Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)	**CAZAN CRISTINA**
E-mail	c.vladuta@unitbv.ro

Desired employment / Occupational field

Transilvania University of Brasov
Faculty of Product and Environmental Design
Department of Product Design, Mechatronics and Environment
University Professor

Work experience

Period	2025 - present
Function or position held	Full Professor
Main activities and responsibilities	Teaching courses: Environmental Management and Audit, Integration of environmental management systems, environmental quality and occupational safety, Solid Waste Management, Recycling Technologies, Biochemistry, Organic Chemistry, Waste Recycling (Master), and Polymer Chemistry (Master). Guidance for student thesis, practice guidance (tutoring); Mentoring student scientific research.
Name and address of employer	Transilvania University of Brașov
Type of business or sector of activity	Education and Research

Period	2015 - 2025
Function or position held	Associate Professor
Main activities and responsibilities	Teaching activities (courses, seminars and laboratories) in the following subjects: Solid Waste Management, Recycling Technologies, Biochemistry, Organic Chemistry, Waste Recycling, Polymer Chemistry (Master). Guiding students for their diploma/dissertation work and internship. Volunteering activities. Maintaining relations with the economic environment.
Name and address of employer	Transilvania University of Brașov
Type of business or sector of activity	Education and Research

Period	2008-2015
Function or position held	Lecturer
Main activities and responsibilities	Teaching activities (courses and laboratories) for the subjects: Environmental Management and Audit, Solid Waste Management, Recycling Technologies, Biochemistry, Organic Chemistry, Recyclable Materials. Guiding students for their diploma/dissertation work and internship. Volunteering activities. Maintaining relations with the economic environment. Research activities in the field of solid waste recycling.
Name and address of employer	Transilvania University of Brașov
Type of business or sector of activity	Education and Research

Period	2003-2008.
Function or position held	Assistant Lecturer
Main activities and responsibilities	Teaching activities: teaching laboratories and seminars for the subjects: General Chemistry, Biochemistry, Special Materials. Practical activities with students. Research activities in the field of solid waste recycling
Name and address of employer	Transilvania University of Brașov
Type of business or sector of activity	Education and Research
Period	1999-2003
Function or position held	Teacher
Main activities and responsibilities	Teaching activities (courses, seminars, laboratory) in chemistry. Leadership, volunteer activities
Name and address of employer	CN Dr. Ioan Mesota / CN Racoviță
Type of business or sector of activity	Pre-university education

Education and training

Period	**2014-2015**
Qualification / diploma obtained	Post-doctorate
Main subjects studied / professional skills acquired	Professional skills in the field of solid waste recycling, obtaining composite materials (compression and injection methods), advanced characterization methods (mechanical tests - tensile, compression, bending, impact, XRD, FT-IR, AFM, contact angle, DSC) optimization of polymer composite materials - endurance tests
Name and type of educational institution/training provider	Transilvania University of Brașov
Level in national or international classification	Postgraduate Training Course
Period	**2003-2010**
Qualification / diploma obtained	PhD in Materials Science and Engineering
Main subjects studied / professional skills acquired	Professional skills in the field of solid waste recycling for the production and characterization of waste-based composite materials used for indoor/outdoor environments.
Name and type of educational institution/training provider	Transilvania University of Brașov
Level in national or international classification	Doctoral studies
Period	**2006-2008**
Qualification / diploma obtained	Master of Science
Main subjects studied / professional skills acquired	Master: Applied Chemistry in Environment and Industry Professional competences in Nanomaterials in Environmental and Industry, Advanced Environmental Chemistry, Metrology in Chemistry, Basic of RES, Advanced Polymers, Sustainable Development, ECO Design, Environmental Impact Assessment, Project Development, Environmental Biotechnology, Electrochemical and Mechanical Corrosion
Name and type of educational institution/training provider	Transylvania University of Brașov
Level in national or international classification	Master's Degree

