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EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

Funded by the Horizon 2020 Framework Programme
of the European Union

ActInPak

Communicating the results of COST Action ActInPak

Diana Gregor-Svetec, David Ravnjak

Riga, 5-6 June 2018

Univerza v Ljubljani
Naravoslovnotehniška fakulteta
Oddelek za tekstilstvo, grafiko in oblikovanje

Univeristy of Ljubljana
Papirnica Vevče

KNOWLEDGE TRANSFER AND DISSEMINATION (WG4)

Dissemination of COST Action results and communication with targeted audience are important tasks for shearing networking activities outside the action.

The objective of WG4 is to disseminate the generated knowledge to the industry and society.

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DISSEMINATION

PROPAK CHINA 2018

SMART PACKAGING 2017

Harnessing active and intelligent technologies to add value to flexible and rigid packaging

COMMUNICATION

means sharing the work with the audiences outside the narrow scientific area to industry, small and medium enterprises, policymakers, the media and laypersons.

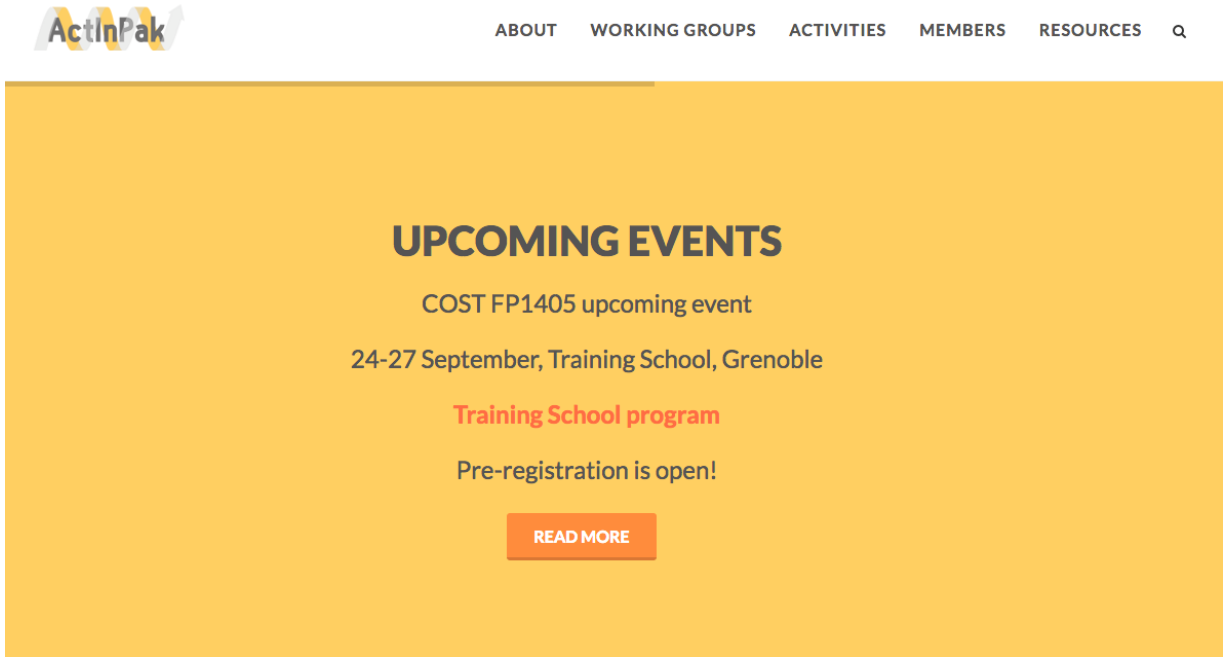
ANCIPATED RESULTS

- to develop a knowledge-based network on sustainable, active and intelligent fibre-based packaging,
- build a database for future research and development in the area of A&I fibre-based packaging,
- show the possibilities of A&I fibre-based packaging in R&D as well as for commercial products,
- provide a better knowledge of A&I fibre-based packaging to the industry and society.

COMMUNICATION PLAN

- **Scientific community, organisations, industry**

- http://www.actinpak.eu/



COMMUNICATION PLAN

- **Scientific community, organisations, industry**

COST FP1405 ActInPak

FEATURED

2mo

Sanne Ligthart-Tiekstra · Group Owner
Chair of COST Action ActInPak | Creative project leader/manager R&D

Pre-registration Working Group Workshop on 5-6 June now open!

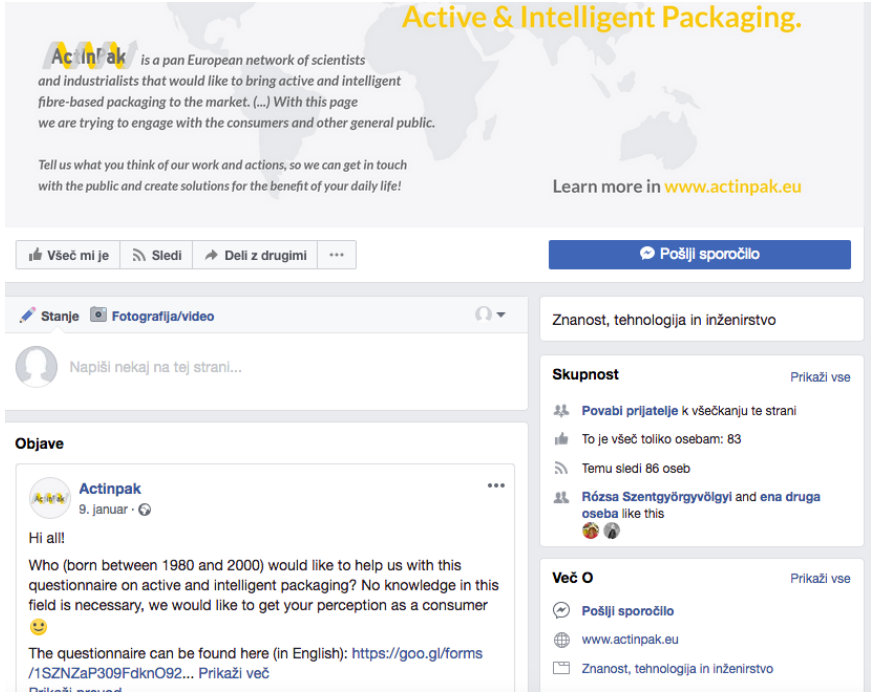
5-6 June 2018, Latest developments in active and intelligent packaging and Opportunities for communication of ActInPak, Working Group Workshop in Riga, Latvia

