

**Cooperation and partnership strategy for the enhancement of the education quality of strategic master Chemistry of Advanced Materials in line with Green Chemistry requirements**

- **Green Chemistry of Advanced Materials – GREENCAM**

Project cod	18-COP-0041
Project coordinator	Assoc. prof. Madalina Sandulescu-Tudorache
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Project Budget	136720 euro
UB Project Budget	67584 euro
Project website	<a href="https://www.chimie.unibuc.ro/edu/greencam/index.php">https://www.chimie.unibuc.ro/edu/greencam/index.php</a>

### Partners

University of Bucharest

Norwegian University of Science and Technology

### Objectives

- The enhancement of the quality and relevance of education and training focused on the CAM (Chemistry of Advanced Materials) master, Faculty of Chemistry, UB.
- Higher education student and staff learning mobility between NTNU and UB partners.
- Cooperation and partnerships between education and the world of work in the area of Green Chemistry.
- Professional development of teachers from UB.

GREENCAM proposes an academic partnership between University of Bucharest (UB) as beneficiary coordinator and Norwegian Technique and Science University (NTNU) as donor partner. GREENCAM activity is focused on Chemistry of Advanced Materials (CAM), strategic master direction of Faculty of Chemistry (UB). The project establishes an excellent opportunity to CAM students for coming in contact with fresh knowledge and also acquiring new skills from the area of Green Chemistry in the context of Advanced Materials. UB and NTNU will share the successful teaching strategies and best practices for improving student learning and also to achieve a high-quality professional development of participant teachers as well.

Additionally, GREENCAM proposes an alliance between Green Chemistry and Advanced Materials. The project aims, therefore, to offer a new strategy for designing the CAM master program in response to contemporary international debates about the environmental pollution and green industry, emerging to the general concept of environment preservation.

### GREENCAM offers

#### *for teachers*

- the enhancement of professional skills in line of new and modern teaching courses;
- educational development and pedagogical innovation adapted at European academic space;
- new vision on the management of learning/training activity;
- the opportunity of contact between industry and university areas;
- the experience of collaborative activity in academic field;
- future collaboration in education and also research area;

#### *for students*

- excellent theoretical education and lab skills especially in the area of green advanced materials;
- attractive and motivated perspective to be prepared for a performing career.
- short-term study mobility (STSM) for adapting the education at the current requirements of the European society.

### **Research topics for STSM**

1. Crystalline porous coordination polymers with catalytic / gas adsorption applications.
2. Humins – from wastes to catalytic materials.
3. Designing biocatalysts based on the model of enzymes co-immobilization with application for cascade biocatalysis.
4. Developing new biocatalysts based on cold-active enzymes for the valorisation of biomass waste.

### **The intellectual outputs proposed**

- improved curricula of CAM master study;
- electronic support of three improved courses dedicated to the master students;
- e-book including the master theses with double supervision (NTNU and UB);
- proceedings of the Intensive study program in printed and electronic version;
- special issue of the workshop (multiple event) "Contemporary solutions for advanced materials with high impact on society";
- two scientific papers published in ISI journals.