

Gela Goderdzishvili's books and auxiliary textbooks

(2020-2025)

1. **Silicon from mountain rocks to electronics** - Elza Khutsishvili, Tengiz Kamushadze, Gela Goderdzishvili - Publishing house: Favorite Style Ltd, Tbilisi 2023, ISBN 978-9941-8-5495-8, number of pages 257.
2. **Giorgi Nikoladze at the origins of computer technologies: A view from modernity** - L. Imnaishvili, N. Iashvili, T. Lominadze, G. Pantsulaia, M. Bedineishvili, G. Goderdzishvili - Publishing house "Technical University", Tbilisi 2025, ISBN 978-9941-520-68-6, number of pages 145.

Gela Goderdzishvili's scientific articles

(2020-2025)

1. **Paradigms of the "Arithmometer" for Direct Multiplication by Georgy Nikoladze** - Levan Imnaishvili, Maguli Bedineishvili, Gela Goderdzishvili, Gocha Zedginidze. **EJASET** European Journal of Applied Science, Engineering and Technology Vol. 3 No. 3 (2025), pp. 254-267, (ISSN 2786-9342).
2. **Restoration of Giorgi Nikoladze's Arithmometer for the Issue** - Levan Imnaishvili, Gela Goderdzishvili, Maguli Bedineishvili, Nugzar Iashvili, Teona Chigladze - Journal "Energy" Series: "Modern Problems of Energy and Ways to Solve Them" No. 2 (98), Part I, GTU, Tbilisi, 2021, pp. 105-110. ISSN 1512-0120.
3. **Agrochemical and sanitary-veterinary mobile analytical laboratory** - Imnaishvili L., Makhashvili K., Goderdzishvili G., Bedineishvili M., Iashvili N. - Collection of scientific papers of the International Scientific and Technical Symposium "Modern Engineering Problems of Key Industries" of the III International Kosygin Forum "Modern Problems of Engineering Sciences". (October 20-21, 2021), pp. 98-101.
4. **On the creation of an agrochemical sanitary-veterinary mobile analytical laboratory** - Levan Imnaishvili, Ketevan Makhashvili, Gela Goderdzishvili, Nugzar Iashvili - Journal of Business Engineering, Georgian Technical University, Georgian Academy of Engineering, N1-2. 2020. ISSN 1512-0538. pp. 86-88.
5. **Technology for conducting laboratory experiments remotely** - Imnaishvili L., Bedineishvili M., Zedginidze G., Chovelidze A. - Journal "Energy" №4(96), Part I, GTU, Tbilisi, 2020, pp. 141-145. ISSN 1512-0120.
6. **Radioactivity of soil in suburbs of Tbilisi city (the capital of Georgia)** - L. Mtsariashvili, N. Kekelidze, G. Goderdzishvili, T. Jakhutashvili, E. Tulashvili - Journal „Annals of Agrarian Science“, vol. 18, №3, 2020, pp. 290-294. ISSN: 1512-1887. (Published 01-02-2021).

Participation in conferences Gely Goderdzishvili (congresses, symposia)

(2020-2025)

1. **Restoration of Giorgi Nikoladze's Arithmometer for the Issue** - Levan Imnaishvili, Gela Goderdzishvili, Maguli Bedineishvili, Nugzar Iashvili, Teona Chigladze - III International Scientific and Technical Conference "Modern Problems of Energy and Ways to Solve Them", Tbilisi, Georgia, June 7-10, 2021.
2. **SILICON–GRAPHENE BASED SOLAR ELEMENTS** - Tamar Berberashvili, Lali Chakhvashvili, Habibollah Bakhtiari, Gela Goderdzishvili, Paata Kervalishvili - Georgian Technical University 6th International Conference "Nanotechnology" G T U n a n o 2 0 2 1. ISBN 978-9941-28-850-0, 4 – 7 October 2021 Tbilisi, Georgia. P. 14.
3. **Agrochemical and sanitary-veterinary mobile analytical laboratory** - Imnaishvili L., Makhashvili K., Goderdzishvili G., Bedineishvili M., Iashvili N. - Collection of scientific papers of the International Scientific and Technical Symposium "Modern Engineering Problems of Key Industries" of the III International Kosygin Forum "Modern Problems of Engineering Sciences". (October 20-21, 2021).
4. **Technology for remote laboratory experiments** - Levan Imnaishvili, Maguli Bedineishvili, Gela Goderdzishvili, Gocha Zedgenidze, Archili Chovelidze - II International Scientific and Technological Conference "Modern Problems of Energy and Ways to Solve Them" December 7-10, 2020, Georgia, Tbilisi.

