

Universitatea Tehnică a Moldovei
(Denumirea organizației)

APROB:
Rector, Dr. hab. Viorel BOSTAN

(semnătura)
“ ” _____ 2023

PROCES-VERBAL
nr. 1 din 27 septembrie 2023
de recepție finală/punere în funcțiune a rezultatelor obținute în cadrul proiectului
de cercetare și inovare cu cifrul 20.80009.5007.11

În baza ordinului nr. 1137-DȘ din „30” august 2023, comisia în componența președintelui comisiei

Prorector pentru cercetare
(funcția)

Dr. hab. Vasile Tronciu
(nume, prenume)

și membrii comisiei:

Conducător Proiect
(funcția)

academician Anatolie Sidorenko
(nume, prenume)

Contabilă șefă adjunctă
(funcția)

Daniela Gîrlea
(nume, prenume)

a întocmit prezentul proces-verbal de recepție finală/punere în funcțiune a următorului obiect de active materiale și/sau nemateriale (grupe de obiecte):

| Nr. d/o | Denumirea obiectului de active materiale și/sau nemateriale (grupe de obiecte) | Numărul de inventar | Data de recepție finală /punere în funcțiune | Nr. unit. | Valoarea de intrare, mii lei | Durata de funcționare utilă, ani | Suma uzurii anuale, lei |
|---------|--|---------------------|--|-----------|------------------------------|----------------------------------|-------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 1. 2020 | ¹ Monografii | | | 3 | 392.2 | | |
| 2. 2020 | ² Articole în reviste științifice | | | 7 | 622.8 | | |
| 3. 2020 | ³ Articole în culegeri științifice | | | 7 | 621.4 | | |
| 4. 2020 | ⁴ Teze în culegeri științifice | | | 17 | 470.8 | | |
| 5. 2020 | ¹¹ Brevete | | | 1 | 180 | | |
| | TOTAL 2020 | | | | 2287.20 | | |
| 6. 2021 | ⁶ Articole în reviste științifice | | | 12 | 1266.3 | | |
| 7. 2021 | ⁷ Articole în culegeri științifice | | | 2 | 178.2 | | |
| 8. 2021 | ⁸ Teze în culegeri științifice | | | 19 | 596.4 | | |
| 9. 2021 | ⁹ Brevete | | | 2 | 378.2 | | |
| | TOTAL 2021 | | | | 2419.1 | | |

| | | | | | | | |
|-------------|--|--|--|----|---------------|--|--|
| 10. 2022 | ¹⁰ Monografii | | | 1 | 495.8 | | |
| 11. 2022 | ¹¹ Articole în reviste științifice | | | 4 | 826.4 | | |
| 12. 2022 | ¹² Articole în culegeri științifice | | | 3 | 547.6 | | |
| 13. 2022 | ¹³ Teze în culegeri științifice | | | 8 | 601.1 | | |
| 14. 2022 | ¹⁴ Brevete | | | 5 | 652.5 | | |
| | TOTAL 2022 | | | | 3123.4 | | |
| 15. 2023 | ¹⁵ Articole în reviste științifice | | | 11 | 1319.2 | | |
| 16. 2023 | ¹⁶ Articole în culegeri științifice | | | 7 | 700.3 | | |
| 17. 2023 | ¹⁷ Teze în culegeri științifice | | | 11 | 634.2 | | |
| 18. 2023 | ¹⁸ Brevete | | | 2 | 390.5 | | |
| | TOTAL 2023 | | | | 3044.2 | | |

| Codul de clasificare a obiectului de active conform Catalogului mijloacelor fixe și activelor nemateriale | Data fabricării (elaborării) | Numărul pașaportului tehnic, altui document (se va specifica) |
|---|------------------------------|---|
| 8 | 9 | 10 |
| | | |
| | | |
| | | |

2020

¹Monografii

- PENIN, A. Analysis of electrical circuits with variable load regime parameters: projective geometry method. In: *Springer International Publishing Switzerland, 3rd edition, 2020. 520p.* <https://www.springer.com/gp/book/9783030353650>
- SIDORENKO, A. Functional Nanostructures and Sensors for CBRN Defence and Environmental Safety and Security. Edited by Anatolie Sidorenko, Horst Hahn. Springer, Dordrecht. Online ISBN: 978-94-024-1909-2. DOI: <https://doi.org/10.1007/978-94-024-1909-2>
- Потапов Е. И., Гараба И. А., Засавицкий Е. А.. Противорабовые работы в Республике Молдова: их эффективность и экологические аспекты. Кишинэу, 2020 (Tipografia «Protipar Service») – 88 p. ISBN: 978-9975-3448-0-7

²Articole în reviste științifice

- KRESSDORF, B.; MEYER, T.; BELENCHUK, A.; SHAPOVAL, O.; TEN BRINK, M.; MELLES, M.; ROSS, U.; HOFFMANN, J.; MOSHNYAGA, V.; SEIBT, M.; BLÖCHL, P.; JOOSS, C. Room-temperature hot-polaron photovoltaics in the charge-ordered state of a layered perovskite oxide heterojunction. In: *Phys. Rev. Applied.* 2020, **14**(5), pp. 054006. ISSN: 2331-7019 (online). <https://doi.org/10.1103/PhysRevApplied.14.054001> (IF: 4.194).
- BAKURSKIY, S.; KUPRIYANOV, M.; KLENOV, N. V.; SOLOVIEV, I.; SCHEGOLEV, A.; MORARI, R.; KHAYDUKOV, Yu.; SIDORENKO, A. S. Controlling the proximity effect in a Co/Nb multilayer: the properties of electronic transport. In: *Beilstein J. Nanotechnol.* 2020, **11**, 1336–1345. ISSN: 21904286 <https://doi.org/10.3762/bjnano.11.118> (IF: 2.612).
- KHAYDUKOV, Yu.; PÜTTER, S.; GUASCO, L.; MORARI, R.; KIM, G.; KELLER, T.; SIDORENKO, A.; KEIMER, B. Proximity effect in [Nb(1.5 nm)/Fe(x)]₁₀/Nb(50 nm) superconductor/ferromagnet

- heterostructures. In: *Beilstein J. Nanotechnol.* 2020, **11**, 1254–1263. ISSN: 21904286 <https://doi.org/10.3762/bjnano.11.109> (IF: 2.612)
7. VAKHRUSHEV, A.; FEDOTOV, A.; BOIAN, V.; MORARI, R.; SIDORENKO, A. Molecular dynamics modeling of formation processes parameters influence on a superconducting spin valve structure and morphology. Preprint In: *Beilstein Arch.* 2020, 202067. <https://doi.org/10.3762/bxiv.2020.67.v1> (IF: 2.622).
 8. MUNTYANU, F.; GILEWSKI, A.; NENKOV, K.; ZALESKI, A.; CHISTOL V. Influence of the pronounced degree of imperfection on the superconductivity, weak magnetism, and quantum transport of crystallite structures with one or more nano-width multilayer interfaces of $\text{Bi}_{1-x}\text{Sb}_x$ ($0.07 \leq x \leq 0.2$) alloys. In: *Physica B: Condensed Matter*, 2020, **252**, 412262. (IF: 1.87) <https://doi.org/10.1016/j.physb.2020.412262>.
 9. KAPRAN, O.; MORARI, R.; GOLOD, T.; BORODIANSKYI, E.; PREPELITSA, A.; BOIAN, V.; KLENOV, N.; SIDORENKO, A.; KRASNOV, V. Transport characterization of magnetic states in Superconductor/Ferromagnet Nb/Co multilayers. *Condensed Matter - Superconductivity*, 2020, <https://arxiv.org/abs/2010.03454>
 10. PENIN, A.; SIDORENKO, A. Normalized representation of spin valve resistance value by the hyperbolic metric. In: *Moldavian Journal of the Physical Sciences*, 2020, **19** (1-2), pp.110-119. Cat.B.

