

# Europass Curriculum Vitae

## Personal information

First name(s) / Surname(s) **ANDREI Ionut-Relu**  
Address(es) Str. Atomistilor 409, Magurele-Bucharest, 077125, Ilfov, Romania  
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E-mail [ionut.andrei@inflpr.ro](mailto:ionut.andrei@inflpr.ro)  
Nationality Romanian  
Date of birth 30.09.1978  
Gender Male

## Work experience

Dates **Since Nov. 2010**  
Occupation or position held Senior scientist grade III  
Main activities and responsibilities Laser spectroscopy of dye-doped liquid droplets, and optofluidics. Physics of micro- and nano-droplets. Laser physics and technology. Laser systems. Laser spectroscopy. Chaotic behaviors of laser emission.  
Name and address of employer National Institute for Lasers, Plasma and Radiation Physics (NILPRP), Lasers Department, Laser Spectroscopy Group (LSG), PO Box MG-36, Atomistilor 409, Magurele-Bucharest, 077125, Romania  
Type of business or sector Research

Dates **2006 - 2010**  
Occupation or position held Research scientist  
Main activities and responsibilities Laser physics and technology. Laser systems. Laser spectroscopy. Chaotic behaviors of laser emissions. Econophysics. Physics of droplets.  
Name and address of employer NILPRP, Lasers Department, LSG  
Type of business or sector Research  
Name and address of employer NILPRP, Lasers Department, LSG

Dates **2002 -2006**  
Occupation or position held Research assistant  
Main activities and responsibilities Laser physics and technology. Laser systems. Laser spectroscopy. Chaotic behaviors of laser emissions. Econophysics.  
Name and address of employer NILPRP, Lasers Department, LSG  
Type of business or sector Research

*On leave from NILPRP, see Annexe I*

## Education and training

Dates 2012  
Title of qualification awarded Ph.D. in Physics  
Principal subjects/occupational skills covered Chaotic behavior study of the laser systems emission  
Name and type of organisation providing education and training University of Bucharest, Faculty of Physics  
Level in national or international classification PhD student

Dates 2002 -2004  
 Title of qualification awarded Physicist  
 Principal subjects/occupational skills covered Specialization studies in "Optics. Spectroscopy. Plasma. Lasers".  
*Topic:* The chaotic behavior study of beams emission from semiconductor lasers in optical extended cavities  
 Name and type of organisation providing education and training University of Bucharest, Faculty of Physics  
 Level in national or international classification Master

Dates 1997 -2002  
 Title of qualification awarded Diplomat Engineer  
 Principal subjects/occupational skills covered Specialization studies in "Laser technology"  
*Topic:* The physics and technology of the He-Se+ Laser  
 Name and type of organisation providing education and training University of Bucharest, Faculty of Physics  
 Level in national or international classification Basic in science

Dates 1993 -1997  
 Title of qualification awarded High school  
 Principal subjects/occupational skills covered Mathematics and Physics  
 Name and type of organisation providing education and training "Grigore Moisil" High School, Urziceni - Ialomita, Romania  
 Level in national or international classification Baccalaureate

**Personal skills and competences**

Mother tongue(s) **Romanian**

Other language(s)

Self-assessment  
 European level (\*)

**English**

**French**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Independent user	C1	Independent user
A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user

Organisational skills and competences

Member in the Organizing Committee of Scientific Manifestations:  
 Seminar „*Bridging Economists with Physicists*”, 29-30 October 2004, ASE – Bucharest.  
 Summer School on “*Econophysics and Complexity*”, Academy of Economic Studies Bucharest, 02-09 September 2005, Navodari, Romania.  
 Summer School on “*Econophysics and Complexity*”, Academy of Economic Studies Bucharest, 25Aug.-02 Sep. 2006, Sinaia, Romania.  
 Summer School on “*Econophysics and Complexity*”, Academy of Economic Studies Bucharest, 01-09 Sep. 2007, Paltinis - Sibiu, Romania.  
 Joint Conference of the 7<sup>th</sup> MC & WG Meetings. COST ACTION P21 „The physics of droplets”, Bucharest, Romania, May, 2009.  
 International Student Workshop on Laser Applications 2010 (ISWLA10), Bran, Romania, May 25-28, 2010.

Technical skills and competences

Technical specific skills for working in a Laser Spectroscopy; Laser physics and technology Laboratory.

