

Ș. L. Dr. Ing. MUNTIANU Gabriela
Lista de lucrări științifice

A. Teza de doctorat

Ing. **MUNTIANU G.**, conducător științific Prof. Emerit dr. ing. **JINESCU G.**, **Cercetări privind utilizarea nanomaterialelor pe bază de argilă în depoluarea intensivă a gazelor**, Universitatea Politehnica București, Facultatea de Chimie Aplicată și Știința Materialelor, susținere publică 26.09.2014 și titlul de doctor nr. 3181/06.02.2015.

B. Cărți de specialitate și note de curs/laborator

1. **MUNTIANU G.**, ROȘU A.M., **Chimia pe înțelesul tuturor. Experimente. Aplicații**, Editura Pim, Iași, **2023**, ISBN 978-606-13-7528-8.
2. **MUNTIANU G.**, ROȘU A.M., **Chimie aplicată**, Editura Pim, Iași, **2023**, ISBN 978-606-13-7735-0.
3. **MUNTIANU G.**, JINESCU G., **Dinamica particulelor în strat fluidizat și strat fluidizat stabilizat magnetic**, Editura Alma Mater, Bacău, **2020**, ISBN 978-606-527-647-5.
4. GROSU L., **MUNTIANU G.**, PATRICIU O.I., ROȘU A.M., **Curs remedial pentru studenți**. Partea a II-a, Editura Docucenter, Bacău, **2019**, ISBN 978-606-721-281-5, ISBN 978-606-721-350-8.
5. GEORGESCU A.M., **MUNTIANU G.**, PATRICIU O.I., TÂMPU R.I., **Curs remedial pentru studenți**. Partea I, Editura Docucenter, Bacău, **2018**, ISBN 978-606-721-281-5, ISBN 978-606-721-280-8.
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8. NISTOR I.D. (coord.), **MUNTIANU G.**, **Metode moderne de control în ingineria proceselor ecologice**. Note de curs, Editura Alma Mater, Bacău, **2016**, ISBN 978-606-527-540-9.
9. NISTOR I.D. (coord.), **MUNTIANU G.**, **Biotehnologii de valorificare a subproduselor în industrii ecologice**. Note de curs, Editura Alma Mater, Bacău, **2016**, ISBN 978-606-527-539-3.

C. Articole publicate în reviste cotate ISI

1. PLATON N., PÂRVULESCU O. C., ARUS V. A., GEORGESCU A. M., SILION M., MIRON A., **MUNTIANU G.**, ROSU A. M., IANCU P., AZZOUZ A., **Natural bio-sourced additives for bread technology improvement and highly nutritive products**, Foods, **2026**, 15, 413, ISSN 2304-8158, JCR - Q1 (Food Science and Technology), <https://doi.org/10.3390/foods15030413>, factor de impact (2024): 5,1, WOS:001688066100001
2. DOROFTEI R.F., MIRILA D., SILION M., IONITA D., ROSU A.-M., MUNTEANU C., ISTRATE B., **MUNTIANU G.**, GEORGESCU A.-M., NISTOR I.-D., **Clays as dual-function materials for TNT adsorption and catalytic degradation: an experimental approach**, Materials, **2025**, 18(16), 3824, eISSN 1996-1944, Q1, <https://doi.org/10.3390/ma18163824>, factor de impact (2024): 3,4, WOS:001558011100001
3. **MUNTIANU G.**, GEORGESCU A.-M., ROSU A.-M., PLATON N., ARUS V.A., JINESCU C.V., NISTOR I.D., **Ammonia gas adsorption in fixed bed and fluidized bed using bentonite particles**, Appl. Sci., **2025**, 15(2), pp. 832-848, ISSN 2076-3417, JCR - Q2 (Engineering, Multidisciplinary), DOI10.3390/app1502083, factor de impact (2025): 2,5, WOS:001404056400001
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5. **MUNTIANU G.**, NISTOR I.-D., MIRILĂ D.-C., GEORGESCU A.-M., ARUȘ V.-A., PLATON N., JINESCU C., **Electromagnetic field application in fluidization of metallic particles**, Scientific Study & Research Chemistry & Chemical Engineering, Biotechnology, Food Industry, **2024**, 25 (4), pp. 439-454, ISSN 1582-540X, <https://doi.org/10.29081/ChIBA.2024.625>, factor de impact (2024): 0,7, WOS:001381255700009

