

## LIST OF SELECTED PUBLICATIONS OF TAMARA KNYAZYAN

1. H.V. Baghdasaryan, A.V. Daryan, **T.M. Knyazyan**, N.K.Uzunoglu, "Nonlinear Behavior of Narrow-band Microinterferometer Fabry-Perot", Trans. Black Sea Region Symposium on Applied Electromagnetism, Metsovo, 17-19 April, 1996.
2. H.V. Baghdasaryan, A.V. Daryan, **T.M. Knyazyan**, and N.K.Uzunoglu, " Modeling of a Nonlinear Enhanced Performance Fabry-Perot Interferometer Filter", Microwave and Optical Technology Letters, v.14, No. 2, 1997, pp. 105-108.
3. H.V. Baghdasaryan, G.G. Karapetyan, **T.M. Knyazyan**, S.I. Avagyan and N.K.Uzunoglu, "Computer Modelling of a Fiber Bragg Grating-Amplifier", COST 240 Workshop, SOA-based Components for Optical Networks, Book of abstracts, Prague, Oct., 1997, pp.18-1 - 18-3.
4. H.V. Baghdasaryan, G.G. Karapetyan, S.I. Avagyan, **T.M. Knyazyan**, G.M. Haroutounyan, "Plane Electromagnetic Wave Interaction with Nonuniform Bragg Gratings: Non-traditional Approach", C1.3: Computation of High Frequency Fields, 43rd International Scientific Colloquium, Technical University of Ilmenau, Sept. 21-24, 1998.
5. H.V. Baghdasaryan, **T.M. Knyazyan**, "Problem of Plane EM Wave Self-action in Multilayer Structure: an Exact Solution", Optical and Quantum Electronics, Special Issue on 'Optical waveguide theory and numerical modelling', Vol. 31, No. 9/10, 1999, pp. 1059-1072.
6. H.V. Baghdasaryan, **T.M. Knyazyan**, S.I. Avagyan, "An advanced method of single expression for computer modelling of nonuniform, active and nonlinear fiber Bragg gratings", ICTON'99, Conference proceedings, Kielce, Poland, June 9-11, 1999, pp. 57-60.
7. H.V. Baghdasaryan and **T.M. Knyazyan**, " Modelling of strongly nonlinear sinusoidal Bragg gratings by the Method of Single Expression ", Optical and Quantum Electronics, Special Issue on 'Optical waveguide theory and numerical modelling', vol. 32, No 6/8, 2000, pp. 869-893.
8. H.V. Baghdasaryan and **T.M. Knyazyan**, "Method of Single Expression – New Conception of Nonlinear Boundary Problems' Solution in Classical Electrodynamics", Millennium Conference on Antennas & Propagation - AP2000, Abstracts Book, Volume II – Propagation, Davos, Switzerland, 9-14 April 2000.
9. H.V.Baghdasaryan, **T.M. Knyazyan**, Fiber Chirped Bragg Gratings' Computer Modelling by the Method of Single Expression, Proceedings. 10<sup>th</sup> European Conference on Integrated Optics ECIO'01, Paderborn, Germany, April 4-6, 2001, pp.429 – 432.
10. H.V.Baghdasaryan, **T.M. Knyazyan**, Method of single expression – new approach for nonlinear coatings design, Optical Interference Coatings '01 Conference, Banff, Alberta, Canada, 15-20 July,2001, TuA7.
11. H. V. Baghdasaryan, **T. M. Knyazyan**, Serge G. Dashyan, Non-uniform Amplifying Bragg gratings' Computer Simulation by the Method of Single Expression, 3<sup>rd</sup> International Conference on Transparent Optical Networks, Conference Proceedings, Poland, June, 2001, pp.139-140.
12. H.V. Baghdasaryan and **T.M. Knyazyan**, " Modelling of linearly chirped Bragg gratings by the Method of Single Expression ", Optical and Quantum Electronics, Special Issue on Optical waveguide theory and numerical modelling, vol. 34, No. 5, 2002, pp. 481-492.
13. H. V. Baghdasaryan and **T. M. Knyazyan**, "Computer Modelling of Amplifying Phase-Shifted Bragg Gratings by the Method of Single Expression", 10th International Workshop on Optical Waveguide Theory and Numerical Modelling, Nottingham, UK, 5-6 April, 2002, p. 50.
