

სამეცნიერო პუბლიკაციები

1. **Petriashvili G.Sh.** Chilaya G.S "Observation of a new blue phase", "Kristalographya", **1991**, т.36, в.5, с.1325-1327.
2. G.Chilaya and **G.Petriashvili**. "Two Blue Phases with Positive Temperature Dependence of Bragg Wavelength". *Molecular Materials*, **1993**, Vol. 2, pp. 195-199.
3. G.Chilaya and **G.Petriashvili**. "Electrooptical properties of blue phases with an induced helix". *Molecular Materials*, **1993**, Vol. 2, pp. 239-244.
4. G.Chilaya, A.Chanishvili, **G.Petriashvili** and D.Sikharulidze, "Anomalous Selective Reflection at Cholesteric-to-Smectic A Phase Transition". *Mol. Cryst. Liq. Cryst.* **1995**, vol. 261, pp. 233-239. **Impact Factor: 0.633**
5. A.Chanishvili, G.Chilaya, M.Neundorf, G.Pelzl, **G.Petriashvili**, "Investigation of a twisted phase between the cholesteric and the smectic A phase", *Crystal Research and Technology*, **1996**, v.31, No.5, pp. 679-683.
6. **Г.Ш.Петриашвили**, З.М.Элашвили, С.П.Тавзарашвили, К.Г.Тевдорашвили "Термохромные немато-хиральные смеси с улучшенными цветоконтрастными характеристиками", *Кристаллография*, **1996**, т. 41, № 3, с.548-551.
7. К.Г.Джапаридзе, З.М.Элашвили, Г.Ш.Челидзе, Ц.И.Зурабишвили, Э.Я.Вашакидзе, **Г.Ш.Петриашвили**, С.П.Тавзарашвили, К.Г.Тевдорашвили "Термоиндикаторные полимерные пленки на базе немато-хиральных смесей", *Кристаллография*, **1997**, т. 42, № 2, с.3430-342.
8. **Г.Ш.Петриашвили**, М.Н.Аронишидзе, А.А.Хатиашвили, А.Г.Чанишвили, Г.С.Чилая "Индуцированный хиральный смектический С-жидкий кристалл с коротким шагом спирали". *Кристаллография*, **1997**, т.42, № 3, с.499-501.
9. G.Chilaya, **G.Petriashvili**, A.Chanishvili, D.Sikharulidze . New pretransitional liquid crystal phase with anomalous selective refraction. *Mol.Materials*,**1997**, v.8, pp. 245-255.
10. A.Chanishvili ,D.Sikharulidze, G.Chilaya, **G.Petriashvili**, "Electrooptics of "amorphous" cholesteric structure with intermediate chirality". *Mol.Materials.*, v.8,**1997**, pp.295-299.
11. G.Chilaya, G.Hauck, H.-D.Koswig, **G.Petriashvili**, D.Sikharulidze. Field induced increase of pitch in planar cholesteric liquid crystals. *Cryst.Res.Tecnol.* 32,3, **1997**, pp.401-405.

12. **Петриашвили Г.Ш.**, Сихарулидзе Д.Г., Тавзарашивили С.П., Хатиашвили А.А., Чанишвили А.Г., Чилая Г.С. "Электрооптический эффект в оптически активной жидкокристаллической структуре". *Инженерные новости Грузии*, N4, **1999**, стр.91.
13. Аронишидзе М.Н., **Петриашвили Г.Ш.**, Сихарулидзе Д.Г., Тевдорашвили К.Г., Чанишвили А.Г., Чилая Г.С. "Жидкокристаллические преобразователи инфракрасного изображения". *Инженерные новости Грузии*, N4, **1999**, стр.135.
14. **G.Petriashvili**, D.Sikharulidze, A.Chanishvili and G.Chilaya. "Different Factors Affecting Formatiion of Blue Phases". *Crystallography Reports*, V.44, No.5, **1999**, pp.908-912.
