Model F17 – Memoriul științific al studentului doctorand

MEMORIU ȘTIINȚIFIC
Drd. Buzatu Andreea Daniela

Studii de doctorat

Perioada: 2021-2026
Conducători științific: Prof.dr.ing. Ghiban Brândușa
Prof. dr. ing. Bordeașu Ilare
Domeniu: Ingineria Materialelor
Titlul tezei de doctorat: "**Influența tratamentelor termice asupra comportării mecanice și la cavitație a unui aliaj de aluminiu tip 2017A**"

Activitate științifică

A. Lista de lucrări științifice (articole în reviste sau volume)

1. Istrate, D.; Sbarcea, B.G.; Demian, A.M.; **Buzatu, A.D**.; Salcianu, L.; Bordeasu, I.; Micu, L.M.; Ghera, C.; Florea, B.; Ghiban, B. Correlation between mechanical properties, structural characteristics and cavitation resistance of cast aluminum alloy type 5083. *Crystals*, Vol. 12, Issue 11, Article 1538, 2022. DOI: 10.3390/cryst121111538.
2. Ghera, C.; Odagiu, O.P.; Nagy, V.; Micu, L.M.; Luca, A.N.; Bordeasu, I.; Demian, M.A.; **Buzatu, A.D**.; Ghiban, B. Influence of ageing time on cavitation resistance of 6082 aluminum alloy. *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, Vol. 84, Issue 4, pp. 225–237, 2022 (indexed 2023).
3. Odagiu, P.O.; Salcianu, C.L.; Ghera, C.; **Buzatu, A.D**.; Micu, L.M.; Luca, A.N.; Bordeasu, I.; Ghiban, B. Heat treatment parameters influence on the cavitation resistance of an aluminum alloy. *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, Vol. 85, Issue 3, pp. 239–252, 2023.
4. Bordeasu, I.; Ghiban, B.; Ghera, C.; Salcianu, C.L.; Micu, L.M.; Stroita, D.C.; Demian, M.A.; **Buzatu, A.D**. The effect of hardening obtained after TIG remelting on the resistance of the 7075 alloy structure to cavitation erosion. *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, Vol. 87, Issue 1, 2025. ISSN 1454-2331.
5. Bordeasu, I.; Ghiban, B.; Constantin, T.A.; Parmanche, R.; **Buzatu, A.D**.; Micu, L.M.; Bordeasu, D.; Demian, M.A. New results regarding the influence of artificial aging heat treatment at 140°C on the cavitation resistance of the 2017A aluminum alloy structure. *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, Vol. 87, Issue 3, pp. 295–308, 2025. ISSN 1454-2331.
6. **Buzatu, A.D**.; Bordeasu, D.; Bordeasu, I.; Ditoiu, I.D.; Ciurel, C.A.; Pasca, M.A.; Enaru, L.N.; Ghiban, B. Comparative Analysis of the State of Resistance to Cavitation Erosion of Alloy 2017A Compared to Aluminum Alloys Type 5083, Type 6082 and Type 7075. Hidraulica – Magazine of Hydraulics, Pneumatics, Tribology, Ecology, Sensories, Mechatronics, No. 1, pp. 57-69, 2026. ISSN 1453 – 7303.
7. **Buzatu, A.D.;** Ditoiu, I.D.; Enaru, L.N.; Ghiban, B. The influence of aging heat treatments on the structural and mechanical characteristics of aluminum alloy 2017A. UPB Scientific Bulletin, Series B: Chemistry and Materials Science Vol. 88, Issue 2, pp. 241–258, 2026.
8. Istrate, D.; Lazar (Natra), C.; Odagiu, O.P.; Demian, A.M.; **Buzatu, A.D.**; Ghiban, B. Influence of homogenization and aging parameters applied to mechanical and structural characteristics of alloy 5083. IOP Conference Series: Materials Science and Engineering, Vol. 1262, 2022, Article 012021. DOI: 10.1088/1757-899X/1262/1/012021.
9. Lazar (Natra), C.; Istrate, D.; Odagiu, O.P.; Demian, A.M.; **Buzatu, A.D**.; Ghiban, B. Evaluation of mechanical characteristics of 3003 aluminum alloy plated sheets. IOP Conference Series: Materials Science and Engineering, Vol. 1262, 2022, Article 012021. DOI: 10.1088/1757-899X/1262/1/012021.

