

List of Publications

1. V.P. Kluev, D.I. Mash, V.V. Morozov, D.N. Nikogosyan, A.N. Oraevsky: Detection of infrared radiation by frequency conversion to the visible range. *Kratkie Soobshchenia po Fizike FIAN*, **No.5**, 38–42 (1970), [In Russian]
2. E.N. Antonov, M.A. Bolshov, V.G. Koloshnikov, D.N. Nikogosyan: Nonlinear conversion of IR radiation to the visible range as a new approach of the absorption spectrophotometry. *Pisma Zh. Eksp. Teor. Fiz.*, **14(1)**, 23–27 (1971) [English transl.: *JETP Lett.*, **14(1)**, 15–17 (1971)]
3. E.N. Antonov, V.G. Koloshnikov, V.R. Mironenko, D.N. Nikogosyan: Influence of solvent on the generation parameters of the continuous wave dye-laser. *Kvant. Elektron.*, **1(1)**, 204–206 (1974) [English transl.: *Sov. J. Quant. Electron.*, **4(1)**, 126–127 (1974)]
4. Y.A. Gorokhov, D.P. Krindach, D.N. Nikogosyan, A.P. Sukhorukov: Influence of thermal self-actions on second harmonic generation of continuous-wave radiation. *Kvant. Elektron.*, **1(3)**, 679–683 (1974) [English transl.: *Sov. J. Quant. Electron.*, **4(3)**, 382–384 (1974)]
5. E.N. Antonov, V.G. Koloshnikov, D.N. Nikogosyan: Nonlinear frequency converter as infrared spectrometer and detector. *Opt. Spektrosk.*, **36(4)**, 768–772 (1974) [English transl.: *Opt. Spectrosc. USSR*, **36(4)**, 446–448 (1974)]
6. A.V. Bobrov, D.N. Nikogosyan: Detection of Raman scattering in the IR range by frequency conversion to the visible. *Kvant. Elektron.*, **1(5)**, 1242–1245 (1974) [English transl.: *Sov. J. Quant. Electron.*, **4(5)**, 685–686 (1974)]
7. E.N. Antonov, V.R. Mironenko, D.N. Nikogosyan, M.I. Golovey: Conversion of CO₂ laser radiation to the visible range in a proustite crystal. *Kvant. Elektron.*, **1(8)**, 1742–1746 (1974) [English transl.: *Sov. J. Quant. Electron.*, **4(8)**, 963–965 (1974)]
1975
8. D.N. Nikogosyan, A.P. Sukhorukov, M.I. Golovey: Saturation of second harmonic generation of TEA CO₂ laser radiation in a proustite crystal. *Kvant. Elektron.*, **2(3)**, 609–612 (1975) [English transl.: *Sov. J. Quant. Electron.*, **5(3)**, 344–346 (1975)]
9. P.G. Kryukov, Y.A. Matveets, D.N. Nikogosyan: The method of infrared detection with picosecond time resolution based on perpendicular up-conversion. *Kvant. Elektron.*, **2(10)**, 2269–2275 (1975) [English transl.: *Sov. J. Quant. Electron.*, **5(10)**, 1236–1239 (1975)]
10. D.N. Nikogosyan: The up-conversion efficiency of CO₂ laser radiation in a proustite crystal pumped by ultrashort light pulses. *Kvant. Elektron.*, **2(11)**, 2524–2525 (1975) [English transl.: *Sov. J. Quant. Electron.*, **5(11)**, 1378–1379 (1975)]
11. Y.V. Voroshilov, D.N. Nikogosyan: The method of orientation of uniaxial nonlinear single crystals. *Kvant. Elektron.*, **3(3)**, 608–610 (1976) [English transl.: *Sov. J. Quant. Electron.*, **6(3)**, 326–327 (1976)]
12. V.V. Lobko, Y.A. Matveets, D.N. Nikogosyan: Investigation of temporal structure of high-pressure CO₂ laser pulse by means of up-conversion. *Kvant. Elektron.*, **3(6)**, 1253–1257 (1976) [English transl.: *Sov. J. Quant. Electron.*, **6(6)**, 680–682 (1976)]
13. D.N. Nikogosyan: Crystals for nonlinear optics. Uniaxial crystals. *Kvant. Elektron.*, **4(1)**, 5–26 (1977) [English transl.: *Sov. J. Quant. Electron.*, **7(1)**, 1–13 (1977)]
14. P.G. Kryukov, Y.A. Matveets, D.N. Nikogosyan, A.V. Sharkov, E.M. Gordeev, S.D. Fanchenko: Generation of frequency tunable single ultrashort light pulses in a LiIO₃ crystal. *Kvant. Elektron.*, **4(1)**, 211–213 (1977) [English transl.: *Sov. J. Quant. Electron.*, **7(1)**, 127–128 (1977)]

15. Y.A. Matveets, D.N. Nikogosyan, V. Kabelka, A. Piskarskas: Efficient second harmonic generation in a KDP crystal pumped with Nd:YAG laser pulses of 0.5 Hz repetition frequency. *Kvant. Elektron.*, **5(3)**, 664–666 (1978) [English transl.: *Sov. J. Quant. Electron.*, **8(3)**, 386–388 (1978)]
16. P.G. Kryukov, V.S. Letokhov, Y.A. Matveets, D.N. Nikogosyan, A.V. Sharkov: Picosecond research of some biomolecules (Bacteriorhodopsin, Bacteriochlorophyll and bases of DNA). In: *Picosecond Phenomena*, Springer Series in Chemical Physics, vol.4, ed. by C.V. Shank, E.P. Ippen and S.L. Shapiro (Springer-Verlag: Berlin, Heidelberg, New York 1978), pp.158–166
17. P.G. Kryukov, Y.A. Matveets, D.N. Nikogosyan, A.V. Sharkov: Tunable double-channel ultrashort-pulse optical oscillator. *Kvant. Elektron.*, **5(11)**, 2348–2353 (1978) [English transl.: *Sov. J. Quant. Electron.*, **8(11)**, 1319–1322 (1978)]
