

Autorul tezei de abilitare: Conf. Dr. Cazan Cristina

Titlul tezei de abilitare: Valorificarea prin reciclare a deșeurilor solide în contextul economiei circulare

Domeniul: Ingineria Mediului

LISTA DE LUCRĂRI

LUCRĂRI RELEVANTE

1. **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>
2. 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>
3. **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>
4. Cosnita, M., Balas, M., **Cazan, C.**, The Influence of Fly Ash on the Mechanical Properties of Water Immersed All Waste Composites, Polymers, 14(10), 2021, 1957. Doi:10.3390/polym14101957
<https://www.webofscience.com/wos/woscc/full-record/WOS:000803684200001>
5. **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>
6. 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>
7. **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>
8. 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>

TEZA DE DOCTORAT

Titlul tezei: " Materiale compozite de tip cauciuc și mase plastice reciclate", titlul de doctor în Domeniul Știința și Ingineria Materialelor, conform OMECTS 4387/06.06.2011.

BREVETE

Cosnita, M., Visa, M., **Cazan, C.**, „Materiale compozite hibride din deseuri de module fotovoltaice cu siliciu, cauciuc si polietilena” OSIM 2020

CĂRȚI / CAPITOLE DE CĂRȚI

1. Cosnita, M., Balas, M., **Cazan, C.**, 2021, The Influence of Fly Ash on the Mechanical Properties of Water Immersed All Waste Composites, 283-289, capitol in "Advances in Sustainable Polymeric Materials" Editor Cazan Cristina, Editura MDPI, ISBN 978-3-0365-7370-0
2. **Cazan, C.**, Enesca, A., Andronic, L., 2021, Synergic Effect of TiO₂ Filler on the Mechanical Properties of Polymer Nanocomposites, 329-353, capitol in "Advances in Sustainable Polymeric Materials" Editor Cazan Cristina, Editura MDPI, ISBN 978-3-0365-7370-0
3. Enesca, A., **Cazan, C.**, 2021, Polymer Composite-Based Materials with Photocatalytic Applications in Wastewater Organic Pollutant Removal: A Mini Review, 353- 373, capitol in "Advances in Sustainable Polymeric Materials" Editor Cazan Cristina, Editura MDPI, ISBN 978-3-0365-7370-0
4. Cosnita, M., **Cazan, C.**, Duta, A., 2018, Recycling Silicon-PV Modules in Composites with PVC, HDPE and Rubber Wastes, In: Visa I., Duta A. (Eds) Nearly Zero Energy Communities. Book Series: Springer Proceedings in Energy, Editura Springer International Publishing, 550-565, ISBN: 978-3-319-63214-8
5. Isac, L., **Cazan, C.**, 2015, Engineering Materials for Industrial Products Design. Metallic and Polymeric Materials, Editura Universitatii Transilvania din Brasov,
6. **Cazan, C.**, Cosnita, M., Visa, M., Duta, A., 2014, co-author chapter 38: Novel Rubber - Plastics Composites Fully Based on Recycled Materials, in Sustainable Energy in the Built Environment - Steps Towards nZEB, Springer, ISBN 978-3-319-09706-0
7. Visa, M., **Cazan, C.**, Andronic, L., 2014, co-author chapter 41: Fly Ash Based Substrates for Advanced Wastewater Treatment, in Sustainable Energy in the Built Environment - Steps Towards nZEB, Springer International Publishing Switzerland, ISBN: 978-3-319-09706-0
8. **Cazan, C.**, Duta, A., 2013, author chapter Advances in Elastomers: Rubber - thermoplastic blends editura Springer, ISBN:978-3-642-20924-6.
9. **Cazan, C.**, Duta, A., 2010, author chapter "8. Recycled Rubber – Composite Matrix", in book "Types, Properties and Uses", Nova Science Publishers, Inc., ISBN: 978-1-61761-464-4a
10. **Vladuta, C.**, 2008, author chapter "4.3 Recycling" in book "Sustainable Energy", Ed. Universitatii Transilvania, Editors: Ion Visa, Anca Duta, ISBN 978-973-598-454-0
11. Isac, L., Tică, R., Andronic, L., **Vladuta, C.**, 2004, Chimie - Activități experimentale, Editura Universității Transilvania din Brașov

