

დ. ჯიშაშვილის პუბლიკაციების, კონფერენციებში მონაწილეობისა და
გამოგონებების სრული სია.

პუბლიკაციები

1. D. L. Surmanidze, T. E. Lobzhanidze, I. R. Metskhvarishvili, G. N. Dgebuadze, V. M. Gabunia, B. G. Bendeliani, M. R. Metskhvarishvili, D. A. Jishiashvili. Low Temperature Physics, 50, 34–38 (2024).
doi.org/10.1063/10.0023889
2. G. Gelashvili, D. Gelenidze, D. Jishiashvilia, Z. Shiolashvili, N. Makhatadze, A. Jishiashvili, V. Gobronidze. Photocatalytic activity of ZnO nanomaterials with different morphologies. Digest Journal of Nanomaterials and Biostructures V. 18, N. 3, pp. 1085 – 1092, 2023.
<https://doi.org/10.15251/DJNB.2023.183.1085>
3. A.Jishiashvili, N. Mitagvaria, A. Chirakadze, D.Jishiashvili. Photocatalytic activity and environmental toxicity of ZnO microcrystals with different morphologies. Bulletin of the Georgian National Academy of Sciences, vol. 16, no. 1, 81-86, 2022.
4. E. Gelagutashvili, N. Bagdavadze, D. Jishiashvili, A. Gongadze, M. Gogebashvili, N. Ivanishvili. Effect of Cu(II), Pb(II), Mg(II) ions on gamma-irradiated *Spirulina platensis*. 2022.
<https://doi.org/10.48550/arXiv.2204.02307>
arXiv:2204.02307 [physics.bio-ph]. 8 გვ. გვ. 830.
5. A.Jishiashvili, A.Chirakadze, Z.Shiolashvili, N.Makhatadze, V.Gobronidze, D.Jishiashvili. Vapor synthesis of ZnO nanocrystal-based hollow microspheres. Proceedings of the 7th International Conference MTP-2021: Modern Trends in Physics. December 15-17, 2021 Baku State University, Baku, Azerbaijan. V.1, pp.125-131.
6. A. Jishiashvili, Z. Shiolashvili, D. Jishiashvili, A. Chirakadze, N. Makhatadze. Growth of ZnO Microcrystals from Zn and Cu Chloride Precursors. Bulletin of the Georgian National Academy of Sciences, vol. 15, no. 2, 53-58, 2021.
7. A.Chirakadze, N.Mitagvaria, D. Jishiashvili, M. Devdariani, G. Petriashvili, L. Davlianidze, N. Dvali, K. Chubinidze, A. Jishiashvili, Z. Buachidze, I. Khomeriki. Development and Testing of Nanoparticles for Treatment of Cancer Cells by Curie Temperature Controlled Magnetic Hyperthermia. Bulletin of the Georgian National Academy of Sciences, vol. 15, no. 1, 91-98, 2021.
8. E.S. Gelagutashvili, N.V. Bagdavadze, D. Jishiashvili, E.N. Ginturi, A.D. Gongadze, M.E. Gogebashvili, N.I. Ivanishvili. Influence of metal ions after one year repeated irradiation of spirulina platensis. Journal of Radiobiology and Radiation Safety, Vol.1, №2, 43-48. 2021.
9. A. Jishiashvili, Z. Shiolashvili, D. Jishiashvili, N. Makhatadze, A. Chirakadze, V. Gobronidze. Scanning electron microscopic study of ZnO crystallites. Nano Studies, 20, 105-110, 2020.
10. M. Nadareishvili, G. Mamniashvili, D. Jishiashvili, G. Abramishvili, C. Ramana, J. Ramsden. Investigation of the Visible Light-Sensitive ZnO Photocatalytic Thin Films. Engineering, Technology & Applied Science Research, V10,N2, pp. 5524-5527, 2020.
11. D. Jishiashvili, Z. Shiolashvili, N. Makhatadze, A. Jishiashvili, A. Chirakadze, V. Gobronidze. A study of the condensed coppercontaining nanomaterials. Nano Studies, 2019, 19, 285-290.
12. D.Jishiashvil, A.Chirakadze, Z.Shiolashvili, N.Makhatadze, A.Jishiashvili, V.Gobronidze. Vapor-phase synthesis of copper-based nanostructures. Conference Proceedings – Modern Trends In Physics. Baku, 01-03 May, 2019. (იმპაქტ ფაქტორიანი)
http://apps.webofknowledge.com/Search.do?product=UA&SID=F5RZIzhwZF3w7oSRYgc&search_mode=GeneralSearch&prID=65fc023b-a7f4-432b-9d52-488c04a96397
13. A.Chirakadze, D.Jishiashvili, N.Mitagvaria, I.Lazrishvili, Z.Shiolashvili, A.Jishiashvili, N.Makhatadze, Z.Buachidze, N.Khuskivade. Studies of the comparativelylow-temperature synthesis and preliminary toxic characteristics of silver doped lanthanum manganite nanoparticles using conventionaland microwave heating. Conference Proceedings – Modern Trends In Physics. Baku, 01-03 May, 2019. (იმპაქტ ფაქტორიანი)
http://apps.webofknowledge.com/Search.do?product=UA&SID=F5RZIzhwZF3w7oSRYgc&search_mode=GeneralSearch&prID=65fc023b-a7f4-432b-9d52-488c04a96397

