



# THE RESEARCH CENTER FOR WASTE RECYCLING

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**„DUNAREA DE JOS“ UNIVERSITY OF GALATI  
FACULTY OF ENGINEERING**



## ABOUT

The Research Center for Waste Recycling from "Dunarea de Jos" University of Galati is an academic research unit created in order to concentrate the professional experience and the efforts of the scientific community in the university, for carrying out research, development and innovation in the field of waste recovery.

### RESPONSIBLE

Prof. dr. ing.  
Buruiană Daniela



### TEAM

S.I. dr. ing. Ghisman Viorica  
S.I. dr. ing. Obreja Cristian Dragos  
As. dr. ing. Bogatu Nicoleta  
Masters student Ghisman Georgiana

The transformation of waste into reusable resources (raw material) is the main objective of the circular and ecological economy, which involves in itself the process of more efficient management of raw material, innovation at the level of product design and manufacture with the aim of reducing the amount of packaging, as well as training staff in terms of waste management and the integration of UDJG's concerns and research regarding the valorization/recycling of all types of waste, given that they represent a major environmental problem of contemporary society, especially in Romania.

## **DEVELOPMENT STRATEGIES AND OPPORTUNITIES**

The research center for waste recycling is in line with the strategies for sustainable development at the European and national level which give particular importance to ensuring the links between research and sustainable development and with the 2020 vision of the European Research Area whereby "it must have strong roots in society and respond to its needs and ambitions, in the desire to ensure sustainable development".

The research program of "Dunarea de Jos" University of Galati and all the themes within the Research Center for Waste Recycling are in close correlation with the fields included in the EU's ambitious framework program for research and innovation (2021-2027) strengthening the scientific and technological bases of the EU and the European Research Area (ERA) stimulating innovation capacity, competitiveness and job creation in Europe addressing citizens' priorities and supporting our socio-economic model and values.

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## **RESEARCH DOMAINS**

- Utilization of slag waste in agriculture
- The recovery of plastic waste in the road construction industry
- Valorization of waste from the pharmaceutical industry
- Waste recycling in order to sequester greenhouse gases

# INFRASTRUCTURE

1. Scanning electron microscope SEM,
2. FT-IR spectrophotometer with ATR module + Software with included accessories. Model: IRSpirit-T
3. Ultrasonic bath
4. Hettich Zentrifugen Universal Refrigeration Centrifuge
5. UV-A, UV-B, UV-C irradiation equipment Delta Systech Romania
6. Thin film deposition equipment Polos SPIN150i/200i infinite
7. Electric hotplate with temperature probe and stirrer
8. Rotoevaporator LCD Digital Dlab
9. Elma ultrasonic bath
10. Ultrasonic bath with heating and timer IBX instruments
11. Magnetic stirrer set with heating Dlab Ms-H280-PRO
12. Magnetic stirrer set with heating 20 liters – MS-H-PROT
13. Magnetic stirrer set without heating MS-PA
14. Macherey-Nagel Visocolor School water analysis putty
15. Insize digital microdurometer
16. Fritsch Pulverisette 2 mechanical mortar
17. Technical balance



## INFRASTRUCTURE

18. Multiparameter Tester pH ec TDS temperature Multiparameter Tester pH ec TDS temperature
19. Kern ALJ 160-4AM Analytical Balance
20. Microwave oven Samsung MS28F303TAS/OL, 28L, 1000W, Display, Digital control, metal interior



## TEAM