18. P.G. Kryukov, V.S. Letokhov, Y.A. Matveets, D.N. Nikogosyan, A.V. Sharkov: Selective two-step excitation of the electronic state of the organic molecule in aqueous solution by picosecond light pulses. *Kvant. Elektron.*, **5(11)**, 2490–2492 (1978) [English transl.: *Sov. J. Quant. Electron.*, **8(11)**, 1405–1407 (1978)]
19. D.N. Nikogosyan, A.V. Borodavkin, N.A. Simukova: Two-step photodissociation of nucleic acid components in aqueous solution under action of ultrashort UV pulses. In: *Picosecond Methods in Spectroscopy of Molecules, Crystals and Biological Systems* (Tallin 1979), pp.188–195
20. P.G. Kryukov, V.S. Letokhov, D.N. Nikogosyan, A.V. Borodavkin, E.I. Budowsky, N.A. Simukova: Multiquantum photoreactions of nucleic acid components in aqueous solution by powerful ultraviolet picosecond radiation. *Chem. Phys. Lett.*, **61(2)**, 375–379 (1979)
21. D.A. Angelov, G.G. Gurzadyan, D.N. Nikogosyan: Generation of high-power picosecond pulses at 218–316 nm wavelengths. *Kvant. Elektron.*, **6(10)**, pp.1334–1335 (1979) [English transl.: *Sov. J. Quant. Electron.*, **9(10)**, 1334–1335 (1979)]
22. D.A. Angelov, P.G. Kryukov, V.S. Letokhov, D.N. Nikogosyan, A.A. Oraevsky: Selective action on nucleic acid components by picosecond light pulses. *Appl. Phys.*, **21(4)**, 391–395 (1980)
23. D.A. Angelov, P.G. Kryukov, V.S. Letokhov, D.N. Nikogosyan, A.A. Oraevsky: Selective action on nucleic acid components by picosecond light pulses. In: *Lasers in Photomedicine and Photobiology*, Springer Series in Optical Sciences, vol.22, ed. by R. Pratesi and C.A. Sacchi (Springer-Verlag: Berlin, Heidelberg, New York 1980), pp.207–215
24. D.A. Angelov, P.G. Kryukov, V.S. Letokhov, D.N. Nikogosyan, A.A. Oraevsky: Selective interaction of ultrashort ultraviolet laser pulses with the components of macromolecules. *Kvant. Elektron.*, **7(6)**, 1304–1318 (1980) [English transl.: *Sov. J. Quant. Electron.*, **10(6)**, 746–753 (1980)]
25. D.N. Nikogosyan, D.A. Angelov: Formation of free radicals in water under high-power laser UV irradiation. *Dokl. Akad. Nauk SSSR*, **253(3)**, 733–734 (1980), [In Russian]
26. D.A. Angelov, G.G. Gurzadyan, P.G. Kryukov, V.S. Letokhov, D.N. Nikogosyan, A.A. Oraevsky: High power UV ultrashort laser action on DNA and its components. In: *Picosecond Phenomena II*, Springer Series in Chemical Physics, vol.14, ed. by R.M. Hochstrasser, W. Kaiser and C.V. Shank (Springer-Verlag: Berlin, Heidelberg, New York 1980), pp.336–339
27. D.A. Angelov, D.N. Nikogosyan, A.A. Oraevsky: Two-photon photolysis of water and its role in two-step photodecomposition of aqueous solutions of DNA components. *Kvant. Elektron.*, **7(12)**, 2573–2577 (1980) [English transl.: *Sov. J. Quant. Electron.*, **10(12)**, 1502–1505 (1980)]

28. A.A. Belogurov, G.B. Zavilgelsky, D.A. Angelov, P.G. Kryukov, V.S. Letokhov, D.N. Nikogosyan: Action of ultrashort laser pulses on λ bacteriophage. *Studia Biophys.*, **80(1)**, 45–51 (1980), [In Russian]
29. D.N. Nikogosyan, D.A. Angelov: Formation of free radicals in water under high-power laser UV irradiation. *Chem. Phys. Lett.*, **77(1)**, 208–210 (1981)
30. D.A. Angelov, P.G. Kryukov, V.S. Letokhov, D.N. Nikogosyan, A.A. Oraevsky: Efficiency of two-step photolysis of DNA bases by high-power ultraviolet laser radiation. *Kvant. Elektron.*, **8(3)**, 595–599 (1981) [English transl.: *Sov. J. Quant. Electron.*, **11(3)**, 359–362 (1981)]
31. G.G. Gurzadyan, D.N. Nikogosyan, P.G. Kryukov, V.S. Letokhov, T.S. Balmukhanov, A.A. Belogurov, G.B. Zavilgelsky: Mechanism of high power picosecond laser UV inactivation of viruses and bacterial plasmids. *Photochem. Photobiol.*, **33(6)**, 835–838 (1981)
32. G.G. Gurzadyan, D.N. Nikogosyan, P.G. Kryukov, V.S. Letokhov, T.S. Balmukhanov, A.A. Belogurov, G.B. Zavilgelsky: Mechanism of high power picosecond laser UV inactivation of viruses and bacterial plasmids. *Biofizika*, **26(4)**, 659–663 (1981) [English transl.: *Biophysics*, **26(4)**, 668–673 (1981)]
33. G.G. Gurzadyan, D.N. Nikogosyan, A.A. Belogurov: Photochemical sensitivity of aromatic amino acids under picosecond laser UV irradiation. *Biofizika*, **26(6)**, 991–994 (1981) [English transl.: *Biophysics*, **26(6)**, 1013–1016 (1981)]
34. D.N. Nikogosyan: Action of powerful laser radiation on nucleic acid bases. *Kvant. Elektron.*, **8(12)**, 2674–2680 (1981) [English transl.: *Sov. J. Quant. Electron.*, **11(12)**, 1625–1628 (1981)]