14. D. Jishiashvili, Z. Shiolashvili, A. Chirakadze, N. Makhatadze, V. Gobronidze, A. Jishiashvili, K. Gorgadze, D. Kanchaveli. Pyrolytic synthesis of boron nitride nanoflakes. *Nano Studies*, 2018, v. 17/18, 67-70.
15. A. Jishiashvili, Z. Shiolashvili, N. Makhatadze, D. Jishiashvili, b, D. Kanchaveli, D. Sukhanov. Synthesis of indium phosphide / zinc phosphate core-shell nanowires. *Digest Journal of Nanomaterials and Biostructures*. 2018, v. 13, N. 2, 535 – 542. (იმპაქტ ფაქტორიანი)
16. D. Jishiashvili, A. Chirakadze, Z. Shiolashvili, N. Makhatadze, A. Jishiashvili, D. Kanchaveli, D. Sukhanov, V. Gobronidze. Growth of InP based composite nanowires. *Journal of Low Dimensional Systems*, 2018, v. 2 (1), 23-27. (იმპაქტ ფაქტორიანი)
17. A. Chirakadze, D. Jishiashvili, Z. Buachidze, K. Gorgadze, Z. Shiolashvili, A. Jishiashvili, N. Mitagvaria, I. Lazrishvili. New approaches to development of new nanomaterials for magnetic hyperthermia of cancer cells and prospectives of combined treatment of cancer in Georgia. *Journal of Low Dimensional Systems*, 2018, v. 2 (1), 8-22. (იმპაქტ ფაქტორიანი)
18. Jishiashvili A., Shiolashvili Z., Makhatadze N., Jishiashvili D., Chirakadze A., Sukhanov D., Kanchaveli D. Influence of water on the growth process of Ge_3N_4 and InP nanowires. *Oriental Journal of Chemistry*, 2017, 33, 3, 1103-1110. <http://dx.doi.org/10.13005/ojc/330306> (იმპაქტ ფაქტორიანი)
19. D. Jishiashvili, Z. Shiolashvili, N. Makhatadze, A. Jishiashvili, D. Sukhanov, V. Gobronidze. Growth of nitride and phosphide nanowires in the presence of water molecules. In: *Proceedings of ICANM 2016: Int. Conf. Exh. Adv. Nano Mater.*, 2016, Montreal, IAEMM, 73-80. (იმპაქტ ფაქტორიანი)
20. D. Jishiashvili, Z. Shiolashvili, A. Chirakadze, A. Jishiashvili, N. Makhatadze, K. Gorgadze. Development of low temperature technology for the growth of wide band gap semiconductor nanowires. *AIMS Materials Science*, 3(2), 2016. pp. 470-485. (იმპაქტ ფაქტორიანი)
DOI: 10.3934/matersci.2016.2.470
21. P. Kervalishvili, A. Chirakadze, Z. Buachidze, D. Jishiashvili, T. Bjalava, G. Kervalishvili, W. Toscano, V. Gvakharia, G. Sergeenko. Microwave in Environmental Technologies and Synthesis of Nano-materials: The Georgian Experience. Chapter In book: Nuclear Radiation Nanosensors and Nanosensory Systems, Published by Springer, P.O. Box 17, 3300 AA Dordrecht, The Netherlands , 2016, pp.91-150. DOI: 10.1007/978-94-017-7468-0_8 (იმპაქტ ფაქტორიანი)
22. P. Kervalishvili, A. Chirakadze, A. Gigineishvili, Z. Buachidze, D. Jishiashvili, M. Wireman, W. Toscano, G. Kervalishvili, G. Sergeenko, V. Gvakharia. Microwave Enhanced Producing of High-Purity Metallic Manganese and Composite Manganese Based Alloy. Chapter In book: Nuclear Radiation Nanosensors and Nanosensory Systems, Published by Springer, P.O. Box 17, 3300 AA Dordrecht, The Netherlands, 2016, pp. 151-160. (იმპაქტ ფაქტორიანი)
23. D. Jishiashvili, L. Chkhartishvili, Z. Shiolashvili, N. Makhatadze, A. Jishiashvili, B. Buadze. On the morphology of indium phosphide based nanowires. *Nano Studies*, V.12. 2015, pp.79-86.
24. L. Chkhartishvili, D. Jishiashvili, Z. Shiolashvili, N. Makhatadze, A. Jishiashvili, B. Buadze. Temperature-dependent morphological changes in InP based nanowires. *ICANM2015 Proceedings* (August 10-12, 2015, Ottawa, Canada). A publication of the International Academy of Energy, Minerals & Materials. 937 Portobello Blvd. PO Box 17029, Ottawa, Ontario. 2015, pp.1-7. (იმპაქტ ფაქტორიანი)
25. D. Jishiashvili, Z. Shiolashvili, N. Makhatadze, A. Jishiashvili, V. Gobronidze, D. Sukhanov. Vapor-Solid growth of InP and Ga₂O₃ based composite nanowires. *European Chemical Bulletin*, V.4, N1, 2015, 24-29.
26. D. Jishiashvili, L. Chkhartishvili, Z. Shiolashvili, N. Makhatadze, V. Gobronidze, A. Jishiashvili. Growth mechanism and morphology of germanium nitride nanowires. *Nano Studies*, V.10, 2014, 55-63.
27. D. Jishiashvili, L. Kiria, Z. Shiolashvili, N. Makhatadze, E. Miminoshvili, A. Jishiashvili. Formation of Germanium Nitride Nanowires on the Surface of Crystalline Germanium. *Journal of Nanoscience*. V. 2013, 2013, Article ID 641734, 10 pages. <http://dx.doi.org/10.1155/2013/641734> (იმპაქტ ფაქტორიანი)

