking efficiency of industrial waste and invasive plant papers for paper bags - Mija Sežun, Slovenia (071)*
- 10:00 – 10:15** **Session 1B (Chair: Frédéric Debeaufort)**
Impact of polylactic acid packages on microbiological spoilage of fresh produce: A case study with cherry tomatoes – Salvatore D'Aquino, Italy (121)
- 10:15 – 10:30** *Effect of humidity on ethylene removal kinetics of various scavengers in active packaging - Spoorthy Shenoy, Germany (117)*
- 10:30 – 10:45** *Advances to save the packaging plastic film in Grapefruits - Rafael Torregrosa-Coque, Spain (056)*
- 10:45 – 11:00** *Zein based antimicrobial edible coating for 'granny smith' apple quality - Zinash A. Belay, South Africa (060)*
- 11:00 – 11:30** **Coffee break**
- 11:30 – 11:45** **Session 3C (Chair: Ilke Unalan)**
Biopolymer-based electrically conductive biocomposite films for food packaging applications - Ana Barra, Portugal (092)
- 11:45 – 12:00** *Utilization of chestnut shell lignin in alginate films - Ece Soğut, Turkey (064)*
- 12:00 – 12:15** *High solids, solvent free modification of engineered poly-saccharides for food packaging applications - Athanasios D. Porfyris, Greece (109)*
- 12:15 – 12:30** *Bio-based platelet-shaped biochars as reinforcements in biopolymers for food packaging applications – Jon Trifol, Finland (079)*



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- 12:30 – 13:30** **Industry forum (Chair: Milena Corredig, Aarhus University)**
Contributors:
Thomas Bak Thellesen, Faerch A/S, Denmark
Tim Van Caelenberg, Puratos, Belgium
- 13:30 – 14:30** **Lunch break**
- 14:30 – 15:00** **Poster session**
- 15:00 – 15:30** **Session 6 (Chair: Marit Kvalvåg Pettersen)**
Keynote 6: "The most sustainable packaging: how to define your best individual solution" Peter Désilets (Pacoon GmbH, Germany)
- 15:30 – 15:45 *Assessing the environmental sustainability of packaging on seafood supply chains: A critical review - Cheila Almeida, Portugal (115)*
- 15:45 – 16:00 *Food waste and eco-design: synergy between food and packaging LCA – Andrea Casson, Italy (076)*
- 16:00 – 16:30** **Final Remarks & Conference conclusions (Milena Corredig & Giancarlo Colelli)**