15. D.Sikharulidze, A.Tchanishvili, **G.Petriashvili**, N.Scaramuzza, R.Barberi and R.Bartolino. "Polarity sensitive bistable color effect in cholesteric liquid crystals with an asymmetric polymer network", *Applied Physics Letters*, V.75, No.7, pp.1013-1014, **1999**. **Impact Factor: 3.521**
16. V.I.Zhekov, G.G.Asatiani, Z.G.Melikishvili, G.A.Tsintsadze, T.I.Sanadze, T.D.Medoidze, **G.S.Petriashvili** and A.G.Papashvili. "Absorption spectra and selective excitation of Y₃Al₅O₁₂:Tm³⁺ and YLiF₄ : Tm³⁺ laser systems". *Laser Physics*, **2000**, V.10, No.2, pp.532-539. **Impact Factor: 1.231**
17. Аронишидзе М.Н., **Петриашвили Г.Ш.**, Сихарулидзе Д.Г., Тавзарашивили С.П., Тевдорашвили К.Г., Хатиашвили А.А., Чанишвили А.Г., Чилая Г.С. "Электрооптические характеристики голубой фазы II". *Georgian Engineering News*, **2000**, N3, p. 45-46.
18. M.N.Aronishidze, **G.Sh.Petriashvili**, D.G.Sikharulidze, S.P.Tavzarashvili, K.G.Tevdorashvili, A.A.Khatiashvili, A.G.Chanishvili, G.Chilaya, "Electrooptical effects in blue phases of cholesteric liquid crystals", *Proc. SPIE*, **2001**, V.4511, pp.108-112.
19. Japaridze K.G., Zurabishvili Ts.I., **Petriashvili G.Sh.**, Chelidze G.Sh., Chilaya G.S., Elashvili Z.M., "Polymer liquid-crystalline films with effective colour-temprature features", *Georgian Engineering News*, **2002**, N3, pp. 106-107.
20. K.Japaridze, Z.Elashvili, G.Chilaya, G.Chelidze, Ts.Zurabishvili, **G.Petriashvili**, M.Gogadze, "New thermoindicator nemato-chiral polymer films", *Georg.Ac.Matsne*, **2002**, v.28, N3-4, pp.262-263.
21. Aronishidze M.N. Chanishvili A.G., Chilaya G.S., Khatiashvili A.A., **Petriashvili G.Sh.**, Tavzarashvili S.P., Tevdorashvili K.G., "Cholesteric liquid crystal mixtures sensitive to solar irradiation", *Georgian Engineering News*, **2003**, N3, pp. 7-11.

22. Andro Chanishvili, Guram Chilaya, **Gia Petriashvili**, Riccardo Barberi, Roberto Bartolino, Gabriella Cipparrone, Alfredo Mazzulla, Luis Oriol , Phototunable lasing in dye-doped cholesteric liquid crystals, *Appl.Phys.Lett.*, **2003**,V83, N 26, pp.5353-55. **Impact Factor: 3.352**
23. Andro Chanishvili, Guram Chilaya, **Gia Petriashvili** Riccardo Barberi, Roberto Bartolino, Gabriella Cipparrone, Alfredo Mazzulla, Luis Oriol, “Lasing in dye-doped cholesteric liquid crystals: two new strategies of tuning”, *Adv. Mat.* **2004**, v.16, p. 791. **Impact Factor: 25.809**
24. A.Chanishvili, G.Chilaya, **G.Petriashvili** and D.Sikharulidze, “Light induced effects in cholesteric mixtures with a photosensitive nematic host”, *Mol.Cryst.Liq.Cryst.*, V.409, **2004**, pp.209-218. **Impact Factor: 0.633**
25. Andro Chanishvili, Guram Chilaya, **Gia Petriashvili**, Riccardo Barberi, Roberto Bartolino, Maria P. De Santo, “Luminescent dichroic-dye-doped cholesteric liquid-crystal displays”, *Jornal of the SID*, **2004**, V.12, N3, pp. 341-345.