35. A.A. Oraevsky, A.V. Sharkov, D.N. Nikogosyan: Picosecond study of electronically excited singlet states of nucleic acid components. *Chem. Phys. Lett.*, **83(2)**, 276–280 (1981)
36. D.N. Nikogosyan, D.A. Angelov, A.A. Oraevsky: Determination of parameters of excited states of DNA and RNA bases by laser UV photolysis. *Photochem. Photobiol.*, **35(5)**, 627–635 (1982)
37. G.G. Gurzadyan, D.N. Nikogosyan, T.S. Balmukhanov, G.B. Zavilgelsky: The study of formation of single-strand breaks in the DNA chain under picosecond laser UV irradiation. *Photobiochem. Photobiophys.*, **4(1–2)**, 87–93 (1982)
38. D.N. Nikogosyan: Lasers and DNA. *Priroda*, **No.2**, 77–87 (1982), [In Russian]
39. E.I. Budowsky, D.N. Nikogosyan, A.A. Oraevsky, N.A. Simukova, D.Y. Yakovlev: Direct and indirect action on thymine in aqueous solution by powerful laser ultraviolet radiation. *Photobiochem. Photobiophys.*, **4(4)**, 233–239 (1982)
40. D.N. Nikogosyan, A.A. Oraevsky, V.I. Rupasov: Two-photon ionization and dissociation of liquid water by powerful laser UV irradiation. *Chem. Phys.*, **77(1)**, 131–143 (1983)
41. N.Y. Dodonova, L.A. Remisova, N.M. Tsyganenko, D.N. Nikogosyan: Mechanism of guanosine-5'-monophosphate photodegradation under vacuum and laser UV irradiation. *Biofizika*, **28(1)**, 14–17 (1983) [English transl.: *Biophysics*, **28(1)**, 11–15 (1983)]
42. D.N. Nikogosyan, A.A. Oraevsky, V.I. Rupasov: Primary photochemical processes under two-photon laser UV photolysis of liquid water. *Khim. Fiz.*, **2(3)**, 394–400 (1983) [English transl.: *Sov. J. Chem. Phys.*, **2(3)**, 659–671 (1983)]
43. D.N. Nikogosyan, G.G. Gurzadyan, G.B. Zavilgelsky: Decrease of quantum yield of pyrimidine dimers formation in poly(dT) under high intensity laser UV irradiation. *Dokl. Akad. Nauk SSSR*, **269(2)**, 485–488 (1983), [In Russian]

44. A.A. Oraevsky, D.N. Nikogosyan: Two-photon ionization of liquid water and subsequent transformations of hydrated electron. *Khim. Fiz.*, **2(7)**, 943–947 (1983) [English transl.: *Sov. J. Chem. Phys.*, **2(7)**, 1550–1558 (1983)]
45. A.A. Oraevsky, D.N. Nikogosyan: Mechanisms of two-quantum photolysis of thymine in water solution. *Khim. Fiz.*, **2(9)**, 1208–1214 (1983) [English transl.: *Sov. J. Chem. Phys.*, **2(9)**, 2011–2020 (1983)]
46. D.N. Nikogosyan: Picosecond research of excited singlet states of nucleic acid base molecules. In: *Laser Applications in Atomic, Molecular and Nuclear Physics* (Nauka: Moscow 1983), pp.142–154, [In Russian]
47. D.N. Nikogosyan, V.S. Letokhov: Nonlinear laser photophysics, photochemistry and photobiology of nucleic acids. *Riv. Nuovo Cim.*, ser.3, **6(8)**, 1–72 (1983)
48. D.N. Nikogosyan, G.G. Gurzadyan: Two-quantum photoprocesses in DNA and RNA biopolymers under powerful picosecond laser UV irradiation. *Laser Chem.*, **4(4–5)**, 297–303 (1984)
49. D.N. Nikogosyan, V.S. Letokhov: *Nonlinear Laser Photophysics, Photochemistry and Photobiology of Nucleic Acids* (Institute of Spectroscopy, USSR Academy of Sciences: Troitzk 1984), pp.1–247, [In Russian]
50. G.G. Gurzadyan, D.N. Nikogosyan: Two-step excitation of bases in DNA and RNA. *Dokl. Akad. Nauk SSSR*, **276(3)**, 628–631 (1984), [In Russian]
51. G.B. Zavlilgelsky, G.G. Gurzadyan, D.N. Nikogosyan: Pyrimidine dimers, single-strand breaks and crosslinks induced in DNA by powerful laser UV irradiation. *Photobiochem. Photobiophys.*, **8(3)**, 175–187 (1984)
52. G.I. Bekov, G.A. Maksimov, D.N. Nikogosyan, V.N. Radaev: Enhancement of selectivity of laser photoionization analysis under two-pulse action of electric field on Rydberg atoms. *Kvant. Elektron.*, **11(6)**, 1262–1264 (1984) [English transl.: *Sov. J. Quant. Electron.*, **14(6)**, 852–853 (1984)]
53. A.V. Kruminsh, D.N. Nikogosyan, A.A. Oraevsky: Tuning of Nd:YAG laser radiation frequency by stimulated Raman scattering in organic liquids. *Kvant. Elektron.*, **11(7)**, 1479–1481 (1984) [English transl.: *Sov. J. Quant. Electron.*, **14(7)**, 1001–1002 (1984)]
54. A.Z. Grasyuk, L.L. Losev, D.N. Nikogosyan, A.A. Oraevsky: Generation of single picosecond pulses of up to 0.6 mJ energy and of 9.2 μm wavelength by stimulated Raman scattering. *Kvant. Elektron.*, **11(9)**, 1872–1874 (1984) [English transl.: *Sov. J. Quant. Electron.*, **14(9)**, 1257–1258 (1984)]
