

PERSONAL INFORMATION

Mihai Boni

 Atomistilor, 409, 077125 Magurele (România)

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WORK EXPERIENCE

01/2013–Present

Research Scientist

National Institute for Laser, Plasma and Radiation Physics
Atomistilor, 409, 077125 Magurele (România)
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Business or sector Research

06/2011–04/2013

Assistant Research Scientist

Mihai Boni
Atomistilor, 409, 077125 Magurele (România)
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Business or sector Research

01/2010–07/2011

Assistant Research Scientist Trainee

National Institute for Laser, Plasma and Radiation Physics
Atomistilor, 409, 077125 Magurele (România)
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Business or sector Research

EDUCATION AND TRAINING

2011–2018

PhD

Faculty of Physics, University of Bucharest
Atomistilor, 405, 077125 Magurele (România)
<http://fizica.unibuc.ro>

Studies on the behavior of fluids in the field of laser radiation

2009–2011

Master degree

Faculty of Physics, University of Bucharest
Atomistilor, 405, 077125 Magurele (România)
<http://fizica.unibuc.ro>

Microdroplets analysis by Fluorescence and Raman spectroscopy

2006–2009

Bachelor degree

Faculty of Physics, University of Bucharest
Atomistilor, 405, 077125 Magurele (România)
<http://fizica.unibuc.ro>

Measurement of low-intensity optical signals using the single-photon counting technique

PERSONAL SKILLS

Mother tongue(s) Romanian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
 Common European Framework of Reference for Languages

Organisational / managerial skills

Leadership - coordinator of 1 international conference and member in the organization committee of 4 international conferences;

Volunteering - Vice-President Romanian Student SPIE Chapter (2012-2013), President Romanian Student SPIE Chapter (2011-2012), Secretary Student Romanian SPIE Chapter (2010-2011)

ATTACHMENTS

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Appendix 1.pdf

List of publications

Articles

1. Dinache, A., Smarandache, A., Andrei, I.R., Urzica, I., Nichita, C., **Boni, M.**, Nastasa, V., Pascu, M.L., "Laser assisted generation of micro/nanosize emulsions", *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 577, pp. 265-273, (2019).
2. Andrei, I.-R., **Boni, M.**, Staicu, A., Pascu, M.L., "Lasing of optically pumped large droplets: Instant and gradual blueshift", *Journal of the Optical Society of America B: Optical Physics*, 35 (8), pp. 1950-1955, (2018).
3. **Boni, M.**, Staicu, A., Andrei, I.R., Smarandache, A., Nastasa, V., Saponjic, Z., Pascu, M.L., "TiO₂ nanoparticles influence on rhodamine 6G droplet emission", *Romanian Reports in Physics*, 70 (4), art. no. 513, (2018).
4. Smarandache, A., **Boni, M.**, Andrei, I.R., Handzlik, J., Kiec-Kononowicz, K., Staicu, A., Pascu, M.-L., "Spectroscopic investigations of novel pharmaceuticals: Stability and resonant interaction with laser beam" *Applied Surface Science*, 417, pp. 143-148, (2017).
5. **Boni, M.**, Staicu, A., Andrei, I.R., Smarandache, A., Nastasa, V., Comor, M., Saponjic, Z., Pascu, M.L., "Studies on laser induced emission of microdroplets containing Rhodamine 6G solutions in water doped with TiO₂ nanoparticles" *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 519, pp. 238-244, (2017).
6. Nastasa, V., Pascu, A., **Boni, M.**, Smarandache, A., Staicu, A., Pascu, M.L., "Insights into the photophysics of zinc phthalocyanine and photogenerated singlet oxygen in DMSO-water mixture", *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 505, pp. 197-203, (2016).
7. Smarandache, A., Nastasa, V., **Boni, M.**, Staicu, A., Handzlik, J., Kiec-Kononowicz, K., Amaral, L., Pascu, M.-L., "Laser beam resonant interaction of new hydantoin derivatives droplets for possible biomedical applications", *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 505, pp. 37-46, (2016).
8. Andrei, I.R., Tozar, T., Dinache, A., **Boni, M.**, Nastasa, V., Pascu, M.L., "Chlorpromazine transformation by exposure to ultraviolet laser beams in droplet and bulk", *European Journal of Pharmaceutical Sciences*, 81, pp. 27-35, (2016).
9. Morán, M.C., Tozar, T., Simon, A., Dinache, A., Smarandache, A., Andrei, I.R., **Boni, M.**, Pascu, M.L., Cirisano, F., Ferrari, M., "Toxicity study in blood and tumor cells of laser produced medicines for application in fabrics", *Colloids and Surfaces B: Biointerfaces*, 137, pp. 91-103, (2016).
10. Dinache, A., **Boni, M.**, Alexandru, T., Radu, E., Stoicu, A., Andrei, I.R., Staicu, A., Liggieri, L., Nastasa, V., Pascu, M.L., Ferrari, M., "Surface properties of Vancomycin after interaction with laser beams", *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 480, pp. 328-335, (2015).
11. Alexandru, T., Staicu, A., Pascu, A., Radu, E., Stoicu, A., Nastasa, V., Dinache, A., **Boni, M.**, Amaral, L., Pascu, M.L., "Characterization of mixtures of compounds produced in chlorpromazine aqueous solutions by ultraviolet laser irradiation: their applications in antimicrobial assays", *Journal of biomedical optics*, 20 (5), p. 051002, (2015).
12. **Boni, M.**, Nastasa, V., Andrei, I.R., Staicu, A., Pascu, M.L., "Enhanced fluorescence emitted by microdroplets containing organic dye emulsions", *Biomicrofluidics*, 9 (1), art. no. 014103, (2015).
13. **Boni, M.**, Nastasa, V., Staicu, A., Andrei, I.R., Pascu, M.L., "Characterisation of fluorescent pendant droplets", *Romanian Reports in Physics*, 67 (4), pp. 1278-1287, (2015).
14. Simon, A., Alexandru, T., **Boni, M.**, Damian, V., Stoicu, A., Dutschk, V., Pascu, M.L., "Interaction of solutions containing phenothiazines exposed to laser radiation with materials