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1. GEORGESCU A.-M., **MUNTIANU G.**, NISTOR I.D., NARDOU F., **Modeling and optimization of Al-pillaring process using experimental design procedure**, Journal of Agroalimentary Processes and Technologies, vol. 23, nr. 4, **2017**, p. 212-216, ISSN (print): 2069-0053 / (online): 2068-9551, Indexată BDI.
2. **MUNTIANU G.**, A.M. GEORGESCU, I.D. NISTOR, G. JINESCU, **Ammonia adsorption kinetics on clay particles in fluidized bed**, Bulletin of Romanian Chemical Engineering Society, vol. 3, nr. 2, **2016**, p. 2-11, ISSN 2360-4697, Indexată BDI.
3. **MUNTIANU G.**, PLATON N., ARUS V. A., ROSU A. M., NISTOR D. I., JINESCU G., **Hydrodynamic study of clay particles in fluidized bed**, Journal of Engineering Studies and Research, vol. 19, nr. 2, **2013**, p. 70-75, ISSN 2068-7559, Indexată BDI.

4. ROSU A.-M., **MUNTIANU G.**, MIRON N. D. NISTOR I.D., BRABIE G., **Determination of microbiological medium quality through a mathematical model concerning the prevention of biocorrosion**, Journal of Engineering Studies and Research, vol. 19, nr. 4, **2013**, p. 1-6, ISSN 2068-7559, Indexată BDI.
5. **MUNTIANU G.**, PLATON N., JINESCU G., SIMINICEANU I., MARDARU A., ZAVADA R.M., MIRON D.N., NISTOR I.D., **Preparation and characterization of nanostructured materials used for the retention of gaseous pollutants**, Annals of "Dunarea de Jos" University of Galati, Fascicle II, Anul III (XXXIV), **2011**, p. 115-122, ISSN 2067-2071, Seria B*.
6. MARDARU A., DJELVEH G., ISOPENCU G., JINESCU C., MARES A.M., **GHIMICIU G.**, **Characterizing foams flow obtained by continuous foaming operation**, U.P.B. Sci. Bull., vol. 73, nr. 3, **2011**, p. 117-132, ISSN (print): 1454-2331 / (online): 2286-3680, Seria B.
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E. Participare la conferințe, congrese și simpozioane naționale și internaționale (selecție)

1. COJOCARU S., COJAN E., ARUȘ A.-V., ROȘU A.-M., PLATON N., **MUNTIANU G.**, NISTOR I.-D., **Layered double hydroxides for environmental remediation**, International Conference, Modern technology in the food industry, MTFI 2026, Seventh Edition, 21-24 October **2026**, Chisinau, Republic of Moldova, Prezentare orală.
2. COJOCARU S., COJAN E., SABĂU S., SILION HODEA A.-M., RADA HULEA C., MIHĂILĂ D., **MUNTIANU G.**, ROȘU A.-M., PETROVICI A.-R., JINESCU G., NISTOR I.D., **Clay-based functionalized materials involved in the depollution of waters with pharmaceutical wastes**, The 21st International Conference of Constructive Design and Technological Optimization in Machine Building Field, OPROTEH 2026, 20-22 mai, Bacău **2026**, Poster.
3. GEORGESCU A.-M., ROSU A.-M., **MUNTIANU G.**, MOSNEGUTU E., MIRILA.D., NISTOR I.-D., **Gelatin-clay hybrid composites for dye adsorption in food industry applications**, Symposium of International Chemical Engineering and Materials, SICHEM 2025, POLITEHNICA Bucharest, Romania, 6 – 7 November, București **2025**, Poster.
4. Mirila D.-C., Silion M., Doroftei R.F., Rosu A.M., Georgescu A.M., Nedeff F.M., **Muntianu G.**, Nistor I.D., **Comparative analysis of clay-based adsorbents and biological adsorbents derived from *Cyprinus Carpio***, Applications of Chemistry in Nanosciences and Biomaterials Engineering (NanoBioMat), 11th Edition, 25-27 iunie **2025**, București, Poster.
5. HODEA (SILION) A., **MUNTIANU G.**, PLATON N., ARUȘ V.A., NISTOR I.-D., **Studies on ensuring protein stability in sauvignon white wine, through bentonite treatment**, The 20th International Conference of Constructive Design and Technological Optimization in Machine Building Field, OPROTEH 2025, 21-23 mai, Bacău, **2025**, Poster.
6. COJAN E., **MUNTIANU G.**, ANDRIOAI-GRIGORAȘ G., PLATON N., ARUȘ A.V., NISTOR I.-D., **Some aspects regarding possible applications of anionic clays**, The 20th International Conference of Constructive Design and Technological Optimization in Machine Building Field, OPROTEH 2025, 21-23 mai, Bacău, **2025**, Poster.
7. HORTOLOMEU (LUNCANU) A., ROSU A.-M., GEORGESCU A.-M., **MUNTIANU G.**, NISTOR I.-D., MIRILA D.-C., **Spectrophotometric determination of polyphenolic compounds in various wines from Bacău county**, The 20th International Conference of Constructive Design and Technological Optimization in Machine Building Field, OPROTEH 2025, 21-23 mai, Bacău, **2025**, Poster.
8. DIACONESCU (DOROFTEI) R.-F., MIRILĂ D.C., ROSU A.-M., GEORGESCU A.-M., **MUNTIANU G.**, NISTOR I.-D., **Retention and catalytic degradation of 2,4,6-Trinitrotoluene using synthesized organoclays**, The 20th International Conference of Constructive Design and Technological Optimization in Machine Building Field, OPROTEH 2025, 21-23 mai, Bacău, **2025**, Poster.
9. **MUNTIANU G.**, GEORGESCU A.-M., NISTOR I.-D., JINESCU G., **Dynamic parameters determination in binary fluidized bed of bentonite particles**, 19th International Conference of Constructive Design and Technological Optimization in Machine Building – OPROTEH 2024, 22-24 mai, Bacău, **2024**, Poster.
10. PLATON N., ARUȘ V.A., GEORGESCU A.-M., ROȘU A.-M., **MUNTIANU G.**, NISTOR I.-D., **The behavior of bread with the addition of coconut shells activated carbon**, 19th International Conference of