³ Articole în culegeri științifice

11. MUNTEANU, F.; NENKOV, K.; ZALESKI, A.; CHISTOL, V. Superconductivity and weak ferromagnetism in inclination bicrystal interfaces of bismuth and antimony. In: *4th International Conference on Nanotechnologies and Biomedical Engineering*, Proceedings of ICNBME-2019, September 18-21, 2019, Chisinau, Moldova, IFMBE, volume 77, 2020, pp.19-22
12. SIDORENKO, A.; GUTSUL, T.; BOGDEVIC, O.; SUMAN, V.; FEDOROV, V.; LUPU, M.; NEGRUTI, G. Long-term Environmental Risks of Pollution of the Dniester River Basin by Obsolete Pesticides. În: *Proceedings of the International Conference „EU Integration and Management of the Dniester River Basin”*, Chisinau, October 8-9, 2020. Chisinau: Eco-TIRAS, 390, pp.282-285
13. SIDORENKO, A.; RASTIMESINA, I.; POSTOLACHI, O.; FEDOROV, V.; GUTUL, T.; VASEASHTA, A. The Toxic Effect of Trifluralin on Soil Microorganisms in the Presence of Fe0/PVP Nanoparticles. In: *Sidorenko A., Hahn H. (eds) Functional Nanostructures and Sensors for CBRN Defence and Environmental Safety and Security*. NATO Science for Peace and Security Series C: Environmental Security. Springer, Dordrecht, 2020, pp.113-124 Online ISBN: 978-94-024-1909-2 https://doi.org/10.1007/978-94-024-1909-2_9
14. PENIN, A.; SIDORENKO, A. (2020) Transmission of Two Measuring Signals by an Invariant Property of Three Wire Communication Lines. . In: *Sidorenko A., Hahn H. (eds) Functional Nanostructures and Sensors for CBRN Defence and Environmental Safety and Security*. NATO Science for Peace and Security Series C: Environmental Security. Springer, Dordrecht, 2020, pp.65-82 Online ISBN: 978-94-024-1909-2. DOI: https://doi.org/10.1007/978-94-024-1909-2_4
15. BANDURYAN, B. B.; BAZALEEVV, M. I.; KLEPIKOV, V. F.; LYTVYENENKO, V. V.; NOVIKOV, V. E.; GOLUBOV, A. A.; SIDORENKO, A. IR-Sensors and Detectors of Irradiation Based on Metal Folis In: *Sidorenko A., Hahn H. (eds) Functional Nanostructures and Sensors for CBRN Defence and Environmental Safety and Security*. NATO Science for Peace and Security Series C: Environmental Security. Springer, Dordrecht, 2020, pp.83-88 Online ISBN: 978-94-024-1909-2. DOI: https://doi.org/10.1007/978-94-024-1909-2_5
16. PAJEWSKA-SZMYT, M.; GADZAŁA-KOPCIUCH, R.; SIDORENKO, A.; BUSZEWSKI, B. Smart Surface with Ferromagnetic Properties for Eco- and Bioanalytics. In: *Sidorenko A., Hahn H. (eds) Functional Nanostructures and Sensors for CBRN Defence and Environmental Safety and Security*. NATO Science for Peace and Security Series C: Environmental Security. Springer, Dordrecht, 2020, pp.89-91. Online ISBN: 978-94-024-1909-2. DOI: https://doi.org/10.1007/978-94-024-1909-2_14
17. VASEASHTA, A.; DUCA, G.; CULIGHIN, E.; BOGDEVICI, O.; KHUDAVERDYAN, S.; SIDORENKO, A. Smart and Connected Sensors Network for Water Contamination Monitoring and Situational Awareness. In: *Sidorenko A., Hahn H. (eds) Functional Nanostructures and Sensors for CBRN Defence and Environmental Safety and Security*. NATO Science for Peace and Security Series C: Environmental Security. Springer, Dordrecht, 2020, https://doi.org/10.1007/978-94-024-1909-2_20

⁴ Teze în culegeri științifice

18. SIDORENKO, A.; GUTUL, T.; ANTROPOV, E. Research and innovation - AGAINST COVID-19. *Pan-European Hacaton #EUvsVIRUS 2020*, organized by European Commission Directorate-General for Research & Innovation-. Directorate TF- European Innovation Council. TF.2- Innovation ecosystems. Brussels 24 April 2020.
19. MUNTEANU, F.; NENKOV, K.; ZALESKI, A.; CONDREA, E. Unusual manifestation of weak magnetism and superconductivity in bicrystal interfaces of Bi, Sb and $\text{Bi}_{1-x}\text{Sb}_x$ ($0.07 \leq x \leq 0.2$) alloys. Poster presentation at JEMS 2020 (Joint European Magnetic Symposia), December 7-11, 2020. Virtual conference. Lisbon, Portugalia.