26. A.Chanishvili, G.Chilaya, **G.Petriashvili**, R.Barberi, R.Bartolino, G.Cipparrone, A.Mazzulla, Laser emission from a dye-doped cholesteric liquid crystal pumped by another cholesteric liquid crystal laser. *Apl. Phys. Lett.*, **2004**, V. 85, N.16, pp. 3378-3380. **Impact Factor: 3.352**
27. M.Aronishidze, A.Chanishvili, G.Chilaya, **G.Petriashvili**, S.Tavzarashvili, L.Lisetski, I.Gvozdovskyy, I.Terenetskaya, “Color change effect based on provitamin D phototransformation in cholesteric liquid crystalline mixtures”, *Mol.Cryst.Liq.Cryst.*, **2004**, V.420, pp.47-53. **Impact Factor: 0.633**
28. K.Japaridze, Z.Elashvili, G.Chilaya, G.Chelidze, C.Zurabishvili, **G.Petriashvili**, “Nemato-chiral three-component thermoindicator polymer films” *Geogia Chemical Journal*, V.4(4), p.363-365, **2004**.
29. A.Chanishvili, G.Chilaya, **G.Petriashvili**, “Wide range tunable distributed feedback cholesteric liquid crystal laser”, *Proceedings of the Institute of Cybernetics*, **2004**, vol.3, 1-2, pp.202-208.
30. M.Aronishidze, A.Chanishvili, G.Chilaya, **G.Petriashvili**, S.Tavzarashvili, L.Lisetski, I.Gvozdovskyy, I.Terenetskaya, “Color change effect based on provitamin D phototransformation in cholesteric liquid crystalline mixtures”, *Proceedings of the Institute of Cybernetics*, **2004**, vol.3, 1-2, pp.209-216.
31. A.Chanishvili, G.Chilaya, T.Medoidze, Z.Melikishvili, **G.Petriashvili**, G.Tsintsadze “Optical information recording on a luminescent dye doped cholesteric liquid crystal structure”, *Proceedings of the Institute of Cybernetics*, **2004**, vol.3, 1-2, pp.259-263.

32. A.Chanishvili, G.Chilaya, **G.Petriashvili**, R.Barberi, R.Bartolino, G.Cipparrone, A.Mazzulla,R.Gimenes, L.Oriol, M.Pinol, "Widely fine-tuneable UV-Vis liquid crystal laser", *Apl. Phys. Lett.*, V86, p.051107, **2005**. **Impact Factor: 3.521**
33. A.Chanishvili, G.Chilaya, **G.Petriashvili**, P.J.Collings, "Trans-Cis Isomerization and the Blue Phases", *Phys. Rev.E*, V.71, p.051705, **2005**. **Impact Factor: 2.353**
34. Aronishidze M.N. Chanishvili A.G., Chilaya G.S., **Petriashvili G.Sh.**, Tavzarashvili S.P. and Tevdorashvili K.G., "Luminescent dye doped cholesteric liquid crystals for optical information recording", *Georgian Engineering News*, **2005**, N1, pp. 68-70.
35. G. Chilaya **G. Petriashvili**, A. Chanishvili, I. Terenetskaya, N. Kireeva , L. Lisetski, "Provitamin D₂ and Provitamin D₃ Photo Transformations in Cholesteric Liquid Crystal Mixtures Induced by UV Radiation", *Mol.Cryst.Liq.Cryst.*, V.433, pp.73-85, **2005**. **Impact Factor: 0.633**
36. A.Chanishvili, G. Chilaya, **G.Petriashvili**, R.Barberi, R.Bartolino,M.P.De Santo, "Cholesteric liquid crystal mixtures sensitive to different ranges of solar UV irradiation", *Mol.Cryst.Liq.Cryst.* V.434, pp.353-366, **2005**. **Impact Factor: 0.633**
37. Andro Chanishvili, Guram Chilaya, **Gia Petriashvili**, Riccardo Barberi, Maria P. De Santo, Mario A. Matranga, and Federica Ciuchi, "Lasing in an intermediate twisted phase between cholesteric and smectic A phase", *Appl. Phys. Lett.*, V.88, p.101105. **2006**. **Impact Factor: 3.352**
38. Аронишидзе М.Н., **Петриашвили Г.Ш.**, Тавзарашвили С.П., Тевдорашвили К.Г., Чанишвили А.Г., Чилая Г.С., Чихладзе Т.М., "Обратимое изменение шага спирали холестерического жидкого кристалла под воздействием света", *Georgian Engineering News*, N3, pp. 59-61, **2006**.
