СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

(За стилем AIP)

1. I.K. Yanson, Low Temperature Physics, 9(7), 343 (1983).

2. Yu. G. Naidyuk and I. K. Yanson, *Point-Contact Spectroscopy*. (Springer, Berlin, 2005).

3. A.V. Khotkevich and I.K. Yanson, *Atlas of Point Contact Spectra of Electron-Phonon Interactions in Metals*. (Kluwer Academic Publishers, Boston/Dordrecht/London, 1995).

4. G.V. Kamarchuk, A.P. Pospelov, L.V. Kamarchuk, A.V. Savytskyi, D.A. Harbuz, and V.L. Vakula, in *Functional Nanostructures and Sensors for CBRN Defense and Environmental Safety and Security, NATO Science for Peace and Security Series C: Environmental Security,* Ed. by. A. Sidorenko and H. Hahn (Springer, Dordrecht, 2020), p. 245

5. G. Kamarchuk, A. Pospelov, A. Savytskyi, V. Gudimenko, V. Vakula, A. Herus, D. Harbuz, L. Kamarchuk, and M. F. Pereira, in *Terahertz (THz), Mid Infrared (MIR) and Near Infrared (NIR) Technologies for Protection of Critical Infrastructures Against Explosives and CBRN,* Ed. By. M.F. Pereira and A. Apostolakis (Springer, Dordrecht, 2021), p. 203.

6. J. Zhang, X. Liu, G.Neri, and N. Pinna, Adv. Mater., 28(5), 795 (2016).

7. R. S. Andre, R. C. Sanfelice, A. Pavinatto, L. H. C. Mattoso, and D. S. Correa, Materials & Design, 156, 154 (2018).

8. Z. Meng, R.M. Stolz, L. Mendecki, and K.A. Mirica. Chemical Reviews, 119(1), 478 (2019).

9. B. Yang, N.V. Myung, and T. Tran, Advanced Electronic Materials, 7(9), 2100271 (2021).

10. T. Lin, X. Lv, Z. Hu, A. Xu, and C. Feng, Sensors, 19(2), 233 (2019).

11. G. Korotcenkov, B.K. Cho, Sensors and Actuators B: Chemical, 244, 182 (2017).

12. B. de Lacy Costello, A. Amann, H. Al-Kateb, C. Flynn, W. Filipiak, T. Khalid, D. Osborne, N.M. Ratcliffe, J. Breath Res., 8 (1), 014001 (2014).

13. G.V. Kamarchuk, A.P. Pospelov, A.V. Yeremenko, E.C. Faulques, and I.K. Yanson, Europhys. Lett. 76**,** 575 (2006).

14. G.V. Kamarchuk, I.G. Kolobov, A.V. Khotkevich, I.K. Yanson, A.P. Pospelov, I.A. Levitsky, and W.B. Euler, Sensors Actuators B, 134, 1022 (2008).

15. G.V. Kamarchuk, A.P. Pospelov, L.V. Kamarchuk, and I.G. Kushch, in *Nanobiophysics: Fundamentals and Applications,* Ed. by V.A. Karachevtsev (Pan Stanford Publishing Pte. Ltd., Singapore, 2015), p. 327.

16. G.V. Kamarchuk, A.P. Pospelov, and I.G. Kushch, in *Volatile Biomarkers: Non-Invasive Diagnosis in Physiology and Medicine*, Ed. by A. Amann and D. Smith (Elsevier, Amsterdam, 2013), p. 265.

17. A. Amann and D. Smith, *Volatile biomarkers: non-invasive diagnosis in physiology and medicine.* (Elsevier, Amsterdam, 2013).

18. A. Amann and D. Smith, *Breath analysis for clinical diagnosis and therapeutic monitoring*. (World Scientific, Singapore/New Jersey, 2005).

19. I. Kushch, N. Korenev, L. Kamarchuk, A. Pospelov, A. Kravchenko, L. Bajenov, M. Kabulov, A. Amann, and G. Kamarchuk, J. Breath Res., 9**,** 047111 (2015).

20. A. Smolinska, E.M.M Klaassen, J.W. Dallinga, K.D.G. van de Kant, Q. Jobsis, E.J.C. Moonen, E. Dompeling, and F.J. van Schooten, PLoS ONE, 9(4), e95668 (2014).

