

# Europass Curriculum Vitae

## Personal information

Surname(s) / First name(s) **TOZAR (ALEXANDRU) Tatiana**  
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E-mail [tatiana.alexandru@infipr.ro](mailto:tatiana.alexandru@infipr.ro); alexandrutatiana23@gmail.com  
Nationality Romanian  
Date of birth 23.01.1988  
Gender Female  
ResearcherID E-6369-2016  
ORCID: [orcid.org/0000-0002-5953-9241](https://orcid.org/0000-0002-5953-9241)

## Work experience

Dates *August 2016 - onwards*  
Occupation or position held Research Scientist, grade III  
Main activities and responsibilities Laser based methods to develop new medicines for use to fight the multiple drug resistance developed by bacteria and tumor tissues; Resonant interaction of the laser beams with microdroplets;  
Name and address of employer National Institute for Lasers, Plasma and Radiation Physics; Lasers Department, 409 Atomistilor, Magurele City, Jud. Ilfov, 077125, Romania  
Type of business or sector Research

Dates *May 2015 – June 2016*  
Occupation or position held Research Scientist  
Main activities and responsibilities Research activity in Laser Spectroscopy and Biophysics  
Name and address of employer National Institute for Lasers, Plasma and Radiation Physics; Lasers Department, 409 Atomistilor, Magurele City, Jud. Ilfov, 077125, Romania  
Type of business or sector Research

Dates *April 2012 – April 2015*  
Occupation or position held Assistant Research Scientist  
Main activities and responsibilities Research activity in Laser Spectroscopy and Biophysics  
Name and address of employer National Institute for Lasers, Plasma and Radiation Physics; Lasers Department, 409 Atomistilor, Magurele City, Jud. Ilfov, 077125, Romania  
Type of business or sector Research

Dates *October 2011 – March 2012*  
Occupation or position held Assistant Research Scientist Trainee  
Main activities and responsibilities Research activity in Laser Spectroscopy and Biophysics  
Name and address of employer National Institute for Lasers, Plasma and Radiation Physics; Lasers Department, 409 Atomistilor, Magurele, Ilfov, 077125, Romania

Type of business or sector	Research
<b>Education and training</b>	
Dates	<i>June 2014 – September 2015</i>
Title of qualification awarded	PhD scholarship; Title “Generation and testing the photoreaction products obtained from the exposure of solutions of drugs to laser beams”.
Name and type of organization providing education and training	POSDRU/159/1.5/S/137750, entitled „ Doctoral and Postdoctoral programs - support for increasing the competitiveness of research in science”, University of Bucharest, Romania
Level in national or international classification	PhD student
Dates	<i>October 2012 – September 2015</i>
Title of qualification awarded	PhD in Physics
Principal subjects/occupational skills covered	Optics, Spectroscopy, Plasma, Lasers; PhD Thesis: “Generation and testing the photoreaction products obtained from the exposure of solutions of drugs to laser beams”.
Name and type of organization providing education and training	University of Bucharest, Faculty of Physics, Romania
Level in national or international classification	PhD
Dates	<i>October 2010 – July 2012</i>
Title of qualification awarded	Master graduate in Medical Biophysics
Name and type of organization providing education and training	University of Bucharest, Faculty of Physics, Romania
Level in national or international classification	Master degree
Dates	<i>October 2007 – July 2010</i>
Title of qualification awarded	University graduate in Medical Physics
Name and type of organization providing education and training	University of Bucharest, Faculty of Physics, Romania
Level in national or international classification	Bachelor degree
Dates	<i>February 12<sup>th</sup> 2015 -January 17<sup>th</sup> 2016</i>
Title of qualification awarded	“Spin Your Thesis!” 2015 programme: “ <i>Interaction of laser exposed medicines with target surfaces and volumes in hypergravity conditions</i> ”
Name and type of organization providing education and training	European Space Agency
Level in national or international classification	Education and Research
Dates	<i>October 11<sup>th</sup>- November 11<sup>th</sup> 2014</i>
Principal subjects/occupational skills covered	Photoproducts generated in water based solution of Vancomycin and Phenothiazines by exposure to laser radiation
Name and type of organization providing education and training	Short time scientific mission- COST BM1003. Dip. di Scienze Chimiche, Università di Napoli "Federico II", Napoli, Italy
Type of business or sector	Training and Research
Dates	<i>June 3<sup>rd</sup>-June 5<sup>th</sup> 2014</i>
Principal subjects/occupational skills covered	Glycoscience: a complex discipline with a central role in modern biology, biotechnology and medicine