EDITOR CĂRȚI

Cazan, C., Advances in Sustainable Polymeric Materials, Editura MDPI, 2022, ISBN 978-3-0365-7370-0. doi:10.3390/polym14224972

ARTICOLE ÎN REVISTE ISI

1. **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>
2. 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>
3. 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>
4. 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>
5. 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>
6. 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>
7. Cosnita, M., Balas, M., **Cazan, C.**, The Influence of Fly Ash on the Mechanical Properties of Water Immersed All Waste Composites, *Polymers*, 14(10), 2021, 1957. Doi:10.3390/polym14101957
<https://www.webofscience.com/wos/woscc/full-record/WOS:000803684200001>
8. **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>
9. Andronic, L., Isac, L., **Cazan, C.**, Enesca, A., Simultaneous Adsorption and Photocatalysis Processes Based on Ternary TiO₂-Cu_xS-Fly Ash Hetero-Structures. *Applied Sciences*, 10(22), 2020, 8070. doi:10.3390/app10228070
<https://www.webofscience.com/wos/woscc/full-record/WOS:000594212100001>
10. 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>
11. Cosnita, M., Manciualea, I., **Cazan, C.**, All-Waste Hybrid Composites with Waste Silicon Photovoltaic Module. *Polymers*, 12(1), 2019, 53. doi:10.3390/polym12010053
<https://www.webofscience.com/wos/woscc/full-record/WOS:000519848300053>
 12. Isac, L., **Cazan, C.**, Enesca, A., Andronic, L. Copper Sulfide Based Heterojunctions as Photocatalysts for Dyes Photodegradation. *Frontiers in Chemistry*, 7, 2019, 694. doi:10.3389/fchem.2019.00694
<https://www.webofscience.com/wos/woscc/full-record/WOS:000494674900001>
 13. **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>
 14. 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>
 15. **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>
 16. 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>
 17. György, E., Pérez del Pino, A., Logofatu, C., **Cazan, C.**, Duta, A., Mullins, W. Simultaneous Laser-Induced Reduction and Nitrogen Doping of Graphene Oxide in Titanium Oxide/Graphene Oxide Composites. *Journal of the American Ceramic Society*, 97(9), 2014, 2718-2724. doi:10.1111/jace.13013
<https://www.webofscience.com/wos/woscc/full-record/WOS:000341826500007>
 18. Andronic, L., Enesca, A., **Cazan, C.**, Visa, M., TiO₂-active carbon composites for wastewater photocatalysis. *Journal of Sol-Gel Science and Technology*, 71(3), 2014, 396-405. doi:10.1007/s10971-014-3393-6
<https://www.webofscience.com/wos/woscc/full-record/WOS:000340499500003>
 19. 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>
20. **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>
21. Ienei, E., Isac, L., **Cazan, C.**, Duta, A., Characterization of Al/Al₂O₃/NiOx solar absorber obtained by spray pyrolysis, *Solid State Science*, 12(11), 2010, 1894–1897. doi:10.1016/j.solidstatesciences.2010.05.028
<https://www.webofscience.com/wos/woscc/full-record/WOS:000284521900013>
22. **Vladuta, C.**, Andronic, L., Duta, A., Effect of TiO₂ 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>
23. **Vladuta, C.**, Voinea. M., Purghel, E., Duta, A., Correlations between the structure and the morphology of PET–rubber nanocomposites with different additives, *Materials Science And Engineering B-Advanced Functional Solid-State Materials*, 165(3), 2009, 221–226. doi:10.1016/j.mseb.2009.07.004
<https://www.webofscience.com/wos/woscc/full-record/WOS:000273157800020>
24. Andronic, L., Enesca, A., **Vladuta, C.**, Duta, A., Photocatalytic activity of cadmium doped TiO₂ films for photocatalytic degradation of dyes, *Chemical Engineering Journal*, 152(1), 2009, 64–71. doi:10.1016/j.cej.2009.03.031
<https://www.webofscience.com/wos/woscc/full-record/WOS:000274348400009>
25. Voinea, M., **Vladuta, C.**, Bogatu, C., Duta, A., Surface properties of copper based cermet materials. *Materials Science and Engineering B*, 152(1-3), 2008, 76–80. doi:10.1016/j.mseb.2008.06.020
<https://www.webofscience.com/wos/woscc/full-record/WOS:000261480600016>
26. **Vladuta, C.**, Andronic, L., Visa, M., Duta, A., Ceramic interface properties evaluation based on contact angle measurement, *Surface & Coatings Technology*, 202(11), 2008, 2448–2452 doi:10.1016/j.surfcoat.2007.08.033
<https://www.webofscience.com/wos/woscc/full-record/WOS:000253930900045>
27. **Cazan, C.**, *Advances in Sustainable Polymeric Materials*, *Polymers*, 14(22), 2021, 4972. doi:10.3390/polym14224972
28. Cosnita, M., **Cazan, C.**, Duta, A., Product development using composite from recycled wood, plastics and rubber, 1st first Conference on Quality and innovation and engineering and management (QIEM), *QIEM Proceedings (2011)*, 253-256.