Period	**2009**
Qualification / diploma obtained	Certificate of completion of postgraduate training course issued by the Ministry of Education, Research and Youth
Main subjects studied / professional skills acquired	Professional skills acquired: Environmental Auditor, Environmental Management Systems Manager
Name and type of educational institution/training provider	Procomunita Sibiu
Level in national or international classification	Training Course
Period	**2008**
Qualification / diploma obtained	Certificate of completion of postgraduate training course issued by the Ministry of Education, Research and Youth
Main subjects studied / professional skills acquired	Professional skills acquired: Quality Auditor, Quality Management Systems Manager
Name and type of educational institution/training provider	Procomunita Sibiu
Level in national or international classification	Training Course
Period	**2002-2003**
Qualification / diploma obtained	Certificate of Completion Course
Main subjects studied / professional skills acquired	Competence in using specialized chemistry software, such as ChemDraw, to draw chemical structures, to model and visualize three-dimensional molecular structures, and to understand molecular properties and interactions; to perform computational simulations of chemical reactions, kinetics, and mass transport in chemical systems.
Name and type of educational institution/training provider	Transilvania University of Brașov
Level in national or international classification	Training Course
Period	2000-2001
Qualification / diploma obtained	
Main subjects studied / professional skills acquired	Initiation internship in "Counseling and Guidance"
Name and type of educational institution/training provider	Brașov Psychopedagogical Assistance Center and Brașov Teaching Staff House
Level in national or international classification	Training course
Period	1993-1997
Qualification / diploma obtained	Bachelor's Degree in Physics and Chemistry
Main subjects studied / professional skills acquired	General skills: inorganic chemistry, organic chemistry, analytical chemistry, physical chemistry, electrochemistry, polymer chemistry, chemical technology, physics, polymer physics, solid state physics, molecular physics
Name and type of educational institution/training provider	Transilvania University of Brașov

Level in national or international classification	University studies

Personal skills and competences

Mother tongue(s): romanian

Self-assessment

	Understanding	Speaking	Writing
Enghlish	B2	B2	B2
Italian	A1	A1	A1

Social skills and competencies	Ability to communicate clearly and concisely; Ability to work effectively in a team, share ideas, listen and collaborate to achieve common goals; team spirit; perseverance. Ability to understand and empathize with the needs and perspectives of other people and to adapt to different environments and social situations.
Organisational skills and competencies	Ability to plan and organize activities and resources effectively to achieve set objectives. Ability to identify problems, analyze situations and find effective and creative solutions. Good management experience; Ability to motivate others, take responsibility and guide the team towards achieving common objectives. - Member of the organizing committee of conferences: The International Conference on Trends in Environmental Education-EnvEdu Brasov, Romania, editions: 2005, 2006, The International Conference on Materials Science & Engineering BRAMAT- Brasov, Romania, editions: 2005, 2007, The nternational Conference for Sustainable Energy-CSE-Brasov, Romania, edition 2008, 2014, 2017 - Member of the undergraduate, dissertation, admission committees. Coordination activities of undergraduate/dissertation papers. - Guest Editor invited at special issue Polymer Waste Recycling and Management, 2020-2021, Polymers Journal (FI = 5; Q1). Publisher: Cazan Cristina - Guest Editor invited at special issue, Advances in Sustainable Polymeric Materials, 2021-2022 Polymers Journal (FI = 5; Q1). Publisher: Cazan Cristina - Guest Editor invited at special issue, Eco-Sustainable Development and Circular Economy, 2021-2022, Sustainability (FI = 3.9; Q2). Publisher: Cazan Cristina, Shauhrat S. Chopra - Guest Editor invited at special issue, Polymer Waste Recycling and Management II, Polymers Journal (FI = 5; Q1). Publisher: Cazan Cristina, Cosnita Mihaela - Guest Editor invited at special issue, Advances in Sustainable Polymeric Materials II, Polymers Journal (FI = 5; Q1), Editor: Cazan Cristina, Pop Alin Mihai - Guest Editor invited at special issue, Sustainable Advanced Composite Materials for the Built Environment. Materials Journal, (FI = 3.5; Q2) Editor: Cazan Cristina - Guest Editor invited at special issue, Advances in Sustainable Polymeric Materials, 3rd Edition, Polymers Journal (FI = 5; Q1). Publisher: Pop Alin Mihai, Cazan Cristina
Technical skills and competencies	Competencies in advanced material characterization: SEM, XRD, UV-VIS, FTIR, contact angle measurements, mechanical testing (tensile, compression, three-point bending, resilience). Competencies in injection molding technology of recyclable plastics.
Computer skills and competencies	Ability to effectively use an operating system such as Windows; Ability to work with office suites such as Microsoft Office (Word, Excel, PowerPoint), Google Workspace (Docs, Sheets, Slides) or other similar programs for word processing, spreadsheet creation, presentations and data management
Scholarships/research internships	▪ ESEIA International Summer School 2014, Transilvania University of Braşov ▪ Postdoctoral Fellowship for Research Excellence POSDRU/159/1.5/S/134378, 2014-2015, Transilvania University of Braşov ▪ Eco-Chemie SPR – Electrochemistry and Corrosion – Seminar and Training, Braşov, Romania, 2006.

