CENTER OF SCIENTIFIC RESEARCH OF ENVIRONMENT, FOOD AND HEALTH SAFETY- CCESMAS

PHYSICAL- CHEMICAL ANALYSIS

Contact details

Name | Center of Scientific Research of Environment, Food and Health Safety- Physical-Chemical Analysis  
Acronym | CCESMAS-Phys-Chem  
Logo |  
Site | http://chimie-biologie.ubm.ro/cercetare.html  
Address | 76 Victoriei Str., Baia Mare, Romania  
Faculty | Faculty of Sciences  
Department | Chemistry-Biology Department  
Telephone | +40 0262 276059  
Fax | +40 0262 275368  
Director | Prof. Dr. Eng. Anca Mihaly Cozmuta  
e-mail | ancamihalycozmuta@gmail.com

Areas of expertise

Food safety and security: ● Food control; ● Functional food; ● Traceability of contaminants along of food chain ● Active food packages
Environment: ● Environment monitoring: wastes, organic and inorganic pollutants from different matrices ● Recovery of valuable metals from different wastes (including also the mining water wastes)
Science of material: ● Nanomaterials based on titania, silica and noble metals: preparation, characterization and applications in depollution, recovery of metals, self cleaning, food preservation, etc...
Chemometry: ● Statistically processing the experimental data; ● Mathematical modelling of experimental data

Team

Prof. Dr. Eng. Anca Mihaly Cozmuta (coordinator), Associate Prof. Dr. Camelia Nicula, Associate Prof. Dr. Anca Peter, Associate Prof. Dr. Eng. Leonard Mihaly Cozmuta

Representative projects

FOODCHAIN4EUROPE - HIGH QUALITY FOOD CHAIN 4 EUROPE – INTERREG IV (2017-2022)
GRAFOOD – “Active GRAphe based FOOD packaging systems for a modern society”, PNIII-P3-3.2 COFUND-M-ERA.NET II-GRAFOOD, (2017-2020)
STRUCTural and PHOtochemical investigations of a nanosized composite as active component of paper based PACKAGE designed for food applications (STRUCT-PHO-PACK) – Romania-Russia bilateral projects; 2017-2018.
SMARTPACK-“Smart functions of packages containing nano-structured materials in food preservation”, (2012-2015)
RIVAM, “Rehabilitation of tailings ponds by application old amendments and cultivation of vegetal species with high adaptability to the heavy metals”, http://chimie-biologie.ubm.ro/RIVAM (2008-2011)
SIG, “Designing the hazards charts and environment assessment in mining areas of Maramures and Satu Mare counties using GIS”, (2005-2008)

Significant results

Active packages for food industry
The most representative publications of the past 5 years
5. Peter, Anca; Nicula, Camelia; Mihaly-Cozmuta, Leon; et al., An efficient and innovative method to preserve the harvested plums during storage. Journal of Food Processing and Preservation, 42(1), e13398, 2018
6. Mihaly-Cozmuta, Anca; Peter, Anca; Craciun, Grigore; et al., Preparation and characterization of active cellulose-based papers modified with TiO2, Ag and zeolite nanocomposites for bread packaging application. Cellulose, 24(9), 3911-3928, 2017
8. Peter, Anca; Mihaly-Cozmuta, Anca; Nicula, Camelia; et al., UV Light-Assisted Degradation of Methyl Orange, Methylene Blue, Phenol, Salicylic Acid, and Rhodamine B: Photolysis Versus Photocatalysis Water Air and Soil Pollution 228(1), Number: 41, 2017

Patent:
Methods to obtain intelligent packages containing nano-structured materials used in food preservation -European patent, filing No. 1023377/ 28.08.2015

The offer addressed to the economic environment

| Research & development | Pollution monitoring; Rehabilitation of polluted areas; Physical-chemical control and expertise of food; Food packaging; Nanomaterials; preparation, characterization, application; Recovery of valuable metals (Au, Ag, Cu) from wastes; Waste waters treatment; Application of nanomaterials in environment depollution; Intelligent and active food packages: nano-packages; bioactive edible films;
| Consulting | Technologies for remediation of polluted soils; Technologies for recovery of valuable metals from wastes (Cu, Au, Ag); Food packaging; Food safety; |
| Applied engineering services | Technologies for remediation of polluted soils; Technologies for recovery of valuable metals from wastes (Cu, Au, Ag); Physical-chemical analysis of solid and liquid samples; Analysis of mineral elements in different matrices |
| Training | Operation of analysis equipment (FTIR, TOC, Analyst Perkin Elmer 800); Statistically processing of experimental data; Nanomaterials: preparation, characterization and applications; Food packaging. |