During this Workshop, we invite participants to give an update on the latest developments in...
Show more

Latest developments in A&I packaging and Opportunities for communication of ActInPak

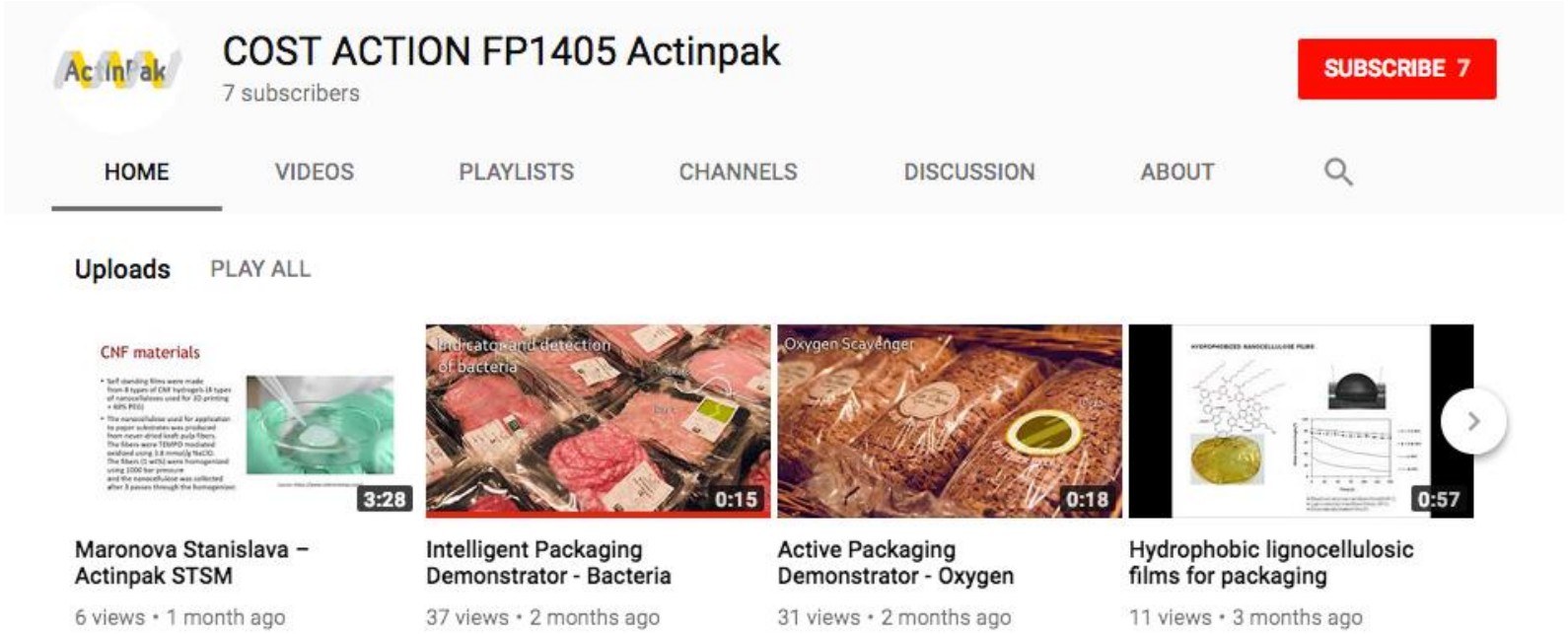
During this Workshop, we invite participants to give an update on the latest developments in active and intelligent packaging, and discuss

Actinpak



- **Scientific community, organisations, industry**

COST ACTION FP1405 Actinpak



- **Scientific community, organisations, industry**

Newsletter http://www.actinpak.eu/newsletters/

COST Action FP1405
Active and intelligent fibre-based packaging - innovation and market introduction

NEWSLETTER
Volume 1

EDITORIAL

Welcome to the first newsletter of the COST Action FP 1405 on Active and intelligent fibre-based packaging – innovation and market introduction (ActInPak). The Action ActInPak aims to identify and focus on the key technical, social, economic and legislative factors relevant for a successful deployment of renewable fibre-based functional packaging solutions. This will be achieved by conducting research and development into active and intelligent packaging, encompassing both scientific and technical solutions, addressing the opportunities for, and obstacles to, market introduction.
The main objective of the Action ActInPak is to develop a knowledge-based network on sustainable, active and intelligent fibre-based packaging in order to overcome current technological, industrial, and social limitations that hinder the wide deployment of existing and newly developed solutions in market applications.
Currently, 36 countries are involved in the network, with participants representing over 150 universities, institutes and companies. The Action has just started and we hope that you will follow us in the next four years.

Sanne Tiekstra
Action Chair

Chair of the Action: Sanne Tiekstra (NL)
Vice Chair of the Action: Julien Bras (FR)
COST Science officer of the Action: Fatima Bouchama
COST Administrative officer of the Action: Cassia Azevedo
Working group leaders:
Working Group 1: Selçuk Yildirim (CH)
Working Group 2: Johanna Lahti (FI)
Working Group 3: Grzegorz Ganczewski (PL)
Working Group 4: David Ravnjak (SI)
MC Members:
http://www.cost.eu/COST_Actions/fps/Actions/FP1405 ?management

http://www.actinpak.eu
http://www.cost.eu/COST_Actions/fps/Actions/FP1405
https://www.linkedin.com/groups/COST-FP1405-ActInPak-8254568/about

COST Action FP1405 ActInPak

Duration: 2015-2019

COST Action FP1405 is a good opportunity to build knowledge on active and intelligent packaging.