20. CONDREA, E.; MUNTEANU, F. Magnetotransport properties of deformed Bi nanowires. Poster presentation at JEMS 2020 (Joint European Magnetic Symposia), December 7-11, 2020. Virtual conference. Lisbon, Portugal.
21. SIDORENKO, A.; GUTUL, T.; FEDOROV, V.; COSCODAN, E.; SIBAEV, A.; PETRENKO, P. Metoda de tratare prealabila a semintelor de grau in prezenta nanoparticulelor de magnetit in camp magnetic. *The 24th International exhibition of inventions "INVENTICA 2020", Iasi-Romania, 29th – 31st of July 2020*, Volume Inventica 2020 online, p.554. ISSN:1844-7880. <http://ini.tuiasi.ro/salon/wp-content/uploads/sites/3/2020/07/Linkuri-de-acces-Volum-Postere.pdf>
22. SIDORENKO, A.; GUTSUL, T.; FEDOROV, V.; HOMEACOVA, T.; SHIBAEV, A. Nanoremediation of the soil contaminated by residual pesticides. În: *Internatoinal ON-LINE Conference SPINTECH summer school-2020, University of Twente, the Netherlands, 01-03 October 2020*.
23. SIDORENKO, A. S. Hybrid Structures for Spintronics and Qubits. În: *Internatoinal ON-LINE Conference SPINTECH summer school-2020, University of Twente, the Netherlands, 01-03 October 2020*.
24. COJOCARU, V.; GALUS, R.; FEDORISIN, T.; SIDORENKO, S. Smart device for hypothermia therapeutic. Poster at the International Conference "Annual Meeting of the Israel Society for Medical and Biological Engineering" (ISMBE, Abstract No. 138). 25-26 February, 2020 | Haifa, Israel.
25. SIDORENKO, A.; GUTUL, T.; FEDOROV, V.; SUMAN, V.; COSCODAN, E. Tehnologie de nanoremediere a soluluicontaminat cu pesticide reziduale 219T (rezultatele proiectului 2017-2018) *The 24th International exhibition of inventions "INVENTICA 2020", Iasi-Romania, 29th – 31st of July 2020*, Volume Inventica 2020 online, p.553. ISSN:1844-7880 <http://ini.tuiasi.ro/salon/wp-content/uploads/sites/3/2020/07/Linkuri-de-acces-Volum-Postere.pdf>
26. SIDORENKO, A.; MORARI, R.; ZASAVITCHI, E. Valva de spin Josephson pentru elemente de memorie criogenica. In: *The 24th International exhibition of inventions "INVENTICA 2020", Iasi-Romania, 29th – 31st of July 2020*, Volume Inventica 2020 online, p.559. ISSN:1844-7880 <http://ini.tuiasi.ro/salon/wp-content/uploads/sites/3/2020/07/Linkuri-de-acces-Volum-Postere.pdf>
27. SIDORENKO, A. Functional nanostructures with complex topology. In: On-line International conf. "CMD2020GEFES - Condensed Matter", Madrid 03 September 2020.
28. ZASAVITSKY, E. A.; KARAGENOV, D. I.; SEPTITCHI, A. IU.; SIDORENKO, A. S. Turn de recire de eficienta inalta pentru indepartarea caldurii generate de instalatiile tehnologice. In: *The 24th International exhibition of inventions "INVENTICA 2020", Iasi-Romania, 29th – 31st of July 2020*, Volume posters 2020 online, p.560. ISSN:1844-7880 <http://ini.tuiasi.ro/salon/wp-content/uploads/sites/3/2020/07/Linkuri-de-acces-Volum-Postere.pdf>
29. СИДОРЕНКО, А. С.; МОРАРЬ, Р. А.; БОЯН, В. И.; ПРЕПЕЛИЦА, А. А.; АНТРОПОВ, Е. И.; САВВА, Ю. Б.; ФЕДОТОВ, А. Ю.; СЕВЕРЮХИНА, О. Ю.; ВАХРУШЕВ, А. В. Функциональные наноструктуры и метаматериалы сверхпроводник-ферромагнетик проводниковой спинтроники. В: *Всероссийская научно-практическая конференция с международным участием «Перспективные технологии и материалы»: материалы научно-практической конференции г. Севастополь, 14-16 октября 2020 г. Севастопольский государственный университет, 2020, 222с. С.67*.
30. SIDORENKO, A. С. Функциональные наноструктуры сверхпроводник-ферромагнетик для спинтроники. In: *Пленарный доклад на международной конференции «Нанофизика и Нанoeлектроника», 10-13 Марта, 2020, Нижний Новгород, Россия. С.6*.
31. СИДОРЕНКО, А. С.; МОРАРЬ, Р. А.; БОЯН, В. И.; ПРЕПЕЛИЦА, А. А.; АНТРОПОВ, Е. И.; САВВА, Ю. Б.; ФЕДОТОВ, А. Ю.; СЕВЕРЮХИНА, О. Ю.; ВАХРУШЕВ, А. В., Гибридные наноструктуры сверхпроводник-ферромагнетик для сверхпроводниковой спинтроники. В: *VIII Международная конференция с элементами научной школы для молодежи «ФУНКЦИОНАЛЬНЫЕ НАНОМАТЕРИАЛЫ И ВЫСОКОЧИСТЫЕ ВЕЩЕСТВА». Суздаль. 5-9 октября 2020 г. С.42-43 / Сборник материалов. – 374 с. ISBN 978-5-6043996-5-1*.
32. SIDORENKO, A.; GUTSUL, T. Функциональные наноструктуры для сверхпроводниковой электроники. В: *Праці XI Міжнародній науково-практичній конференції «СУЧАСНІ ПІДХОДИ ДО ВИСОКОЕФЕКТИВНОГО ВИКОРИСТАННЯ ЗАСОБІВ ТРАНСПОРТУ», Україна, м. Ізмаїлі Одеської області, 3–4 грудня 2020 року*
33. SIDORENKO, A.; NICA, Iu. Dispozitivul de iradiere spectrozonală UV pentru combaterea cu COVID-19. «Research and innovation - AGAINST COVID-19» -*Simpozionul stiintific online dedicat pandemiei COVID-19, organizat de Academia de Stiinte a Moldovei. 28 aprilie 2020, Academie de Stiinte a Moldovei, Chisinau, Moldova*.
34. BOIAN, V. Modelarea proceselor de formare a valvei de spin supraconductoare bazate pe nanostructuri multistrat supraconductor – feromagnet. In: *Tendințe contemporane ale dezvoltării științei: viziuni ale tinerilor cercetători*. Ediția IX-a, 10 iunie 2020, Chișinău, Republica Moldova.

5Brevete

35. BELOTERCOVSCHII, Igori; SIDORENKO, Anatolie; CONDREA Elena; MORARI, Roman. *Dispozitiv de colectare și transmisie fără fir a datelor*. CERTIFICAT de inregistrare a desenului si modelului industrial №1874. Nr.depozit: f20190040, Data depozit: 2019.05.23: BOPI nr. 4/2020