Gela Goderdzishvili's books and auxiliary textbooks

(2007-2019)

1. **Laboratory work in semiconductor optoelectronics and integral optics** - Chikovani R., Goderdzishvili G., Mkheidze T., Khachidze T. - Publishing house "Technical University", 2008. Grif ISBN 978-9941-14-323-6. Number of pages 80.

Gela Goderdzishvili's scientific articles

(1974-2019)

1. **Features of the formation of reflective and absorbing surfaces on light-emitting structures** - Goderdzishvili G., Tatishvili K. - Georgian Engineering News (GEN), vol. 89, 2019. pp. 87-92. ISSN 1512-0287.
2. **Development and investigation of the local diffusion method in GaAsP ($0.65 \leq x \leq 1$) solid solutions and structures created on their basis** - Tatishvili K.G., Goderdzishvili G.I. - Georgian Engineering News (GEN), vol. 89, 2019. pp. 93-95. ISSN 1512-0287.
3. **On the safe use of natural gas** - Mestvirishvili Sh.A., Iashvili N.G., Goderdzishvili G.I., Khutashvili I.B., Kasoshvili K.N. - Georgian Engineering News (GEN), vol. 89, 2019. pp. 84-86. ISSN 1512-0287.

4. **SCADA Systems Training and Research Laboratory Stand** - Imnaishvili L., Bedineishvili M., Goderdzishvili G. - V International Scientific Conference, Energy: Regional Problems and Development Prospects. Collection of Reports, Kutaisi, 2018, pp. 126–129. ISSN 1512-3979.
5. **Radon in natural water sources in the territory of kartli artesian (Georgia)** - L. Mtsariashvili, N. Kekelide, G. Goderdzishvili, E. Tulashvili, T. Jakhutashvili - 18th International Multidisciplinary Scientific GeoConference SGEM2018, conference proceedings, vol.18, ISBN 978-619-7408-72-0; ISSN 1314-2704; DOI:10.5593/SGEM 2018/1.5, Vienna, Austria, pp.407-415. ISSN 1314-2704.
6. **Creation of a new laboratory training stand for studying SCADA systems** - Imnaishvili L. Sh., Bedineishvili M. M., Goderdzishvili G. I., Iashvili N. G. - III International Scientific and Practical Conference, UDC 004.9, Krapovitsa, April 19-20, 2018, pp. 209-220.
7. **Educational-scientific and expert laboratory of informatics and management systems** - G. Goderdzishvili - "Georgia at the origins of informatization", Georgian Technical University, Tbilisi 2017, pp. 90-93. ISBN 978-9941-20-953-6.
8. **Modern digital technologies in Georgia** - Imnaishvili L. G. Goderdzishvili, Iashvili N. - "Georgia at the origins of informatization", Georgian Technical University, Tbilisi 2017, pp. 222-224. ISBN 978-9941-20-953-6.
9. **Automated system for industrial transport management of mining enterprises** - Makhashvili K., Iashvili N., Dolidze A., Khartishvili M. - Georgian Engineering News (GEN), #4, 2017. pp. 32-34. ISSN 1512-0287.
10. **Educational laboratory stand of SCADA systems** - Imnaishvili L.Sh., Bedineishvili M.M., Goderdzishvili G.I., Iashvili N.G. - Proceedings of the International scientific and practical conference "Science, education, innovation: testing of research results", February 9, 2017, Prague, Czech Republic.
11. **Development of a concentrated solar radiation photovoltaic conversion module** - Goderdzishvili G., Trapaidze I., Zhgenti M., Chulukhadze N. - Georgian Engineering News (GEN), #1, 2015. pp. 72-76. ISSN 1512-0287.
12. **Nuclear Radiatio Nanosensors and nanosensory Systems** - P.Kervalishvili, T.berberashvili, L.Chakhvashvili, G.Goderdzishvili - THE 33rd ISTC-KOREA Work-shop Nanotechnology for deeper understanding of todays challenge NANOCON 2015, CIS-KOREA Teqhnologi Cooperation Opportunities in Nanotechnology, pp. 133-139.
13. **Development of Electronic Spins Based Nanosensory Systems** - P. Kervalishvili, T. Berberashvili, G.Goderdzishvili, L. Chakhvashvili. - INTERNATIONAL CONFERENCE "TBILISI SPRING-2014". Nuclear Radiation Nanosensors and Nanosensory Systems, ISBN 978-9941-20-415-9. Tbilisi, pp. 108-111.
14. **Photovoltaic installations with sunlight concentrators** - I. Trapaidze, G. Goderdzishvili, L. Trapaidze, M. Jghenti, N. Chulukhadze, N. Esiava - International School of Nanophotonics and Photovoltaics ISNP, Italy- Georgia Georgian Technical University, September 2014.
15. **On the role of mathematics in physics** - Gigineishvili A., Gegechkori T., Goderdzishvili G. - Collection of works, Archil Eliashvili Institute of Control Systems of the Georgian Technical University, 16, 2012, pp. 239-243.
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17. **Mobile Multi-Robot Systems Control Based on Evolutionary Algorithms** - B. Meparishvili, G. Janelidze, G. Goderdzishvili - International Scientific Conference ERA-7, Athens, Greece, 27-30 September, 2012. pp.1-8.
