

Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Carmen Mateescu**
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 Nationality Romanian
 Date of birth 25 June, 1969
 Gender F

Work experience

July 2016 – present
 Senior Researcher, Department of Environment, Energy and Climate Change, Head of Laboratory of Biochemistry and Bioresources.
 Research activities in the field of environmental technologies and bioresources recovery. Project management, coordinator of several national projects: Project PNIII Grant 170PED / 2017 "Development and validation of reliable solutions to produce biogas from algal biomass in the Danube Delta Biosphere Reserve"; Complex Project 0541 "Integration of microalgal cultivation process into biogas plants for by-products complex recovery". Development of national and international research projects in the fields of environmental protection and renewable energy. Development of patented innovative solutions for waste and wastewater treatment with the recovery of fuel gases and by-products. Research, design and execution of equipment for the energy recovery of biodegradable waste while improving the environment quality; Research on bio-electromagnetic stimulation of living cell cultures for applications in the fields of environmental biotechnology and bioenergy.

Dates November 2010 – June 2016
 Occupation or position held Senior Researcher, Department of Efficiency in Energy Conversion and Consumption
 Main activities and responsibilities Research activities in the field of renewable energy sources: Researches for generating biogas from biomass and waste; Chemical and microbiological analysis of high organics-loaded wastewaters for monitoring anaerobic digestion in biogas systems;
 Research for stimulating microbial activity in waste-to-biogas processes for increasing the energy efficiency of the biogas systems; Research for enhancing the biological decomposition of lignocellulosis materials used for biofuels industry;
 Management of some national and bilateral projects: Nucleu Project no. 0935/2009 „Enhance the effectiveness of equipments and technological processes for energetically conversion of renewables”; Ro-China Bilateral Project „ Investigation on biogas producing microorganisms under high hydrostatic pressures and applied research on algae growth for CO₂ recovery”; Ro-China Bilateral Project „Prospective studies for assessing the opportunity to develop a bioreactor for energy generation based on organic waste and wastewaters”

Name and address of employer INC DIE ICPE CA, 313-Splaiul Unirii, Bucharest-3, 030138, Romania
 Type of business or sector Environmental protection and renewable energy sources

Dates September 2009 – October 2010
 Occupation or position held Researcher, Head of Biology Department

Main activities and responsibilities	Research activities in the field of renewable energy sources: Researches for biogas production from biomass and waste; Chemical and microbiological analysis of highly organics loaded wastewaters for monitoring anaerobic digestion in biogas systems; Researches for stimulating microbial activity in biogas generation processes for increasing the energy efficiency of the biogas systems; Researches for enhancing the biological decomposition of lignocelluloses materials used in biofuels industry; Project management activities for the national project Nucleu 0935/2009 „Enhance the effectiveness of equipments and technological processes for energetically conversion of renewables”
Name and address of employer	INCDIE ICPE CA, 313-Splaiul Unirii, Bucharest-3, 030138, Romania
Type of business or sector	Environmental protection and renewable energy sources
Dates	June 2007 - August 2009
Occupation or position held	Researcher
Main activities and responsibilities	Research activities in the field of environmental protection and renewable energy sources; Elaboration of project proposals for national and European research programs; Dissemination activities of the research results in scientific papers, publications, books, conferences and workshops
Name and address of employer	INCDIE ICPE CA, 313-Splaiul Unirii, Bucharest-3, 030138, Romania
Type of business or sector	Environmental protection and renewable energy sources
Dates	January 2001 – June 2007
Occupation or position held	Junior Researcher, Responsible for environmental protection within the department
Main activities and responsibilities	Research activities under national research programs in the field of environmental protection (municipal, industrial and hazardous waste incineration); Elaboration of technical specification for “Medical waste incinerator”, “PCBs containing waste incinerator”, “Plastics, organic liquids, municipal waste and sanitary-veterinary waste incinerator” Ambient air monitoring in urban areas, Elaboration of an integrated system for waste disposal; Testing for assessment of the electrical materials resistance in special environments (salt mist, ozone, hydrogen sulphide, sulphur dioxide); Dissemination activities of the research results in scientific papers, publications, books, conferences and workshops
Name and address of employer	SC ICPE SA, 313-Splaiul Unirii, Bucharest-3, 030138, Romania
Type of business or sector	Research activities in the field of environmental protection
Dates	September 1994 – August 1998
Occupation or position held	Teacher for high school education
Main activities and responsibilities	Practical and theoretical teaching activities in the fields of equipments and technologies for chemical industry, analytical chemistry; Elaboration of laboratory procedures for chemical analysis; Elaboration of “Workers Safety Norms in Analytical Chemistry Laboratory”
Name and address of employer	High School „Petru Poni” Bucharest, Preciziei Street, Bucharest-6
Type of business or sector	Teaching activities for high school education

Education and training

Dates	2007 – 2012
Title of qualification awarded	Doctor
Principal subjects/occupational skills covered	Doctoral studies in the fields of environmental engineering and renewable energy sources, biochemistry and microbiology of the environment, waste and wastewaters treatment technologies Title of doctoral thesis: „Studies regarding the energy recovery of organic waste from ethanol industry to obtain high energy value biogas”
Name and type of organisation providing education and training	University “Politehnica” of Bucharest, Faculty of Applied Chemistry and Materials Sciences
Dates	1987 - 1993
Title of qualification awarded	Diploma of Chemical Engineer

Principal subjects/occupational skills covered Organic chemistry, instrumental analysis, wastewater treatment technologies, synthesis technologies for dyes, medicines, pesticides

Name and type of organisation providing education and training University "Politehnica" of Bucharest, Faculty of Industrial Chemistry