39. Guram Chilaya, Andro Chanishvili, **Gia Petriashvili**, Riccardo Barberi, Maria P. De santo, Mario A. Matranga, Enhancing cholesteric liquid crystal laser stability by cell rotation, *OPTICS EXPRESS*, Vol. 14, No. 21, pp 9939-9943, **2006**. **Impact Factor: 3.561**
40. G. Chilaya, A. Chanishvili, **G. Petriashvili**, R. Barberi,R. Bartolino, M. P. De Santo,M. A. Matranga, P. Collings, Light Control of Cholesteric Liquid Crystals Using Azoxy-Based Host Materials, *Mol. Cryst. Liq. Cryst.*, Vol. 453, pp. 123–140, **2006**. **Impact Factor: 0.633**
41. G. Chilaya, A. Chanishvili, **G. Petriashvili**, M.Aronishidze, Reversible control of helix pitch in 1D photonic liquid crystals employing light emitting diodes (Proc.of Inst.of Cybernetics, pp 34-38. **2006**

42. DINA ARONZON, ERIC P. LEVY, PETER J. COLLINGS , ANDRO CHANISHVILI, GURAM CHILAYA and **GIA PETRIASHVILI** “Trans–cis isomerization of an azoxybenzene liquid crystal,” Liquid Crystals, Vol. 34, No. 6, June **2007**, 707–718 **Impact Factor: 3.078**
43. G. Chilaya, A. Chanishvili, **G. Petriashvili**, R. Barberi, R. Bartolino, G. Cipparrone, A. Mazzulla and P. V. Shibaev, Reversible tuning of lasing in cholesteric liquid crystals controlled by light emitting diodes, Advanced Materials, Volume 19, Issue 4, pp.565-568, **2007**.
Impact Factor: 25.809
44. G. Chilaya, A. Chanishvili, **G. Petriashvili**, R. Barberi, G. Cipparrone, A. Mazzulla, M. P. Dc Santo, H. Sellame, M. A. Matranga Single Mode Lasing in Multilayer Sandwiched Systems Consisting of Cholesteric Liquid Crystals and Dye Solution Proc. of SPIE Vol. 6637 66370M-2, **2007**
45. SvetlanaV.Serak ,NelsonV.Tabiryan ,GuramChilaya , Andro Chanishvili, and **Gia Petriashvili** Chiral Azobenzene Nematics Phototunable with a Green Laser Beam Mol.Cryst.Liq.Cryst., Vol.488,pp.42–55, **2008**, **Impact Factor: 0.633**
46. G. Chilaya, A. Chanishvili, **G. Petriashvili**, R. Barberi, G. Cipparrone, A. Mazzulla, M. P. Dc Santo, H. Sellame, M. A. Matranga Lasing in three layer system consisting of cholesteric liquid crystal and dye doped solution Molecular crystals and Liquid Crystals., 495, 97, **2008**,
Impact Factor: 0.633
47. Japaridze K.G., Chilaya G.S., Elashvili Z.M., Zurabishvili Ts.I., **Petriashvili G.Sh.** and Chelidze G.Sh. THERMOSENSITIVE LIQUID-CRYSTAL POLYMER FILMS GEORGIAN ENGINEERING NEWS, N3, **2008**
48. **G. Petriashvili**, A. Chanishvili G. Chilaya M. A. Matranga M. P. Dc Santo, R. Barberi Novel UV sensor based on a liquid crystalline mixture containing a photoluminescent dye. Mol.Cryst.Liq.Cryst.,Vol.500, pp.82–90, **2009**, **Impact Factor: 0.633**
49. **G. Petriashvili**, M.A.Matranga, M.P. De Santo,G.Chilaya, R.Barberi “Wide band gap materials as a new tuning strategy for dye doped cholesteric liquid crystals laser”, OPTICS EXPRESS vol.17, No.6/16 March, **2009**, **Impact Factor: 3.561**