14. H. V. Baghdasaryan, **T. M. Knyazyan**, S. G. Dashyan, A.A. Mankulov, N. K. Uzunoglu, "Modelling of Multilayer-Dielectric-Multilayer Amplifying Fabry-Perot Microinterferometer Using the Method of Single Expression", 4th International Conference on Transparent Optical Networks –ICTON 2002, Conference Proceedings, Poland, April 21-25, 2002, We. C.6, pp. 53 – 56.
15. H.V. Baghdasaryan, **T.M. Knyazyan**, S.S. Berberyan, A. A. Mankulov, "Gires-Tournois Interferometer Correct Analysis Using the Method of Single Expression", 4th International Conference on Transparent Optical Networks –ICTON 2002, Conference Proceedings, Poland, April 21-25, 2002, We. P.4, pp. 70 – 73.
16. H. V. Baghdasaryan and **T. M. Knyazyan**, "Method of Single Expression - Advanced Powerful Tool for Computer Modelling of Wavelength Scale Nonuniform Frequency-Selective 1D Photonic Structures", 4th International Conference on Transparent Optical Networks –ICTON 2002, Conference Proceedings, Poland, April 21-25, 2002, Th. C.5, pp. 157 – 162.
17. H.V. Baghdasaryan and **T. M. Knyazyan**, "Simulation of Amplifying Phase-Shifted Fiber Bragg Gratings by the Method of Single Expression", Optical and Quantum Electronics, Special Issue on Optical waveguide theory and numerical modelling, vol. 35, 2003, pp. 493-506.
18. H.V. Baghdasaryan, **T.M. Knyazyan**, S.S. Berberyan, A.A. Mankulov, "Correct Analysis of Gires-Tournois Absorbing Interferometer by the Method of Single Expression", Microwave and Optical Technology Letters, vol. 37, No. 1, 2003, pp. 64-67.
19. H. V. Baghdasaryan, **T.M. Knyazyan**, "Computer simulation of amplifying phase-shifted Bragg gratings by the method of single expression", in Proceedings of SPIE, Vol. 4989, Optical Devices for Fiber Communication IV, edited by Michel J. F. Digonnet, (SPIE, Bellingham, WA, 2003), pp. 61-68.

20. H. V. Baghdasaryan, **T. M. Knyazyan**, S. G. Dashyan, A. A. Mankulov, "VCSEL's computer simulation by the nontraditional method of single expression", in Proceedings of SPIE, Vol. 4986, Physics and Simulation of Optoelectronic Devices XI, edited by Marek Osinski, Hiroshi Amano, Peter Blood, (SPIE, Bellingham, WA, 2003), pp. 355-362.
21. H. V. Baghdasaryan and **T. M. Knyazyan**, "Method of single expression - an exact solution for wavelength scale 1D photonic structures' computer modeling", in Proceedings of SPIE, Vol. 5260, Applications of Photonic Technology 6, edited by Roger A. Lessard, George A. Lampropoulos, (SPIE, Bellingham, WA, 2003), pp. 141-148.
22. H.V. Baghdasaryan, **T.M. Knyazyan**, A.A. Mankulov, "Numerical Modelling of Amplifying Gires-Tournois Microinterferometer by the Method of Single Expression", 5th International Conference on Transparent Optical Networks –ICTON 2003, Conference Proceedings, Poland, June 29-July 3, 2003, We.P.9, pp. 118 - 121.
23. H.V. Baghdasaryan, **T.M. Knyazyan**, A.A. Mankulov, "Electric Field Distribution in 1D Layered Media: Qualitative Analysis in the Method of Single Expression", 6th International Conference on Transparent Optical Networks – ICTON 2004, Conference Proceedings, Poland, July 4-8, 2004, pp. 319 - 324.
24. H.V. Baghdasaryan, **T.M. Knyazyan**, A.A. Mankulov, "Wavelength Scale Modelling of Absorbing and Amplifying Reflective Microresonators by the Method of Single Expression", 6th International Conference on Transparent Optical Networks –ICTON 2004, Conference Proceedings, Poland, July 4-8, 2004, pp. 363 - 366.