ActInPak COST Action FP1405
Active and intelligent (fibre-based) packaging – innovation and market introduction

NEWSLETTER
Volume 5

EDITORIAL

Welcome to the fifth newsletter of the COST Action FP 1405. Currently, 43 countries are involved in the network, with participants representing 209 academic institutions, 35 technical centres, and 83 industrial partners. We are looking forward to new members.
In the meantime, we have entered the third Grant Period, running from 1-5-2017 to 30-4-2017. Our activities are running according to plan. We would like to thank all of you for your feedback regarding the Monitoring Progress Report. With your help, it was possible to show all progress of Action and submit report in time to COST Office. Our achievements were quite impressive! Once we get the feedback of the Rapporteur the Action Chair will inform you.
Our Showroom on active and intelligent packaging is quite impressive. You are all welcomed to send us samples of active, intelligent, interactive packaging in the market you find in your country or examples in the development stage.
Some overview about our activities is shortly presented in Newsletter, more information is available at our website and LinkedIn.

Sanne Tiekstra, Action Chair
Diana Gregor Svetec, Editor

UPDATES FROM THE WORKING GROUPS

All Working Groups are working actively on their publications, either in large or small groups.
During the upcoming Budapest meeting the three industry leaflets on active packaging, intelligent packaging, and legislation will be published and put to the test. Let's hope the industrial participants are as enthusiastic about it as we are!

Also, we would like translate these leaflets into local languages so it is easy accessible for industry. Please contact WG1 Leader Selçuk Yildirim (selcuk.yildirim@zhaw.ch) if you would like to help us with that.

COST Action FP1405 ActInPak

Duration: 2015-2019

More information:
www.actinpak.eu
www.linkedin.com/groups/COST-FP1405-ActInpak-8254568/about

More information:
www.actinpak.eu

ActInPak COST Action FP1405
Active and intelligent (fibre-based) packaging – innovation and market introduction

NEWSLETTER
Volume 6

EDITORIAL

Welcome to the sixth newsletter of the COST Action FP 1405, with the title "Time is running out!"
We are almost at the end of the third Grant Period (30/4/2018), meaning we will start our final Grant Period. Even less than a year to finalise all our work, and to think of follow-up activities.
I still remember our very first meeting in Brussels, when the network was new, we didn't know each other yet, and we had to decide upon our plan of activities. Now the network is three years old, and we are searching for time to actually execute all our plans.
Some overview about our activities and work ahead of us is shortly presented in this Newsletter, more information is available at our website and LinkedIn.

Sanne Tiekstra, Action Chair
Diana Gregor Svetec, Editor

NEXT ACTINPAK MEETINGS

How to join? Visit the dedicated event's page on our website, click the register button and fill in your details.

5-6 June 2018, Latest developments in active and intelligent packaging and Opportunities for communication of ActInPak, Working Group Workshop in Riga, Latvia
During this Workshop, we invite participants to give an update on the latest developments in active and intelligent packaging, and discuss the progress of our Action with consumer and environmental organisations. The program continues with a workshop on communication activities for different audiences, and finishes with a WG workshop aims to follow up on previous meetings and work and finalise all deliverables such as roadmaps and leaflets.
Pre-registration and submission of abstract **before 1 April 2018** via our website.

24-27 September 2018, Business Development for Active and Intelligent Packaging, Training School, Grenoble, France
We invite Early Career Investigators and PhD students to join the Training School on Business Development for Active and Intelligent Packaging. During this Training School, the focus will be on the end of the Value Chain to end ActInPak's joint search 'how to fill the gap between science and industry'. The Trainees learn how to develop and advertise concepts; to better understand how to create a viable business case and what boundary conditions are important when creating innovations for the market.

COST Action FP1405 ActInPak

Duration: 2015-2019

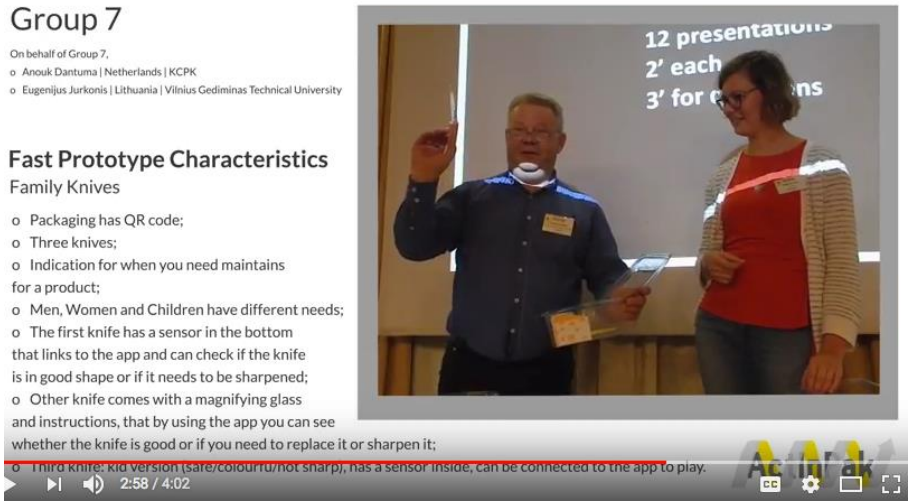
More information:
www.actinpak.eu
www.linkedin.com/groups/COST-FP1405-ActInpak-8254568/about

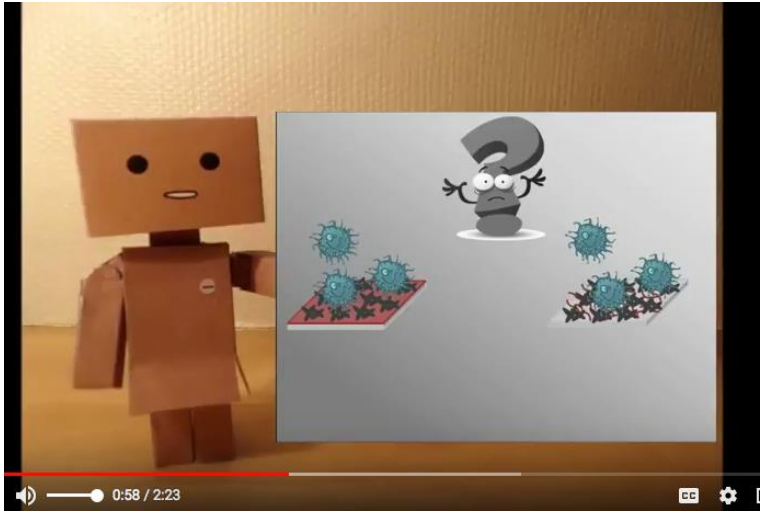
More information:
www.actinpak.eu/actinpak-events/