28. D. Jishiashvili¹, L. Chkhartishvili, Z. Shiolashvili, N. Makhadze, A. Jishiashvili, V. Gobronidze. Ge- and In-based one-dimensional nanostructures: Self-catalytic growth. *Nano Studies*, V.7, 2013, 47-51.
29. G. R. Patzke, R. Kontic, Z. Shiolashvili, N. Makhadze, D. Jishiashvili. Hydrazine-assisted formation of indium phosphide (InP)-based nanowires and core-shell composites. *Materials*, V. 6, pp. 85–100, 2013. <http://www.mdpi.com/1996-1944/6/1/85> (იმპაქტ ფაქტორიანი)
30. D. Jishiashvili, L. Kiria, Z. Shiolashvili, N. Makhadze, E. Miminoshvili, A. Jishiashvili, D. Sukhanov. Pyrolytic growth of one-dimensional oxide and nitride nanomaterials. *Nano Studies*. V. 6, 2012. pp. 115-120.
31. D. Jishiashvili, L. Kiria, Z. Shiolashvili, N. Makhadze, A. Jishiashvili, D. Sukhanov. The morphology of vapor–liquid–solid grown nitride nanowires. Proceedings of the 2nd International Conference “Nanotechnologies” Nano-2012. Tbilisi, Georgia, 2012;
32. D. Jishiashvili, Z. Shiolashvili, N. Makhadze, L. Kiria. One Dimensional Nanomaterials Synthesized Using Hydrazine Vapor. *Bulletin of TICMI*. V.15, 2011, 55-56.
33. D. Jishiashvili, Z. Shiolashvili, N. Makhadze, L. Kiria, A. Jishiashvili, V. Gobronidze. Growth of germanium nitride nanowires. *Nano Studies*, V.4., 2011, 133-138.
34. ჯიშაშვილი დ. ა., შიოლაშვილი ზ. ნ., მახათძე ნ. კ., კირია ლ. ტ., ჯიშაშვილი ა. დ., გიბრონიძე ვ. ვ. ნანოკრისტალები ტეტრაგონალური გერმანია, გვიცემული და გამოცემული არ არის. *Microwave & Telecommunication Technology*, IEEE Catalog number: CFP11788, 2011, 731-732.
35. N. Makhadze, Z. Shiolashvili, V. Gobronidze, A. Jishiashvili, D. Sukhanov. Synthesis of tetragonal germanium nanocrystals embedded in amorphous matrices. Proceedings of the First International Conference on Nanochemistry and Nanotechnologies (March 23-24, 2010. Tbilisi, Georgia).2010 . pp. 186-192.
36. D. Jishiashvili¹, V. Kapakis, X. Devaux, C. Politis, E. Kutelia, N. Makhadze, V. Gobronidze, and Z. Shiolashvili. Germanium Nitride Nanowires Produced by Thermal Annealing in Hydrazine Vapor. *Advanced Science Letters*, Vol.2, No.1, 2009, pp.40-44. (იმპაქტ ფაქტორიანი)
37. D. Jishiashvili, E. Kutelia, V. Gobronidze, Z. Shiolashvili, N. Makhadze, G. Tsertsvadze. Pores in the Phase-Separated Ge:GeO₂ Films. *Bulletin of the Georgian Academy of Sciences*. v.173, N 3, 2006, pp.507-509. (იმპაქტ ფაქტორიანი)
38. D. Jishiashvili, E. Kutelia, V. Gobronidze, Z. Shiolashvili, N. Makhadze. Water treatment of the nanocrystalline Ge:GeO₂. *Georgian Engineering News*, N1, 2006, p.103-104. (In Russian).
39. D. Jishiashvili, B. Eristavi, V. Gobronidze, Z. Shiolashvili, A. Jishiashvili, N. Makhadze. Auger analysis of the nanocrystalline Ge:GeO₂ films. *Georgian Engineering News*, N1, 2006, p.100-102. (In Russian).
40. Jishiashvili D., Gobsch G., Ecke G., Gobronidze V., Mtsceradze G., Shiolashvili Z. Surface passivation of GaAs using Ge interface control layer.- *Phys. Stat. Sol.(a)*, 2005, v.202, N9. pp. 1778-1785. (იმპაქტ ფაქტორიანი)
41. Jishiashvili D., Gobronidze V., Shiolashvili Z., Mtsceradze G. Segregation of Ge Nanocrystals in the Germanium Oxide Film. *Georgian Engineering News*, N3, 2005, p.109-111.
42. Jishiashvili D., Gobronidze V., Shiolashvili Z., Eristavi B., Mosidze L. Fabrication of the IV-Group Semiconductor Nanocrystals in Metal Oxide Matrices. *Georgian Engineering News*, N3, 2005, p.15-17.
43. Jishiashvili D., Gobronidze V., Shiolashvili Z., Berishvili Z., Skhiladze G. Formation of Ge quantum dots in GeO₂ films. Proceedings of the International conference “Modern information and electronic technologies”, Odessa, May 23-27, 2005. pp. 371-374. (In Russian).
44. Shiolashvili Z., Jakeli K., Kristesashvili V., Jishiashvili D., Gobronidze V. Submicron Diffusion Layers in Si Produced by Pulse Photon Annealing. *Bulletin of the Georgian Academy of Sciences*. V.168, N3, 2003, pp.497-500. (იმპაქტ ფაქტორიანი)
45. D.Jishiashvili, I. Nakutsrishvili, V. Gobronidze, Z. Shiolashvili. Vacuum sublimation of germanium monoxide. *Bulletin of the Georgian academy of sciences. Chemistry*. V. 27, №1-2, 2001. pp. 134-139.(In Rusian). (იმპაქტ ფაქტორიანი)

46. I. Nakhutsrishvili, D.Jishiashvili, Z. Mkervalishvili. Fabrication of the germanium oxynitride films in NH₃. Bulletin of the Russian Academy of Sciences. Inorganic Materials. V. 39, №8, 2003. pp. 971-973. (In Russian) (იმპაქტ ფაქტორიანი)
47. D.Jishiashvili, Z. Shiolashvili, V. Gobronidze, I. Nakhutsrishvili. A study of solid phase reactions at the Ge-GeO₂ interface. Proceedings of the International Symposium and Exhibition on Advanced Packaging Materials. Evergreen Marriot Conference Resort. Stone Mountain Park, GA March 3-6, 2002. USA. pp.112-115. (იმპაქტ ფაქტორიანი)
48. Jishiashvili D., Gobronidze V., Shiolashvili Z. Passivation of GaAs by Ge Oxinitride Films. Proceedings of the 2th International Symposium Electrochemistry Of Manganese, Electrodeposition, Corrosion and Passivity Of Materials. Tbilisi. October 17-20, 2001. PP.32-33.
49. Jishiashvili D., Gobsch G., Ecke G., Shiolashvili Z., Gobronidze V., Nakhutsrishvili I. AES study of thermally treated GeO₂(111)/GaAs structures Proceedings of the International Semiconductor Conference CAS-2001 (October 9-13, 2001), Sinaia, Romania. pp.327-330.
50. ShiolashviliZ., Jishiashvili D., Eterashvili T., Gobronidze V. Application of the zinc-silicate glass and GeO₂ thin films as diffusion sources and encapsulants for GaAs and InP. 3rd international conference "MicroMat 2000". Berlin. April 17-19, 2000. (იმპაქტ ფაქტორიანი)
51. I. Nakhutsrishvili, D.Jishiashvili, E. Miminoshvili, M. Mushkudiani. Formation of Ge₃N₄ films at the Ge surface. Bulletin of the Russian Academy of Sciences. Inorganic Materials. V. 36, №10, 2000. pp. 1340-1341. (In Russian) (იმპაქტ ფაქტორიანი)
52. ShiolashviliZ., Jishiashvili D. A low-temperature source for Zn pulse photon diffusion in GaAs . Georgian Engineering News, N4, December, 1999, pp. 97-100.
53. Jishiashvili D., Nakhutsrishvili I., Dzhanelidze R., Katsiashvili M Mechanism of germanium oxynitride film formation. Bulletin of the Georgian Academy of Sciences, 1999, v.159, №3, pp.431-434. (იმპაქტ ფაქტორიანი)
54. Jishiashvili D., Kutelia E., Eristavi B., Gobronidze V., Tskhovrebashvili K. Auger electron spectroscopy study of the amorphous GeOx film structure. Bulletin of the Georgian Academy of Sciences, 1998, №1, pp.103-106. (იმპაქტ ფაქტორიანი)
55. Jishiashvili D., Shiolashvili Z., Dzhanelidze R., Mosidze L. Zinc diffusion from a reactively sputtered glass source in GaAs. Proceedings of the 20th International conference semiconductors /October 7-11/, Romania, Sinaia, 1997, pp. 267-270.
56. Jishiashvili D., Dzhanelidze R., Gobronidze A., Shiolashvili Z., Kutelia E. Surface passivation of GaAs for MIS-structure-based microsistems. Key Interface, 1997, №1, pp.14-16.
57. Jishiashvili D., Gobronidze A., Dzhanelidze R., Shiolashvili Z., Kutelia E., Nakhutsrishvili I., Mosidze L. Development of the amorphous, high resistivity Ge: (O,N) films for radiation-hardened MIS device applications. Proceedings of the 19th International conference semiconductors /October 9-12/, Romania, Sinaia, 1996, pp. 328-331.
58. Jishiashvili D., Kutelia E., Dzhanelidze R., Shiolashvili Z., Gobronidze A. AES study of the GaAs-germanium oxinitride interface. Materials Science Forum, 1995, v.185-188, pp.165-170. (იმპაქტ ფაქტორიანი)
59. Jishiashvili D., Kutelia E., Dzhanelidze R., Shiolashvili Z., Gobronidze V.V. Passivation of monoayomic and compound semiconductors by GeO_xN_y films. Proceedings of the 18th Inter-national conference semiconduc-tors /October 11-14/, Romania, Sinaia, 1995, pp. 145-148.
60. I. Nakhutsrishvili, D. Jishiashvili, D. Mogilianskii. Fabrication of α - and β -germanium nitride. Bulletin of the Russian Academy of Sciences. Inorganic Materials. V. 30, N 12, 1994. pp. 1504-1506. (In Russian). (იმპაქტ ფაქტორიანი)
61. G. Bagrstishvili, M. Kaciashvili, D. Mogilianskii, D. Jishiashvili. X-ray analysis of germanium nitride. Bulletin of the Georgian Academy of Sciences. V. 150, N 2, 1994. pp. 272-274. (In Georgian).
62. I. Nakhutsrishvili, D. Jishiashvili, M. Kaciashvili, D. Mogilianskii, Nitride formation at the hydrazine vapor treated Ge surface. Bulletin of the Russian Academy of Sciences. Inorganic Materials. V. 30, N 12. 1994. pp.1507-1509. (In Russian).
63. D. Jishiashvili, R. Dzhanelidze, Z. Shiolashvili, B. Eristavi, E. Kuelia, L. Mosidze, I. Nakhutsrishvili, M. Kaciashvili. Investigation of GaAs/Ge oxynitride interface. Bulletin of the Georgian Academy of Sciences. V. 150, N 3, 1994. pp. 95-98. (In Georgian).