50. **Gia Petriashvili**, Guram Chilaya, Mario Ariosto Matranga, Maria Penelope De Santo, Gaetano Cozza , Riccardo Barberi , Jesus del Barrio , Luiz Silvino Chinelatto Jr., Luis Oriol Milagros Picol “Chiral luminescent compounds as a perspective for cholesteric liquid crystal lasers” Optical Materials 31, 1693–1696, **2009**, **Impact Factor: 2.023**
51. Japaridze K.G., Zurabishvili Ts.I. and **Petriashvili G.Sh.** “New Photosensitive Liquid- Crystal Polymer Film” Georgian Engineering News, N3, **2009**
52. M. P. DE SANTO, M. A. MATRANGA, F. CIUCHI, **G.PETRIASHVILI**, AND R. BARBERI Lasing Stability Enhancement in Dye Doped Cholesteric Liquid Crystals Mol. Cryst. Liq. Cryst., Vol. 516: pp. 197–203, **2010**, **Impact Factor: 0.633**

53. M. A. MATRANGA, M. P. DE SANTO, **G. PETRIASHVILI**, A. CHANISHVILI, G. CHILAYA, and R. BARBERI, Frequency Tunable Lasing in a Three Layer Cholesteric Liquid Crystal Cell, *Ferroelectrics*, 395:1–11, **2010**, **Impact Factor: 0.697**
54. Aronishidze M.N., Chanishvili A.G., Chilaya G.S., **Petriashvili G.Sh.**, Pondjavidze N.T., Tavzarashvili S.P., Tevdorashvili K.G. and Wardosanidze Z.V., INFORMATION RECORDING BASED ON SELECTIVE REFLECTION WAVELENGTH MODULATION IN PHOTORESISTIVE CHOLESTERIC LIQUID CRYSTALS., *GEORGIAN ENGINEERING NEWS*, N2, **2010**, V.Chavchanidze Institute of Cybernetics
55. Aronishidze M.N., Chanishvili A.G., Chilaya G.S., **Petriashvili G.Sh.**, Pondjavidze N.T., Tavzarashvili S.P., and Tevdorashvili K.G. TEMPERATURE-TUNABLE LASING IN THREE-LAYER SYSTEMS CONSISTING OF CHOLESTERIC LIQUID CRYSTALS AND A DYE SOLUTION., *GEORGIAN ENGINEERING NEWS*, N2, **2010**, V.Chavchanidze Institute of Cybernetics.
56. Japaridze K.G., Devadze L.V., Maisuradze J.P., Mzhavanadze I.A., Zurabishvili Ts.I., Sepashvili N.O. and **Petriashvili G.Sh.**, Photochromic Liquid-Crystal Systems for Nanotechnology., *GEORGIAN ENGINEERING NEWS*, N4, **2010**
57. Japaridze K.G., Devadze L.V., Maisuradze J.P., Mzhavanadze I.A., Zurabishvili Ts.I., **Petriashvili G.Sh.**, Sepashvili N.O., Mzhavanadze I.A., Akhobadze Sh.A and Gugava M.T., Photochromic Liquid-Crystal Sensory Materials., *GEORGIAN ENGINEERING NEWS*, N1, V.Chavchanidze Institute of Cybernetics, **2011**
58. Guram Chilaya, Andro Chanishvili, **Gia Petriashvili**, Riccardo Barberi, Maria Penelope De Santo, Mario Ariosto Matranga, Different Approaches of Employing Cholesteric Liquid Crystals in Dye Lasers, *Materials Sciences and Applications*, 2, 116-129, **2011**, **Impact Factor: 0.29**
59. R. Hamdi, **G. Petriashvili**, G. Lombardo, M. P. De Santo, and R. Barberi- Liquid crystal bubbles forming a tunable micro-lenses array- *JOURNAL OF APPLIED PHYSICS* 110, 074902, **2011**, **Impact Factor: 2.328**
60. R. HAMDI, **G. PETRIASHVILI**, M. P. DE SANTO, G. LOMBARDO, AND R. BARBERI- Electrically Controlled 1D and 2D CLC Grating- *Mol. Cryst. Liq. Cryst.*, Vol. 553: pp. 1–6, **2012**, **Impact Factor: 0.633**
61. Alfredo Mazzulla, **Gia Petriashvili**, Mario Ariosto Matranga, Maria Penelope De Santo and Riccardo Barberi –Thermal and electrical laser tuning in liquid crystal blue phase I- *Soft Matter*, 8, 4882–4885, **2012**, **Impact Factor: 3.399**