18. **Three-dimensional mathematical model of diffusion process during fabrication of isoplanar structure taking into account crystal's anisotropy** - A. Prangishvili, R. Chikovani, R. Gogsadze, G. Goderdzishvili, N. Jibladze, A. Topchishvili - Journal Model Assisted Statistics and Applicatin, Amsterdam, 6, 2011, pp. 249-260.
19. **Increase of Efficiency of Solar Concentrated Energy Photoelectric Transforming Module** - Gela Goderdzishvili, Alexander Mosashvili, Tengiz Mkheidze, Rafiel Chikovani - New Developments in Materials Science, MATERIALS Science and Technolocies, ISBN 978-1-61668-852-3. 2011, pp. 161-167.
20. **International Scientific Conference "Current Issues in Applied Physics" dedicated to the founding of the Faculty of Engineering Physics of the Georgian Technical University and the anniversary of Professor Rafiel Chikovani** - Goderdzishvili G. - Nano Studies, #3, 2011. pp. 85-91.
21. **Application of Polymer Parabolic Concentrators in Silicon Photoelectric Converters of Solar Energy** - J.I. Avaliani, R.I. Chikovani, T.I. Khachidze, G.I. Goderdzishvili, I.M. Avaliani, I.I. Kordzakhia - International Scientific Conference Current Problems in Applied Physics, March 30, 2011, Georgian Technical University, Tbilisi. pp. 5-7.
22. **Low Intensity Light Improved method of radiation spectrum registration** - Goderdzishvili G., Mkheidze D., Berakchiani I. - International scientific conference Current problems of applied physics, March 30, 2011, Georgian Technical University, Tbilisi. pp. 15-17.
23. **Microstructure and physical-mechanical properties of aluminum-doped single-crystal gallium arsenide** - Goderdzishvili G., Mkheidze D., Berakchiani I. - International scientific conference Current problems of applied physics, March 30, 2011, Proceedings, ISBN 978-9941-20-009-0. Georgian Technical University, Tbilisi. pp. 184-188.
24. **Study of the processes of gas-phase deposition of epitaxial SiGe structures on substrates of Si and SiGe single crystals** - A. Yu. Zhuravlev, N. A. Semenov, V. I. Sheremet, B. M. Shirokov, A. Vu Shiyani, G. V. Bokuchava, G. Sh. Darsavelidze, G. I. Goderdzishvili, R. I. Chikovani - International Scientific Conference, Modern Issues of Applied Physics". March 30, 2011. Proceedings, ISBN 978-9941-20-009-0. Tbilisi. pp. 194-198.
25. **On the development of optoelectronic elements using the properties of nanosilicon on sapphire structure** - Kazarov R., Chikovani R., Goderdzishvili G., Khachivze T. Garibashvili D. - Nano Studies, #2, 2010. pp. 119-121.
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- R.Chikovani, T.Mkheidze, G.Goderdzishvili - Georgian Engineering News, ISSN 1512-0287, number 4, 2008, pp. 11-22.
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 29. **Development of original method of local thermal oxidation for creation of integrated multi-element emitting indicators** - G. Goderdzishvili, R. Chikovani, T. Mkheidze - PROCEEDINGS "Forum on higher education". Congress of the Black Sea Universities Network. April, 2-5. 2008, Ukraine, pp. 69-70.
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 31. **Initiation of scattering of electrons by deep centers, excited by local longitudinal acoustic vibrations of basic atoms at $T=4,2K$** - Б.В. Kutubidze, Р.И. Чиковани, Г.И. Goderdzishvili, Т.Д. Mkheidze, О.М. Janelide. - Georgian Engineering News, ISSN 1512-0287, No. 2, 2007. pp 58-60.
 32. **Determination of the energy of ionization of deep scattering centers by the method of low-temperature shock ionization** - B.V. Kutubidze, Р.И. Чиковани, Г.И. Goderdzishvili, Т.Д. Mkheidze, О.М. Джanelиде - Georgian Engineering News, ISSN 1512-0287, No.1, 2007. pp. 36-38.
 33. **Dependence of the concentration of acceptors on the speed of growth and ultrasonic field** - B.V. Kutubidze, Р.И. Чиковани, Г.И. Goderdzishvili, Т.Д. Mkheidze, О.М. Джanelиде - Georgian Engineering News, ISSN 1512-0287, №1, 2007. pp. 34-35.
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 35. **Elaboration of an original method of local thermal oxidation for the integrated multi-element light- indicator creation** - G.I. Goderdzishvili, T.D. Mkheidze, T.A. Minashvili, R.I. Chikovani - Novel Materials. Georgian Engineering News, ISSN 1512-0287, 2006. pp. 56-59.
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 37. **Perspektivy razvitiya proizvodstva poluprovodnikovyh preobrazovatelei solnoi energiya in Georgia** - Goderdzishvili G., Mkheidze T., Trapaidze I., Chikovani R. - Georgian Engineering News, number 1, 2004, pp. 67-69.
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51. **Effect of absorption in solar elements based on GaAsP-Cu₂-yS** - Kantariya P.B., Kekelidze H.И., Goderdzishvili Г.И. - Communications of the Academy of Sciences of the Georgian SSR No. 3 (127), 1987, pp. 513-516.

