

PERSONAL INFORMATION

**Dumitriu Cristina**



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**Date of birth** 26/08/1979 | **Nationality** Romanian

WORK EXPERIENCE

03.2019 - present

**Assistant professor**

Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest

- Main activities and responsibilities: Teaching “General Chemistry” Course at the faculty FAIMA (Entrepreneurship, Business Engineering and Management), coordination and guidance of students during practical activities in the General Chemistry laboratory
- Develop own teaching materials, namely printed and the electronic support
- Licence and Dissertation project coordination
- Scientific research activities
- Develop project proposals funded by national programs

**Business or sector** Teaching and research activity

01.10.2014 – Martie 2019

**Teaching assistant**

University Politehnica of Bucharest

Main activities and responsibilities: coordination and guidance of students during practical activities in the General Chemistry laboratory

**Business or sector** Teaching and research activity

15.08.2008 – 01.01.2011

**Head of packaging team**

SC Arena Group S.A. - Bucharest, Romania

Main activities and responsibilities: checks on the production flow, completing the daily delivery-receipt notes in the accounting program

**Business or sector** Pharmaceutical industry

03.01.2007 – 08.08.2008

**Chemist engineer**

SC Combial S.A. - Urziceni, Ialomița, Romania

Main activities and responsibilities: coordinating the production flow from the control desk, responsible for hygiene. member of the HACCP (Hazard Analysis and Critical Control Points) team

**Business or sector** Agri-food industry

01.09.2006 – 03.01.2007

**Chemist engineer**

SC Laropharm - Bragadiru, Ilfov, Romania

Main activities and responsibilities: laboratory analysis for the finished product (strength, dosing, dissolution)

**Business or sector** Pharmaceutical industry

01.04.2005 – 01.09.2006

**Chemist engineer**

Vlad Alex Termo Srl. - Bucharest, Romania

Main activities and responsibilities: laboratory analysis

**Business or sector** Chemical industry

EDUCATION AND TRAINING

- 2013 **Participation in seminars and workshops within POSDRU107 / 1.5 / S / 76909**
- Friedrich Alexander University - Erlangen-Nürnberg, Germany
  - Scientific research
- 1.10.2011 – 01.04.2012 **Internship within POSDRU107 / 1.5 / S / 76909**
- Åbo Akademi – Turku (Åbo), Finland
  - Scientific research obtaining and characterizing conductive polymer films, Electrospinning, Raman Spectroscopy, UV - VIS in situ, ATR in situ
- 2010-2013 **PhD in Chemistry**
- University Politehnica of Bucharest
  - PhD thesis title: "Modified surface electrodes with self-organized nanotube structures, nanofibers and conductive polymers"
- 20.03.2006 – 30.06.2006 **Erasmus mobility grant**
- National Polytechnic Institute of Lorraine, National School of Agronomy and Food Industries - Biotechnology and Food Process Engineering Group, Nancy, France
  - laboratory research - separation of hydrophilic peptides using HPLC
- 2004 – 2006 **Master degree**
- Materials, Substances and Biocompatible Systems, Department of Bioengineering and Biotechnology, University POLITEHNICA of Bucharest.
  - The title of the dissertation thesis: "Analytical techniques for the characterization of peptides".
- 2004 – 2006 **Engineer Diploma**
- Politehnica University of Bucharest
  - Specialization: Engineering and chemistry of organic substances
  - Title of the bachelor's thesis: research part - "Synthesis of 4,7-diphenyl-oxadiazole [4,5-c] pyridine-6-carboxylic acid"; design part - "To design a plant for obtaining ethyl alcohol by fermentation"

**PERSONAL SKILLS**

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	B1/2	B1/2	B1/2	B1/2	B1/2
English	B1/2	B1/2	B1/2	B1/2	B1/2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

- Communication skills**
- Interactive person with good communication skills, serious, responsible, interested in professional collaboration
  - teamwork experience gained through participating in national and international projects as a member and project director but also through participation in numerous national and international conferences
  - good communication skills acquired by participating in student communication sessions (Organic Chemistry: May 2001, May 2002, May 2003, May 2004 - 3rd prize with the paper: "Synthesis and characterization of a new acid chloride")
- Job-related skills**
- knowledge of quality control processes (working in the Quality Control Department at S.C. Laropharm - Bragadiru, Ilfov, Romania)
  - knowledge of HACCP norms - risk analysis and critical control points (working within S.C. Combial S.A. - Urziceni, Ialomita, Romania)

## Computer skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Security	Rezolvare a de probleme
Experienced user	Experienced user	Experienced user	Elementary user	Elementary user

N levels: Elementary user - Independent user - Experienced user  
Digital competences - Self-assessment grid

- good command of Microsoft Office tools
- working with MathCad, OriginLab, ChemWindow, ChemBioOffice, IrfanView, Gimp programs acquired undergraduate, master's and doctoral studies

## Organisational / managerial skills

- ✓ Supervisor in the frame of student scientific sessions communications organized by General Chemistry Department,
- ✓ Project manager for 1 research project: PNIII-PED (2018-2020)

## Driving licence

- B

## ADDITIONAL INFORMATION

## General research areas

- Chemical and electrochemical surface modification and characterisation of metals and metals alloys for bio and non-bio-applications.
- Chemical and electrochemical synthesis of thin films (TiO<sub>2</sub> nanostructures - nanotubes, nanofibers, nanochannels, conducting polymers, hybrid materials) dedicated to biomedical applications
- Surface characterization by electrochemical methods (cyclic voltammetry, electrochemical impedance spectroscopy, Tafel plots techniques for stability evaluation) and physico – chemical methods for thin films: surface charge measurements, wettability test (contact angle), IR spectra; UV-VIS spectra
- Electrochemical detection
- Organic syntheses

## Publications

- Author of 26 scientific articles (most of them ISI indexed, many as main author) and a national patent in collaboration with the members of the department; number of citations in the Web of Science Core Collection, without self-citations, 187
- Participant at 13 international conferences (9 oral presentation)
- 1 national patent

## Research projects

- project team member: Code 41, Nr. CH 380412 - Synthesis of new fluorescent heterocycles with applications in biochemistry and electronics
- project team member: PN-II-PT-PCCA 253/2014 New multifunctional nanostructured coatings for orthopedic implants, NanoCoat;
- project team member: PN-III-P2-2.1-PED-2016-0910 Innovative surface design to extend the period of use and safety of dental and orthopedic implants - NovSurf;
- project team member: PN-III-P2-2.1-PED-2016-1372 Improving the repair of bone defects by shell-based TiO<sub>2</sub>-based nanostructures inspired by bioactive phytochemicals - DAPHYTBONE.
- project team member: PN-II-RU-TE2014-4-0594 Chemically modified electrodes with complexing polymeric films for electroanalysis of heavy metal ions – CHEMPOLANAL
- project director: PN-III-P1-1.1-PD-2016-2185 „New modified electrodes for gluten detection in food - TiO<sub>2</sub> Gluten”
- project director: PN-III-P2-2.1-PED-2021-4405, An innovative sensing system for Non-Invasive Celiac Disease diagnosis

## Other informations

- Member of the Romanian Chemical Society
- awards for research articles from the National Council for Scientific Research in Romania (CNCSIS)
- H-index 10 (according to Scopus);