Computer skills and competences | Microsoft Windows, Microsoft Office, Corel Draw, Origin, Matlab

Driving licence | Since 1996

**Annexes** | Annexe I Stages abroad in research field  
Annexe II List of scientific publications  
Annexe III List of contribution to conferences

## Annexe I

### Stages abroad in research field

Periode	Period	Country	Purpose of visit
November, 2006	2 weeks	France	visiting researcher <sup>a</sup>
February, 2008	2 weeks	Italy	COST - STSM research stage <sup>b</sup>
November, 2014	4 weeks	Turkey	COST - STSM research stage <sup>c</sup>

<sup>a</sup> performed at CNR-ENI National Research Council, Institute for Energetics and Interphases, Genova, Italy, subject "Wetting properties of droplets containing drugs on superhydrophobic surfaces".

<sup>b</sup> Laboratoire de Chimie des Matériaux et Interfaces – LCMI, U.F.R. Scinces et Technique - Universite de Franche-Comte, Besancon, Franta.

<sup>c</sup> Department of Mechanical Engineering - Koç University, Istanbul, Turkey, subject "The 2nd order resonance study of the millimeter-sized pendant droplets", COST Action MP1205 ; COST-STSM-ECOST-STSM-MP1205-261014-050937..

## Annexe II

### List of scientific publications

1. T. Tozar, **I.R. Andrei**, R. Costin, R. Pirvulescu, M.L. Pascu, *Case series about ex vivo identification of squamous cell carcinomas by laser-induced autofluorescence and Fourier transform infrared spectroscopy*, Lasers in Medical Science, 33, 861–869 (2018).
2. C. ONEA, P.E. STERIAN, **I.R. ANDREI**, A. BALEANU, M.L. PASCU, *Chaotic low-frequency fluctuations of laser diode emission at injection currents above threshold*, U.P.B. Sci. Bull., accepted, ISSN 1223-7027 (2018).
3. **I.-R. Andrei**, M. Boni, A. Staicu, and M. L. Pascu; *Lasing of optically pumped large droplets: instant and gradual blueshift*, J. Opt. Soc. Am. B, 35, 8, p. 1950 (2018).
4. **I. R. Andrei**, M. Boni, and M. L. Pascu, Chapter 8 - *Unresonant Interaction of Laser Beams with Pendant Droplets*, In: M. L. Pascu, Ed., Laser Processed Pendant Droplets in Multiple Drug Resistance, Sharjah, UAE: Bentham Science - International Publisher of Journals and Books, 157-190 (2017).
5. M.L. Pascu, M. Boni, T. Tozar, A. Smarandache, A. Stoicu, **I.R. Andrei**, Chapter 9 - *Resonant interaction of laser beams with pendant droplet*, In: M.L. Pascu, Ed., Laser Processed Pendant Droplets in Multiple Drug Resistance, Sharjah, UAE: Bentham Science - International Publisher of Journals and Books, 191-226 (2017).
6. M. Boni, **I.R. Andrei**, A. Staicu, V. Nastasa, M.L. Pascu, Chapter 17 - *Lasing by optically pumped pendant droplets*, In: M.L. Pascu, Ed., Laser Processed Pendant Droplets in Multiple Drug Resistance, Sharjah, UAE: Bentham Science - International Publisher of Journals and Books, 463-488 (2017).
7. M.L. Pascu, A. Smarandache, T. Tozar, **I.R. Andrei**, Chapter 18 - *Spectroscopy of microdroplets: an alternative to the spectroscopy of bulky materials*, In: M.L. Pascu, Ed., Laser Processed Pendant Droplets in Multiple Drug Resistance, Sharjah, UAE: Bentham Science - International Publisher of Journals and Books, 489-500 (2017).
8. A. Smarandache, M. Boni, **I.R. Andrei**, J. Handzlik, K. Kiec-Kononowicz, A. Staicu, M.L. Pascu, *Spectroscopic investigations of novel pharmaceuticals: Stability and resonant interaction with laser beam*, Applied Surface Science v. 417, pp. 143–148 (2017).
9. M. Boni, A. Staicu, **I.R. Andrei**, A. Smarandache, V. Nastasa, M. Comor, Z. Saponjic, M.L. Pascu; *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, v. 519, pp. 238-244 (2017).
10. M.L. Pascu, **I.R. Andrei**, J.-P. Delville, *Laser-induced jetting and controlled droplet formation*, Optofluid. Microfluid. Nanofluid.; 3:44–48 (2016).
11. R. Costin, T.Tozar, V. Zainea, R. Pirvulescu, **I.R. Andrei**, R. Hainăroşie, *Detection of epidermoid squamous-cell carcinoma by laser induced autofluorescence – preliminary results*, Romanian Journal of Military Medicine, v. CXIX, 2, pp. 40-47 (2016).
12. M. Boni, V. Nastasa, A. Staicu, **I.R. Andrei**, M.L. Pascu; *Characterisation of fluorescent pendant droplets*; Romanian Reports in Physics, 67(4), pp.1278-1287 (2015).
13. A. SMARANDACHE, A. Pascu, **I.R. Andrei**, J. HANDZLIK, K. KIEC-KONONOWICZ, A. STAIKU, ML Pascu; *Study of the optical properties of 2-thiohydantoin derivatives*; Rom. Rep. Phys., v. 68, 2, pp. 673-683 (2016).