6 Articole în reviste științifice

36. HOFFMANN - URLAUB, S.; ROSS, U.; HOFFMANN, J.; BELENCHUK, A.; SHAPOVAL, O.; RODDATIS, R.; MA, Q.; KRESSDORF, B.; MOSHNYAGA, V.; JOOSS, C. Ruddlesden-Popper Manganites: Tailoring *c*-Axis Orientation in Epitaxial Ruddlesden-Popper $\text{Pr}_{0.5}\text{Ca}_{1.5}\text{MnO}_4$ Films. In: *Advanced Materials Interfaces*. 2021, **8**(7). Online ISSN: 2196-7350. <https://doi.org/10.1002/admi.202002049> (IF: 4.948).
37. KAPRAN, O.M.; MORARI, R.; GOLOD, T.; BORODIANSKYI, E.A.; BOIAN, V.; PREPELITA, A.; KLENOV, N.; SIDORENKO, A.S.; KRASNOV, V.M. In situ transport characterization of magnetic states in Nb/Co superconductor/ferromagnet heterostructures. In: *Beilstein J. Nanotechnol.* 2021, **12**, 913–923. ISSN: 21904286. <https://doi.org/10.3762/bjnano.12.68> (IF: 3.649).
38. KAPRAN, O.M.; GOLOD, T.; IOVAN, A.; SIDORENKO, A. S.; GOLUBOV, A.; KRASNOV, V.M. Crossover between short- and long-range proximity effects in superconductor/ferromagnet/superconductor junctions with Ni-based ferromagnets. In: *Phys.Rev B*. 2021, **103**, 094509. ISSN: 1550-235X (web) DOI:10.1103/PhysRevB.103.094509 (IF: 3.575).
39. KHAYDUKOV, Yu.; LENK, D.; ZDRAVKOV, V.; MORARI, R.; KELLER, T.; SIDORENKO, A.S.; TAGIROV, L.R.; TIDECKS, R.; HORN, S.; KEIMER, B. Chirality of Bloch domain walls in exchange biased CoO/Co bilayer seen by waveguide-enhanced neutron spin-flip scattering. In: *Phys.Rev B*. 2021, *Phys. Rev. B*. 104, 174445. ISSN: 1550-235X. <https://doi.org/10.1103/PhysRevB.104.174445>. (IF: 3.575).
40. FEDOTOV, A.; VAKHRUSHEV, A.; SEVERYUKHINA, O.; SIDORENKO, A.; SAVVA, Yu.; KLENOV, N.; SOLOVIEV, I. Theoretical Basis of Quantum-Mechanical Modeling of Functional Nanostructures. In: *Symmetry*. 2021, **13**, 883. ISSN 2073-8994. <https://doi.org/10.3390/sym13050883> (IF: 2.713).
41. CONDREA, E.; GILEWSKI, A.; AND NICORICI, V. Thermopower peculiarities and Umkehr effect in strained bismuth wires. In: *Physics Letters A* 2021, **409**, 127524, ISSN 0375-9601 <https://doi.org/10.1016/j.physleta.2021.127524> (IF: 2.657).
42. SIDORENKO, A.; GUTUL, T.; DVORNIKOV, D.; MINE GÜL ŞEKER.; GUTUL, E.; DIMOGLO, A.; VASEASHTA, A. Synthesis of nZVI/PVP nanoparticles for bioremediation applications In: *Bioremediation Journal*. 2021, **25**(2) Print ISSN: 1088-9868 Online ISSN: 1547-6529. <https://doi.org/10.1080/10889868.2021.1911922> (IF: 1.724).
43. SIDORENKO, A.S.; MORARI, R.A.; BOIAN, V.; PREPELITSA, A.A.; ANTROPOV, E.I.; SAVVA, Yu. B.; FEDOTOV, A. Yu.; SEVRYUKHINA, O. Yu.; VAKHRUSHEV, A.V. Hybrid nanostructures superconductor-ferromagnet for superconducting spintronics. In: *Journal of Physics: Conference Series* 2021, **1758** 012037, Online ISSN: 1742-6596. doi:10.1088/1742-6596/1758/1/012037 (IF: 0.55).
44. PENIN, A.A.; SAVVA, Y.B.; SIDORENKO, A.S. Fractionally Quadratic Approximation and Invariant Properties of the Nickel Steel Carpenter 49 Magnetization Curve. In: *Russian Microelectronics*. 2021, **50**(2), p.126–135. <https://doi.org/10.1134/S1063739721020074> (IF: 0.8[РИНЦ])
45. PENIN, A.; SIDORENKO, A. Normalized parameters of a magnetoresistive sensor in bridge circuits. In: *Moldavian Journal of the Physical Sciences*. 2021, **20**(1), pp. 94-104. ISSN: 1810-648X; ISSN:2537-6365. DOI: [10.53081/mjps.2021.20-1.05](https://doi.org/10.53081/mjps.2021.20-1.05) Cat.B
46. MUNTYANU, F.; CHISTOL, V.; CONDREA, E.; Atypical topological features of the $\text{Bi}_{1-x}\text{Sb}_x$ ($0 \leq x \leq 0.2$) nano- width bicrystalline boundaries. *Moldavian Journal of the Physical Sciences*, vol 20, nr. 2, 2021. ISSN: 1810-648X; ISSN:2537-6365 Cat.B.
47. MUNTYANU, F.; NENKOV, K.; ZALESKI, A.; CONDREA, E.; CHISTOL, V.; Various manifestations of weak magnetism and superconductivity in inclination interfaces of Bi, Sb and $\text{Bi}_{1-x}\text{Sb}_x$ ($0.07 \leq x \leq 0.2$) alloys. *Moldavian Journal of the Physical Sciences*, vol 20, nr. 2, 2021. ISSN: 1810-648X; ISSN:2537-6365. Cat.B

7 Articole în culegeri științifice

48. RUZHICKIY, V.I.; SOLOVIEV, I.I.; BAKURSKIY, S.V.; KLENOV, N.V.; SIDORENKO, A.S.; KUPRIYANOV, M.Yu.; STOLYAROV, V.S. Modeling of the vortex dynamics in long Josephson junction. In: *14th Workshop on Low Temperature Electronics (WOLTE-14), 12-16 April 2021, Matera, Italy*. Proceedings of " 2021 IEEE 14th Workshop on Low Temperature Electronics (WOLTE), 2021, pp. 1-3, doi: 10.1109/WOLTE49037.2021.9555435...j
49. СИДОРЕНКО, А.С.; ВАХРУШЕВ, А.В.; ПРЕПЕЛИЦА, А.А.; БОЯН, В.; АНТРОПОВ, Е.И.; САВВА, Ю.Б.; КЛЕНОВ, Н.В.; СОЛОВЬЕВ, И.И.; МОРАРЬ, Р.А.; КРАСНОВ, В.М. Наноструктурные сверхпроводниковые базовые элементы искусственных нейронных сетей. Труды международной научно-практической конференции ПЕРСПЕКТИВНЫЕ ТЕХНОЛОГИИ И МАТЕРИАЛЫ, 6-8 Октября 2021, Севастополь, стр.152-155.

8 Teze ale conferințelor științifice

50. SIDORENKO, A.S.; KAPRAN, O.M.; GOLOD, T.; IOVAN, A.; BOIAN, V.; SAVVA, Yu.B.; GOLUBOV, A.A.; KRASNOV, V.M. Crossover in superconductor/ferromagnet/superconductor junctions with Ni based ferromagnets. In: *Proceedings of 3rd Virtual Congress on MATERIALS SCIENCE &*