More information:
www.actinpak.eu/training-schools/

- **Scientific community, organisations, industry**

Video





- **Scientific community, organisations, industry**

Articles in scientific journals (cited on website, contain link to the published article)

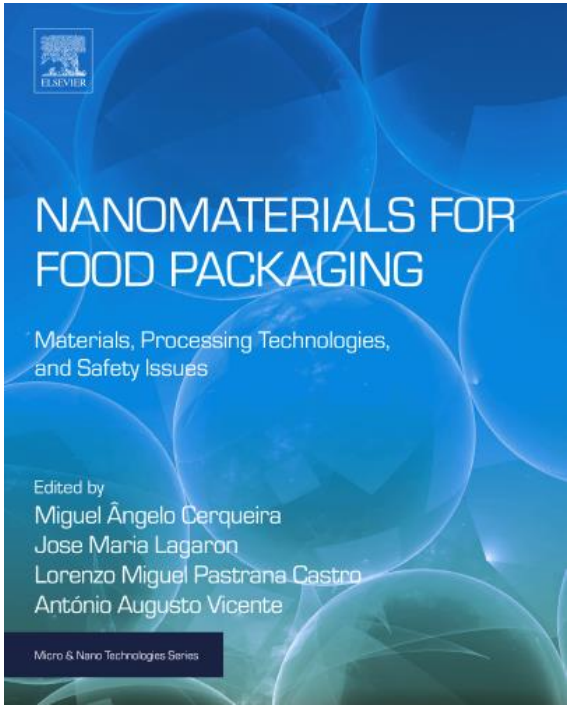
Comprehensive REVIEWS in Food Science and Food Safety

Active Packaging Applications for Food

Selçuk Yildirim, Bettina Röcker, Marit Kvalvåg Pettersen, Julie Nilsen-Nygaard, Zehra Ayhan, Ramune Rutkaite, Tanja Radusin, Patrycja Suminska, Begonya Marcos, and Véronique Coma

Abstract: The traditional role of food packaging is continuing to evolve in response to changing market needs. Current drivers such as consumer's demand for safer, "healthier," and higher-quality foods, ideally with a long shelf-life; the demand for convenient and transparent packaging, and the preference for more sustainable packaging materials, have led to the development of new packaging technologies, such as active packaging (AP). As defined in the European regulation (EC) No 450/2009, AP systems are designed to "*deliberately incorporate components that would release or absorb substances into or from the packaged food or the environment surrounding the food.*" Active packaging materials are thereby "*intended to extend the shelf-life or to maintain or improve the condition of packaged food.*" Although extensive research on AP technologies is being undertaken, many of these technologies have not yet been implemented successfully in commercial food packaging systems. Broad communication of their benefits in food product applications will facilitate the successful development and market introduction. In this review, an overview of AP technologies, such as antimicrobial, antioxidant or carbon dioxide-releasing systems, and systems absorbing oxygen, moisture or ethylene, is provided, and, in particular, scientific publications illustrating the benefits of such technologies for specific food products are reviewed. Furthermore, the challenges in applying such AP technologies to food systems and the anticipated direction of future developments are discussed. This review will provide food and packaging scientists with a thorough understanding of the benefits of AP technologies when applied to specific foods and hence can assist in accelerating commercial adoption.

Keywords: active packaging, antimicrobial packaging, antioxidant releaser, ethylene absorber, oxygen scavenger



- **Scientific community, organisations, industry**

Events

- **Scientific community, organisations, industry**

Training schools

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ActInPak
COST Action FP 1405
Active and intelligent fibre-based packaging – innovation and market introduction

Active and Intelligent Packaging: from Laboratory to Market

COST Action FP1405 Training School

24-27 September 2018, Grenoble, France

Host: Dr. Julien Bras, Grenoble INP – Pagora/LGP2, 460 rue de la Papeterie, 38420 St Martin d'Hères, FRANCE

Early Career Investigators and PhD students are invited to join the Training School on Business Development for Active and Intelligent Packaging. During this Training School, the focus will be on the end of the Value Chain to end ActInPak's joint search 'how to fill the gap between science and industry'. The Trainees learn how to develop and advertise concepts, to better understand how to create a viable business case and what boundary conditions are important when creating innovations for the market.

Trainees will be asked to bring their own concept (product/material/idea) to the Training School. During registration, the Trainees are requested to submit the topic they want to focus on during the workshop. However, it is also possible to work with the ActInPak demonstrators (http://www.actinpak.eu/wp-content/uploads/2016/09/ActInPak-Demonstrators.pdf).

- **Scientific community, organisations, industry**

Workshop / Seminar / Fair

LATEST DEVELOPMENTS IN A&I PACKAGING AND OPPORTUNITIES FOR COMMUNICATION OF ACTINPAK

Incoming / June 5–6, 2018 / Riga, Latvia

On 5-6 of June a Working Group Workshop will take place in Riga. Participants are invited to give an update on the latest developments in active and intelligent packaging, and discuss the progress of our Action with consumer and environmental organisations.

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EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

ActInPak

PAMETNA EMBALAŽA ZA ŽIVILA NA TRŽIŠČU

DIANA GREGOR SVETEC
UL, NARAVOSLOVNOTEHNIŠKA FAKULTETA

VELIKI ŽIVILSKI SEMINAR
19. 4. 2018, GZS, Ljubljana

Gospodarska zbornica Slovenije
Zbornica kmetijskih in živilskih podjetij

VELIKI spomladanski ŽIVILSKI SEMINAR

Veliki spomladanski živilski seminar
SRIP HRANA

ZBORNIK POVZETKOV

Ljubljana,
19. april 2018

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA GOSPODARSKI RAZVOJ IN TEHNOLOGIJO