- surfaces, in view of biomedical applications”, *International Journal of Pharmaceutics*, 475 (1), pp. 270-281, (2014).
15. Dinache, A., **Boni, M.**, Pascu, M.L.,” Phenothiazine derivatives interaction with laser radiation”, *Romanian Reports in Physics*, 65 (3), pp. 1078-1091, (2013).
 16. Alexandru, T., Pascu, M.L., Danko, B., Nastasa, V., **Boni, M.**, Militaru, A., Andrei, I.R., Staicu, A., Hunyadi, A., Armada, A., Viveiros, M., Amaral, L.,” Generation and biological evaluation of the products formed from the exposure of Phenothiazine to a 266 nm laser beam”, *Proceedings of SPIE - The International Society for Optical Engineering*, 8882, art. no. 88820T, (2013).
 17. Armada, A.M., Alexandru, T., Machado, D., Danko, B., Hunyadi, A., Dinache, A., Nastasa, V., **Boni, M.**, Ramos, J., Viveiros, M., Molnar, J., Pascu, M.L., Amaral, L.,” The in vitro activity of products formed from exposure of chlorpromazine to a 266nm laser beam against species of mycobacteria of human interest”, *In Vivo*, 27 (5), pp. 605-610, (2013).
 18. Staicu, A., Pascu, A., **Boni, M.**, Pascu, M.L., Enescu, M.,” Photophysical study of Zn phthalocyanine in binary solvent mixtures”, *Journal of Molecular Structure*, 1044, pp. 188-193, (2013).
 19. Pascu, M.L., Danko, B., Martins, A., Jedlinszki, N., Alexandru, T., Nastasa, V., **Boni, M.**, Militaru, A., Andrei, I.R., Staicu, A., Hunyadi, A., Fanning, S., Amaral, L.,” Correction: Exposure of chlorpromazine to 266 nm laser beam generates new species with antibacterial properties: Contributions to development of a new process for drug discovery”, *PLoS ONE*, 8 (3), (2013).
 20. **Boni, M.**, Nastasa, V., Militaru, A., Smarandache, A., Andrei, I.R., Staicu, A., Pascu, M.L.,” Laser beams interaction with liquids in optofluidic experiments”, *Romanian Reports in Physics*, 64 (4 SUPPL), pp. 1179-1194, (2012).
 21. Pascu, M.L., Smarandache, A., **Boni, M.**, Kristiansen, J., Nastasa, V., Andrei, I.R.” Spectral properties of some molecular solutions”, *Romanian Reports in Physics*, 63 (SUPPL.), pp. 1267-1284, (2012).
 22. Hunyadi, A., Danko, B., **Boni, M.**, Militaru, A., Alexandru, T., Nastasa, V., Andrei, I.R., Pascu, M.L., Amaral, L.,” Rapid, laser-induced conversion of 20-hydroxyecdysone and its diacetone - Experimental set-up of a system for photochemical transformation of bioactive substances” *Anticancer Research*, 32 (4), pp. 1291-1297, (2012).
 23. Nastasa, V., **Boni, M.**, Andrei, I.R., Amaral, L., Staicu, A., Pascu, M.L.,”Optical investigation of medicine solutions in micro-droplets form at interaction with laser radiation”, *Proceedings of SPIE - The International Society for Optical Engineering*, 8098, art. no. 809815, (2011).
 24. Pascu, M.-L., Nastasa, V., Smarandache, A., Militaru, A., Martins, A., Viveiros, M., **Boni, M.**, Andrei, I.R., Pascu, A., Staicu, A., Molnar, J., Fanning, S., Amaral, L.,” Direct modification of bioactive phenothiazines by exposure to laser radiation”, *Recent Patents on Anti-Infective Drug Discovery*, 6 (2), pp. 147-157, (2011).
 25. Nastasa, V., Pradines, V., Andrei, I.R., **Boni, M.**, Pascu, M.L., Miller, R.,” Studies about the generation and characterisation of microdroplets with a controlled content, *Optoelectronics and Advanced Materials, Rapid Communications*, 4 (11), pp. 1916-1919, (2010).

Book Chapters

1. Pascu, M.-L., Staicu, A. and **Boni, M.**, “Pendant Droplets - Optofluidic Approach”, *Laser Optofluidics in Fighting Multiple Drug Resistance*, M.-L. Pascu, Ed. Sharjah, UAE: Bentham Science Publishers, pp. 24–40, 2017.
2. Andrei, I. R., **Boni, M.** and Pascu, M.-L., “Unresonant Interaction of Laser Beams with Pendant Droplets”, *Laser Optofluidics in Fighting Multiple Drug Resistance*, M.-L. Pascu, Ed. Sharjah, UAE: Unresonant Interaction of Laser Beams with Pendant Droplets, pp. 150–183, 2017.

3. Pascu, M.-L., **Boni, M.**, Tozar, T., Smarandache, A., Stoicu, A. and Andrei, I.R., “Resonant Interaction of Laser Beams with Pendant Droplets”, *Laser Optofluidics in Fighting Multiple Drug Resistance*, M.-L. Pascu, Ed. Sharjah, UAE: Bentham Science, pp. 184–218, 2017.
4. Nastasa, V., **Boni, M.**, Stoicu, A., Dinache, A., Smarandache, A. and Pascu, M.-L., “Lasers in Foams and Emulsions Studies”, *Laser Optofluidics in Fighting Multiple Drug Resistance*, M.-L. Pascu, Ed. Sharjah, UAE: Bentham Science, pp. 293–337, 2017.
5. **Boni, M.**, Andrei, I.R., Staicu, A., Nastasa, V. and Pascu, M.-L., “Lasing by Optically Pumped Pendant Droplets”, *Laser Optofluidics in Fighting Multiple Drug Resistance*, M.-L. Pascu, Ed. Sharjah, UAE: Bentham Science, pp. 446–470, 2017.
6. Pascu, M.-L., Militaru, A., **Boni, M.**, Nastasa, V., Alexandru, T., Staicu, A., Andrei, I.R., “Trends in basic research on laser biomedicine”, *Laser Manual*, L. Longo, Ed. Officina Editoriale Oltrarno, pp. 141–181, 2014.