10. Bordeasu, I.; Luca, A.N.; Lazar, I.; Lazar, D.; Baradau, R.; Ghiban, B.; **Buzatu, A.D**.; Demian, A.M.; Odagiu, O.P.; Micu, L.M. Modification of cavitation erosion resistance of aluminum alloy 7075 by maintaining artificial aging heat treatment at 180°C. Hidraulica – Magazine of Hydraulics, Pneumatics, Tribology, Ecology, Sensories, Mechatronics, No. 4, pp. 33–41, 2022. ISSN 1453-7303.
11. Istrate, D.; Lazar (Natra), C.; Odagiu, O.P.; Demian, A.M.; **Buzatu, A.D**.; Ghiban, B. Influence of homogenization and aging parameters applied to mechanical and structural characteristics of alloy 5083. ACME – Materials and Surface Engineering Conference, Iași, România, 9 iunie 2022, Paper code: 2-015.
12. Lazar (Natra), C.; Istrate, D.; Odagiu, O.P.; Demian, A.M.; **Buzatu, A.D**.; Ghiban, B. Evaluation of mechanical characteristics of 3003 aluminum alloy plated sheets. ACME – Materials and Surface Engineering Conference, Iași, România, 9 iunie 2022, Paper code: 2-016.
13. Istrate, D.; Demian, A.M.; **Buzatu, A.D**.; Odagiu, O.P.; Ghiban, B. The influence of heat treatments on the mechanical and structural characteristics of plastically deformed type 5083 aluminum alloys. 9th International Conference on Materials Science and Technologies – RoMAT 2022, 24–25 noiembrie 2022, București, România.
14. **Buzatu, A.D.;** Istrate, D.; Demian, A.M.; Odagiu, O.P.; Ghiban, B. Heat treatments influence on the mechanical behavior and structural characteristics of aluminum alloys type 2017. 9th International Conference on Materials Science and Technologies – RoMAT 2022, 24–25 noiembrie 2022, București, România.
15. Odagiu, O.P.; Istrate, D.; Demian, A.M.; **Buzatu, A.D.;** Ghiban, B. The influence of thermal treatments on the mechanical and structural characteristics of aluminum alloys type 6082. 9th International Conference on Materials Science and Technologies – RoMAT 2022, 24–25 noiembrie 2022, București, România.
16. Demian, A.M.; **Buzatu, A.D**.; Odagiu, O.P.; Istrate, D.; Ghiban, B. Heat treatments influence on the mechanical and structural characteristics of 7075 aluminum alloys. 9th International Conference on Materials Science and Technologies – RoMAT 2022, 24–25 noiembrie 2022, București, România.
17. Demian A.M., Dițoiu I. D., **Buzatu A. D.**, B. Ghiban B. Mathematical modeling of distortions in a 6061 aluminum alloy plate during the quenching process, 10th International Conference on Materials Science and Technologies –RoMAT 2024 November 24-25, 2024, Bucharest, Romania, poster P.10.1.
18. Dițoiu I.D., Demian A. M., **Buzatu A. D.**, B. Ghiban B. The influence of permanent deformation on the mechanical properties of aluminum alloy type 7075 10th International Conference on Materials Science and Technologies –RoMAT 2024 November 24-25, 2024, Bucharest, Romania, poster P.10.2.

B. Participări la conferințe/workshop-uri

1. ROMAT, Bucuresti, Romania, November 24-25, 2022;

Student-doctorand

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