55. G.B. Zavlilgelsky, G.G. Gurzadyan, D.N. Nikogosyan: Laser-induced covalent interstrand cross-links in DNA. *Biofizika*, **30(4)**, 568–570 (1985) [English transl.: *Biophysics*, **30(4)**, 618–620 (1985)]
56. D.N. Nikogosyan, A.A. Oraevsky, V.S. Letokhov, Z.K. Arbieva, E.N. Dobrov: Two-step picosecond UV excitation of polynucleotides and energy transfer. *Chem. Phys.*, **97(1)**, 31–41 (1985)
57. A.A. Oraevsky, D.N. Nikogosyan: Picosecond two-quantum UV photochemistry of thymine in aqueous solution. *Chem. Phys.*, **100(3)**, 429–445 (1985)
58. D.N. Nikogosyan, A.A. Oraevsky, V.S. Letokhov: Sensitized decomposition of liquid solvent at two-step laser excitation of dissolved molecules. *Dokl. Akad. Nauk SSSR*, **283(6)**, 1425–1427 (1985), [In Russian]
59. D.N. Nikogosyan, A.A. Oraevsky, G.B. Zavlilgelsky: Picosecond laser UV inactivation of λ bacteriophage and various *Escherichia coli* strains. *Photobiochem. Photobiophys.*, **10(3)**, 189–198 (1986)

60. A.A. Oraevsky, D.N. Nikogosyan, V.S. Letokhov: Two-quantum UV photolysis of nucleic acid components in aqueous solution in comparison with γ -radiolysis. *Lasers Life Sci.*, **1(1)**, 46–60 (1986)
61. D.N. Nikogosyan, G.G. Gurzadyan: New formulae for the calculation of phase-matching angle. *Kvant. Elektron.*, **13(12)**, 2519–2520 (1986) [English transl.: *Sov. J. Quant. Electron.*, **16(12)**, 1663–1664 (1986)]
62. E.N. Dobrov, Z.K. Arbieva, B.P. Ulanov, R.O. Esenaliev, D.N. Nikogosyan: Comparative study of low-intensity and picosecond laser high-intensity UV inactivation of TMV RNA ability to self-assemble with the virus protein. *Photobiochem. Photobiophys.*, **13(1–2)**, 115–131 (1986)
63. Z.K. Arbieva, P.V. Kalmykov, E.N. Dobrov, R.O. Esenaliev, P.G. Morev, D.N. Nikogosyan: Formation of cross-links with protein and polynucleotide chain breaks in TMV RNA *in situ* under high-intensity picosecond laser UV irradiation. *Dokl. Akad. Nauk SSSR*, **292(1)**, 227–230 (1987), [In Russian]
64. R.O. Esenaliev, I.G. Panyutin, A.A. Oraevsky, D.N. Nikogosyan, G.B. Zavilgelsky: Quantum yields of single-quantum and two-quantum photochemical reactions in dinucleoside-monophosphate dTpdT and DNA under high-intensity picosecond UV irradiation. *Dokl. Akad. Nauk SSSR*, **293(1)**, 232–235 (1987), [In Russian]
65. D.N. Nikogosyan: Definition of photoreaction quantum yield at two-quantum excitation of molecules in solution. *Laser Chem.*, **7(1)**, 29–34 (1987)
66. D.N. Nikogosyan: Picosecond two-quantum photophysics and photochemistry of thymine. In: *Laser Picosecond Spectroscopy and Photochemistry of Biomolecules*, ed. by V.S. Letokhov (Nauka: Moscow 1987), pp.151–180, [In Russian]
67. D.N. Nikogosyan, G.B. Zavilgelsky: Primary photoprocesses in picosecond UV inactivation of viruses and bacteria." In: *Laser Picosecond Spectroscopy and Photochemistry of Biomolecules*, ed. by V.S. Letokhov (Nauka: Moscow 1987), pp.228–248, [In Russian]
68. D.N. Nikogosyan, G.G. Gurzadyan: Crystals for nonlinear optics. Biaxial crystals. *Kvant. Elektron.*, **14(8)**, 1529–1541 (1987) [English transl.: *Sov. J. Quant. Electron.*, **17(8)**, 970–977 (1987)]
69. A.A. Kozlov, V.V. Lobko, Y.A. Matveets, D.N. Nikogosyan, V.S. Letokhov: Decomposition of thymine sensitized by hematoporphyrin and its derivative at one- and two-step laser excitation. *Lasers Life Sci.*, **1(4)**, 247–264 (1987)
70. D.N. Nikogosyan: Picosecond two-quantum photophysics and photochemistry of thymine. In: *Laser Picosecond Spectroscopy and Photochemistry of Biomolecules*, ed. by V.S. Letokhov (Adam Hilger: Bristol 1987), pp.212–252
71. D.N. Nikogosyan, G.B. Zavilgelsky: Primary photoprocesses in picosecond UV inactivation of viruses and bacteria. In: *Laser Picosecond Spectroscopy and Photochemistry of Biomolecules*, ed. by V.S. Letokhov (Adam Hilger: Bristol 1987), pp.253–282
72. D.N. Nikogosyan: Physical principles of nonlinear laser photobiology. In: *Molecular Mechanisms of Biological Action of Optical Radiation*, ed. by A.B. Rubin (Nauka: Moscow 1988), pp.70–78 [In Russian]
73. P.G. Morev, A.A. Oraevsky, D.N. Nikogosyan: Photophysics of highly excited states of nucleic acid constituents. *Khim. Fiz.*, **7(4)**, 485–491 (1988) [English transl.: *Sov. J. Chem. Phys.*, **7(4)**, 778–790 (1988)]
74. D.N. Nikogosyan, E.V. Khoroshilova: Asymmetric two-quantum UV photolysis of DL-tyrosine. *Dokl. Akad. Nauk SSSR*, **300(5)**, 1172–1177 (1988), [In Russian].

