

С П И С Ъ К
на научните трудове на
чл.-кор. проф., д.ф.н. Петър Асенов Атанасов,
с които участвам в конкурса за академик 2018 г.

Научни публикации в специализирани списания

1. Petrova M.D., Atanasov P.A., Christov Ch.D., "Effect of organic additives on the upper laser level relaxation rate and the gain of TE CO₂ laser", *J. Phys.D: Appl. Phys.*, 13, 1835-1840 (1980).
2. Atanasov P.A., Petrova M.D., Grodel M., "Effect of peaking capacitor on the discharge characteristics and output parameters of TE CO₂ laser", *Opt. & Quant. Electron.*, 13, 251-253 (1981).
3. **Атанасов П.А.**, Зарослов Д.Ю., Карлов Н.В., Ковалев И.О., Кузьмин Г.П., Прохоров А.М., "CO₂ лазер с плазменными электродами", *Письма ЖТФ*, 15, 928-932 (1983).
4. **Атанасов П.А.**, Голубченко В.П., Карлов Н.В., Ковалев И.О., Кузьмин Г.П., Прохоров А.М., "Особености формирования сильноточного объемного разряда в CO₂ лазере с плазменными электродами", *Письма ЖТФ*, 11, 13, 786-790 (1985).
5. **Atanasov P.A.**, Gendjov S.I., "Laser cutting of glass tubing - a theoretical model", *J. Phys.D: Appl. Phys.*, 20, 597-601 (1987).
6. **Атанасов П.А.**, Брынзолов П.П., Зикрин Б.О., Карлов Н.В., Ковалев И.О., Кузьмин Г.П., Прохоров А.М., "Электроразрядный CO₂-лазер с возбуждением несамостоятельным разрядом при атмосферном давлении", *Письма ЖТФ*, 14, 16, 1486-1489 (1988).
7. Atanasov P.A., Vasilev S.G., Kovalyov I.O., Kuz'min G.P., Nesterenko A.A., "An investigation of the efficiency of a sliding discharge as a source of preionization and a plasma cathode in high pressure CO₂ lasers", *J. Phys. D: Appl. Phys.*, 21, 1750-1754 (1988).
8. Atanasov P.A., Vasilev S.G., Kovalyov I.O., Kuz'min G.P., Nesterenko A.A., Zykriп B.O., "An experimental investigation of a plasma cathode CO₂ laser at high pressure", *J. Phys.E: Sci. Instrum.*, 21, 1071-1073 (1988).
9. Atanasov P.A., Baeva M.G., "Numerical model of a fast-flow cw CO₂ laser", *Proc. SPIE*, 1031, 56-58 (1989).
10. Atanasov P.A., Serafetinides A.A., "TEA gas lasers excited by a sliding discharge along the surface of a dielectric", *Optics Commun.*, 72, 6, 356-360 (1989).
11. Atanasov P.A., "Laser cutting of glass tubing", *Proc. SPIE*, 1033, 202-207 (1989).
12. Андреев С.И., **Атанасов П.А.**, Брынзолов П.П., Карлов Н.В., Кислесцов А.В., Ковалев И.О., Кузьмин Г.П., Левченко О.А., Нестеренко А.А., "Особенности формирования объемного разряда с плазменными электродами", *ЖТФ*, 60, 1, 102-106 (1990).
13. Serbesov V.S., **Atanasov P.A.**, "Nitrogen laser with high pulse and average power", *Measur. Sci. Technol.*, 1, 601-604 (1990).
14. Serbesov V., Benacka S., Hadziev D., **Atanasov P.**, Elektronov N., Smatko V., Stribik V., Vassilev N., "Structure and superconducting properties of YBa₂Cu₃O_{7-x} films prepared by nitrogen laser evaporation and CO₂ laser annealing in oxygen", *J. Appl. Phys.*, 67, №11, 6953-6957 (1990).
15. Vasilev S.G., **Atanasov P.A.**, "A powerful helium-free TEMA CO₂ laser", *Rev. Roum. de Phys.*, 36, 5/6, 333-335 (1991).
16. Baeva M.G., **Atanasov P.A.**, "Numerical model of an axial fast-flow CO₂ laser with controlled turbulence", *Proc. SPIE*, 1810, 109-112 (1992).
17. Baeva M., **Atanasov P.**, "Numerical investigation of output characteristics of turbulent axial flow CO₂ laser", "Laser Advanced Material Proces.", *Proc. LAMP '92*, eds. Matsunawa A. and Katayama S., 1, 85-89, HIVE Nagaoka, Japan (1992).
18. Atanasov P.A., "Some aspects of high-pressure N₂ assisted CO₂-laser cutting of metals", *Proc. SPIE*, 1810, 628-631 (1992).
19. Baeva M.G., **Atanasov P.A.**, "Numerical investigation of cw CO₂ laser with a fast turbulent flow", *J. Phys. D: Appl. Phys.*, 26, 546-551 (1993).
20. Atanasov P.A., Vasilev S.G., Serafetinides A.A., "540.1 nm pulsed Ne laser excited by a sliding discharge", *Optics & Laser Technol.*, 25, 1, 31-35 (1993).
21. Tzolov V.P., Grozdanov K.A., **Atanasov P.A.**, "Nitrogen laser employing twin sliding discharge", *J. Appl. Phys.*, 75, 2, 1210-1212 (1994).
22. Atanasov P.A., Tomov R.I., Serbezov V.S., "Plasma assisted in-situ laser deposition of Y₁Ba₂Cu₃O_{7-x} superconducting thin films with laser heating and annealing", *Vacuum*, 45, 12, 1215-1217 (1994).
23. Serbezov V., Atanasov P., Tomov R., "Modification of the properties of HTSC YBCO thin films on silicon by super fast laser annealing in oxygen with a cw CO₂ laser", *J. Materials Science: Materials in Electronics*, 5, 272-274 (1994).
24. Baeva M.G., **Atanasov P.A.**, "Influence of SF₆ on HF laser plasma parameters", *Il Nuovo Cimento*, 17, 3, 261-265 (1995).
25. Atanasov P.A., "Laser processing of plastics", *Proc. SPIE*, 2502, 632-637 (1995).
26. Atanasov P.A., "Laser welding of plastics: theory and experiments", *Optical Engineering*, 34, 10, 2976-2980 (1995).
27. Atanasov P.A., Grozdanov K.A., "Simultaneous ultraviolet and infrared emission in a sliding discharge excited laser", *IEEE J. Quant. Electron.*, 32, 7, 1122-1125 (1996).
28. Atanasov P.A., Manolov V.P., "Laser cutting of wire-wound resistors: theory and experiment", *J. Appl. Phys.*, 80, 4, 2003-2008 (1996).
29. Atanasov P.A., Baeva M.G., "CW CO₂ laser cutting of plastics", *Proc. SPIE*, 3092, 772-775 (1997).
30. Atanasov P.A., Peshev Z.Y., Furlinski G.I., "Performance and spectral characteristics of sliding-discharge excited UV-IR laser", *Proc. SPIE*, 3092, 594-597 (1997).