SRIPHRANA

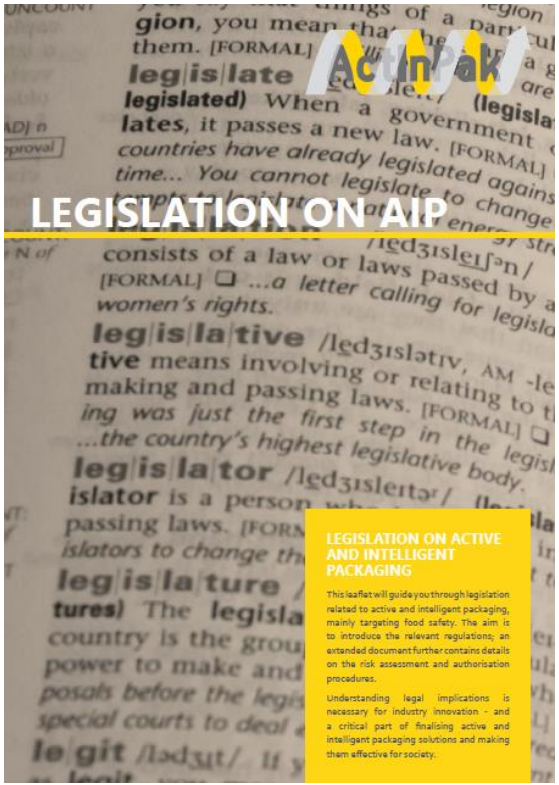
EVROPSKA UNIJA
EVROPSKI SKLAD ZA REGIONALNI RAZVOJ
NALOŽBA V VAŠO PRIHODNOST

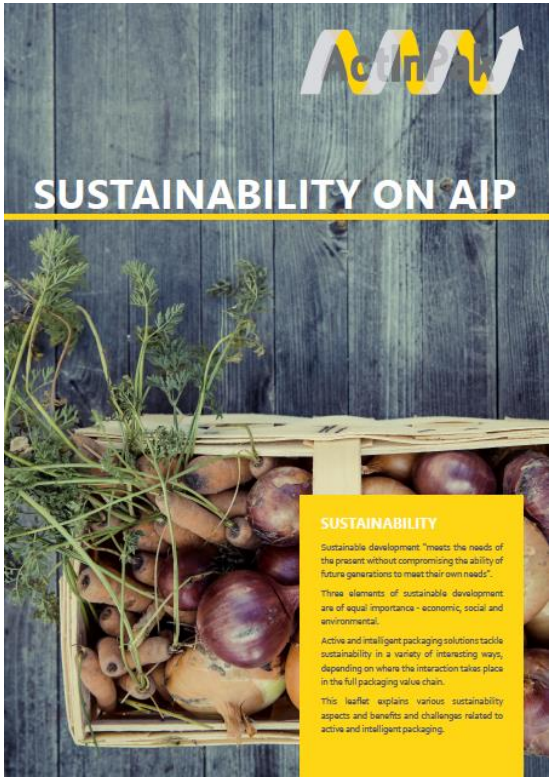
- **Scientific community, organisations, industry**

Leaflets

- **Scientific community, organisations, industry**

Leaflets

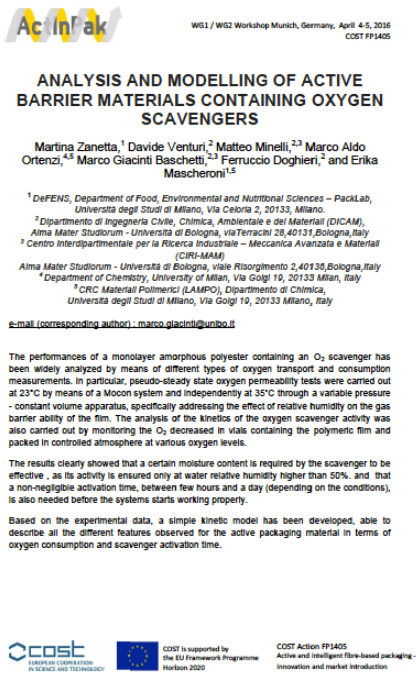




COMMUNICATION PLAN

- **Scientific community, organisations, industry**

Book of Abstracts



WG1 / WG2 Workshop Munich, Germany, April 4-5, 2016
COST FP1405

ANALYSIS AND MODELLING OF ACTIVE BARRIER MATERIALS CONTAINING OXYGEN SCAVENGERS

Martina Zanetta,[1] Davide Venturi,[2] Matteo Minelli,[2,3] Marco Aldo Ortenzi,[4,5] Marco Giacinti Baschetti,[2,3] Ferruccio Doghieri,[2] and Erika Mascheroni[1,5]

[1] *DeFENS, Department of Food, Environmental and Nutritional Sciences – PackLab, Università degli Studi di Milano, Via Celoria 2, 20133, Milano.*
[2] *Dipartimento di Ingegneria Civile, Chimica, Ambientale e dei Materiali (DICAM), Alma Mater Studiorum - Università di Bologna, viaTerracini 28,40131,Bologna,Italy*
[3] *Centro Interdipartimentale per la Ricerca Industriale – Meccanica Avanzata e Materiali (CIRI-MAM) Alma Mater Studiorum - Università di Bologna, viale Risorgimento 2,40136,Bologna,Italy*
[4] *Department of Chemistry, University of Milan, Via Golgi 19, 20133 Milan, Italy*
[5] *CRC Materiali Polimerici (LAMPO), Dipartimento di Chimica, Università degli Studi di Milano, Via Golgi 19, 20133 Milano, Italy*

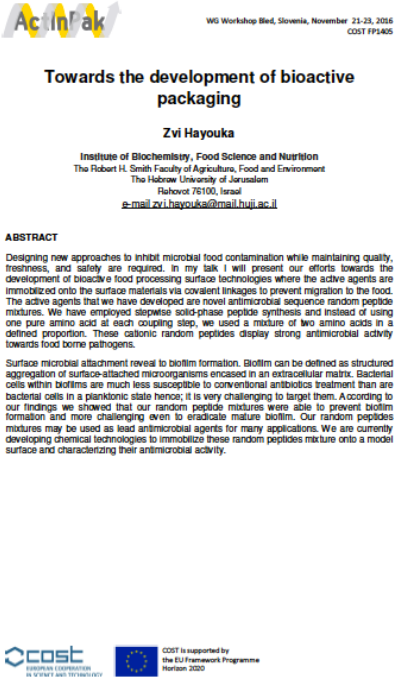
e-mail (corresponding author) : marco.giacinti@unibo.it

The performances of a monolayer amorphous polyester containing an O_2 scavenger has been widely analyzed by means of different types of oxygen transport and consumption measurements. In particular, pseudo-steady state oxygen permeability tests were carried out at 23°C by means of a Mocon system and independently at 35°C through a variable pressure - constant volume apparatus, specifically addressing the effect of relative humidity on the gas barrier ability of the film. The analysis of the kinetics of the oxygen scavenger activity was also carried out by monitoring the O_2 decreased in vials containing the polymeric film and packed in controlled atmosphere at various oxygen levels.