25. H.V. Baghdasaryan, **T.M. Knyazyan**, "Absolute Optical Transparency of a Repetitive Quarter-Wavelength Triple Layers", 7th International Conference on Transparent Optical Networks –ICTON 2005, Conference Proceedings, Barcelona, Spain, July 3-7, 2005, pp.286-290.
26. H.V. Baghdasaryan, **T.M. Knyazyan**, R.I. Simonyan, "Optical Characteristics of Distributed Bragg Reflectors by Taking into Account Material Loss in Layers", 7th International Conference on Transparent Optical Networks – ICTON 2005, Conference Proceedings, Barcelona, Spain, July 3-7, 2005, pp.347-350.
27. H. V. Baghdasaryan and **T. M. Knyazyan**, "Extension of the Method of Single Expression for Analysis of Materials with Complex Permittivity and Permeability", 8th Int. Conf. on Trasp. Opt. Networks ICTON 2006, Conference Proceedings, IEEE Catalog No. 06EX1326C, Nottingham, UK, Mo.B2.4, pp. 13-18, 2006.
28. H. V. Baghdasaryan, **T. M. Knyazyan**, A. A. Mankulov, G. G. Eyramjyan, "Numerical Analysis of Thin Transparent Film Influence on Reflecting and Absorbing Properties of Metallic Mirror", 8th Int. Conf. on Trasp. Opt. Networks ICTON 2006, Conference Proceedings, IEEE Catalog No. 06EX1326C, Nottingham, UK, We.P.1, pp. 213-216, 2006.
29. H. V. Baghdasaryan, **T. M. Knyazyan**, G.G. Eyramjyan, "Correct Electrodynamical Analysis of a Periodic Metal-Dielectric Microstructure by the Method of Single Expression", Proceedings Book of Mediterranean Microwave Symposium MMS 2007, Budapest, Hungary, 14-16 May, 2007, pp. 349-352.
30. G. G. Eyramjyan, H. V. Baghdasaryan and **T. M. Knyazyan**, "Modeling of Transparent in Visible Range Metal-Dielectric Multilayer Structure by the MSE", 9th Int. Conf. on Trasp. Opt. Networks ICTON 2007, Conference Proceedings, IEEE Catalog No. 07EX1796, Rome, Italy, July 1-5, We.P.25, pp. 305-308, 2007.
31. H.V. Baghdasaryan, **T.M. Knyazyan**, T.H. Baghdasaryan, G.G. Eyramjyan, "Extension and Application of the Method of Single Expression (MSE) for Analysis of Plane Electromagnetic Wave Oblique Incidence on a Dielectric Slab", 9th Int. Conf. on Trasp. Opt. Networks ICTON 2007, Conference Proceedings, IEEE Catalog No. 07EX1796, Rome, Italy, July 1-5, Th.A1.5, pp. 258-261, 2007.
32. H. V. Baghdasaryan, **T. M. Knyazyan**, T. H. Baghdasaryan and G. G. Eyramjyan, "Development of the Method of Single Expression (MSE) for Analysis of Plane Wave Oblique Incidence on Multilayer Structures Having Complex Permittivity and Permeability", 10th International Conference on Transparent Optical Networks – ICTON 2008, Conference Proc., Athens, Greece, June 22 – 26, 2008, pp. 250 – 254.
33. H. V. Baghdasaryan, **T. M. Knyazyan**, A. S. Berberyan, T. T. Hovhannisan and M. Marciak, "An Optical Model of a Transmission-Type Vertical-Cavity Electro-Absorption Modulator on Si/SiO<sub>2</sub> for High-Speed Intra/Inter-Chip Interconnects", 10th International Conference on Transparent Optical Networks – ICTON 2008, Conference Proc., Athens, Greece, June 22 – 26, 2008, pp. 174 – 177.
34. H. V. Baghdasaryan, **T. M. Knyazyan**, T. H. Baghdasaryan and G. G. Eyramjyan, "Electrodynamical Analysis of a Transmittive Metal-Dielectric Microstructure by the Method of Single Expression", Proceedings of European Microwave Association, vol. 4, March 2008, pp. 76-81.