31. Atanasov P.A., Tomov R.I., Dikovska A.Og., Tsaneva V.N., Aneva Z.I., Peshev Z.Y., "Preparation of Ti:sapphire thin films on sapphire substrates with XeCl excimer laser ablation", *Proc. SPIE*, 3052, 343-346 (1997).
32. Tomov R.I., Manolov V.P., **Atanasov P.A.**, Tsaneva V.N., Ouzounov D.G., Tzanev V.I., "Experimental and theoretical investigation of cumulative laser irradiation effects in YBCO thin films pulsed laser deposition" *Physica C: Superconductivity*, 274, 3&4, 187-196 (1997).
33. Atanasov P.A., Koleva M.E., Tomov R.I., "Preparation of Y₃Fe₅O₁₃ and Mn-Zn ferrite thin films by excimer laser ablation", *Proc. SPIE*, 2991, 285-290 (1997).
34. Atanasov P.A., Furlinski G.I., Peshev Z.Y., "Spectral and temporal behaviour of sliding-discharge excited UV-IR laser", *Opt. Commun.*, 139, 223-226 (1997).
35. Serafetinides A.A., Tsikrikas G.N., Papayannis A.D., **Atanasov P.A.**, "Simultaneous emission of HF and N₂ lines from a plasma cathode TEA laser", *IEEE J. Quant. Electron.*, 33, 12, 2167-2173 (1997).
36. Serafetinides A.A., Tsikrikas G.N., **Atanasov P.A.**, "Plasma cathode TEA Ar laser development", *Optics & Laser Technologies*, 30, 159-162 (1998).
37. Eugenieva E.D., Dikovska A. Og., **Atanasov P.A.**, "Waveguide and gain properties of active optical layers grown by pulsed laser deposition", *Proc. SPIE*, 3571, 368-372 (1999).
38. Atanasov P.A., Koleva M.E., Tomov R.I., Krastev V.I., "Pulsed laser deposition of Mn-Zn ferrite thin films", *J. Mat. Sci.: Mat. in Electron.*, 10, 295-298 (1999).
39. Atanasov P.A., Maeno K., Manolov V.P., "Aspects of CO₂ laser engraving of printing cylinders", *Appl. Optics*, 38, 9, 1759-1763 (1999).
40. Koleva M., **Atanasov P.**, Tomov R., Vankov O., Matin C., Ristoscu C., Mihailescu I., Iorgov D., Angelova S., Ghelev Ch., Mihailev N., "Pulsed laser deposition of barium hexaferrite (BaFe₁₂O₁₉) thin films", *Appl. Surf. Sci.*, 154-155, 485-491 (2000).
41. Atanasov P.A., Tomov R.I., Perriere J., Eason R.W., Vainos N., Klini A., Zherikhin A., Millon E., "Growth of Nd:potassium gadolinium tungstate thin-film waveguides by pulsed laser deposition", *Appl. Phys. Lett.*, 76, 18, 2490-2492 (2000).
42. Tomov R.I., Kabadjova T.D., **Atanasov P.A.**, Tonchev S., Kaneva M., Zherikhin A., Eason R.W., "LiNbO₃ optical waveguides deposited on sapphire by electric-field-assisted pulsed laser deposition", *Vacuum*, 58, 2-3, 396-403 (2000).
43. Koleva M.E., Tomov R.I., Zotova S., **Atanasov P.A.**, Martin C., Ristoscu C., Mihailescu I.N., "Growth and characterization of pulsed laser-deposited Mn-Zn ferrite thin films", *Vacuum*, 58, 2-3, 294-299 (2000).
44. Atanasov P.A., Imamova S.E., Hugel H., Abeln T., "Optical parameters of silicon carbide and silicon nitride ceramics in 0.2-1.3 μm spectral range", *J. Appl. Phys.*, 88, 8, 4671-4675 (2000).
45. Koleva M.E., Zotova S., **Atanasov P.A.**, Tomov R.I., Ristoscu C., Nelea V., Chiritescu C., Gyorgy E., Ghica E., Mihailescu I.N., "Sr-ferrite thin films grown on a sapphire by a pulsed laser deposition", *App. Surf. Sci.*, 168, 108-113 (2000).
46. Eugenieva E.D., **Atanasov P.A.**, "Waveguide properties of optical thin films grown by pulsed laser deposition", *Mater. Sci. in Semiconductor Proc.*, 3, 575-579 (2000).
47. Atanasov P.A., Eugenieva E.D., Nedialkov N.N., "Laser drilling of silicon nitride and alumina ceramics: numerical and experimental study", *J. Appl. Phys.*, 89, 4, 2013-2016 (2001).
48. Atanasov P.A., Nedialkov N.N., Imamova S.E., Hugel H., Dausinger F., Ruf A., "Molecular dynamics simulation of ultrashort laser ablation of nickel", *Proc. SPIE*, 4397, 290-294 (2001).
49. Furlinski G.I., **Atanasov P.A.**, Serbezov V.S., Peshev Z.Y., "Atomic fluorine laser excited directly by sliding discharge", *Proc. SPIE*, 4397, 99-103 (2001).
50. Serafetinides A.A., Chourdakis G., **Atanasov P.A.**, "Quasi-simultaneous ultraviolet and infrared emission from a plasma cathode TEA laser", *Optics & Laser Tech.*, 33, 85-90 (2001).
51. Atanasov P.A., Perea A., Jiménez de Castro M., Chaos J.A., Gonzalo J., Afonso C.N., Perrière J., "Luminescence properties of thin films prepared by laser

- ablation of Nd-doped potassium gadolinium tungstate", *Appl. Phys.A: Mater. Sci. & Proces.*, A 74, 1, 109-113 (2002).
52. **Atanasov P.A.**, Nedialkov N.N., Imamova S.E., Ruf A., Hügel H., Dausinger F., Berger P., "Laser ablation of Ni by ultrashort pulses: molecular dynamics simulation", *Appl. Surf. Sci.*, 186/1-4, 369-373 (2002).
53. Koleva M.E., Tomov R.I., **Atanasov P.A.**, Ghelev Ch.G., Vankov O.I., Mihailov N.I., Lancok J., Jelinek M., "Simultaneous laser-magnetic field treatment of SrFe₁₂O₁₉ thin films grown by pulsed laser deposition", *Appl. Surf. Sci.*, 186/1-4, 463-468 (2002).
54. **Atanasov P.A.**, Jiménez de Castro M., Perea A., Perrière J., Gonzalo J., Afonso C.N., "Composition and optical properties of thin films prepared by laser ablation of Nd:KGW", *Appl. Surf. Sci.*, 186/1-4, 469-473 (2002).
55. Jelinek M., Lancok J., Pavelka M., **Atanasov P.A.**, Mackova A., Flory F., Escoubas L., Garapon C., "Optical and waveguiding properties of Nd:KGW films grown by pulsed laser deposition", *Appl. Phys.A: Mater. Sci. & Proces.*, A 74, 481-485 (2002).
