ISO-FOOD Spring School
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Workshop on nanoparticles and food

9-13th April 2018

Jožef Stefan Institute, Ljubljana, Slovenia

"This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 621329."

Scope

The Spring School and Workshop are dedicated to various perspectives of nanoparticles in food: either they may appear in food during the production, packaging or cooking, or they are introduced to enrich the taste, colour or consistency. As they are very small, they are difficult to detect in food, and require special techniques to characterise and analyse their interaction with cells and possible effect on human health.

The 3-day Spring School will provide to the participants with the basic knowledge connected to these topics, while in the following 2-day Workshop the participants will get to know about the selected techniques of NPs detection and characterisation. Intense discussions and training by internationally-renowned scientists in the field are planned. The training will be spiced up with the everyday examples.

Participants from broad area connected with food are invited to attend both, the Spring School and Workshop, however, attendance of only one or another is also welcome.

The whole week participation of the two events will be enriched by social events, giving the participants not only the opportunity for informal gathering with researchers from various fields but also to experience Ljubljana city, the boat trip and to taste the Slovenian cuisine.

Spring School and Workshop is organised by Department for Nanostructured materials and Condensed Matter Physics and it will be held in Kolar's lecture hall and in laboratories of Department for Nanostructured materials, Jožef Stefan Institute, Ljubljana, Slovenia.

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Spring School

9-11th April 2018

Monday, 9.4.2018

12:00 - 13:00	**Arrival & Registration**
13:00 - 14:00	*Lunch*
14:00 -14:15	**Opening** **D. Heath; ISO FOOD**
14:15 - 15:00	**M. Remškar**; Special properties of nanoparticles (NPs)
15:00 - 15:30	**N. Ogrinc & L. Fras Zemljič;** Innovative, biodegradable nanostructure material for food packeting
15:30 -15:45	*Coffee Break*
15:45 - 16:30	**M. Humar**; Photonic microparticles in biological systems
19.00 - …	*Dinner; "Gostilna na Gradu"*

Tuesday, 10.4.2018

09:00 - 09:45	**S. Novak Krmpotič**; Colloidal chemistry of NPs
09:45 - 10:30	**B. Nahtigal**; EFSA contact point
10:30 - 11:00	*Coffee break*
11:00 - 11:45	**P. Hoet**; Interactions of nanomaterials with the immune system
11:45 - 12:30	**N. Kostevšek**; Theranostic nanoparticles for future medicine: cancer treatment and imaging
12:30 - 14:00	*Lunch*
14:00 - 14:45	**E. Kranjc**; Nanoparticles and food (safety): the adhesion, uptake and translocation of Pt nanoparticles by arugula and escarole plants
14:45 - 15:30	**B. Višić**; NPs from fragrant smoke sticks
15:30 - 16:15	**S. Gyergyek**; Potential applications of magnetic nanoparticles in beverage industry
16:15 - 16:45	*Coffee Break*
16:15 - 16:45	**M.Filipič**; Cyto- and genotoxicity of NPs
16:45 - 17:30	**M. Pavlin**; Interactions of nanoparticles with cells- mechanisms of toxicity and open challanges

Wednesday, 11.4.2018

09:00 - 09:45	**G. Dražič**; Electron microscopy of NPs
09:45 - 10:30	**J. Vidmar**; Single particle ICP-MS: A powerful tool for NPs characterization and quantification
10:30 - 11:00	*Coffee break*
11:00 - 12:30	Lab tour
12:30 - 14:00	*Lunch*
14:00 - …	Excursion; JSI Reactor Infrastructure Centre

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Workshop

12th–13th April 2018

Thursday, 12.4.2018

09:30 - 10:00	**Introduction** (M. Remškar)
10:00 - 12:30	**Master Chef Food -Contact angle** (A. Abram) - Smoked Food - Colloidal silver
10:00 - 12:30	**White or transparent? -Electron microscopy** (M. Koblar) - Food and cosmetic grade TiO2 - Smoked food - Colloidal silver
13:00 - 14:00	*Lunch*
14:00 - 15:30	**Heal or kill? -Colorimetric test** (A. Drame) - Colloidal silver
18:00 - …	*Dinner; "Boat trip Ljubljanica" or "Pivnica Union"*

Friday, 13.4.2018

09:00 – 09:45	**M. Lorenzetti**: Food-grade TiO2 in confectionery: a case study
10:00 - 11:00	**Birthday cake party -Particle size and surface charge (DLS)** (A. Drame) - Food grade TiO2
10:00 - 11:00	**Small and fast -Optical microscopy of small particles** (M. Koblar) - Food grade TiO2
11:00 – 12:30	**Let's light one -Detection of nanoparticles in air** (M. Remškar, B. Višić) - Sparkler - Magic candle - Smoking (cigarette, smoking of food)
12:30 - …	*Closing*

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