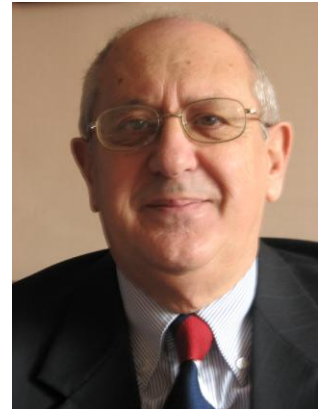


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Personal:

born: November 03, 1942
Bulgarian citizen

Foreign languages:

English, Russian, native – Bulgarian

Degrees:

1967	MS (Phys.)	Sofia University, BG
1977	PhD	IE, BAS, "Investigation of conventional CO ₂ lasers and their application to plasma diagnostics"
1990	DSc	IE, BAS, "Self-sustained gas-discharge CO ₂ lasers: physics, devices, applications"

Academic experience:

2008-now	Corresponding Member of the Bulgarian Academy of Sciences	
2018	Visiting Professor	NIMS, Tsukuba, Japan (15 days)
2016	Visiting Professor	NIMS, Tsukuba, Japan, JSPS Fellow ID No. S16152 (1 month)
2016	Visiting Professor	NIMS, Tsukuba, Japan (10 days)
2015	Visiting Professor	NIMS, Tsukuba, Japan (10 days)
2010	Visiting Professor	Keio University, Japan (10 days), Keio Global Centre of Excellence
2008	Visiting Professor	Keio University, Japan (2 months), Keio Global Centre of Excellence
2006	Visiting Professor	Keio University, Japan (2 months), 21 st Century Centre of Excellence
2002-2003	Visiting Professor	Keio University, Japan (10 months), JSPS
1999-2000	Visiting Professor	Instituto de Optica, CSIC, Madrid (7 months), NATO
1999	Visiting professor	Technical University, Sofia (part time), lecturing on Physics II (6 months)
1997-1998	Visiting Professor	Chiba University, Japan (5 months)
1993-now	Professor	Institute of Electronics (IE), Bulgarian Academy of Sciences (BAS)
1982-92	Assoc. Professor	IE - BAS
1970-82	Res. scientist	IE - BAS
1995-1999	Lecturer	Technical Uni., branch in Sliven (part time), "Lasers – physics and applications"
1979-1989	Supervisor and lecturer	Ministry of Industry and Technology (part time) "Lasers -physics and industrial applications"
1975-1977	Assistant Professor	Phys. Dept., Sofia University (part time), "Radio-technique"
1977-1981	Lecturer	Inst. for Foreign Students, Sofia (part time), "General Physics"
1974	Visiting Scientist	MIT, Res. Lab. of Electronics, Ma. USA
1971	Visiting Scientist	Institute of General Physics, Moscow (1 month)
1967-70	Physicist	IE - BAS

Industrial experience:

1991	project development engineer	CB Lasertechnik GmbH, Germany
1993	project development engineer	CB Lasertechnik GmbH, Germany, Personal responsibility for 120 Projects for the Companies all over the world

Awards:

2014	Badge of Honor of BAS „Marin Drinov on band” for the contributions in the field of the laser physics and laser technologies
2013	Award of the name of “Academician Emil Djakov” for the excellent scientific achievements during 2012 in the field of Radio sciences, Quantum electronics and Physical electronics
2012	Certificate of Appreciation for great contribution to The Global COE Program “High-level, Global Cooperation for Leading-Edge Platform on Access Space” at Keio University, Japan as a Member from 2007 to 2012
2009	National Award of PYTHAGORAS for the exclusive scientific achievements during 2008
2008	Award of the name of “Academician Emil Djakov” for the excellent scientific achievements during 2007 in the field of Radio sciences, Quantum electronics and Physical electronics

- 2006 Award of the name of "Academician Emil Djakov" for the excellent scientific achievements during 2005 in the field of Radio sciences, Quantum electronics and Physical electronics
- 1984 Award of the President of the Bulgarian Academy of Sciences