75. T.J. Karu, L.V. Pyatibrat, O.A. Tiflova, D.N. Nikogosyan: Specificity of lethal and mutagenic action of picosecond laser pulses with 532 nm wavelength. *Radiobiologiya*, **28(4)**, 499–502 (1988), [In Russian]
76. R.O. Esenaliev, A.A. Oraevsky, D.N. Nikogosyan: Two-quantum cooperative excitation of thymidine in water solution under nanosecond laser UV irradiation. *Khim. Fiz.*, **7(12)**, 1652-1655 (1988) [English transl.: *Sov. J. Chem. Phys.*, **7(12)**, 2932–2936 (1988)]
77. E.N. Dobrov, Z.K. Arbieva, E.K. Timofeeva, R.O. Esenaliev, A.A. Oraevsky, D.N. Nikogosyan: UV laser induced RNA-protein cross-links and RNA chain breaks in tobacco mosaic virus *in situ*. *Photochem. Photobiol.*, **49(5)**, 595–599 (1989)
78. D.N. Nikogosyan: Measurement of quantum yield of two-quantum photoreaction of N-glycosidic bond scission in uridine under nanosecond laser UV irradiation. *Khim. Vys. energ.*, **23(5)**, 461–463 (1989) [English transl.: *High Energy Chemistry*, **23(5)**, 365–367 (1989)]
79. D.N. Nikogosyan: Two-quantum photochemistry of nucleic acids. In: *Physical Principles of Laser and Beam Technology, vol.4, Laser Biophysics and Laser Biomedicine*, ed. by N.I. Koroteev and V.Y. Panchenko (VINITI: Moscow 1989), pp.85–171, [In Russian]
80. Y.A. Smirnov, S.P. Kapituletz, Y.Y. Tsilinsky, R.O. Esenaliev, P.G. Morev, A.A. Oraevsky, D.N. Nikogosyan: Inactivation of α -virus VEE by high-intensity laser UV pulses. *Biofizika*, **34(4)**, 570–573 (1989) [English transl.: *Biophysics*, **34(4)**, 614–617 (1989)]
81. D.N. Nikogosyan: Two-quantum UV photochemistry of nucleic acids: comparison with conventional low-intensity UV photochemistry and radiation chemistry. *Int. J. Radiat. Biol.*, **57(2)**, 233–299 (1990)
82. E.V. Khoroshilova, O.A. Golovleva, A.A. Oraevsky, D.N. Nikogosyan: Photochemistry of uridine on high intensity laser UV irradiation. *Khim. Fiz.*, **9(4)**, 465–476 (1990) [English transl.: *Sov. J. Chem. Phys.*, **9(4)**, 770–790 (1990)]
83. D.N. Nikogosyan: Beta barium borate, a new perspective crystal for nonlinear optics. In: *Electronics, ser.11, Laser Technique and Optoelectronics*, ed. by A.A. Kazakov (Central Research Institute of Electronics: Moscow 1990), **No.2(54)**, 3–13, [In Russian]
84. E.V. Khoroshilova, Y.A. Repeyev, D.N. Nikogosyan: UV photolysis of amino acids and peptides. Peptide bond scission on laser irradiation. *Dokl. Akad. Nauk SSSR*, **312(2)**, 484–488 (1990), [In Russian]
85. E.V. Khoroshilova, D.N. Nikogosyan: Photochemistry of uridine on high intensity laser UV irradiation. *J. Photochem. Photobiol. B. Biol.*, **5(3–4)**, 413–427 (1990)
86. E.V. Khoroshilova, Y.A. Repeyev, D.N. Nikogosyan: UV photolysis of aromatic amino acids and related dipeptides and tripeptides. *J. Photochem. Photobiol. B. Biol.*, **7(2–4)**, 159–172 (1990)
87. D.N. Nikogosyan, Y.A. Repeyev, E.V. Khoroshilova, I.V. Kryukov, E.V. Khoroshilov, A.V. Sharkov: Asymmetric photolysis of biomolecules under high-intensity UV laser irradiation. *Chem. Phys.*, **147(2–3)**, 437–445 (1990)
88. V.G. Dmitriev, G.G. Gurzadyan, D.N. Nikogosyan: *Handbook of Nonlinear Optical Crystals*. Springer Series in Optical Sciences, vol.64, ed. by A.E. Siegman (Springer-Verlag: Berlin, Heidelberg, New York 1991), pp.1–221
89. D.N. Nikogosyan: Beta barium borate (BBO). A review of its properties and applications. *Appl. Phys. A*, **52(6)**, 359–368 (1991)
90. D.N. Nikogosyan, S.P. Kapituletz, Y.A. Smirnov: Effects of ultraviolet laser radiation on *Venezuelan equine encephalomyelitis* virus. *Photochem. Photobiol.*, **54(5)**, 847–849 (1991)

91. A.V. Zayats, Y.A. Repeyev, D.N. Nikogosyan, E.A. Vinogradov: Two types of hot luminescence in Si/SiO₂ superlattices. *Phys. Lett. A*, **155(1)**, 65–68 (1991)
92. G.G. Gurzadyan, V.G. Dmitriev, D.N. Nikogosyan: *Nonlinear Optical Crystals. Properties and Applications in Quantum Electronics. Handbook*. (Radio i Sviyaz: Moscow 1991), pp.1–160 [In Russian]
93. D.N. Nikogosyan: Picosecond laser UV Inactivation of λ Bacteriophage and Various *Escherichia coli* Strains. In: *Light in Biology and Medicine, vol.2*, ed. by R.H. Douglas, J. Moan and G. Ronto (Plenum Press: New York 1991), pp.517–521
94. E.A. Vinogradov, A.V. Zayats, D.N. Nikogosyan, Y.A. Repeyev: Radiative recombination in Si/SiO₂ short-period amorphous superlattices. *Fiz. Tverd. Tela*, **33(7)**, 2044–2052 (1991) [English transl.: *Sov. Phys.-Solid State*, **33(7)**, 1151–1156 (1991)]
95. Y.A. Repeyev, E.V. Khoroshilova, D.N. Nikogosyan: 212.8 nm laser photolysis of aromatic and aliphatic amino acids and related peptides. *J. Photochem. Photobiol. B: Biol.*, **12(3)**, 259–274 (1992); Corrigenda. *J. Photochem. Photobiol. B: Biol.*, **17(1)**, 89 (1993)
96. D.N. Nikogosyan, H.Görner: Photolysis of aromatic amino acids in aqueous solution by nanosecond 248 and 193 nm laser light. *J. Photochem. Photobiol. B: Biol.*, **13(3–4)**, 219–234 (1992)
97. A.V. Zayats, Y.A. Repeyev, D.N. Nikogosyan, E.A. Vinogradov: Radiative recombination in shortperiod α - Si/SiO₂ superlattices. *J. Luminesc.*, **51(5–6)**, 335–343 (1992)
98. E.A. Vinogradov, A.V. Zayats, D.N. Nikogosyan, Y.A. Repeyev: Hot luminescence and nonlinear effects in shortperiod superlattices under picosecond excitation. In: *Ultrafast Processes in Spectroscopy 1991*, ed. by A. Laubereau and A. Seilmeier (Institute of Physics: Bristol1992), pp.375–378
99. V.G. Dmitriev, D.N. Nikogosyan: Effective nonlinearity coefficients for three-wave interactions in biaxial crystals of *mm2* point group symmetry. *Opt. Commun.*, **95(1–3)**, 173–182 (1993)
100. D.N. Nikogosyan: Laser photochemistry of amino acids and peptides. *Proc. SPIE*, **1921**, 30–40 (1993)
101. D.N. Nikogosyan, Y.A. Repeyev, D.Y. Yakovlev, V.I. Salyanov, S.G. Skuridin, Y.M. Yevdokimov: Photochemical alterations in DNA revealed by DNA-based liquid crystals. *Photochem. Photobiol.*, **59(3)**, 269–276 (1994)
102. D.N. Nikogosyan: Lithium triborate (LBO). A review of its properties and applications. *Appl. Phys.A*, **58(3)**, 181–190 (1994)
103. E.A. Vinogradov, A.V. Zayats, D.N. Nikogosyan, Y.A. Repeyev, F.A. Pudonin: Optical nonlinearities in amorphous Si/SiO₂ quantum structures. *Opt. Spektrosk.*, **76(2)**, 323–328 (1994) [English transl.: *Opt. Spectrosc.*, **76(2)**, 289–293 (1994)]
104. D.N. Nikogosyan, H. Görner: Photolysis (193 nm) of aliphatic amino acids in aqueous solution. *J. Photochem. Photobiol. B: Biol.*, **30(1–2)**, 189–193 (1995)
105. Y.A. Repeyev, D.N. Nikogosyan: Two-photon absorption in fused silica and in liquid water at 212.8 nm. In: *Notions and Perspectives of Nonlinear Optics*, ed. by O. Keller (World Scientific: Singapore 1996), pp.649–654
106. D.N. Nikogosyan, A. Reuther, A. Laubereau: Primary photochemical processes in thymine in concentrated aqueous solution studied by femtosecond UV spectroscopy. In: *Femtochemistry. Ultrafast Chemical and Physical Processes in Molecular Systems*, ed. by M. Chergui (World Scientific: Singapore 1996), pp.558–565

107. A. Reuther, D.N. Nikogosyan, A. Laubereau: Primary photochemical processes in thymine in concentrated aqueous solution studied by femtosecond UV spectroscopy. *J. Phys. Chem.*, **100(13)**, 5570–5577 (1996)
108. D.N. Nikogosyan, D. Angelov, B. Soep, L. Lindqvist: Direct measurement of excited state lifetime in the homologous sequence adenine, adenosine, adenosine-5'-monophosphate and in calf thymus DNA. *Chem. Phys. Lett.*, **252(5–6)**, 322–326 (1996).