- ENGINEERING, SEP 27 - OCT 01, 2021*, South Dakota School of Mines and Technology, USA, p.34, <https://www.kongreuzmani.com/3-virtual-congress-on-materials-science-and-engineering-materials-info-2021.html>
51. SIDORENKO, A.S.; MORARI, R.A.; BOIAN, V.; PREPELITSA, A.A.; ANTROPOV, E.I.; SAVVA, Yu.B.; FEDOTOV, A.Yu.; SEVRYUKHINA, O.Yu.; VAKHRUSHEV, A.V.. Hybrid nanostructures superconductor-ferromagnet for superconducting spintronics. In: *Proceedings of 2nd Virtual Congress on Materials Science & Engineering Theme: Outlining the Importance of Materials Science for a Better Future, March 29 - 31, 2021*, University of Salerno, Italy, p.23. <https://materialsinfo.mindauthors.com/march-2021/>
 52. MUNTYANU, F.; CHISTOL, V.; CONDREA, E.; Unusual electronic properties of the BiSb nano- width bicrystal interfaces. *International Semiconductor Conference CAS-21*, virtual event, October 6-8, 2021, Bucharest, Romania [Nanoscience & Nanoengineering 4 - Posters](#), paper ID: 9005.
 53. KHAYDUKOV, Yu.; LENK, D.; ZDRAVKOV, V.; MORARI, R.; KELLER, T.; SIDORENKO, A.S.; TAGIROV, L.R.; TIDECKS, R.; HORN, S.; KEIMER, B. Chirality of Bloch domain walls in exchange biased CoO/Co bilayer seen by waveguide-enhanced neutron spin-flip scattering. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p. 46. <https://nanotech.md/en/page/89/spintech-nano-2021>
 54. MUNTYANU, F.; CHISTOL, V.; CONDREA, E.; SIDORENKO, A. Topological features of quantum magnetotransport in Bi_{1-x}Sb_x (0 ≤ x ≤ 0.2) bicrystals. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p. 58, <https://nanotech.md/en/page/89/spintech-nano-2021>
 55. MUNTYANU, F.; CONDREA, E.; CHISTOL, V. Magnetotransport features induced by Dirac electrons behavior and quantum phases transitions at the Bi_{1-x}Sb_x (0 ≤ x ≤ 0.2) interfaces, Technical programme of International Online Conference on Nano Materials (ICN 2021) Mahatma Gandhi University, P.D Hills P.O, Kottayam Kerala, India, p.106
 56. CONDREA, E.; MUNTYANU, F.; GILEWSKI, A.; Magnethotermopower features in bismuth wires at 80K, The 12th International Conference on Intrinsic Josephson Effect and Horizons of Superconducting Spintronics, Conference Abstract Book, 22-25 September 2021, Chisinau, Moldova, p. 64, <https://nanotech.md/en/page/89/spintech-nano-2021>
 57. MUNTYANU, F.; GILEWSKI, A.; Nenkov, K.; Zaleski, A. J. ; CHISTOL, V. Superconductivity, weak magnetism, and quantum transport of Bi_{1-x}Sb_x (0.07 ≤ x ≤ 0.2) crystallite structures with nano-width interfaces an at increased degree of imperfection, 5th International Conference on Nanotechnologies and Biomedical Engineering, November 3-5, 2021, Chisinau, Moldova, Abstract Boook.
 58. NICA, Yu.N.; POGORELISCHII, L.B.; ZAVRAJNY, S.N.; SIDORENKO, A.S. Influenta radiatiei ultraviolete bactericide asupra componentelor structurale ale genomului virusului SARS – COV – 2. *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p.76, <https://nanotech.md/en/page/89/spintech-nano-2021>
 59. SEVRYUKHINA, O.Yu.; FEDOTOV, A.Yu.; SALAMATINA, Yu.; VAKHRUSHEV, A.V.; SIDORENKO, A.S. Modeling of superconducting spin valve magnetic properties. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p. 60, <https://nanotech.md/en/page/89/spintech-nano-2021>
 60. SIDORENKO, A.S.; GUTSUL, T.D.; COSCODAN, E.G. Synthesis of nZVI /PVP nanoparticles for bio – applications. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p.82, <https://nanotech.md/en/page/89/spintech-nano-2021>
 61. SIDORENKO, A.; MORARI, R.; BOIAN, V.; ANTROPOV, E.; PREPELITSA, A.; SAVVA, Yu.; KLENOV, N.; SOLOVIEV, I.; VAKHRUSHEV, A. Nanostructures Superconductor/Ferromagnet for Superconducting Spintronics. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p. 43, <https://nanotech.md/en/page/89/spintech-nano-2021>
 62. SIRBU, A.A.; NIRCA, D.S.; GUTUL, T.D.; FEDOROV, V.M.; SIDORENKO, A.S.. Colorimetric biosensor based on ZnO / ZnFe₂O₄ heterostructures. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p. 68. <https://nanotech.md/en/page/89/spintech-nano-2021>
 63. SUVOROV, S.V.; VAKHRUSHEV, A.V.; SIDORENKO, A.S. Modeling of cluster ion beams implantation into a metal substrate. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p. 67, <https://nanotech.md/en/page/89/spintech-nano-2021>
 64. ZASAVITSKY, E.A.; KARAGENOV, D.I.; SIDORENKO, A.S. Study of a new generation of rockets for active influence on clouds. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021*, Chisinau, Moldova, p.83. <https://nanotech.md/en/page/89/spintech-nano-2021>

65. ZASAVITSKY, E.A.; POTAPOV, E.I.; SIDORENKO, A.S. Environmental aspects of long-term hail-suppression activities in Moldova. In: *Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics*, 22-25 September 2021, Chisinau, Moldova, p.84, <https://nanotech.md/en/page/89/spintech-nano-2021>
66. BOIAN, V.I. Preparation and investigation of the Nb/PtNi/Nb JOSEPHSON junction. Proceedings of The 12th International Conference on Intrinsic Josephson effect and Horizons of Superconducting Spintronics, 22-25 September 2021, Chisinau, Moldova, p.54. <https://nanotech.md/en/page/89/spintech-nano-2021>
67. GUTUL T.D., COSCODAN E.G., SÎRBU A.A., NIRCA D,S. Peroxidase- Like of Fe3O4/PVP Nanocompozite in Hydrogen Peroxide Detection. The 12th International Conference on Intrinsic Josephson Effect and Horizons of Superconducting Spintronics, 22 - 25 September 2021, Chisinau, Moldova. Abstract Book, P.65 <https://nanotech.md/en/page/89/spintech-nano-2021>
68. FEDOROV V.M., GUTUL T.D., BELOTSEKOVSKII I.I., COSCODAN E.G., and LUPU M.C., Long-term pollution of the reut river basin with historic-use pesticides DDT, DDT METABOLITES (DDE, DDD), and HCHS. International virtual conference “Marine ecosystems: research and innovations” October 27-29, 2021, Ukraine, Odessa, p.26.

⁹ Brevete

69. SIBAEV, A.; SIBAEV, I. *Metoda de stimulare a cresterii ciupercilor pleurotus*. Brevet de scurtă durată. s 2019 0122, din 2019.12.09. HOTĂRÂREA nr. 9735 din 2021.03.03.
70. BELOTSEKOVSKII, I.; SIDORENKO, A.; CONDREA, E.; MORARI, R. *Vacuummetrul termoelectric*. Brevet de scurtă durată. s 2020, din 2020.06.16. HOTĂRÂREA nr. 9908 din 2021.10.21.

2022

¹⁰ Monografii

71. SIDORENKO, A. Project “SPINTECH” the key to boosting of excellence of D.GHITU IEEN in spintronics Chişinău : 2022, (Tipografia „Continental Grup” SRL). – 124 p. – 100 ex. ISBN 978-9975-3131-2-4. 016:[54+929]

¹¹ Articole în reviste ştiinţifice

72. SCHEGOLEV, A., KLENOV, N., BAKURSKIY, S., SOLOVIEV, I., KUPRIYANOV, TERESHONOK, M., and SIDORENKO, A. Tunable superconducting neurons for networks based on radial basis functions. Open Access *Beilstein J. Nanotechnol.* 2022, **13**, 444–454. <https://doi.org/10.3762/bjnano.13.37> IF: 3.65
73. VAKHRUSHEV, A., FEDOTOV, A., SEVERYUKHINA, O. and SIDORENKO A. Structure and local structural defects influence on the magnetic properties of cobalt nanofilms. Accepted for *Beilstein Journal of Nanotechnology* 2022, **13**, <https://www.beilstein-journals.org/bjnano> IF: 3.65
74. ПЕНИН, А. Применение нейронной сети для расчета сопротивления нагрузок с учетом инвариантных свойств соотношения вход–выход многополюсников. В: *Электричество*. 2022, № 4, с. 47-58. <https://doi.org/10.24160/0013-5380-2022-4-47-58> IF: 0.456 (РИНЦ)
75. ВАХРУШЕВ, А., ФЕДОТОВ, А., СЕВЕРЮХИНА, О., СИДОРЕНКО, А. Исследование влияния структуры кобальта на магнитные свойства нанопленок. *Химическая физика и мезоскопия*. 2022, т. 24. № 4. с. 436-453. <https://doi.org/10.15350/17270529.2022.4.36>