Participation in conferences Gely Goderdzishvili (congresses, symposia) (1974-2019)

1. **Restoration of Giorgi Nikoladze's Arithmometer for the Issue** - Levan Imnaishvili, Gela Goderdzishvili, Maguli Bedineishvili, Nugzar Iashvili, Teona Chigladze - III International Scientific and Technical Conference "Modern Problems of Energy and Ways to Solve Them", Tbilisi, Georgia, June 7-10, 2021.
2. **SILICON-GRAPHENE BASED SOLAR ELEMENTS** - Tamar Berberashvili, Lali Chakhvashvili, Habibollah Bakhtiari, Gela Goderdzishvili, Paata Kervalishvili - Georgian Technical University 6th International Conference "Nanotechnology" G T U n a n o 2 0 2 1. ISBN 978-9941-28-850-0, 4 - 7 October 2021 Tbilisi, Georgia. P. 14.
3. **Agrochemical and sanitary-veterinary mobile analytical laboratory** - Imnaishvili L., Makhashvili K., Goderdzishvili G., Bedineishvili M., Iashvili N. - Collection of scientific papers of the International Scientific and Technical Symposium "Modern Engineering Problems of Key Industries" of the III International Kosygin Forum "Modern Problems of Engineering Sciences". (October 20-21, 2021).
4. **Technology for remote laboratory experiments** - Levan Imnaishvili, Maguli Bedineishvili, Gela Goderdzishvili, Gocha Zedgenidze, Archili Chovelidze - II International Scientific and Technological Conference "Modern Problems of Energy and Ways to Solve Them" December 7-10, 2020, Georgia, Tbilisi.
5. **Radon in natural water sources in the territory of kartli artesian (Georgia)** - L. Mtsariashvili, N. Kekelide, G. Goderdzishvili, E. Tulashvili, T. Jakhutashvili - 18th International Multidisciplinary Scientific GeoConference SGEM2018, 3-6 December, 2018, Vienna, Austria
6. **6. SCADA Systems Training and Research Laboratory Stand** - Imnaishvili L., Bedineishvili M., Goderdzishvili G. - V International Scientific Conference, Energy: Regional Problems and Development Prospects. October 25-26, 2018, Kutaisi, Georgia.
7. **7. Creation of a new laboratory training stand for studying SCADA systems** - Imnaishvili L. Sh., Bedineishvili M. M., Goderdzishvili G. I., Iashvili N. G. - III International Scientific and Practical Conference, Krapovitsa, April 19-20, 2018.
8. **Soil Radon in the Tbilisi Area** - Lela Mtsariashvili, Nodar Kekelidze, Gela Goderdzishvili, Teimuraz Jakhutashvili, Eremia Tulashvili - Tbilisi State University, Sixth Annual Faculty Conference in Exact and Natural Sciences, February 12-15, 2018.
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10. **Biometric identification of a person in electoral processes** - Imnaishvili L., Bedineishvili M., Goderdzishvili G., Iashvili N. - XI International Scientific and Practical Conference "Modern Information Technologies in Transport, Industry and Education", Dnipro, December 13-14, 2017.