35. H. V. Baghdasaryan, **T. M. Knyazyan**, T. H. Baghdasaryan and G. G. Eyramjyan, "Development of the Method of Single Expression (MSE) for Analysis of Plane Wave Oblique Incidence on Multilayer Structures Having Complex Permittivity and Permeability", Proceedings of the COST MP0702, Warsaw, Poland, 28-29 April, 2008, pp. 32-33.
36. H.V.Baghdasaryan, **T.M. Knyazyan**, Baghdasaryan T.H., "Numerical Model of a New Type of DFB SOA Based on Uniform DBR Structure Completely Transparent at Bragg Wavelength", in Proceedings of European Semiconductor Laser Workshop 2008, September 19 - 20, 2008, Eindhoven, The Netherlands, p. 13.
37. H. V. Baghdasaryan, **T. M. Knyazyan**, A. S. Berberyan, T. T. Hovhannisan, M. Marciak, "An electrodynamical model of a transmission-mode vertical-cavity modulator based on Si/SiO<sub>2</sub> microstructure for inter/intra-chip interconnects", International Topical Meeting on Information Photonics 2008, Hyogo, Japan, November 16-20, 2008, P3-38.

38. H.V. Baghdasaryan, **T.M. Knyazyan**, T.H. Baghdasaryan, "Novel powerful simulation tool for wavelength-scale analysis of an oblique plane wave interaction with multilayer metamaterial structures", 2nd International Congress on Advanced Electromagnetic Materials in Microwaves and Optics, September 21-26, 2008, Pamplona, Spain.
39. **T.M. Knyazyan**, H.V. Baghdasaryan, J. Jahns, H. Knuppertz, "Experimental and Numerical Analysis of Multiple Quantum Well Electroabsorption Modulator", Semiconductor Micro-and Nanoelectronics, Proceedings of 7th International Conference, Tsakhkadzor, Armenia, July 3-5, 2009, pp. 30-33.
40. H. V. Baghdasaryan, **T.M. Knyazyan**, A.S. Berberyan, T.T. Hovhannisan and M. Marciniak, "Numerical Analysis of Impact of DBRs' Outermost Layers on Optical Characteristics of a Surface-Normal Electro-Absorption Modulator by the Method of Single Expression", Proceedings of 11th International Conference on Transparent Optical Networks – ICTON 2008, Azores, Portugal, 28 June - 2 July, 2009, Tu.C1.4.
41. **T.M. Knyazyan**, H.V. Baghdasaryan, J. Jahns, H. Knuppertz, "Experimental and Numerical Study of Multiple Quantum Well Electroabsorption Modulator", Annual Report 2009, Fakultät für Mathematik und Informatik, FernUniversität in Hagen, p. 67.
42. H. V. Baghdasaryan, **T. M. Knyazyan**, T.T. Hovhannisan and M. Marciniak, "Wavelength-Scale Analysis of Optical Field Localisation at Plasmonic Resonance in Non-Linear Kretschmann Structure by the Method of Single Expression", Proceedings of 12th International Conference on Transparent Optical Networks – ICTON 2010, IEEE Catalog No. CFP10485-USB, Munich, Germany, 27 June - 1 July, 2010, Mo.C2.4, 7 pages.
43. H.V. Baghdasaryan, **T.M. Knyazyan**, T.H. Baghdasaryan, B. Witzigmann, and F. Roemer, "Absorption loss influence on optical characteristics of multilayer distributed Bragg reflector: wavelength-scale analysis by the method of single expression", Opto-Electron. Rev., 18, no. 4, 2010, pp. 93-99.
44. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisan, M. Marciniak, "Conditions of Surface Plasmon Excitation in Kretschmann Structure at Nonlinearity in Analyte: Correct Wavelength-scale Analysis by the Method of Single Expression", Proceedings of International Conference on Information Photonics 2011, Ottawa, Canada, May 18-20, 2011, 2 pages.
45. H.V. Baghdasaryan, T.M. Knyazyan, T.T. Hovhannisan, M. Marciniak, "Waveguiding Characteristics of SiO<sub>2</sub> Cover Layer upon Kretschmann Structure: Numerical Analysis by the Method of Single Expression", Proceedings of International Conference on Information Photonics 2011, Ottawa, Canada, May 18-20, 2011, 2 pages.
46. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisan, M. Marciniak, "Peculiarities of Surface Plasmon Excitation in Amplifying Kretschmann Structure: Correct Wavelength-Scale Analysis by the Method of Single Expression", 13th International Conference on Transparent Optical Networks (ICTON 2011), Conference Proceedings, June 26 – 30, 2011, Stockholm, Sweden, Mo.C2.5, 5 pages.
47. H.V. Baghdasaryan, **T.M. Knyazyan**, A. K. Aharonyan, M. Marciniak, "Numerical Modelling of Fabry-Perot Microresonator Based Electro-Optical Modulator for Microwave-Photonic Receiver", 13th International Conference on Transparent Optical Networks (ICTON 2011), Conference Proceedings, June 26 – 30, 2011, Stockholm, Sweden, We.C5.7, 4 pages.
48. A. Kildishev, H. Baghdasaryan X. Ni, L. Prokopeva, **T. Knyazyan**, "Non-Linear Modeling of Active or Passive Optical Lamellar Nanostructures", The 27<sup>th</sup> Annual Review of Progress in Applied Computational Electromagnetics, ACES 2011, March 27-31, 2011, Williamsburg, Virginia, USA.
49. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisan, M. Marciniak, "Analysis of surface plasmons excitation in Kretschmann structure at waveguiding, amplifying and nonlinear cover layer by the method of single expression", Proceedings of International Conference on Micro- and Nano-Photonic Materials and Devices, MINAP 2012, Jan. 16-18, 2012, Trento, Italy, pp. 77-80.
50. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisan, M. Marciniak, "Surface Plasmon Interaction with Amplifying MQWs in Multilayer Kretschmann Structure: Wavelength-Scale Analysis by the Method of Single Expression", 14th International Conference on Transparent Optical Networks (ICTON 2012), Conference Proceedings, July 2-5, 2012, Coventry, United Kingdom, Tu.A5.5, 6 pages.
51. H. V. Baghdasaryan, **T. M. Knyazyan**, A. K. Aharonyan and M. Marciniak, "Numerical Analysis of Operation of Metallic Electrodes in Fabry-Perot Electro-Optical Modulator of Microwave-Photonic Receiver", 14th International Conference on Transparent Optical Networks (ICTON 2012), Conference Proceedings, July 2-5, 2012, Coventry, United Kingdom, Tu.D4.4, 4 pages.
52. H. V. Baghdasaryan, **T.M. Knyazyan**, M. Marciniak, "High Q-factor Fabry-Perot Microresonator as an Alternative to Microdisk in Electro-Optical Modulator for Microwave-Photonic Receivers", Journal of Telecommunications and Information Technology, 2013, No: 2, pp. 24-29.
53. H. V. Baghdasaryan, **T.M. Knyazyan**, "Modelling of optical characteristics of nanocomposite C-Pd thin films by the method of single expression", Proc. of SPIE, Edited by Ryszard S. Romaniuk, Vol. 8903, pp. 890308-1-- 890308-8, 2013.
54. H. V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisan M. Marciniak, "Metal-dielectric Multi-nanolayer Structure Supporting Surface Plasmons: Numerical Analysis by the Method of Single Expression", Book of Abstracts, Conference Information Photonics 2013, 16-19 September 2013, Warsaw, Poland, pp. 53-56, 2013.

55. H.V. Baghdasaryan, **T.M. Knyazyan**, A.K. Aharonyan and M. Marciniak, "Computer Simulation of Fabry-Perot Microresonator Based Electro-optical Modulator of Microwave Photonic Receiver", Proceedings of SEUA. Series "Information technologies, Electronics, Radio engineering". 2013. Issue 16, No: 2. pp. 100-109.
56. H. Baghdasaryan, **T. Knyazyan**, T. Hovhannisyan, "Research perspectives in the field of ground penetrating radars in Armenia", EGU General Assembly 2014, Geophysical Research Abstracts, Vol. 16, EGU2014-8891, 2014 (1 page).
