Dziekan Wydziału
Matematyczno-Przyrodniczego
i Dyrektor Instytutu Chemii,
Nauk o Zdrowiu i Żywności
Uniwersytetu Humanistyczno-Przyrodniczego
im. Jana Długosza
w Częstochowie zapraszają

6 listopada – wtorek – 2018 r.
o godz. 11^{00}
do Audytorium – sala 1023
Al. Armii Krajowej 13/15

na

Seminarium Wydziału Matematyczno-Przyrodniczego

na którym

Prof. Manuel A. Coimbra
Dr. Idalina Gonçalves

CICECO – Aveiro Institute of Materials & QOPNA - Organic Chemistry, Natural Products and Food Stuffs, University of Aveiro, Portugal

przedstawią wykłady:

The research on polysaccharides and their application at the University of Aveiro, in Portugal

Potato chips byproducts for bioplastic's production: from solvent casting to extrusion and injection processes

The research on polysaccharides at the Department of Chemistry of the University of Aveiro has been based on the establishment of the relationships between the structural features of the polysaccharides and their properties. This has allowed to address new solutions for food industries and define biomaterials for food and food packaging applications.

This presentation will focus on the valorization of non-reused potato chips industry byproducts (potato starch from washing slurries, potato peel and frying oils) as biomolecules sources for the development of bioplastic materials. Three main experimental stages will be presented: (1) isolation and physicochemical characterization of potato chips byproducts; (2) development of biobased films by solvent casting; and, (3) extrusion/ injection of the most promising biobased formulations. Experimental parameters optimization will be presented considering different byproducts combinations; mixture ratios; processing times and temperatures. Mechanical and physicochemical characterization for each lab- and pilot-scale developed material will be highlighted.

By exploiting all the biochemical and materials science concepts behind this research it will be possible to understand the feasibility of adding value to agrofood wastes for producing bioplastics and reinforce the major contributes of a circular economy between agrofood and plastic industries.

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