- Constructive Design and Technological Optimization in Machine Building – OPROTEH 2024, 22-24 mai, Bacău, **2024**, Poster.
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 12. ARUȘ V.-A., ROȘU A.-M., PLESCAU I., PLATON N., GEORGESCU A.-M., **MUNTIANU G.**, NISTOR I. D., **Potential of nettle (*Urtica Dioica* L.) as byproduct with multiple uses**, 19th International Conference of Constructive Design and Technological Optimization in Machine Building – OPROTEH **2024**, 22-24 mai, Bacău, 2024, Poster.
 13. ARUȘ V.A., GEORGESCU A.-M., ROȘU A.-M., PLATON N., **MUNTIANU G.**, PÂRVULESCU O.-C., NISTOR I. D., **Enriching the nutritional value of white wheat bread with buckwheat flour**, 23rd Romanian International Conference on Chemistry and Chemical Engineering, September 4 – 7, **2024** Constanța – Mamaia, Poster.
 14. ROȘU A.M., ARUȘ V.A., PLATON N., GEORGESCU A.M., **MUNTIANU G.**, NISTOR I.D., PÂRVULESCU O.C., **Extraction of bioactive compounds from wild garlic (*Allium Ursinum* L.)**, International Chemical Engineering and Material Symposium, SICHEM 2024, 11-12 April **2024**, București, Poster.
 15. **MUNTIANU G.**, GEORGESCU A.M., ROȘU A.M., NISTOR I.D., **Valorification of the bentonite particles as adsorbent in air depollution. Dynamic study in fluidized bed**, Conference Ecology and Protection of Ecosystems, Ediția XIV, 2 – 4 noiembrie, **2023**, Bacău, Poster.
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 17. **MUNTIANU G.**, SIMION A.I., GRIGORAȘ C.G., NISTOR D.I., **Ammonia adsorption on pillared clay in magnetic field. Mathematical modelling and optimization by response surface methodology**, International Conference of Constructive Design and Technological Optimization in Machine Building – OPROTEH, Ediția 18, 11-13 mai, **2023**, Bacău, Poster.
 18. GEORGESCU A.M., ROȘU A.M., **MUNTIANU G.**, URECHE D., NISTOR I.D., **Efficiency of dyes from the food industry on organo-inorganic matrices**, International Conference of Constructive Design and Technological Optimization in Machine Building – OPROTEH, Ediția 18, 11-13 mai, **2023**, Bacău, Poster.
 19. GEORGESCU A.M., ARUȘ A.V., PLATON N., **MUNTIANU G.**, NARDOU F., NISTOR I.D., **Possible using of clay-based nanomaterials in environmental depollution**, International Conference Modern Technologies in the Food Industry, 20-22 Octombrie, **2022**, Chișinău, Poster.
 20. **MUNTIANU G.**, GEORGESCU A.M., ROSU A.M., PLATON N., ARUȘ V.A., NISTOR I.D., **Characterization of aluminum pillared clays for ammonia adsorption in coaxial magnetic fluidized bed**, International Conference of Constructive Design and Technological Optimization in Machine Building – OPROTEH, Ediția 17, 25-27 mai, **2022**, Bacău, Poster.
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 22. **MUNTIANU G.**, SIMION A.I. GRIGORAS C.G., NISTOR I.D., **Utilization of mathematical modelling and optimization by response surface methodology for aluminum pillaring process**, International Conference of Constructive Design and Technological Optimization in Machine Building – OPROTEH, Ediția 16, 25-27 mai, **2021**, Bacău, virtual event – Poster.
 23. ARUȘ V.A., NISTOR I.D., PLATON N., GEORGESCU A.M., **MUNTIANU G.**, JINESCU G., **Lactic acid fermentation in the presence of layered double hydroxides and ultrasound field: Statistical Modelling and Optimization**, International Conference of Constructive Design and Technological Optimization in Machine Building – OPROTEH, Ediția 16, 25-27 mai, **2021**, Bacău, virtual event – Poster.
 24. **MUNTIANU G.**, GEORGESCU A.M., PLATON N., ARUȘ V.A., NISTOR I.D., JINESCU G., **Characterization of Al-pillared clays as possible adsorbents for ammonia retention**, International Conference of Applied Sciences, Chemistry and Chemical Engineering, Ediția 11, 22-24 mai, **2019**, Bacău – Poster.
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30. SIMION A.I., GRIGORAȘ C.G., FAVIER L., ROȘU A.M., **MUNTIANU G.**, GAVRILĂ L., **Environmental problems overview in sugar-beet by-products conversion in fodder yeast**, Ecology and Protection of Ecosystems, Ediția 12, 02-04 noiembrie, **2017**, Bacău – Poster.
31. **MUNTIANU G.**, MIRILA D., NISTOR I.D., JINESCU G., **Electromagnetic field application in control and monitoring air pollution**, Le cinquième colloque francophone PLUridisciplinaire sur les Matériaux, l'Environnement et l'Electronique, 19-21 octombrie, **2017**, Ediția 5, Bacău – Poster.
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36. GEORGESCU A.-M., **MUNTIANU G.**, NISTOR I.D., NARDOU F., **Modeling and optimization of pillaring process using experimental design procedure**, Ecology and Protection of Ecosystems, Ediția 11, 05-07 noiembrie, **2015**, Bacău, Poster.
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F. Participare la saloane de inovație și inventică