Peer-review activity for international programs/projects	International project evaluator: National Science Center Poland
Reviewer for ISI scientific journals	Chemical Engineering Journal, Materials Science and Engineering B, Materials Letter, Materials Chemistry and Physics, Measurement, Chemical Engineering Research and Design, Waste Management, Journal of Nanoscience and Nanotechnology, Molecules, Polymers
Driving license(s)	B
Thematic area of competence and interest	**Advanced Recycling Technologies** – Investigating innovative methods for enhancing material recovery and reuse. **Circular Economy Strategies** – Developing sustainable approaches to waste valorization and resource efficiency. **Eco-friendly Binders and Additives** – Exploring bio-based or low-impact alternatives in composite formulations. **Life Cycle Assessment (LCA) of Recycled Materials** – Evaluating environmental impacts and sustainability of recycled composites. **Smart Waste Management Systems** – Integrating IoT and AI for optimizing urban recycling processes. **Advanced Functional Materials** – High-performance materials for energy storage, insulation, sensors, and smart applications. **Sustainable Construction Materials** – Eco-friendly materials for low-carbon buildings and energy-efficient infrastructure.

Additional Information	Information about the research and development projects he/she has led as project director and the grants obtained, if there are such projects or grants, to indicate for each funding source and the amount of funding;

Project Director:

▪ New multifunctional hybrid composite materials based on waste designed to increase thermal efficiency and sustainability of buildings, UEFISCDI, PN-III-P2-2.1-PED-2021-2071, 2022-2024

▪ Researcher mobility projects, UEFISCDI, PN-III-P1-1.1-MC-2019-0207, contract no. 73/2019

▪ Researcher mobility projects, SGEM Vienna Green Scientific Conference, UEFISCDI, PN-III-P1-1.1-MC-2017-1049, 2017

▪ EU-DG RTD, European Solar Research Infrastructure for Concentrated Solar Power. "Carbon materials obtained by solar pyrolysis from plastic waste for wastewater treatment", C-Mat SolPyr registered as SURPF1904050074, Grand Ageement no. 823802.

▪ EU-DG RTD, European Solar Research Infrastructure for Concentrated Solar Power. "Sealing of solar collectors with increased durability in the working environment (saline aerosols, humidity, temperature and UV), COSY registered as P1404250039 contact no. 312643 between CIEMAT-Solar Platform Almeira and the European Commission.

Research team member of the following national projects:

Hybrid microreactors for the removal of pharmaceutically active compounds from wastewater, UEFISCDI, PN-III-P4-PCE-2021-1020, 2022-2024

Multifunctional 3d photocatalytic systems for environmentally friendly sustainable technologies, Grant of the Romanian National Authority for Scientific Research and Innovation, CCCDI - UEFISCDI, Project Number 169/2020 ERANET-M.-3D-PHOTOCAT, within PNCDI III

Theoretical and experimental study of transition metal oxyhydride nanomaterials for superconductivity and photocatalysis, Grant of the Romanian National Authority for Scientific Research and Innovation, CCCDI - UEFISCDI, Project number 114/2019 ERANET-M.-MĂRȚURI, within PNCDI

▪ Solar thermal collectors with selective spectral coatings for integration into the built environment or solar thermal collectors with efficient absorber plates for integration into the built environment, ERA-MANUNET-II-BiSolar, 2016-2019

▪ Innovative sustainable system for photocatalytic self-decontamination of CBRN protection equipment, UEFISCDI, PN-II-PT-PCCA-2013-4-0747, 2014-2017