64. I. Nakhutsrishvili, D. Mogilianskii, D. Jishiashvili, V. Osipov. The phase composition of the germanium and hydrazine vapour interaction products. Bulletin of the Russian Academy of Sciences. Inorganic Materials. V.29, N 3, 1993. pp.358-360. (In Russian).
65. D. Jishiashvili, D. Mogilianskii, I. Nakhutsrishvili, M. Kaciashvili. The composition and structure of hydrazine vapour deposited germanium nitride. Bukketin of the Georgian Academy of Sciences. V. 148, N 1, 1993. pp. 57-59. (In Georgian).
66. D. Jishiashvili, G. Bagratishvili, T. Jibuti, E. Kutelia, D. Metreveli. Changes in GeO_x thin film structure after electron beam treatment. Surface (Physics, chemistry, mechanics). N 7, 1992. pp. 55-58. (In Russian).
67. G. Bagratishvili, Z. Shiolashvili, D. Kurcikidze, D. Jishiashvili, L. Mosidze, R. Dzahanelidze. Boron diffusion in the $\text{Si}_x\text{C}_y(\text{N}+\text{O})_z$ thin films. Bulletin of the Georgian Academy of sciences. V. 142, N3, 1997. pp.400-402. (In Russian).
68. G. Bagratishvili, I. Nakhutsrishvili, M. Kaciashvili, D. Jishiashvili. The phase composition of the amorphous GeO_x films. Bulletin of the Russian Academy of Sciences. Inorganic Materials. V.27, N6, 1991. pp. 1247-1250. (In Russian).
69. D. Jishiashvili, G. Bagratishvili, D. Kochiashvili, E. Kutelia, T. Bahman. IR spectra and structure of the amorphous germanium oxide films. Bulletin of the Russian Academy of Sciences. Inorganic Materials. V. 26, N 10, 1990. pp. 2131-2134. (In Russian).
70. Jishiashvili D.A, Kutelia E.R Infrared spectroscopic study of GeO_x films. - Phys. Stat. Sol.(b), 1987, v.143, pp. K147-K150.
71. Jishiashvili D.A, Kutelia E.R. Electrophysical properties of the silicon- GeO_x interface. Bulletin of the Georgian Academy of sciences. V. 128, N2, 1987. pp.279-300. (In Russian).
72. D. Jishiashvili, E. Kutelia, B. Eristavi, T. Eterashvili. Composition and structure of the nonstoichiometric germanium oxynitride. Bulletin of the Georgian Academy of sciences. V. 125, N3, 1987. pp.533-536. (In Russian).
73. Bagratishvili G.D., Dzhanelidze R.B., Eterashvili T.V., Jishiashvili D.A, Kutelia E.R. Properties and structure of silicon oxinitride films obtained in a Hydrazine plasma. - Phys. Stat. Sol.(a), 1985, v.87, pp.435-440.
74. G. Bagratishvili, R. Dzhanelidze, D. Jishiashvili. Plasma etching of semiconductor surfaces. Bulletin of the Georgian Academy of sciences. V. 112, N2, 1983. pp.325-328. (In Russian).
75. G. Bagratishvili, I. Baumberg, R. Dzhanelidze, D. Jishiashvili, M. Kadagidze, N. Kurdiani. O. Saksaganskii. Investigation of thin film MIS transistor on GaAs. Сообщения АН ГССР, т.114, N1, с. 69-72. Bulletin of the Georgian Academy of Sciences. V.114, N 1, 1983. pp. 69-72. (In Russian).
76. Bagratishvili G.D., Dzhanelidze R.B., Jishiashvili D.A Nonstoichiometric germanium nitride a new material for MIS microelectronics. II. Composition, properties and the interface with semiconductors. - Phys. Stat. Sol.(a), 1983, v.78, pp.391-400.
77. Bagratishvili G.D., Dzhanelidze R.B., Jishiashvili D.A Nonstoichiometric germanium nitride a new material for MIS microelectronics.I. The choice of insulator and deposition. - Phys. Stat. Sol.(a), 1983, v.78, pp.115-123.
78. ShiolaShvili Z., Bagratishvili G., Jishiashvili D.. Investigation of ion-plasma deposited borosilicate thin films. Bulletin of the Georgian Academy of Sciences. V. 107, N 1, 1982. pp.73-76. (In Russian).
79. Bagratishvili G.D., Dzhanelidze R.B., Jishiashvili D.A., Pisanovskii L.V., Zyuganov A.N., Mikhelashvili V.M., Smertenko P.S. Mechanism of charge flow through the M-GeN-GaAs structure.-Phys. Stat. Sol. (a), 1981, v.65, pp.701-707.
80. Bagratishvili G.D., Dzhanelidze R.B., Jishiashvili D.A., Pisanovskii L.V. Germanium nitride thin films deposited by reactive sputtering in hydrazine plasma.- Bulletin of the Georgian Academy of Sciences. V.99, N 3, 1980. pp. 641-644. (In Russian).
81. Bagratishvili G.D., Dzhanelidze R.B., Jishiashvili D.A., Ziuganov A.N., Mikhelashvili B.M., Smertenko P.C. The conductance of $\text{Al}-\text{Ge}_3\text{N}_4-\text{Ge}$ structures. Bulletin of the Georgian Academy of Sciences. V.98, N 3, 1980. pp. 565-568. (In Russian).
82. Bagratishvili G.D., Dzhanelidze R.B., Jishiashvili D.A., Pisanovskii L.V., Shiolashvili Z.N. Boron diffusion from the reactive sputtered glass source. - Phys. Stat. Sol.(a), 1979, v.56, p.27-35.
83. Bagratishvili G.D., Dzhanelidze R.B., Jishiashvili D.A., Pisanovskii L.V., Shiolashvili Z.N. Boron diffusion from the reactively sputtered borosilicate glass. Bulletin of the Georgian Academy of Sciences. V.87. N 2, 1977. pp. 325-328. (In Russian).