21. I. Oakley-Girvan and S. W. Davis, Cancer Biomarkers, 21(1), 29 (2018).

22. R. Holm, *Electrical Contacts. Almqvist & Wiksells akademiska handböcker.* (H. Gerber, Stockholm, 1946).

23. D. Erts, H. Olin, L. Ryen, E. Olsson and A. Tholen. Physical review. B, Condensed matter, 61(19), 12725 (2000).

24. I.O Kulik, A.N. Omelyanchouk, and R.I. Shekhter, Low Temperature Physics, 3(12), 1543 (1977).

25. I.K. Yanson and I.O. Kulik, J. de Phys., 39(C6), 1564 (1978).

26. O.V. Kirichenko, Yu. A. Kolesnichenko and V.G. Peschansky. Physics reviews, 18(4), 1 (2010).

27. I.O Kulik and I.K. Yanson, Low Temperature Physics, 4(10), 1267 (1978).

28. Van Gelder, A. P., Jansen, and Wyder, P. Physical Review B, 22(4), 1515 (1980).

29. I. O. Kulik, R. I. Shekhter and A. N. Omelyanchouk. Solid State Communications, 23(5), 301 (1977).

30. I.K. Yanson and O.I. Shklyarevskii, Low Temperature Physics, 12(9), 899 (1986).

31. A.H MacDonald and C.R. Leavens, Journal of Physics F: Metal Physics, 13(3), 665 (1983).

32. A.H MacDonald and C.R. Leavens, Journal of Physics F: Metal Physics, 14(4), 963 (1984).

33. A.H. Jalal, F.Alam, S. Roychoudhury, Y. Umasankar, N. Pala, and S. Bhansali, Acs Sensors, 3(7), 1246 (2018).

34. V. Kumar, K.-H. Kim, P. Kumar, B.-H. Jeon, and J.-C. Kim, Coord. Chem. Rev., 342, 80 (2017).

35. K.A. Mirica, J.M. Azzarelli, J.G. Weis, J.M. Schnorr, and T.M. Swager, Proc. Natl. Acad. Sci. U.S.A., 110(35), E3265 (2013).

36. I.K. Yanson, Low Temperature Physics, 9(7), 676 (1983).

37. J.C.Maxwell, *A Treatise of Electricity and Magnetism*. (Clarendon, Oxford, 1904)

38. G. L. Squires. *Introduction to the Theory of Thermal Neutron Scattering* (Dover Publications, Mineola, N.Y., 1996).

39. E.L. Wolf, *Principles of Electron Tunneling Spectroscopy.* (Oxford University Press, Oxford 2011).

40. A.G.M. Jansen, A.P. van Gelder, and P. Wyder, J. Phys. C, 13(33), 6073 (1980).

41. I.-D. Kim, A. Rothschild, and H.L. Tuller, Acta Mater., 61(3), 974 (2013).

42. R. Bhardwaj and A.J. Hazra, Mater. Chem. C, 9, 15735 (2021).

43. C. Wang, Y. Wang, Z. Yang, and N. Hu, Ceram. Int. 47(12), 16367 (2021).

44. X. Yao, Y. Zhang, W. Jin, Y. Hu, and Y. Cui, Sensors, 21(3), 995 (2021).

45. C. Farcau, N.M. Sangeetha, H. Moreira, B. Viallet, J. Grisolia, D. Ciuculescu-Pradines, and L. Ressier, ACS Nano, 5(9), 7137 (2011).

46. R.K. Jha and N. Bhat, Advanced Materials Interfaces, 7(7), 1901992 (2020).

47. K.C. Honeychurch, (Ed). *Nanosensors for Chemical and Biological Applications. Sensing with Nanotubes, Nanowires and Nanoparticles* (Elsevier, Cambridge/Waltham/Kidlington, 2014).