¹² Articole în culegeri ştiinţifice

76. NICA, Iu., POGORELISCHI, L., ZAVRAJNY, S., DIMITRIU, V., PEEV, L. and SIDORENKO, A. The effect of UVC radiation on regions of the SARS –CoV – 2 genome encoding the synthesis of structural proteins. In: I. Tiginyanu et. al. (Eds):ICNBME 2021, IFMBE Proceedings 87, pp.537–543, 2022. https://doi.org/10.1007/978-3-030-92328-0_69
77. FEDOTOV, A., VAKHRUSHEV, A., and SIDORENKO A. Modeling the Deposition of an Additional Layer to Improve the Interface of Spin Valve Nanolayers. AIP Conference Proceedings. 2022. Vol. 2627.
78. СИДОРЕНКО, А., БОЯН, В., САВВА, Ю., ФЕДОТОВ, А., ВАХРУШЕВ, Функциональные наноструктуры сверхпроводник-ферромагнетик для спинтроники. Том 1 Материалы XXIV Международного симпозиума «Нанопизика и Нанoeлектроника» Суздаль, 6-9 Марта 2022, стр. 114 -

¹³Teze ale conferințelor științifice

79. VAKHRUSHEV, A., FEDOTOV, A., BOIAN. V., SIDORENKO, A. Simulation of multilayer atom nanostructures for spinmechatronics In: Mechatronic systems design and solid materials. Methods and Practices. Palm Bay, USA, December, 2021. pp. 187-203. eBook ISBN 9781003045748 <https://www.taylorfrancis.com/chapters/edit/10.1201/9781003045748-8/simulation-multilayer-atom-nanostructures-spinmechatronics-vakhrushev-yu-fedotov-boian-sidorenko>
80. ВАХРУШЕВ, А., ФЕДОТОВ, А., СЕВЕРЮХИНА, О., СИДОРЕНКО, А. Оценка влияния дефектов структуры на магнитные свойства нанопленок спинтроники. Тезисы IX Международной конференции “Кристаллизация: компьютерные модели, эксперимент, технологии”, Ижевск, 6–9 апреля, 2022, Стр. 205-208
81. Sidorenko, A. Functional base elements for artificial neural network The VIII International Euro-Asian Symposium „Trends in MAGnetism”, Kazan, Russia, August 22–26, 2022. p.133
82. BELENCIUK, A., STROH, K., SHAPOVAL, O., VATAVU, S. Optical properties of laminar VO₂-TiO₂ nanocomposites: implication for thermochromic coatings. În Programul „EMRS Spring Meeting” Virtual Conference. May 30th – June 3rd 2022, Symposium L, L.P1.7.
83. SIDORENKO, A. New opportunities in the detection of environmental pollutants. In: Proceedings of The 7th International Conference ECOLOGICAL & ENVIRONMENTAL CHEMISTRY 2022 (EEC-2022, <http://eec-2022.mrda.md> March 3-4, 2022, Chisinau, Republic of Moldova P. 45 ISBN 978-9975-159-06-7.
84. GUTSUL, T., VINOCUROV, A., RASTIMESINA, I., POSTOLACHI, O., SIDORENKO, A. The interaction of rhodochrous CNMN- AC-05 with CoFe₂O₄/PEG nanoparticles analysed by method of confocal laser scanning microscopy. In: Proceedings of The 7th International Conference ECOLOGICAL & ENVIRONMENTAL CHEMISTRY 2022 (EEC-2022, <http://eec-2022.mrda.md>) March 3-4, 2022, Chisinau, Republic of Moldova P. 175. ISBN 978-9975-159-06-7.
85. SHAPOVAL, O., BELENCIUK, A., VATAVU, S. Metalorganic aerosol deposition technique (Tehnologia depunerii din aerosolii compușilor metalorganici). Conferința științifică națională cu participare internațională „Integrare prin Cercetare și Inovare”, Universitatea de Stat din Moldova, Chisinau, 10-11 noiembrie 2022.
86. SHAPOVAL, O., BELENCIUK, A., VATAVU, S. Metalorganic aerosol deposition: the building of oxide films (Depunerea din aerosolii compușilor metalorganici: design-ul filmelor de oxid). Conferința științifică națională cu participare internațională „Integrare prin Cercetare și Inovare”, Universitatea de Stat din Moldova, Chisinau, 10-11 noiembrie 2022.

¹⁴Brevete:

87. BELOTERCOVSCII, I.; SIDORENKO, A.; CONDREA, E.; MORARI, R. *Vacuummetru termoelectric*. Brevet de invenție MD 1587 Z 2022.07.31
88. ФЕДОТОВ, А., ВАХРУШЕВ, А., СИДОРЕНКО, А. Программный комплекс для моделирования и анализа свойств наноструктур спинтроники . Свидетельство о регистрации программы для ЭВМ 2022662508, 05.07.2022.
89. ВАХРУШЕВ, А., СИДОРЕНКО, А., ШЕСТАКОВ, И. Способ получения высококачественных пленок методом механической вибрации подложки. Патент на изобретение 2763357 C1, 28.12.2021.
90. SIBAEV, A.; SIBAEV, I. *Metoda de stimulare a cresterii ciupercilor pleurotus*. Brevet de invenție MD 1522 Z2021.12.31
91. SIDORENKO, A., Roman Morari, Yury Khaydukov, Thomas Keller, Bernhard Keimer *Method for tuning the non-collinearity of remanent magnetic structures. Patent of Germany, application* MI-No. 1201-5998-8C-JK From 01.03.2021

2023

¹⁵Articole în reviste științifice

92. VAKHRUSHEV, A., FEDOTOV, A., SEVERYUKHINA, O., SIDORENKO, A. The influence of structure and local structural defects on the magnetic properties of cobalt nanofilms. In: Beilstein Journal of Nanotechnology, 2023, 14, 23-33. <https://doi.org/10.3762/bjnano.14.3> [IF: 3,65]