84. Bagratishvili G.D., Dzhanelidze R.B., Jishiashvili D.A., Pisanovskii L.V., Shiolashvili Z.N. Physico-chemical properties of the borosilicate thin films. Bulletin of the Georgian Academy of Sciences. V.85, N 3, 1977. pp.621-624. (In Russian).

ადგილობრივ და საერთაშორისო კონფერენციებში მონაწილეობა.

1. A.Jishiashvili, A.Chirakadze, Z.Shiolashvili, N.Makhatadze,V.Gobronidze, D.Jishiashvili. Vapor synthesis of ZnO nanocrystal-based hollow microspheres. 7th International Conference MTP-2021: Modern Trends in Physics. December 15-17, 2021. Baku State University, Baku, Azerbaijan.
2. A. Jishiashvili, Z. Shiolashvili, N. Makhatadze, D. Jishiashvili, A. Chirakadze, K. Gorgadze. Synthesis of nanomaterials from the gas mixture containing NH₃ and HCl. 6th International Conference “Nanotechnology”.4-7 October, 2021, Tbilisi, Georgia.
3. A. Jishiashvili, Z. Shiolashvili, N. Makhatadze, D. Jishiashvili, A. Chirakadze. Branched ZnO microcrystals. A Scanning Electron Microscopy study. 6th International Conference “Nanotechnology”.4-7 October, 2021, Tbilisi, Georgia
4. G.Gelashvili, D.Gelenidze,D.Jishiashvili. Scanning electron microscopy study of plasma synthesized nanoparticles. 6th International Conference “Nanotechnology”.4-7 October, 2021, Tbilisi, Georgia (წარდგენილია თსუ-დან).
5. D. Jishiashvili et al. Growth of indium digermanate nanowires for gas sensor applications. World Multidisciplinary Earth Sciences Symposium 9-13 September 2019 – Prague (Czech Republic)
6. A.Chirakadze, D. Jishiashvili, Z.Shiolashvili, G. Petriashvili. Development and testing of combined nano-based liquids for treatment of cancer cells based on nanoparticles with a therapeutic Curie temperature and liquid crystals: Georgian Experience. International Conference on Liquid Crystals, Liquid Crystalline Polymers and Nanosystems: From Macro to Nano Length Scales (ICLCP 2019) 13- 15 December 2019 at Mahatma Gandhi University, Kottayam, Kerala, India.
7. A. Chirakadze, D. Jishiashvili, G. Petriashvili, N. Mitagvaria, Z. Buachidze, I. Khomeriki, N. Khuskivadze. Development and toxicity testing of nano-liquids for cancer treatment utilizing the phosphatized nanoparticles and liquid crystals with controlled release. International Conference on Liquid Crystals, Liquid Crystalline Polymers and Nanosystems: From Macro to Nano Length Scales (ICLCP 2019) 13- 15 December 2019 at Mahatma Gandhi University, Kottayam, Kerala, India.
8. A. Chirakadze, D. Jishiashvili, G. Petriashvili, A. Jishiashvili, N. Dvali, Z. Buachidze, K. Gorgadze, I. Khomeriki, N. Khuskivadze. Development and testing of combined nano-liquids for treatment of cancer cells based on nanoparticles with a therapeutic Curie temperature and liquid crystals: Georgian Experience. International Conference on Liquid Crystals, Liquid Crystalline Polymers and Nanosystems: From Macro to Nano Length Scales (ICLCP 2019) 13- 15 December 2019 at Mahatma Gandhi University, Kottayam, Kerala, India
9. D. Jishiashvili et al. Vapor-phase synthesis of copper-based nanostructures. Proceedings of the International Conference on “Modern Trends in Physics”, May 1-3, 2019, Baku, Azerbaijan.
10. A. Chirakadze, D.Jishiasgvili, N.Mitagvaria, I. Lazrishvili, Z. Shiolashvili, A. Jishiasgvili, N.Makhatadze, Z. Buachidze, N. Khuskivade. Studies of the comparatively low-temperature synthesis and preliminary toxic characteristics of silver-doped lanthanum manganite nanoparticles using conventional and microwave heating. Proceedings of the International Conference on “Modern Trends in Physics”, May 1-3, 2019, Baku, Azerbaijan.
11. D. Jishiashvili et al. Synthesis of nitride nanomaterials in presence of hydrazine and ammonium chloride vapor. 5th International Conference “Nanotechnologies- NANO 2018”. November 19 – 22, 2018, Tbilisi, Georgia.
12. D. Jishiashvili, L. Chkhartishvili, Z. Shiolashvili, N. Makhatadze, A. Jishiashvili, G. Chonishvili, A. Chirakadze, D. Sukhanov. Synthesis of In₂O₃ nanowires for gas sensor applications. 4th International Conference “ Nanotechnologies” NANO-2016, October24-27, Tbilisi, Georgia.
13. T. Berberashvili, Z. Buachidze, A. Chirakadze, L. Chakhvashvili, D. Jishiashvili, P. Kervalishvili, S. Aleqsanyan, H. Gyulasaryan, A. Manukyan, A. Papoyan, E. Sharoyan, L. Sajti. Carbon coated (Fe-Fe₃C) and Ag-doped lanthanum manganite (Ag_xLa_{1-x}MnO₃) nanocomposites for magnetic hypertermia of cancer cells. 4th International Conference “ Nanotechnologies” NANO-2016, October24-27, Tbilisi, Georgia.