Appendix 2.pdf

List of communications at international conferences

Oral presentations

1. **M. Boni**, A. Dinache, I.R. Andrei, T. Tozar, A. Smarandache, I. Iordache, A. Staicu, M.L. Pascu, "Generation of micro/nano-size emulsion by a laser-assisted method", Bubble & Drop 8th Conference, Sofia, Bulgaria, 24-28 June 2019.
2. A. Dinache, I.R. Andrei, T. Tozar, A. Smarandache, I. Iordache, **M. Boni**, A. Staicu and M.L. Pascu, "Laser assisted device for micro/nano-emulsion production", European Colloid and Interface Society (ECIS) Conference, Ljubljana, Slovenia, 2 - 7 September 2018.
3. T. Tozar, V. Nastasa, **M. Boni**, MC. Chifiriuc, M.L. Pascu, "Generation and identification of antimicrobial species from medicines exposed to laser radiation in view of fighting multiple drug resistance acquired by bacteria", ISCP-INDLAS 2018, Alba Iulia, Romania, 3-7 September 2018.
4. M.L. Pascu, A. Dinache, I.R. Andrei, T. Tozar, A. Smarandache, I. Iordache, **M. Boni**, A. Staicu Laser assisted device for micro/nano-emulsion production, ECIS 2018 Conference, Ljubljana, Slovenia, 2-7 September 2018.
5. **Boni, M**; Andrei, IR; Staicu, A; Pascu, ML; "Resonant and unresonant interaction of laser beams with pendant droplets having different content's", International Conference "Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies" ATOM-N 2018, Constanta, Romania, 23 - 26 August 2018.
6. M. L. Pascu; I. R. Andrei; **M. Boni**; Laser Sources for Optofluidics, Joint International Student Conference on Photonics and Modern Laser Applications Conference 2018, Alba Iulia, Romania, 3-7 September 2018.
7. A. Simon; B. S. Calin; D. C. Tranca; M. Boni; I. R. Andrei; S. Simion; M. Bojan; I. S. Stroescu; M. L. Pascu; Interaction of Laser Exposed Phenothiazine Droplets with Target Surfaces Approached in View of Microgravity Applications, Joint International Student Conference on Photonics and Modern Laser Applications Conference 2018, ISCP-INDLAS 2018, Alba Iulia, Romania, 3-7 September 2018.
8. Pascu, ML; Simon, A; Andrei, IR; Tozar, T; Staicu, A; Dinache, A; Smarandache, A; **Boni, M**; "Optofluidic properties of microdroplets to be used in biomedicine", IONS Balvanyos 2017, Covasna, Romania, 25-28 July 2017.
9. Staicu, A; Dinache, A; Smarandache, A; Pascu, A; Nastasa, V; **Boni, M**; Simon, A; Tozar T; Andrei, IR, Enescu, M; Pascu, ML; "Light triggered drug complexes for targeted delivery", IONS Balvanyos 2017, Covasna, Romania, 25-28 July 2017.
10. Staicu; A, **M. Boni**; I. R. Andrei; A. Smarandache; V. Nastasa; Z. Saponjic; M.L. Pascu; "Studies on the laser induced emission of pendant droplets of dye water solutions containing TiO₂ nanoparticles"; Smart and Green Interfaces Conference 2016, Athens, Greece; 04 – 06 May 2016
11. **M. Boni**; Andrei,IR; Staicu, A; Pascu, ML; "Lasing effects in microvolumetric droplets pumped by laser beams", EMN Meeting On Droplets 2016, , Donostia-San Sebastián, Spain; 10 – 13 May 2016.
12. **M. Boni**, V. Nastasa, I.R. Andrei, A. Staicu, M.L. Pascu, Emission spectra of pendant droplets containing dye solutions and emulsions, 116th Annual Meeting of DGaO, Brno, Czech Republic, 27 - 29 May 2015

