

## Curriculum Vitae

**Res. Dr. Mihaela Codruta COSNITA**



**Affiliation:** Research and Development Institute of Transilvania University of Brasov, Bd Eroilor, No 29, Brasov, Romania  
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**Cod BrainMap**

U-1700-036S-4224

**Birth date:** 25.10.1980

• **Education:**

Institution	Transilvania University of Brasov		
From – To	2010-2013 PhD student	2007-2009 M.Sc. student	2003-2007 Bachelor student
Diploma	PhD	Applied Chemistry in Environment and Industry	Physics-Chemistry

**Professional Qualifications or Related Professional Experience:**

• *Certificate of participation* at the training with the topic - Biomass, renewable energy – organized at the Research Center RESREC (R&DI) of Transilvania University in collaboration with Green Energy Cluster held in October between 13-15 2015.

*Certificate of participation* at the International Summer School: Sustainable Smart Metropolitan Regions of Tomorrow, organized at Transilvania University of Brasov, between 14 – 28 July 2013.

• **Scientific degree:** 2014 – doctor, in the fundamental field: Engineering Sciences, domain: Materials Science and Engineering.

**PhD thesis title:** *Composites materials with controlled properties based on recyclable rubber, PET and wood*

PhD thesis web: <http://webbut.unitbv.ro/teze/rezumat/2013/rom/CosnitaMihaelaCodruta.pdf>

### • Teaching and Research Experience

Position	Researcher	Associate Professor	Professor
From – To	2015 – present	2010 – 2015	2008-2010
Institution	Research and Development Institut of TransilvaniaUniversity of Brasov	Transilvania University of Brasov	Sextil Pușcariu College, from Bran, Brasov

### Foreign Languages:

Understanding		Speaking		Writing	
English	Good	English	Good	English	Good
Spanish	Very good	French	Good	Spanish	Good

### Research visibility

*Publications:* over 20 papers published in main stream journals, among which over 15 indexed in ISI –Web of Science

*Peer review* for Journal of Applied Polymer Science; Textile Research Journal, Journal of Composite Materials, Waste management, Journal of Cleaner Production, Materials, Coatings, Construction and Building materials

Since 2015 member of the Romanian Chemistry Society, Brasov branch

### Teaching activities abroad

Teaching activities in Austria at the Technical University of Graz, Institute of Paper, Pulp and Fiber Technology for Biorefinery master program students, in November 2018. The taught course was the Bioresources and Bio based Products (Course No. 66.757), within the Bio Energy Train (BET) project. The Bioresources and Bio based Products course comprising 5 Nuggets: Nugget 1 - Product development - the role of materials in the development of sustainable products; Nugget 2- Bio-resources- raw and waste bio-resources in products development; Nugget 3 - Composites; Nugget 4- Bio-resources in composites development; Nugget 5- Composites fully based on organic waste and bio-resources;

### *Project leader:*

PN-III-P1-1.1- PD-2016-0286. Novel all wastes composites PV based for indoor or outdoor applications, during 2018-2020.

### *Grant team member*

- PNII ctr. Nr. 162/2012, Complex high surface area photoactive nano-materials for environmentally-friendly energy production and organic pollutants degradation NANOVISMAT; 2012-2016;
- CB Photodeg (PNII-PCCA, no. 282/2014);
- Increasing the ELDON SRL SC competitiveness by optimizing the production technology of floor-standing cabinets, ELDON-OPTIM-TECH (PNIII-Bridge Grant, 102BG), 2016-2018.
- IDEI 753- Obținerea caracterizarea, modelarea și optimizarea filmelor nano și mezo-structurate de fotocatalizatori pe bază de SnO<sub>2</sub> cu morfologie controlată, 2011
- IDEI 840- Modelarea conducției electrice în absorber și în interfața absorber/strat tampon pentru creșterea eficienței celulelor PV în stare solidă, 2011
- Ctr. Nr. 160/2016, Beneficiar SC ELDON SRL; 2015-2016
- M-ERANET WaterSafe ctr. 39/2016, 2016-2018
- H2020 project 656760 - BioEnergyTrain - GAP- 656760 Bio Energy Train, 2015-2018.

