С П И С Ъ К

на научните трудове на

проф., д.ф.н. Петър Асенов Атанасов

A. Дисертации

1. **Атанасов П.А.**, “Изследване на конвенционални лазери с CO_2 и тяхното приложение в диагностика на плазмата”, *Кандидатска дисертация*, 148 стр., С. (1976).
2. **Атанасов П.А.**, “Газоразрядни CO_2 лазери със самостоятелен разряд - физични проблеми, устройства и приложения”, *Докторска дисертация*, 259 стр., С. (1989).

B. Научни публикации в специализирани списания и сборници

B.I. Публикации в чуждестранния печат

1. George E.V., **Atanasov P.A.**, "Electron loss process in the helium afterglow", *MIT RLE Quart. Prog. Rep*., 116, 75-78 (1975).
2. 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 CO_2 laser", *J. Phys.D: Appl. Phys*., 13, 1835-1840 (1980).
3. **Atanasov P.A.**, Petrova M.D., Grodel M., "Effect of peaking capacitor on the output parameters of TE CO_2 laser", *Proc. OPTICA'80*, 88-93, Budapest, Hungary (1980).
4. **Atanasov P.A.**, Petrova M.D., Grodel M., "Effect of peaking capacitor on the discharge characteristics and output parameters of TE CO_2 laser", *Opt. & Quant. Electron*., 13, 251-253 (1981).
5. **Атанасов П.А.**, Ярослов Д.Ю., Карлов Н.В., Ковалев И.О., Кузьмин Г.П., Прохоров А.М.,” CO_2 лазер с плазменными електродами”, *Письма ЖТФ*, 15, 928-932 (1983).
6. **Атанасов П.А.**, Голубченко В.П., Карлов Н.В., Ковалев И.О., Кузьмин Г.П., Прохоров А.М., “Особености формирования сильноточного объемного разряда в CO_2 лазере с плазменными электродами”, *Письма ЖТФ*, 11, 13, 786-790 (1985).
7. **Атанасов П.А.**, Брынзалов П.П., Йотов И.Н., Карлова Е.К., Ковалев И.О., Кузьмин Г.П., Нестеренко А.А., “Исследования эффективности предыонизации плазменными электродами в CO_2 лазерах”, *Краткие Сообщ. по Физике*, N 7, 27-29 (1987).
8. **Atanasov P.A.**, Vasilev S.G., Iotov I.N., "A compact multi-atmospheric CO_2 laser", Proc. IV School on Quant. Electron. "*Las. and Appl.*", ed. Spasov A.Y., 581-584, WSPCo, Singapore (1987).
9. **Atanasov P.A.**, Iotov I.N., Kuzmin G.P., Kovalyov I.O., "Measurement of the electron density produced by sliding discharge", Proc. IV School on Quant. Electron. *"Las. and Appl."*, ed. Spasov A.Y., 585-588, WSPCo, Singapore (1987).
10. **Atanasov P.A.**, Gendjov S.I., "Laser cutting of glass tubing - a theoretical model", *J. Phys.D: Appl. Phys*., 20, 597-601 (1987).
11. **Атанасов П.А.**, Брынзалов П.П., Зикрин Б.О., Карлов Н.В., Ковалев И.О., Кузьмин Г.П., Прохоров А.М., “Электроразрядный CO_2-лазер с возбуждением несамостоятельным разрядом при атмосферном давлении”, *Письма ЖТФ*, 14, 16, 1486-1489 (1988).
12. **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 CO_2 lasers", *J. Phys. D: Appl. Phys.*, 21, 1750-1754 (1988).
13. **Atanasov P.A.**, Vasilev S.G., Kovalyov I.O., Kuz'min G.P., Nesterenko A.A., Zykrin B.O., "An experimental investigation of a plasma cathode CO_2 laser at high pressure", *J. Phys.E: Sci. Instrum*., 21, 1071-1073 (1988).
14. Paskov P.P., Pavlov L.I., **Atanasov P.A.**, Kushev D.B., Zheleva N.N., "Optical bistability in PbSnTe at 10 μm", *Opt. Commun*., 65, 2, 133-136 (1988).
15. Paskov P.P., Pavlov L.I., **Atanasov P.A.**, Kushev D.B., Zheleva N.N., "Optical nonlinearity and fast switching in PbSnTe Fabry - Perot etalon", *Phys. Stat. Sol.(b)*, 150, 2, 729-733 (1988).
16. Paskov P.P., Pavlov L.I., **Atanasov P.A.**, "Nonlinear refraction due to dynamical Burstein-Moss effect in lead chalcogenides", *Phys. Stat. Sol.(b)*, 149, 739-746 (1988).
17. **Atanasov P.A.**, Vasilev S.G., Kovalyov I.O.,Kuz'min G.P., Nesterenko A.A., Zykrin B.O., "An experimantal investigation of a plasma cathode CO_2 laser at high pressure", *Eng. Optics*, 2, 79-82 (1989).
18. Vasilev S.G., **Atanasov P.A.**, "A non-self-sustained discharge at high pressure produced by a plasma cathode", "*Las. – Phys. and Appl."*, ed. Spasov A.Y., 764-767, WSPCo, Singapore (1989).
19. **Atanasov P.A.**, Baeva M.G., "Numerical model of a fast-flow cw CO_2 laser", *Proc. SPIE*, 1031, 56-58 (1989).
20. **Atanasov P.A.**, Nicolova I.G., "Underline tuning of the waveguide CO_2 laser", "*Las. – Phys. and Appl."*, ed. Spasov A.Y., 772-774, WSPCo, Singapore (1989).
21. **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).
22. Pavlov E.L., **Atanasov P.A.**, "Experimental investigation of laser cutting of glass tubing", "*Lasers - Physics and Applications*", ed. Spasov A.Y., 768-771, WSPCo, Singapore (1989).
23. **Atanasov P.A.**, "Laser cutting of glass tubing", *Proc. SPIE*, 1033, 202-207 (1989).
24. Pascov P.P., Pavlov L.I., **Atanasov P.A.**, “Thermally - induced optical bistability in PbTe at room temperature", *Optical & Quant. Electron*., 21, 159-165 (1989).
25. **Atanasov P.A.**, Iotov I.N.,Petrov D.S.,Vasilev S.G., Kovalyov I.O., Kuzmin G.P., "Experimental investigation and numerical modeling of a high-power TEA CO_2 laser with plasma electrodes", *Proc. SPIE*, 1225, 375-380 (1990).
26. Андреев С.И., **Атанасов П.А.**, Брынзалов П.П., Карлов Н.В., Кислецов А.В., Ковалев И.О., Кузьмин Г.П., Левченко О.А., Нестеренко А.А., “Особености формирования объемного разряда с плазменными электродами”, *ЖТФ*, 60, 1, 102-106 (1990).
27. Serbesov V.S., **Atanasov P.A.**, "Nitrogen laser with high pulse and average power", *Measur. Sci. Technol.*, 1, 601-604 (1990).
28. Serbesov V., Hadziev D., **Atanasov P.**, Smatko V., "Properties of YBaCuO superconducting thin films deposited by nitrogen laser evaporation and heat-treated in O_2 atmosphere by cw CO_2-laser", "*Weak Superconductivity*", eds. Benacka S. and Kedro M., 27-32, Nova Sci. Publ., NY, USA (1990).
29. Serbesov V., Benacka S., Hadziev D., **Atanasov P.**, Elektronov N., Smatko V., Stribik V., Vassilev N., "Structure and superconducting properties of $YBa_2Cu_3O_{7-x}$ films prepared by nitrogen laser evaporation and CO_2 laser annealing in oxygen", *J. Appl. Phys.*, 67, №11, 6953-6957 (1990).
30. Vasilev S.G., **Atanasov P.A.**, "A powerful helium-free TEMA CO_2 laser", *Rev. Roum. de Phys.*, 36, 5/6, 333-335 (1991).
31. Vasilev S.G., **Atanasov P.A.**, "UV laser excited by a sliding discharge", "*Lasers: Physics and Applications*", ed. Atanasov P.A., 545-549, WSPCo, Singapore (1991).
32. Serbesov V., Benacka S., Smatko V., **Atanasov P.**, "Etching of high-Tc superconducting thin films with nitrogen laser", "*Lasers: Physics and Applications*", ed. Atanasov P.A., 535-539, WSPCo, Singapore (1991).
33. Baeva M.G., **Atanasov P.A.**, "Numerical model of an axial fast-flow CO_2 laser with controlled turbulence", *Proc. SPIE*, 1810, 109-112 (1992).
34. Baeva M., **Atanasov P.**, "Numerical investigation of output characteristics of turbulent axial flow CO_2 laser", *"Laser Advanced Material Proces.", Proc. LAMP '92*, eds. Matsunawa A. and Katayama S., 1, 85-89, HIVE Nagaoka, Japan (1992).
35. **Atanasov P.A.**, "Some aspects of high-pressure N_2 assisted CO_2-laser cutting of metals", *Proc. SPIE*, 1810, 628-631 (1992).
36. **Atanasov P.**, Tomov R., Serbezov V.,"Plasma-assisted “in situ” laser deposition of high temperature superconducting $YBa_2Cu_xO_{7-x}$ thin films", *"Electronic and Optoelectronic Materials for the 21st Century*", eds. Marshall J.M, Kirov N., Vavrek A., 547-550, WSPCo, Singapore (1992).
37. Baeva M.G., **Atanasov P.A.**, "Numerical investigation of cw CO_2 laser with a fast turbulent flow", *J. Phys. D: Appl. Phys*., 26, 546-551 (1993).
38. **Atanasov P.A.**, Vasilev S.G., Serafetinides A.A., "540.1 nm pulsed Ne laser excited by a sliding discharge", *Optics & Laser Techn*., 25, 1, 31-35 (1993).
39. Tzolov V.P., Grozdanov K.A., **Atanasov P.A.**, "Nitrogen laser employing twin sliding discharge", *J. Appl. Phys.*, 75, 2, 1210-1212 (1994).
40. **Atanasov P.A.**, Tomov R.I., Serbezov V.S., "Plasma assisted in-situ laser deposition of $Y_1Ba_2Cu_xO_{7-x}$ superconducting thin films with laser heating and annealing", *Vacuum*, 45, 12, 1215-1217 (1994).
41. **Atanasov P.A.**, Tomov R.I., Serbesov V.S., "Laser processing of $Y_1Ba_2Cu_3O_7$ superconducting thin films", *Proc. SPIE*, 2332, 29-37 (1994).
42. 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 CO_2 laser", *J. Materials Science: Materials in Electronics*, 5, 272-274 (1994).
43. Baeva M.G., **Atanasov P.A.**,"Influence of SF_6 on HF laser plasma parameters", *Il Nuovo Cimento*, 17, 3, 261-265 (1995).
44. Vasilev S.G., Grozdanov K.A., **Atanasov P.A.**, "A new type of twin sliding discharge arrangement for direct pumping of gas lasers", Proc. VIII Int. School on Quant. Electron, "*Las. – Phys.and Appl.*", 273-278, Sofia, Paris (1995).
45. Baeva M.G., **Atanasov P.A.**, "Computer calculation of HF laser plasma parameters", Proc. VIII Int. School on Quant. Electron, "*Las.-Phys. and Appl.*", 269-272, Sofia, Paris (1995).
46. Tsikrikas G.N., Serafetinides A.A., Papayannis A.D., **Atanasov P.A.**, Vasilev S.G., Kuzmin G.P., "Plasma cathode TEA HF laser development", Proc. of VIII Int. School on Quant. Electron, "*Las.- Phys. and Appl*.", 263-268, Sofia, Paris (1995).
47. **Atanasov P.A.**, Tomov R.I., Serbezov V.S., Faroog A.W., "Target surface modification and plasma probe measurements at UV laser ablation of $Y_1Ba_2Cu_xO_{7-x}$ target", ", Proc. VIII Int. School on Quant. Electron, "*Las.-Phys. and Appl.*", 386-391, Sofia, Paris (1995).