14. M.C. Morán, T. Tozar, A. Simon, A. Dinache, A. Smarandache, **I.R. Andrei**, M. Boni, M.L. Pascu, F. Cirisano, M. Ferrari, 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).
15. **I.R. Andrei**, T. Tozar, A. Dinache, M. Boni, V. Nastasa, M.L. Pascu, *Chlorpromazine Transformation by Exposure to Ultraviolet Laser Beams in Droplet and Bulk*, *Eur. J. Pharm. Sci.*, 81, 1, pp. 27–35 (2016).
16. M. Boni, V. Nastasa, **I.R. Andrei**, A. Staicu, M.L. Pascu; *Enhanced fluorescence emitted by microdroplets containing organic dye emulsions*, *Biomicrofluidics* 9, 014126 (2015).
17. A. Dinache, M. Boni, T. Alexandru, E. Radu, A. Stoicu, **I.R. Andrei**, A. Staicu, L. Liggieri, V. Nastasa, M. L. Pascu, M.Ferrari; *Surface properties of Vancomycin after interaction with laser beams*, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, vol. 480, 328–335 (2015).
18. **I.R. Andrei**, G.V. Popescu, M.L. Pascu, *Optical spectrum behaviour of a coupled laser system under chaotic synchronization conditions*, *Journal of the European Optical Society - Rapid publications JEOS-RP*, DOI 10.2971/jeos.2013.13054, vol.8,13054 (2013).
19. M.L. Pascu, B. Danko, A.M., N. Jedlinski, T. Alexandru, 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: Contributions to Development of a New Process for Drug Discovery*, *PLOS ONE* 8, 2, e55767 (2013).
20. **I.R. Andrei**, G.V. Popescu, C.M. Ticos, M.L. Pascu, *Optical spectrum analysis of chaotic synchronization in a bidirectional coupled semiconductor laser system*, *Chaos and Complex Systems, Proceedings of the 4<sup>th</sup> International Interdisciplinary Chaos Symposium*, Springer Complexity, XV, 581 p. 425 (2013).
21. 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 266nm laser beam*; *Proc. SPIE 8882, ROMOPTO 2012: Tenth Conference on Optics: Micro- to Nanophotonics III*, 88820T, doi:10.1117/12.2032666, (2013);
22. A. Hunyadi; B. Danko; M. Boni; A. Militaru; T. Alexandru; V. Nastasa; **I.R. Andrei**; M.L. Pascu; L. Amaral; *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. M. Boni; V. Nastasa; A. Militaru; A. Smarandache; **I.R. Andrei**; A. Staicu; M.L. Pascu, *Laser beams interaction with liquids in optofluidic experiments*, *Romanian Reports in Physics*, vol. 64, Suppl., P. 1179-1194 (2012).
24. M.L. Pascu, G.V. Popescu, C.M. Ticos, **I.R. Andrei**, *Unresonant interaction of laser beams with microdroplets*, *Journal of the European Optical Society - Rapid publications*, vol.7, 12001 (January 2012).