48. Z. He, Y. Yang, J.-W. Liu, and S.-H. Yu, Chem. Soc. Rev., 46(10), 2732 (2017).

49. M. Ates, Materials Science and Engineering: C., 33(4), 1853 (2013).

50. M. Hussain, K. Kotova, and P.A. Lieberzeit, Sensors, 16(7), 1011 (2016).

51. M. Das and S. Roy, Mater. Sci. Semicond. Process, 121, 105332 (2021).

52. R. Tang, Y. Shi, Z. Hou, and L. Wei, Sensors, 17(4), 882 (2017).

53. N. Joshi, T. Hayasaka, Y. Liu, H. Liu, O.N. Oliveira, and L.A. Lin, Microchimica Acta, 185(4), 1 (2018).

54. J.H. Choi, J. Lee, M. Byeon, T.E. Hong, H. Park and C.Y. Lee. ACS Appl. Nano Mater., 3(3), 2257 (2020).

55. M. Rodner, D. Puglisi, S. Ekeroth, U. Helmersson, I. Shtepliuk, R. Yakimova, A. Skallberg, K. Uvdal, A. Schütze, and J. Eriksson, Sensors, 19(4), 918 (2019).

56. G. Korotcenkov, Materials Science and Engineering: B, 139(1), 1 (2007).

57. M. R. Cavallari, L.M. Pastrana, C.D.F. Sosa, A.M.R. Marquina, J.E.E. Izquierdo, F.J. Fonseca, C.A.D. Amorim, L.G. Paterno, and I. Kymissis, Materials, 14(1), 3 (2021).

58. A. Ettema, M. Lenders, J. Vliegen, A. Slettenaar, M.C. Tjepkema-Cloostermans, and C. de Vos, J. Breath Res., 15(2), 027101 (2021).

59. D. Karakaya, O. Ulucan, and M. Turkan, International Journal of Automation and Computing, 17(2), 179 (2020).

60. L.W. Chan, M.N. Anahtar, T.-H. Ong, K.E. Hern, R.R. Kunz, and S.N. Bhatia, Nat. Nanotechnol., 15(9), 792 (2020).

61. K. Sharifi and S. Pirsa, Chemical Review and Letters, 3(4), 192 (2020).

62. L. E. Brus, Physical Review B, 53(8), 4649 (1996).

63. L. E. Brus, The Journal of Chemical Physics, 80(9), 4403 (1984).

64. G. Di Francia, L. Quercia, I. Rea, P. Maddalena, and S. Lettieri, Sensors and Actuators B: chemical, 111, 117 (2005).

65. N. Sutin, Annual Review of Physical Chemistry, 17, 119 (1966).

66. R. A. Marcus, Reviews of Modern Physics, 65(3), 599 (1993).

67. D. K. Ferry and R. Akis, Journal of Physics: Condensed Matter, 20(45), 454201 (2008).

68. G. Di Francia, B. Alfano, and V. La Ferrara, Journal of Sensors, 2009, 1 (2009).

69. G. Di Francia, M. Della Noce, V. La Ferrara, L. Lancellotti, P. Morvillo, and L. Quercia, Materials Science and Technology, 18(7), 767 (2002).

70. A. Halimaoui, in *Properties of Porous Silicon*, Ed. by L.T. Canham (INSPEC, London, 1997), p. 12.

71. J. Janata, *Principles of Chemical Sensors.* (Springer, Dordrecht/ Heidelberg/London/New York, 2009).

72. K.P. Ramaiyan and R. Mukundan, Soc. Interface, 28(3), 59 (2019).

73. Ю.О. Вашпанов та В.О. Сминтина, *Адсорбційна чутливість напівпровідників.* (Астропрінт, Одеса, 2005).

74. M. S. Yao, W.X. Tang, G.E. Wang, B. Nath, and G. Xu, Adv. Mater., 28(26), 5229 (2016).

75. G.F. Fine, L.M. Cavanagh., A. Afonja, and R. Binions, Sensors, 10, 5469 (2010).

76. J. Kong, N.R. Franklin, C. Zhou, M.G. Chapline, S. Peng, K. Cho, and H. Dai, Science, 287(5453), 622 (2000).

77. D.O. Harbuz, A.P. Pospelov, V.I. Belan, V.A. Gudimenko, V.L. Vakula, L.V. Kamarchuk, Y.V. Volkova, and G.V. Kamarchuk, Low Temperature Physics, 47(3), 254 (2021).