14. D. Jishiashvili, Z. Shiolashvili, N. Makhadze, A. Jishiashvili, V. Gobronidze. Growth of nitride and phosphide nanowires in the presence of water molecules. ICANM2016 International conference & exhibition on advanced and nanomaterials August 1-3, 2016. Montreal, Canada. 2016
15. L. Chkhartishvili, D. Jishiashvili, Z. Shiolashvili, N. Makhadze, A. Jishiashvili, B. Buadze. Temperature-dependent morphological changes in inp based nanowires. ICANM2015 International conference & exhibition on advanced and nanomaterials august 10-12, 2015, Ottawa, Ontario, Canada. 2015.
16. D. Jishiashvili, L. Chkhartishvili, Z. Shiolashvili, N. Makhadze, V. Gobronidze, A. Jishiashvili. Investigation of vapor-liquid-solid grown tapered germanium nitride nanowires. ICANM2014 Canada (August, 11-13). International Conference on Advanced and Nano Materials. Calgary, Canada. 2014.
17. D. Jishiashvili, Z. Shiolashvili, N. Makhadze, V. Gobronidze, A. Jishiashvili. A study of shell formation in InP based composite nanowire. International Conference NANO-2014 Tbilisi, Georgia (November 20-24, 2014).
18. Z. Buachidze, A. Chirakadze, D. Jishiashvili, P.J. Kervalishvili, D. Bibiluri, L. Gurchumelia, L. Sharikadze. Microwave in environmental technologies and synthesis of nanomaterials: processing of organic and onorganic compounds. 3rd International Conference NANO-2014 Tbilisi, Georgia (November 20-24, 2014).
19. D.Jishiashvili, Z.Shiolashvili, N.Makhadze, A.Jishiashvili,V. Gobronidze, L.Kiria. Synthesis of Nanowire Networks for Chemical Gas Sensor Applications. Nuclear Radiation Nanosensors and Nanosensory Systems. Iinternational Conference “Tbilisi- spring-2014” (March 5-9, 2014). The NATO Science for Peace and Security Programme
20. D.Jishiashvili, L.Chkhartishvili, L.Kiria, Z.Shiolashvili, N.Makhadze, A.Jishiashvili,V. Gobronidze. Self-catalytic growth of germanium and indium based 1D nanostructures. ICANM2013 Canada. International Conference on Advanced and Nano Materials. Quebec, Canada. 2013. http://iaemm.com/ESW/Files/ICANM2013_Program_Detail.pdf
21. Hydrazine-assisted routes to 1D nitride and oxide nanomaterials for environmental and energy applications, EC funded GEO RECAP project (N266155) networking and IDEALIST project twinning meetings, Georgian Technical University, Tbilisi, Georgia, 27-28 June, 2012
22. D.Jishiashvili, Z.Shiolashvili, N.Makhadze, L.Kiria, A.Jishiashvili. Development of InP based core-shell nanowires for advanced nanoelectronic devices, EC Funded GEO RECAP Project (N266155) 2nd Training Event and Final Meeting, Georgian Technical University, Tbilisi, Georgia, 15-16 October, 2012
23. D. Jishiashvili. New one dimensional nanomaterials grown in hydrazine vapor. NewMaRE: New Materials and Renewable Energy. International School organized by the Southampton University UK, and Georgian Technical University. Tbilisi, Georgia, 2012.
24. D. Jishiashvili, L. Kiria, Z. Shiolashvili, N. Makhadze, A. Jishiashvili, D. Sukhanov. The morphology of vapor-liquid-solid grown nitride nanowires. 2nd International Conference “Nanotechnologies” Nano-2012. Tbilisi, Georgia, 2012.
25. D.A. Jishiashvili, , Z.N. Shiolashvili, N. K.Makhadze, L. T. Kiria, A.D. Jishiashvili, V.V. Gobronidze. Tetragonal Ge nanocrystals formed during the growth of Ge₃N₄ nanowires. 21st International Crimean Conference “Microwave and telecommunication Technology” (CriMiCo’2011) 12-16 September, 2011,Sevastopol, Ukraine.
26. D. Jishiashvili, Z.Shiolashvili, N. Makhadze, L. Kiria, A. Jishiashvili, D. Sukhanov. Development of the new one dimensional nanomaterials for ultrasensitive gas sensors.The European Future Tachnologies Conference and Exhibition-FET11. 4-6 May.Budapest, Hungary. 2011.
27. D. Jishiashvili, Z. Shiolashvili, N. Makhadze, L. Kiria. One Dimensional Nanomaterials Synthesized Using Hydrazine Vapor. Tbilisi International Centre of Mathematics and Informatics. Workshop 1D Nanostructures - Theory and Technology. 13 September, Tbilisi. 2011.
28. D. Jishiashvili1, Z.Shiolashvili, N. Makhadze, L. Kiria, V. Gobronidze, A. Jishiashvili, D. Sukhanov. Fabrication of Indium based nanowires for gas-sensor applications International Scientific Conference - Modern Issues of Applied Physics. Tbilisi. 30 March, 2011.
29. D. Jishiashvili1, Z.Shiolashvili, N. Makhadze, A. Jishiashvili, D. Sukhanov. Nanowire-based ultrasensitive gas sensors. Modern ecological problems and Caucasus. The International Conference ECO-July 4-6, Tbilisi, Georgia. 2010.