62. **Petriashvili G.Sh.**, Japaridze K.G., Devadze L.V., Zurabishvili Ts.I., Sepashvili N.O. and Ponjavidze N.T.--"Flexible cholesteric interferential mirror"- *Georgian Engineering News*, 1, 122-125, **2013**,
63. B. Partsvania, **G. Petriashvili**, and N. Fonjavidze-Possibility of using near infrared irradiation for early cancer diagnosis - *Electromagnetic Biology and Medicine*, 1-3, 1536-8378 (print), 1536-8386 (electronic), **2013**

64. **Gia Petriashvili**, Kokhta Japaridze, Lali Devadze, Cisana Zurabishvili, Nino Sepashvili, Nino Ponjavidze, Maria P. De Santo, Mario A. Matranga, Ridha Hamdi, Federica Ciuchi, and Riccardo Barberi – "Paper like cholesteric interferential mirror" - OPTICS EXPRESS, Vol. 21, No. 18, 9 September, 2013, **Impact Factor: 3.561**
65. A. Khuskivadze, D.Kochiashvili, G. Koberidze, B. Partsvania, **G. Petriashvili**, A. Chanishvili, N. Fonjavidze Near infrared radiation in diagnosis of prostate cancer- preliminary results Urology, Volume 82, Issue 3, Supplement, pp.870-871, September, 2013, **Impact Factor: 2.365**
66. Kokhta Japaridze, Lali Devadze, Jimsher Maisuradze, **Gia Petriashvili**, Tsisana Zurabishvili, Izolda Mzhavanadze, Nino Sepashvili -A Novel Method of Increasing the Photosensitivity of Spiropyran-Containing Systems, Bull. Georg. Natl. Acad. Sci., vol. 7, no. 3, 2013
67. Zurab V. Wardosanidze, Andro Chanishvili, **Gia Petriashvili**, and Guram Chilaya- Cholesteric Liquid Crystal holographic Laser- Optics Letters, February 15, Vol.39, No.4, 2014, **Impact Factor: 3.866**
68. **Gia Petriashvili**, Maria P. De Santo, Ketevan Chubinidze, Ridha Hamdi, and Riccardo Barberi - Visual micro-thermometers for nanoparticles photo-thermal conversion- Optics Express, Vol. 22 Issue 12, pp.14705-14711, 2014, **Impact Factor: 3.561**
69. **Gia Petriashvili**, Maria P. De Santo, Ketevan Chubinidze, Ridha Hamdi, and Riccardo Barberi - Visual micro-thermometers for nanoparticles photo-thermal conversion- virtual journal for biomedical optics, Vol.9, Iss. 8-Aug.7, 2014, **Impact Factor: 3.910**
70. Khuskivadze A, Kochiashvili D, Chovelidze S, Koberidze G, Papava V, Partskhvania B, **Petriashvili G**, Sulaberidze T. - Visualization of Human Prostate Cancer Using Infrared Radiation- Urology 84 (4 Supplement 1), p S 304, October 2014, **Impact Factor: 2.365**
71. Maria Penelope De Santo, **Gia Petriashvili**, Ramla Gary, Giuseppe Pucci, Riccardo Barberi Anti-counterfeiting and identification solutions using soft matter- Rend. Acc. Lincei, Print ISSN 2037-0776, online ISSN 1720-0776, Accademia Nazionale dei Lincei Published online: Springer, 26 May 2015, **Impact Factor: 0.986**
72. Lotfi Saadaoui, **Gia Petriashvili**, M. P. De Santo, Ridha Hamdi, Tahar Othman, and Riccardo Barberi- "Electrically controllable multicolor cholesteric laser" - OPTICS EXPRESS, Vol. 23, Issue 17, pp. 22922-22927, 2015, **Impact Factor: 3.561**
73. **Gia Petriashvili**, Ridha Hamdi, Maria Penelope De Santo, Ramla Gary, and Riccardo Barberi- Light-controllable linear dichroism in nematics - **Applied Optics**, Vol. 54, No. 28, pp. 8293-8297, 2015, **Impact Factor: 1.973**