48. **Atanasov P.A.**, "Laser processing of plastics", *Proc. SPIE*, 2502, 632-637 (1995).
49. **Atanasov P.A.**, "Laser welding of plastics: theory and experiments", *Optical Engineering*, 34, 10, 2976-2980 (1995).
50. Tomov R.I., Serbezov V.S., **Atanasov P.A.**, "Laser processing of YBCO superconducting thin films", *Proc. SPIE*, 2502, 650-655 (1995).
51. Grozdanov K.A., **Atanasov P.A.**, "Simultaneous emission in UV and IR region in a sliding discharge excited laser", "*High Power Lasers - Science and Engineering*" ed. Kossowsky et al., Kluwer Acad. Publ., 185-190 (1996).
52. **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).
53. **Atanasov P.A.**, Manolov V.P., "Laser cutting of wire-wound resistors: theory and experiment", *J. Appl. Phys*., 80, 4, 2003-2008 (1996).
54. Tomov R.I., **Atanasov P.A.**, "The formationof Y-Ba-Cu-O thin films by pulsed laser deposition", in "*Vacuum, Electron and Ion Tech.*", ed. Karpuzov D.S., Nova Sci. Publ. Inc., 293-298 (1996).
55. **Atanasov P.A.**, Tomov R.I., Serbesov V.S., Grunchev A., Avramov L., "Laser patterning and modification of thin YBCO films", *Proc. SPIE*, 2777, 163-173 (1996).
56. Tomov R.I., **Atanasov P.A.**, Serbesov V.S., "Laser deposition of thin buffer and YBCO thin films on Si and GaAs substrates", Proc. *SPIE*, 2777, 174-179 (1996).
57. **Atanasov P.A.**, Baeva M.G., "CW CO_2 laser cutting of plastics", *Proc. SPIE*, 3092, 772-775 (1997).
58. **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).
59. **Atanasov P.A.**, Koleva M.E., Tomov R.I., Ouzounov D.G., Tsaneva V., Yorgov D., Grivas Ch., "Pulsed laser deposition of Mn-Zn-ferrite, $La_{0.8}Sr_{0.2}MnO_3$ and $Y_3Fe_5O_{12}$ thin films", *Proc. SPIE*, 3052, 339-342 (1997).
60. **Atanasov P.A.**, Tomov R.I., Kabadjova T.D., Ouzounov D.G., Tsanev V.I., "Preparation of $LiNbO_3$ thin films by XeCl excimer laser ablation", *Proc. SPIE*, 3052, 347-351 (1997).
61. **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).
62. 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).
63. **Atanasov P.A.**, Koleva M.E., Tomov R.I., "Preparation of $Y_3Fe_5O_{13}$ and Mn-Zn ferrite thin films by excimer laser ablation", *Proc. SPIE*, 2991, 285-290 (1997).
64. **Atanasov P.A.**, Tomov R.I., Peshev Z.Y., Dicovska A.Og., Tsaneva V.N., "Formation of Ti:sapphire thin films on single-crystal sapphire and GaAs substrates by pulsed laser deposition", *Proc. SPIE*, 2991, 267-272 (1997).
65. **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).
66. Serafetinides A.A., Tsikrikas G.N., Papayannis A.D., **Atanasov P.A.**, "Simultaneous emission of HF and N_2 lines from a plasma cathode TEA laser", *IEEE J. Quant. Electron.*, 33, 12, 2167-2173 (1997).
67. Danev G., Spassova E., Petkov K., Tomov R.I., Atanasov P.A., Popova K., "Excimer laser irradiation on carbide/polyimide layers", *Vide: Science, Technique and Applications*, 53 (284 SUPPL. 1), 251-254 (1997).
68. Serafetinides A.A., Tsikrikas G.N., **Atanasov P.A.**, "Plasma cathode TEA Ar laser development", *Optics & Laser Technologies*, 30, 159-162 (1998).
69. 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).
70. Kabadjova T.D., **Atanasov P.A.**, Tomov R.I., Zherikin A., Ouzounov D.G., "Investigation of the process of pulsed laser deposition of $BaTiO_3$ ferroelectric thin films for device applications", *Proc. SPIE*, 3571, 349-353 (1999).
71. **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).
72. **Atanasov P.A.**, Maeno K., Manolov V.P., "Aspects of CO_2 laser engraving of printing cylinders", *Appl. Optics*, 38, 9, 1759-1763 (1999).
73. **Atanasov P.**, Koleva M., Tomov R., Nedkov I., "Thin films of oxide ferrites produced by pulsed laser deposition", "*Nano-Crystalline and Thin Film Magnetic Oxides*", Nedkov I. and Ausloos M. eds., 251-256, Kluwer Acad. Publ., N. (1999).
74. G. Danev, Spassova E., Petkov K., Tomov. R.I., Popova K., **Atanasov P.A.**, Ihlemann J., "Excimer laser-induced damage in bilayer carbide/polyimide system", *Adv. Mater. for Opt. & Electron.*, 9, 227-234 (1999).
75. Koleva M., **Atanasov P.**, Tomov R., Vankov O., Matin C., Ristoscu C., Mihailescu I., Iorgov D., Angelova S., Ghelev Ch., Mihailov N., "Pulsed laser deposition of barium hexaferrite ($BaFe_{12}O_{19}$) thin films", *Appl. Surf. Sci.*, 154-155, 485-491 (2000).
76. **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).
77. Tomov R.I., Kabadjova T.D., **Atanasov P.A.**, Tonchev S., Kaneva M., Zherikhin A., Eason R.W., "$LiNbO_3$ optical waveguides deposited on sapphire by electric-field-assisted pulsed laser deposition", *Vacuum*, 58, 2-3, 396-403 (2000).
78. 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).
79. **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).
80. 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).
81. 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).
82. Jendrzejevski R., Slivinski G., Martev I., Nedialkov N., **Atanasov P**., "Laser treatment of the 38HMJ steel surface in a liquid nitrogen environment", *Proc. SPIE*, 4238, 149-154 (2000).
83. **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).
84. **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).
85. Koleva M., Tomov R., Zotova S., **Atanasov P.**, Ristoscu C., Nelea V., Arens S., Gyorgy E., Mihailescu I.N., Colis S., "Influence of substrate orientation on the characteristics of Sr-ferrite thin films obtained by pulsed laser deposition", *Proc. SPIE*, 4397, 314-318 (2001).
86. **Atanasov P.A.**, Imamova S.E., Nedialkov N.N., "Molecular dynamic simulation of ablation", "*Fundamentals of Ablation with Short Pulsed Solid State Lasers*", *Proc. Int. Workshop*, 10-23, (2001).
87. 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).
88. Serafetinides A.A., Chourdakis G., **Atanasov P.A.**, "Quasi-simultaneous ultraviolet and infrared emissiom from a plasma cathode TEA laser", *Optics & Laser Tech.*, 33, 85-90 (2001).
89. **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).
90. Jelinek M., Lancok J., Pavelka M., Studnicka V., Mackova A., Perina V., Havranek V., Flory F., Escoubas L., Garapon C., **Atanasov P.A.**, Koleva M.E., "Laser deposition and characterization of waveguiding Nd:KGW films", *Laser Phys.*, 12, 2, 325-328 (2002).
91. **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).
92. 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 filed treatment of $SrFe_{12}O_{19}$ thin films grown by pulsed laser deposition", *Appl. Surf. Sci.*, 186/1-4, 463-468 (2002).
93. **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).
94. Jelinek M., Lancok J., Pavelka M., **Atanasov P.A.**, Mackova A., Flory F., Escoubas L., Garapon C., "Optical and wavequideing properties of Nd:KGW films grown by pulsed laser deposition", *Appl. Phys.A: Mater. Sci. & Proces.,* A 74, 481-485 (2002).
95. Kuneva M.K., Tonchev S.H., Sendova-Vasileva M., Dimova-Malinovska D., **Atanasov P.A.**, "IR-spectra of waveguides in $LiNbO_3$ obtained by using different melts", *Sensors & Actuators A*, 99, 1-2, 154-159 (2002).
96. Lančok J., Jelínek M., Oswald J., Bulíø J., **Atanasov P**., Koleva M., Escoubas L., Flory F., "Nd doped KGW crystalline waveguides fabricated by pulsed laser deposition", *Proc. SPIE*, 4762, 162-165 (2002).
97. **Atanasov P.A.**, Nedialkov N.N., Imamova S.E., "Laser ablation of Al and Si by ultrashort laser pulses: recent results on MD simulation", "*Fundamentals of Ablation with Short Pulsed Solid State Lasers*", Proc. of Int. Workshop, 149-157 (2002).
98. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, "Evolution of the ultrashort ablation process", "*Fundamentals of Ablation with Short Pulsed Solid State Lasers*", *Proc. of Int. Workshop*, 158-160 + movie (2002).

99. Dikovska A.Og., **Atanasov P.A**., Tomov R.I., Tonchev S.H., Sapundjiev D.Ts., "Er:Y_2O_3 thin films grown by pulsed laser deposition", *Vacuum*, 69, 1-3, 273-276 (2003).
100. Okato T., **Atanasov P.A.**, Obara M., "Pulsed laser deposition of Nd:KGd$(WO_4)_2$ waveguide in Ar and O_2 environment", *Appl. Phys.A: Mater. Sci. & Proces.,* 77, 3-4, 395-398 (2003).
101. **Atanasov P.A.**, Okato T., Obara M., Dikovska A.Og., "Pulsed laser deposition and characterization of the structural and optical properties of Nd:KGW thin films", *Proc. APLS'02*, 131-134 (2003).
102. Obara M., **Atanasov P.A.**, Hirayama Y., Ozono K., Nedialkov N.N., Imammova S.E., "Femtosecond ablation dynamics of advanced materials", *Proc. APLS'02*, 1-6 (2003).
103. Obara M., Ozono K., Kanai M., Sekita H., **Atanasov P.A.**, "Femtosecond laser processing tailored for biomedical materials and laser power delivery through optical fibers", *Proc. SPIE*, 4977, 123-135 (2003).
104. Obara M., **Atanasov P.A.**, "Ablation processing of advanced materials by tailored femtosecond laser pulse", *Proc. SPIE*, 5226, 315-326 (2003).
105. Okato T., **Atanasov P.A.**, Tomov R.I., Obara M., "Fabrication of Nd:KGW film on Si with CeO_2 buffer layer", *Appl. Phys.A: Mater. Sci. & Proces.,* 77, 6, 775-778 (2003).
106. 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).
107. 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).
108. 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).
109. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, "Laser ablation of iron by ultrashort laser pulses", "*Fundamentals of Ablation with Short Pulsed Solid State Lasers*", *Proc. of Int. Workshop*, pps. 12 (2003).
110. **Atanasov P.A.**, Nedialkov N.N., Imamova S.E., "Laser ablation of metals by ultrashort pulses", "*Fundamentals of Ablation with Short Pulsed Solid State Lasers*", *Proc. of Int. Workshop*, pps. 27 (2004).
111. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, "Laser ablation of Fe by ultrashort pulses: recent MD simulation results", "*Fundamentals of Ablation with Short Pulsed Solid State Lasers*", *Proc. of Int. Workshop*, pps. 13 (2004).
112. 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).
113. **Atanasov P.A.**, Okato T., Tomov R.I., Obara M., "(110) Nd:KGW waveguide films grown on Si/CeO_2 substrates by pulsed laser deposition", *Thin Solid Film.,* 453/454, 1, 150-153 (2004).
114. 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).
115. 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).
116. Dikovska A.Og., Okato T., **Atanasov P.A.**, Obara M., "Cathodoluminescent properties of pulsed laser deposited Er,Yb co-doped Y_2O_3 thin films", *J. Phys. D: Appl. Phys.*, 37, 21, L41–L44 (2004).
117. 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).
118. 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).
119. 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).
120. 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).
121. 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).
122. Nedialkov N.N., **Atanasov P.A.**, Sawczak M., Śliwiński G., **"**Laser drilling of AlN ceramics using nanosecond pulses", *Proc. SPIE*, 5777, 850-854 (2005).
123. Stanimirova T.J., **Atanasov P.A.**, Dikovska A.Og., Stankova N.E., Tonchev S.H., "Structural and optical properties of thin indium oxide films produced by pulsed laser deposition", *Proc. SPIE*, 5830, 55-59 (2005).
124. Stankova N.E., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Socol G., Mihailescu I., "Growth of anatase TiO_2 thin films by laser ablation", *Proc. SPIE*, 5830, 60-64 (2005).
125. 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).
126. Dikovska A.Og., **Atanasov P.A.**, Tomov R.I., Dimitrov I.G., "Ultraviolet annealing of thin Y_2O_3 films grown by pulsed laser deposition", *Proc. SPIE*, 5830, 75-79 (2005).
127. 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).
128. Kuneva M.K., Tonchev S.H., **Atanasov P.A.**, "Infrared spectra of proton-exchanged waveguides in $LiNbO_3$ and $LiTaO_3$", *Mater. Sci. and Engin. B*, 118, 301–305 (2005).
129. 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).
130. Dikovska A.Og., **Atanasov P.A.**, Vasilev C., Dimitrov I.G., Stoyanchov T.R., "Thin ZnO films produced by pulsed laser deposition", *J. Optoelectronics & Advanced Mater.*, 7, 3, 1329-1334 (2005).
131. Nedialkov N.N., Sawczak M., Jadraque M., **Atanasov P.A.**, Martin M., Sliwinski G., "Effect of laser drilling on surface and material properties of AlN ceramics", *Proc. SPIE,* 5958, 36-43 (2005).
132. Amoruso S., Bruzzese R., Vitiello 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).
133. 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).
134. Dikovska A.Og., **Atanasov P.A.**, Dimitrov I.G., Vasilev C., Kocourek T., Jelinek M., "Structural and optical properties of Er, Yb co-doped Y_2O_3 thin films", *Appl. Surf. Sci.*, 252, 4569-4572 (2006).
135. 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).
136. Dikovska A.Og., **Atanasov P.A**., Jiménez de Castro M., Perea A., Gonzalo J., Afonso C.N., García López J., "Optically active Er^{3+}-Yb^{3+} codoped Y_2O_3 films produced by pulsed laser deposition", *Thin Solid Films*, 500 (1-2), 336-340 (2006).
137. Mazingue Th., Escoubas L., Spalluto L., Flory F., Jacquouton P., Perrone A., Kaminska E., Piotrowska A., Mihailescu I., **Atanasov P.**, "Optical characterizations of ZnO, SnO_2, and TiO_2 thin films for butane detection", *Appl. Optics*, 45, 7, 1425-1435 (2006).
138. Dikovska A.Og., Tonchev S.H., Vasilev C., **Atanasov P.A.**, "Fabrication and study of periodically structured Y_2O_3 waveguides", *Plasma Proc. & Polymers*, 3, 201-204 (2006).
139. **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).
140. 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).
141. **Atanasov P.A.**, Takada H., Nedyalkov 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).
142. 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).
143. Peeva A., Dikovska A.Og., **Atanasov P.A.**, Jiménez de Castro M., Skorupa W., "Rare-earth implanted Y_2O_3 thin films", *Appl. Surf. Sci*., 253, 19, 8165-8168 (2007).
144. Dikovska A.Og., **Atanasov P.A.**, Stoyanchov 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).
145. 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).

146. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Petrov K.P., Avdeev G.V., "Structural and optical properties of YVO_4 thin films", *Appl. Surf. Sci*., 253, 19, 8250-8253 (2007).
147. Stanimirova T.J., **Atanasov P.A.**, Stankova M., Dimitrov I.G., Stoyanchov 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).
148. **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).
149. Koleva M.E., **Atanasov P.A.**, Perriere J., Tzankov D., "Characterization of vanadium doped ZnO films produced by pulsed laser deposition", *Proc. SPIE,* 6604, 660415 (2007).
150. Nedyalkov 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).
151. 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).
152. 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).
153. **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).
154. 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).
155. Dikovska Og., **Atanasov P.A.**, Andreev A.Ts., Zafirova B.S., Karakoleva E.I., Stoyanchov T.R., "ZnO thin film on side polished optical fiber for gas sensing applications", *Appl. Surf. Sci*., 254, 4, 1087-1090 (2007).
156. 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).
157. Stankova N.E., Dimitrov I.G., Stoyanchov T.R., **Atanasov P.A.**, "Optical and gas sensing properties of thick TiO_2 films grown by laser deposition", *Appl. Surf. Sci*., 254, 4, 1268-1272 (2007).
158. 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).
159. Dimitrov I.G., Dikovska A.Og., **Atanasov P.A.**, Stoyanchov T.R., Vasilev T., "Al doped ZnO thin films for gas sensor application", *J. of Phys. Conf. Ser.,* 113, doi:10.1088/1742-6596/113/1/012044, 012044 (2008).
160. Nedyalkov N.N., ImamovaS.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).
161. 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).
162. 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)
163. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Obara M., "Near field localization mediated by a single gold nanoparticle embeeded in transparent matrix: application for surface modification", *Appl. Surf. Sci.*, 255, 5125-5129 (2009).
164. Stankova N.E., Dimitrov I.G., Stoyanchov T.R., **Atanasov P.A.**, Kovacheva D., "Structure and optical anisotropy of pulsed laser deposited TiO_2 films for optical applications", *Appl. Surf. Sci.*, 255, 5275-5279 (2009).
165. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Petrov K.A., Avdeev G.V., "Pulsed laser deposited Er^{3+},Yb^{3+}:YVO_4 waveguides on MgO/Si substrates", *Appl. Surf. Sci.*, 255, 5284-5287 (2009).
166. Nikolov A.S., **Atanasov P.A.**, Milev D.R., Stoyanchov T.R., Deleva A.D., Peshev Z.J., "Synthesis and characterization of TiO_2 nanoparticlesprepared by pulsed-laser ablation of Ti target in water", *Appl. Surf. Sci.*, 255, 5351-5354 (2009).
167. 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).
168. Stankova N.E., Dimitrov I.G., **Atanasov P.A.**, T. Sakano, Y. Yata, M. Obara, "Nanostructured optical waveguide films of WO_3 and TiO_2 for photonic gas sensors", *Thin Solid Films,* 518, 4597–4602 (2010).
169. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Petrov K.P., Avdeev G.V., "Er, Yb:YVO_4 waveguides produced by PLD and UVPLD", *Thin Solid Films,* 518, 4726–4729 (2010).
170. 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).
171. 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).
172. 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).
173. 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).
174. 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).
175. Kuneva M., Tonchev S., Nesheva D., **Atanasov P.**, "Proton-exchanged waveguiding layers in Y-cut lithium niobate: Analysis of the phase composition by spectroscopic methods", *Solid State Sciences*, 12, 11, 1870-1872 (2010).
176. **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).
177. 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).
178. 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).
179. 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).
180. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Obara M., "Nanosecond laser heating of gold nanoparticles", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics,* 1-7 (2010).
181. Dikovska A., Andreev A., Atanasova G., **Atanasov P.**, "ZnO nanostructures grown by PLD", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics*, 19-27 (2010).
182. **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).
183. Obara M., Tanaka Y., Obara G., Zenikada A., Terakawa M., Nedyalkov N., **Atanasov P.**, "Nanoablation patterning by femtosecond laser excited scattering near-field", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics*, 45-53 (2010).
184. Miyanishi T., Terakawa M., Obara M., Nedyalkov N., **Atanasov P.**, "Directionally-controlled plasmon excitation in gold nanoparticles for near-field nanopatterning by femtosecond laser", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics*, 54-63 (2010).
185. 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).
186. Dimitrov I., Nedyalkov N., **Atanasov P.**, "Optical properties of gold nanoparticles arrays", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics*, 84-92 (2010).
187. Nikov R., Nikolov A., **Atanasov P.**, "Au and Ag nanoparticles fabrication by ns laser ablation of solid targets in water", *Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics*, 93-103 (2010).
188. Tanaka Y., Obara G., Zenikada A., Terakawa M., Obara M., Nedyalkov N. N.,**Atanasov P.A.**, "Mie scattering and resonant plasmon polaritons for nano-ablation patterning", *AIP Conf. Proc.,* 1278, 242-249 (2010).
189. 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).
190. 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).