25. V. Nastasa, K. Samaras, **I.R. Andrei**, M.L. Pascu, T. Karapantsios, *Study of the formation of micro and nano-droplets containing immiscible solutions*, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, Vol. 382, No.1-3, p. 246-250, 2011.
26. C.M. Ticos, **I.R. Andrei**, M.L. Pascu, M. Bulinski, *Experimental control of power dropouts by current modulation in a semiconductor laser with optical feedback*, *Physica Scripta*, 83, 055402, 2011.
27. M.L. Pascu, Adriana Smarandache, M. Boni, Jette Kristiansen, V. Nastasa, **I. R. Andrei**, *Spectral properties of molecular solutions*, *Romanian Reports in Physics*, Vol. 63, Supplement, pp. 1267–1284, 2011.
28. 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*, Volume 6, Number 2, pp. 147-157(11), May 2011.
29. M. L. Pascu, **I. R. Andrei**, V. Nastasa, M. Boni, G. V. Popescu, *Laser Radiation Interaction With Fluorophores In Micro-/Nano-Droplets Of Solutions*, *Lasers Med Sci* 26 , Suppl 1: S16, 2011.
30. **I.R. Andrei**, *Characterization of chaotic emission of a laser diode in optical feedback conditions produced by different external reflectors*, *OAM-Rapid Communications* vol. 4, No. 10, 2010.
31. V. Nastasa, V. Pradines, **I.R. Andrei**, M. Boni, M.L. Pascu, R. Miller, *Studies about the generation and characterisation of microdroplets with a controlled content*, *OAM- Rapid Communications* vol. 4, No. 11, 2010.
32. M.L. Pascu, A. Pascu, A. Staicu, **I.R. Andrei**, V. Nastasa, *Tunable lasers at the laser spectroscopy group: short form history from the beginnings to date*, *Romanian Reports in Physics*, Vol. 62, No. 3, p. 425-431, 2010
33. M.L. Pascu, **I.R. Andrei**, M. Ferrari, Angela Staicu, Adriana Smarandache, A. Mahamoud, V. Nastasa, L. Liggieri, *Laser beams resonant interaction with micro-droplets which have a controlled content*, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, Vol. 365, No.1-3, p. 83-88, 2010.
34. **I.R. Andrei**, C. Ticos, M. Bulinski, M.L. Pascu, *Chaotic behaviour in the emission of semiconductor lasers optically coupled with an external cavity*, *Journal of Optoelectronics and Advanced Materials*, Vol. 12, No. 1, p. 63-67, 2010.
35. M. Bulinski, Catalin M. Ticos, **I. R. Andrei**, *M:N phase synchronization of LFF in a chaotic ECSL system*, *Noise and Fluctuations in Photonics, Quantum Optics, and Communications - Proceedings of the Society of Photo-optical Instrumentation Engineers (SPIE)*, Vol. 6603, p. 660329 1-9 (9), 2007.
36. C.M. Ticos, M. Bulinski, **I.R. Andrei** and M.L. Pascu, *Power dropout control by optical phase modulation in a chaotic semiconductor laser*, *Journal of the Optical Society of America B*, vol. 23, No. 12, p. 2486-2493, December 2006.