30. D. Jishiashvili, N. Makhatadze, Z. Shiolashvili, V. Gobronidze, A. Jishiashvili, D. Sukhanov. Synthesis of tetragonal germanium nanocrystals embedded in amorphous matrices. 1st Georgian Conference on Nanochemistry and Nanotechnologies, March 23-24, Tbilisi,, Georgia. 2010.
31. D. Jishiashvili, N.Makhatadze, Z. Shiolashvili, V. Gobronidze, A. Jishiashvili. Synthesis of germanium nitride nanowires. International Semiconductor Conference CAS-2009. 12-14 oct 2009, Sinaia, Romania.
32. D. Jishiashvili, X. Devaux, N. Makhatadze, V. Gobronidze, A. Jishiashvili Z. Shiolashvili. Vapor-Liquid Solid (VLS) Growth of Tapered Germanium Nitride Nanowires. The International Conference For NanoTechnology Industries (NANO Conference 2009, King Saud University) April 5-7, 2009, Riyadh, Saudi Arabia.
<http://nano.ksu.edu.sa/conferences/icni/admin/AbstractInput/abstractdetails.asp?ID=9>
33. D. Jishiashvili, V. Kapakis, X. Devaux, C. Politis, E. Kutelia, N. Makhatadze, V. Gobronidze, and Z. Shiolashvili. Germanium Nitride Nanowires Produced by Thermal Annealing in Hydrazin Vapore.1st International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems. June 16-18, Halkidiki, Greece.2008.
<http://www.uta.edu/ic4n/2008/Conference%20Program.pdf>
34. D. Jishiashvili, E. Kutelia, V. Gobronidze and E. Miminoshvili Synthesis of Germanium Nitride Nanowires and Spherical Particles. The 4th International Congress of Nanotechnology. November 5-8, 2007. San Francisco , USA.. <http://www.nanotechcongress.com/Cleantech.htm>
35. D. Jishiashvili, E. Kutelia, V. Gobronidze, D. Kanchaveli. Formation of macropores and microtubes using the nanocrystalline Ge:GeO₂ films (Invited Lecture). International Congress of Nanotechnology, ICNT 2006. October 30-November 2, 2006. San Francisco, USA.
36. D. Jishiashvili, V. Gobronidze, Z. Shiolashvili, D. Kanchaveli. Nanoporous films produced by the magnetron sputtering of Ge in oxygen plasma. NANOMAT-2006. International Workshop on Nanostructured materials. June 21-23, 2006. Antalya, Turkey. Presentation № A217.
37. D. Jishiashvili, V. Gobronidze, Z. Shiolashvili, D. Kanchaveli. Si and Ge nanocrystals embedded in the alumina film. 13th International Metallurgy and Materials Congress IMMC 2006, 09-12 November, 2006, Istanbul, Turkey.
38. D. Jishiashvili, V. Gobronidze, Z. Shiolashvili, N. Makatadze, L. Sakhvadze. Formation of nanopores in the phase-separated Ge:GeO₂ films. Georgian conference “Photonics -2005”. Tbilisi, December 27-28. 2005.
39. Д.А. Джишиашвили, В.В. Гобронидзе, З.В. Беришвили, З.Н. Шиолашвили, Г.А. Схиладзе и О.Л.Т. Сахвадзе. Получение германиевых квантовых точек в пленке GeO₂. Труды пятой международной конференции “Современные информационные и электронные технологии”. Украина, Одесса, 23-27 мая, 2005г. стр. 371.
40. Jishiashvili D., V. Gobronidze, Z. Shiolashvili, T. Eterashvili and L. Sakhvadze. Ge Nanocrystals Embedded in the Germanium Dioxide Thin Film. Proceedings of the Institute of Cybernetics. Vol. 3, N 1-2, 2004.
41. D.Jishiashvili, Z. Shiolashvili, V. Gobronidze, I. Nakhutsrishvili. A study of solid phase reactions at the Ge-GeO₂ interface. Proceedings of the International Symposium and Exhibition on Advanced Packaging Materials. Evergreen Marriot Conference Resort. Stone Mountain Park, GA March 3-6, 2002. USA.
42. Jishiashvili D., Gobronidze V., Shiolashvili Z. Surface passivation of GaAs by germanium oxinitride film. 2nd international Symposium “Electrochemistry of manganese. Electrodeposition, corrosion and passivity of metallic materials”. October 17-20, 2001, Tbilisi.
43. Jishiashvili D., Gobsch G., Ecke G., Shiolashvili Z., Gobronidze V., Nakhutsrishvili I. AES study of thermally treated GeO₂(111)/GaAs structures Proceedings of the International Semiconductor Conference CAS-2001 (October 9-13, 2001), Sinaia, Romania.
44. Jishiashvili D., Gobronidze V., Shiolashvili Z., Nakhutsrishvili I., Mushkudiani M. Development of new thin film materials for nanoelectronic. Thesis of Conferences on Modern Problems of Computer Science, Tbilisi, 21-22 November, 2000.
45. Shiolashvili Z., Jishiashvili D., Eterashvili T., Gobronidze V. Application of the zinc-silicate glass and GeO₂ thin films as diffusion sources and encapsulants for GaAs and InP. 3rd international conference "MicroMat 2000". Berlin. April 17-19, 2000.