191. 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).
192. 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).
193. 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).
194. 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).
195. 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).
196. 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).
197. 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).
198. 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).
199. Atanasova G., Dikovska A.Og., Stankova M., Stefanov P, **Atanasov P.A.**, "XPS study of ZnO nanostructures prepared by laser ablation", *J. Phys.: Conf. Ser.,* 356, 1, 012036, doi:10.1088/1742-6596/356/1/012036 (2012).
200. 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).
201. Koleva M.E., Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A.**, "Structural and photoluminescent properties of Ag/ZnO nanocomposite heterostructures", *Phys.: Conf. Ser.,* 356, 1, 012002 (2012).
202. 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).
203. 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).
204. Nikolov 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. Pys. A*, 109, 2, 315-322 (2012).
205. 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).
206. Grochowska K., Śliwiński G., Iwulska A., Sawczak M., Nedyalkov N., **Atanasov P.**, Obara G., Obara M., "Engineering Au nanoparticle arrays on SiO_2 glass by pulsed UV laser irradiation", *Plasmonics*, 8, 1, 105-113 (2013).
207. 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).
208. Koleva M.E., Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A.**, Atanasova G.B., "Ag/ZnO nanocomposites prepared by laser methods", *Proc of SPIE*, 877007-877007 (2013).
209. 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).
210. Dikovska A.O., Avdeev G.V., Nedyalkov N.N., Koleva M.E., **Atanasov P.A.**, "Preparation of metal nanorods substrates for SERS application", *Proc of SPIE*, 877006-877006 (2013).
211. Nedyalkov N.N., Nikov Ru.G., **Atanasov P.A.**, "Near field intensity enhancement and localization in noble metal nanoparticle ensembles", *Proc of SPIE*, 877005-877005 (2013).
212. Nikov Ru.G., Nedyalkov N.N., **Atanasov P.A.**, Grochowska K., Iwulska A., Sliwinski G., "Laser nanostructuring of Au/Ag and Au/Ni films for application in SERS", *Proc of SPIE*, 87700D-87700D (2013).
213. 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).
214. 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).
215. Balansky R., Longobardi M., Ganchev G., Iltcheva 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).
216. Amoruso S., Nedyalkov N.N., Wang X., Ausanio G., Bruzzese R., **Atanasov P.A**., "Ultrashort-pulse laser ablation of gold thin film targets: theory and experiment", *Thin Solid Films*, 550, 190-198 (2014).
217. Koleva M.E., Nedyalkov N.N., Dikovska A.OG., **Atanasov P.A.**, Avdeev G.V., Shimizu H., Terakawa M., Obara M., Pallotti D., Orabona E., Maddalena P., Lettieri S., "Nanostructured Ag/ZnO multilayer plasmonic composites", *J. of Optoelectronics & Advanced Materials*, 16, No. 1-2, 144–148 (2014).
218. **Atanasov P.A.,** Nedyalkov N.N., Dikovska A.Og., Nikov Ru., Amoruso S., Wang X., Bruzzese R., Hirano K., Shimizu H., Terakawa M., Obara M., "Noble metallic nanostructures: preparation, properties, applications", *Phys.: Conf. Ser.*, 514, 012024, 1-8 (2014).
219. 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).
220. Nikov Ru.G., Nedyalkov N.N., Stankova N.E., **Atanasov P.A**, "Fabrication of 2D arrays of multi-component nanoparticles", *Phys.: Conf. Ser.,* 514, 012025, 1-5 (2014).
221. Koleva M.E., Nedyalkov N.N., **Atanasov P.A.,** "Effect of plasmo-exciton coupling on the optical response of a ZnO/Ag/ZnO nanocomposite", *Phys.: Conf. Ser.,* 514, 012031, 1-4 (2014).
222. Dikovska A.Og., Koleva M.E., Atanasova G.B., Stoyanchov T.R., Nedyalkov N.N., **Atanasov P.A.,** "PLD fabrication of ZnO nanostructures on metal-coated substrates", *Phys.: Conf. Ser.,* 514, 012032, 1-4 (2014).
223. 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).
224. **Atanasov P.A.,** Nedyalkov N.N., Valova E.I., Georgieva Zh.S., Armyanov S.A., Kolev K.N., Amoruso S., Wang X., Bruzzese R., Sawczak M., Śliwiński G., "Fs-laser processing of polydimethylsiloxane and metallization", *Journal of Applied Physics*, 116, 2, 023104 (2014).
225. 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).
226. 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).
227. Nikov Ru.G., Nedyalkov N.N., **Atanasov P.A.,** Dealporte Ph., Grojo D., "Fabrication and characterization of metal nanostructures on metal substrates", *Proc. SPIE*, 9447, 94470K_1-7 (2015).
228. Koleva M.E., Nedyalkov N.N., **Atanasov P.A.**, Fukata N., Dutta M., "Optical properties of Ag-ZnO nanostructures", *Proc. SPIE*, 9447, 94470E_1-7 (2015).
229. Nikov R.G., Nikolov A.S., Nedyalkov N.N., **Atanasov P.A.,** Alexandrov M.T., Karashanova D.B., "Formation of bimettalic nanoparticles by pulsed laser ablation of multicomponent thin films in water", *Proc. SPIE*, 9447, 94470M_1-7(2015).
230. Stankova N.E., **Atanasov P.A.,** Nedyalkov N.N., Stoyanchov T.R., Kolev K.N., Valova E.I., Georgieva J.S., Armyanov St.A., Amoruso S., Wang X., Bruzzese 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).
231. Armyanov 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).
232. 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., Armyanov St.A., "Optical properties of polydimethylsiloxane (PDMS) during nanosecond laser processing", *Appl. Surf. Sci.*, 374, 96-103 (2016).
233. Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Hirsch D., Rauschenbach B., Grochowska K., Sliwinski G., "Characterization of Ag nanostructures fabricated by laser-induced dewetting of thin films", *Appl. Surf. Sci.*, 374, 36-41 (2016).
234. **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., Armyanov St.A., "Fs-laser processing of medical grade polydimethylsiloxane (PDMS)", *Appl. Surf. Sci.*, 374, 229-234 (2016).

235. **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).
236. Białous A., Gazda M., Grochowska K., **Atanasov P.**, Dikovska A., Nedyalkov N., Reszczyńska J., Zaleska-Medowska A., Śliwiński G., "Nanoporous TiO_2 electrode grown by laser ablation of titanium in air at atmospheric pressure and room temperature", *Thin Solid Films*, 601, 41-44 (2016).
237. Nedyalkov N., Koleva M., Nikov R., **Atanasov P.**, Nakajima Y., Takami A., Shibata A., Terakawa M., "Laser nanostructuring of ZnO thin films", *Appl. Surf. Sci*., 374, 172-176 (2016).
238. Koleva M.E., Nedyalkov N.N., **Atanasov P.A.**, Gerlah J.W., Hirsch D., Prager 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).
239. 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).
240. 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).
241. Nikolov A.S., Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., Marinkov N.E., Dimitrov I.Z., Boevski I.I., Visan A., Mihailescu I.N., "Influence of the liquid level and ablation process duration on the characteristics of nanostructures created by nanosecond laser ablation of Ag in water", *Proc. SPIE-International Society for Optics and Photonics,* 102260C-102260C (2017).
242. Nedyalkov N., Nikov R., Nikov R., Nikolov A., **Atanasov P**., Nakajima Y., Terakawa M., Sawczak M., Grochowska K., Sliwinski G., "Gold nanostructures for detection of pesticides, nitrates and drugs using surface enhanced Raman spectroscopy", *Proc. SPIE-International Society for Optics and Photonics,* 102260B-102260B (2017).
243. 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).
244. **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).
245. 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).
246. 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).
247. 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).
248. 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).
249. **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).
250. **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).
251. Armyanov 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).
252. 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).
253. Nedyalkov N., Stankova N.E., Koleva 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).
254. Stankova N.E., **Atanasov P.A.**, Nedyalkov N.N., Tatchev Dr., Kolev K.N., Valova E.I., Armyanov 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).
255. 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).

B.II. Публикации в нашия печат

256. Stefanov V.J., **Atanasov P.A.**, "Effect of adding chloroform, ether and acetone in small quantities to CO_2 laser output power", *C.R. Acad. Bulg. Sci*., 22, 8, 867-870 (1969).
257. **Atanasov P.A.**, "Effect of temperature and composition of gas mixture on population inversion in pulsed CO_2 laser", *C. R. Acad. Bulg. Sci.*, 26, 3, 327-330 (1973).
258. Стефанов В.Й., **Атанасов П.А.**, Гелев Ч.Г.,"Влияние малъх добавок диэтилового эфира и хлороформа на энергетическое распределение электронов в плазме CO_2 лазера", *Bulg. J. Phys*., 1, 1, 87-92 (1974).
259. Стефанов В.Й., **Атанасов П.А.**,"Зависимость времени существования генерации от разрядного тока в импульсном CO_2 лазере", *Bulg. J. Phys*., 1, 3, 311-315 (1974).
260. **Атанасов П.А.**, "Метод за настройка на вълноводен CO_2 лазер", *Е. и П.*, 5, 156 (1974).
261. **Atanasov P.A.**, "Effective lifetime of the CO_2 lower laser level (10 0) in presence of organic admixtures", *C.R. Acad. Bulg. Sci*., 28, 10, 1355-1358 (1975).
262. **Atanasov P.A.**, "Effect of small quantities of organic vapors on CO_2 laser plasma", *C.R. Acad. Bulg. Sci.*, 28, 9, 1183-1186 (1975).
263. **Atanasov P.A.**, "Investigation of fully ionized plasma by CO_2 laser ring interferometer", *C.R. Acad. Bulg. Sci*., 29, 7, 971-974 (1976).
264. **Atanasov P.A.**, Toshev E.T., "A rate equation model of an optically pumped 16 μm CO_2 laser", *C.R. Acad. Bulg. Sci.*, 31, 2, 171-174 (1978).
265. **Атанасов П.А.**, "Приложение на лазерите в управляемия термоядрен синтез", *Актуални проблеми на науката*, 32 стр., ЦНИ - БАН (1979).
266. Бърнеков В., Димитрова-Панкова М., Литовски З., **Атанасов П.,** "Деструкция на дървесината, получена при рязането й с лазерен лъч", *НС ВЛТИ*, 145-148 (1981).
267. **Атанасов П.А.**, Веков И.Г., "Регулируем трифазен изправител за мощни лазери", *Е. и П.*, N10, 32-33 (1983).
268. Петрова М., **Атанасов П.**, Гелев Ч., Аврамов Л., "Влияние на ксилол и трипропиламин върху разрядните характеристики и коефициента на усилване на ТЕ CO_2 лазер", *Сб. Труд. НИИО*, 1, 2, 24-28 (1983).
269. **Атанасов П.**, Петрова М., Гелев Ч., Аврамов Л., "Изследване на ТЕ CO_2 лазер с УВ предйонизация", *Сб. Труд. НИИО*, 1, 2, 29-34 (1983).
270. **Атанасов П.А.**, Кузьмин Г.П., "Скользящий разряд в CO_2 лазерах", III School on Quant. Electron, *"Laser Physics and Applications"*, inv. lecture, 62 - 85, Varna (1984).
271. **Atanasov P.A.**, Gendjov S.I., "Laser heating of metal coated ceramics - computational experiment", *Bulg. J. Phys*., 12, 6, 623-629 (1985).
272. Генджов С., **Атанасов П.**, Боев В., Стефанов К., Трифонов Т., "Моделиране на лазерно термично въздействие върху керамична мишена с метално покритие", *Сб. IV конф. "ТНТМ в електрон. и кибернет."*, 64-67, София (1985).
273. **Атанасов П.А.**, Павлов Е.Л., Йотов Й.Н., "CO_2 лазери с изходна мощност 50, 100, 150 и 300 W", *Е. и П.*, 2, 15-18 (1986).
274. **Atanasov P.A.**, Pavlov L.I., Paskov P.P., Stanco E., Kukiello P., "D. C. discharge in a pin-plate electrode configuration with an auxiliary electrode for a cw laser application", *Bulg. J. Phys*., 13, 5, 456-460 (1986).
275. **Atanasov P.A.**, Pavlov E.L., "Laser cutting of cylindrical glasses", *Bulg. J. Phys*., 13, 1, 87-90 (1986).
276. Paskov P.P., **Atanasov P.A.**, Pavlov L.I., "CO_2 laser spectrometer for investigation of the optical characteristics of semiconductor crystals", *Bulg. J. Phys.*, 14, 6, 595-601 (1987).
277. **Атанасов П.А.**, Николова И.Г., "Експериментално изследване на вълноводен CO_2 лазер", III Нац. Конф. "*Оптика и лаз. техника*", 248-251, Варна (1987).
278. **Atanasov P.A.**, Vasilev S.G., Iotov I.N., "Experimental investigation of a high-pressure pulsed CO_2 laser with self-sustained discharge", *Bulg. J. Phys.*, 15, 3, 286-292 (1988).
279. **Атанасов П.А.**, Пасков П.П., Вачев В.Д., Барудов С.Т., "Изследване на импулсно-периодичен CO_2 лазер с надлъжен разряд и бавен проток на газа", *Е. и П.*, 6, 17-21 (1989).
280. Vasilev S.G., **Atanasov P.A.**, "Pulsed CO_2 laser with self-sustained discharge, operating with free-helium mixtures at superatmospheric pressure", *Bulg. J. Phys.*, 16, 1, 129-134 (1989).
281. Baeva M.G., **Atanasov P.A.**, "Estimation of parameters of an electric discharge c.w. CO_2 laser", *Bulg.J. Phys*., 16, 6, 610-616 (1989).
282. Сербезов В., Хаджиев Д., Бенечка С., Шматко В., **Атанасов П.**, Штрибик В., Шилдер С., "Импулсно лазерно нанасяне на високотемпературни