▪ Innovative integrated materials - technology - equipment system for simultaneous photocatalysis and adsorption applied in sustainable wastewater treatment, UEFISCDI, PN-II-PT-PCCA-2013-4-0726, 2014-2017

▪ Complex photoactive nanomaterials with large surface area for green energy production and organic pollutant degradation, UEFISCDI, PN-II-PT-PCCA-2011-3.2-1235, 2012-2016

▪ Multifunctional materials for efficient conversion of solar energy into thermal energy period:2006-2008 funder: UEFISCDI no. ctr: CEEX 277/2006

▪ Integrated renewable energy conversion system Integrated renewable energy conversion system, RECIS period: 2006-2008 funder: UEFISCDI nrctr:CEEX 226/2006

▪ Efficient solar thermal systems with high acceptance for implementation in urban environments (EST IN URBA) period: 2012-2016 financier: partnerships no. ctr: 28/2012

▪ Improving the functional performance of Multiflex cabinets period: 2016-2016 financier: SC ELDON SRL no. ctr: 160/06.01.2016

▪ Renewable Energy Sources and Environmentally Friendly ICT Tools, RES-EM ICT Tools,LdV RO/01/B/F/141026, 2003-2005

List of relevant articles

1. Cazan, C., Cosnita, M., Sustainable composites with synergistic combinations of construction and demolition waste: Behavior of rubber, HDPE, PS, and brick after short-term water immersion, Journal of Cleaner Production, 471 (2024) 143342. doi: 10.1016/j.jclepro.2024.143342
   https://www.webofscience.com/wos/woscc/full-record/WOS:001301201200001\
2. Ionescu, A.M., Cazan, C., Pharmaceutical Waste Management: A Comprehensive Analysis of Romanian Practices and Perspectives, Sustainability, 16(15) 2024, 6571.doi:10.3390/su16156571
   https://www.webofscience.com/wos/woscc/full-record/WOS:001287090300001
3. Matei, S., Pop, MA., Zaharia, SM., Cosnita, M., Croitoru, C., Spirchez, C., Cazan, C., Investigation into the Acoustic Properties of Polylactic Acid Sound-Absorbing Panels Manufactured by 3D Printing Technology: The Influence of Nozzle Diameters and Internal Configurations, Materials, 17(3), 2024, 580. DOI:10.3390/ma17030580
   https://www.webofscience.com/wos/woscc/full-record/WOS:001160043000001
4. Cosnita, M., Pop, MA., Cazan, C., Cristea, D., Aging resistance under short time ultraviolet (UV) radiations of polymer wood composites entirely based on wastes, Environmental Technology & Innovation, 31, 2023, DOI: 10.1016/j.eti.2023.103208
   https://www.webofscience.com/wos/woscc/full-record/WOS:001015181400001
5. Cazan, C., Enesca, A., Isac, L., Andronic, L., Cosnita, M., Accelerated Aging of Polymeric Composites Based on Waste with TiO2 Fillers, ACS Applied Polymer Materials, 5(6), 2023, 3958-397. doi:10.1021/acsapm.3c00129
   https://www.webofscience.com/wos/woscc/full-record/WOS:000985553600001
6. Andronic, L., Mamedov, D., Cazan, C., Popa, M., Chifiriuc, MC., Allaniyazov, A., Palencsar, S., Karazhanov, SZ., Cerium oxide thin films: synthesis, characterization, photocatalytic activity and influence on microbial growth, Biofouling, 38(9), 2022, 865-875, doi:10.1080/08927014.2022.2144264
   https://www.webofscience.com/wos/woscc/full-record/WOS:000879983000001
7. Isac, L., Cazan, C., Andronic, L., Enesca, A., CuS-Based Nanostructures as Catalysts for Organic Pollutants Photodegradation, Catalysts 11(10), 2022, 1135, doi:10.3390/catal12101135
   https://www.webofscience.com/wos/woscc/full-record/WOS:000872703300001
8. Enesca, A., Cazan, C., Polymer Composite-Based Materials with Photocatalytic Applications in Wastewater Organic Pollutant Removal: A Mini Review, Polymers, 14(16), 2022, 3291. Doi:10.3390/polym14163291
   https://www.webofscience.com/wos/woscc/full-record/WOS:000845603900001
9. Cosnita, M., Balas, M., Cazan, C., The Influence of Fly Ash on the Mechanical Properties of Water Immersed All Waste Composites, Polymers, 14(10), 2022, 1957. Doi:10.3390/polym14101957
   https://www.webofscience.com/wos/woscc/full-record/WOS:000803684200001
10. Cazan, C., Enesca, A., Andronic, L., Synergic Effect of TiO2 Filler on the Mechanical Properties of Polymer Nanocomposites, Polymers, 13(12), 2021, 2017. doi:10.3390/polym13122017
    https://www.webofscience.com/wos/woscc/full-record/WOS:000666562300001
11. Andronic, L., Isac, L., Cazan, C., Enesca, A., Simultaneous Adsorption and Photocatalysis Processes Based on Ternary TiO2-CuxS-Fly Ash Hetero-Structures. Applied Sciences, 10(22), 2020, 8070. doi:10.3390/app10228070
    https://www.webofscience.com/wos/woscc/full-record/WOS:000594212100001
12. Enesca, A., Cazan, C., Volatile Organic Compounds (VOCs) Removal from Indoor Air by Heterostructures/Composites/Doped Photocatalysts: A Mini-Review. Nanomaterials, 10(10), 2020, 1965. doi:10.3390/nano10101965
    https://www.webofscience.com/wos/woscc/full-record/WOS:000585318900001
13. Cosnita, M., Manciulea, I., Cazan, C., All-Waste Hybrid Composites with Waste Silicon Photovoltaic Module. Polymers, 12(1), 2020, 53. doi:10.3390/polym12010053
    https://www.webofscience.com/wos/woscc/full-record/WOS:000519848300053