56. Kuneva M.K., Tonchev S.H., Sendova-Vasileva M., Dimova-Malinovska D., **Atanasov P.A.**, "IR-spectra of waveguides in LiNbO₃ obtained by using different melts", *Sensors & Actuators A*, 99, 1-2, 154-159 (2002).
57. Dikovska A.Og., **Atanasov P.A.**, Tomov R.I., Tonchev S.H., Sapundjiev D.Ts., "Er:Y₂O₃ thin films grown by pulsed laser deposition", *Vacuum*, 69, 1-3, 273-276 (2003).
58. Okato T., **Atanasov P.A.**, Obara M., "Pulsed laser deposition of Nd:KGd(WO₄)₂ waveguide in Ar and O₂ environment", *Appl. Phys.A: Mater. Sci. & Proces.*, 77, 3-4, 395-398 (2003).
59. Obara M., **Atanasov P.A.**, "Ablation processing of advanced materials by tailored femtosecond laser pulse", *Proc. SPIE*, 5226, 315-326 (2003).
60. Okato T., **Atanasov P.A.**, Tomov R.I., Obara M., "Fabrication of Nd:KGW film on Si with CeO₂ buffer layer", *Appl. Phys.A: Mater. Sci. & Proces.*, 77, 6, 775-778 (2003).
61. Koleva M.E., Tomov R.I., **Atanasov P.A.**, Vankov O.I., Mihailov N.I., "Modification of pulsed laser deposited yttrium iron garnet thin films by post-deposition annealing procedures", *Proc. SPIE*, 5226, 357-361 (2003).
62. Imamova S.E., Nedialkov N.N., **Atanasov P.A.**, Ruf A., Berger P., Dausinger F., "Ultrashort laser ablation of iron: molecular dynamics simulation", *Proc. SPIE*, 5226, 347-351 (2003).
63. Nedialkov N.N., **Atanasov P.A.**, Sawczak M., Slivinski G., "Ablation of ceramics with ultraviolet, visible and infrared nanosecond laser pulses", *Proc. SPIE*, 5120, 703-708 (2003).
64. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, Heusel G., Breitling D., Ruf A., Hügel H., Dausinger F., Berger P., "Laser ablation of iron by ultrashort pulses", *Thin Solid Films*, 453/454, 496-500 (2004).
65. **Atanasov P.A.**, Okato T., Tomov R.I., Obara M., "(110) Nd:KGW waveguide films grown on Si/CeO₂ substrates by pulsed laser deposition", *Thin Solid Film.*, 453/454, 1, 150-153 (2004).
66. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, "Ablation of metals by ultrashort laser pulses", *J. Phys. D: Appl. Phys.*, 37, 638-643 (2004).
67. Nedialkov N.N., **Atanasov P.A.**, Imamova S.E., Ruf A., Berger P., Dausinger F., "Dynamics of the ejected material in ultrashort laser ablation of metals", *Appl. Phys.A: Mater. Sci. & Proces.*, 79, 4-6, 1121-1125 (2004).
68. Dikovska A.Og., Okato T., **Atanasov P.A.**, Obara M., "Cathodoluminescent properties of pulsed laser deposited Er,Yb co-doped Y₂O₃ thin films", *J. Phys. D: Appl. Phys.*, 37, 21, L41-L44 (2004).
69. Okato T., Osada T., Obara M., **Atanasov P.A.**, Tomov R.I., "Fabrication of low-loss Nd:KGW laser waveguide on silicon substrate", *Proc. SPIE*, 5448 part 1, 616-623 (2004).
70. Imamova S.E., **Atanasov P.A.**, Nedialkov N.N., "Molecular dynamics simulation using pair and many body interatomic potentials: ultrashort laser ablation of Fe", *Nucl. Instr. Meth. Phys. Res. B*, 227, 4, 490-498 (2005).
71. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, Berger P., Dausinger F., "Mechanism of ultrashort laser ablation of metals: molecular dynamics simulation", *Appl. Surf. Sci.*, 247, 1-4, 243-248 (2005).
72. Stankova N.E., **Atanasov P.A.**, Stanimirova T.J., Dikovska A.Og., Eason R.W., "Thin (001) tungsten trioxide films grown by laser deposition", *Appl. Surf. Sci.*, 247, 1-4, 401-405 (2005).
73. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, Berger P., Dausinger F., "Deep hole drilling in Fe by ultrashort laser pulses: molecular dynamics simulation study", *Proc. SPIE*, 5777, 846-849 (2005).
74. Nedialkov N.N., **Atanasov P.A.**, Sawczak M., Śliwiński G., "Laser drilling of AlN ceramics using nanosecond pulses", *Proc. SPIE*, 5777, 850-854 (2005).
75. Stankova N.E., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Socol G., Mihaiilescu I., "Growth of anatase TiO₂ thin films by laser ablation", *Proc. SPIE*, 5830, 60-64 (2005).
76. Okato T., Obara M., **Atanasov P.A.**, "Fabrication of Nd:KGW waveguides by use of nozzle-gas-assisted PLD method", *Proc. SPIE*, 5830, 70-74 (2005).
77. Dikovska A.Og., **Atanasov P.A.**, Tomov R.I., Dimitrov I.G., "Ultraviolet annealing of thin Y₂O₃ films grown by pulsed laser deposition", *Proc. SPIE*, 5830, 75-79 (2005).
78. Nedialkov N.N., **Atanasov P.A.**, Breitling D., Heusel G., Dausinger F., "Ablation of metals by ultrashort laser pulses", *Proc. SPIE*, 5830, 80-84 (2005).
79. Stanimirova T.J., **Atanasov P.A.**, Dimitrov I.G., Dikovska A.Og., Investigation of the structural and optical properties of tin oxide films grown by pulsed laser deposition", *J. Optoelectronics & Advanced Mater.*, 7, 3, 1335-1340 (2005).
80. Dikovska A.Og., **Atanasov P.A.**, Vasilev C., Dimitrov I.G., Stoyanov T.R., "Thin ZnO films produced by pulsed laser deposition", *J. Optoelectronics & Advanced Mater.*, 7, 3, 1329-1334 (2005).
81. Amoruso S., Bruzzese R., Vitello M., Nedialkov N.N., **Atanasov P.A.**, "Experimental and theoretical investigation of femtosecond laser ablation of Al in vacuum", *J. Appl. Phys.*, 98 (4) 1-7 (2005).
82. Nedialkov N.N., **Atanasov P.A.**, "Molecular dynamics simulation study of deep hole drilling in iron by ultrashort laser pulses", *Appl. Surf. Sci.*, 252, 4411-4415 (2006).
83. Dikovska A.Og., **Atanasov P.A.**, Dimitrov I.G., Vasilev C., Kocourek T., Jelinek M., "Structural and optical properties of Er, Yb co-doped Y₂O₃ thin films", *Appl. Surf. Sci.*, 252, 4569-4572 (2006).