свръхпроводящи тънки слоеве от $YBa_2Cu_3O_{7-x}$", *СИЕЛА'89*, 172-177, Пловдив (1989).
283. Павлова В., **Атанасов П.**, Павлов Е., "Методи за изследване на термообработени с лазерен лъч повърхностни зони", *V НТ Конф. "Лаб. контрол '89*", 9 стр., ЦИНТИ (1989).
284. Vasilev S.G., **Atanasov P.A.**, Iotov I.N., Petrov D.S., "Numerical modeling of the discharge characteristics of plasma cathode TEMA CO_2 laser", *Bulg. J. Phys.,* 18, 4, 341-351 (1991).
285. Baeva M.G., **Atanasov P.A.**, "Electron energy distribution functions in CO_2 laser mixtures", *Bulg. J. Phys*., 18, 3, 226-232 (1991).
286. Baeva M.G., **Atanasov P.A.**, "Multiterm Boltzmann equation analysis of electron energy distribution function in CO_2 laser mixtures", *Proc. VII Int. School on Quant. Electron, "Las. – Phys.and Appl.*", ed. Atanasov P.A., 321-324, Sofia (1992).
287. **Atanasov P.**, Tzanev V., Tomov R., Serbesov V.,"IR optical characteristics of thin superconducting $YBa_2Cu_xO_{7-x}$ films", *Proc. VII Int. School on Quant. Electron,* "*Las. – Phys. and Appl.*", ed. Atanasov P.A., 357-360, Sofia (1992).
288. Serbezov V., **Atanasov P.**, Tomov R., Benacka St., Smatko V., Stribik V., "Modification of the properties of HTSC YBCO thin films on silicon by superfast laser annealing in oxygen with a cw CO_2 laser", *Proc. VII Int. School on Quant. Electron,* "*Las. – Phys. and Appl.*", ed. Atanasov P.A., 401-404, Sofia (1992).
289. Baeva M.G., **Atanasov P.A.**, "Influence of the gas mixture composition on the CO_2 laser plasma parameters", *Bulg. J. Phys*., 21, 41-46 (1994).
290. **Atanasov P.A.**, "Thin-film photonic gas sensors", *J. of the Bulg. Acad. of Sci.*, 5, 25-30 (2005) (in Bulgarian).
291. **Atanasov P.A.**, Nedialkov N.N., Amoruso S., Bruzzese 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).
292. **Atanasov P.A.**, Nedialkov N.N., "Generation and evolution of metal nanoparticles during ultrashort laser ablation and plasmon excitation of gold nanoparticles", *NOVOSTI*, BAS, ISSN 1312-2436, 5 (57), 3-4 (2008).
293. Балански Р., Ганчев Г., Илчева М., Тошкова Р., Недялков Н., **Атанасов П.**, Иззоти А., Де Флора С., "Наночастици и наногенотоксикология", *Онкология*, ISSN:0369-7649, 37, 4, 36-47 (2009).
294. **Атанасов П.А**., "Лазерът-половин век двигател на иновациите в науката и практиката", *Списание на БАН*, 4, 93-104 (2010).
295. 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).
296. Сгурев В., Кендеров П., Цветанов Хр., Кралчевски П., Хаджийски М., Филипов Ф., Руменин Ч., Попов А., Ковачев А., Младенов Г., **Атанасов П.**, "Становище по проблеми на технологичното развитие на България", *Списание на БАН*, 3, 55-70 (2011).
297. Балански Р., Ганчев Г., Илчева М., Тошкова Р., Недялков Н., **Атанасов П.**, Иззотти А., Де Флора С., "Трансплацентарен кластогенен ефект на златни наночастици у мишки", *Онкология*, ISSN:0369-7649, 40, 4, 35-41 (2012).
298. **Атанасов П.А**., "Плазмонни и оптични свойства на метални наноструктури и тяхното приложение във високочувствителната Раманова спектроскопия и биофотониката", *Списание на БАН*, 6, 17-28 (2013).
299. Сгурев В., Кендеров П., Руменин Ч., Кралчевски П., Цветанов Хр., Хаджийски М., Филипов Ф., Попов А., Ковачев А., Младенов Г., **Атанасов П.**, "Становище по проблеми на технологичното развитие на България", *БАН*, 44 стр. (2014).
300. **Атанасов П.А**., "Нов метод за третиране на композитни материали с цел създаване на микросистеми за медицинско и високотехнологично приложение", *Списание на БАН*, 4, 14-22 (2015).
301. **Атанасов П.А**., "Проблеми на съвременните лазерни технологии", *Списание на БАН*, 1, 65-67 (2016).
302. **Атанасов П.А**., "Импулсно лазерно отлагане на тънки слоеве", *Списание на БАН*, 1, 11-16 (2017).
303. Nikov R.G., Nedyalkov 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).

С. Доклади на конференции, публикувани в кратко и разширено резюме

С.I. Конференции в чужбина

1. Стефанов В.Й., **Атанасов П. А.**, “Влияние малых добавок хлороформа, эфира и ацетона на выходную мощность лазера на CO_2”, I Всесоюзны симпозиум по “*Физике газовых лазеров*”, Новосибирск, СССР (1969).
2. **Atanasov P.**, Toshev E., "A rate equation approach to an optically pumped 16 μm CO_2 laser", III Int. Tagung "*Laser und ihre Anwendungen*", D33, 4, Dresden, GDR (1977).
3. **Atanasov P.A.**, Petrova M.D., Christov Ch.G., "Effect of organic additives on the upper laser level relaxation rate and the gain of TE CO_2 laser", *EKON IX Conf.*, 236-237, Poznan, Poland (1980).
4. Petrova M.D., **Atanasov P.A.**, "Investigation of an UV-preionized TE CO_2 laser", IV Int. Conf. "*Lasers and their Appl*.", K32, 71, Leipzig, GDR (1981).
5. **Atanasov P.A.**, Stanco J., Kukiello P., "Investigations of a model transverse-discharge convection-cooled cw CO_2 laser", I Int. Conf. "*Lasers and Appl*.", 31-32, Bucharest, Rom. (1982).
6. **Atanasov P.A.**, Pavlov E.L., "Laser cutting of cylindrical glasses", V Int. Conf. "*Lasers and their Appl*.", S.93, 104, Dresden, GDR (1985).
7. **Atanasov P.A.**, Gendjov S.I., "Laser heating of metal-coated ceramics - a computational experiment", *V Int. Conf. "Lasers and their Appl*.", P.3.12, 194, Dresden, GDR (1985).
8. **Atanasov P.A.**, "Laser cutting of glas tubes", *UK/BG Laser Tech. Seminar*, 3, Bedford, UK invited (1987).
9. **Atanasov P.A.**, Pavlov L.Y., Paskov P.P., "Observation of optical bistability in narrow-band semiconductors", 2C-7, IX Vavilov Conf. on "*Nonlinear Optics*", Novosibirsk, USSR (1987).
10. **Atanasov P.A.**, Baeva M., "Numerical model of a fast axial flow cw CO_2 laser", VII Int. Symp. on “*Gas Flow & Chem. Lasers”*, 10, Vienna, Austria (1988).
11. Vasilev S.G., **Atanasov P.A.**, "A powerful helium-free TEMA CO_2 laser", III Int. Conf. "*Trends in Quant. Electron*.", I.P.7, 37, Bucharest, Rom. (1988).
12. **Atanasov P.A.**, "Laser cutting of glass tubing", III Int. Conf. "*Trends in Quant. Electron*.", 487-488, plenary, Bucharest, Rom. (1988).
13. Пасков П.П., Павлов Л.Й., **Атанасов П.А.**, “Тепловая и электронная оптическая бистабильност в галкогенидах свинца”, NIII Междун. конф. *КИНО*, 290-291, Минск, СССР (1988).
14. Paskov P.P, Pavlov L.I., **Atanasov P.A.**, Kushev D.B., Zheleva N.N,"Optical nonlinearity and fast switching in PbSnTe ethalon", Int. Conf. on "*Optical Nonlinearity and Bistability of Semiconductors*", Berlin, GDR (1988).
15. **Атанасов П.А.**, “Лазерная резка стеклянных труб”, Междун. семин. по теме *4.3.5. КП НТП* на СИВ, plenary, Москва, СССР (1988).
16. Андреев С.Н., **Атанасов П.А.**, Брынзалов П.П., Карлов Н.В., Кислецов А.В., Ковалев И.О., Кузьмин Г.П., Левченко А.А., “Несамостоятельный объемный разряд с плазменным катодом в азоте высокого давления”, IV Всесоюз. Конф. по *Физ. Газового разряда*, ч. II, 61-62, Махачкала, СССР (1988).
17. **Atanasov P.A.**, Serafetinides A.A., "An experimental study of gas laser excited by a sliding discharge", 2nd European Conf. on Quant. Electron." *EQEC'89*, II.P, 2.25, Dresden, GDR (1989).
18. **Atanasov P.A.**, "Some aspects of high-pressure N_2 assisted CO_2-laser cutting of metals", VIII Int. Symposium *Gas Flow & Chem. Lasers*, 145, Crete, Greece (1992).
19. Baeva M.G., **Atanasov P.A.**, "Numerical model of an axial fast-flow CO_2 laser with controlled turbulence", VIII Int. Symposium on *Gas Flow & Chem. Lasers,* 78, Crete, Greece (1992).
20. Vasilev S.G., **Atanasov P.A.**, "Experimental investigation and numerical modeling of NI_2 laser, excited by sliding discharge", *OE LASE'92*, Los Angeles, 1628, 08 (1992).
21. **Atanasov P.A.**, Tomov R.I., Serbezov V.S., "Laser processing of YBaCuO thin films", invited, *ALT' 93*, Prague (1993).
22. Baeva M.G., **Atanasov P.A.**, "On the influence of the CO_2 laser gas mixture composition", *I Int. Symp. Laser and Optoelectron. Tech. & Appl*., 3.3.3, Singapore (1993).
23. Grozdanov K.A., **Atanasov P.A.**, “Investigation of a nitrogen laser excited by sliding discharges", *CLEO/Europe'94*, CTuK94, 146, Amsterdam (1994).
24. **Atanasov P.,**"Laser processing of plastics", *GCL'94*, ThP05, Friedrichshafen, Germany, poster (1994).
25. **Atanasov P.**, Tomov R., Serbesov V., "Laser processing of YBCO superconducting thin films", *GCL'94*, ThP08, Friedrichshafen, Germany poster (1994).
26. **Atanasov P.A.**, Tomov R.I., Serbezov V.S., Grunchev A., Avramov L., "Laser patterning and modification of thin YBCO films", *ALT' 95*, Prague (1995).
27. Tomov R.I., **Atanasov P.A.**, Serbezov V.S., "Laser deposition of thin buffer and YBCO thin films on Si and GaAs substrates", *ALT' 95*, Prague (1995).
28. Grozdanov K.A., **Atanasov P.A.**, "Simultaneous emission in UV and IR region in a sliding discharge excited laser", *NATO Adv. Study Inst. - High Power Lasers – Sci. and Engin*.", Karlovy Vary (1995).
29. Koleva M., **Atanasov P.**, Tomov R., Vankov O., Matin C., Ristoscu C., Mihailescu I., Iorgov D., Angelova S., Ghelev Ch., Mihailov N., “Pulsed laser deposition of barium hexaferrite (BaFe12O19) thin films”, *E-MRS Meeting*, France, poster (1999).
30. Ristoscu C., Nelea V., Chiritescu C., Gyorgy E., Mihailescu I.N., Koleva M., **Atanasov P.,** Tomov R., Zotova S., “Thin films of Sr ferrite produced by laser ablation deposition”, DIII/ P5, *E-MRS Meeting*, France, poster (2000).
31. **Atanasov P.A.**, Imamova S.E., Nedialkov N.N., “Molecular dynamic simulation of ablation”, invited, Int. Workshop on “*Fundamentals of Ablation with Short Pulsed Solid State Lasers*”, Hirschegg (2001).
32. Jelínek M., Lančok J., **Atanasov P.A.**, Flory F., “Laser deposition of waveguiding Nd:KGW films”, *10th Int. Laser Physics Workshop*, Moscow, July 3-7, 21 (2001).
33. Koleva M.E., Tomov R.I., **Atanasov P.A.**, Ghelev Ch.G., Vankov O.I., Mihailov N.I., Lanchok J., Jelinek M., “Combined laser-magnetic field treatment of $SrFe_{12}O_{19}$ thin films grown by pulsed laser deposition”, L/P2.12, *E-MRS Meeting*, poster (2001).
34. **Atanasov P.A.**, Nedialkov N.N., Imamova S.E., “Laser ablation of Al and Si by ultrashort laser pulses: recent results on MD simulation”, invited, Int. Workshop on “*Fundamentals of Ablation with Short Pulsed Solid State Lasers*”, Hirschegg (2002).
35. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, “Evolution of the ultrashort ablation process”, invited, Int. Workshop on “*Fundamentals of Ablation with Short Pulsed Solid State Lasers*”, Hirschegg (2002).
36. Koleva M.E., **Atanasov P.A.**, Vankov O.I., Mihailov N.I., “Modification of pulsed laser deposited $SrFe_{12}O_{19}$ thin films by IR laser irradiation in magnetic field”, *E-MRS Meeting*, France D/PII.23 poster (2002).
37. **Atanasov P.A.**, Okato T., Obara M., Tomov R.I, “Pulsed laser deposition of thin (110) Nd:KGW films on CeO_2/Si substrates”, *Symposium H: Photonic Processing of Surfaces, Thin Films and Devices, EMRS*, H/PII.04, Strasbourg, June 10-13, poster (2003).
38. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, Heusel G., Breitling D., Ruf A., Hugel H., Dausinger F., Berger P., “Laser ablation of iron by ultrashort laser pulses”, *Symposium H: Photonic Processing of Surfaces, Thin Films and Devices, EMRS*, H-V.2, Strasbourg, June 10-13, oral presentation (2003).
39. Obara M., Ozono K., Sekita H., **Atanasov P.A.**, "Femtosecond laser processing tailored for advanced materials: biomedical materials and molecular dynamics simulation, *Photonics West*, San Jose, USA, February 25-28, 49177A-17, Invited (2003).
40. Obara M., Ozono K., Sekita H., **Atanasov P.A.**, "Femtosecond laser processing tailored for advanced materials: biomedical materials and molecular dynamics simulation, *LASE 2003,* 49177A-17, San Jose, USA, January 25-31, Invited (2003).
41. Okato T., **Atanasov P.A.**, Obara M., Tomov R.I, “Fabrication of Nd:KGd$(WO_4)_2$ thin films on Si substrate by introducing CeO_2 buffer layer”, *CLEO/EUROPE – EQEC 2003*, München, June 22-27, (2003).
42. 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”, *COLA'03*, Heraklion, October 05-10, (2003).
43. Dikovska A.Og., **Atanasov P.A**., Tomov R.I., Tonchev S.H., Perea A., Gonzalo J., Afonso C.N., Okato T., Obara M., “Preparation of Er^{3+}, Yb^{3+} co–doped Y_2O_3 thin films by pulsed laser deposition”, *COLA'03*, Heraklion, October 05-10, (2003).
44. **Atanasov P.A.**, Okato T., Obara M., Dikovska A.Og, “Pulsed laser deposition and characterization of the structural and optical properties of Nd:KGW thin films”, *3rd Asian Pacific Laser Symp.*, plenary, Osaka, Japan (2003).
45. **Atanasov P.A.**, Nedialkov N.N., Imamova S.E., “Laser ablation of metals by ultrashort pulses”, invited, Int. Workshop on “*Fundamentals of Ablation with Short Pulsed Solid State Lasers*”, Hirschegg, 4-6 Feb. (2004).
46. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, “Laser ablation of Fe by ultrashort pulses: recent MD simulation results”, invited, Int. Workshop on “*Fundamentals of Ablation with Short Pulsed Solid State Lasers*”, Hirschegg 4-6 Feb. (2004).
47. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, Berger P., Dausinger F., “Mechanism of ultrashort laser ablation of metals: molecular dynamics simulation”, *Symposium N: Laser interactions in materials: nanoscale to mesoscale, EMRS*, N-IV.3, Strasbourg, May 24-28, (2004).
48. Okato T., Osada T., Obara M., **Atanasov P.A.**, Tomov R.I., “Fabrication of low-Loss Nd:KGW laser waveguide on silicon substrate by pulsed laser deposition”, *SPIE High-Power Laser Ablation V*, Taos, USA (April 2004).
49. Stanimirova T.J., **Atanasov P.A.**, Dikovska A.Og., Stankova N.E., Tonchev S.H., “Structural and optical properties of thin indium oxide films produced by pulsed laser deposition”, *Symposium N: Laser interactions in materials: nanoscale to mesoscale, EMRS*, N-PIII.08, Strasbourg, May 24-28, (2004).
50. Stankova N.E., **Atanasov P.A**., Stanimirova T.J., Dikovska A.Og., Eason R.W., “Thin (001) tungsten trioxide films grown by laser deposition”, *Symposium N:*

Laser interactions in materials: nanoscale to mesoscale, EMRS, N-PIII.10, Strasbourg, May 24-28, (2004).