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21. **Photovoltaic installations with sunlight concentrators** - I. Trapaidze, G. Goderdzishvili, L. Trapaidze, M. Jghenti, N. Chulukhadze, N. Esiava - International School of Nanophotonics and Photovoltaics ISNP, Italy- Georgia Georgian Technical University, September 2014.
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Gela Goderdzishvili Scientific-Research and Practical Activities (2020-2025)

Implemented and ongoing scientific projects	Year	Topic/work title	Position (supervisor/manager/ key performer, etc.)
Project #CIF -2-2024-03	2024-2025	"National development and implementation of engineering educational programs using distance laboratories"	Researcher
Georgian Technical University, project	01.01.2023-31.12. 2023	"Reconstruction of Giorgi Nikoladze's Direct Multiplication and Division Electric Arithmetic"	Researcher
Georgian National Science Foundation Project SP-22-316	30.11.2022-30.05.2023	"Silicon from Mountain Rocks to Electronics", Field of Science: Physical Sciences. Scientific Direction: Condensed Matter Physics.	Main performer

Gela Goderdzishvili Scientific-Research and Practical Activities

(1998-2016)

Implemented and ongoing scientific projects	Year	Topic/work title	Position (supervisor/manager/ key performer, etc.)
Georgian Technical University Internal Grant	09.01.2015-05.01.2016	Implementation of the SCADA laboratory complex, GTU internal grant, the project lead donor and leading organization is the Georgian Technical University.	Main performer
ევროკავშირი FP7-INCO-2013-9 პროექტის #609534	2013-2016	"Strengthening cooperation with the Eastern Partnership countries between inclusive and secure societies in the field of science and innovation." European Union Research and Innovation Programme FP7-INCO-2013-9.	Researcher
ევროკავშირის FP7-NMP.2013.4.0-5, პროექტის #609534	01.11.2013-01.11.2015	"Implementation of nanomaterial technologies for societal benefit in the European Neighbourhood". European Union Research and Innovation Programme FP7-NMP.2013.4.0-5.	Researcher
ევროკავშირის FP7-INCO-2011-6, პროექტის # 294299	2011-2013	"Strengthening the links between the Georgian Technical University and the European Research Area in the field of sensor research." European Union Research and Innovation Programme FP7-INCO-2011-6.	Researcher
Ukrainian International Scientific and Technical Center, Project #P467	2011-2013	"Processing of SiGe-based photovoltaic and opto-electrical devices."	Researcher
Georgian Technical University, Project #25.	2010	"Design and pilot model of a small-scale solar photovoltaic system."	Scientific Director
International Scientific and Technical Center of Ukraine, Project #3997	2008-2010	"Processing and research of bulk semiconductor crystals and epitaxial structures based on Si-Ge alloys."	Main performer
Georgian National Science Foundation Project #076	2006-2009	"Development of isoplanar technology based on semiconductor heterostructures and obtaining integral radiating elements for the creation of promising optoelectronic devices"	Main performer
Project INTAS-96-1887	1998-2000	"Photovoltaic installations with sunlight concentrators"	Main performer

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