109. A. Reuther, A. Laubereau, D.N. Nikogosyan: Primary photochemical processes in water. *J. Phys. Chem.*, **100(42)**, 16794–16800 (1996)
110. V.G. Dmitriev, G.G. Gurzadyan, D.N. Nikogosyan: *Handbook of Nonlinear Optical Crystals. Second, Revised and Updated Edition*. Springer Series in Optical Sciences, vol.64, ed. by A.E. Siegman (Springer-Verlag: Berlin 1997), pp.1–413
111. H. Görner, D.N. Nikogosyan: Indirect 248 nm 20 ns photolysis of aliphatic amino acids in aqueous solution. *J. Photochem. Photobiol. B: Biol.*, **39(1)**, 84–89 (1997)
112. E.V. Khoroshilova, Y.A. Repeyev, D.N. Nikogosyan: Laser photolysis of aliphatic amino acids in aqueous solution under two-photon excitation of solvent at $\lambda = 266$ nm. *Dokl. Akad. Nauk*, **352(5)**, 643–645 (1997), [In Russian]
113. A. Reuther, A. Laubereau, D.N. Nikogosyan: A simple method for the *in situ* analysis of femtosecond UV pulses in the pump-probe spectroscopy of solutions. *Opt. Commun.*, **141(3–4)**, pp.180–184 (1997)
114. D.N. Nikogosyan, H. Görner: Photolysis (193 nm) of aliphatic dipeptides in aqueous solutions. *Biol. Chem.*, **378(11)**, 1349–1351 (1997)
115. D.N. Nikogosyan: *Properties of Optical and Laser-Related Materials. A Handbook*. (John Wiley & Sons Ltd.: Chichester, 1997), pp.1–594
116. E.N. Dobrov, D.N. Nikogosyan: UV-induced nucleic acid-protein cross-linking: manual on planning of irradiation experiments and calculation of absorbed dose and quantum yield. *Photochem. Photobiol.*, **67(3)**, 269–275 (1998)
117. P.M.W. Skovgaard, R.J. Mullane, D.N. Nikogosyan, J.G. McInerney: Two-photon conductivity in semiconductor waveguide autocorrelators. *Opt. Commun.*, **153(1–3)**, 78–82 (1998)
118. D.N. Nikogosyan, H. Görner: Towards the laser photochemistry of the cornea: studies of the most common and highly absorbing aliphatic amino acids in collagen. *J. Photochem. Photobiol. B: Biol.*, **47(1)**, 63–67 (1998)
119. V.G. Dmitriev, G.G. Gurzadyan, D.N. Nikogosyan: *Handbook of Nonlinear Optical Crystals. Third Revised Edition*. Springer Series in Optical Sciences, vol.64, ed. by A.E. Siegman (Springer-Verlag: Berlin 1999), pp.1–413
120. D.N. Nikogosyan, H. Görner: Laser-induced photodecomposition of amino acids and peptides: extrapolation to corneal collagen. *IEEE J. Select. Topics Quant. Electron.*, **5(4)**, 1107–1115 (1999)
121. M. Mulcahy, J.G. McInerney, D.N. Nikogosyan, H. Görner: 193 nm photolysis of aromatic and aliphatic dipeptides in aqueous solution: dependence of decomposition quantum yield on the amino acid sequence. *Biol. Chem.*, **381(12)**, 1259–1262 (2000)
122. J. Ni Chroinin, A. Dragomir, J.G. McInerney, D.N. Nikogosyan: Accurate determination of two-photon absorption coefficients in fused silica and crystalline quartz at 264 nm. *Opt. Commun.*, **187(1–3)**, 185–191 (2001).
