

LISTA LUCRĂRILOR ȘTIINȚIFICE

publicate de către colectivul de cercetători Lupașcu Tudor, acad., dr. hab., Nastas Raisa, dr., conf. cerc, Peruhov Oleg, dr., Țîmbaliuc Nina, dr. conf. cerc., Ceban Irina, dr.
în perioada 2023-2024

MONOGRAFII

Capitole în monografii editate peste hotare

1. PETUHOV, O., LUPAȘCU, T., Vlase, T., BRADU, I-A., BEHUNOVA, D. Bactericidal Properties of Microwave Activated Carbons Enhanced with Enoxil and Silver/Selenium Nanoparticles. Published in the International Book *Recent Developments in Chemistry and Biochemistry Research* Vol. 7, Chapter 8, pp.126-149.
<https://doi.org/10.9734/bpi/rdebr/v7/2762>

Culegeri de lucrări editate în Republica Moldova

1. Book of Abstracts of the scientific seminar with the international participation ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH, September 21, 2023, Chisinau, Republic of Moldova. Editors: Tudor Lupascu, Raisa Nastas. Chișinău: 2023 (CEP USM). – 45 p. ISBN: 978-9975-62-559-3 (PDF). <http://dx.doi.org/10.19261/admateh.2023> (<https://ichem.md/seminar-stiintific-ADMATEH>)

ARTICOLE ȘTIINȚIFICE PUBLICATE ÎN REVISTE ȘTIINȚIFICE DE PROFIL

Articole în reviste din bazele de date Web of Science și SCOPUS (cu indicarea factorului de impact IF)

1. CEBAN (GINSARI), I., LUPASCU, T., MIKHALOVSKY, S., NASTAS, R. Adsorption of Cobalt and Strontium Ions on Plant-Derived. In: *C — Journal of Carbon Research*. 2023, 9(3), 71; <https://doi.org/10.3390/c9030071> (IF=4.1)
2. MUNTEAN, S.G., NISTOR, M.A., NASTAS, R., PETUHOV, O. Dyes and Heavy Metals Removal from Aqueous Solutions Using Raw and Modified Diatomite. In: *Processes*, 2023, 11(8), 2245. <https://doi.org/10.3390/pr11082245> (IF=3.5)
3. GUTSANU, V., BOTNARU, M., PETUHOV, O. The Study of Chemical Transformations on Activated Carbon with Adsorbed Vitamin C before and after Thermal Regeneration. In: *Colloid Journal*. 2023, vol. 85, pp. 340-347. ISSN 1061-933X. DOI: <https://doi.org/10.1134/S1061933X22600361> (IF= 1,1).
4. GUTSANU, V., PETUHOV, O., IPATE A-M., LISA, G., BOTNARU, M. Metal/carbon Composite Precursors for Obtaining New Sorbents-Catalysts. In: *Colloid Journal*, 2023, vol. 85, No. 06, pp. 871-888. <https://doi.org/10.1134/S1061933X23600537> (IF =1,1)
5. LUPASCU, T., PETUHOV, O., CULIGHIN, E., MITINA, T., RUSU, M., ROTARU, A. The influence of surface chemistry upon the textural, thermal and sorption properties of apple-pectin adsorbent materials. In: *Journal of Thermal Analysis and Calorimetry*. 2023, vol. 148, nr. 10, pp. 4573-4587. ISSN 1388-6150. DOI: <https://doi.org/10.1007/s10973-022-11465-7> (I.F.=4,63)

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6. PETUHOV, O., TIMBALIUC, N., CEBAN (GINSARI), I., CIBOTARU, S., LUPASCU, T., NASTAS, R. Comparative study of the local vegetable activated carbon with commercial ones for adsorption of methylene blue. In: *Chemistry Journal of Moldova*, pp.93-101, 19(1), 2024, <https://doi.org/10.19261/cjm.2024.0897>. (IF 0,5).