84. Hirayama Y., **Atanasov P.A.**, Obara M., Nedialkov N.N., Imamova S.E., "Femtosecond laser ablation of crystalline iron: experimental investigation and molecular dynamics simulation", *Japan. J. Appl. Phys.*, 45 (2A), 792-797 (2006).
85. Dikovska A.Og., **Atanasov P.A.**, Jiménez de Castro M., Perea A., Gonzalo J., Afonso C.N., García López J., "Optically active Er³⁺-Yb³⁺ codoped Y₂O₃ films produced by pulsed laser deposition", *Thin Solid Films*, 500 (1-2), 336-340 (2006).
86. Mazingue Th., Escoubas L., Spalluto L., Flory F., Jacquoton P., Perrone A., Kaminska E., Piotrowska A., Mihaiilescu I., **Atanasov P.**, "Optical characterizations of ZnO, SnO₂, and TiO₂ thin films for butane detection", *Appl. Optics*, 45, 7, 1425-1435 (2006).
87. Dikovska A.Og., Tonchev S.H., Vasilev C., **Atanasov P.A.**, "Fabrication and study of periodically structured Y₂O₃ waveguides", *Plasma Proc. & Polymers*, 3, 201-204 (2006).
88. **Atanasov P.A.**, Dikovska A.Og., Perriere J., Defourneau R.M., "Composition, structural and electrical properties of thin films prepared by laser ablation of neodymium-doped potassium gadolinium tungstate", *Thin Solid Films*, 515, 3052-3056 (2007).
89. Amoruso S., Bruzzese R., Wang X., Nedialkov N.N., **Atanasov P.A.**, "Femtosecond laser ablation of nickel in vacuum", *J. Phys. D: Appl. Phys.*, 40, 331-340 (2007).
90. **Atanasov P.A.**, Takada H., Nedialkov N.N., Obara M., "Nanohole processing on silicon substrate by femtosecond laser pulse with localized surface plasmon polariton", *Appl. Surf. Sci.*, 253, 19, 8304-8308 (2007).
91. Nedialkov N.N., **Atanasov P.A.**, Amoruso S., Bruzzese R., Wang X., "Laser ablation of metals by femtosecond pulses: theoretical and experimental study", *Appl. Surf. Sci.*, 253, 19, 7761-7766 (2007).
92. Peeva A., Dikovska A.Og., **Atanasov P.A.**, Jiménez de Castro M., Skorupa W., "Rare-earth implanted Y₂O₃ thin films", *Appl. Surf. Sci.*, 253, 19, 8165-8168 (2007).
93. Dikovska A.Og., **Atanasov P.A.**, Stoyanov T.R., Andreev A.Tz., Karakoleva E.I., Zafirova B.S., "Pulsed laser deposited ZnO film on side-polished fiber as a gas sensing element", *Appl. Optics*, 46, 13, 2481-2485 (2007).
94. Amoruso S., Bruzzese R., Wang X., Nedialkov N.N., **Atanasov P.A.**, "An analysis of the dependence on photon energy of the process of nanoparticles generation by femtosecond laser ablation in a vacuum", *Nanotechnology*, 18, 14, 145612, 1-6 (2007).
95. Stanimirova T.J., **Atanasov P.A.**, Stankova M., Dimitrov I.G., Stoyanov T.R., "Optical and structural properties of undoped and palladium doped indium tin oxide films grown by pulsed laser deposition", *Appl. Surf. Sci.*, 253, 19, 8206-8209 (2007).
96. **Atanasov P.A.**, Nedialkov N.N., "Influence of the processing parameters on the ultrashort laser ablation of metals", *Proc. SPIE*, 6346, part 2, 2Y 1-6 (2007).
97. Nedialkov N.N., Sakai T., **Atanasov P.A.**, Obara M., "Surface modification by localized surface plasmon polaritons excited by femtosecond laser pulse", *Chin. Opt. Lett.*, 5, S1-S4 (2007).
98. Dikovska A.Og., **Atanasov P.A.**, Tonchev S.H., Ferreira J., Escoubas L., "Periodically structured ZnO thin films for optical gas sensor application", *Sensors and Actuators A*, 140 (1), 19-23 (2007).

99. Nedyalkov N.N., **Atanasov P.A.**, Obara M., "Near-field properties of a gold nanoparticle array on different substrates excited by femtosecond laser", *Nanotechnology*, 18, 30, 305703 (2007).
100. **Atanasov P.A.**, Nedyalkov N.N., Sakai T., Obara M., "Localization of the electromagnetic field in the vicinity of Au nanoparticles: surface modification of different substrates", *Appl. Surf. Sci.*, 254, 4, 794-798 (2007).
101. Nedialkov N., Sawczak M., Jendrzejewski R., **Atanasov P.**, Martin M., Śliwiński G., "Analysis of surface and material modifications caused by laser drilling of AlN ceramics", *Appl. Surf. Sci.*, 254, 4, 893-897 (2007).
102. Dikovska Og., **Atanasov P.A.**, Andreev A.Ts., Zafirova B.S., Karakoleva E.I., Stoyanov T.R., "ZnO thin film on side polished optical fiber for gas sensing applications", *Appl. Surf. Sci.*, 254, 4, 1087-1090 (2007).
103. Koleva M.E., **Atanasov P.A.**, Nedialkov N.N., Fukuoka H., Obara M., "Role of vanadium content in ZnO thin films grown by pulsed laser deposition", *Appl. Surf. Sci.*, 254, 4, 1228-1231 (2007).
104. Stankova N.E., Dimitrov I.G., Stoyanov T.R., **Atanasov P.A.**, "Optical and gas sensing properties of thick TiO₂ films grown by laser deposition", *Appl. Surf. Sci.*, 254, 4, 1268-1272 (2007).
105. Andreev A.Tz., Zafirova B.S., Karakoleva E.I., Dikovska A.O., **Atanasov P.A.**, "Highly sensitive refractometers based on a side-polished single-mode fibre coupled with a metal oxide thin-film planar waveguide", *J. Opt. A: Pure Appl. Opt.*, 10, 035303 (2008).
106. Dimitrov I.G., Dikovska A.Og., **Atanasov P.A.**, Stoyanov T.R., Vasilev T., "Al doped ZnO thin films for gas sensor application", *J. of Phys. Conf. Ser.*, 113, 113/1/012044, 012044 (2008).
107. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Obara M., "Formation and initial evolution of nanoparticles at ultrashort laser ablation of gold: molecular dynamics simulation", *Proc. SPIE*, 7027, 702709 (2008).
108. Obara M., Sakano T., Sakai T., Nugroho H., Miyanishi T., Tanaka Y., Saiki T., Nedyalkov N.N., **Atanasov P.A.**, "Nanostructure processing by near-field with femtosecond laser excitation: process switching and SERS application", *Proc. SPIE*, 7027, 702703 (2008).