123. L.I. Isaenko, A. Dragomir, J.G. McInerney, D.N. Nikogosyan: Anisotropy of two-photon absorption in BBO at 264 nm. *Opt. Commun.*, **198(4–6)**, 433–438 (2001)
124. A. Dragomir, J.G. McInerney, D.N. Nikogosyan, A.A. Ruth: Two-photon absorption coefficients of several liquids at 264 nm. *IEEE J. Quant. Electron.*, **38(1)**, 31–36 (2002)

125. A. Dragomir, J.G. McInerney, D.N. Nikogosyan, P.G. Kazansky: Two-photon absorption properties of commercial fused silica and germanosilicate glass at 264 nm. *Appl. Phys. Lett.*, **80(7)**, 1114–1116 (2002)
126. A. Dragomir, D.N. Nikogosyan, A.A. Ruth, K.A. Zagorulko, P.G. Kryukov: Long-period fibre grating formation with 264 nm femtosecond radiation. *Electron. Lett.*, **38(6)**, 269–271 (2002)
127. A. Dragomir, J.G. McInerney, D.N. Nikogosyan: Femtosecond measurements of two-photon absorption coefficients at $\lambda = 264$ nm in glasses, crystals, and liquids. *Appl. Opt.*, **41(21)**, 4365–4376 (2002)
128. A. Dragomir, D.N. Nikogosyan, K.A. Zagorulko, P.G. Kryukov: Inscription of long period fibre gratings by femtosecond UV radiation. *Proc. SPIE*, **4876**, 313–320 (2003)
129. P.G. Kryukov, Y.V. Larionov, A.A. Rybaltovskii, K.A. Zagorulko, A. Dragomir, D.N. Nikogosyan, A.A. Ruth: Long-period fibre grating fabrication with femtosecond pulse radiation at different wavelengths. *Microelectr. Eng.*, **69(24)**, 248–255 (2003)
130. K.A. Zagorulko, P.G. Kryukov, E.M. Dianov, A. Dragomir, D.N. Nikogosyan: Fibre-Bragg-grating writing in single-mode optical fibres by UV femtosecond pulses. *Kvant. Elektron.*, **33(8)**, 728–730 (2003) [In Russian, English transl.: *Quant. Electron.*, **33(8)**, 728–730 (2003)]
131. A.A. Ruth, A. Dragomir, D.N. Nikogosyan: Four- and two-photon absorption cross-section measurements in naphthalene vapour. *Nonl. Opt. Quant. Opt.*, **30(2)**, 103–114 (2003)
132. A. Dragomir, D.N. Nikogosyan, G. Brambilla: Increased photosensitivity of Ge-doped and Ge, Sn-doped fibres under high-intensity 264 nm laser light. *Electron. Lett.*, **39(20)**, 1437–1438 (2003)
133. A. Dragomir, D.N. Nikogosyan, K.A. Zagorulko, P.G. Kryukov, E.M. Dianov: Inscription of fiber Bragg gratings by ultraviolet femtosecond radiation, *Opt. Lett.*, **28(22)**, 2171–2173 (2003)
134. S.A. Slattery, D.N. Nikogosyan: Two-photon absorption at 211 nm in fused silica, crystalline quartz and some alkali halides. *Opt. Commun.*, **228(1–3)**, 127–131 (2003)
135. S.A. Slattery, D.N. Nikogosyan, N. Plougmann, N.R. Sørensen, M. Kristensen: Efficient Bragg grating fabrication in Ge-rich fibre by high-intensity femtosecond 264 nm irradiation. *Electron. Lett.*, **40(23)**, 1472–1473 (2004)
136. D.N. Nikogosyan: *Nonlinear Optical Crystals: A Complete Survey*. (Springer, New York 2005), pp.1–427.
137. A.I. Kalachev, V. Pureur, D.N. Nikogosyan: Investigation of long-period fiber gratings induced by high-intensity femtosecond UV laser pulses. *Opt. Commun.*, **246(1–3)**, 107–115 (2005); Erratum. *Opt. Commun.*, **251(1–3)**, 229 (2005)
138. S.A. Slattery, D.N. Nikogosyan, G. Brambilla: Fiber Bragg grating inscription by high-intensity femtosecond UV laser light: comparison with other existing methods of fabrication. *J. Opt. Soc. Am. B*, **22(2)**, 354–361 (2005); Erratum. *J. Opt. Soc. Am. B*, **22(5)**, 1143 (2005)
139. C. Corbari, P.G. Kazansky, S.A. Slattery, D.N. Nikogosyan: Ultraviolet poling of pure fused silica by high-intensity femtosecond radiation. *Appl. Phys. Lett.*, **86(7)**, article 071106 (2005); Erratum. *Appl. Phys. Lett.*, **86(14)**, article 149902 (2005)
140. S.A. Slattery, D.N. Nikogosyan: High-intensity UV laser inscription of fibre Bragg gratings and comparison with other fabrication techniques. *Proc. SPIE*, **5827**, 200–210 (2005)
141. A.I. Kalachev, D.N. Nikogosyan: Investigation of long-period fibre gratings inscribed by high-intensity femtosecond UV laser light. *Proc. SPIE*, **5827**, 285–298 (2005)

142. A.I. Kalachev, V. Pureur, S.A. Slattery, D.N. Nikogosyan: Investigation of long-period fiber gratings recorded by high-intensity femtosecond UV laser pulses. *Proc. SPIE*, **5855**, Part 1, 330–333 (2005)
143. A.I. Kalachev, D.N. Nikogosyan, G. Brambilla: Long-period fiber grating fabrication by high-intensity femtosecond pulses at 211 nm. *J. Lightwave Technol.*, **23(8)**, 2568–2578 (2005)
144. S.A. Slattery, D.N. Nikogosyan: Long-period fiber grating inscription under high-intensity 352 nm femtosecond irradiation: three-photon absorption and energy deposition in cladding. *Opt. Commun.*, **255(1–3)**, 81–90 (2005)
145. M. Dubov, I. Bennion, S.A. Slattery, D.N. Nikogosyan: Strong long-period fiber gratings recorded at 352 nm. *Opt. Lett.*, **30(19)**, 2533–2535 (2005)
146. C. Caucheteur, A. Fotiadi, P. Mégret, S.A. Slattery, D.N. Nikogosyan: Polarization properties of long-period gratings prepared by high-intensity femtosecond 352 nm pulses. *Photon. Technol. Lett.*, **17(11)**, 2346–2348 (2005)
147. D.N. Nikogosyan: Long-period gratings in a standard telecom fibre fabricated by high-intensity femtosecond UV and near-UV laser pulses. *Meas. Sci. Technol.*, **17(5)**, 960–967 (2006)