The results clearly showed that a certain moisture content is required by the scavenger to be effective , as its activity is ensured only at water relative humidity higher than 50%. and that a non-negligible activation time, between few hours and a day (depending on the conditions), is also needed before the systems starts working properly.

Based on the experimental data, a simple kinetic model has been developed, able to describe all the different features observed for the active packaging material in terms of oxygen consumption and scavenger activation time.

COST is supported by the EU Framework Programme Horizon 2020
COST Action FP1405
Active and intelligent fibre-based packaging - innovation and market introduction



WG Workshop Bled, Slovenia, November 21-23, 2016
COST FP1405

Towards the development of bioactive packaging

Zvi Hayouka

Institute of Biochemistry, Food Science and Nutrition
The Robert H. Smith Faculty of Agriculture, Food and Environment
The Hebrew University of Jerusalem
Rehovot 76100, Israel
e-mail zvi.hayouka@mail.huji.ac.il

ABSTRACT

Designing new approaches to inhibit microbial food contamination while maintaining quality, freshness, and safety are required. In my talk I will present our efforts towards the development of bioactive food processing surface technologies where the active agents are immobilized onto the surface materials via covalent linkages to prevent migration to the food. The active agents that we have developed are novel antimicrobial sequence random peptide mixtures. We have employed stepwise solid-phase peptide synthesis and instead of using one pure amino acid at each coupling step, we used a mixture of two amino acids in a defined proportion. These cationic random peptides display strong antimicrobial activity towards food borne pathogens.

Surface microbial attachment reveal to biofilm formation. Biofilm can be defined as structured aggregation of surface-attached microorganisms encased in an extracellular matrix. Bacterial cells within biofilms are much less susceptible to conventional antibiotics treatment than are bacterial cells in a planktonic state hence; it is very challenging to target them. According to our findings we showed that our random peptide mixtures were able to prevent biofilm formation and more challenging even to eradicate mature biofilm. Our random peptides mixtures may be used as lead antimicrobial agents for many applications. We are currently developing chemical technologies to immobilize these random peptides mixture onto a model surface and characterizing their antimicrobial activity.

COST is supported by the EU Framework Programme Horizon 2020

Conference/Workshop, Israel, November 7-9, 2017
COST FP1405

Feasibility of active and intelligent packaging for local and organic food in Southern Finland

Sara Paunonen[a], Marja Pitkänen[b], Mika Vähä-Nissi[b], Ville Leminen[a], Mika Kainusalmi[a]

[a] VTT Technical Research Institute of Finland Ltd, Tampere, Finland
[b] VTT Technical Research Institute of Finland Ltd, Espoo, Finland
[c] Lappeenranta University of Technology, Lappeenranta, Finland
mika.vaha-nissi@vtt.fi (corresponding author)

ABSTRACT

The sales of organic and local food have increased in the EU in recent years together with consumers' interest in these foods. This study explores the feasibility of innovative packaging for organic and local food. Attitudes and opinions of eighteen local and organic food chains in Southern Finland were collected with semi-structural interviews carried out during the fall 2015. The stakeholders were micro- and small-scale producers and processors of fish, meat, berries, and mushrooms, wholesalers, retailers, and institutional kitchens. The aim was to understand factors promoting and preventing the penetration of innovative packaging solutions into organic and local food market. A clear majority of the respondents held a general positive attitude towards active and intelligent packaging technologies, and thought that active and intelligent solutions are equally suitable for local and organic food as for conventional food. This is in line with previous results on positive attitudes of Finnish consumers and retailers towards intelligent packaging. However, less than half of the respondents would actually use the technologies in their own products due to a range of reasons, such as price increase, lack of value added, and possible technical complexity. Those having a negative attitude towards advanced technologies emphasized the importance of human senses in detecting food spoilage.

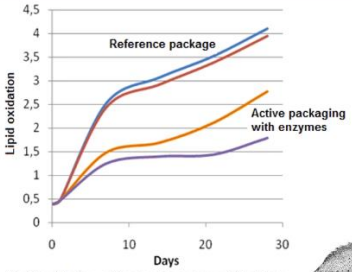
COST is supported by the EU Framework Programme Horizon 2020
COST Action FP1405
Active and intelligent fibre-based packaging - innovation and market introduction

- **Scientific community, organisations, industry**

Book of Showroom examples

Oxygen Scavenger; Reel-to-Reel Production

R&D
On the Market



Lipid oxidation of fresh minced lumpfish. Tests performed by Innovation Center of Iceland. Enzyme-material slows down oxidation.

Lumpfish

Coating trials at Tampere University of Technology, Finland

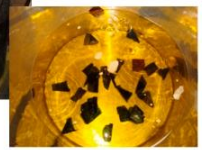
What? Active packaging material based on oxygen-scavenging enzymes . Paper and plastic prototypes developed within Enzycoat II, an European MNT ERA-Net project conducted by Karlstad University, Sweden.
Where?
When? Public technical report published August 2013

More details: Lars.Jarnstrom@kau.se, Karlstad, Sweden.
http://www.nordicinnovation.org/Publications/enzycoat-ii/

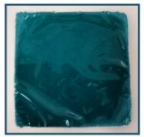
Active Material

R&D / Scale-Up
On the Market

Chitosan-based films in wine vessel



Chitosan-based film



Wine treated with **chitosan-based film**

What? Chitosan-based films for food preservation: antioxidant and antimicrobial activity
Where? University of Aveiro and Dão Sul S.A., Portugal
When? 2015

More details: Sulfite-free wine treated with chitosan-based films is microbiologically safe (inhibition of the growth of yeast and bacteria) and it is preserved in relation to oxidation. Chitosan-based films allowed the wine preservation during, at least, 2 years.