ARTICOLE INDEXATE IN BAZA DE DATE SCOPUS

1. Bogatu, C., **Cazan, C.**, Manciualea, I., Duta, A., Corrosion resistance in saline environment of colored based alumina spectrally selective surfaces, JurnalBDI: Solid State Phenomena <https://doi.org/10.4028/www.scientific.net/SSP.227.103>
2. Manciualea, I., Bogatu, C., **Cazan, C.**, Dumitrescu, A., Duta, A., Investigation of Some Mannich Bases Corrosion Inhibitors for Carbon Steel, JurnalBDI: Solid State Phenomena 227 (2015) 63-66. <https://doi.org/10.4028/www.scientific.net/SSP.227.63>
3. Visa, M., **Cazan, C.**, Andronic, L., Fly Ash Based Substrates for Advanced Wastewater treatment, JurnalBDI: Springer Proceedings in Energy, 2014, 539-569, <http://link.springer.com>
4. Duta, A., **Cazan, C.**, Cosnita, M., Fly ash in optimized composites based on rubber, recycled plastics, World of coal ash(WOCA) Conferences 9-10 may, 2011, Denver, USA.
5. Duta, A., **Cazan, C.**, Accelerated aging test of composites based on rubber, recycled plastics and fly ash, World of coal ash(WOCA) Conferences 9-10 may, 2011, Denver, CO USA.
6. Cerbu, C., Ciofoaia, V., Curtu, I., **Vladuta, C.**, Impact behavior for the composite materials randomly reinforced with e-glass fibers, 13th International Research/Expert Conference "Trends in the Development of Machinery and Associated Technology" TMT 2009, Hammamet, Tunisia, 16-21 October 2009.
7. **Vladuta, C.**, Duta, A., Influence of environmental open air conditions on the mechanical properties of PET – rubber composites, Gala i, Romania, UgalMat 2005 The annals of "Dunarea de Jos" University of Galati Fascicle IX Metallurgy and Materials Science, ISSN 1453 – 083X. NR 2 – 2005.