Name and type of organization providing education and training	COSTB M1003 Training School, Napoli, Italy
Type of business or sector	Training and Research
Dates	<i>November 3<sup>st</sup>- November 9<sup>th</sup> 2013</i>
Principal subjects/occupational skills covered	"Structure and dynamics of liquid foams and their applications"
Name and type of organization providing education and training	Université Paris-Sud, Orsay, France
Type of business or sector	Training and Research
Dates	<i>July 1<sup>st</sup>-July 3<sup>th</sup> 2013</i>
Principal subjects/occupational skills covered	NABATIVI summer school "Targeting Gram-negative bacteria: from drugs discovery to pre-clinical exploitation"
Name and type of organization providing education and training	San Raffaele Scientific Institute, Milan, Italy
Type of business or sector	Training and Research
Dates	<i>June 8<sup>th</sup>-June 15<sup>th</sup></i>
Principal subjects/occupational skills covered	6th International Graduate summer school - Biophotonics '13
Name and type of organization providing education and training	Lund University, Lund, Sweden and Technical University of Denmark, Denmark
Type of business or sector	Training and Research
Dates	<i>April 23<sup>th</sup> – April 25<sup>th</sup> 2013</i>
Principal subjects/occupational skills covered	"A way to Smart Europe" training school– COST MP1106
Name and type of organization providing education and training	University of Twente, Enschede, The Netherlands
Type of business or sector	Training and Research
Dates	<i>January 22<sup>th</sup> – January 25<sup>th</sup> 2013</i>
Principal subjects/occupational skills covered	"Microbial infection from the chemistry perspective: the bottom-up approach" Winter Training School – COST BM1003
Name and type of organization providing education and training	Facultad de Farmacia, Universidad CEU San Pablo / CIB-CSIC, Madrid, Spain
Type of business or sector	Training and Research
Dates	<i>July 9<sup>th</sup> – July 13<sup>th</sup> 2012</i>
Principal subjects/occupational skills covered	Lab VIEW Core 1 and Lab VIEW Core 2.
Name and type of organization providing education and training	National Instruments
Type of business or sector	Training
Dates	<i>March 01<sup>th</sup> – March 31<sup>th</sup> 2012</i>
Principal subjects/occupational skills covered	Biological evaluation of products formed from the irradiation of chlorpromazine with a 266 nm laser beam.
Name and type of organization providing education and training	Unit of Microbiology, Institute of Hygiene & Tropical Medicine of Lisbon, Universidade Nova de Lisboa, Lisbon, Portugal.
Type of business or sector	Training and Research

Dates	July 11 <sup>th</sup> – July 31 <sup>th</sup> 2011																																								
Principal subjects/occupational skills covered	Studies of regularity of programmed cell death after influence of damage factors. Joint Institute for Nuclear Research, Laboratory of Radiation Biology (LRB), Dubna, Russia																																								
Type of business or sector	Training and Research																																								
<b>Personal skills and competences</b>																																									
Mother tongue(s)	Romanian																																								
Other language(s)																																									
Self-assessment <i>European level (*)</i>																																									
<b>English</b>																																									
<b>German</b>																																									
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B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user																																
Organizational skills and competences	Member in the organization committee of 5 international conference																																								
Social skills and competences	Team work, President (2013-2014) Romanian SPIE Chapter, Vice-President (2014-2016) Romanian SPIE Chapter																																								
Computer skills and competences	Windows, Office Pack, web sites design, Origin, Mathematica, C++, Corel Draw																																								
Other skills and competences	- Experience in: spectral properties of biomolecules; laser beam interaction with biomolecule systems; microbiological methods for determining the antibacterial action of an antimicrobial agent; time-resolved spectroscopic measurements; writing technical papers and reports; - Skills in using analytical methods: TLC (Thin Layer Chromatography), UV-VIS and IR (FTIR) spectroscopy, induced fluorescence spectroscopy (volume and droplet sample);																																								
Driving license	Category A, B, since 2007.																																								
<b>Additional information</b>																																									
<b>Annexes</b>	ANNEX 1: PUBLICATIONS ANNEX 2: HEAD OF NATIONAL PROJECTS ANNEX 3: BOOK CHAPTERS ANNEX 4: CONFERENCES ANNEX5: MEMBERSHIP OF NATIONAL AND INTERNATIONAL SOCIETIES																																								