109. Sakano T., Tanaka Y., Nishimura R., Nedyalkov N.N., **Atanasov P.A.**, Saiki T., Obara M., "Surface enhanced Raman scattering properties using Au-coated ZnO nanorods grown by two-step, off-axis pulsed laser deposition", *J. Phys. D: Appl. Phys.*, 41 (23), 235304 (2008).
110. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Obara M., "Near field localization mediated by a single gold nanoparticle embedded in transparent matrix: application for surface modification", *Appl. Surf. Sci.*, 255, 5125-5129 (2009).
111. Stankova N.E., Dimitrov I.G., Stoyanov T.R., **Atanasov P.A.**, Kovacheva D., "Structure and optical anisotropy of pulsed laser deposited TiO₂ films for optical applications", *Appl. Surf. Sci.*, 255, 5275-5279 (2009).
112. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Petrov K.A., Avdeev G.V., "Pulsed laser deposited Er³⁺,Yb³⁺:YVO₄ waveguides on MgO/Si substrates", *Appl. Surf. Sci.*, 255, 5284-5287 (2009).
113. Nikolov A.S., **Atanasov P.A.**, Milev D.R., Stoyanov T.R., Deleva A.D., Peshev Z.J., "Synthesis and characterization of TiO₂ nanoparticles prepared by pulsed-laser ablation of Ti target in water", *Appl. Surf. Sci.*, 255, 5351-5354 (2009).
114. Dikovska A.Og., **Atanasov P.A.**, Dimitrov I.G., Imamova S.E., Vasilev T., "Transparent conductive Al doped ZnO thin films produced by pulsed laser deposition", *J. Optoelectronics & Advanced Mater.*, 11, No. 10, 1517-1520 (2009).
115. Stankova N.E., Dimitrov I.G., **Atanasov P.A.**, T. Sakano, Y. Yata, M. Obara, "Nanostructured optical waveguide films of WO₃ and TiO₂ for photonic gas sensors", *Thin Solid Films*, 518, 4597-4602 (2010).
116. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Petrov K.P., Avdeev G.V., "Er, Yb:YVO₄ waveguides produced by PLD and UVPLD", *Thin Solid Films*, 518, 4726-4729 (2010).
117. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Miyanishi T., Obara M., "Local nanoheating and substrate nanomodification based on enhanced absorption and near-field properties of gold nanoparticles", *J. Optoelectronics & Advanced Mater.*, 12, No. 3, 484-489 (2010).
118. Imamova S.E., Nedyalkov N.N., Dikovska A.O., **Atanasov P.A.**, Sawczak M., Śliwiński G., Jendrzejewski R., Obara M., "Laser nanostructuring of thin Au films for application in surface enhanced Raman spectroscopy", *J. Optoelectronics & Advanced Mater.*, 12, No. 3, 500-504 (2010).
119. Nedyalkov N., Imamova S., **Atanasov P.**, Obara M., "Gold nanoparticles as nanoheaters and nanolenses in the processing of different substrate surfaces", *J. of Phys.: Conference Series*, 223, 1-8, 012035 (2010).
120. Dikovska A.Og., Atanasova G.B., Nedyalkov N.N., Stefanov P.K., **Atanasov P.A.**, Karakoleva E.I., Andreev A.Ts., "Optical sensing of ammonia using ZnO nanostructure grown on a side-polished optical fiber", *Sensors and Actuators B*, 146, 1, 331-336 (2010).
121. Naydenova Ts., **Atanasov P.**, Koleva M., Nedialkov N., Perriere J., Defourneau D., Fukuoka H., Obara M., Baumgart Ch., Zhou Sh., Schmidt H., "Influence of vanadium concentration on the microstructure and magnetic properties of V-doped ZnO thin films", *Thin Solid Films*, 518, 19, 30, 5505-5508 (2010).
122. **Atanasov P.A.**, Nedyalkov N.N., Imamova S.E., Miyanishi T., Obara M., "Substrate nanomodification based on heating and near field properties of gold nanoparticles", *Int. J. of Nanoparticles*, 3 (3), 206-219 (2010).
123. Imamova S., Nedyalkov N., Dikovska A., **Atanasov P.**, Sawczak M., Jendrzejewski R., Śliwiński G., Obara M., "Near field properties of nanoparticle arrays fabricated by laser annealing of thin Au and Ag films", *Appl. Surf. Sci.*, 257 (3), 1075-1079 (2010).
124. Miyanishi T., Terakawa M., Obara M., Nedyalkov N.N., **Atanasov P.A.**, "Directionally controlled plasmon excitation in gold nanoparticles for near-field nanopatterning by femtosecond laser", *Proc. SPIE*, 7751, 77511X_1-10 (2010).
125. Dikovska A.Og., Dimitrov I.G., Alexandrov M.T., Nedyalkov N.N., **Atanasov P.A.**, "Silver nanoparticles produced by PLD in vacuum", *Proc. SPIE*, 7751, 775120_1-6 (2010).
126. **Atanasov P.**, Nedyalkov N., Nikolov A., Nikov R., "Laser ablation as a fabrication method for metal nanoparticles", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics*, 37-44 (2010).
127. Imamova S., Nedyalkov N., Nikov R., **Atanasov P.**, "Laser nanostructuring of bimetal thin films", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics*, 79-83 (2010).
128. Dimitrov I., Nedyalkov N., **Atanasov P.**, "Optical properties of gold nanoparticles arrays", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics*, 84-92 (2010).
129. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Tanaka Y., Obara M., "Interaction between ultrashort laser pulses and gold nanoparticles: nanoheater and nanolens effect", *J. of Nanopart. Res.*, 13, 3, 2181-2193 (2011).
130. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Toshkova R.A., Gardeva E.G., Yossifova L.S., Alexandrov M.T., Obara M., "Interaction of gold nanoparticles with nanosecond laser pulses: Nanoparticle heating", *Appl. Surf. Sci.*, 275, 5456-5459 (2011).
131. Nikolov A.S., Nedyalkov N.N., Nikov R.G., **Atanasov P.A.**, Alexandrov M.T., "Characterization of Ag and Au nanoparticles created by nanosecond pulsed laser ablation in double distilled water", *Appl. Surf. Sci.*, 257, 5278-5282 (2011).
132. Nikov R.G., Nikolov A.S., **Atanasov P.A.**, "Preparation of gold and silver nanoparticles by pulsed laser ablation of solid target in water", *Proc SPIE*, 7747, 774708_1-8 (2011).
133. Grochowska K., Nedyalkov N., **Atanasov P.**, Śliwiński G., "Nanostructuring of thin Au films by means of short UV laser pulses", *Opto-electronics Review*, 19 (3), 327-332 (2011).
134. Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A.**, "Fabrication of ZnO nanorods using metal nanoparticles as growth nuclei", *Materials Sci. and Engineering B*, 176, 1548-1551 (2011).