ARTICOLE PREZENTATE/PUBLICATE IN VOLUME ALE CONFERINTELOR INTERNAȚIONALE

1. **Cazan, C.**, Cosnita, M., Properties of composite materials from rubber, HDPE, and PP waste with outdoor applications, 13th International Conference on "Materials Science and Engineering" - BRAMAT 2009, Brasov, Romania, 2024.
2. Cosnita, M., **Cazan, C.**, Sustainable Composite Materials from Construction and Demolition, 13th International Conference on "Materials Science and Engineering" - BRAMAT 2009, Brasov, Romania, 2024.
3. Cosnita, M., **Cazan, C.**, Current routes in recycling the Silicon Photovoltaic module (Si-PV) wastes Sustainable recycling of Si-PV wastes, World Conference on World Recycling Convention, Madrid, Spania, 2023.
4. **Cazan, C.**, Research and development priorities for C&D waste recycling to support a circular economy, 4th Edition of World Congress on Geology & Earth Science, Barcelona, Spania, 2023.
5. Andronic, L., **Cazan, C.**, Z-Scheme Copper Sulphide/RGO/TiO₂ photocatalysts for environmental applications, International Conference on Sustainable Nanotechnology and Nanomaterials (ICONN-2022), August 25-26, 2022.
6. **Cazan, C.**, Cosnita, M., Accelerated aging of waste-based polymer composites with inorganic fillers, 36th International Conference on Environmental Chemistry and Pollution Control,

- Video Presentation, Viena, Austria, 2022
7. Andronic, L., **Cazan, C.**, Photo catalyst loaded onto activated carbon support from wood waste for visible light photocatalysis, Carbon Chemistry and Materials (CCM-2022), Rome, Italy, during the travel period of October 8-13, 2022.
 8. Andronic, L., **Cazan, C.**, Isac, L., Enesca, A., Carbonaceous @TiO₂ heterojunctions for simultaneous photocatalysis of pesticides and pharmaceutical pollutants, 11th European Conference on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA), Turin, Italy, during the travel period of June 4-11, 2022.
 9. **Cazan, C.**, The interfaces effects on mechanical properties of plastic waste composite materials, The 30th Assembly of Advanced Materials Congress, Singapore, Singapore, 31.10.2019 – 04.11.2019
 10. **Cazan, C.**, Cosnita, M., Multifunctional Composites Based on Waste of Silicon-PV Modules, High Density Polyethylene and Tire Rubber, International Scientific Conferences on Earth & Geo Science-SGEM Vienna GREEN 2017, 27-30 noiembrie 2017, la Viena, Austria
 11. Duta, A., **Cazan, C.**, Cosnita, M., All-wastes composites with increased PET content, The 3rd CEEP Workshop on Polymer Science, September 23-26, 2015, Iasi, Romania
 12. Cosnita, M., **Cazan, C.**, Duta, A., Waste wood role in the design of all-wastes composites with rubber matrix, The 3rd CEEP Workshop on Polymer Science, September 23-26, 2015, Iasi, Romania
 13. **Cazan, C.**, Cosnita, M., Duta, A., Design and properties control in composite materials based on recycled rubber, PET, PVC and HDPE, The Influence of Temperature on the Interface Properties of PET-rubber Nanocomposites, 3rd International Conference on Recent Advances in Composite Materials, ICRAACM, Limoges, France, 2010.
 14. **Vladuta, C.**, Duta, A., Effect of UV exposure on the mechanical properties of PET - rubber - TiO₂ composites, 6th International Conference on "Materials Science and Engineering" - BRAMAT 2009, Brasov, Romania, 2009.
 15. **Vladuta, C.**, Duta, A., Polymer - Inorganic Composites on Advanced Recycling Solution, 2nd Conference on Sustainable Energy, CSE, Transilvania University of Brasov, Romania, 2008.
 16. **Vladuta, C.**, Voinea, M., Duta, A., Composite materials based on recycled PET and tire rubber obtained by compression molding, Simpozionul Impactul Acquis-ului Comunitar de Mediu asupra Tehnologiilor si Echipamentelor, ACQUISTEM, Agiiea, 2008.
 17. **Vladuta, C.**, Duta, A., The mechanical properties of PET-Rubber composites, The 5th International Conference on "Materials Science and Engineering" - BRAMAT 2007, Brasov, Romania, 2007

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