46. Jishiashvili D., Shiolashvili Z., Dzhanelidze R., Mosidze L. Zinc diffusion from a reactively sputtered glass source in GaAs. Proceedings of the 20th International conference semiconductors /October 7-11/, Romania, Sinaia, 1997.
47. Jishiashvili D., Gobronidze A., Dzhanelidze R., Shiolashvili Z., Kutelia E., Nakhutsrishvili I., Mosidze L. Development of the amorphous, high resistivity Ge: (O,N) films for radiation-hardened MIS device applications. Proceedings of the 19th International conference semiconductors /October 9-12/, Romania, Sinaia, 1996.
48. Jishiashvili D., Dzhanelidze R., Shiolashvili Z., Razmadze Z. New type of insulating material for radiation-hardened Metal-Insulator-Semiconductor Integrated Circuits. Georgian Symposium for project development and conversion /May 15-18/, collection of abstracts, Tbilisi, 1995.
49. Jishiashvili D., Dzhanelidze R., Shiolashvili Z., Razmadze Z. New type of insulating material for radiation-hardened Metal-Insulator-Semiconductor Integrated Circuits. Georgian Symposium for project development and conversion /May 15-18/, collection of reports, Tbilisi, 1995.
50. Jishiashvili D., Dzhanelidze R., Shiolashvili Z., Nakhutsrishvili I. Auger electron spectroscopic study of the gallium arsenide-germanium oxinitride interface. - Seventh international symposium on passiviti /August 21-26/, abstracts, Clausthal, Germany, 1994.
51. Jishiashvili D., Dzhanelidze R., Shiolashvili Z., Kurcikidze D. Development af basic technologies for GaAs integrated circuits. The I republican conference on metallic arsenic and development of microelectronics in Georgia. May 5-8, 1992. Tbilisi, Georgia.
52. Chikovani N.D. Baramidze I.M., Jishiashvili D., Kvataliani I., Shvelidze L. Application of transient metal alloys to increase the stability of Shottky barriers on GaAs. XII conference on microelectronics, October 26-28. Tbilisi, 1987.
53. G. Bagratishvili, Yu Berozashvili, R. Dzhanelidze, D. Jishiashvili, D. Kurcikidze, I. Nakhutsrishvili. Amorphous semiconductors in microelectronics technology. XII conference on microelectronics, October 26-28. Tbilisi, 1987.
54. G. Bagratishvili, S. Grigorovich, R. Dzhanelidze, D. Jishiashvili, L. Piskanovskii. Fabrication and properties of MIS structures based on the nonstoichiometric germanium nitride. 4th scientific-technological conference “Thin films in mass production of semiconductor devices and ICs”. April 13-18. Tbilisi, 1981.
55. G. Bagratishvili, R. Dzhanelidze, D. Jishiashvili, N. Kurdiani, O. Saksaganskii. The influence of fabrication technology on the electro physical propeties of GaAs based devices. 4th scientific-technological conference “Thin films in mass production of semiconductor devices and ICs”. April 13-18. Tbilisi, 1981.
56. G. Bagratishvili, Y. Biganishvili, D. Jishiashvili, B. Mikhelashvili, Z. Shiolashvili. Investigation of reactive ion-plasma deposited borosilicate thin films. 4th scientific-technological conference “Thin films in mass production of semiconductor devices and ICs”. April 13-18. Tbilisi, 1981.
57. G. Bagratishvili, I. Baumberg, R. Dzhanelidze, D. Jishiashvili, M. kadagidze, N. Kurdiani, O. Saksaganskii. MIS thin film transistor on GaAs. 4th scientific-technological conference “Thin films in mass production of semiconductor devices and ICs”. April 13-18. Tbilisi, 1981.
58. D. Jishiashvili, A. Ziuganov, L. Piscanovskii, B. Mikhelashvili, P. Smertenko. The mechanism of charge flow in M-Ge₃N₄-S-M structures. 4th republican conference of young scientists and specialists “Physical aspects of microelectronics and semiconductor devices”. May 27-29, Tbilisi, 1980.
59. G. Bagratishvili, R. Dzhanelidze, D. Jishiashvili, L. Piskanovskii. Fabricatio of thin films of Ge₃N₄ by reactive sputtering in hydrazine plazma. 11th scientific-technical conference “Physical problems of MIS electronics”. September 4-6, Sevastopol, Ukraine, 1980.
60. G. Bagratishvili, Y. Biganishvili, R. Dzhanelidze, D. Jishiashvili, L. Piskanovskii, Z. Shiolashvili. Boron diffusion from the doped dielectrics. All USSR conference “Methods of investigation of MIS-structures and physical aspects of MIS IC technologies”. August 24-28, Kiev, Ukraine. 1976.

გამოგონებები.

1. D. Jishiashvili, Z. Shiolashvili, N. Makhatadze, V. Gobronidze, A. Jishiashvili. Method of fabricating tetragonal germanium nanocrystals. P 5202, 2011.
2. D. Jishiashvili, V. Gobronidze, Z. Shiolashvili. Method of fabricating germanium nitride nanofibers. Georgian Patent. P 4320. 2008.

3. D. Jishiashvili, V. Gobronidze, Z. Shiolashvili. Method of making rolled-up nanotubes. Georgian Patent. P 4195. 2007.
4. D. Jishiashvili, V. Gobronidze, B. Eristavi, Z. Shiolashvili. Method of fabricating group IV nanocrystals in the metal oxide matrices. Georgian Patent. GE P 3725 B- from 2006.
5. D. Jishiashvili, V. Gobronidze, I. Nakhutsrishvili, Z. Shiolashvili. Method of making semiconductor devices.. Georgian Patent.GE P 2594 – from 2000
6. D. Jishiashvili, V. Gobronidze. Method for passivating the GaAs surface. Georgian Patent. GE P 2610 – from 2000.
7. G. Bagratishvili, Z. Bakhtadze, N. Biganishvili, D. Jishiashvili, B.Mikhelashvili, Z. Shiolashvili. Method of making the doped dielectric films. Invention (USSR) N 1152445, 1984.
8. D. Jishiashvili, G. Bagratishvili, S. Grigorovich, R. Dzhanelidze. Method of making nonstoichiometric nitrides. Invention (USSR) N 1099775, 1982.
9. G. Bagratishvili, R. Dzhanelidze, D. Jishiashvili. Method of making germanium nitride thin films. Invention (USSR) N 1014405, 1982.
10. D. Jishiashvili, G. Bagratishvili, R. Dzhanelidze, V. Somkhishvili. Method of plasma etching. Invention (USSR) N 898898, 1980.

საერთაშორისო პროექტებში მონაწილეობა.

1. ახალი დიელექტრიკული მასალის შემუშავება რადიაციამედეგი ლითონი-დიელექტრიკი-ნახევარგამტარი ინტეგრალური სქემებისათვის. 1997-1999 G -059, ISTC. ხელმძღვანელი.
2. ზედაპირის პასივაციის ახალი ტექნოლოგიის შემუშავება GaAs-ზე მიკროტალლური ინტეგრალური სქემების შესაქმნელად. 2000-2002 G -258, ISTC. ხელმძღვანელი.
3. ციკლური დეფორმაციით გამოწვეული დესტრუქციის მექანიზმის შესწავლა რეაქტორულ ფოლადებში G -719 ISTC. შემსრულებელი.
4. Si-Ge ნანოსტრუქტურული ნაერთების მიღება აფეთქებით კომპაქტირების ტექნოლოგიით და მათ საფუძველზე ენერგო-ეფექტული თერმოელექტრული ბატარეების შექმნა. 2009-2011 # -4996 STCU. შემსრულებელი.
5. ერთგანზომილებიანი ნიტრიდული და ოქსიდური ნანომასალების მიღება გარემოსდაცვითი და ენერგეტიკის მიზნებისათვის.შვეიცარიის ეროვნული სამეცნიერო ფონდის გრანტი SCOPES IZ73Z0_127943 / 1. 2011-2012. ხელმძღვანელი
6. ნანომასალების გაზრდის ახალი ტექნოლოგიების შემუშავება და აირების ზემგრძნობიარე სენსორების დამზადება. 2016-2018, #6204 STCU. ხელმძღვანელი.
7. კიბოს უჯრედების თვითრეგულირებადი (კიურის ტემპერატურით ლიმიტირებული) მაგნიტური ჰიპერეთერმიისთვის ახალი ნანომასალების შექმნა და კვლევა.2018-2020, # 7089 STCU. შემსრულებელი.
8. ნანოფზნილების მისაღები პლაზმური რკალის რეაქტორი. შოთა რუსთაველის სახელობის ეროვნული სამეცნიერო ფონდის გრანტი გამოყენებითი კვლევებისთვის. 2019-2023, AR-19-719. შემსრულებელი.