135. Amoruso S., Nedyalkov N.N., Wang X., Ausanio G., Bruzzese R., **Atanasov P.A.**, "Ultrafast laser ablation of gold thin film targets", *J. Appl. Phys.*, 110, 124303, 1-4 (2011).
136. Nedyalkov N.N., Nikov Ru., Dikovska A.Og., **Atanasov P.A.**, Obara G., Obara M., "Laser annealing of bimetal thin films: a route of fabrication of alloyed nanostructures", *Appl. Surf. Sci.*, 258, 23, 9162-9166 (2012).
137. Nikov R.G., Nikolov A.S., Nedyalkov N.N., Dimitrov I.G., **Atanasov P.A.**, Alexandrov M.T., "Stability of contamination-free gold and silver nanoparticles produced by nanosecond laser ablation of solid targets in water", *Appl. Surf. Sci.*, 258, 23, 9318-9322 (2012).
138. Koleva M.E., Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A.**, Bliznakova I.A., "Enhancement of ZnO photoluminescence by laser nanostructuring of Ag underlayer", *Appl. Surf. Sci.*, 258, 23, 9181-9185 (2012).
139. Dikovska A.Og., Nedyalkov N.N., Imamova S.E., Atanasova G.B., **Atanasov P.A.**, "Au-coated ZnO nanostructures for surface enhanced Raman spectroscopy applications", *Quantum Electronics*, 42 (3), 258 - 261 (2012).
140. Nedyalkov N.N., **Atanasov P.A.**, Toshkova R.A., Gardeva E.G., Yossifova L.S., Alexandrov M.T., Karashanova D., "Laser heating of gold nanoparticles: Photothermal cancer cell therapy", *Progress in Biomedical Optics and Imaging – Proc. of SPIE*, 8427, art. no. 84272P (2012).
141. Dikovska A.Og., Tsankov N.Ts., Toshkova R., Gardeva E., Yossifova L., Nedyalkov N.N., **Atanasov P.A.**, "Fabrication of ZnO nanostructures and their application in biomedicine", *Proc. SPIE*, 8424, 8424Q1-7 (2012).
142. Nikov A.S., Nedyalkov N.N., Nikov R.G., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., "Investigation of Ag nanoparticles produced by nanosecond pulsed laser ablation in water", *Appl. Phys. A*, 109, 2, 315-322 (2012).
143. Nedyalkov N.N., Dikovska A., Dimitrov I., Nikov Ru., **Atanasov P.A.**, Toshkova R.A., Gardeva E.G., Yossifova L.S., Alexandrov M.T., "Far- and near-field optical

- properties of gold nanoparticle ensembles", *Quantum Electronics*, 42 (12), 1123–1127 (2012).
144. Grochowska K., Śliwiński G., Iwulska A., Sawczak M., Nedyalkov N., **Atanasov P.**, Obara G., Obara M., "Engineering Au nanoparticle arrays on SiO₂ glass by pulsed UV laser irradiation", *Plasmonics*, 8, 1, 105-113 (2013).
145. Nikov Ru., Nedyalkov N., **Atanasov P.A.**, Terakawa M., Shimizu H., Obara M., "Tuning the optical properties of gold nanostructures fabricated on flexible substrates", *Appl. Surf. Sci.*, 264, 779-782 (2013).
146. Nikov R.G., Nikolov A.S., Nedyalkov N.N., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., "Processing condition influence on the characteristics of gold nanoparticles produced by pulsed laser ablation in liquids", *Appl. Surf. Sci.*, 274, 105-109 (2013).
147. Nikolov A.S., Nikov R.G., Dimitrov I.G., Nedyalkov N.N., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., "Modification of the silver nanoparticles size-distribution by means of laser light irradiation of their water suspensions", *Appl. Surf. Sci.*, 280, 55-59 (2013).
148. Hirano K., Shimizu H., Enami T., Terakawa M., Obara M., Nedyalkov N.N., **Atanasov P.A.**, "Plasmonic nanometric optical tweezers in an asymmetric space of Gold nanostructured substrates", *Journal of Nanotechnology in Diagnosis and Treatment*, 1, 2-10 (2013).
149. Balansky R., Longobardi M., Ganchev G., Ilcheva M., Nedyalkov N., **Atanasov P.**, Toshkova R., De Flora S., Izzotti A., "Transplacental clastogenic and epigenetic effects of gold nanoparticles in mice", *Mutation Research - Fundamental & Molecular Mechanisms of Mutagenesis*, 751, 42-48 (2013).
150. Amoruso S., Nedyalkov N.N., Wang X., Ausanio G., Buzzese R., **Atanasov P.A.**, "Ultrashort-pulse laser ablation of gold thin film targets: theory and experiment", *Thin Solid Films*, 550, 190-198 (2014).
151. **Atanasov P.A.**, Nedyalkov N.N., Dikovska A.Og., Nikov Ru., Amoruso S., Wang X., Buzzese R., Hirano K., Shimizu H., Terakawa M., Obara M., "Noble metallic nanostructures: preparation, properties, applications", *Phys.: Conf. Ser.*, 514, 012024, 1-8 (2014).
152. Nikolov A.S., Nedyalkov N.N., Nikov R.G., Dimitrov I.G., **Atanasov P.A.**, Maximova K., Delaporte Ph., Kabashin A., Alexandrov M.T., Karashanova D.B., "Processing conditions in pulsed laser ablation of metals in liquid for fabrication of nanowire networks", *Appl. Surf. Sci.*, 302, 243-249 (2014).
153. Nedyalkov N., Nikolov A., **Atanasov P.**, Alexandrov M., Terakawa M., Shimizu H., "Nanostructured Au film produced by pulsed laser deposition in air at atmospheric pressure", *Optics & Laser Technology*, 64, 41-45, (2014).
154. **Atanasov P.A.**, Nedyalkov N.N., Valova E.I., Georgieva Zh.S., Artyanov S.A., Kolev K.N., Amoruso S., Wang X., Buzzese R., Sawczak M., Śliwiński G., "Fs-laser processing of polydimethylsiloxane and metallization", *Journal of Applied Physics*, 116, 2, 023104 (2014).
155. Grochowska K., Siuzdak K., **Atanasov P.A.**, Bittencourt C., Dikovska A., Nedyalkov N.N., Śliwiński G., "Properties of plasmonic arrays produced by pulsed-laser nanostructuring of thin Au films", *Beilstein J. Nanotechnol.*, 5, 2102–2112 (2014).
156. Nedyalkov N., Nikov Ru., Koleva M., **Atanasov P.A.**, Constantinescu C., Delaporte Ph., Grojo D., "Nanoparticle-decorated ceramics as substrate in surface enhanced Raman spectroscopy", *Appl. Surf. Sci.*, 336, 16-20 (2015).
157. Nikov R.G., Nikolov A.S., Nedyalkov N.N., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., "Formation of bimetallic nanoparticles by pulsed laser ablation of multicomponent thin films in water", *Proc. SPIE*, 9447, 94470M_1-7(2015).