78. G.V. Kamarchuk, A.P. Pospelov, A.V. Savytskyi, A.O. Herus, Yu.S. Doronin, V.L. Vakula, and E. Faulques, SN Appl. Sci., 1, 244 (2019).

79. S. Ma, D.Yuan, Z. Jiao, T.Wang, and X. Dai, The Journal of Physical Chemistry C, 121(43), 24077 (2017).

80. P.M. Chubov, I.K. Yanson, and A.I. Akimenko, Low Temperature Physics, 8(1), 17 (1982).

81. V.V. Fisun, A.V. Khotkevich, B.L. Konopatskyi, G.V. Kamarchuk, S.V. Morlok, and Y.L. Alexandrov, Low Temperature Physics, 34(2), 161 (2008).

82. J. Moreland and J.W. Ekin, Journal of Applied Physics, 58(10), 3888 (1985).

83. C.J. Muller, J.M. van Ruitenbeek, and L.J. de Jongh, Phys. Rev. Lett., 69, 140 (1992).

84. C.J. Muller, J.M. van Ruitenbeek, and L.J. de Jongh, Physica C, 191, 485 (1992).

85. R.A. Heintz, H. Zhao, X. Ouyang, G. Grandinetti, J. Cowen, and K.R. Dunbar, Inorganic Chemistry, 38(1), 144 (1999).

86. J. Shinar, (Ed). *Organic Light Emitting Devices*, (Springer, Berlin, 2003).

87. Z. H. Kafafi, Proc. SPIE, 4465 (2002).

88. D. Fichou and Z. Bao, Proc. SPIE, 4466 (2002).

89. R. S. Potember, T. O. Poehler, and R. C. Benson, Appl. Phys. Lett. 34, 405 (1982).

90. T. Oyamada, H. Tanaka, K. Matsushige, H. Sasabe, and C. Adachi. Applied Physics Letters, 83(6), 1252 (2003).

91. A. Pearson, A.P. O'Mullane, S.K. Bhargava, and V. Bansal, Inorganic Chemistry, 51, 8791 (2012).

92. I.F. Schegolev, Phys. Stat. Sol. Ser.A, 12(1), 9 (1972).

93. A.V. Kravchenko, V.A. Starodub, A.R. Kazachkov, A.V. Khotkevich, O.S. Pyshkin, and G.V. Kamarchuk, in *Spectroscopy of Emerging Materials*, Ed. by E.C. Faulques, D.L. Perry, and A.V. Yeremenko (Kluwer Academic Publishers, Boston/Dordrecht/London, 2004) p. 319.

94. R. S. Potember, T. O. Poehler, and R. O. Cowan, Appl. Phys. Lett. 34, 405 (1979).

95. A. Pospelov, M.V., N. Sakhnenko, Yu. Alexandrov, V. Shtefan, A. Kravchenko, and G. Kamarchuk, Materials Science, 20(3), 65 (2002).

96. O. Pyshkin, G. Kamarchuk, A. Yeremenko, A. Kravchenko, A. Pospelov, Yu. Alexandrov, and E. Faulques, J. Breath Res., 5(1), 016005 (2011).

97. Г.В. Камарчук, А.П. Поспелов, А.В. Еременко, E. Faulques, и И.К. Янсон, Сенсорная электроника и микросистемные технологии, 4(3), 46 (2007).

98. P.S. Ramesh and D.N. Srivastava, Science and Technology Journal, 3(2), 2321 (2015)

99. Z. Hussain, R. Ojha, L. Martin, A.M. Bond, R. Ramanathan, and V. Bansal, Emergent Materials, 2(1), (2019).

100. A.P. Pospelov, V.I. Belan, D.O. Harbuz, V.L. Vakula, L.V. Kamarchuk, Yu.V. Volkova, and G.V. Kamarchuk, Beilstein J. Nanotechnol. 11, 1631 (2020).

101. L. Kamarchuk, A. Pospelov, D. Harbuz, V. Belan, Yu. Volkova, A. Tkachenko, and G. Kamarchuk. J. Breath Res., 16(1), 016002 (2022).