14. Cazan, C., Cosnita, M., Isac, L., The influence of temperature on the performance of rubber - PET-HDPE waste -based composites with different inorganic fillers. Journal of Cleaner Production 208 (2019) 1030-1040. Doi:10.1016/j.jclepro.2018.10.045
https://www.webofscience.com/wos/woscc/full-record/WOS:000451362200094
15. Cosnita, M., Cazan, C., Duta, A.,The influence of inorganic additive on the water stability and mechanical properties of recycled rubber, polyethylene terephthalate, high density polyethylene and wood composites. Journal of Cleaner Production, 165, 2017, 630-636. doi:10.1016/j.jclepro.2017.07.103
https://www.webofscience.com/wos/woscc/full-record/WOS:000411544400057
16. Cazan, C., Cosnita, M., Duta, A., Effect of PET functionalization in composites of rubber–PET–HDPE type. Arabian Journal of Chemistry, 10(3), 2017, 300-312.doi:10.1016/j.arabjc.2015.10.005
https://www.webofscience.com/wos/woscc/full-record/WOS:000396405000002
17. Cosnita, M., Cazan, C., Duta, A., Effect of waste polyethylene terephthalate content on the durability and mechanical properties of composites with tire rubber matrix. Journal of Composite Materials, 51(3), 2017, 357-372. Doi:10.1177/0021998316645850
https://www.webofscience.com/wos/woscc/full-record/WOS:000394801300006
18. Cosnita, M., Cazan, C., Duta, A., Interfaces and mechanical properties of recycled rubber-polyethylene terephthalate-wood composites. Journal of Composite Materials, 48(6),2014, 683–694. doi:10.1177/0021998313476561
https://www.webofscience.com/wos/woscc/full-record/WOS:000332196000005
19. Cazan, C., Perniu, D., Cosnita, M., Duta, A., Polymeric Wastes From Automotives As Second Raw Materials For Large Scale Products, Environmental Engineering And Management Journal, 12(8), 2013, 1649-1655.
https://www.webofscience.com/wos/woscc/full-record/WOS:000330190300014
20. Vladuta, C., Andronic, L., Duta, A., Effect of TiO_2 Nanoparticles on the Interface in the PET-Rubber Composites. Journal of Nanoscience and Nanotechnology, 10(4), 2010, 2518–2526. doi:10.1166/jnn.2010.1440
https://www.webofscience.com/wos/woscc/full-record/WOS:000273984900035

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12.05.2025

prof.dr. Cristina Cazan