13. **M. Boni**, V. Nastasa, I.R. Andrei, A. Staicu, M.L. Pascu, Resonant interaction of laser beams with pendant droplets of emulsions, 3rd EOS Conference on Optofluidics (EOSOF 2015), München, Germany, 21 - 24 June 2015.
14. **M. Boni**, V. Nastasa, I.R. Andrei, A. Staicu, M.L. Pascu, Lasing emission by microdroplets of emulsion, Smart and green interfaces- Conference 2015, Belgrade, Serbia, March 2015.
15. A. Staicu, A. Dinache, A. Smarandache, T. Tozar, A. Pascu, V. Nastasa, **M. Boni**, A. Simon, I. R. Andrei, M. Enescu, M. L. Pascu, Photophysical studies of some compounds of interest in targeted drug delivery, International Conference on Optics "Micro- to Nano-Photonics IV - ROMOPTO 2015, Bucharest, Romania, September 1 - 4, 2015.
16. A. Dinache, T. Tozar, **M. Boni**, A. Staicu, V. Nastasa, A. Stoicu, I.R. Andrei, V. Damian, E. Radu, M. Ferrari, M. L. Pascu (2015), Smart and green interfaces- Conference 2015, Belgrade, Serbia, 31 March - 1 April 2015.
17. A. Smarandache, A. Pascu, **M. Boni**, I. Andrei, J. Handzlik, K. Kiec-Kononowicz, A. Staicu, M.-L. Pascu, Spectroscopic investigations of new hydantoin derivatives and their behaviour under laser beam exposure for further biomedical applications, 6th Congress of International Phototherapy Association, Nice, France, 9-10 July 2015.
18. **M. Boni**, A. Staicu, I. R. Andrei, A. Smarandache, V. Nastasa, Z. Saponjic, M.L. Pascu, Studies on the laser induced emission of microdroplets containing Rhodamine 6G solutions in water doped with TiO₂ nanoparticles, Smart and green interfaces- Conference, 29-31 October, Sofia, 2015.
19. T. Tozar, M. C. Morán, A. Dinache, A. Smarandache, I. R. Andrei, A. Simon, **M. Boni**, F. Cirisano, M. Ferrari, M. L. Pascu, Spectroscopic and analytical studies of Thioridazine exposed to UV laser radiation and susceptibility of bacteria to the mixture of photo-products assay, 11th International Conference "Micro- to Nano-Photonics IV- ROMOPTO 2015", Bucharest, Romania, 1-4 September 2015.
20. Mihail Lucian Pascu, Ionut Relu Andrei, **Mihai Boni**, Viorel Nastasa, Ruxandra Pirvulescu, Interaction of laser beams with single droplets in pendant position, 3rd EOS Conference on Optofluidics (EOSOF 2015)", München, Germany, 21 - 24 June 2015.
21. Agota Simon, Tatiana Tozar, **M. Boni**, V. Damian, Victoria Dutschk, M.L. Pascu, Biomedical applications of non-antibiotics exposed to UV laser radiation and their interaction with fabric surfaces, ISRMS, Bucharest, Romania, 12 - 16 May 2015.
22. A. Simon, T. Alexandru, **M. Boni**, V. Damian, A. Stoicu, V. Dutschk, M.L. Pascu, Phenothiazines exposed to 266 nm laser beam in interaction with fabric surfaces, in view of biomedical applications, 116th Annual Meeting of DGaO, Brno, Czech Republic, 27 - 29 May 2015.
23. A. Simon, T. Tozar, A. Stoicu, **M. Boni**, V. Damian, M.L. Pascu, Interaction of laser exposed non-antibiotic solutions with target surfaces, in view of biomedical applications: ESA "Spin Your Thesis!" campaign, 11th International Conference "Micro- to Nano-Photonics IV- ROMOPTO 2015", Bucharest, Romania, 1-4 September 2015.
24. M.L. Pascu, R. Pirvulescu, **M. Boni**, I.R. Andrei, Laser beams interaction with droplets in view of biomedical applications, 6th Congress of International Phototherapy Association, Nice, France, 9-10 July 2015.
25. M.L. Pascu, **M. Boni**, I.R. Andrei, Emission of laser/lasing radiation by optically pumped droplets in pendant position, "Advances in optofluidics: Integration of optical control and photonics with microfluidics" COST Action MP1205 Conference and MC meeting, Porto, Portugal, 7-8 May 2015.
26. M.L. Pascu, T. Alexandru, **M. Boni**, A. Dinache, V. Nastasa, I. Andrei, Laser irradiation interaction with droplets that contain medicines, Smart and green interface- Cost Action MP 1106 and 5th International Conference on "Heat transfer and fluid flow in microscale", Marseille, France, 22-24 April 2014.

27. A. Dinache, **M. Boni**, V. Nastasa, T. Alexandru, A. Stoicu, I. Andrei, E. Radu, M. L. Pascu, Mechanisms and photoproducts involved in foam production starting from Vancomycin solutions exposed to laser radiation, 20th International Symposium on Surfactants in Solution, Coimbra, Portugal, 22-27 June 2014.
28. I. R. Andrei, T. Alexandru, **M. Boni**, A. Dinache, V. Nastasa, M.L. Pascu, Characterization of laser radiation interaction with liquid droplets and bulk that contain solution of chlorpromazine in water, International Student Conference on Photonics (ISCP 2014), Orastie, Romania, 23-26.09.2014.
29. A. Simon, T. Alexandru, **M. Boni**, V. Damian, V. Dutschk, M.L. Pascu, Interaction of solutions containing phenothiazines exposed to laser radiation with materials surfaces, in view of biomedical applications, International Student Conference on Photonics (ISCP 2014), Orăștie, Romania, 23-26 September 2014.
30. A. Dinache, **M. Boni**, A. Staicu, T. Alexandru, E. Radu, V. Nastasa, A. Stoicu, I. Andrei, V. Damian, M. Ferrari, M.L. Pascu, Spectral evidence of Vancomycin's modification under exposure to laser radiation, International Student Conference on Photonics (ISCP 2014), Orăștie, Romania, 23-26 September 2014.
31. A. Staicu, A. Dinache, T. Alexandru, A. Pascu, A. Smarandache, V. Nastasa, **M. Boni**, A. Simon, F. Sima, M. Enescu, M.L. Pascu, "Photodynamic studies of some molecules of interest in drug carrier systems", International Student Conference on Photonics (ISCP 2014), Orăștie, Romania, 23-26 September 2014.
32. **M. Boni**, I.R. Andrei, V. Nastasa, A. Staicu, M.L. Pascu, "Study of the dynamic effects at the laser beam - pendant droplet interaction", INDLAS 2014, 19-23 May 2014, Bran, Romania.
33. **M. Boni**, I.R. Andrei, A. Staicu, M.L. Pascu, Lasing emission by pending micro-droplets that contain laser dye, International Student Conference on Photonics (ISCP 2014), Orăștie, Romania, 23-26 September 2014.
34. **M. Boni**, V. Nastasa, I.R. Andrei, A. Staicu, M.L. Pascu, "Enhanced fluorescence in pending micro-droplets that contain emulsions", 5th edition of International Student Conference on Photonics (ISCP 2014), Orăștie, Romania, 23-26 September 2014.
35. M.L. Pascu, Agota Simon, Victoria Dutsch, Tatiana Alexandru, V. Nastasa, **M. Boni**, Andra Dinache, Ruxandra Angela Pirvulescu, "Overview on the interaction between medicines exposed to laser radiation and materials of medical interest", Laser Florence, Florence, Italy 2013.
36. A. Stoicu, E. Radu, V. Nastasa, A. Dinache, T. Alexandru, **M. Boni**, G. Popescu, A. Staicu, M.-L. Pascu, "Spectrochemical Study about the Photoreaction Products Obtained by Chlorpromazine Exposure to UV Laser Beam", ISCP, Bran, Romania, 20-24 May 2013.
37. Andrei, I R; Alexandru, T; Dinache, A; **M. Boni**; Nastasa, V ; Simion, S; Ticos, C; Pascu, M L; "Interaction of laser beams with microdroplets containing medicines solutions in water", 2nd EOS Conference on Optofluidics, Munich, Germany, 13-15 May 2013.
38. T. Alexandru, M. L. Pascu, A. Armada, B. Danko, V. Nastasa, **M. Boni**, A. Militaru, I. R. Andrei, A. Staicu, A. Hunyadi, M. Viveiros, L. Amaral, "Activity of irradiated Chlorpromazine with a 266 nm laser beam against efflux pumps system", Exploratory workshop 2012 "Emerging analytical tools to investigate Nitro-Oxidative stress", Bucharest, Romania, 24-26 July 2012.
39. T. Alexandru, M.-L. Pascu, B. Danko, A. A. Martins, N. N. Jedlinszki, V. Nastasa, **M. Boni**, A. Militaru, I. R. Andrei, A. Staicu, A. Hunyadi, S. Fanning, L. Amaral, "Exposure of chlorpromazine to 266 nm laser beam generates new species with antibacterial properties: the dawn of a new process for drug discovery", ISCP, Sinaia, Romania, 8-11 May 2012.
40. T. Alexandru, A. Hunyadi, B. Danko, **M. Boni**, A. Militaru, V. Nastasa, I. R. Andrei, M. L. Pascu, L. Amaral, Molecular modifications of 20-hydroxycodysone by exposure to laser beams, ATOM, Constanța, Romania, 23-26 August 2012.