Articole în reviste din Registrul National al revistelor de profil, cu indicarea categoriei

1. ȚIMBALIUC, N., PETUHOV, O., LUPAȘCU, T., BOLDURESCU, N. Studiul proceselor de adsorbție a vitaminei B6 pe adsorbanti carbonici autohtoni. În: *Studia Universitatis Moldaviae. Seria Științe Reale și ale Naturii*, 2023, nr. 1(171), p.178-185, (Categorie B). [https://doi.org/10.59295/sum1\(171\)2023_24](https://doi.org/10.59295/sum1(171)2023_24)
2. CIOBANU, M., LUPAȘCU, T., ȚIMBALIUC, N., BOLDURESCU, N. Regenerarea cărbunelui activ AG-3 utilizat în procesele de potabilizare a apelor de suprafață. În: *Studia Universitatis Moldaviae. Seria Științe Reale și ale Naturii*, 2023, nr. 6(166), pp 106-112, (Categorie B). [http://doi.org/10.59295/sum6\(166\)2023_14](http://doi.org/10.59295/sum6(166)2023_14)

**ARTICOLE ȘTIINȚIFICE PUBLICATE ÎN LUCRĂRILE MANIFESTĂRILOR ȘTIINȚIFICE
În lucrările manifestărilor științifice internaționale realizate în afara țării**

1. NASTAS, R., CEBAN, I., GOREACOC, T., LUPAȘCU, T. Testing of modified activated carbons for removal of sulphide and nitrite ions from water. In: *Materials of the 5th International Scientific and Practical Conference "Future prospects and reality towards waterproofing technologies"*, 14-15 November 2024, Kiev, Ukraine. *Proceedings*, pp. 86-89.

În lucrările manifestărilor științifice naționale cu participare internațională realizate în Republica Moldova

1. NASTAS, R., BALAN, I. Experimental and DFT study of metal ion adsorption on activated carbon surface via carboxylic groups. In: *Proceedings of the National Conference with International Participation „INTEGRARE PRIN CERCETARE ȘI INOVARE”* 7-8 November 2024, Chisinau, R. Moldova. Chisinau: CEP USM, 2024, ISBN 978-9975-62-808-2 (PDF). pp. 644-651. DOI: <https://doi.org/10.59295/spd2024n.89>
2. GRIGORAȘ, D., MITINA, T., BONDARENKO, N., LUPAȘCU, T. Studiul calității apei subterane din trei localități din zona centru a Republicii Moldova. În: *Integrare prin cercetare și inovare: conferința științifică națională cu participare internațională. Științe ale naturii și exacte*, Chișinău, Republica Moldova, 7-8 noiembrie 2024, pp. 606-614. Chisinau: CEP USM, 2024, ISBN 978-9975-62-808-2 (PDF). https://ichem.md/sites/default/files/2025-01/Conf_USM%207-8%20noiembrie%202024.pdf. DOI: <https://doi.org/10.59295/spd2024n.84>

BREVETE DE INVENȚIE ELIBERATE DE AGEPI

1. PETUHOV O., LUPAȘCU T. *Instalație portabilă pentru testarea materialelor filtrante și tehnologiilor de potabilizare a apelor naturale*. Brevet de invenție MD 4906 C1, Hotărâre de acordare a brevetului nr. 10506 din 2024.09.25, Publicat BOPI nr. 11/2024. <https://db.agepi.md/Inventions/details/a/%202023%200011/LinkTitluElib>

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TEZE ALE COMUNICĂRILOR LA MANIFESTĂRI ȘTIINȚIFICE
În lucrările manifestărilor științifice internaționale (peste hotare)