Professional recognition and activities:

- 2015-2018 Project entitled "New advanced method for processing nano-composite materials for creation of microsystems for medical and high-tech applications", funded by NSF, Bulgaria
- 2014-2017 Bilateral project with Leibniz Institute of Surface Modification (IOM), Leipzig, "Ion beam and laser techniques for surface nanostructuring of different materials and application to high resolution analyses (SERS)", DAAD – Germany
- 2003-2006 IST-2001-39112 project, NANOPHOS – "Nanostructured Photonic Sensors", 5th FP, EU
- 1999-2004 PRIMUS project No 13N7710/6, funded by BMBF, Germany
- 1998-2002 INCO Copernicus PL 978043 project, IMPULSENET – "Inter-European net on pulsed laser deposition of optical and magnetic thin films", EU
- 1999-2000 NATO grant, IO, CSIC, Madrid, Spain (7 months), NATO
- 1996 Facility grant (CHGE-CT92-007), Inst. of Electronic Structure & Laser, FORTH, Greece
- 1981-now Bilateral International projects for scientific cooperation - 27
- 1982-now Sponsored Research, 24 projects funded by Bulg. Acad. of Sci., DFG - Germany, EU, Nat. Council for Sci. Res. at the Ministry of Sci. & Education - Bulgaria, NATO
- 1983-1990 Head of 9 projects for Bulgarian industry
- 2000-now Referee for Optical Engineering, AIP journals, Appl. Surf. Sci.
- 1995-now Referee for Optics Communications
- 1996-now Referee for IEE Proc. - Optoelectronics, Opt. Engineering
- 1995-now Member of the Int. Adv. Comm. of GCL-HPL Symposia: Germany, Russia, Poland, Italy, Czech Rep., Austria, Portugal, Bulgaria, Turkey, China
- 1995-2010 Chair of the Bulgarian Chapter of the International Soc. for Optical Engineering, SPIE
- 1995 Member of the Int. Adv. Comm. of NATO Advanced Study Institute "High Power Lasers - Science and Engineering", Czech Rep.
- 1995 Member of the Int. Adv. Comm. of Int. Symp. on Advanced Materials for Optics and Optoelectronics, ALT'95 Czech Rep.
- 1990,1992 Head of the Organizing & Advisory Committee of 6th and 7th School on Quant.Electron., Varna and Sofia, Bulgaria
- 2014-now Senior Editor, *NanoOpen*, USA
- 2013-now Editor-in-Chief, *Journal of Nanotechnology in Diagnosis and Treatment*, Savvy, USA
- 2013-now Member of the Editorial Board, *Journal of Electromagnetic Optics*, France
- 1996, 1999, 2001, 2003, 2005, 2007 Editor or Co-Editor of Proc. of SPIE, v. 3092, 3571, 4397, 5226, 5830, 6604, USA
- 1997-now Member of the Editorial Board, *Bulg. J. Physics*
- 1992 Editor of Proc. of 7th Int. School on Quant. Electron, "Lasers - Physics and Applications", Sofia
- 1990 Editor of Proc. of 6th Int. School on Quant. Electron, "Lasers - Physics and Applications", WSPCo, Singapore

International expertise:

- 2008 Evaluator for achievements of the Global Centre of Excellence for 2007-2008, Keio University, Japan
- 2006 Evaluator for achievements of the 21st Century Centre of Excellence for 2002-2006, Keio University, Japan
- 2002-now Czech Rep. National Foundation, Czech Rep.
- 2010-2012 Greek Sci. National Foundation, Greece
- 2000 - 2003 Expert of 5th FP, GROWTH, EU

Summary of contributions:

- 1969- 299 refereed contributions, 6 chapters in monographies, 11 patents and applications
- 1980- 100 invited and contributed papers presented on Int. and Nat. conf. in 14 countries

Professional service:

- 1993-1999 Director of the IE, BAS
- 1983-2010 Head of Laboratory on "Gas lasers and laser technologies", IE - BAS
- 2010-2014 Head of Laboratory on "Micro- and nano-photonics", IE - BAS
- 1982- Supervisor of 15 PhD theses
- 1982-89 Supervisor of 13 MS theses.