### • *Published Papers and Conference Participations*

*The list of the most important scientific publications and conferences*

#### ***I. Articles published in ISI Thomson Reuters journals, Web of Science***

1. Stanciu, M.D.; Cosnita, M.; Cretu, C.N.; Teodorescu, H.D.; Trandafir, M. Mechanical and Acoustic Properties of Alloys Used for Musical Instruments. *Materials* **2022**, *15*, 5192. <https://doi.org/10.3390/ma15155192> (FI=3.75) – Q1
2. **Cosnita, M.**; Balas, M.; Cazan, C. The Influence of Fly Ash on the Mechanical Properties of Water Immersed All Waste Composites. *Polymers* **2022**, *14*, 1957. <https://doi.org/10.3390/polym14101957>, (FI= 4.97) – Q1
3. Chicos, LA., Zaharia, S.M., Cempura, G., **Cosnita, M.** *et al.* Effect of concentrated solar energy on microstructure evolution of selective laser melted Ti-6Al-4V alloy. *Int J Adv*

- Manuf Technol* **118**, 3183–3207 (2022). <https://doi.org/10.1007/s00170-021-08136-6>, (FI= 3.56)
4. Visa, M.; Cosnita, M.; Moldovan, M.; Marin, C.A.; Mihaly, M. Fly Ash Waste Recycling by Pt/TiO<sub>2</sub> Incorporation for Industrial Dye Removal. *Int. J. Environ. Res. Public Health* **2021**, *18*, 3887. <https://doi.org/10.3390/ijerph18083887>, (FI= 4.61) – Q1
  5. Milosan, I.; Bedő, T.; Gabor, C.; Munteanu, D.; Pop, M.A.; Catana, D.; **Cosnita, M.**; Varga, B. Characterization of Aluminum Alloy–Silicon Carbide Functionally Graded Materials Developed by Centrifugal Casting Process. *Appl. Sci.* **2021**, *11*, 1625. <https://doi.org/10.3390/app11041625>, (FI= 2.84)
  6. **Cosnita M.**, Cazan C, Manciulea I. *All-Waste Hybrid Composites with Waste Silicon Photovoltaic Module*. *Polymers* **2020**, *12*(1), 53. (FI=3.16) – Q1
  7. Croitoru, C.; Pop, M.A.; Bedo, T.; **Cosnita, M.**; Roata, I.C.; Hulka, I. Physically Crosslinked Poly (Vinyl Alcohol)/Kappa-Carrageenan Hydrogels: Structure and Applications. *Polymers* **2020**, *12*, 560. (FI=4.97)
  8. D.Feldiore, D.Cristea, M.Tierean, C.Croitoru, C.Gabor, L.Jakab-Farkas, L.Cunha, E.Alves, V.Craciun, A.Marin, C.Moura, J.Leme, M.Socol, D.Craciun, **M.Cosnita**, D.Munteanu. Deposition temperature influence on the wear behaviour of carbon-based coatings deposited on hardened steel. *Applied Surface Science*, Vol. 475, 1 May 2019, Pages 762-773. (FI=7.39) – Q1
  9. 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*. Vol. 208, 20 January 2019, Pages 1030-1040. (IF = 11.07) – Q1
  10. Fazakas E, Varga B, Geantă V, Berecz T, Jenei P, Voiculescu I, **Cosnita M**, Ștefănoiu R. *Microstructure, Thermal, and Corrosion Behavior of the AlAgCuNiSnTi Equiatomic Multicomponent Alloy*. *Materials* (Basel). **2019** Mar 20;12(6):926. doi: 10.3390/ma12060926. PMID: 30897766; PMCID: PMC6471484. (IF = 3.75) – Q2
  11. Bedo, T., Varga, B., Cristea, D., Nitoi, A., Gatto, A., Bassoli, E., Bulai, G., Velicu, I.L., Ghiuta, I., Munteanu, S., Pop, A.M., Gabor, C., **Cosnita, M.**, Pârv, L., Munteanu, D. (2019). *Metastable Al-Si-Ni alloys for additive manufacturing: structural stability and energy release during heating*. *Metals* **9**(5):483. (IF = 2.69)