158. Stankova N.E., **Atanasov P.A.**, Nedyalkov N.N., Stoyanchov T.R., Kolev K.N., Valova E.I., Georgieva J.S., Artyanov St.A., Amoruso S., Wang X., Buzzese R., Grochowska K., Śliwiński G., Baert K., Hubin A., Delplancke M.P., Dille, J., "Fs- and ns-laser processing of polydimethylsiloxane (PDMS) elastomer: comparative study", *Appl. Surf. Sci.*, 336, 321-328 (2015).
159. Artyanov S., Stankova N.E., **Atanasov P.A.**, Valova E., Kolev K., Georgieva J., Steenhaut O., Baert K., Hubin A., "XPS and μ-Raman study of nanosecond-laser processing of polydimethylsiloxane (PDMS)", *Nucl. Instr. Meth. Phys. Res. B*, 360, 30-35 (2015).
160. Stankova N.E., **Atanasov P.A.**, Nikov Ru.G., Nikov R.G., Nedyalkov N.N., Stoyanchov T.R., Fukata N., Kolev K.N., Valova E.I., Georgieva J.S., Artyanov St.A., "Optical properties of polydimethylsiloxane (PDMS) during nanosecond laser processing", *Appl. Surf. Sci.*, 374, 96-103 (2016).
161. Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Hirsch D., Rauschenbach B., Grochowska K., Śliwiński G., "Characterization of Ag nanostructures fabricated by laser-induced dewetting of thin films", *Appl. Surf. Sci.*, 374, 36-41 (2016).
162. **Atanasov P.A.**, Stankova N.E., Nedyalkov N.N., Fukata N., Hirsch D., Rauschenbach B., Amoruso S., Wang X., Kolev K.N., Valova E.I., Georgieva J.S., Artyanov St.A., "Fs-laser processing of medical grade polydimethylsiloxane (PDMS)", *Appl. Surf. Sci.*, 374, 229-234 (2016).
163. **Atanasov P.A.**, Stankova N.E., Nedyalkov N.N., Stoyanchov T.R., Nikov Ru.G., Fukata N., Gerlach J.W., Hirsch D., Rauschenbach B., "Properties of ns-laser processed polydimethylsiloxane (PDMS)", *J of Phys.: Conf. Ser.*, 700, 012023, 1-5 (2016).
164. Koleva M.E., Nedyalkov N.N., **Atanasov P.A.**, Gerlach J.W., Hirsch D., Rauschenbach B., Fukata N., Jevasuwan W., "Porous plasmonic nanocomposites for SERS substrates fabricated by two-step method", *Journal of Alloys and Compounds*, 665, 282-287 (2016).
165. Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Karashanova D.B., "Characterization of colloidal silver nanostructures produced by pulsed laser ablation in different liquids", *Proc. SPIE-International Society for Optics and Photonics*, 102260E-102260E (2017).
166. Nikov Ru.G., Dikovska A.O., Nedyalkov N.N., **Atanasov P.A.**, "Fabrication of Au nanostructures by pulsed laser deposition in air", *Proc. SPIE-International Society for Optics and Photonics*, 102260F-102260F (2017).
167. Nedyalkov N., Nikov R., Nikov A., **Atanasov P.**, Nakajima Y., Terakawa M., Sawczak M., Grochowska K., Śliwiński G., "Gold nanostructures for detection of pesticides, nitrates and drugs using surface enhanced Raman spectroscopy", *Proc. SPIE*, 102260B-102260B (2017).
168. Sawczak M., Zyskowski M., Karczewski J., **Atanasov P.A.**, Nedyalkov N.N., Nikov Ru.G., Stankova N.A., Śliwiński G., "Nanoparticle over mirror plasmonic structures prepared with use of Au colloid produced by laser ablation in water", *Proc. SPIE-International Society for Optics and Photonics*, 102260G-102260G (2017).
169. **Atanasov P.A.**, Nedyalkov N.N., Nikov Ru., Fukata N., Jevasuwan W., Subramani T., Hirsch D., Rauschenbach B., „SERS of insecticides and fungicides assisted by Au and Ag nanostructures produced by laser techniques", *Intern. J. of Environmental & Agriculture Res.*, 3, 4, 61-69 (2017).
170. Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Karashanova D.B., "Laser-assisted fabrication and size distribution modification of colloidal gold nanostructures by nanosecond ablation in different liquids", *Appl. Phys. A*, 123, 490 (2017).
171. Nedyalkov N., Dikovska A.O., Nikov R., **Atanasov P.A.**, Śliwiński G., Hirsch D., Rauschenbach B., "Laser-induced nanoparticles fabrication on paper", *Appl. Phys. A*, 123, 570 (2017).
172. Nikov Ru.G., Dikovska A.O., Nedyalkov N.N., **Atanasov P.A.**, Atanasova G., Hirsch D., Rauschenbach B., "ZnO nanostructures produced by pulsedlaser deposition in open air", *Appl. Phys. A*, 123, 657 (2017).
173. Nikov Ru.G., Dikovska A.Og., Nedyalkov N.N., Avdeev G.V., **Atanasov P.A.**, "Au nanostructure fabrication by pulsed laser deposition in open air: Influence of the deposition geometry", *Beilstein J. Nanotechnol.*, 8, 2438-2445 (2017).
174. **Atanasov P.A.**, Nedyalkov N.N., Nikov Ru.G., Fukata N., Jevasuwan W., Subramani T., Hirsch D., Rauschenbach B., "SERS analyses of thiamethoxam assisted by Ag films and nanostructures produced by laser techniques", *J of Raman spectroscopy*, 49 (3) 397-403 (2018).
175. **Atanasov P.A.**, Nedyalkov N.N., Nikov Ru.G., Grüner Ch., Rauschenbach B., Fukata N., "SERS analyses trough Ag nanostructures produced by ion-beam deposition techniques", *J of Phys.: Conf. Ser.* 992, 012050, 1-6 (2018).
176. Artyanov St., Valova E., Konstantin K., Tatchev D., **Atanasov P.**, Stankova N., "Electroless deposition of nickel on biocompatible poly(dimethylsiloxane) after a laser processing as a pretreatment", *Advanced Materials Letters*, 9(2), 101-106 (2018).
177. Nikov Ru., Dikovska A., Nedyalkov N., **Atanasov P.**, "Magnetic-particles-composed wire structures produced by pulsed laser deposition in a magnetic field", *J of Phys.: Conf. Ser.* 992, 012025, 1-6 (2018).
178. Nedyalkov N., Stankova N.E., Valova M.E., Nikov R., **Atanasov P.**, Grozeva M., Iordanova E., Yankov G., Aleksandrov L., Iordanova R., Karashanova D., "Optical properties modification induced by laser radiation in noble-metal-doped glasses", *J of Phys.: Conf. Ser.* 992, 012047, 1-6 (2018).