Membership:

- 2000-now E-MRS

1972-now	Bulgarian Phys. Union
1995-now	Int. Soc. for Opt. Engineering - SPIE
1991-now	Member of Sci. Council on "Radiophysics, physical and quantum electronics"
1987-now	Member of Sci. Council of the Institute of Electronics, BAS
1995-1999	Member of Faculty Council of the Technical Univ., Sofia branch in Sliven
1994-2002	Member of Sci. Council on "Physics"
1996	Member of LIA (Laser Institute of America)

Principal areas of research:

Photonics – laser physics and techniques: interaction of cw, pulsed and ultra-short laser pulsed radiation with matter; laser technologies; CO₂, pulsed atomic and molecular lasers; plasma physics; micro- and nano-photonics; fs photonics and optoelectronics, sensorics; material science and nanotechnologies: nanostructuring of surfaces, polaritonics; SERS; biophotonics

Recent selected contributions (2015-2018):

1. 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).
2. 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).
3. 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).
4. Nikov R.G., Nikolov A.S., Nedyalkov N.N., **Atanasov P.A.**, Alexandrov M.T., Karashanova D.B., "Formation of bimetallic nanoparticles by pulsed laser ablation of multicomponent thin films in water", *Proc. SPIE*, 9447, 94470M_1-7(2015).
5. Stankova N.E., **Atanasov P.A.**, Nedyalkov N.N., Stoyanov T.R., Kolev K.N., Valova E.I., Georgieva J.S., Armyanov St.A., Amoroso S., Wang X., Bruzzese R., Grochowska K., Śliwiński G., Baert K., Hubin A., Delplanck M.P., Dille J., "Fs- and ns-laser processing of polydimethylsiloxane (PDMS) elastomer: comparative study", *Appl. Surf. Sci.*, 336, 321-328 (2015).
6. 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).
7. Stankova N.E., **Atanasov P.A.**, Nikov Ru.G., Nikov R.G., Nedyalkov N.N., Stoyanov 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).
8. 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).
9. **Atanasov P.A.**, Stankova N.E., Nedyalkov N.N., Fukata N., Hirsch D., Rauschenbach B., Amoroso 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).
10. **Atanasov P.A.**, Stankova N.E., Nedyalkov N.N., Stoyanov 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).
11. Białous A., Gazda M., Grochowska K., **Atanasov P.**, Dikovska A., Nedyalkov N., Reszczyńska J., Zaleska-Medowska A., Śliwiński G., "Nanoporous TiO₂ electrode grown by laser ablation of titanium in air at atmospheric pressure and room temperature", *Thin Solid Films*, 601, 41-44 (2016).
12. 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).
13. Koleva M.E., Nedyalkov N.N., **Atanasov P.A.**, Gerlach 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).
14. 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).
15. 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).
16. 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).
17. 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).
18. 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).
19. **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).
20. 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).

21. Nedyalkov N., Dikovska A.O., Nikov R., **Atanasov P.A.**, Šliwiński G., Hirsch D., Rauschenbach B., "Laser-induced nanoparticles fabrication on paper", *Appl. Phys. A*, 123, 570 (2017).
22. Nikov Ru.G., Dikovska A.O., Nedyalkov N.N., **Atanasov P.A.**, Atanasova G., Hirsch D., Rauschenbach B., "ZnO nanostructures produced by pulsed laser deposition in open air", *Appl. Phys. A*, 123, 657 (2017).
23. Nikov Ru.G., Dikovska A.O., 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).
24. **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).
25. **Atanasov P.A.**, Nedyalkov N.N., Nikov Ru.G., Grüner Ch., Rauschenbach B., Fukata N., "SERS analyses through Ag nanostructures produced by ion-beam deposition techniques", *J of Phys.: Conf. Ser.* in press (2018).
26. 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).

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