1. MIRILA D.-C., ROSU A.-M., GEORGESCU A.-M., **MUNTIANU G.**, NEDEFF F., PANAINTE-LEHADUS M., NISTOR I.-D., **Innovative nanomaterial used as catalyst and bacterial inhibition agent**, EUROINVENT 17th European Exhibition of Creativity and Innovation, 8-10 mai, Iasi, 2025: **medalia de aur**;
2. GEORGESCU A.-M., **MUNTIANU G.**, ROSU A.-M., MIRILA D.-C., MOROI A.M., VARTOLOMEI N., NISTOR I.-D., LEHADUS-PANAINTE M., **New organic digestive biscuits with rare black mulberry addition and delightful jelly**, 6th International Exhibition INVENTCOR, 3-5 aprilie 2025, Deva: **medalie de aur** acordată de International Center for Research and Development IRAQ; **medalie de aur** și **premiu special** acordate de Universitatea „Constantin Brâncuși” din Târgu Jiu; **medalie de argint** acordată de Association of Inventors and Innovators UPI CIB Serbia;
3. VARTOLOMEI N., ARUȘ V.A., TĂNASE S., PLATON N., GEORGESCU A.M., **MUNTIANU G.**, NISTOR I.D., TURTOI M., **Yogurt with the organic rosehip powder addition**, 6th International Exhibition INVENTCOR, 3-5 aprilie 2025, Deva: **medalie de aur**;
4. MIRILA D.-C., HORTOLOMEU A., VARTOLOMEI N., ROSU A.-M., GEORGESCU A.-M., NEDEFF F.-M., ARUS V.-A., PLATON N., **MUNTIANU G.**, PANAINTE-LEHADUS M., NISTOR I.-D., **Innovative retention of phthalates in wine using newly developed nanomaterials**, International Innovation and Invention Show EURO POLITEHNICUS 1st edition, 22-24 noiembrie 2024, București: **medalia de aur** de la EURO Politehnicus International Innovation & Invention Show.

Data,
19.10.2026

Semnătura,