51. Nedialkov N.N., Imamova S.E., **Atanasov P.A.**, Berger P., Dausinger F., "Basic features of deep hole drilling in metals by ultrashort laser pulses: molecular dynamics simulation study", *GCL/HPL'2004*, P2-67, Prague, August 30-September 3, 192-193 (2004).
52. Nedialkov N.N., **Atanasov P.A.**, Sawczak M., Slivinski G., "Laser drilling of AlN ceramics using nanosecond laser pulses", *GCL/HPL'2004*, P2-47, Prague, August 30-September 3, 181 (2004).
53. Okato T., Obara M., **Atanasov P.A.,** Tomov R.I.**,** "Nd:KGW planar waveguides on silicon substrate for integrated active optical devices", *IEEE LEOS 17th Ann. Meeting*, Rio Grange, Puerto Rico (2004).
54. Cudzik L., Jelinek M., Studnicka V., Pavelka M., **Atanasov P.A.**, "Laser annealing of Bi_2Te_3 thin films prepared by pulsed laser deposition", *Workshop 2005 – CTU Reports*, Part A, Prague, March 2005, 9, 116-117 (2005).
55. **Atanasov P.A**., Dikovska A.Og., Dimitrov I.G., Perriere J., Defourneau R.M., "Electrical and optical properties of thin films prepared by laser ablation of Nd-doped potassium gadolinium tungstate", *EMRS*, J-PII.10, 8/19, Strasbourg, May 31-June 03 (2005).
56. Dikovska A.Og., **Atanasov P.A**., Dimitrov I.G., Kocuorek T., Jelinek M., "Structural and optical properties of Er, Yb co-doped Y_2O_3 thin films", *EMRS*, J-PII.09, 8/19, Strasbourg, May 31-June 03 (2005).
57. Nedialkov N.N., **Atanasov P.A.**, "Molecular dynamics simulation study of deep hole drilling in iron by ultrashort laser pulses", *EMRS*, J-IX.02, 13/19, Strasbourg, May 31-June 03, invited (2005).
58. Seiler W., Millon E., Perez-Casero R., Perriere J., Defourneau D., Defourneau R.M., Dikovska A., **Atanasov P**., "Growth of new oxide phases by pulsed laser deposition", *EMRS*, J-PII.13, Strasbourg, May 31-June 03 (2005).
59. **Atanasov P.A.**, Dikovska A.Og., Stankova N.E., Stanimirova T.J., Dimitrov I.G., Eason R.W., Escoubas L., Spalluto L., Mazingue T., Du H.L., "Properties of pulsed laser deposited thin metal oxide films for gas sensor application", *NANOPHOS'2005*, poster, Warsaw, September 03 (2005).
60. **Atanasov P.A.**, Takada H., Nedyalkov N.N., Obara M., "Nanohole processing on silicon substrate by femtosecond laser pulse with localized surface plasmon polariton", *E-MRS Meeting*, H.09-02, Nice, France, invited (2006).
61. Stanimirova T.J., **Atanasov P.A.**, Stankova M., Dimitrov I.G., Stoyanchov T.R., "Optical and structural properties of pure and palladium doped indium tin oxide films grown by pulsed laser deposition", *E-MRS Meeting*, H.P3-19, Nice, France (2006).
62. Dikovska A.Og., **Atanasov P.A.**, T.R. Stoyanchov, A.Ts. Andreev, B.S. Zafirova, E.I. Karakoleva, "Pulsed laser deposited ZnO film on side-polished fiber as a gas sensing element", *E-MRS Meeting*, K.P3-06, Nice, France (2006).
63. Dikovska A.Og., **Atanasov P.A.**, H. Tonchev, L. Escoubas, "Periodically structured ZnO thin films for optical gas sensor application", *E-MRS Meeting*, K.P3-03, Nice, France (2006).
64. Peeva A., Dikovska A.Og., **Atanasov P.A.**, Jiménez de Castro M., Skorupa W., "Rare-earth implanted Y_2O_3 thin films", *E-MRS Meeting*, H.P3-26, Nice, France (2006).
65. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Petrov K.A., Avdeev G.V., "Structural and optical properties of YVO_4 thin films", *E-MRS Meeting,* HP3-25, Nice, France (2006).
66. Nedialkov N.N., **Atanasov P.A.**, Amoruso S., Bruzzese R., Wang X., "Laser ablation of metals by femtosecond pulses: theoretical and experimental study", *E-MRS Meeting*, HP1-30, Nice, France (2006).
67. **Atanasov P.A.,** Nedialkov N.N., "Laser ablation of metals by ultrashort pulses", *XVI Int. Symp. GCL/HPL*, 140, Gmunden, Austria (2006).
68. Nedyalkov N.N., Sakai T., **Atanasov P.A.**, Obara M., "Surface modification by localized surface plasmon polaritons excited by femtosecond laser pulse", *APLS 2006*, III – 13, Guilin, China (2006).
69. Amoruso S., Bruzzese R., Wang X., Nedialkov N.N., **Atanasov P.A**., "Characterization of laser ablation plasmas produced by ultrashort laser pulses", *5th International Conference on Photo-Excited Processes and Applications ICPEPA-5*, 3-7 September 2006, Charlottesville, Virginia, USA, invited (2006).
70. Nedyalkov N.N., **Atanasov P.A.**, Obara M., "Near field properties in vicinity of gold nanoparticle array", Int. Conf. "Fundamentals of Laser Assisted Micro- and Nanotechnologies" (FLAMN -2007), June 25 - 28, St. Petersburg, Russia (2007).
71. **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", *E-MRS Meeting*, P/P1-10, Strasbourg, France, poster (2007).
72. **Atanasov P.A.**, Nedialkov N.N., Amoruso S., Bruzzese R., Wang X., "Ultrashort laser ablation of nickel in vacuum: material relaxation and nanoparticles generation", *E-MRS Meeting*, P/P1-12, Strasbourg, France, poster (2007).
73. Dikovska A.Og., **Atanasov P.A.**, Milev. D.R., Dimitrov I.G., "Y_2O_3 waveguide amplifier produced by pulsed laser deposition", *E-MRS Meeting*, C/PII-6, Strasbourg, France, poster (2007).
74. Koleva M.E., **Atanasov P.A.**, Perriere J., Nedialkov N., Obara M., "Role of Vanadium content in ZnO thin films grown by pulsed laser deposition", *E-MRS Meeting*, P/P2-06, Strasbourg, France (2007).
75. Koleva M.E., **Atanasov P.A.,** Naidenova Ts.G., Nedialkov N., Perriere J., Fukuoka H., Obara M., "Laser deposition of vanadium doped ZnO thin films", *NATO ASI Conf.*, Romania (2007).
76. Stankova N.E., Dimitrov I.G., Stoyanchov T.R., **Atanasov P.A.**, "Optical and gas sensing properties of thick TiO_2 films grown by pulsed laser deposition", *E-MRS Meeting*, P/P2-04, Strasbourg, Franceq poster (2007).
77. Dikovska A.Og., **Atanasov P.A.**, Stoyanchov T.R., Andreev A.Ts., Zafirova B.S., Karakoleva E.I., "ZnO film on side-polished fiber for gas sensing application", *E-MRS Meeting*, P/P3-29, Strasbourg, France, poster (2007).
78. Nedialkov N., Sawczak M., Jendrzejewski R., **Atanasov P.**, Martin M., Slivinski G., "Analysis of the surface and materials modifications caused by laser drilling of AlN ceramics", *E-MRS Meeting*, P/P3-30, Strasbourg, France, poster (2007).
79. **Atanasov P.A.**, Obara M., Nedyalkov N.N., "Plasmonic surface nanostructuring by intense femtosecond laser", *2nd ECL-Keio NanoWorkshop*, 21-26, Yokohama, Japan, invited (2007).
80. Obara M., Miyanishi T., Sakai T., Tanaka Y., Nedyalkov N.N., **Atanasov P.A.**, "Nanostructure processing of various materials by surface plasmon polaritons excited by femtosecond laser", *E-MRS Meeting*, B-04 1, Strasbourg, France, invited (2008).
81. Nikolov A.S., **Atanasov P.A.**, Milev D.R., Stoyanchov T.R., Deleva A.D., Peshev Z.J., Petrov I., "Synthesis and characterization of TiO_2 nanoparticlesprepared by pulsed-laser ablation of Ti target in water", *E-MRS Meeting*, B-P1 37, Strasbourg, France (2008).
82. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Petrov K.A., Avdeev G.V., "Pulsed laser deposited Er^{3+},Yb^{3+}:YVO_4 waveguides on MgO/Si substrates", *E-MRS Meeting*, B-P2 19, Strasbourg, France (2008).
83. Stankova N.E., Dimitrov I.G., Stoyanchov T.R., **Atanasov P.A.**, "Structure and optical anisotropy of pulsed laser deposited TiO_2 films", *E-MRS Meeting*, B-P2 23, Strasbourg, France (2008).
84. Kuneva M., Tonchev S., Nesheva D., **Atanasov P.**, "Proton exchanged waveguiding layers in Y-cut lithium niobate: analysis of the phase composition by spectroscopic methods", *E-MRS Meeting*, P-7 56, Strasbourg, France (2008).
85. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Obara M., "Near field localization mediated by a single gold nanoparticle embeeded in transparent matrix: application for surface modification", *E-MRS Meeting*, B-O7 4, Strasbourg, France, oral presentation (2008).
86. Koleva M.E., **Atanasov P.A.**, Naydenova Ts.G., Nedialkov N.N., Perriere J., Defourneau D., Fukuoka H., Obara M., "Vanadium doped thin films of ZnO grown by pulsed laser deposition", *E-MRS Meeting*, France B-P2 32, poster (2008).
87. **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", *ICNAM'2009*, NMS-10, 66, plenary, Bahrain, Bahrain (2009).
88. Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A.**, Andreev A.Ts., "Nanostructured ZnO film deposited on a side-polished fiber for gas sensor application", *E-MRS Meeting*, EP 1-18, poster, Strasbourg, France (2009).
89. Naydenova Ts.G., Koleva M.E., Milev D.R., **Atanasov P.A.**, Shengqiang Zhou, Baumgart Ch., Liedke M., Schmidt H., "Influence of post-deposition treatment on microstructure and magnetic properties of Pulsed Laser Deposited ZnO thin films", *E-MRS Meeting*, HP1-29, poster, Strasbourg, France (2009).
90. Stankova N.E., Dimitrov I.G., Stoyanchov T.R., **Atanasov P.A.**, Nanostructured optical waveguide films of WO_3 and TiO_2 for photonic gas sensors, *E-MRS Meeting*, HP1-52, poster, Strasbourg, France (2009).
91. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., Avdeev G.V., Petrov K.P., "Er, Yb:YVO_4 waveguides produced by PLD and UVPLD", *E-MRS Meeting*, HP2-45, poster, Strasbourg, France (2009).
92. 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", *E-MRS Meeting*, Q 7-2, poster, Strasbourg, France (2009).
93. 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", *E-MRS Meeting*, Q 7-5, poster, Strasbourg, France (2009).
94. Dimitrov I.G., **Atanasov P.A.**, Dikovska A.Og., "Prism-coupling technique for refractive index and thickness evaluation: an extended approach to the isotropic thin films", *E-MRS Meeting*, F 8-9, poster, Strasbourg, France (2009).
95. Nikolov A.S., Nedyalkov N.N., Dimitrov I.G., **Atanasov P.A.**, "Formation and characterization of Ag and Au nanoparticles created by pulsed laser ablation in liquid

media", *E-MRS Meeting*, RPI 17, poster, R5, Strasbourg, France (2010).

96. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., "Homo-epitaxial growth of Er^3, Yb^3:YVO_4 waveguides", *E-MRS Meeting*, RPII 16, poster, R12, Strasbourg, France (2010).
97. Nedyalkov N.N., Imamova S.E., **Atanasov P.A.**, Obara M., "Interaction of gold nanoparticles with nanosecond laser pulses: nanoparticle heating", *E-MRS Meeting*, RPIII 45, poster, R24, Strasbourg, France (2010).
98. Dimitrov I.G., Nedyalkov N.N., **Atanasov P.A.**, "Optical properties of gold nanoparticle arrays", *E-MRS Meeting*, B10-4, poster, B14, Strasbourg, France (2010).
99. Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A.**, "Fabrication of ZnO nanorods using metal nanoparticles as growth nuclei", *7th Intern. Conf. on Nanoscience & Nanotech. (NN10)*, W2, oral, Ouranoupolis Halkidiki, Greece (2010).
100. Yossifova L.S., Gardeva E.G., Toshkova R.A., Alexandrov M., Vladov I., Nedyalkov N., Imamova S., **Atanasov P.**, Balansky R., "Potential therapeutic properties of plasmonically heated gold nanoparticles in HELA CELL line", *Annals of Oncology*, 21, Suppl. 8, 183-183 (2010).
101. Nikolov A.S., Nedyalkov N.N., Nikov R.S., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., "Investigation of Ag nanoparticles produced by nanosecond pulsed laser dblation in water", *Intern.I Symp. on Colloids and Mater.,* 8-11 May, poster, Amsterdam, The Netherlands (2011).
102. Koleva M.E., Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A.**, "Preparation and characterization of Ag/ZnO nanocomposites obtained by pulsed laser deposition", *E-MRS Meeting*, Symp. J, poster, P 2 15, Strasbourg, France (2011).
103. Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A**., Avdeev G.V., " Preparation of metal nanorod substrates for SERS application", *E-MRS Meeting*, Symp. J, poster, P 2 8, Strasbourg, France (2011).
104. Nedyalkov N.N., Dikovska A.Og., Imamova S.E., Nikov Ru., **Atanasov P.A**., Obara G., Obara M., "Laser annealing of bimetal thin films: a route of fabrication of alloyed nanostructures", *E-MRS Meeting*, Symp. J, poster, P 2 9, Strasbourg, France (2011).
105. Nikov R.G., Nikolov A.S., Nedyalkov N.N., **P.A. Atanasov**, "Stability of contamination-free gold and silver nanoparticles produced by nanosecond laser ablation of solid targets in water", *E-MRS Meeting*, Symp. J, poster, P 1 27, Strasbourg, France (2011).
106. Obara G., Maeda N., Miyanishi T., Terakawa M., Obara M., Nedyalkov N.N., **Atanasov P.A.**, "Periodic ripple formation on the silicon surface by controlling surface plasmon polaritons excited by a femtosecond laser", *E-MRS Meeting*, Symp., invited, J 12 4, Strasbourg, France (2011).
107. **Atanasov P.A**., "Noble metal nanostructures: preparation, properties, applications", *Third Global COE Symposium*, Keio University, Japan, February 27-28, invited (2012).
108. **Atanasov P.A**., "Noble metal nanostructures: preparation, properties, applications", *Obara lab Symposium*, Keio University, Japan, March 01, invited, (2012).
109. Dikovska A.Og., Nedyalkov N.N., Toshkova R.A., Gardeva E.G., Yossifova L.S., **Atanasov P.A.**, "Fabrication of ZnO nanostructures and their application in biomedicine*", Photonics Europe 2012*, Brusseles, April 16-20, 8424-96, poster (2012).
110. Nedyalkov N.N., **Atanasov P.A.**, Toshkova R.A., Gardeva E.G., Yossifova L.S., Alexandrov M.T., "Laser heating of gold nanoparticles: photothermal cancer cell therapy", *", Photonics Europe 2012*, Brusseles, April 16-20, 8427-98, poster (2012).
111. Dikovska A.Og., Tsankov N.Ts., **Atanasov P.A.**, Kocourek T., Jelinek M., "Fabrication of ZnO nanostructures by PLD", *E-MRS Meeting*, Symp., poster, Symposium V, P1 39, Strasbourg, France (2012).
112. Nikov Ru.G., Nedyalkov N.N., **Atanasov P.A.**, "Tuning the optical properties of gold nanostructures fabricated on flexible substrates", *E-MRS Meeting,* poster, Symposium V, P2 36, Strasbourg, France (2012).
113. Grochowska K., Iwulska A., Nedyalkov N., **Atanasov P.**, Śliwiński G., "Engineering Au nanoparticle arrays on SiO_2 glass by pulsed UV laser irradiation", *E-MRS Meeting,* poster, Symposium N, P5 12, Strasbourg, France (2012).
114. Nikolov A.S., Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Alexandrov M.T., "Modification of the Ag and Au nanoparticles size distribution by means of laser light illumination of their water suspension", *E-MRS Meeting,* poster, Symposium V, P3 1, Strasbourg, France (2012).
115. 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 liquide", *E-MRS Meeting,* poster, Symposium V, P3 3, Strasbourg, France (2012).
116. Dikovska A.Og., Alexandrov M.T., Atanasova G., Tsankov N.Ts., Nedyalkov N.N., **Atanasov P.A.**, "Silver nanoparticles produced by PLD in vacuum: role of the laser wavelength used", *E-MRS Meeting,* poster, Symposium V, P3 13, Strasbourg, France (2012).
117. Koleva M.E., Nedyalkov N.N., Dikovska A.Og., **Atanasov P.A.**, "Optical properties in plasmonic multilayer structure", *E-MRS Meeting,* poster, Symposium V, P3 14, Strasbourg, France (2012).
118. **Atanasov P.A.**, Nedyalkov N.N., Amoruso S., Wang X., Ausanio G., Bruzzese R., "Nanoparticles size control in ultrashort-pulse laser ablation of gold thin film", *E-MRS Meeting,* poster, Symposium V, P3 28, Strasbourg, France (2012).
119. Nikov Ru., Nedyalkov N., **Atanasov P.**, Contantinescu C., Delaporte Ph., Grojo P., Terakawa M., Shimizu H., Obara M., "Near field localization in nanoparticle array on the end face of optical fiber", poster, *E-MRS Meeting*, Symposium V, PII 16, Strasbourg, France (2013).
120. Nikolov A.S., Nedyalkov N.N., Nikov R.G., Dimitrov I.G., **Atanasov P.A.**, Maximova K., Kabashin A., Delaporte Ph., Alexandrov M.T., Karashanova D.B., "Processing conditions in pulsed laser ablation of metals in liquid for fabrication of nanowire", *E-MRS Meeting* poster, Symposium V, PII 30, Strasbourg, France (2013).
121. Stankova N.E., Nedyalkov N.N., Nikov R.G., **Atanasov P.A.**, Ristoscu C., "Micromachining and near-field nanopatterning by UV laser irradiation – precise materials processing", *E-MRS Meeting,* poster, E-MRS, Symposium V, PIII 53, Strasbourg, France (2013).
122. Polyzos D.K., Tsigaridas G., Serafetinides A.A., Makropoulou M., Kotsifaki D., **Atanasov P.A.,** Nedialkov N.N., "Theoretical and Experimental Study of Optical Trapping on a Micro-structured Substrate", Proc. of XXIX Panhellenic Conf. on Solid State Phys. & Material Sci. with Intern. Participation, Athens, 22-25.09.2013, P01, 12-13 (2013).
123. Yossifova L., Gardeva E., Toshkova R., Alexandrov M., Nedyalkov N., **Atanasov P.**, *European J. of Cancer*, 49, 2, S227-S228 (2013).
124. **Atanasov P.A.**, Nedyalkov N.N., Valova E.I., Georgieva J.S., Armyanov St.A., Kolev K.N., Amoruso S., Wang X., Bruseze R., Sawczak M., Śliwiński G., "Fs-Laser processing of polydimethylsiloxane", *E-MRS Meeting,* poster, Symposium J, JPVIII 59, Lille, France (2014).
125. Stankova N.E., **Atanasov P.A.**, Stoyanchov T.R., Kolev K.N., Valova E.I., Georgieva J.S., Armyanov St.A., "Comparison between femtosecond and nanosecond laser processing of PDMS polymer: Raman spectroscopy investigation", *E-MRS Meeting,* poster, Symposium J, JPVIII 51, Lille, France (2014).
126. Dikovska A.Og., Atanasova B.P., Avdeev G.V., **Atanasov P.A.**, "Sintesis and characterization of ZnO nasnostructures on noble-metal coated substrates", *E-MRS Meeting,* poster, Symposium CC, CC.P1 13, Lille, France (2015).
127. **Atanasov P.A.**, Stankova N.E., Nedyalkov N.N., Fukata N., Amoruso S., Wang X., Kolev K.N., Valova E.I., Georgieva J.S., Armyanov St.A., "Fs-laser processing of medical grade polydimethylsiloxane (PDMS), *E-MRS Meeting,* oral presentation, Symposium CC, CC.05 5, Lille, France (2015).
128. Nikov Ru.G., Nedyalkov N.N., **Atanasov P.A.**, Hirsch D., Rauschenbach B., "Characterization of Ag nanostructures fabricated by laser-induced dewetting of thin films", poster, Symposium CC, CC.P2 7, Lille, France (2015).
129. **Atanasov P.A.**, Stankova N.E., Nedyalkov N.N., Stoyanchov T.R., Nikov Ru.G., Fukata N., Gerlach J.W., Rauschenbach B., "Properties of nanosecond laser processed polydimethylsiloxane (PDMS), *E-MRS Meeting,* poster, Symposium CC, CC.P2 8, Lille, France (2015).
130. Nedyalkov N.N., Koleva M.E., Nikov R.G., **Atanasov P.A.**, Nakajima Y., Terakawa M., "Laser nanostructuring of ZnO thin films", *E-MRS Meeting,* poster, Symposium CC, CC.P2 9, Lille, France (2015).
131. Koleva M.E., Nedyalkov N.N., **Atanasov P.A.**, Rauschenbach B., Gerlach J.W., Hirsch D., Prager A., "Two-step laser method for syntesis of plasmonic porous nanocomposites", *E-MRS Meeting,* poster, Symposium CC, CC.P2 18, Lille, France (2015).
132. Nikolov A.S., Koutzarova T., Nedyalkov N.N., Nikov R.G., Kolev S., Peneva P., **Atanasov P.A.**, Kovacheva D., Karashanova D.B.,, "Hexaferrite nanostructure colloids fabricated by laser ablation in water", *E-MRS Meeting,* poster, Symposium CC, CC.P2 22, Lille, France (2015).
133. Stankova N.E., **Atanasov P.A.**, Nedyalkov N.N., Stoyanchov T.R., Nikov R.G., Fukata N., "Optical properties of polydimethylsiloxane (PDMS) during nanosecond laser processing", *E-MRS Meeting,* poster, Symposium CC, CC.P2 23, Lille, France (2015).
134. Nikov R.G., Nikolov A.S., Nedyalkov N.N., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., "Laser-assisted fabrication and size distribution modification of colloidal ZnO nanstructures", *E-MRS Meeting,* poster, Symposium CC, CC.P2 36, Lille, France (2015).
135. Stankova N.E., **Atanasov P.A.**, Nikov Ru.G., Nikov R.G., Nedyalkov N.N., Vankov Or.I., Iordanova E., Yankov G., Grozeva M., Tatchev Dr., Kolev K.N., Valova E.I., Georgieva J.S., Armyanov St.A., Grochowska K., Śliwiński G., Fukata N., "Optical and morphological characterization of medical grade PDMS after surface modification by fs-laser irradiation", *E-MRS Meeting,* poster, Symposium C, C.P2 64, Lille, France (2016).
136. Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Karashanova D.B., "Syntesis of colloidal gold nanostructures by pulsed laser ablation in different liquids", *E-MRS Meeting,* oral, Symposium Y, Y.04.04, Warsaw, Poland (2016).
137. Nikov Ru.G., Dikovska A.O., Nedyalkov N.N., **Atanasov P.A.**, "Investigation of Au nanostructures fabricated by pulsed laser deposition in air", *E-MRS Meeting,* poster, Symposium Y, Y.P.1.04, Warsaw, Poland (2016).
138. Stankova N.E., **Atanasov P.A.**, Tzonev At.N., Perrone A., Karoor A., "Iharacterization of noble metal/TiO_2 nanostructures for plasmon-enhanced photon harvesting in photovoltaics", *E-MRS Meeting,* poster, Symposium Y, Y.P.1.24, Warsaw, Poland (2016).
139. Nikolov A., Koutzarova T., Nikov R., Nedyalkov N., **Atanasov P.**, Kolev S., Peneva P., Karashanova D., Kovacheva D., Gerlach J., Rauschenbach B., "Study of nanostructures produced by laser ablation of barium hexaferrite in water", *E-MRS Meeting,* poster, Symposium D, D.P.2.10, Warsaw, Poland (2016).

140. **Atanasov P.A.**, Nedyalkov N.N., Nikov Ru., Fukata N., Jevasuwan W., Subramani T., "SERS analyses of pesticides, insecticides and fungicides trough Au and Ag nanostructures produced by laser techniques", *E-MRS Meeting,* oral presentation, Symposium X, X-11.5, Strasbourg, France (2017).
141. Nedyalkov N., Dikovska A., Nikov R., **Atanasov P.**, Hirsch D., Rauschenbach B., Takami A., Terakawa M., "Laser induced nanoparticle fabrication on paper", *E-MRS Meeting,* poster, Symposium X, X.P-1.8, Strasbourg, France (2017).
142. Nedyalkov N., Koleva M.E., Stankova N.E., Nikov R., **Atanasov P.A.**, Grozeva M., Yordanova E., Yankov G., Karashanova D., Nakajima Y., Terakawa M., "Laser assisted nanoparticles formation inside gold doped borosilicate glass", *E-MRS Meeting,* poster, Symposium X, X.P-1.16, Strasbourg, France (2017).
143. Nikov Ru.G., Dikovska A.Og., Nedyalkov N.N., **Atanasov P.A.**, "ZnO nanostructures produced by pulsed laser deposition in open air", *E-MRS Meeting,* poster, Symposium X, X.P-1.36, Strasbourg, France (2017).
144. Stankova N.E., **Atanasov P.A.**, Iordanova E., Yankov G., Radeva E., Grozeva M., Zamfirescu M., Calin B.St., Luculescu C.R., Dumitru M.D., Grochowska K., Śliwiński G., Fukata N., "Effects of short and ultrashort pulsed laser irradiation on the physical and chemical properties of nanocomposite biopolymers", *E-MRS Meeting,* poster, Symposium X, X.P-1.38, Strasbourg, France (2017).
145. Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Karashanova D.B., "Colloidal ZnO nanostructures fabricated by nanosecond laser ablation in different liquids", *E-MRS Meeting,* poster, Symposium X, X.P-1.43, Strasbourg, France (2017).
146. Armyanov St., Valova E., Kolev K., Georgieva J., Tatchev D., **Atanasov P.**, Stankova N.,"Selective metaliization of laser irradiated biocompatoble poly(dimethilsiloxane) by electroless deposition for future MEMS and medical applications", *European Advanced Materials Congress*, 22–24 August 2017, poster, Stockholm- Helsinki (2017)
147. Stankova N.E. **Atanasov P.A.**, Yordanova E., Yankov G., Radeva E., Zamfirescu M., Calin B.St., Lukulescu C.R., Dumitru M.D., Tatchev D., Kolev K., Valova E., Armyanov St., Karashanova D., Grochowska K, Sliwinski G., Fukata N., Hirsch D., Rauschenbach B., "Laser assisted modification of biocompatible polymer relevant to neural interfacing technologies", *Intern. Conf. on Mterials Sci. and Graphene Technology*, April 09-11, 2018 Dubai, UAE, poster (2018).