- **Scientific community, organisations, industry**

Book of Showroom examples

Intelligent printing

R&D
On the Market

What? Thermochromic inks on all Coca Cola packaging (small and large PET bottles, glass bottles for restaurants etc. and cans) in The Netherlands that are activated once the product is cooled to a
Where? temperature between 3 and 12 degrees Celcius. It is a temporary gimmick for the
When? summer 2016 period, meant to keep customers 'refreshed' all summer long. There is also an additional element to the packaging: consumers are stimulated to take a picture of their properly cooled Coca Cola can/bottle and upload it to the Coca Cola website, to get a chance to win a weekend away in the Coca Cola beach house.

Keep-it

R&D
On the Market

What? Time Temperature Monitoring (Keep-it) for salmon
Where? Bought in the Supermarket "REMA 1000", Trondheim, Norway
When? September 2016

- **Scientific community, organisations, industry**

Guidelines/Roadmaps

	Short-term (Now - 2019)	Mid-term (2020 - 2022)	Long-term (2023 - 2025)	Visionary
Market Drivers	Why do I need to do or change something? e.g. food scarcity, foodborne illnesses, huge product losses, etc.			
Solutions	What should I do, and when? e.g. reduce food waste, real-time communication about quality and safety, etc.			
Enabling Technologies	How can I do it? e.g. antimicrobial packaging, TTI's, NFC technology, etc.			
Resources	What resources or capabilities do I need to do that? e.g. Production facility, test panel, microbiology knowledge, €€, etc.			

- **Policymakers, national authorities**
  - articles for EU policy/research websites & magazines
  - articles in local media
  - interviews
  - press releases

COMMUNICATION PLAN

- **Laypersons**
  - social media
  - educational materials - video
  - interviews
  - press releases

COMMUNICATION PLAN

****PRESS RELEASE****

ActInPak Fair
Final Conference COST Action FP1405
Active and intelligent fibre-based packaging - innovation and market introduction

The Final Conference of COST Action FP1405 ActInPak will take place on 21st of November 2018 in Vienna, Austria. During the ActInPak Fair, oral presentations, poster presentations and an exhibition will share the outcomes of four years of work will be communicated to industry, policymakers, scientists, and other stakeholders. Since 2015, ActInPak aimed to develop a knowledge-based network on sustainable, active and intelligent fibre-based packaging in order to overcome current technological, industrial, and social limitations that hinder the wide deployment of existing and newly developed solutions in market applications.

Research and development of new fibre-based packaging materials with active and intelligent features have shown huge potential in the past to optimise the supply chain, and increase the shelf-life of foodstuff and enhance consumer consciousness of food utilisation. Very few of the potential solutions have, however, been able to reach the market. Therefore, the key technical, social, economic and legislative factors relevant for a successful deployment of renewable fibre-based functional packaging solutions are identified.

The Action achieved the objectives by providing an open multidisciplinary platform for the complete paper and board packaging value chain and had a strong involvement of industrial partners throughout Europe. Sustainable fibre-based packaging materials with new and active functionalities may help to introduce new products on the market with higher value and profits for paper and board manufacturers than traditional products.

Currently, 39 countries are involved in the network, with participants representing over 100 institutes and companies.

More information: link to event-page
Or join our LinkedIn network: https://www.linkedin.com/groups/COST-FP1405-ActInPak-8254568/about

COST Action FP1405
Active and intelligent fibre-based packaging - innovation and market introduction (ActInPak)

The main objective of the Action is to develop a knowledge-based network on sustainable, active and intelligent fibre-based packaging in order to overcome current technological, industrial, and social limitations that hinder the wide deployment of existing and newly developed solutions in market applications.

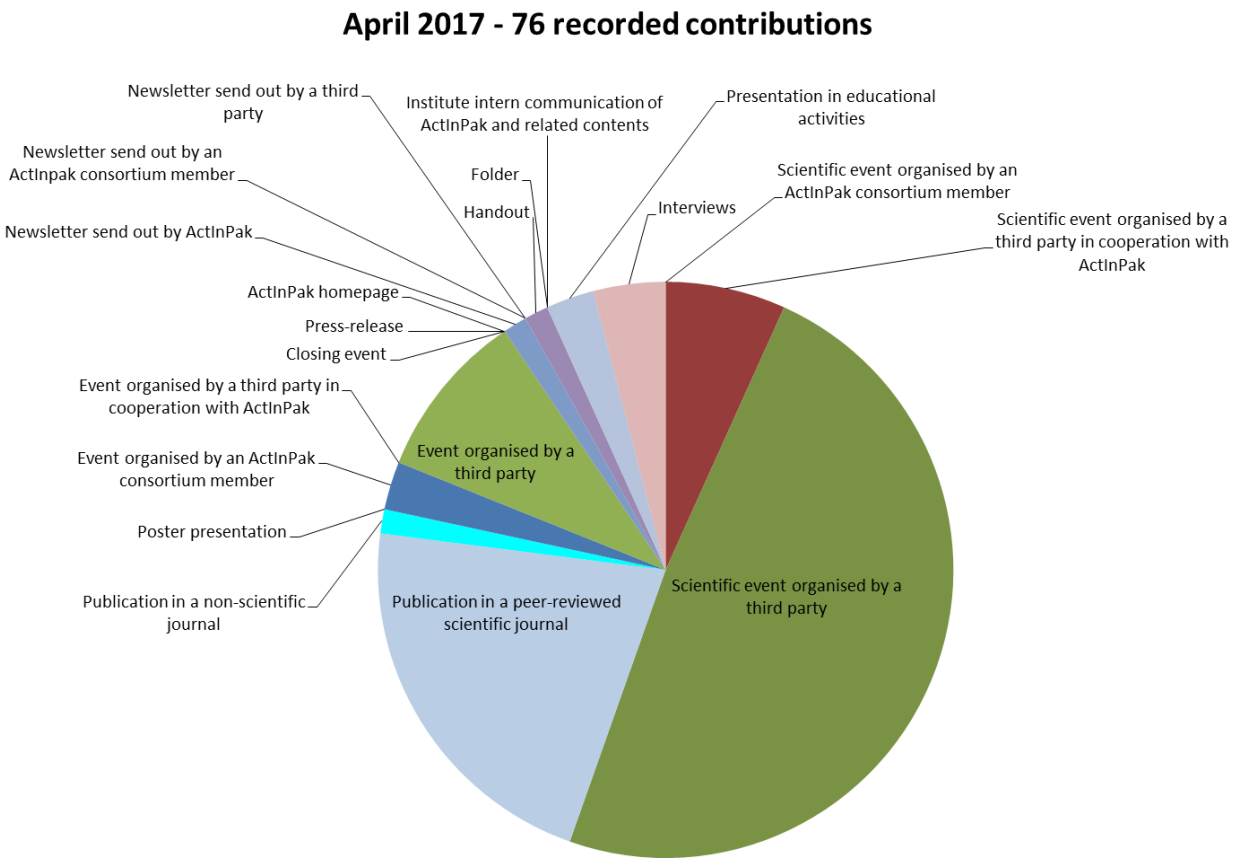
Research and development of new fibre-based packaging materials with active and intelligent features have shown huge potential to optimise the supply chain, and increase the shelf-life of foodstuff and enhance consumer consciousness of food utilisation. Very few of the potential solutions have, however, been able to reach the market.