93. SIDORENKO, A., HAHN, H., KRASNOV, V. Frontiers of nanoelectronics: intrinsic Josephson effect and prospects of superconducting spintronics. In: *Beilstein Journal of Nanotechnology*, 2023 Jan 10:14:79-82. <https://doi.org/10.3762/bjnano.14.9> [IF: 3,65]
94. BRINZA, M., SCHRÖDER, S., ABABII, N., GRONENBERG, M., STRUNSKUS, T., PAUORTE, Th., ADELUNG, R., FAUPEL, F., LUPAN, O. Two-in-One Sensor Based on PV4D4-Coated TiO₂ Films for Food Spoilage Detection and as a Breath Marker for Several Diseases. In: *Biosensors*. 2023, 13, nr 5, pp. 538; <https://doi.org/10.3390/bios13050538> [IF: 5,743]
95. MUNTYANU, F., CHISTOL, V., CONDREA, E., SIDORENKO, A. Topological features of quantum transport in bi1-xSbx (0 ≤ x ≤ 0.2) bicrystals. In: *Low Temp. Phys.* 2023, 49, 1, 139-145. <http://fnt.ilt.kharkiv.ua/index.php/fnt/issue/> [IF: 0,923]
96. FEDOTOV, A., VAKHRUSHEV, A., SIDORENKO, A. Modeling the deposition of an additional layer to improve the interface of spin valve nanolayers. In: *AIP Conference Proceedings* 2627, 020002-02005 (2023) <https://doi.org/10.1063/5.0115094> [IF: 0,189]
97. MIRGOROD, Yu. A., STOROZHENKO, A. M. and CONDREA, E. P. Acid Corrosion Inhibitor from Tobacco Waste for Steel of Oil Pipes. In: *Surface Engineering and Applied Electrochemistry* 2023, **59**, 1, 85–89. ISSN 1068-3755 <https://doi.org/10.3103/S1068375523010106> [IF:0,243]
98. SIDORENKO, A., KLENOV, N., SOLOVIEV, I., BAKURSKIY, S., BOIAN, V., MORARI, R., SAVVA, Iu., LOMAKIN, A., SIDORENKO, L., SIDORENKO, S., SIDORENKO, I., SEVERYUKHINA, O., FEDOTOV, A., SALAMATINA, A., VAKHRUSHEV, A. Base Elements for Artificial Neural Network: Structure Modeling, Production, Properties. In: *International Journal of Circuits, Systems and Signal Processing*, 2023, vol. 17, 177-182. DOI: 10.46300/9106.2023.17.21 [IF:0,195]
99. SCHRÖDER, S., ABABII, N., BRÎNZĂ, M., MAGARIU, N., ZIMOC, L., BODDULURI, M. T., STRUNSKUS, T., ADELUNG, R., FAUPEL, F., LUPAN, O. Tuning the Selectivity of Metal Oxide Gas Sensors with Vapor Phase Deposited Ultrathin Polymer Thin Films. In: *Polymers*. 2023, 15, nr 3, pp. 524; <https://doi.org/10.3390/polym15030524> [IF: 4,967]
100. BELENCHUK, A., SHAPOVAL, O., RODDATIS, V., STROH, K., VATAVU, S., WAWRA, J., MOSHNYAGA, V., Spinodal decomposition introduces strain-enhanced thermochromism in polycrystalline V_{1-x}Ti_xO₂ thin films. In: *Nanoscale* 2023, 15, 11592-11602. 10.1039/D3NR01350B. <https://doi.org/10.1039/d3nr01350b>
101. ВАХРУШЕВ, А. В., ВИНОГРАДОВ, Ф. А., ФЕДОТОВ, А. Ю., СИДОРЕНКО, А. С. Моделирование улучшения интерфейса многослойных наносистем ниобий-кобальт прессованием. *Химическая физика и мезоскопия*, 2023, том 25, №2, стр. 160-169. <https://doi.org/10.15350/17270529.2023.2.15>
102. СУКМАН, Н., ГАЙДАРЖИ, Ф., КАЛИНИЧЕНКО, С. Анализ качественных характеристик органических удобрений, полученных из отходов птицефермы предприятия SRL “Pilicik-Grup”. In: *Știință, educație, cultură*. Comrat: Universitatea de Stat din Comrat, 2023, Vol.1, pp. 420-424. ISBN 978-9975-83-254-0; 978-9975-83-255-7. https://ibn.idsi.md/ro/vizualizare_articol/179507

¹⁶Articole în culegeri științifice

103. PENIN, A., SIDORENKO, A. Irregular Step of Changing for Neural Network Data Sets Improves the Accuracy of Resistive Sensors Calculation. In: Sontea V., Tiginyanu I., Railean S. (eds) *6th International Conference on Nanotechnologies and Biomedical Engineering (ICNBME 2023)*. IFMBE Proceedings, September 20-23, vol. 92, 2023, p. 150-159. https://doi.org/10.1007/978-3-031-42782-4_17
104. BELOTERCOVSCHII, I., SIDORENKO, A., CONDREA, E., SMYSLOV, V. (2024). Combination Thermostated Vacuum Gauge. In: Sontea, V., Tiginyanu, I., Railean, S. (eds) *6th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2023. IFMBE Proceedings*, vol 91. pp. 574-581, Springer, Cham. https://doi.org/10.1007/978-3-031-42775-6_61
105. DATSKO, T., ZELENTOV, V., DVORNIKOV, D. Advanced Nanotechnology-Based Approach to Waste Water Purification from Organic Pollutants. In: *Proceedings of 6th International Conference on Nanotechnologies and Biomedical Engineering*, September 20–23, 2023, Chisinau, vol. 1: Nanotechnologies and Nano-biomaterials for Applications in Medicine, 2023, p. 134-146. https://doi.org/10.1007/978-3-031-42775-6_15,
106. SIDORENKO, A., GUTSUL, T., SHIBAEV, A., LUPU, M. Colorimetric determination of toxic substances in water and soil using ZnO/ZnFeO₄ heterostructures. *Матеріали XIV Міжнародної Науково-Практичної Конференції Сучасні Підходи до Високоєфективного Використання Засобів Транспорту, (ДІ НУ «ОМА») 8 – 9 грудня 2023 року, Ізмаїл, Україна*, pp. 142-145. DOI:10.13140/RG.2.2.33864.49928

107. BOIAN, V. Determination of the critical thickness of Nb superconducting layers coupled with Co. In: *Electronics, Communications and Computing (IC ECCO-2022)*, 12th inter. conf., 20-21 Oct. 2022, Chisinau, Republica Moldova: conf.proceed., Chisinau, 2022, pp.102-105. <https://doi.org/10.52326/ic-ecco.2022/EL.08>
108. SCHRÖDER, S., BRINZA, M., CRETU, V., ZIMOCHE, L., GRONENBERG, M., ABABII, N., RAILEAN, S., STRUNSKUS, TH., PAUORTE, TH., ADELUNG, R., FAUPEL, F., LUPAN, OLEG. A New Approach in Detection of Biomarker 2-propanol with PTFE-Coated TiO₂ Nanostructured Films. În: Sontea V., Tiginyanu I., Railean S. (eds) *6th International Conference on Nanotechnologies and Biomedical Engineering (ICNBME 2023)*. *IFMBE Proceedings*, September 20-23, vol. 92, 2023, p. 75-83. Springer, Cham. https://doi.org/10.1007/978-3-031-42782-4_9
109. MALCOCI, Cezar-Casian. Studiarea Supraconductibilității în Nanostructuri de Niobiu-Cobalt. În: *Conferința tehnico științifică a studenților, masteranzilor și doctoranzilor*. 5-7 aprilie, 2023, , Chișinău, Moldova: Tehnica-UTM, 2023, Vol. I., pp. 315-318. ISBN 978-9975-45-828-3. https://ibn.idsi.md/vizualizare_articol/188000, https://ibn.idsi.md/collection_view/2356