37. **I.R.Andrei**, M.Bulinski, *Methods and application of the chaos control*, Proceedings of The 2006 International Conference on Commerce, Faculty of Commerce, Academy of Economic Studies, Bucharest, Romania, 27-29 March 2006, CD, ISBN-10 973-594-785-4 ; ISBN-13 978-973-594-785-9.
38. F. Ungureanu, L. Voicu, **I.R. Andrei**, *The modification of phenyl-pyridine compounds under UV irradiation: FTIR investigation*, Journal of Optoelectronics and Advance Materials, Vol. 8, No. 1, p. 315-318, February 2006.
39. **I.R.Andrei**, M.L.Pascu, M.Bulinski, *The analysis of data encoding characteristics for chaotic coupling of two multimode laser diodes with external cavity*, Romanian Reports in Physics, Vol. 57, No. 3, p. 425-431, 2005.
40. M.Bulinski, M.L.Pascu, **I.R.Andrei**, *Phase synchronisation and coding chaos with semiconductor lasers*, Journal of Optoelectronics and Advance Materials, Vol. 6, No. 1, p. 77-86, March 2004.

### Annexe III

#### List of contribution to conferences (oral presentation)

1. Á. 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 & Modern Laser Applications Conference 2018, ISCP-INDLAS 2018, September 3-7, Alba Iulia, Romania.
2. M. L. Pascu, **I. R. Andrei**, M. Boni, Laser optofluidics and applications (invited), Joint International Student Conference on Photonics & Modern Laser Applications Conference 2018, ISCP-INDLAS 2018, September 3-7, Alba Iulia, Romania.
3. Pascu, ML; Pirvulescu, R; **Andrei,IR**; Boni, M; Toza, T; Laser microspectroscopy in fighting multiple drug resistance, Laser Florance, Florence 2017, 9-11 November 2017.
4. Tozar, T; Nastasa, V; Popa, M; Chifiriuc, MC; **Andrei, IR**; Pascu, ML; "Thioridazine exposed to UV laser radiation: a new approach in fighting against infectious diseases", 1st Molecules Medicinal Chemistry Symposium, 8 September 2017, Barcelona, Spain.
5. 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
6. A. Simon, **I.R. Andrei**, L. Frunzã, I. Zgurã, A. Dowson, J.J.W.A van Loon, M.L. Pascu; Laser modified medicine droplets under hypergravity conditions; International OSA Network of Students (IONS) KOALA, Brisbane, Australia, 26 November-1 December 2017
7. A. Simon, A. Stoicu, T. Tozar, **I.R. Andrei**, L. Frunzã, I. Zgurã, Alan Dowson, J.J.W.A van Loon, M.L. Pascu; Laser Modified Medicine Droplets in Terrestrial and Hypergravity Conditions: Generation, Behaviour and Interaction with Target Surfaces of Biomedical Interest; International OSA Network of Students (IONS), Balvanyos, Romania, 25-28 July 201
8. 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, 25-28 July 2017, Covasna, Romania
9. 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, 25-28 July 2017, Covasna, RomaniaM.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.
10. 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.
11. A. Simon, A. Stoicu, **I.R. Andrei**, T. Alexandru, A. Staicu, A. Smarandache, M.L. Pascu\*, Wetting properties of medicines solutions exposed to laser beams and treated in hypergravity conditions, "Smart and green interfaces: Fundamentals and diagnostics" (SGI-FunD) Symposium, Sofia, Bulgaria, 29-31 October 2015.
12. A. Simon, A. Stoicu, T. Tozar, **I.R. Andrei**, V. Damian, M.L. Pascu, Direct modification of photosensitive non-antibiotics by exposure to UV laser radiation and their interaction with target surfaces: New process for drug discovery and delivery in view of space mission applications, Antibiotic resistance and antibiotic alternatives: Looking towards the future, , London, UK, 3-5 November 2015.
13. 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, 11 th International Conference "Micro- to Nano-Photonics IV- ROMOPTO 2015", Bucuresti, Romania, 1-4 septembrie 2015.
14. T. Tozar, A. Stoicu, V. Nastasa, M. Popa, **I.R. Andrei**, M. C. Chifiriu, M. L. Pascu, Testing the susceptibility of bacteria in planktonic and biofilms forms to fenotiazines exposed to a 266 nm laser beam emitted by a Nd:YAG laser, Annual Scientific Conference of Faculty of Physics, Magurele, Romania, June 19, 2015.
15. 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 mai 2015.