102. S. Kim, J. Brady, F. Al-Badani, S. Yu, J. Hart, S. Jung, T.-T. Tran, and N.V. Myung, Front. Chem., 9, 11 (2021).

103. A. De Vincentis, G. Pennazza, M. Santonico, U. Vespasiani-Gentilucci, G. Galati, P. Gallo, C. Vernile, C. Pedone, R. Antonelli Incalzi, and A. Picardi, Sci. Rep., 6(1), 1 (2016).

104. M. Bofan, N. Mores, M. Baron, M. Dabrowska, S. Valente, M. Schmid, A. Trové, S. Conforto, G. Zini, P. Cattani, L. Fuso, A. Mautone, Ch. Mondino, G. Pagliari, T. D'Alessio, and P. Montuschi, J. Breath Res., 7, 017103 (2013).

105. V.A. Gudimenko, D.A. Garbuz, A.S. Klimkin, V.L. Vakula, A.P. Pospelov, and G.V. Kamarchuk, Journal of V. N. Karazin Kharkiv National University. Series Physics, 27, 26 (2017).

106. I.G. Kushch, N.M. Korenev, L.V. Kamarchuk, A.P. Pospelov, Yu.L. Alexandrov, and G.V. Kamarchuk, in *Biodefence, NATO Science for Peace and Security Series A: Chemistry and Biology*, Ed. by S. Mikhalovsky and A. Khajibaev (Springer, Dordrecht, 2010), p. 63.

107. V.I. Kulinskiy and L.S. Kostjukovskaya, Laboratory Science, 14(7), 390 (1969).

108. G.V. Zubkov, V.D. Petrushin, V. A. Chipizhenko, and A.A. Aniskina, Collect. Proc. Kharkov Med. Inst. 109, 77 (1974).

109. M. Hall, E. Frank, G. Holmes, B. Pfahringer, P. Reutemann, and I.H. Witten, SIGKDD Explorations, 11(1), 10 (2009).

110. M.J. Norušis, *SPSS 16.0 advanced statistical procedures companion*. (Prentice Hall Press: Upper Saddle River, NJ, 2008).

111. R. J. Freund, W.J. Wilson and D.L. Mohr, *Statistical Methods (Third edition),* (Academic Press, Cambridge, 2010).

112. G.V. Kamarchuk, A.P. Pospelov, D.A. Harbuz, V.A. Gudimenko, L.V. Kamarchuk, A.S. Zaika, A.S. Pletnev, and A.V. Kravchenko et, Biophys. Bul. 2(38), 66 (2017).

113. D. Smith, P. Španěl, J. Herbig, and J. Beauchamp, J. Breath Res., 8, 027101 (2014)

114. K. Lamote, P. Brinkman, L. Vandermeersch, M. Vynck, P.J. Sterk, H. van Langenhove, O. Thas, J. van Cleemput, K. Nackaerts, and J.P. van Meerbeeck, Oncotarget, 8(53), 91593 (2017).

115. B. Henderson, A. Khodabakhsh, M. Metsälä, I. Ventrillard, F.M. Schmidt, D. Romanini, G.A.D. Ritchie, S. te Lintel Hekkert, R. Briot, T. Risby, N. Marczin, F.J.M. Harren, and S.M. Cristescu, Applied Physics B, 124, 161 (2018).

116. V. J. Vaks, Infrared, Millimeter, Terahertz Waves, 33, 43 (2012).

117. M. F. Pereira, J.P. Zubelli, D. Winge, A. Wacker, A. Rodrigues, V. Anfertev, and V. Vaks, Phys. Rev. B, 96, 045306 (2017).

118. A. Apostolakis and M.F. Pereira, AIP Advances, 9, 915922 (2019).

119. A. Apostolakis and M.F. Pereira, Nanophotonics, 9(12), 3941 (2020).

120. N. Bohli, M. Belkilani, J. Casanova-Chafer, E. Llobet, and A. Abdelghani, Beilstein J. Nanotechnol., 10, 2364 (2019).

121. C.A. Proença, T.A. Freitas, T.A. Baldo, E.M. Materón, F.M. Shimizu, G. R. Ferreira, F.L.F. Soares, R.C. Faria, and O.N. Jr. Oliveira, Beilstein J. Nanotechnol., 10, 2171 (2019).