¹⁷Teze ale conferințelor științifice

110. КОЖОКАРЬ, С. В., Синтез, анализ и характеристика (2aR,3aR,4aS,5aS)-4,4,5a-триметил-2-оксопергидроциклопропа[4,5]бензо[b]азет-1-сульфонилхлорида. In: LXXXIV Ежегодная итоговая научно-практическая конференция студентов и молодых учёных с международным участием «Актуальные вопросы экспериментальной и клинической медицины-2023», 1-28 апреля 2023, Санкт-Петербург, Российская Федерация. Сборник тезисов, стр. 151. ISBN 978-5-88999-879-2. https://sovetsno1med.ru/avekm_Sbornik_tezisov_AVEKM_2023.pdf
111. КОЖОКАРЬ, С. В., Синтез, анализ и характеристика (1S,3S,5R,7R)-триметил-4-азатрицикло[5.1.0.0.3,5]октана. In: LXXXIV Ежегодная итоговая научно-практическая конференция студентов и молодых учёных с международным участием «Актуальные вопросы экспериментальной и клинической медицины-2023», 1-28 апреля 2023, Санкт-Петербург, Российская Федерация. Сборник тезисов, стр. 153. ISBN 978-5-88999-879-2. https://sovetsno1med.ru/avekm_Sbornik_tezisov_AVEKM_2023.pdf
112. SUCMAN, N., CALINICENCO, S., MACAEV, F. Using NMR analysis to identify unconventional adducts of indole-2,3-dione. În “BOOK OF ABSTRACTS”, *Central European NMR Symposium & Bruker Users Meeting*, 13-15 September 2023, Prague, Czechia, P.31. http://ceum2023.uochb.cas.cz/assets/files/Book%20of%20abstracts_V3.pdf
113. SIDORENKO, A., KLENOV, N., SOLOVIEV, I., BAKURSKIY, S., SAVVA, YU., LOMAKIN, A., KOJUS, O., BOIAN, V., PREPELITSA, A., LUPU, M., VAKHRUSHEV, A. Superconducting Base Elements for Artificial Neural Network. In: *Proceedings of 8th International Conference on Superconductivity and Magnetism- ICSM2023*, May 4 – 11 2023, p.143, Ölüdeniz-Fethiye, TÜRKİYE. https://icsm2023.org/wp-content/uploads/2023/06/8TH_ICSM_ABSTRACT_BOOK_ABS_USB_15.06.2023_2300_LAST1.pdf
114. SIDORENKO, A. Superconducting neurons and synapses for artificial neural network. In: *Proceedings of the Samarkand International Symposium on Magnetism “SISM-2023”*, 2 – 6 July, 2023, p. 138, Samarkand. ISBN: 978-5-00202-320-2.
115. SUCMAN, N., GAIDARJI, F., CALINICENCO S. Optimization of parameters for creating liquid fertilizers using the waste from poultry farm SRL „PILICCIK-GRUP”. In: *International Scientific Symposium Modern Trends in the Agricultural Higher Education*. October 5-6, 2023, Chisinau, Republica Moldova (in Pres). https://fsasm.utm.md/wp-content/uploads/sites/40/2023/10/Agenda_simpozion.pdf
116. BELOTERCOVSCHII, I., SIDORENKO, A., CONDREA, E., SMYSLOV, V. Combination Thermostated Vacuum Gauge. In: *The 6th International Conference on Nanotechnologies and Biomedical Engineering*, September 20-23, 2023, Chisinau, Republic of Moldova Abstract Book, p.115
117. LUPU, M., SIDORENKO A. Application of the Josephson Junction for the ANNs Energy Efficient Memory. In: *IFMBE Proceedings of The 6th International Conference on Nanotechnologies and Biomedical Engineering*. Ediția 6, R, 20-23 septembrie 2023, Chișinău. Chișinău: Springer Science and Business Media Deutschland GmbH, 2023, p. 114. ISBN 978-9975-72-773-0. https://ibn.idsi.md/vizualizare_articol/188799
118. SIDORENKO, A. Brain like artificial neural network based on superconducting neurons and synapses. In: *Proceedings of the 6th International Conference on Nanotechnologies and Biomedical Engineering*, September 20-23, 2023, Chisinau, Republic of Moldova, p. 40-41. https://ibn.idsi.md/ro/vizualizare_articol/188627
119. COJOCARI, S., MACAEV, F. Synthesis and characterization of the (1s,3r,4s,6r)-3,4-aza-3,7,7-trimethylbicyclo-[4.1.0]-heptan. In: *The National Conference with international participation Natural Sciences in the Dialogue of Generations*, September 14-15, 2023, Chisinau, Republic of Moldova, CEP

USM, 2023, p. 206. ISBN 978-9975-3430-9-1. https://ibn.idsi.md/ro/vizualizare_articol/189089

120. COJOCARI, S., SIDORENKO, A., MACAEV, F. Preparation, analysis and characterization of (1R,3R,5S,7S)-4,4,7-trimethyl-8-azatricyclo[5.2.0.0^{3,5}]nonan-9-one, In: The National Conference with international participation *Natural Sciences in the Dialogue of Generations* September, 14-15, 2023, Chisinau, Republic of Moldova, CEP USM, 2023, p. 207. ISBN 978-9975-3430-9-1. https://ibn.idsi.md/ro/vizualizare_articol/189090

¹⁸**Brevete:**

121. DATKO, T., ZELENTOV, V., DVORNIKOV, D., SAINSUS, I. Procedeu de obținere a fotocatalizatorului hibrid pe bază de TiO₂ nanocristalin și diatomit prin electroliză. Brevet de invenție MD 1671, Nr. depozit: s 2021 0046. Data depozit: 2021.05.31. Acordat din 2023.02.28 BOPI NR.2/2023, pp.68-69. https://www.agepi.md/sites/default/files/bopi/BOPI_02_2023.pdf <http://www.db.agepi.md/Inventions/details/s%202021%200046>
122. ВАХРУШЕВ, А., СИДОРЕНКО, А., ФЕДОТОВ, А., ШЕСТАКОВ, И. Устройство для получения электропроводящего покрытия в виде металл-углеродной или металлической пленки магнетронным распылением с механической вибрацией подложки. Патент Российской Федерации № 2802044, МКИ6, С23С 14/35, пр. 2022129498. Заяв. 04.07.2022. Оpubл. 22.08.2023 Бюл. №24, 16 р.

Obiectul de mijloace fixe (grupa de obiecte) menționat(e) anterior a fost elaborat în cadrul proiectului cu cifrul **20.80009.5007.11**, implementat de

Universitatea Tehnică a Moldovei

(denumirea autorității/instituției bugetare)

în baza contractului de finanțare nr. **148-PS** din „03” ianuarie 2023.

Caracteristica succintă a obiectului de mijloace fixe (grupe de obiecte) :

Obiectul de mijloace fixe (grupa de obiecte), corespunde (nu corespunde) condițiilor tehnice

_____ (de specificat ce nu corespunde)

și necesită (nu necesită) remediere

_____ (de specificat remediile)

Obiectul de mijloace fixe (grupa de obiecte) a fost pus(ă) în funcțiune în

_____ (denumirea secției, sectorului, serviciului, locului de exploatare)

Concluzia comisiei _____

Obiectul de mijloace fixe (grupa de obiecte) menționat(ă) în valoare de _____

_____ se pune în funcțiune.

_____ (în cifre și în litere)

Documentele anexate: _____

Președintele comisiei:

Prorector pentru cercetare

(funcția)

(semnătura)

Dr. hab. Vasile Tronciu

(nume, prenume)

Membrii comisiei:

Conducător Proiect

(funcția)

(semnătura)

Acad. Anatolie Sidorenko

(nume, prenume)

Contabilă șefă adjunctă

(funcția)

(semnătura)

Daniela Gîrlea

(nume, prenume)

Obiectul de mijloace fixe (grupa de obiecte) menționat(ă) a fost transmis(ă) de către conducătorul proiectului

(numele, prenumele)

(semnătura)

Obiectul de mijloace fixe (grupa de obiecte) menționat(ă) a fost primit(ă) de către

(funcția)

(numele, prenumele)

(semnătura)

Mențiunea contabilității privind înregistrarea intrării obiectului de mijloace fixe (grupe de obiecte):

_____ nr. _____ din „_____” _____ 2023
(denumirea, numărul și data documentului primar)

Contabilă-șefă

(semnătura)

Svetlana Ambroci

(numele, prenumele)

„_____” _____ 20__