1. LUPASCU, T. PETUHOV O., MITINA T., CIOBANU, M., NASTAS, R. New autochthonous carbonic adsorbents for groundwater potabilization. In: *IasiCHEM 5-MIT 2023 Faculty of Chemistry Conference*. 26-27 October 2023, Iasi, Romania. p. 11.
2. CEBAN, I., NASTAS, R., LUPASCU, T. Adsorption of caffeic and p-coumaric acids on activated carbons. In: *IasiCHEM 5-MIT 2023 Faculty of Chemistry Conference*. 26-27 October 2023, Iasi, Romania. p. 26.
3. LUPASCU, T., PETUHOV, O., MITINA, T., BONDARENCO, N., GRIGORAS, D. "Groundwater quality in Republic of Moldova and Technologies for their potabilization." *International symposium "The environment and the industry"*, 2023 București, pp. 80-81. DOI: <http://doi.org/10.21698/simi.2023.ab29>
4. PETUHOV, O., SCUTARU, I., BRADU, I-A., LUPASCU, T., BOLDURESCU, N. Evaluating the thermal regeneration processes of spent activated carbons used in winemaking. *The 7th Central and Eastern European Conference on Thermal Analysis and Calorimetry*, 28-31 August 2023, Brno, Czech Republic. p.178.
5. PETUHOV, O., BOLDURESCU, N., BRADU, I-A., LUPASCU, T. Preparation and characterization of carbonaceous adsorbents from solid industrial waste. *The 7th Central and Eastern European Conference on Thermal Analysis and Calorimetry*, 28-31 August 2023, Brno, Czech Republic. p.179.
6. GUTSANU, V., LISA, G., BOTNARU M., IPATI, A-M., PETUHOV, O. Removal of Nitrite Ions from Solutions Using new Adsorbant-Catalysts. *12th International Conference on Environmental Engineering and Management (ICEEM12)*. 13th - 16th September 2023, in Iasi, Romania. Conference Abstracts Book, pp.191-192.
7. GUTSANU, V., PETUHOV, O., IPATE, A-M., LISA, G., BOTNARU, M. Composites-precursors for obtaining new sorbents and catalysts. IXth Edition of *The International Symposium "PRIOrities of CHEMistry for a sustainable development" PRIOCHEM* 11 -13 October 2023, Bucharest, Romania Hallmark event by INCDCP - ICECHIM Bucharest, p.23.
8. BALAN, I., NASTAS, R. Computational modeling of the adsorption of copper ions on the activated carbon surface. In: Book of Abstracts of the *Ukrainian conference with international participation «Chemistry, Physics and Technology of Surface»*, May 29-30, 2024, Kyiv, Ukraine, p. 36. ISBN 978-617-95367-1-7. <https://drive.google.com/file/d/1tJaD4gUBwS9PKcGhHhlu5iku7JwS9E8T/view>
9. CEBAN (GINSARI), I., NASTAS, R., LUPASCU, T. Adsorption of caffeic and p-coumaric acids on activated carbons with different surface chemistry. In: Book of Abstracts of the *Ukrainian conference with international participation «Chemistry, Physics and Technology of Surface»*, May 29-30, 2024, Kyiv, Ukraine, p. 187. ISBN 978-617-95367-1-7. <https://drive.google.com/file/d/1tJaD4gUBwS9PKcGhHhlu5iku7JwS9E8T/view>
10. LUPASCU, L., PETUHOV, O., BOLDURESCU, N., TIMBALIUC, N., LUPASCU, T. Adsorption of bacteria and fungi on different carbon adsorbents. In: Book of Abstracts of the *Ukrainian conference with international participation «Chemistry, Physics and Technology of Surface»*, May 29-30, 2024, Kyiv, Ukraine, p. 195. ISBN 978-617-95367-1-7. <https://drive.google.com/file/d/1tJaD4gUBwS9PKcGhHhlu5iku7JwS9E8T/view>