Other specializations Training courses: „Training session under the Dissemination Program for Biogas Technologies from Farm Waste, 05-07.04.2017, „Environment technologies and European environment legislation 28.05 – 01.06.2001; „Integrated system for waste management in accordance with Communities Acquis”, 12-16.03.2007; „Integrated management system quality-environment”, 24-30 July 2007; „Preparing and management of European projects”, 11.17.08.2004; „Measuring uncertainty assessment in chemical laboratories for environmental pollution analysis”, organized by RENAR, 29-31.10.2001; „Low pollutants emission installations and equipments”, 27-28.11.2001

Personal skills, competences Communication skills, good adaptability for challenges

Mother tongue(s) Romanian

Self-assessment

European level (*)

English

French

	Understanding		Speaking		Writing	
	Listening	Reading	Spoken interaction	Spoken production		
English	C2	C2	C2	C2	C2	C2
French	A1	A2	A1	A1	A2	A2

(*) Common European Framework of Reference for Languages

Computer skills and competences medium

Driving licence Category B vehicle

Additional information Author/coauthor of more than 100 articles and scientific papers published in national and international journals and conference proceedings. Author of the scientific books: *Achievements and perspectives in biogas industry*, Printech, 2008, *Methanogenesis in natural and anthropic processes*, Printech 2014

Registered patents and patent applications (9 out of a total of 10):

- o **Patent RO 131563B1/2020** *Tubular bioreactor with the liquid effluent partial recirculation*. Author: Mateescu Carmen
- o **Patent RO 132199B1/2020**: *Process for stimulating biomass and system for producing biogas* Authors: Mateescu Carmen, Lingvay Iosif, Caramitu Alina, Tanase Nicolae, Radu Elena
- o **Patent Application A00463/2020**, *Polymeric material stabilized with microalgal biomass and manufacturing process*, Authors: Zaharescu Traian, Mateescu Carmen, Dima Andreea-Daniela
- o **Patent Application A00773/2019**, *Process for stimulating biogas and biomethane in codigestion*, Authors: Mateescu Carmen, Dima Andreea-Daniela, Lungulescu Eduard-Marius, Militaru Adrian
- o **Patent Application A/00053/2018** *Experimental model for testing the biomethane potential of biomass* Authors: Mateescu Carmen, Lipcinski Daniel, Lungulescu Marius, Tanase Nicolae, Torok Liliana
- o **Patent Application A/00523/2018** *Process of algal biomass enzymatic pretreatment used for biogas production*, Authors: Mateescu Carmen, Nicula Nicoleta Oana, Eduard-Marius Lungulescu, Torok Liliana, Torok Zsolt
- o **Patent RO126398B1/30.04.2014** *Sewage sludge treatment procedure to stimulate the activity of methanogenic microorganisms* Author: Mateescu Carmen
- o **Patent RO 125902B1/30.04.2014** *Biogas obtaining plant* Authors: Carmen Mateescu, Ionel Chiriță, Nicolae Stancu, Corina Băbuțanu
- o **Patent Application A00226/2011** *"Bioreactor for renewables based energy"* Authors: Assmann Allo, Rottmayr Sepp, Carmen Mateescu, Kappel Wilhelm, Klingeiss Arnold, Sinca Maria, Tanasescu Florin Teodor, Nate Silviu

National and international awards (selection, 9 out of a total of 13):

- o **Gold Medal** at EUROINVENT, Iași, Romania, May 2022, for the patent application A/00463/2020 *Polymeric material stabilized with microalgal biomass and manufacturing process*, Authors: Zaharescu Traian, Mateescu Carmen, Dima Andreea-Daniela;
- o **Gold Medal** at Pro Invent Cluj-Napoca, Nov. 2020, for the patent application A/00523/2018 *Process of algal biomass enzymatic pretreatment used for biogas production*, Authors: Mateescu Carmen, Nicula Nicoleta, Marius Lungulescu, Torok L., Torok Zsolt;
- o **Silver Medal** at EUROINVENT, Iasi, Romania, 16-18 May, 2019, for the patent application No. A/00324/2016 *Tubular bioreactor with the liquid effluent partial recirculation*. Author: Mateescu Carmen
- o **Gold Medal** at EUROINVENT, Iasi, Romania, 19 May, 2018, for the patent application No. A/00269/2016: *"Process for stimulating biomass and system for producing biogas"*, Authors: Mateescu Carmen, Lingvay Iosif, Caramitu Alina, Tanase Nicolae, Radu Elena
- o **Gold Medal and Excellence Diploma**, at Pro Invent Cluj-Napoca, Romania, 22-24 March 2017, for the patent application No. A/00324/2016 *Tubular bioreactor with the liquid effluent partial recirculation*. Author: Mateescu Carmen
- o **Silver Medal** at „The Belgian and International Trade Fair for Technological Innovation” Brussels Eureka, Belgium, Novembre 2010, for the patent application No. A/00616 / 14.07.2010 *"Household biogas unit for rural areas"*, Authors: Carmen Mateescu, Ionel Chirita, Nicolae Stancu, Corina Alice Babutanu;
- o **Silver Medal** at Inventika Bucharest 2010, Romania, for the patent application No. A/01046 / 14.12.2009 *"Sewage sludge treatment process for stimulating the activity of methanogens"*, Author: Carmen Mateescu;
- o **Bronz Medal** at „Salon International des Inventions”, Geneva, Switzerland, April 2011, for the patent application No. A/00616 /14.07.2010 *"Household biogas unit for rural areas"* Authors: C. Mateescu, I. Chirita, N. Stancu, C. Babutanu;
- o **Prize AGIR** 2011, for the research result *"Household biogas unit for rural areas"*, achieved under the project Nucleu No. 0935/2009. The result was transferred to the trade company PRODLACTOSERV SRL;

Date: June 2022