



COST is supported by
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COST Action FP1405

Active and intelligent fibre-based packaging – innovation and market introduction

NEWSLETTER

Volume 2

EDITORIAL

Welcome to the second newsletter of the COST Action FP 1405 on the Active and intelligent fibre-based packaging – innovation and market introduction (ActInPak). For the COST Action ActInPak first year is over and in this first year a lot of work was already done. We had MC/WG meeting, WGs workshop in connection with AIPIA conference, WGs meeting jointly with PTS' Innovative packaging symposium and five STSM were successfully completed. The newsletter gives a periodical overview of activities in the COST Action FP1405 community. All activities of our action are detailed presented on the Action website. Our website and LinkedIn are essential means of information, interaction and dissemination. On the website we just started with a virtual showroom, which will be updated continuously by the COST Action members. On members' webpage all members have the possibility to present themselves with a short description.

Currently, 38 countries are involved in the network, with participants representing over 100 institutes and companies. Current missing COST countries within our Action are Estonia, Iceland, Latvia, Malta, Montenegro and former Yugoslav Republic of Macedonia. We are looking forward to suggestions for partners from mentioned countries.

In the meantime we have moved from our first Grant Period to our second! In short GP2, running from 1-5-2016 to 30-4-2017. Some activities are planned already. Our next activity will be the training school in Swansea, and the next joint meeting will be in Bled, Slovenia, from 21-23 November 2016. In between there will be some specific Working Group meetings for which you will all be invited as soon as possible by the respective Working Group Leaders.

We wish you a pleasant reading of newsletter!

Sanne Tiekstra, Action Chair
Diana Gregor Svetec, Editor

<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.

More information on:
<http://www.actinpak.eu/stsm/>

SHORT TERM SCIENTIFIC MISSIONS

In Grant Period 1, five Short Term Scientific Missions were achieved, as seen from data below. On the next COST Action MC/WG meeting they will present research they have done in course of STSM.

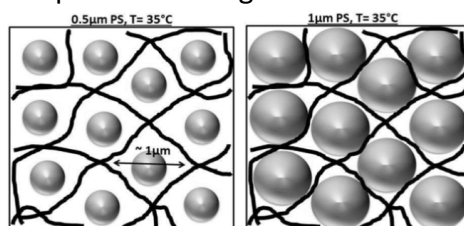


- Yana Petkova Olson
 - » Sweden to Germany
 - » 5 January 2016 to 31 March 2016
- Anouk Dantuma
 - » Netherlands to Portugal
 - » 6 March 2016 to 18 March 2016
- Daniele Oliveira de Castro
 - » France to Italy
 - » 15 March 2016 to 14 April 2016
- Charlène Riverdy
 - » France to Sweden
 - » 4 April 2016 to 15 April 2016
- Jinneth Lorena Castro
 - » Spain to Portugal
 - » 11 April 2016 to 30 April 2016

Topics and main achievements of STSMs:

- Determination of microstructures in starch temperature responsive mixtures by microrheology.

The structural, micro and macrorheological properties of a ternary thermo-sensitive starch-pluronic-silica system were studied. The microstructure in these gel materials can be controlled by variations in the ratio between the components and temperature. Viscous regions with controlled size can be produced and probably used for controlled release of active components at temperature change.



- Researching the antimicrobial effects and application areas of biobased active coating for paper-based packaging applications of various fresh products.

All tested active papers are able to - to some extent - maintain the quality of fresh strawberries longer, especially when it comes to weight loss. However, a negative influence on taste, smell and structure of the strawberries was also found, especially for the coatings containing essential oils in higher amounts.

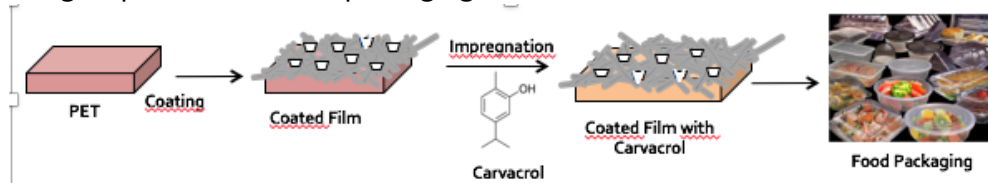
More information on:
http://www.actinpak.eu/wp-content/uploads/2016/05/FP1405_GP1_STSM_Petkova_report.pdf

More information on:
http://www.actinpak.eu/wp-content/uploads/2016/05/FP1405_GP1_STSM_Dantuma_report.pdf



- Measurements of shelf life and anti-fog properties of functionalized cellulose nanocrystals materials for food packaging application.

The main objective of this STSM was to obtain new surface-modified materials able to release antibacterial molecules over a prolonged period, considering its potential in food packaging.