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11. TIMBALIUC, N., PETUHOV, O., BOLDURESCU, N., LUPASCU, T. Study of o-nitrophenol adsorption processes on different types of activated carbons. In: Book of Abstracts of the *Ukrainian conference with international participation «Chemistry, Physics and Technology of Surface»*, May 29-30, 2024, Kyiv, Ukraine, p. 55. ISBN 978-617-95367-1-7. <https://drive.google.com/file/d/1tJaD4gUBwS9PKcGhHhlu5iku7JwS9E8T/view>
12. PETUHOV, O., LUPASCU, T. Portable installation for testing filter materials and technologies for potabilization of natural waters. *BOOK OF ABSTRACTS INTERNATIONAL SYMPOSIUM "THE ENVIRONMENT AND THE INDUSTRY"*, Romania, September 19th - 20th, p.30-31, 2024. DOI: <http://doi.org/10.21698/simi.2024.ab10>
13. SHEPEL, D., RUSU, M., LUPASCU, T. Determination of the content of humic substances in the natural waters of the Republic of Moldova. *BOOK OF ABSTRACTS INTERNATIONAL SYMPOSIUM "THE ENVIRONMENT AND THE INDUSTRY"*, Romania, September 19th -20th, p.46-47, 2024. DOI: <http://doi.org/10.21698/simi.2024.ab17>
14. PETUHOV, O., VLASE, T., LUPASCU, T., TIMBALIUC, N., BOLDURESCU, N. Synthesis and catalytic performances of manganese and iron loaded carbon composites for the selective catalytic oxidation of dyes. Book of Abstracts of *Central and Eastern European Conference on Physical Chemistry and Materials Science*, 16-19 September 2024 Kaunas, Lithuania, p.126.
15. PETUHOV, O., VLASE, T., LUPASCU, T., TIMBALIUC, N., BOLDURESCU, N. Heating mechanism of carbon materials through microwave treatment. Book of Abstracts *Central and Eastern European Conference on Physical Chemistry and Materials Science* 16-19 September 2024 Kaunas, Lithuania, p.169.
16. PETUHOV, O., VLASE, T., BRADU, I-A., BOLDURESCU, N., LUPASCU, T. Preparation and study of low-cost environmental pollution adsorbents from spent tyre. Book of Abstracts *33rd Symposium "Eugen Segal" of the Commission for Thermal Analysis and Calorimetry of the Romanian Academy*, 17-18 of October 2024, Timișoara – Romania, Book of Abstracts p. 28, ISBN 978-630-327-115-6. https://ichem.md/sites/default/files/2024-12/Book%20of%20abstracts_Simpoz%20E.Segal%20Timisoara.pdf
17. CEBAN (GINSARI), I., NASTAS, R., GOREACIOC, T., GROMOVOY, T., PETUHOV, O., LUPASCU, T. Using of thermal methods to identify functional Groups on the activated carbons surface. *33rd Symposium "Eugen Segal" of the Commission for Thermal Analysis and Calorimetry of the Romanian Academy*. 17-18 october 2024, Timisoara, Romania. Book of Abstracts, p. 44. ISBN 978-630-327-115-6. https://ichem.md/sites/default/files/2024-12/Book%20of%20abstracts_Simpoz%20E.Segal%20Timisoara.pdf
18. NASTAS, R., CEBAN (GINSARI), I., BOCIRNEA, A., BALAN, I. Complementation of different techniques for elucidating the metal ion binding mechanisms on the carbonaceous adsorbents. *NanoteC24. International Conference on Carbon Nanoscience and Nanotechnology*. 27-30 August 2024, Nantes, France. Book of Abstracts, p. 75.
19. CEBAN (GINSARI), I., NASTAS, R., LUPASCU, T. Toxic metals adsorption on different activated carbons derived from agricultural wastes. In: *Workshop on Methods of Water Pollution Control*. 3-4 December 2024, Kosice, Slovakia. Book of Abstracts, pp. 24-25. ISBN 978-80-89883-17-2

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20. CEBAN, I., BOCIRNEA, A., BALAN, I., NASTAS, R. Combining spectral methods, acid-base titrations and computational methods for elucidation of metalbinding mechanisms on activated carbons. In: *International Conference "Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat 2024"*, 27- 29 November 2024, p. 132. https://ichem.md/sites/default/files/2025-01/NanoBioMat-Book-ofabstracts_final.pdf

În lucrările manifestărilor științifice internaționale (Republica Moldova)