122. E.C. Lin and B.T. Massey, Clin. Gastroenterol. Hepatol., 14, 203 (2016).

123. L. Michaud, F. Gottrand, P.S. Ganga-Zandzou, N. Wizla-Derambure, D. Turck, and P. Vincent, Gut, 42, 594 (1998).

124. D.A. Drossman and W.L. Hasler, Gastroenterology, 150(6) ,1257 (2016).

125. A.P. Pospelov, I.G. Kushch, Y.L. Alexandrov, A.M. Pletnev, and G.V. Kamarchuk, Sens. Electron. Microsyst. Technol., 4(2), 49 (2007).

126. S.A. Golovko, V.A. Gudimenko, A.P. Pospelov, and G.V. Kamarchuk, Sci. Herald Uzhhorod Univ., Ser. Phys., 35, 95 (2014).

127. S.A. Golovko, V.A. Gudimenko, A.S. Klimkin, A.M. Pletnev, V.L. Vakula, A.S. Zaika, L.V. Kamarchuk, I.G. Kushch, A.P. Pospelov, A.V. Kravchenko, and G.V. Kamarchuk, Univers. J. Mater. Sci., 4, 32 (2016).

128. S.N. Young, Journal of psychiatry & neuroscience: JPN, 32(6), 394(2007).

129. Pilowsky, P. M., (Ed). *Serotonin: The Mediator That Spans Evolution*. (Academic Press, Oxford, 2019).

130. P. Blier and M. El Mansari, Philos. Trans. R. Soc., B, 368(1615), 20120536 (2013).

131. T. Jenkins, J. Nguyen, K. Polglaze, and P. Bertrand, Nutrients, 8(1), 56 (2016).

132. M.D. Crowell, British Journal of Pharmacology, 141(8), 1285 (2004).

133. M. Berger, J.A. Gray, and B.L. Roth, Annual Review of Medicine, 60(1), 355 (2009).

134. J.M. Yano, K. Yu, G.P. Donaldson, G.G. Shastri, P. Ann, L. Ma, and E.Y. Hsiao. Cell, 161(2), 264(2015).

135. Y. Katsu and T. Iguchi, In *Handbook of Hormones. Comparative Endocrinology for Basic and Clinical Research*, Ed. by Y. Takei, H. Ando, and K. Tsutsui. (Academic Press, 2016), p 533.

136. D.Y. Lee, E. Kim, and M.H. Choi, BMB Reports, 48(4), 209 (2015).

137. W.M. Jefferies, Medical Hypotheses, 34(3), 198 (1991).

138. R.H. Straub and M. Cutolo, Rheumatology, 55(2), ii6(2016).

139. V.I. Kulinskiy and L.S. Kostjukovskaya, Lab. Sci., 14, 390 (1969).

140. N.L. Bobrov, A.V. Khotkevich, G.V. Kamarchuk, and P.N. Chubov, Low Temperature Physics, 40(3), 215 (2014).

141. I. K. Yanson, G.V. Kamarchuk, and A.V. Khotkevich, Low Temperature Physics, 10, 423(1984).

142. G.V. Kamarchuk, A.V. Khotkevich, M.E. Kozlov., and K.I. Pokhodnya, Low Temperature Physics, 18, 679(1992).

143. A. Brzezinski. The New England Journal of Medicine. 336(3), 186 (1997).

144. D.A. Harbuz, A.P. Pospelov, V.A. Gudimenko, A.P. Konotop, P.V. Mateychenko, D.A. Kowalska, E. Faulques and G.V. Kamarchuk. Molecular Crystals and Liquid Crystals, 718(1), 25 (2021).

ДОДАТОК А
СПИСОК ПУБЛИКАЦІЙ ЗДОБУВАЧА
(За стилем AIP)

Наукові праці у наукових фахових виданнях України та у наукових виданнях, проіндексованих у базах Scopus і Web of Science:

1. V.A. Gudimenko, D.A. Garbuz, A.S. Klimkin, V.L. Vakula, A.P. Pospelov, and G.V. Kamarchuk, Journal of V. N. Karazin Kharkiv National University. Series Physics, 27, 26 (2017). (Б)
2. G.V. Kamarchuk, A.P. Pospelov, D.A. Harbuz, V.A. Gudimenko, L.V. Kamarchuk, A.S. Zaika, A.S. Pletnev, and A.V. Kravchenko, Biophys. Bul. 2(38), 66 (2017). (Б)
3. A.P. Pospelov, V.I. Belan, D.O. Harbuz, V.L. Vakula, L.V. Kamarchuk, Yu.V. Volkova, and G.V. Kamarchuk, Beilstein J. Nanotechnol. 11, 1631 (2020). (Scopus, Німеччина).
4. G.V. Kamarchuk, A.P. Pospelov, L.V. Kamarchuk, A.V. Savytskyi, D.A. Harbuz, and V.L. Vakula, in *Functional Nanostructures and Sensors for CBRN Defense and Environmental Safety and Security, NATO Science for Peace and Security Series C: Environmental Security,* Ed. by. A. Sidorenko and H. Hahn (Springer, Dordrecht, 2020), p. 245. (Scopus, Нідерланди).
5. D.O. Harbuz, A.P. Pospelov, V.I. Belan, V.A. Gudimenko, V.L. Vakula, L.V. Kamarchuk, Y.V. Volkova, and G.V. Kamarchuk, Low Temperature Physics, 47(3), 254 (2021). (Scopus, США).
6. G. Kamarchuk, A. Pospelov, A. Savytskyi, V. Gudimenko, V. Vakula, A. Herus, D. Harbuz, L. Kamarchuk, and M. F. Pereira, in *Terahertz (THz), Mid Infrared (MIR) and Near Infrared (NIR) Technologies for Protection of Critical Infrastructures Against Explosives and CBRN,* Ed. By. M.F. Pereira and A. Apostolakis (Springer, Dordrecht, 2021), p. 203. (Scopus, Нідерланди).

7. D.A. Harbuz, A.P. Pospelov, V.A. Gudimenko, A.P. Konotop, P.V. Mateychenko, D.A. Kowalska, E. Faulques and G.V. Kamarchuk. Molecular Crystals and Liquid Crystals, 718(1), 25 (2021). (Scopus, Велика Британія)

Опубліковані праці апробаційного характеру:

8. G.V. Kamarchuk, A.P. Pospelov, V.A. Gudimenko, D.A. Garbuz, and L.V. Kamarchuk, Innovative point-contact nanosensors for real-time detection of *Helicobacter pylori* virulent strains. In: *Book of Abstracts "NBP-2017"*, *Kharkiv, Ukraine, October 2-5 2017*, p. 24.

9. D. Harbuz, A. Pospelov, V. Gudimenko, A. Tkachenko, and G. Kamarchuk, Sensor profiling of breath gas as a tool to thwart terror attacks. In: *Book of Abstracts "Advanced Research Workshop "Terahertz (THz), Mid Infrared (MIR) and Near Infrared (NIR) Technologies for Protection of Critical Infrastructures Against Explosives and CBRN", Liblice, Czech Republic, November 5-9 2018*, P3.

10. G. Kamarchuk, A. Pospelov, A. Savitsky, V. Gudimenko, V. Vakula, A. Herus, D. Harbuz, and L.Kamarchuk, On the prospect of application of point-contact sensors to solving global security problems. In: *Book of Abstracts Advanced Research Workshop "Terahertz (THz), Mid Infrared (MIR) and Near Infrared (NIR) Technologies for Protection of Critical Infrastructures Against Explosives and CBRN", Liblice, Czech Republic, November 5-9 2018*, O21.

11. D.O. Harbuz, A.P. Pospelov, V.A. Gudimenko, A.A. Tkachenko, and G.V. Kamarchuk, Detection of human emotional states through real-time sensor breath analysis. In: *Book of Abstracts "ICPYS-LTP 2018", Kharkiv, Ukraine, June 4-8 2018,* p. 143.

12. E. Uzun, G. Kamarchuk, A. Pospelov, L. Kamarchuk, D. Harbuz, V. Gudimenko, and V. Vakula, Point-contact nanosensors for solving security problems. In: *Book of Abstracts "Проблеми техногенно-екологічної безпеки: освіта, наука, практика", Kharkiv, Ukraine, November 21-22 2019,* p. 84-86.