С.II. Конференции у нас

148. **Атанасов П.А.**, "Начини за получаване на по-голяма изходна мощност от лазерите с CO_2", *Симпозиум III Нац. преглед ТНТМ*, Пловдив, 1-6 (1970).
149. Стефанов В.Й., **Атанасов П.А.**, "Зависимост на времето за съществуване на генерация от разрядния ток", *VI Нац. конф. по физ.*, 138, София (1973).
150. **Атанасов П.А.**, "Определяне времето на живот на $CHCl_3$, действуващ на долното лазерно ниво в CO_2 лазер", *I Нац. Конф. по "Радиофиз. и електрон.*", 87, София (1974).
151. **Атанасов П.А.**, "Изследване на силно йонизирана Не плазма с CO_2 лазерен интерферометър", *I Нац. Конф. "Радиофиз. и електрон.*", 86, София (1974).
152. **Атанасов П.А.**, Бърнеков В., Гелев Ч., Аврамов Л., "Изследване на възможността за рязане на ПДВ с помощта на лазер", I Нац. Симп. "*Физика и електронизация*", Г-28, 68, Пловдив (1979).
153. **Atanasov P.A.**, Petrova M.D., Jordanov B.G., "Infrared spectra of tri-n-propylamine and m-xylene and their relation to the upper laser level of CO_2", poster, *Proc. IX NCS*, Albena (1980).
154. **Атанасов П.А.**, Петрова М.Д., Гродел М., "Влияние на изострящ кондензатор върху разрядните характеристики и изходните параметри на ТЕ CO_2 лазер", III Нац. Симп. "*Приложна оптика и лазерна тех.*", 5 стр., Гюлечица, ЦИНТИ (1980).
155. **Атанасов П.А.**, Събева М.Й., Йотов Й.Н., "ТЕ CO_2 лазер с ултравиолетова предйонизация, създавана от пълзящ разряд", *I Нац. конгрес на физиците*, 274, София (1983).
156. **Atanasov P.A.**, Павлов Е.Л., Цветков Д.Г., "Изрязване на стъклени чаши с CO_2 лазер", *Юбил. Научна сесия ВХТИ*, 73, 4 стр., София (1983).
157. **Atanasov P.A.**, Станцо Й., Кукиело П., "Някои характеристики на CO_2 лазер с бърз проток на газа", *I Нац. Конгрес на физиците*, 273, София (1983).
158. **Атанасов П.А.**, Павлов Е.Л., "Лазерно терморазделяне на стъклени цилиндрични изделия", *I Нац. Конгрес на физиците*, 281, София (1983).
159. **Атанасов П.А.**, "Метод за полиране на водоразтворими оптични материали", *ОПТИКА'84,* Ж.12, 14, 3 стр., Варна (1984).
160. **Атанасов П.А.**, Павлов Е., Цветков Д., Кожухаров В., "Лазерно рязане на стъклени цилиндрични изделия", VIII Нац. НТ конф. *"Стъкло и фина керамика*", Варна (1984).
161. **Атанасов П.А.**, Павлов Е.Л., Йотов Й.Н., "Полупромишлени CO_2 лазери с изходна мощност 50, 100 и 150 W", *ОПТИКА'84*, Б.11, 6, 6 стр., Варна (1984).
162. **Atanasov P.A.**, Pavlov E.L., "Laser cutting of cylindrical glasses by melting", *IV School on Quant. Electron.,* poster, Sunny Beach (1986).
163. **Atanasov P.A.**, Pavlov L.I., Paskov P.P., "CO_2 laser spectrometer for semiconductor diagnostics", *IV School on Quant. Electron.*, poster (1986).
164. **Атанасов П.А.**, Павлов Е.Л., "Лазерно рязяне на стъклени цилиндрични изделия", *ЛАЗЕРИ'86*, Ч.13, 25, Пловдив (1986).
165. **Атанасов П.А.**, Василев С.Г., Йотов Й.Н., "Компактен импулсен CO_2 лазер при високо налягане", *ЛАЗЕРИ'86*, С.1, 3, Пловдив (1986).
166. **Атанасов П.А.**, Николова И.Г., "Експериментално изследване на вълноводен CO_2 лазер", *ЛАЗЕРИ'86*, С.9, 7, Пловдив (1986).
167. **Атанасов П.А.**,"Маломощни технологични CO_2 лазери", ННТ Конф. *ЕЛТЕРМАТ'87*, Албена, invited (1987).
168. **Atanasov P.A.**, "Preionization in pulsed CO_2 lasers", V Int. School on Quant. Electron. "*Laser Phys. & Appl.*", inv. lecture, 12 pps., Sunny Beach (1988).
169. **Atanasov P.A.**, Paskov P.P., Vachev V.D., Barudov S.T., "A study of a pulsed - periodic CO_2 laser with longitudinal discharge and slow gas flow", *Proc. III Nat. Conf.*, A.24, 27-28, Plovdiv (1988).
170. Vasilev S.G., **Atanasov P.A.**, "A TEMA CO_2 laser with plasma electrode", III Nat. Conf. "*Lasers & Appl*.", A.25, 28-29, Plovdiv (1988).
171. **Atanasov P.A.**, Kuz'min G.P., "Multi-atmospherical TE CO_2 lasers", III Nat. Conf. "*Lasers & Appl*.", invited, A.2, 4, Plovdiv (1988).
172. **Atanasov P.A.**, Branzalov P., Karlov N.V., Kovalyov I.O., Kuz'min G.P., Zikrin B.O., "The electrical discharge atmospheric pressure CO_2 laser with a non-selfmaintained discharge", III Nat. Conf. "*Lasers & Appl.*", A.10, 11-12, Plovdiv (1988).
173. **Atanasov P.A.**, Baeva M.G., "Predicted operating characteristics of an electric discharge cw CO_2 laser", III Nat. Conf. "*Lasers & Appl.*", A.11, 13-14 (1988).
174. Василев С.Г., **Атанасов П.А.**, Йотов Й.Н., Петров Д.С., "Опростен числен модел на мощен CO_2 лазер с два плазмени електрода", IV Гр. Конф. "*Физика, електронизация и кибернетизация*", София (1989).
175. Mitutsov V.Z., **Atanasov P.A.**, Schnieder I., Mihailescu I., "Mathematical modeling of an elastic mounted laser resonator mirror", *LASERS'90*, 120-21, Plovdiv (1990).
176. Mitutsov V.Z., **Atanasov P.A.**, "Elastic mounting of mirror in laser resonator", *LASERS'90*, 134, Plovdiv (1990).
177. Baeva M.G., **Atanasov P.A.**, "Numerical modeling of cw laser cutting of plastics", *IX Int. School on Q.E. Lasers: Phys. and Appl*., Varna (1996).
178. **Atanasov P.A.**, Koleva M.E., Tomov R.I., Ouzounov D.G., Tsaneva V., Yorgov D., Grivas Ch., "Pulsed laser deposition of Mn-Zn-ferrite, $La_{0.8}Sr_{0.2}MnO_3$ and $Y_3Fe_5O_{12}$ thin films", *IX Int. School on Q.E. Lasers: Phys. and Appl*., (1996).
179. Atanasov P.A., Koleva M.E., Tomov R.I., "Preparation of $Y_3Fe_5O_{13}$ and Mn-Zn ferrite thin films by excimer laser ablation", IX Int. School on Q.E. *Lasers: Phys. and Appl*., (1996).
180. **Atanasov P.A.**, Koleva M.E., Tomov R., Nedkov I., "Thin films of oxide ferrites produced by pulsed laser deposition", *Workshop "Nano-Crystalline and Thin Film Magnetic Oxides",* Sozopol, (1998).
181. 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", *XI VEIT* (1999).
182. **Atanasov P.A.**, "Pulsed laser deposition of planar waveguide lasers", inv. lecture, *4th Gen. Conf. of Balkan Phys. Uni.*, V. Turnovo, invited (2000).
183. Ristoscu C., Nelea V., Chiritescu C., Gyorgy E., Mihailescu I.N., Koleva M., **Atanasov P.**, Tomov R., Zotova S., "Influence of substrate orientation on the characteristics of Srferrite thin films obtained by pulsed laser deposition", *11th Int. School on Q.E. Lasers: Phys. and Appl*., PD6, poster (2000).
184. Koleva M.E., **Atanasov P.A.**,Tomov R.I., Vankov O.I., Mihailov N.I., Modification of pulsed-laser-deposited yttrium iron garnet thin films by IR laser irradiation in magnetic field, *12 Int. School on Q.E. Lasers: Phys. and Appl*., PD5, poster (2002).
185. **Atanasov P.A.**, Nedialkov N.N., Imamova S.E., Obara M., "Ablation processing of metals by ultrashort laser pulses", *ILLA'2003*, Smolyan, Sept. 27-Oct.01, 7, invited (2003).
186. **Atanasov P.A.**, "Pulsed laser deposition of optical films", *VEIT'05*, IL-11, invited, Sunny Beach, September 12-16, (2005).
187. Stanimirova T.J., **Atanasov P.A.**, Dimitrov I.G., Dikovska A.Og., Stankova N.E., Stoyanchov T.R., "Optical properties of undoped and palladium doped indium tin oxide films grown by pulsed laser deposition", *VEIT'05*, PC-35, 124, Sunny Beach, September 12-16, (2005).
188. Dikovska A.Og., Tonchev S.H., Vasilev C., **Atanasov P.A.**, "Fabrication and study of periodically structured Y_2O_3 waveguides", *VEIT'05*, PA-43, 68, Sunny Beach, September 12-16, (2005).
189. Stankova N.E., **Atanasov P.A.**, Stoyanchov T.R., Dimitrov I.G., "Properties of thin TiO_2 films produced by pulsed laser deposition", *VEIT'05*, PB-38, 99, Sunny Beach, September 12-16, (2005).
190. **Atanasov P.A.**, "Thin films produced by PLD for photonic gas sensors", *LTL'05*, LTP, invited, Plovdiv, October 8-11, (2005).
191. Koleva M.E., **Atanasov P.A.**, Perriere J., D. Tzankov, "Characterization of Vanadium doped ZnO films produced by pulsed laser deposition", *XIV Int. School Q.E." Laser Phys. & Appl.",* PB.13, 93 (2006).
192. 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", *XV Int. School Q.E." Laser Phys. & Appl."*, invited (2006).

193. N. N. Nedyalkov N.N., ImamovaS.E., **Atanasov P.A**., Obara M., "Formation and initial evolution of nanoparticles at ultrashort laser ablation of gold: molecular dynamics simulation", *XV Int. School Q.E." Laser Phys. & Appl."*, poster (2006).
194. **Atanasov P.A.**, "Interaction of ultra-short laser pulses with matter and nanostructuring", *VEIT'07*, IL-17, 34-36, invited, Sozopol, September 17-21 (2007).
195. Koleva M.E., **Atanasov P.A.**, Perriere J., "Structure and properties of pulsed laser deposited vanadium doped ZnO films", *VEIT'07*, OP-10, 48, Sozopol, September 17-21 (2007).
196. Dimitrov I.G., Dikovska A.Og., **Atanasov P.A.**, Vasilev T., "Al doped ZnO thin films for gas sensors", *VEIT'07*, OP-11, 49, Sozopol, September 17-21 (2007).
197. Stankova N.E., Dimitrov I.G., Stoyanchov T.R., **Atanasov P.A.**, "Optical anisotropy of thin TiO_2 films prepared by pulsed laser deposition", *VEIT'07*, PB-23, 90, Sozopol, September 17-21 (2007).
198. **Atanasov P.A.**, "Nanostructuring of materials, based on near-field enhancement of the electromagnetic field in the vicinity of nano-size objects", *9th Workshop Nanoscience & Nanotechnology*, Sofia, 28-30 Nov., invited, (2007).
199. **Atanasov P.A.**, "Nanostructuring based on the near-electromagnetic field-enhansment in the vicinity of the nanoparticle", Vitosha 14-16 Dec. invited (2007).
200. Milev D.R., **Atanasov P.A.**, Dikovska A.Og., Dimitrov I.G., "Er^{3+},Yb^{3+}:YVO_4 waveguide thin films grown on MgO substrates by PLD", *10ти Юбилеен Зимен Семинар*, 10, Vitosha 14-16 Dec. (2007).
201. Nedyalkov N., Imamova S., **Atanasov P**., Obara M., "Gold nanoparticles as nanoheaters and nanolenses in the processing of different substrate surfaces", *VEIT'09,* Sunny Beach, invited, September (2009).
202. **Atanasov П.А.**, "Лазерът – повече от половин век двигател на иновациите в науката и практиката", *Семинар на САЧК*, София, 29.03.2010, доклад (2010)
203. Imamova S., Nedyalkov N., Nikov R., **Atanasov P.**, "Laser nanostructuring of bimetal thin films", *Int. Workshop on "Nanophotonics"*, Keio-IE, Sofia, 03.09.2010, IEP1, poster (2010).
204. Dimitrov I., Nedyalkov N., **Atanasov P.**, "Optical characteristics of metal nanoparticles and clusters", *Int. Workshop on "Nanophotonics"*, Keio-IE, Sofia, 03.09.2010, IEP2, poster (2010).
205. Nikov R., Nikolov A., **Atanasov P.**, "Au and Ag nanoparticles fabrication by ns laser ablation of solid targets in water", *Int. Workshop on "Nanophotonics"*, Keio-IE, Sofia, 03.09.2010, IEP3, poster (2010).
206. Obara M., Nedyalkov N., **Atanasov P.**, "Nanoablation patterning by femtosecond laser excited plasmonics", *Int. Workshop on "Nanophotonics"*, Keio-IE, Sofia, 03.09.2010, KO 03, invited (2010).
207. **Atanasov P.A.**, Nedyalkov N.N., Nikolov A.S., Nikov R.G., "Laser ablation as a fabrication method for metal nanoparticles", *Int. Workshop on "Nanophotonics"*, Keio-IE, Sofia, 03.09.2010, IEO 01, invited (2010).
208. Dikovska A.Og., Alexandrov M.T., Dimitrov I.G., Nedyalkov N.N., **Atanasov P.A.**, "Silver nanoparticles produced by PLD in vacuum", *18th GCL&HPL,* Sofia, 30.08.2010, poster HP 01(2010).
209. Miyanishi T., Terakawa M., Obara M., Nedyalkov N.N., **Atanasov P.A.**, "Directionally-controlled plasmon excitation in gold nanoparticles for nearofield nanopattering by femtosecond laser", *18th GCL&HPL*, HO 01, oral presentation, Sofia 30.08.2010 (2010).
210. Nikov R., Nikolov A., **Atanasov P**., "Preparation of gold and silver nanoparticles by pulsed laser ablation of solid target in water", *XVI Int. School Q.E." Laser Phys. & Appl."*, 20-24.09.2010, Nessebar, 46, PA7 poster (2010).
211. Nikov Ru., Imamova S., Atanasov P., "Pulsed laser nanostructuring of thin Au and Ag films for application in surface enhanced Raman spectroscopy", *XVI Int. School Q.E." Laser Phys. & Appl."*, 20-24.09.2010, Nessebar, 47, PA8 poster (2010).
212. Dikovska A.Og., Nedyalkov N.N., Imamova S.E., Atanasova G.B., **Atanasov P.A.**, "Au-coated ZnO nanostructures for SERS application", *19th Int. Conf. on Advanced Laser Technologies,* Golden Sands, 03-08.09.2011, P-2-LM, 125-126, poster (2011).
213. Nedyalkov N.N., Dimitrov I.G., **Atanasov P.A.**, Toshkova R.A., Gardeva E.G., Yossifova L.S., Alexandrov M.T., Dikovska A.Og., "Far and near field optical properties of gold nanoparticle ensembles", *19th Int. Conf. on Advanced Laser Technologies,* Golden Sands, 03-08.09.2011, poster, P-7-LM, 130 (2011).
214. Nedyalkov N.N., Dikovska A., Nikolov A., Koleva M., **Atanasov P.A.**, "Top-down and bottom-up techniques for laser nanostructures fabrication", *17th VEIT'2011,* Sunny Beach, 19-23.09.2011, invited, IL-6, 25 (2011).
215. Koleva M.E., Dikovska A.O., Nedyalkov N.N., **Atanasov P.A.**, Bliznakova I.A., "Structural and photoluminescent properties of Ag/ZnO nanocomposite heterostructures", *17th VEIT'2011,* Sunny Beach, 19-23.09.2011, poster, PA-3, 58 (2011).
216. Atanasova G., Dikovska A.Og., Stankova M.A., Stefanov P., **Atanasov P.A.**, "XPS study of ZnO nanostructures prepared by laser ablation", *17th VEIT'2011,* Sunny Beach, 19-23.09.2011, poster, PB-17, 86 (2011).
217. **Атанасов П.А.**, "Получаване на наночастици от благородни метали чрез лазерна аблация: свойства и приложения", *Нанотехнологиите и новите възможности за технологични ниши*, Кръгла маса, 15.12.2011, поканен доклад (2011).
218. Nikolov A., Nedyalkov N., Nikov R., **Atanasov P.**, Alexandrov M., Karashanova D., "Fabrication of gold and silver nanoparticles by pulsed laser ablation in double distilled water", *XVII Int. School Q.E." Laser Phys. & Appl."*, 44, PA7 poster (2012).
219. Koleva M., Dikovska A., Nedyalkov N., **Atanasov P.**, Ag/ZnO multilayer nanopcomposites prepared by laser methods", *XVII Int. School Q.E." Laser Phys. & Appl."*, 45, PA8 poster (2012).
220. Nikov Ru., Nedyalkov N., **Atanasov P.**, "Near field intensity enhancement and localization in noble metal nanoparticle ensembles", *XVII Int. School Q.E." Laser Phys. & Appl."*, 45, PA9 poster (2012).
221. Dikovska A., Nedyalkov N., Avdeev G., **Atanasov P.**, "Fabrication of metal nanorod substrates for SERS application", *XVII Int. School Q.E." Laser Phys. & Appl."*, 46, PA10 poster (2012).
222. Nikov Ru., Nedyalkov N., **Atanasov P.**, Groshkowska K., Iwulska A., Sliwinski G., "Laser nanostructuring of Au/Ag and Au/Ni films for application in SERS", *XVII Int. School Q.E." Laser Phys. & Appl."*, 53, PA18 poster (2012).
223. Nikov R., Nikolov A., Nedyalkov N., **Atanasov P.**, Alexandrov M., Karashanova D., "Investigation of Au nanoparticles produced by laser ablation of solid target in water", *XVII Int. School Q.E." Laser Phys. & Appl."*, 54, PA19 poster (2012).
224. **Atanasov P.A.**, "Noble metalic nanostructures: preparation, properties, applications", *18th VEIT'2013,* Sozopol, 07-11.10.2013, invited, IL-4, 26 (2013).
225. Nedyalkov N., Nikov Ru., **Atanasov P.**, Contantinescu C., Delaporte Ph., "Fabrication of 2D arrays of multi-component nanoparticles", *18th VEIT'2013,* Sozopol, 07-11.10.2013, poster, PB-1, 79 (2013).
226. Koleva M.E., Nedyalkov N.N., **Atanasov P.A.,** "Effect of plasmo-exciton coupling on the optical response of a ZnO/Ag/ZnO nanocomposite",*18th VEIT'2013,* Sozopol, 07-11.10.2013, poster, PB-9, 85 (2013).
227. Dikovska A.Og., Koleva M.E., Atanasova G.B., Stoyanchov T.R., Nedyalkov N.N., **Atanasov P.A.,** "PLD fabrication of ZnO nanostructures on metal-coated substrates", *18th VEIT'2013,* Sozopol, 07-11.10.2013, poster, PB-10, 85-86 (2013).
228. Ников Р.Г., Николов А.С., Недялков Н.Н., Димитров И.Г., **Атанасов П.А.**, Александров М.Т., Карашанова Д.Б., "Експериментално изследване на процеса за създаване на нановериги при импулсна лазерна аблация на метали в течност", *II Нац. Конгрес по физически науки*, София, 25-29.09.2013, устен доклад (2013).
229. Ников Ру.Г., Недялков Н.Н., **Атанасов П.А.**, "Локализация на близкото поле в 2D-наноструктура формирана върху челото на оптично влакно", *II Нац. Конгрес по физически науки*, София, 25-29.09.2013, устен доклад (2013).
230. **Atanasov П.А.**, "Нови подходи в оптиката - оптични свойства на наночастици и наноструктури от благородни метали", *II Нац. Конгрес по физически науки*, София, 25-29.09.2013, 06-01, пленарен доклад (2013).
231. **Atanasov П.А.**, "Прогрес в областта на микро- и нано-фотониката в ИЕ-БАН", *II Нац. Конгрес по физически науки*, София, 25-29.09.2013, пленарен доклад (2013).
232. **Atanasov П.А.**, "Наноструктури от благородни метали: получаване свойства и приложения", *ВВУ „Н.Й. Вапцаров"*, Варна, 29.03.2013, поканен доклад (2013).
233. **Atanasov П.А.**, "Лазерът – повече от половин век двигател на иновациите в науката и практиката", *ВВУ „Н.Й. Вапцаров"*, Варна, 29.03.2013, поканен доклад (2013).
234. Dikovska A.Og., Atanasova G.B., Avdeev G.V., Koleva M.E., Nedyalkov N.N., **Atanasov P.A.,** "Fabrication of ZnO nanostructures by PLD", *18th ISQE,* Sozopol, 29.09-03.10.2014, poster, PA-4, 40-41 (2014).
235. Nikov Ru.G., Nedyalkov N.N., **Atanasov P.A.,** "Fabrication and characterization of metal substrates", *18th ISQE,* Sozopol, 29.09-03.10.2014, poster, PA-6, 42 (2014).
236. Koleva M.E., Nedyalkov N.N., **Atanasov P.A.**, Fukata N., Dutta M., "Optical properties of Ag-ZnO nanostructures", *18th ISQE,* Sozopol, 29.09-03.10.2014, poster, PA-9, 44 (2014).
237. Nikov R.G., Nikolov A.S., Nedyalkov N.N., **Atanasov P.A.,** Alexandrov M.T., Karashanova D.B., "Formation of bimettalic nanoparticles by pulsed laser ablation of multicomponent yjin films in water", *18th ISQE,* Sozopol, 29.09-03.10.2014, poster, PA-12, Supl., 1 (2014).
238. **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 nanosecond laser processed polydimethylsiloxane (PDMS)", *19th VEIT'2015,* Sozopol, 21-25.09.2015, poster, PB-5, 85 (2015).