57. H.V. Baghdasaryan, **T. M. Knyazyan**, T.T. Hovhannisyan and M. Marciniak, "Metal-dielectric Layered Structure Supporting Surface Plasmons: Numerical Modelling by the Method of Single Expression", 16th International Conference on Transparent Optical Networks, ICTON 2014, Graz, Austria, July 6-10, 2014, Th.B4.2 M, 6 pages.
58. A.V. Daryan, H.V. Baghdasaryan, **T.M. Knyazyan**, "Possible regimes of plane electromagnetic wave self-action in ionizable medium: phase-plane analysis by the method of single expression", PROCEEDINGS of the International Conference on "Microwave and THz Technologies and Applications" October 2-3, 2014, Aghveran, Armenia "Gitutium" Publishing House of the NAS RA, Yerevan, 2014, pp. 106-110.
59. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan, A.A. Hakhoumian, M. Marciniak, "THz emission from optically pumped GaP layer within 1D microcavity: numerical modelling by the method of single expression", PROCEEDINGS of the International Conference on "Microwave and THz Technologies and Applications" October 2-3, 2014, Aghveran, Armenia "Gitutium" Publishing House of the NAS RA, Yerevan, 2014, pp.17-22.
60. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan and M. Marciniak, "Metal-dielectric Multilayer Structure Supporting Surface Plasmons: electromagnetic modelling by the Method of Single Expression", Optical and Quantum Electronics, Kluwer Academic Publishers, 2015, 47:3–15. DOI 10.1007/s11082-014-0003-3.
61. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan, A.A. Hakhoumian, M. Marciniak, "Optimal 1D microcavity for THz emission from optically pumped GaP layer: numerical analysis", in Book of Abstracts, SMMO2015 Conference & COST MP1204 Conference, April 8-11, 2015, Prague, Czech Republic, p. 28.
62. H.V. Baghdasaryan, T.M. Knyazyan, T.T. Hovhannisyan, M. Marciniak, "Surface plasmons excitation in Kretschmann structure with waveguiding, amplifying and nonlinear nanoscale cover layer", in Book of Abstracts, Nanoscale Quantum Optics, Kick-off Workshop, COST Action MP1403, 9-10 April 2015, Belgrade, Serbia, p. 41.
63. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan, A.A. Hakhoumian, M. Marciniak, "Microcavity with DBR Mirrors for Efficient THz Emission from Optically Pumped GaP Layer: Numerical Analysis by the Method of Single Expression", (Invited), Proceedings of ICTON 2015 Conference, 5-9 July 2015, Budapest, Hungary, We.C4.6.
64. Hovik V. Baghdasaryan, **Tamara M. Knyazyan**, Tamara T. Hovhannisyan, Gurgen R. Mardoyan, Marian Marciniak, „Wavelength-scale Analysis of Influence of Chirped DBRs on Optical Characteristics of Multinanolayer Photovoltaic Cells”, Proceedings of 18th International Conference on Transparent Optical Networks ICTON 2016, We.P.33, 5 pages.
65. Hovik Baghdasaryan, **Tamara Knyazyan**, Tamara Hovhannisyan, and Marian Marciniak, „Single-Frequency Radiation from DBR Fiber Laser: Numerical Analysis by the Method of Single Expression”, Proceedings of 18th International Conference on Transparent Optical Networks ICTON 2016, Tu.C1.5, 6 pages.
66. Hovik Baghdasaryan, **Tamara Knyazyan**, Tamara Hovhannisyan, Marian Marciniak, Erich Leitgeb, Stefano Taccheo, "Electromagnetic Analysis of Single Longitudinal-mode Operation of DBR Fiber Laser: Numerical Simulation by the Method of Single Expression", International Conference on Broadband Communications for Next Generation Networks and Multimedia Applications (CoBCom) September 14-16, 2016, Graz, Austria. ISBN: 978-1-5090-2270-0. 5 pages.
67. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan, M. Marciniak, "Conditions of single-frequency radiation from fiber laser with FBG mirrors: numerical analysis by the method of single expression", PROCEEDINGS of the International Conference on "Microwave and THz Technologies, Photonics and Wireless Communications" IRPhE' 2016 May 4-6, Yerevan, Armenia. Pages 3-6. "Gitutium" Publishing House of the NAS RA, Yerevan, 2016.