1. LUPAȘCU, L., PETUHOV, O., LUPAȘCU, T. Study of the adsorption of bacillus subtilis bacteria and candida albicans fungus on enterosorbents of different vegetal origin. *Conferința Științifico-Practice Internațională „INSTRUIRE PRIN CERCETARE PENTRU O SOCIETATE PROSPERĂ”* Ediția a-X-a, 18-19 martie 2023, Chișinău. DOI: 10.46727/c.v1.18-19-03-2023. p. 76-79.
2. LUPASCU, L., PETUHOV, O., LUPASCU, T., BOLDURESCU, N. Study of the adsorption of Candida albicans fungus on enterosorbents obtained from aprikot husks”. *Conferința științifică națională cu participare internațională “ Dialogul Generațiilor”*, septembrie 14-15, 2023, Chisinau, Republica Moldova. p. 165.
3. LUPASCU, L., PETUHOV, O., TIMBALIUC, N. “Study of the adsorption of Bacillus cereus on different fractions of activated carbons obtained from apple wood”, p. 208. *Conferința științifică internațională “PATRIMONIUL DE IERI–IMPLICAȚII ÎN DEZVOLTAREA SOCIETĂȚII DURABILE DE MÂINE”* IAȘI-CHIȘINĂU-LVIV, 9-10 februarie 2023, ediția a VII-a.
4. LUPASCU, T., PETUHOV, O., NASTAS, R., CIOBANU, M., TIMBALIUC, N., MITINA, T., CEBAN (GINSARI), I., LUPASCU, L., BOLDURESCU, N. Activated carbons – efficient adsorbents for the protection of the environment and human health. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, Chisinau, Republic of Moldova, p. 9. ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admateh.2023.ab01>
5. CEBAN (GINSARI), I., NASTAS, R., LUPASCU, T. Adsorption of caffeic acid on activated carbons. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, Chisinau, Republic of Moldova, p. 15. ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admateh.2023.ab07>
6. CEBAN (GINSARI), I., NASTAS, R. Adsorption of tannic acid on activated carbons with different surface chemistry. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, Chisinau, Republic of Moldova, p. 32. ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admateh.2023.ab23>
7. CEBAN (GINSARI), I., MORARU, E., NASTAS, R. The redox properties of activated carbons evaluated by the ABTS cation-radical method. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, Chisinau, Republic of Moldova, p. 34. ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admateh.2023.ab25>

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8. GUTSANU, V., PETUHOV, O., IPATE, A-M., LISA, G., BOTNARU, M. Composites – precursors for obtaining new sorbents and catalysts. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, p.12, Chisinau, Republic of Moldova. ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admatch.2023.ab04>
9. TIMBALIUC, N., LUPASCU, T. Adsorption of o-nitrophenol on local carbonic adsorbents. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, p.13, Chisinau, Republic of Moldova. ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admatch.2023.ab05>
10. LUPASCU, L., PETUHOV, O., LUPASCU, T. Adsorption of bacillus subtilis and bacillus cereus gram-positive bacteria on enterosorbents obtained from apricot husks. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, p.19, Chisinau, Republic of Moldova, ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admatch.2023.ab11>
11. PETUHOV, O., LUPASCU, T., VLASE, T., BOLDURESCU, N. Carbonaceous adsorbents from solid industrial waste. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, p.29, Chisinau, Republic of Moldova, ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admatch.2023.ab21>
12. LUPASCU, T., CIOBANU, M., PETUHOV, O. The catalytic activity of carbon catalysts impregnated with manganese, copper, and cobalt ions. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, p.35, Chisinau, Republic of Moldova, ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admatch.2023.ab26>
13. MITINA, T., BONDARENCO, N., GRIGORAS, D., LUPASCU, T. Evaluation of water quality in water sources in the south of the Republic of Moldova. In: *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*, September 21, 2023, p.39, Chisinau, Republic of Moldova. ISBN: 978-9975-62-559-3. <http://dx.doi.org/10.19261/admatch.2023.ab30>

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