74. Ramla Gary, Daniela Amelio, Filippo Garofalo, **Gia Petriashvili**, Maria Penelope De Santo, Yuen Kwong Ip, and Riccardo Barberi - Endothelial-like nitric oxide synthase immunolocalization by using gold nanoparticles and dyes- BIOMEDICAL OPTICS EXPRESS -Vol. 6, No. 12 4738, 2015, **Impact Factor: 3.910**

75. Ramla Gary, Giovani Carbone, **Gia Petriashvili**, Maria Penelope De Santo and Riccardo Barberi – “Detection of Gold Nanoparticles Aggregation Growth Induced by Nucleic Acid through Laser Scanning Confocal Microscopy,”*Sensors*, 16, 258; **2016, Impact Factor: 3.031**
76. **Gia Petriashvili**, Maria Penelope De Santo , Lali Devadze , Tsisana Zurabishvili , Nino Sepashvili , Ramla Gary , Riccardo Barberi, - “Rewritable Optical Storage with a Spiropyran Doped Liquid Crystal Polymer Film,”*Macromol. Rapid Commun.*, 37, 500–505, **2016, Impact Factor: 4.078**
77. **Gia Petriashvili**, Lali Devadze, Tsisana Zurabishvili, Nino Sepashvili, and Ketevan Chubinidze, - “Light controlled drug delivery containers based on spiropyran doped liquid crystal micro spheres,” *BIOMEDICAL OPTICS EXPRESS* 442, Vol. 7, No. 2, **2016, Impact Factor: 3.910**
78. **Gia Petriashvili**, Maria Penelope De Santo, Raul Josue Hernandez, Riccardo Barberi and Gabriella Cipparrone- “Mixed emulsion of liquid crystals microresonators: towards white laser systems,” *Soft Matter*, 13, 6227, **2017, Impact Factor: 3.399**
79. **Gia Petriashvili**, Maria Penelope De Santo, Riccardo Barberi, "A laser spectroscopy based method for the detection of acidic compounds in solution," *Sensors and Actuators B: Chemical*, Volume 244, Pages 1098–1102, June **2017, Impact Factor: 6.393**
80. Ketevan Chubinidze, Besarion Partsvania, Lali Devadze, Tsisana Zurabishvili, Nino Sepashvili, **Gia Petriashvili**, Mariam Chubinidze, - “Gold Nanoparticle Conjugated Organic Dye Nanocomposite Based Photostimulated Luminescent Enhancement and Its Application in Nanomedicine,” *American Journal of Nano Research and Applications*, 5(3-1): 42-47, **2017**
81. **Gia Petriashvili**, Maria Penelope De Santo, Raul Josue Hernandez , Riccardo Barberi and Gabriella Cipparrone- “Mixed emulsion of liquid crystals microresonators: towards white laser systems,” *Soft Matter*, 13, 6227-6233, **2017, Impact Factor: 3.399**
82. A. Chanishvili, N. Ponjavidze, **G. Petriashvili**, G. Chilaya, A. Jullien, U. Bortolozzo, and S. Residori, “Photo-induced holographic recording in an optically active cholesteric liquid crystal layer” *Opt. Data Process. Storage*, 4:1–7, **2018**
83. **Gia Petriashvili**, Mauro Daniel Luigi Bruno, Maria Penelope De Santo and Riccardo Barberi – “Temperature-tunable lasing from dye-doped chiral microdroplets encapsulated in a thin polymeric film,” *Beilstein J. Nanotechnol.* 9, 379–383. doi:10.3762/bjnano.9.37, **2018**