68. A.A. Hakhoumian, H.V. Baghdasaryan, **T.M. Knyazyan**, M.Marciniak, and T.T. Hovhannisyan, "Microresonator with DBR mirrors for efficient terahertz radiation from optically pumped GaP layer: numerical modelling by the method of single expression", Physical Bases of Instrumentation, vol.5, No.1(18), 2016, pp.70-77. (in Russian).
69. H. Baghdasaryan, **T. Knyazyan**, T. Hovhannisyan, M. Marciniak and L. Pajewski, "Enhancement of Air-ground Matching by Means of a Chirped Multilayer Structure: Electromagnetic Modeling with the Method of Single Expression", Journal of Telecommunications and Information Technology, No.3, 2017, pp.30-36.
70. H. Baghdasaryan, **T. Knyazyan**, T. Hovhannisyan, G. Mardoyan, M. Marciniak, and T. Benson, "Influence of Chirped DBR Reflector on the Absorption Efficiency of Multi-nanolayer Photovoltaic Structures: Wavelength-scale Analysis by the Method of Single Expression", Journal of Telecommunications and Information Technology, No.3, 2017, pp.99-106.
71. H. Baghdasaryan, **T. Knyazyan**, T. Hovhannisyan, and M. Marciniak, "Solution of Boundary Problems in Intensity-Dependent Nano-Optics and Quantum Mechanics by the Method of Single Expression", Proceedings of ICTON 2017 Conference, 2-6 July 2017, Girona, Spain, Tu.B4.3, 7 pages.
72. Hovik Baghdasaryan, **Tamara Knyazyan**, Tamara Hovhannisyan, Marian Marciniak, "General Expression of the Poynting Vector Appropriate for Evanescent Wave Region: Intrinsic Function in the Method of Single Expression",

73. H. Baghdasaryan, **T. Knyazyan**, T. Hovhannisyan, M. Marciniak, E. Leitgeb, S. Sugecki, S. Taccheo, and T. Benson, "Single - And Double-Mode Light Generation in DFB Fiber Laser: Wavelength-Scale Electromagnetic Modelling by the Method of Single Expression", *in Proceedings of ICTON 2018*, July 1-5, 2018, Bucharest, Romania, Tu.A6.4, 7 pages, IEEE, DOI: 10.1109/ICTON.2018.8473891.
74. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan, A.V. Daryan, M. Marciniak, "An Alternative Expression of The Poynting Vector Operating in a Confined Region of Evanescent Waves: Natural Function in The Method of Single Expression", (*Proceedings of the Int. Conference on " Microwave and THz Technologies and Wireless comm."*), Armenian Journal of Physics, vol. 11, issue 4, pp. 235-240, (2018).
75. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan, M. Marciniak, "Universal expression for the Poynting vector applicable for evanescent waves: inherent output from the method of single expression", *Proceedings of 12th International Congress on Artificial Materials for Novel Wave Phenomena — Metamaterials 2018*, Espoo, Finland. pp. 222–224, (2018). DOI: 10.1109/MetaMaterials.2018.8534072.
76. H. Baghdasaryan, T. Knyazyan, T. Hovhannisyan, M. Marciniak, E. Leitgeb, S. Sugecki, S. Taccheo, "Single-Mode Light Generation in DFB Fiber Laser: Wavelength-Scale Electromagnetic Modelling by the Method of Single Expression", *in Proceedings of CoBCom*, July 11 - 13, 2018, Graz, Austria, 6 pages, IEEE, DOI: 10.1109/COBCOM.2018.8443979.
77. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan, A.V. Daryan, M. Marciniak, "Monitoring of Electromagnetic Energy Flow in a Confined Region of Evanescent Waves by an Alternative Expression for the Poynting Vector", *Proceedings of 13th European Conference on Antennas and Propagation (EuCAP 2019)*, Krakow, Poland, pp. 2277–2281, (2019).