This Action aims to identify and focus on the key technical, social, economic and legislative factors relevant for a successful deployment of renewable fibre-based functional packaging solutions. This will be achieved by conducting research and development into active and intelligent packaging, encompassing both scientific and technical solutions, addressing the opportunities for, and obstacles to, market introduction. The innovative approach of this Action lies in the sharp focus on the integration of active and intelligent solutions in papermaking in order to create next-generation functional fibre-based packaging. The Action will achieve the objectives by providing an open multidisciplinary platform for the complete paper and board packaging value chain and aims at strong involvement of industrial partners throughout Europe. Sustainable fibre-based packaging materials with new and active functionalities may help to introduce new products on the market with higher value and profits for paper and board manufacturers than traditional products.

Currently, 39 countries are involved in the network, with participants representing over 100 institutes and companies.

More information: www.actinpak.eu
Or join our LinkedIn network: https://www.linkedin.com/groups/COST-FP1405-ActInPak-8254568/about

DISEMINATION & COMMUNICATION ACHIEVED



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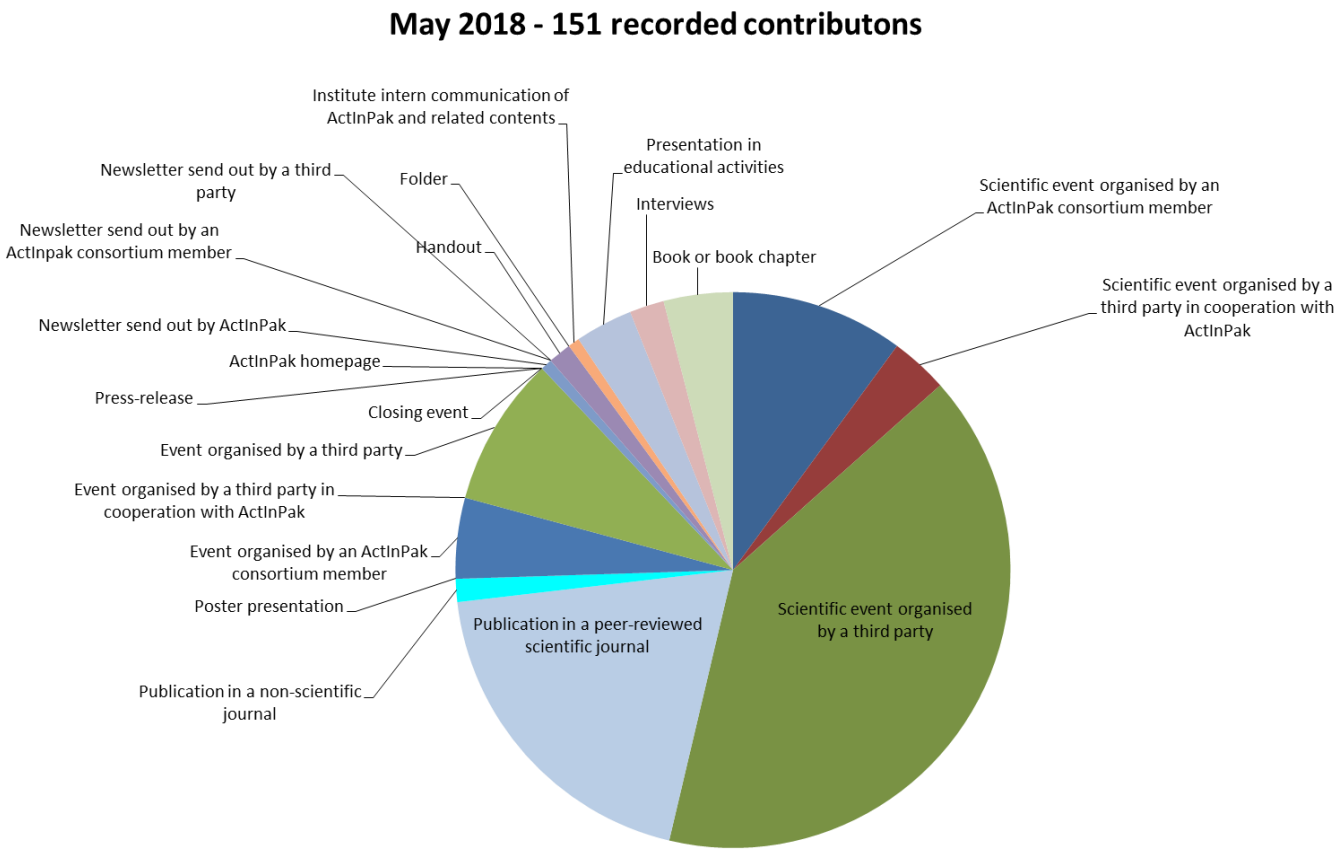

WHAT TO DO?

- More dissemination via
  - Videos
  - Social media
  - Ambassador activities
- Translate the standard leaflets => DONE
- Contact CEPI for communication to industry
- Participate in ILSI 2018 annual meeting
- Prepare targeted publications for the EU Parliament

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