179. Stankova N.E., **Atanasov P.A.**, Nedyalkov N.N., Tatchev Dr., Kolev K.N., Valova E.I., Artyanov St.A., Grochowska K., Śliwiński G., Fukata N., Hirsch D., Rauschenbach B., "Laser-induced surface modification of biopolymers - micro/nanostructuring and functionalization", *J of Phys.: Conf. Ser.* 992, 012051, 1-6 (2018).
180. Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Karashanova D.B., "Synthesis of bimetallic nanostructures by nanosecond laser ablation of multicomponent thin films in water", *J of Phys.: Conf. Ser.* 992, 012046, 1-6 (2018).
181. Stefanov V.J., **Atanasov P.A.**, "Effect of adding chloroform, ether and acetone in small quantities to CO₂ laser output power", *C.R. Acad. Bulg. Sci.*, 22, 8, 867-870 (1969).
182. **Atanasov P.A.**, "Effective lifetime of the CO₂ lower laser level (10 0) in presence of organic admixtures", *C.R. Acad. Bulg. Sci.*, 28, 10, 1355-1358 (1975).
183. **Atanasov P.A.**, "Effect of small quantities of organic vapors on CO₂ laser plasma", *C.R. Acad. Bulg. Sci.*, 28, 9, 1183-1186 (1975).
184. Атанасов П.А., Веков И.Г., "Регулируем трифазен изправител за мощнни лазери", *Е. и П.*, N10, 32-33 (1983).
185. Атанасов П.А., Кузьмин Г.П., "Скользящий разряд в CO₂ лазерах", III School on Quant. Electron., "Laser Physics and Applications", inv. lecture, 62 - 85, Varna (1984).
186. **Atanasov P.A.**, Nedialkov N.N., Amoruso S., Buzzese R., Wang X., "Ultrashort laser ablation of nickel in vacuum: material relaxation and nanoparticles generation", *C.R. Acad. Bulg. Sci.*, 61, No 7, 863-870 (2008).
187. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Toshkova R.A., Gardeva E.G., Yossifova L.S., Alexandrov M.T., "Nanosecond laser heating of gold nanoparticles".

- Application in photothermal cancer cell therapy", Comptes Rend. de L'Acad. Bulg. des Sci., 63 (5) 767-774 (2010).**
188. Nikov R.G., Nedjalkov N.N., Nikolov A.S., **Atanasov P.A.**, Gerlach J.W., Rauschenbach B., "Laser ablation in liquid: a route for fabrication of noble metal and oxide nanostructures composed colloids", C.R. Acad. Bulg. Sci., 70, 12, 1737-1746 (2017).

Патенти и авторски свидетелства

1. Атанасов П.А., Петрова М.Д., "Газов лазер с напречен разряд", **Авт. свидетелство № 31450** (1980).
2. Атанасов П.А., Петрова М.Д., "Газов лазер с бърз проток на газа", **Авт. свидетелство № 33145** (1981).
3. Атанасов П.А., Павлов Е.Л., "Метод за управляване на термонапреженията при лазерно терморазделяне на стъклени цилиндрични изделия", **Патент № 35234** (1983).
4. Атанасов П.А., Павлов Е.Л., "Метод за рязане на стъклени цилиндрични изделия", **Авт. свидетелство № 35233** (1983).
5. Атанасов П.А., Груев Ф.М., "Възел за завъртане оста на лазерен резонатор на 180°", **Авт. свидетелство № 37824** (1984).
6. Атанасов П.А., Николова И.Г., Митуцов В.Ц., "Пренастройвам вълноводен лазер", **Авт. свидетелство № 88844** (1990).
7. Атанасов П.А., Митуцов В.Ц., "Държател за лазерно огледало", **С-во за пром. образец № 2140** (1992).
8. Атанасов П.А., Недялков Н.Н., "Метод за структуриране на полимери с лазерни импулси", **Заявка за патент**, Вх. № 111645/05.12.2013; ОБ на Пат. Ведомство № 6, 12 (2015).
9. Атанасов П.А., Недялков Н.Н., Станкова Н.Е., "Метод за структуриране на полимери с лазерни импулси", **Заявка за патент**, Вх. № 111933/12.02.2015.
10. Недялков Н.Н., Атанасов П.А., Диковска А. Ог., Ников Ру., „Метод за получаване на наночастици от метали и оксиди върху хартия”, **Заявка за патент**, Вх. № 112496/27.04.2017.
11. Недялков Н., Атанасов П., Ников Ру., Имамова С., "Структури от многокомпонентни наночастици и метод за получаването им", **Патент**, № 66651 В1 03.03.2018 г.
12. Станкова Н.Е., Атанасов П.А., Недялков Н.Н., "Метод и система за структуриране и активиране на полимери с лазерни импулси", **Заявка за патент**, Вх. № 112728/03.05.2018.

Монографии

1. Atanasov P.A. "High-pressure CO₂ lasers", in "Lasers and their Applications", ed. Spasov A.Y., 61-88, WSPCo, Singapore (1987).
2. Atanasov P.A., Kuz'min G.P., "High-pressure CO₂ laser with plasma electrodes", in "Lasers – Phys. and Applications", ed. Spasov A.Y., 273-291, WSPCo, Singapore (1989).
3. Atanasov P.A., "Laser-induced thermal effects in dielectrics and semiconductors", in "Lasers - Physics and Applications", ed. Spasov A.Y., 496-520, WSPCo, Singapore (1989).
4. Atanasov P.A., Kuz'min G.P., Serbezov V.S., Tomov R.I., "Laser deposition of high-temperature superconducting thin films", in "Lasers: Physics and Applications", ed. Atanasov P.A., 346-369, WSPCo, Singapore (1991).
5. Atanasov P.A., "Optically active Nd-doped potassium gadolinium tungstate films produced by pulsed laser deposition", in "Pulsed Laser Deposition of Optoelectronic films", Ser. "Optoelectronic Materials and Devices" v. II, ed. M.A. Popescu, ch. 6, 173-206 INOE, Bucharest (2005).
6. Tanaka Y., Terakawa M., Obara M., Nedjalkov N.N., Atanasov P.A., "Plasmonic nanopatterning of the material surface mediated with gold nanoparticles excited by a femtosecond laser pulse", in "Gold Nanoparticles: Properties, Characterization and Fabrication", ed. P. E. Chow, ch. 6, 173-204, NOVA Sci. Publishers, NY (2010).
7. Atanasov P.A., "Gold nanostructures: preparation, properties, application in biophotonics and SERS", in "Nanostructures for Novel Therapy: Synthesis, Characterization and Applications", eds. D. Ficai and A. Grumezescu, ch. 17, 457-496, Elsevier, (2017).
8. Atanasov P.A., Stankova N.E., Nedjalkov N.N., Kolev K., Valova E., Artyanov St., "Laser processing of biocompatible polymers for development of MEMS for medical and high-tech applications", ed. A. Startseva, LAP Lambert Academic Publishing, ISBN 978-613-9-83108-1, 44 pgs. (2018).

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