84. **Gia Petriashvili**, Lali Devadze, Andro Chanishvili, Cisana Zurabishvili, Nino Sepashvili, Nino Ponjavidze, Maria Penelope De Santo and Riccardo Barberi, “Spiropyran doped rewritable cholesteric liquid crystal polymer film for the generation of quick response codes,” *OPTICAL MATERIALS EXPRESS* Vol. 8, No. 12, pp. 3708-3715, **2018, Impact Factor: 2.673**
85. Weichao Zheng, Carla Sofia Perez-Martinez, **Gia Petriashvili**, Susan Perkin and Bruno Zappone, “Direct measurements of structural forces and twist transitions in cholesteric liquid crystal films with a surface force apparatus,” *Soft Matter*, 15(24), **2019, Impact Factor: 3.399**

86. **Gia Petriashvili** and Andro Chanishvili, “Liquid crystal blue phases interconversions based real-time thermal imaging device,” Liquid crystal blue phases interconversions based real-time thermal imaging device,” Optics Express, Vol. 27, No. 9, pp. 13526-31, **2019, Impact Factor: 3.561**
87. A. Chanishvili, G. Petriashvili, N. Ponjavidze & Ts. Zurabishvili, “Reversible LED controlled optical activity of a cholesteric liquid crystal layer,” MOLECULAR CRYSTALS AND LIQUID CRYSTALS, VOL. 683, NO. 1, 14-19, **2019, Impact Factor: 0.559**
88. **Gia Petriashvili**, Mauro D. L. Bruno, Maria P. De Santo, Erica Fuoco & Riccardo Barberi, “Acid mediated tunability of stimulated laser emission from dye doped chiral microdroplets,” MOLECULAR CRYSTALS AND LIQUID CRYSTALS, VOL. 684, NO. 1, 82–88, **2019, Impact Factor: 0.559**
89. **Gia Petriashvili**, Andro Chanishvili, Tsisana Zurabishvili, Ketevan Chubinidze, Nino Ponjavidze, Maria Penelope De Santo, Mauro Daniel Luigi Bruno, and Riccardo Barberi, “Temperature tunable omnidirectional lasing in liquid crystal blue phase microspheres,” OSA Continuum, Vol. 2, No. 11, pp. 3337-3342, **2019**
90. Ketevan Chubinidze, Besarion Partsvania, Alexandre Khuskivadze, Paata Burnadze, **Gia Petriashvili**, Diana Dzidziguri, Omari Mukbaniani, “MODELING OF CALMODULIN-MEDIATED PROCESSES IN TISSUES USING CALMODULIN-FUNCTIONALIZED GOLDNANOPARTICLES AND FLUORESCENT DYES,” Materials and technology 54 (2), pp.211–214, **2020. Impact Factor: 0.714.**
91. **Gia Petriashvili**, Ridha Hamdi, Andro Chanishvili, Tsisana Zurabishvili, Ketevan Chubinidze, and Nino Ponjavidze, “Electrically Controlled Lasing in Supercooled Liquid Crystal Blue Phase I Microdroplets,” ACS Appl. Electron. Mater. 2, 6, 1724–1728, **2020**.
92. Archil Chirakadze, Nodar Mitagvaria, David Jishiashvili, Marina Devdariani, **Gia Petriashvili**, Lena Davlianidze, Nugzar Dvali θ , Ketevan Chubinidze, Alexander Jishiashvili, Zakaria Buachidze θ , Irina Khomeriki “Development and Testing of Nanoparticles for Treatment of Cancer Cells by Curie Temperature Controlled Magnetic Hyperthermia,” Bull. Georg. Natl. Acad. Sci, V.15 (1), **2021**.
93. Ketevan Chubinidze, Mariam Kurasbediani, Nanuli Doreulee, Besarion Partsvania, **Gia Petriashvili**, “Quercetin-Modified Fe₃O₄ Nanoparticle-Based Medical Imaging Modality for the Monitoring of Therapeutic-Drug Delivery”, Materials and Technology, V 55, Issue 4, pp.477-481, **2021. Impact Factor: 0.714.**