78. Hovik V. Baghdasaryan, **Tamara M. Knyazyan**, Tamara T. Hovhannisyan, and Marian Marciniak, "Double-Barrier Resonant Tunneling in Nano-Optics and Quantum Mechanics: Wavelength-Scale Analysis by the Method of Single Expression", *Proceedings of 21st International Conference on Transparent Optical Networks ICTON 2019*, Fr.A5.1, 6 pages, DOI: 10.1109/ICTON.2019.8840538.
79. H. V. Baghdasaryan, **T. M. Knyazyan**, T. T. Hovhannisyan, T. Baghdasaryan, A. V. Daryan, M. Marciniak, "Electromagnetic energy flow in confined regions of evanescent waves: wavelength-scale analysis by the method of single expression", Optical and Quantum Electronics, 51, p.286, 12 pages, 2019, <https://doi.org/10.1007/s11082-019-2005-7>.
80. H.V. Baghdasaryan, **T.M. Knyazyan**, T.T. Hovhannisyan, G.R. Mardoyan, St. Taccheo, M. Marciniak // Stop-band optical filters protecting from harmful infrared radiation: wavelength-scale electromagnetic modelling by the method of single expression / Optical and Quantum Electronics, 2022, 54, 10 pages, Scopus, 10.1007/s11082-022-03537-7, 0306-8919, 1572-817X.
81. Hovik Baghdasaryan, **Tamara Knyazyan**, Tamara Hovhannisyan, Gurgen Mardoyan, Tigran Baghdasaryan, Hristo Danchov Ivanov, Pasha Bekhrad, Marian Marciniak, Erich Leitgeb // Transmission Type Nano-Layered Electro-Optical Modulator for Chip-to-Chip Optical Interconnection: Electromagnetic Modelling by the Method of Single Expression / 2022 / IEEE, 2022 International Conference on Broadband Communications for Next Generation Networks and Multimedia Applications (CoBCom), DOI: 10.1109/COBCOM55489.2022.9880646, 5 pages.
82. H. V. Baghdasaryan; **T. M. Knyazyan**; T. T. Hovhannisyan; T. Baghdasaryan, "Peculiar emitting properties of electromagnetic waves from amplifying medium: numerical analysis", International Conference on Microwave & THz Technologies, Wireless Communications and OptoElectronics (IRPhE 2022), IET 2022, p. 1 – 3, DOI:10.1049/icp.2022.2781.
83. Hovik V. Baghdasaryan, **Tamara M. Knyazyan**, Tamara T. Hovhannisyan, Marian Marciniak, and Tigran Baghdasaryan, "The Poynting Vector in Light-Emitting Multilayer Micro/Nanostructures: Wavelength-Scale Analysis by the Method of Single Expression", *Proceedings of 23-rd International Conference on Transparent Optical Networks (ICTON)*, 2023, Th.A5.4, 4 pages.
84. Hovik V. Baghdasaryan, **Tamara M. Knyazyan**, Tamara T. Hovhannisyan, Gurgen R. Mardoyan, Tigran Baghdasaryan, Erich Leitgeb, and Marian Marciniak, "Reflective Type Multi-Nanolayer Electro-Optical Modulator for Free Space Chip-to-Chip Optical Interconnection: Electromagnetic Modelling by the Method of Single Expression", *Proceedings of 23-rd International Conference on Transparent Optical Networks (ICTON)*, 2023, We.D1.5, 4 pages.
85. H. V. Baghdasaryan, **T. M. Knyazyan**, T. T. Hovhannisyan, G. R. Mardoyan, T. Baghdasaryan, E. Leitgeb, M. Marciniak // Transmissive and reflective type multi-nanolayer electro-optical modulators for chip-to-chip free space optical interconnection: wavelength-scale electromagnetic modelling by the method of single expression / Optical and Quantum Electronics, 2024, 56, 11 pages, Scopus, 10.1007/s11082-024-07251-4, 0306-8919, 1572-817X.
86. Hovik V. Baghdasaryan; **Tamara M. Knyazyan**; Tamara T. Hovhannisyan; Gurgen R. Mardoyan; Tigran Baghdasaryan; Erich Leitgeb; Marian Marciniak // Reflection-mode electro-optical plasmonic modulator: electromagnetic modelling by the method of single expression / 2024 / *Proceedings of 2024 24th International Conference on Transparent Optical Networks (ICTON)*, 1-4.