239. Nikov R.G., Nikolov A.S., Nedyalkov N.N., Pavlov E.L., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., "Investigation of the aging process of noble metal nanostructures fabricated by nanosecond laser ablation in water", *19th VEIT'2015,* Sozopol, 21-25.09.2015, poster, PB-9, 88 (2015).
240. Nikov Ru.G., Nedyalkov N.N., **Atanasov P.A.**, "Laser nanostructuring of Ag films deposited on different substrates", *19th VEIT'2015,* Sozopol, 21-25.09.2015, poster, PB-10, 89 (2015).
241. Stankova N.E., **Atanasov P.A.**, Nikov Ru.G., Nikov R.G., Nedyalkov N.N., "Laser-assisted processing of PDMS elastomer like precise material for neural interface engineering", *19th VEIT'2015,* Sozopol, 21-25.09.2015, poster, PB-12, 90 (2015).
242. **Атанасов П.А**., "Проблеми на съвременните лазерни технологии", поканен, *работна среща „Предизвикателствата за технологичното развитие на България"*, БАН, 30.11 (2015).
243. **Атанасов П.А**., "Лазерни и йонно-лъчеви техники за повърхностно наноструктуриране на различни материали и приложение за анализ с висока разделителна способност", *III Национален конгрес по Физически науки*, доклад, Симп. 5, 30.09, 4 (2016).
244. Nedyalkov N., Nikov Ru., Nikov Ro., Nikolov A., **Atanasov P.A.**, Sawszak M., Grochowska K., Sliwinski G., "Gold nanostructures for detection of pesticides, nitrates and drugs using surface enhanced Raman spectroscopy", *19th ICSGE'2016,* Sozopol, 26-30.09.2016, poster, PA-13, 62 (2016).
245. Nikolov A.S., Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., Marinkov N.E., Dimitrov I.Z., Boevski I.I., Visan A., Mihailescu I.N., "Influence of the liquid level and duration of the ablation process on the characteristics of nanostructures cretaed by nanosecond laser ablation of Ag in water", *19th ICSGE'2016,* Sozopol, 26-30.09.2016, poster, PA-14, 63 (2016).
246. 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", *19th ICSGE'2016,* Sozopol, 26-30.09.2016, poster, PA-16, 65 (2016).
247. Nikov Ru.G., Dikovska A.O., Nedyalkov N.N., **Atanasov P.A.**, "Fabrication of Au nanostructures by pulsed laser deposition in air", *19th ICSGE'2016,* Sozopol, 26-30.09.2016, poster, PA-17, 65 (2016).
248. Stankova N., Nikov Ru.,**Atanasov P.**, Iordanova E., Yankov G., Grozeva M., Tatchev Dr., Kolev K., Armyanov St., Grochowska K., Sliwinski G., Fukata N., "Fs- and ns-laser fabrication of high definition tracks and electrodes on medical grade PDMS surface for neural interface technologies application", *19th ICSGE'2016,* Sozopol, 26-30.09.2016, poster, PA-19, 67 (2016).
249. Armyanov St., Valova E., Kolev K., Georgieva J. Tanchev D. **Atanasov P.**, Stankova N., "Selective metallization of laser irradiated biocompatible poly(dimethylsiloxane) by electroless deposition for fututе MEMS and medical applications", *International Association of Advanced Materials, European Advanced Materials Congress*, 22–24.08.2017, Stockholm- Helsinki, Poster (2017).
250. **Atanasov P.A.**, Nedyalkov N.N., Nikov Ru.G., Grüner Ch., Rauschenbach B., Fukata N.,"SERS analyses trough nanostructures produced by ion-beam deposition techniques", *VEIT'2017*, 25-29.09.2017, PC16, 146 (2017).
251. Nikov Ru.G., Dikovska A.O., Nedyalkov N.N., **Atanasov P.A.**, "Nanoparticle-compozed nanowires produced by pulsed laser deposition in a magnetic field", *VEIT'2017*, 25-29.09.2017, PB1, 111 (2017).
252. Nikov R.G., Nedyalkov N.N., **Atanasov P.A.**, Karashanova D.B., "Syntesis of bimetallic nanostructures by nanosecond laser ablation of multicomponent thin films in water", *VEIT'2017*, 25-29.09.2017, PC9, 141 (2017).
253. Stankova N., **Atanasov P.**, Nedyalkov N.N., Iordanova E., Yankov G., Grozeva M., Tatchev Dr., Kolev K.N., Valova E.I., Armyanov St.A., Fukata N., Hirsch D., "Laser induced surface modification of biopolymers – micro/nanostructuring and functionalization", *VEIT'2017*, 25-29.09.2017, PC20, 146-147 (2017).

Е. Монографии

1. **Atanasov P.A.**, "High-pressure CO_2 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 CO_2 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., Nedyalkov 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., Nedyalkov N.N., Kolev K., Valova E., Armyanov 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).

Статистика
на научните трудове на чл.-кор. Петър Атанасов

1. Дисертации – 2

2. Монографии или глави от монографии, публикувани в чужбина – 8

3. Статии в списания с импакт фактор – 147

Adv. Mater. for Opt. & Electron. – 1 (IF=0.897)
Adv. Mater. Letters – 1 (IF=1.61)
Appl. Optics – 3 (IF=1.694)
Appl. Phys. Lett. – 1 (IF=3.515)
Appl. Phys.A: Mater. Sci. & Proces. – 9 (IF=1.694)
Appl. Surf. Sci. – 39 (IF=2.538)
Beilstein J. Nanotechnol. – 2 (IF=2.326)
Chin. Opt. Lett. – 1 (IF=1.073)
C.R. Acad. Bulg. Sci. – 9 (IF=0.198)
IEEE J. Quant. Electron. – 2 (IF=2.113)
Intern. J. of Environmental & Agriculture Res. – 1 (IF=2.431)
Il Nuovo Cimento – 1 (IF=1.398)
Japan. J. Appl. Phys. – 1 (IF=1.057)
J. of Alloys and Compounds – 1 (IF=2.999)
J. Appl. Phys. – 8 (IF=2.185)
J. Mat. Sci.: Mat. in Electron. – 2 (IF=1.966)
J. Opt. A: Pure Appl. Opt. – 1 (IF=2.01)
J. Optoelectronics & Advanced Mater. – 6 (IF=0.563)
J. of Nanopart. Res. – 1 (IF=2.278)
J. Phys.D: Appl. Phys. – 5 (IF=2.521)
J. Phys.E: Sci. Instrum. – 1 (IF=0.804)
J. of Raman Spectroscopy – 1 (IF=2.979)
ЖТФ – 1 (IF=0.535)
Laser Phys. – 1 (IF=2.545)
Mater. Sci. and Engin. B – 2 (IF=2.122)
Mater. Sci. in Semiconductor Proc. – 1 (IF=1.761)
Measur. Sci. Technol. – 1 (IF=0.804)
Mutation Research - Fundamental & Molecular Mechanisms of Mutagenesis – 1 (IF=4.44)
Nucl. Instr. Meth. Phys. Res. B – 2 (IF=1.186)
Nanotechnology – 2 (IF=3.672)
Opt. Commun. – 3 (IF=1.542)
Optical Engineering – 1 (IF=0.958)
Optics & Laser Techn. – 4 (IF=1.649)
Opt. & Quant. Electron. – 2 (IF=1.078)
Opto-electronics Review – 1 (IF=1.279)
Письма ЖТФ – 3 (IF=1.364)
Plasma Proc. & Polymers – 1 (IF=2.964)
Plasmonics – 1 (IF=2.738)
Phys. Stat. Sol.(b) - 2 (IF=1.605)
Physica C: Superconductivity – 1 (IF=1.11)
Rev. Roum. de Phys. – 1 (IF=0.745)
Sensors & Actuators A – 2 (IF=1.943)
Sensors and Actuators B – 1 (IF=3.84)
Solid State Sciences – 1 (IF=1.679)
Thin Solid Films – 9 (IF=1.867)
Quantum Electronics – 2 (IF=0.886)
Vacuum – 4 (IF=1.426)

4. Статии в списания с импакт ранг – 70

***Int. J. of Nanoparticles – 1 (*SJR = 0.17)**
***J. of Phys. Conf. Ser. – 11 (*SJR = 0.168)**
***Proc. SPIE – 58 (*SJR = 0.203)**

5. Статии в други списания – 29

Bulg. J. Phys. – 12
Eng. Optics – 1
Е. и П. – 4
Journal of Nanotechnology in Diagnosis and Treatment – 1
Краткие Сообщ. по Физике - 1
Онкология – 2
Vide: Science, Technique and Applications – 1
Списание на БАН -7

6. Други статии в списания, поредици и брошури– 7

***MIT RLE Quart. Prog. Rep.* - 1**
J. of the Bulg. Acad. of Sci. – 2
NOVOSTI – 1
***Актуални проблеми на науката* – 1**
***"Становище по проблеми на технологичното развитие на България"* – 2**

7. Статии в пълен текст в материали на конференции – 48

- публикувани в чужбина – 37

Proc. OPTICA'80 -1
Proc. of School on QE "*Las. and Appl.*", WSPCo, Singapore – 7
Proc. of School on QE "*Las. and Appl.*", Paris – 3
***Proc. "Electronic and Optoelectronic Materials for the 21st Century*", Singapore – 1**
"*High Power Lasers - Science and Engineering*", Kluwer Acad. Publ. - 1
"*Vacuum, Electron and Ion Tech.*", Nova Sci. Publ. Inc - 1
"*Weak Superconductivity*", Nova Sci. Publ., NY - 1
"Nano-Crystalline and Thin Film Magnetic Oxides", Kluwer Acad. Publ. – 1
Proc. LAMP '92 – 1
Proc. Int. Workshop – 6
Proc. APLS'02 – 2
"Fundamentals of Ablation with Short Pulsed Solid State Lasers", Proc. of Int. Workshop – 3
Proc. of IE BAS-Keio GCOE Workshop on Nanophotonics – 8
Adv. Mater. for Opt. & Electron. – 1

- публикувани у нас – 11

***НС ВЛТИ* – 1**
III School on Quant. Electron, *"Laser Physics and Applications" – 4*
III Нац. Конф. "*Оптика и лаз. техника*" – 1
СИЕЛА'89 – 1
***V НТ Конф. "Лаб. контрол '89"* – 1**
Сб. IV конф. "ТНТМ в електрон. и кибернет. – 1
Сб. Труд. НИИО – 2

8. Доклади на конференции, публикувани в кратко и разширено резюме - 251

- в чужбина – 145: пленарни 3; поканени 16; постери 126
- у нас – 106, в т.ч.: пленарни 2; поканени 22; постери 82

9. Патенти и авторски свидетелства - 12

- патенти – 2 + 4 заявки
- авторски свидетелства – 5
- с-во за промишлен образец -1

20.05.2018 г.