41. M. L. Pascu, V.V. Nastasa, **M. Boni**, T. Alexandru, A. Smarandache, A. Militaru, "Laser methods used to fight the multiple drug resistance (MDR) developed by bacteria", Exploratory Workshop 2012 „Emerging Analytical to Investigate Nitro-oxidative Stress, Bucharest, Romania, July 2012.
42. V. Nastasa, **M. Boni**, I.R. Andrei, M.L. Pascu, "Study of the properties of micro- and nano- droplets by using the interaction with laser radiation", International Student Conference on Photonics, Sinaia, May 2012."
43. M.L. Pascu, A. Militaru, M. Boni, T. Alexandru, V. Nastasa, I.R. Andrei. "Laser Methods Used to Fight Multiple Drug Resistance to Treatment". Laser Florence 2012, Florence, Italy, 9-10 November 2012.
44. **M. Boni**, V. Nastasa, A. Pascu, Angela Staicu, M. L. Pascu, "Measurements of Raman Spectra induce by laser beams on droplets", International Student Conference on Photonics, Sinaia, May 2012.
45. **M. Boni**, V. Nastasa, A. Staicu, I.R. Andrei, M.-L. Pascu, "Lasing effects on optically pumped micro-droplets", Seventeenth International School on Quantum Electronics: Laser Physics and Applications (ISQE'12), Nessebar, Bulgaria, 24 – 28, September, 2012.
46. A. Militaru (Dinache), M. Martins, M. P. McCusker, T. Alexandru, V. Nastasa, **M. Boni**, S. Fanning, M. L. Pascu, "Laser modified medicines: new alternatives in fighting MDR bacteria", International Conference on Antimicrobial Research - ICAR2012, Lisbon, Portugal, November 2012.
47. M.L. Pascu, V. Nastasa, **M. Boni**, G.V. Popescu, I.R. Andrei, Studies on the interaction of laser beams with pendant droplets, EOSAM 2012, Aberdeen, Scotland, UK, 25-28 September 2012.
48. Angela Staicu, M. Enescu, A. Pascu, S. Foley, **M. Boni**, M.L. Pascu, „Photophysical studies on amino acids and proteins oxidation”, International Student Workshop on Laser Applications, Bran, May 31-June 4, 2011.
49. Laser Radiation Interaction with Fluorophores In Micro-/Nano-Droplets of Solutions, M. L. Pascu, I. R. Andrei, V. Nastasa, **M. Boni**, G. V. Popescu, LASER FLORENCE 2100, Florence, 3-6 November 2011.
50. Pascu M.L.; Nastasa V.; Smarandache A.; Militaru A.; Martins A.; Viveiros M.; **Boni M.**; Andrei I.; Pascu A.; Staicu A.; Molnar J.; Fanning S.; Amaral L., Direct Modification of Bioactive Phenothiazines by Exposure to Laser Radiation, Recent Patents on Anti-Infective Drug Discovery, Volume 6, Number 2, pp. 147-157(11), May 2011.
51. Laser Radiation Interaction with Fluorophores In Micro-/Nano-Droplets of Solutions, M. L. Pascu, I. R. Andrei, V. Nastasa, **M. Boni**, G. V. Popescu, Lasers Med Sci 26, Suppl 1: S16, 2011.
52. V. Nastasa, **M. Boni**, I.R. Andrei, C.M. Ticos, M.L. Pascu, "Optical investigation of medicine solutions in micro-droplets form at interaction with laser radiation", SPIE Optics and Photonics Conference, August 2011.

Posters

1. **M. Boni**; I.R. Andrei; A. Staicu; M.L. Pascu; Resonant and Unresonant Interaction of Laser Beams with Pendant Droplets Containing Different Solutions, Joint International Student Conference on Photonics and Modern Laser Applications Conference 2018, Alba Iulia, Romania, 3-7 September 2018.
2. **M. Boni**, Laser – liquid interactions with pendant beads Laser Ignition Summer School 2018, Sibiu, Romania, 02-06 July 2018.
3. A. Smarandache, **M. Boni**, J. Handzlik, K. Kiec-Kononowicz, A. Staicu, and M.-L. Pascu, „Laser Induced Colloidal Structures in Drugs Solutions”, European Colloid and Interface Society (ECIS) Conference, Ljubljana, Slovenia, 2 - 7 September 2018;