12. Pop M.; Croitoru C; Bedő T.; Geamăn V.; Radomir I; **Cosnita M.**; Zaharia S.; Chicoş L.; Miloşan I., *Structural changes during 3D-printing of bio-derived and synthetic thermoplastic materials*, Journal of Applied Polymer Science, December 2018, DOI: 10.1002/app.47382. **(IF=3.06) – Q2**
13. **Cosnita M.**, Cristina Cazan, Anca Duta. *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, Vol. 165, 1 Nov. 2017, pg. 630-636. **(FI=11.07) – Q1**
14. Bogatu C., Perniu D., Sau C., Iorga O., **Cosnita M.**, Duta A., Ultrasound assisted sol-gel TiO<sub>2</sub> powders and thin films for photocatalytic removal of toxic pollutants, Ceramics International, Vol 43, Aug. 2017, Nr. 11, pg. 7963-69. **(FI=5.53) – Q1**
15. **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 0021998316645850, first published on April 26, 2016. **(IF=3.19) – Q2**
16. Cazan, C., Cosnita, M., Duta, A., Effect of PET functionalization in composites of rubber-PET-HDPE type, Arabian Journal of Chemistry, Available online 20 October 2015, <http://dx.doi.org/10.1016/j.arabjc.2015.10.005>. **(IF= 6.21) - Q2**
17. **Cosnita M.**, Cazan C., Duta A., *Interfaces and mechanical properties of recycled rubber–polyethylene terephthalate–wood composites*, Journal of Composite Materials, 48 (6), (2013),pp.683-694.**(IF= 3.19) – Q2**
18. Cazan, C., Perniu, D., **Cosnita, M.**, Duta, A., Polymeric wastes from automobiles as second raw materials for large scale products, Environmental Engineering and Management Journal 12 (2013) 1649-1655. **(IF = 1.26)**
19. **Cosnita, M.**, Cristina Cazan, M. Visa, A. Duta, *Product development using composites from recycled wood, plastics and rubber*, publicat in: Proceedings of the 1st International Conference on Quality and Innovation in Engineering and Management, QIEM Proceedings (2011), 253-256.**(ISI indexed)**

## ***II. Articles published in Scopus indexed journals***

1. Duta, A., Cazan, C., **Cosnita, M.**, Fly ash in optimized composites based on rubber, recycled plastics, World of Coal Ash Conferences (WOCA), 9-10 May, 2011, Denver, USA

## ***III. Speaker and oral presentations at international conferences***

- ✓ **Invited speaker by United Scientific Group (TX, USA) at the 2<sup>nd</sup> International Conference on Materials Science & Engineering**, during 27- 29 April 2020, in San Francisco, USA (Mat Science 2020) as result of her *research impact and visibility on the international community*.
  
- ✓ **M. Cosnita**, C. Cazan, M. Visa, A. Duta, Product development using composites from recycled wood, plastics and rubber, publicat in: Proceedings of the 1st International Conference on Quality and Innovation in Engineering and Management, Cluj-Napoca, 17-19 Martie 2011, **ISI indexed**.
- ✓ **M. Cosnita**, C. Cazan, A. Duta, Wood content influence on the mechanical properties of PET and rubber based composites, International Conference Multiphase Polymers and Polymer Composites from Nanoscale to Macro Composites, Universite Paris-Est Creteil, U-PEC, France, 8-10 of June 2011.
- ✓ **Cosnita, M.**, Cazan, C., Duta, A: 15<sup>th</sup> International Conference on Experimental Mechanics, Porto, Portugalia – ICEM 2013: *"The influence of CaO addition and processing temperature of mechanical properties of recycled rubber, PET and wood based composites"*.
- ✓ Cazan, C., **Cosnita, M.**, Visa, M., Duta, A, Conference Sustainable Energy Brasov Romania– CSE 2014 articles: *Novel Rubber - Plastics Composites Fully Based on Recycled Materials*
- ✓ C. Cazan, **M. Cosnita**, A. Duta, Effect of PET functionalization in composites based on tire rubber and plastic materials, 4th International Conference on Integrity, Reliability & Failure, Funchal, Portugal, 23-27 of June 2013.
- ✓ **M. Cosnita**, C. Cazan, A. Duta, "The 3<sup>rd</sup> CEEP Workshop on Polymer Science", with paper: "Wood waste role in the design of all-wastes composites with rubber matrix", 23-25 of September 2015.
- ✓ **M. Cosnita**, C. Cazan, M. Visa, A. Duta, *The influence of the waste Si-PV conditioning on the mechanical performance of the hybrid composite materials*. 11th International Conference on Materials Science & Engineering – Bramat, 13-16 March 2019, Poiana Brasov, Brasov, Romania.
- ✓ **M. Cosnita**, C. Cazan, M. Visa, A. Duta, *The influence o low waste silicon photovoltaic" content and their grain size on the performance and water stability of all-waste composites"*, PMI 2018, 8th International Conference on Polymers and Moulds Innovations (Guimarães, Portugal , 19-21 September 2018):

- ✓ C. Cazan, **M. Cosnita**, The interfaces effects on mechanical properties of plastic waste composite materials, Advanced Materials Congress, Singapore, 2019.