148. S.A. Slattery, D.N. Nikogosyan, C. Caucheteur, A. Fotiadi, P. Mégret: Polarization properties of long-period gratings prepared by high-intensity femtosecond 352 nm pulses. *Proc. SPIE*, **6187**, pp.6187071–6187078 (2006)
149. G. Brambilla, A.A. Fotiadi, S.A. Slattery, D.N. Nikogosyan: Two-photon photochemical long-period grating fabrication in pure-fused-silica photonic crystal fiber. *Opt. Lett.*, **31(18)**, 2675–2677 (2006)
150. C. Caucheteur, A.A. Fotiadi, P. Megret, G. Brambilla, S.A. Slattery, D.N. Nikogosyan: Polarisation properties of long-period grating inscribed in pure-fused-silica photonic crystal fibre. *Electron. Lett.*, **42(23)**, 1339–1340 (2006)
151. T. Ernst, D.N. Nikogosyan: Single-quantum mechanism of Bragg grating inscription in a Ge/B codoped fibre by high-intensity 264 nm femtosecond pulses. *Meas. Sci. Technol.*, **18(1)**, L1–L3 (2007)
152. D.N. Nikogosyan: Multi-photon high-excitation-energy approach to fibre grating inscription. *Meas. Sci. Technol.*, **18(1)**, R1–R29 (2007)
153. C. Caucheteur, P. Megret, T. Ernst, D.N. Nikogosyan. Polarization properties of fibre Bragg gratings inscribed by high-intensity femtosecond 264 nm pulses. *Opt. Commun.*, **271(2)**, pp.303–308 (2007)
154. V. Kudriasov, D. Majus, V. Sirutkaitis, S.A. Slattery, D.N. Nikogosyan: Comparative study of UV absorption changes induced in germanosilicate glass by high-intensity femtosecond pulses at 267, 400 and 800 nm. *Opt. Commun.*, **271(2)**, 408–412 (2007)
155. H.G. Limberger, C. Ban, R.P. Salathé, S.A. Slattery, D.N. Nikogosyan: Absence of UV-induced stress in Bragg gratings recorded by high-intensity 264 nm laser pulses in a hydrogenated standard telecom fiber. *Opt. Express*, **15(9)**, 5610–5615 (2007)
156. M. Dubov, V. Mezentsev, I. Bennion, D.N. Nikogosyan: UV femtosecond laser inscribes a 300 nm period nanostructure in a pure fused silica. *Meas. Sci. Technol.*, **18(7)**, L15–L17 (2007)
157. A.A. Fotiadi, G. Brambilla, T. Ernst, S.A. Slattery, D.N. Nikogosyan: TPA-induced long-period gratings in a photonic crystal fiber: inscription and thermal sensing properties. *J. Opt. Soc. Am. B*, **24(7)**, 1475–1481 (2007)
158. C. Caucheteur, A.A. Fotiadi, P. Megret, G. Brambilla, S.A. Slattery, D.N. Nikogosyan: Wavelength dependent polarization properties of a long-period grating inscribed in a pure-fused-silica photonic crystal fiber. *Proc. SPIE*, **6588**, 65880H1–65880H8 (2007)

159. R.P. O'Byrne, S.V. Sergeev, D.A. Flavin, D.N. Nikogosyan: Strain characterization of fiber Bragg gratings inscribed by high-intensity femtosecond UV pulses. Proc. SPIE, **6619**, 661918-1–661918-4 (2007)
160. M. Dubov, I. Bennion, D.N. Nikogosyan, P. Bolger, A.V. Zayats: Point-by-point inscription of 250-nm-period structure in bulk fused silica by tightly-focused femtosecond UV pulses. J. Opt. A: Pure Appl. Opt., **10(2)**, article 025305 (6pp) (2008).
161. R.P. O'Byrne, S.V. Sergeev, D.A. Flavin, S.A. Slattery, D.N. Nikogosyan, J.D.C. Jones: Anisotropic fiber Bragg gratings inscribed by high-intensity femtosecond-UV pulses: Manufacturing technology and strain characterization for sensing applications. IEEE Sensors J., **8(8)**, pp.1256–1263 (2008)
162. M. Dubov, R.K. Nasyrov, D.N. Nikogosyan, A.G. Poleshchuk, V.K. Mezentsev, I. Bennion: Micro-holographic methods for sub-micrometer grating fabrication with UV femtosecond laser. Proc. SPIE, **7100**, 71000T-1–71000T-9 (2008)
163. J.-F. Rysman, D.N. Nikogosyan: Accurate measurement of thermal sensitivity for fibre Bragg gratings inscribed by high-intensity 264 nm femtosecond pulses. Opt. Commun., **282(6)**, 1120–1122 (2009)
164. V.G. Dmitriev, G.G. Gurzadyan, D.N. Nikogosyan: *Handbook of Nonlinear Optical Crystals. Third Revised Edition*. Springer Series in Optical Sciences, vol.64, ed. by A.E. Siegman (Higher Education Press: Beijing 2009), pp.1–439
165. D.N. Nikogosyan: *Nonlinear Optical Crystals: A Complete Survey*. (Higher Education Press: Beijing 2009), pp.1–500
166. D.N. Nikogosyan, M. Dubov, H. Schmitz, V. Mezentsev, I. Bennion, P. Bolger, A.V. Zayats: Point-by-point inscription of 250-nm-period structure in bulk fused silica by tightly-focused femtosecond UV pulses: experiment and numerical modeling. Central European Journal of Physics, **8(2)**, 169–177 (2010)
167. A. Gusarov, B. Brichard, D.N. Nikogosyan: Gamma-radiation effects on Bragg gratings written by femtosecond UV laser in Ge-doped fibers. IEEE Trans. Nucl. Sci., **57(4)**, 2024–2028 (2010)
168. P. Kelleher, D.N. Nikogosyan: Inscription of narrow-band fibre Bragg gratings with 264 nm femtosecond pulses. Opt. Fiber Technol., **16(4)**, 212–216 (2010)
169. B.J. O'Regan, D.N. Nikogosyan: Femtosecond UV long-period grating fabrication with amplitude mask technique. Opt. Commun., **284(24)**, 5650–5654 (2011)
170. K. Mc Evoy, D.N. Nikogosyan: Realization of periodic transmission filter based on a pair of cascaded long-period fibre gratings of different strength/wavelength position. Opt. Laser Technol., **44(3)**, 683–687 (2012)
171. B.J. O'Regan, D.N. Nikogosyan, D. Paipulas, V. Kudriašov, V. Sirutkaitis: Long-period grating inscription in hydrogen-free SMF-28 fiber by high-repetition-rate femtosecond UV pulses. Opt. Fiber Technol., **18(2)**, 88–92 (2012)