4. A. Smarandache, **M. Boni**, M.L. Pascu, „Spectroscopic Investigations on Fast Laser Photoinduced Molecular Modifications in Droplets Containing New Hydantoins”, Joint International Student Conference on Photonics and Modern Laser Applications Conference 2018 (ISCP-INDLAS 2018) Alba Iulia, Romania, September 3-7, 2018.
5. A. Dinache, I.R. Andrei, T. Tozar, I. Iordache, A. Smarandache, **M. Boni**, A. Staicu, M.L. Pascu, „Laser Assisted Generation of Nano-Emulsions”, Joint International Student Conference on Photonics and Modern Laser Applications Conference 2018 Alba Iulia, Romania, September 3-7, 2018.
6. A. Dinache, I.R. Andrei, **M. Boni**, T. Tozar, M.L. Pascu, “Laser foaming of medicine solutions”, European Colloid and Interface Society (ECIS) Conference, Ljubljana, Slovenia, 2 - 7 September 2018.
7. **Boni, M**; Andrei, I.R.; Staicu, A; Pascu, M.L.; " Time resolved fluorescence emission of suspended beads pumped by laser radiation”, IONS Balvanyos 2017, Covasna, Romania, 25-28 July 2017.
8. A. Smarandache, **M. Boni**, J. Handzlik, K. Kiec-Kononowicz, A. Staicu, M.-L. Pascu, "Laser Induced Colloidal Structures in Drugs Solutions", IONS Balvanyos 2017, Covasna, Romania, 25-28 July 2017.
9. I.-R. Andrei, **M. Boni**, A. Staicu, M.-L. Pascu, "High Resolution Spectral Characterization of the Dye Micro-Droplet Lasing Emission", IONS Balvanyos 2017, Covasna, Romania, 25-28 July 2017.
10. Smarandache A.; Pascu; **M. Boni**; I. Andrei; J. Handzlik; K. Kiec-Kononowicz; A. Staicu; M.-L. Pascu; "Spectroscopic investigations of novel pharmaceuticals: stability and laser beam resonant interaction"; ICPEPA10, Braşov, Romania; 29 August – 02 September 2016.
11. Andrei I.R.; **M. Boni**; A. Staicu; M.L. Pascu; “Fluorescence emission structure of a side-pumped Rh6G dye-doped micro-droplet”; ICPEPA10, Braşov, Romania; 29 August – 02 September 2016.
12. Nastasa V.; **M. Boni**; I.R. Andrei; A. Staicu; M.L. Pascu; “Enhanced fluorescence emission of pendant micro-droplets containing emulsions”, Bubble and Drop 2015, Potsdam, Germany, 06-10 July 2015.
13. V. Nastasa, **M. Boni**, A. Smarandache, T. Alexandru, A. Staicu, I.R. Andrei, A. Dinache, Z. Saponjic, M.L. Pascu, “Laser photocatalytic effect of TiO₂ nanoparticles for water pollutants removal”, Smart and green interfaces- Conference 2015, Belgrade, Serbia, March 2015.
14. I.R. Andrei, **M. Boni**, A. Staicu, M.L. Pascu, “Lasing emission by side-pumped dye-doped droplets in pendant positions: modal structure”, International Conference on Optics "Micro- to Nano-Photonics IV - ROMOPTO 2015, Bucharest, Romania, September 1 - 4, 2015.
15. **M. Boni**, V. Nastasa, I.R. Andrei, Angela Staicu, M.L. Pascu, “Comparison of lasing emission of pendant droplets containing dye solutions and emulsions”, International Conference on Optics "Micro- to Nano-Photonics IV - ROMOPTO 2015, Bucharest, Romania, September 1 - 4, 2015.
16. **Boni M.**; I.R. Andrei; V. Nastasa; Angela Staicu; M.L. Pascu; “Lasing Emission by Side-pumped Emulsion Droplets in Pendant Positions”, PIERS Prague, Czech Republic, July 2015.
17. Tozar T.; A. Dinache; V. Nastasa; **M. Boni**; Á. Simon; M.L. Pascu; Antimicrobial activity of UV photogenerated non-antibiotic drug in fighting multidrug resistance bacteria,”New frontiers in regenerative medicine and surgery. Interdisciplinarity, research and clinical applications” Congress, Bucharest, Romania, 12, 15- 16 May 2015.
18. Smarandache, A., **M. Boni**, V. Nastasa, I. R. Andrei, J. Handzlik, K. Kiec-Kononowicz, L. Amaral, M.L. Pascu; “Laser beam resonant interaction of new hydantoin derivatives droplets for biomedical applications”, B&D 2015, Potsdam, Germany, 06-10 July 2015.
19. A. Smarandache, V. Nastasa, **M. Boni**, J. Handzlik, K. Kiec-Kononowicz, L. Amaral, M.L. Pascu; “Light exposure influence on the wetting properties of new imidazolidine derivatives solutions”