13. D.O. Harbuz, O.P. Konotop, V.A. Gudimenko, A.P. Pospelov, and G.V. Kamarchuk Structural features of point-contact sensors based on

tetracyanoquinodimethane compounds. In: *Book of Abstracts "ICPYS-LTP 2019", Kharkiv, Ukraine, June 3-7 2019,* p. 104.

14. D.O. Harbuz, A.P. Pospelov, M.D. Romanov, P.V. Mateychenko, A.P. Konotop, V.A. Gudimenko, and G.V. Kamarchuk, Revealing of correlation between morphology and sensing parameters of TCNQ based point-contact sensors, In: Book of Abstracts *"XIV Міжнародна наукова конференція «Фізичні явища в твердих тілах»", Kharkiv, Ukraine, December 3-5 2019*, p. 39.

15. M.D. Romanov, D.O. Harbuz, V.O. Gudimenko, A.P. Pospelov, and G.V. Kamarchuk The influence of crystallization parameters of TCNQ-based point-contact structures on their electro-physical sensing properties in gases. In: *Book of Abstracts "Теоретичні та практичні дослідження молодих науковців", Kharkiv, Ukraine, November 19-22 2019,* p 538.

16. D.O. Harbuz, A.P. Pospelov, M.D. Romanov, P.V. Mateychenko, A.P. Konotop, V.A. Gudimenko, and G.V. Kamarchuk Surface morphology of nanostructured gas sensors based on metal-polymer compounds. In: *Book of Abstracts "ICEPOM-12", Kamianets-Podilskyi, Ukraine, June 1-5 2020,* p. 215.

17. D.O. Harbuz, A.P. Pospelov, V.I. Belan, V.A. Gudimenko, V.L. Vakula, L.V. Kamarchuk, Y.V. Volkova, and G.V. Kamarchuk, Melatonin determination in the human organism by a breath test. In: *Book of Abstracts "II International Advanced Study Conference Condensed Matter and Low Temperature Physics CM&LTP 2021", Kharkiv, Ukraine, June 6 - 12 2021,* p.146.

18. D.A. Harbuz, Yu.S. Doronin, V.A. Lototskaya, A.A. Tkachenko, V.L. Vakula, G.V. Kamarchuk, Cluster source of vacuum ultraviolet and ultrasoft x-ray radiation: from basic research to practical application. In: *Book of Abstracts "INTERNATIONAL RESEARCH AND PRACTICE CONFERENCE NANOTECHNOLOGY AND NANOMATERIALS - 2020", Lviv, Ukraine, August 26-29 2020,* p. 477.

19. O.P. Konotop, D.O. Harbuz, V.A. Gudimenko, A.P. Pospelov, and G.V. Kamarchuk, Structural analysis and surface morphology of point-contact nanosensors based on Cu-TCNQ compound. In: *Book of Abstracts "International*

school-seminar for young scientists "Functional materials for technical and biomedical applications"", Kharkiv, Ukraine, September 6-10 2021, p. 11.

20. D.O. Harbuz, A.P. Pospelov, V.I. Belan, V.A. Gudimenko, V.L. Vakula, L.V. Kamarchuk, Y.V. Volkova, and G.V. Kamarchuk Melatonin content determination by a breath test analysis. In: *Book of Abstracts "International school-seminar for young scientists "Functional materials for technical and biomedical applications"", Kharkiv, Ukraine, September 6-10 2021,* p. 18.

21. G.V. Kamarchuk, A.P. Pospelov, D.O. Harbuz, A.V. Savytskyi, A.O. Herus, V.I. Belan, V.A. Gudimenko, V.L. Vakula, and L.V. Kamarchuk, Point-contact sensors as an advanced tool for real-time analysis of molecular systems. In: *Book of Abstracts "7th International Conference NANOBIOPHYSICS: Fundamental and Applied Aspects", Kharkiv, Ukraine, October 4-8 2021*, L13, p. 52.

22. D.O. Harbuz, A.P. Pospelov, V.I. Belan, V.A. Gudimenko, V.L. Vakula, L.V. Kamarchuk, Y.V. Volkova, and G.V. Kamarchuk, The determination of melatonin content in the human body using exhaled gas analysis. In: *Book of Abstracts "7th International Conference NANOBIOPHYSICS: Fundamental and Applied Aspects", Kharkiv, Ukraine, October 4-8 2021*, O20, p. 45.