- Manufacturing and measurement of superhydrophobicity for paper-based active packaging.

I learnt how to manufacture a superhydrophobic coating suspension with latex and mineral particles and to measure final properties of paperbased coated material. We tried to replace latex with hydrophobized cellulose nanofibrils (CNF) and we achieve a 150° water contact angle. Absorption of water in the time remains a problem to work on.



Researches are invited to apply for STSM for GP2 from May 2016 till April 2017.

At University of Algarve, ISE (Prof. dr. Margarida Vieira) are interested in receiving researchers that want to work in the development of new biomaterials, microencapsulation of antimicrobials and of oxygen scavengers and mathematical modeling of controlled release of these compounds.

More information on:
http://www.actinpak.eu/wp-content/uploads/2016/05/FP1405GP1_STSM_Castro_report.pdf

More information on:
http://www.actinpak.eu/wp-content/uploads/2016/05/FP1405GP1_STSM_Riverdy_report.pdf

More information on:
<http://www.actinpak.eu/stsm-video-jinneth-lorena-castro>

More information on:
<http://www.actinpak.eu/category/dissemination-events/>

DISSEMINATION EVENTS

COST Action ActInPak was promoted at conferences and in media.

S. Yildirim and D. Gregor Svetec presented topic “Active and Intelligent Food Packaging: Current Solutions” 11th International Label Conference, 16-18 March 2016, Zell am See, Austria.

J. Lahti participated in two events in April 2016 in Finland:
PackPrintForum2016 organised by Finnish Packaging Association,
http://www.tut.fi/cs/groups/public_news/@l712/@news/@p/documents/liit/x150396.pdf
Innovations in Packaging 2016 organised by Tampere University of Technology
<http://www.tut.fi/fi/tietoa-yliopistosta/uutiset-ja-tapahtumat/tapahtumat/seminar-innovations-in-packaging-2016-x151900>.

At PTS Innovative Packaging Symposium, that was held on 6-7 April 2016 in Munich, Germany, 11 COST Action members gave oral presentation and 7 had poster presentation.

News about COST Action ActInPak appeared in different media, in journal VIGC Eye-Opener No. 3 - April 2016 (Belgium), Selcuk Yildirim gave interview in WirtschaftsBlatt (Austria) and Diana Gregor Svetec for Ö3 Radio (Austria).

UPCOMING EVENTS

Events, ActInPak

- 11-15 July 2016: ActInPak Training School in Swansea, UK.
Topic: Printing of functional applications.
<http://wcpcswansea.com/events/summer-school/2016/>
Still reimbursements for trainees available.
Registration via Chris Hammett c.a.hammett@swansea.ac.uk.
- 26 September 2016: Nanotec2016 combined with WG1 meeting, Valencia, Spain.
- 21-23 November 2016: MC/WG meeting, Bled, Slovenia.

Events, partners

- 13-16 June 2016, TAPPI, Grenoble, France, <http://conference.tappi-nano.org/>
- 25-27 October 2016, Foodtech, Novi Sad, Serbia,
<http://foodtech2016.uns.ac.rs/>
- 16-18 November 2016, ILSI, Barcelona, <http://www.ilsil.org/Europe/Pages/Packaging-Materials-Symposium-2016-General-Information.aspx>
- 26-28 April 2017, MATBIM, Porto, Portugal,
<http://www.porto.ucp.pt/pt/matbim2017>.

SHOWROOM



Antimicrobial packaging for syringe
EU project NEWGENPAK, demonstrator
September 2015



Oxygen Scavenger for cake preservation
Supermarket "Le Carré Asiatique", Grenoble, France
December 2015



Temperature indicator for flowers
Concept by KCPK, Arnhem, NL
2015



Intelligent packaging – thermochromic ink
Supermarket, Arnhem, NL
May 2016



Augmented reality (Layar) in humus packaging
Arnhem, NL
2016 (since 2013)



FreshPaper, antibacterial paper for fruits and vegetables
Fenugreen, USA
2015

Virtual showroom about active and intelligent packaging will be constantly updated on the website with examples from all in COST Action participating countries.
We are looking forward to get examples of active and intelligent packaging in the market.

Virtual Showroom

What ? An open DATABASE of development and product present in the European Market with a focus on sharing samples

To Who ? Anybody

Procedure? Simple, send one slide to s.tiekstra@bumaga.nl or diana.gregor@ntf.uni-lj.si

How Many? At least 100 at the end of the COST Action FP1405

Antimicrobial

R&D
In the Market



NewGenPak

Multi
Packaging
Solutions



What ? Antimicrobial packaging for syringe, external face to limit nosocomial transfer

Where ? From an European project NEWGENPAK, demonstrator

When ? Sept 2015

More details: Julien.Bras@grenoble-inp.fr, Grenoble, FRANCE