- 5th International Colloids Conference 2015 “Colloid and Interface Sciences for a Brighter Future”, Amsterdam, Nederland, 21-24 June 2015.
20. I.R. Andrei, T. Alexandru, **M. Boni**, A. Dinache, V. Nastasa, M.L. Pascu, “Resonant effects on medicine solutions irradiated at two different UV laser beams: droplets and bulk experiments”, INDLAS 2014, Bran, Romania, 19-23 May 2014.
 21. A. Dinache, **M. Boni**, I. Andrei, T. Alexandru, V. Nastasa, M. L. Pascu, “Spectroscopic evidence of antibiotic solutions modifications at interaction with laser radiation”, INDLAS 2014, Bran, Romania, 19-23 May 2014.
 22. A. Simon, T. Alexandru, **M. Boni**, V. Damian, V. Dutschk, M.L. Pascu, “Phenothiazines solutions exposed to laser radiation in interaction with special surfaces”, in view of biomedical applications, INDLAS 2014, Bran, Romania, 19-23 May 2014.
 23. V. Nastasa, **M. Boni**, T. Alexandru, A. Stoicu, A. Simon, A. Dinache, A. Smarandache, I. R. Andrei, A. Staicu, M. L. Pascu, “Contributions to medical applications of lasers”, 2014 Biophotonics Summer School, University of Illinois at Urbana-Champaign, Urbana, USA, 19 – 30 May 2014.
 24. T. Alexandru, A. Armada, V. Nastasa, **M. Boni**, A. Dinache, L. Amaral, M. L. Pascu, “Antimicrobial activity of irradiated CPZ against Gram-Negative and Gram-Positive bacteria”, International Student Conference on Photonics (ISCP 2014), Orastie, Romania, 23-26.09.2014.
 25. **M. Boni**, A. Dinache, V. Nastasa, I. R. Andrei, A. Staicu, M. L. Pascu, Enhanced fluorescence in micro-droplets containing emulsions, 20th International Symposium on Surfactants in Solution, Coimbra, Portugal, 22-27 June 2014.
 26. **M. Boni**, A. Dinache, V. Nastasa, M. L. Pascu, “Optical studies of Vancomycin modification during foam generation at interaction with laser beams, COST Actions MP1106 and CM1101 Joint Training School Particles at Liquid Interfaces: Fundamentals and Applications, Bonassola, Italy, 2 – 5 April 2014.
 27. **M. Boni**, I.R. Andrei; V. Nastasa, M.L. Pascu, Interaction of laser beams with pendant droplets containing laser dyes, Smart and Green Interfaces Conference, Marseille, France, 22-24 April, 2014.
 28. **Boni M.**; Nastasa V.; Andrei I.R., Dinache A.; Pascu M.-L.; “Measurements of the volume stability of the pendant droplets which contain different solutions”, 1st International Workshop on Wetting and evaporation droplets of pure and complex fluids, Marseilles, France, June 17-20th, 2013.
 29. T. Alexandru, M. L. Pascu, B. Danko, V. Nastasa, **M. Boni**, A. Militaru, I. R. Andrei, A. Staicu, A. Hunyadi, A. Armada, M. Viveiros, L. Amaral, "Generation and biological evaluation of the products formed from the exposure of Chlorpromazine to a 266 nm laser beam", Intl. Conference “Micro-to Nano-Photonics III ROMOPTO 2012”, Bucharest, Romania, 3-6 September 2012.
 30. A. Staicu, A. Pascu, **M. Boni**, T. Alexandru, M. Enescu, M.L. Pascu. "Spectroscopical studies of zinc phthalocyanine in binary solvent mixtures". International Conference on Optics "Micro- to Nano-Photonics III- ROMOPTO 2012", Bucharest, Romania, September 2012.
 31. V. Nastasa, **M. Boni**, I. R. Andrei, M. L. Pascu, "Laser induced modifications on drugs and their use as transport vectors to biological targets", Micro- to Nano-Photonics III, ROMOPTO 2012, 10th International Conference on Optics, Bucharest, 3-6 September 2012.
 32. **M. Boni**, V. Nastasa, I. R Andrei, Angela Staicu, M. L. Pascu, "Lasing effects in micro droplets", Micro- to Nano-Photonics III, ROMOPTO 2012, 10th International Conference on Optics, Bucharest, 3-6 September 2012.
 33. **M. Boni**, V. Nastasa, I.R Andrei, Angela Staicu, M. L. Pascu, "Laser beams interaction on droplets", International Student Conference on Photonics, Sinaia, May 2012.

34. **M. Boni**, V. Nastasa, A. Staicu, I.R. Andrei, M.-L. Pascu, “Lasing effects on optically pumped micro-droplets”, Seventeenth International School on Quantum Electronics: Laser Physics and Applications” (ISQE’12), Nessebar, Bulgaria, 24 – 28, September, 2012.
35. **M. Boni**, V. Nastasa, I.R. Andrei, C. Lungu, M.L. Pascu, “Calorimetric measurements on micro-droplets”, Central and Eastern European Conference on Thermal Analysis and Calorimetry, 7-10 Septembrie 2011, Craiova, Romania, 7-10 September 2011.
36. V. Nastasa, **M. Boni**, I.R. Andrei, C.M. Ticos, M.L. Pascu, Optical investigation of medicine solutions in micro-droplets form at interaction with laser radiation, SPIE Optics and Photonics conference, August 2011.

List of oral presentations at national conferences

1. **M. Boni**, I.R. Andrei, A. Staicu, M.L. Pascu, “Lasing and fluorescence emission by laser pumped droplets levitating in acoustic field”, Annual Scientific Conference University of Bucharest, Faculty of Physics 2019 Meeting, Măgurele, Romania, June 21-22 2019.
2. T. Tozar, **M. Boni**, A-M. Udrea, A. Staicu, M.L. Pascu, “Characterization and identification of antimicrobial species generated from thioridazine irradiated with 266 nm laser beam”, Annual Scientific Conference University of Bucharest, Faculty of Physics 2019 Meeting, Măgurele, Romania, June 21-22 2019.
3. P. C. Logofătu, F. Garoi, **M. Boni**, M.L. Pascu, “The study of the properties of water droplets using a Mach-Zehnder interferometer and Mie rigorous diffraction”, Annual Scientific Conference University of Bucharest, Faculty of Physics 2019 Meeting, Măgurele, Romania, June 21-22 2019.
4. **M. Boni**, I.R. Andrei, A. Staicu, M.-L. Pascu, “Lasing of optically pumped large droplets”, Annual Scientific Conference University of Bucharest, Faculty of Physics 2019 Meeting, Măgurele, Romania, June 21-22 2018.
5. **M. Boni**, I.R. Andrei, A. Staicu, M.-L. Pascu, Temporal resolved fluorescence emission by laser pumped microliter droplets in air, Annual Scientific Conference University of Bucharest, Faculty of Physics 2017 Meeting, Măgurele, Romania, 23-24 June 2017.
6. Á. Simon, **M. Boni**, T. Tozar, M. Ferrari, M.-L. Pascu, Foam generation and behavior of unexposed and laser exposed medicine solutions in view of biomedical applications, Annual Scientific Conference University of Bucharest, Faculty of Physics 2017 Meeting, Măgurele, Romania, 23-24 June 2017.
7. **Boni, M**; Andrei, IR; Staicu, A; Pascu, ML; "Time deconvolution of lasing emission of microvolumetric droplets pumped by laser beams", Annual Scientific Conference University of Bucharest, Faculty of Physics 2016 Meeting, Măgurele, Romania, 17 June 2016.
8. **M. Boni**, V. Nastasa, I.R. Andrei, A. Staicu, M.L. Pascu, “Comparison between emission spectra of pendant droplets containing dye solutions and emulsions”, Annual Scientific Conference of Faculty of Physics, Magurele, Romania, 19 June 2015.
9. **M. Boni**, I.R. Andrei, A. Staicu, M.L. Pascu, Tunable lasers with pendant micro-droplets active media, The 2014 Scientific Communications Session of Physics Faculty, University of Bucharest, Bucharest, Romania, 20 June 2014.
10. A. Dinache, **M. Boni**, M. Martins, M. P. McCusker, V. Nastasa, S. Fanning, M.L. Pascu, Antibacterial activity and spectroscopic analysis of laser modified drugs, Annual Scientific Conference University of Bucharest, Faculty of Physics 2013 Meeting, Măgurele, Romania, 21 June 2013.