16. 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), Munchen, Germany, June 21 – 24, 2015.
17. 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, June 19, 2015.
18. M.L Pascu, **I.R. Andrei**, M. Boni, V. Nastasa, R. Pirvulescu, Interaction of laser beams with single droplets in pendant position, 3rd EOS Conference on Optofluidics (EOSOF 2015), Munchen, Germany, June 21 – 24, 2015.
19. 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 31 – April 2, 2015.
20. 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 (invited), International Conference on Optics "Micro- to Nano-Photonics IV - ROMOPTO 2015, Bucharest, Romania, September 1 - 4, 2015.
21. A. Dinache, T. Tozar, M. Boni, A. Staicu, V. Nastasa, A. Stoicu, **I.R. Andrei**, V. Damian, E. Radu, M. Ferrari, M. L. Pascu, Smart and green interfaces- Conference 2015, Belgrade, Serbia, March 31 – April 2, 2015.
22. A. Smarandache, A. Pascu, M. Boni, **I.R. Andrei**, J. Handzlik, K. Kiec-Kononowicz, A. Staicu, M.-L. Pascu\*, Spectroscopic investigations of new hydantoin derivatives and their behavior under laser beam exposure for further biomedical applications, 6th Congress of International PhotoTherapy Association (IPTA 6), Nice, France, July 9 – 10, 2015.
23. A. SMARANDACHE, M. BONI, V. NASTASA, **I. R. ANDREI**, J. HANDZLIK, K. KIEC-KONONOWICZ, L. AMARAL, M.L. PASCU; INVESTIGATIONS ON THE INTERACTION OF UNEXPLORED HYDANTOIN DERIVATIVES SOLUTIONS WITH OPTICAL BEAMS, Annual Scientific Conference of Faculty of Physics, Magurele, Romania, June 19, 2015.
24. A. SMARANDACHE, A. SIMON, A. DINACHE, T. TOZAR, M. BONI, **I. R. ANDREI**, M. C. MORÁN, F. CIRISANO, M. FERRARI, M.L. PASCU; STABILITY OF NEW LASER PRODUCED MEDICINES IN VIEW OF THEIR APPLICATION ON BIOMEDICAL FABRICS; Annual Scientific Conference of Faculty of Physics, Magurele, Romania, June 19, 2015.
25. Mihai Boni, Angela Staicu, **Ionut Relu Andrei**, Adriana Smarandache, Viorel Nastasa, Z. Saponjic, Mihail-Lucian Pascu, Studies on the laser induced emission of microdroplets containing Rhodamine 6G solutions in water doped with TiO<sub>2</sub> nanoparticles, Smart and green interfaces: Fundamentals and diagnostics (SGI-FunD), Sofia, Bulgaria, 29-31 October 2015.
26. M.L. Pascu, M. Boni, **I.R. Andrei**, Optically pumped microliter droplets as lasing sources in the visible spectral range (invited), International Conference on Optics "Micro- to Nano-Photonics IV - ROMOPTO 2015, Bucharest, Romania, September 1 - 4, 2015.
27. **I.R. Andrei**, A. Baleanu, M.L. Pascu, Chaotic low-frequency fluctuations of the radiation emitted by a semiconductor laser working at currents above the laser threshold, The 2015 Scientific Communications Session of Physics Faculty, University of Bucharest, Bucharest, Romania, June 19, 2015.
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, 5th International Student Conference on Photonics (ISCP), Orastie, Romania, 23-26 September 2014.
29. Boni M.; Nastasa V.; **Andrei I.R**; Staicu A.; Pascu M. L.; "Enhanced fluorescence in pending micro-droplets that contain emulsions"; 5th International Student Conference on Photonics (ISCP), Orastie, Romania, 23-26 September 2014.
30. **I.R. Andrei**, Tatiana Alexandru, M. Boni, Andra Dinache, V. Nastasa, M.L. Pascu, Investigation of irradiation effects on medicine solutions exposed to UV laser beams in droplet and bulk, The 2014 Scientific Communications Session of Physics Faculty, University of Bucharest, Bucharest, Romania, 20 June 2014.
31. 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", 5th International Student Conference on Photonics (ISCP), Orastie, Romania, 23-26 September 2014.
32. Pascu M.L., Alexandru T., Boni M., Dinache A., Nastasa V., **Andrei I.**; "Laser radiation interaction with droplets that contain medicines"; Smart and Green Interfaces Conference, Marseille, France, 22-24 April, 2014.
33. M.L. Pascu, **I.R. Andrei**, Adriana Smarandache, Andra Dinache, Tatiana Alexandru, M. Boni, Angela Staicu, Ruxandra Angela Pirvulescu; Laser methods in generating anti-infective effects of non-antibiotics", Laser Florence 2013, Florence, Italy, 9-10 November 2013.
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2. **I. R. Andrei**, V. Nastasa, G. Popescu, M. L. Pascu, White light diffraction phase microscope for tissue analysis, Joint International Student Conference on Photonics & Modern Laser Applications Conference 2018, ISCP-INDLAS 2018, September 3-7, Alba Iulia, Romania.
3. 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 & Modern Laser Applications Conference 2018, ISCP-INDLAS 2018, September 3-7, Alba Iulia, Romania.
4. 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 & Modern Laser Applications Conference 2018, ISCP-INDLAS 2018, September 3-7, Alba Iulia, Romania.
5. **I.-R. Andrei**, M. Boni, A. Staicu, M.-L. Pascu, "High Resolution Spectral Characterization of the Dye Micro-Droplet Lasing Emission", IONS Balvanos 2017, Covasna, Romania, 25-28 July 2017.



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7. Tozar, T; Nastasa, V; Popa, M; Chifiriuc, MC; **Andrei, IR**; Pascu, ML; "Thioridazine exposed to UV laser radiation: a new approach in fighting against infectious diseases", 1st Molecules Medicinal Chemistry Symposium, 8 September 2017, Barcelona, Spain.
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