11. M.L. Pascu, A. Staicu, A. Pascu, **M. Boni**,” Time-resolved phosphorescence spectroscopy to measure the photodynamic efficiency of some phthalocyanine sensitizers”, Annual Scientific Conference University of Bucharest, Faculty of Physics 2011 Meeting, Măgurele, Romania, 17 June 2011.
12. **M. Boni**, V. Nastasa, I.R. Andrei, G.V. Popescu, M.L. Pascu, Studies on the optical properties of micro-droplets, Annual Scientific Conference University of Bucharest, Faculty of Physics 2011 Meeting, Măgurele, Romania, 17 June 2011.
13. M.L. Pascu, V. Nastasa, A. Smarandache, A. Militaru, A. Martins, M. Viveiros, **M. Boni**, I.R. Andrei, A. Pascu, A. Staicu, J. Molnar, L. Amara, “Laser induced modifications of phenothiazines”, Annual Scientific Conference University of Bucharest, Faculty of Physics 2010 Meeting, Măgurele, Romania, 18 June 2010.
14. **M. Boni**, V. Nastasa, Angela Staicu, I. Jecu, C. P. Lungu, A. Pascu, M. L. Pascu, “Comparative studies on laser induced Raman spectra on ultra-pure water and DMSO”, Annual Scientific Conference University of Bucharest, Faculty of Physics 2010 Meeting, Măgurele, Romania, 18 June 2010.
15. I. Ionita, G. Voitcu, **M. Boni**, “Monte Carlo Simulation of Photon Way through Highly Scattering Biotissue”, Annual Scientific Conference University of Bucharest, Faculty of Physics 2010 Meeting, Măgurele, Romania, 18 June 2010.

Awards

Best Doctoral Thesis Award for Exact Sciences and Engineering, Second Edition of the Senate Awards of the University of Bucharest, Bucharest, December 2018 for “Studies on the behavior of fluids in the field of laser radiation”.

Excellent Paper Award, oral session, ATOM-n 2018, 23-26.08.2018, Constanta, Romania: Mihai Boni, et al. “Resonant and unresonant interaction of lasers beams with pendant droplets having different contents”.

Best Poster Presentation, IONS Balvanyos 2017, 25-28.07.2017, Balvanyos, Romania: Mihai Boni, et al. “Time resolved fluorescence emission of suspended beads pumped by laser radiation”.

Best Oral Presentation, ISCP 2014, 23-26.09.2014, Orastie, Romania: Mihai Boni, et al. “Lasing effects on optically pumped micro-droplets”.

Best Student Poster awards, ISQE 2012, 24-28.09.2012, Nessebar, Bulgaria: Mihai Boni, et al. “Lasing effects on optically pumped micro-droplets”.

Working Stages Abroad

“Interaction of the laser beams with microdroplets having a controlled content”, The National Research Council, Institute for Energy and Interfaces, Genova, Italy, 4 October - 2 November 2014.

“Measurements of Raman spectroscopy on thiol compounds”, University Franche-Comté, Besançon, France 11 -18 November 2010.

Training

“1st PortASAP Hackathon, DIY Open Source Hardware for wine analysis”, Aveiro, Portugal, 11 – 12 March 2019.

“Laserlab Europe User Training Workshop on Time-Resolved Techniques”, BIOCEV and International Laser Centre at Vestec, Vestec, Czech Republic, 20 – 22 June, 2018.

“The Laser Ignition Summer School 2018”, Sibiu, Romania, 19-22 July 2017.

“International Advanced Course in Liquid Interfaces”, Drops and Sprays (LIDESP)”, Technische Universität Darmstadt, Darmstadt, Germany, 19 – 22 May 2015.

“Particles at Liquid Interfaces-Fundamentals and Applications”, Bonassola, Italy, 2 – 5 April 2014.

National Instruments – LabVIEW Core1 and Core 2 courses, Magurele, Ilfov, 9 -13 July 2012.

Seventeenth International School on Quantum Electronics: "Laser Physics and Applications", Nessebar, Bulgaria, 24-28 September 2012.

Fluid and Solid Interfaces 2011, Department of Chemical Engineering of Sofia University and COST Action D43, Sofia, Bulgaria, 12-15 April 2011.

Intensive Programme USIL 2011, Ultra Short and Intense Laser Technology and Metrology, University of Bordeaux, Bordeaux, France, 27 November – 10 December 2011.

International WE-Heraeus Workshop Jacobs University Bremen, COST BM0701 ATENS Jacobs University Bremen, Bremen, Germany, 4- 10 July 2010.

Conferences Organizing Committee

Joint International Student Conference on Photonics Conference - Modern Laser Applications (ISCP-INDLAS 2018), Alba-Iulia, Romania, 2018

International Student Conference on Photonics, Orastie, Romania, (ISCP 2014), 2014

International Student Conference on Photonics (ISCP 2013) Satellite to Modern Laser Applications (INDLAS 2013), Bran, Romania, 2013

International Student Conference on Photonics (ISCP 2012), Sinaia, Romania 2012

International Student Workshop on Laser Applications (ISWLA 2011), Bran, Romania, 2011