ANNEX 1

#### PUBLICATIONS

- Tozar, T**; Pascu, ML; "Time stability of laser exposed phenothiazines aqueous solutions in view of antimicrobial research" PROCEEDINGS OF THE ROMANIAN ACADEMY, Series A (2018) accepted for publication.
- Tozar, T**; Andrei, IR; Costin, R; Pirvulescu, RA; Pascu, ML; "Case series about ex vivo identification of squamous cell carcinomas by laser induced autofluorescence and Fourier transformed infrared spectroscopy", LASERS IN MEDICAL SCIENCE, 33(4):861-869 (2018).
- Tozar, T**; Smarandache, A; Staicu, A; Pascu, ML; Pirvulescu, RA; "Laser modified phenothiazines and hydantoin: photo-products characterisation and application on animal eyes pseudo-tumours", LETTERS IN DRUG DESIGN & DISCOVERY, 15:687-697 (2018) - review
- Dinache, A; Smarandache, A; Simon, A; Nastasa, V; **Tozar, T**; Pascu, A; Enescu, M; Khatyr, A; Sima, F; Pascu, ML; Staicu, A; "Photosensitised cleavage of some olefins as potential linkers to be used in drug delivery"; APPLIED SURFACE SCIENCE, 417: 136-142 (2017).

5. Andrei, IR; **Tozar, T**; Dinache, A; Boni, M; Nastasa, V; Pascu, ML; "Chlorpromazine transformation by exposure to ultraviolet laser beams in droplet and bulk"; EUROPEAN JOURNAL OF PHARMACEUTICAL SCIENCES, 81: 27-35 (2016).
6. Morán, MC; **Tozar, T**; Simon, A; Dinache, A; Smarandache, A; Andrei, IR; Boni, M; Pascu, ML; 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: 91-103 (2016).
7. **Alexandru, T**; Staicu, A.; Pascu, A.; Dinache, A.; ben Abdeladhim, A; Enescu, K; Khatyr, A; Pascu, M.L; "Light cleavage of some potential linkers for drug carriers"; ROMANIAN REPORTS IN PHYSICS, 68(2) (2016).
8. **Tozar, T**; Stoicu, A; Radu, E; Pascu, ML; "Evaluation of thin layer chromatography image analysis method for irradiated chlorpromazine quantification"; ROMANIAN REPORTS IN PHYSICS, 67(4):1608-1615 (2015).
9. Smarandache, A; Simon, A; **Tozar, T**; Nastasa, V; Pascu, ML; "Stability studies on Promethazine unexposed and exposed to UV laser radiation", PROC. SPIE 9549, PHYSICAL CHEMISTRY OF INTERFACES AND NANOMATERIALS XIV, 954916-1 – 954916-9 (2015).
10. **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 UV laser irradiation: their applications in antimicrobial assays"; JOURNAL OF BIOMEDICAL OPTICS, 20(5): 051002-1 - 051002-11 (2015).
11. Dinache, A; Boni, M; **Alexandru, T**; Radu, E; Stoicu, A; Andrei, I.R; Staicu, A; Liggieri, L; Nastasa, V; Pascu, M.L; Ferrari, L; "Surface properties of Vancomycin after interaction with laser beams"; COLLOIDS AND SURFACES A: PHYSICO-CHEMICAL AND ENGINEERING ASPECTS, 450: 328-335 (2015).
12. Simon, A; **Alexandru, T**; Boni, M; Damian, V; Stoicu, A; Dutschk, V; Pascu, ML; "Interaction of solutions containing phenothiazines exposed to laser radiation with materials surfaces, in view of biomedical applications", INTERNATIONAL JOURNAL OF PHARMACEUTICS, 475(1–2): 270–281 (2014).
13. 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: 605-610 (2013).
14. **Alexandru, T**; Pascu, ML; Danko, B; Nastasa, V; Boni, B; Militaru, A; Andrei, IR; 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-1 – 88820T-7 (2013).
15. Pascu, M L; Danko, B; Martins, A; Jedlinski, N; **Alexandru, T**; Nastasa, V; Boni, M; Militaru, A; Relu Andrei, I; Staicu, A; Hunyadi, A; Fanning, S; Amaral, L; "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): e55767-1 - e55767-16 (2013)
16. **Alexandru, T**; Armada, A; Danko, B; Hunyadi, A; Militaru, A; Boni, M; Nastasa, V; Martins, A; Viveiros, M; Pascu, M L; Molnar, J; Amaral, L; "Biological evaluation of products formed from the irradiation of chlorpromazine with a 266 nm laser beam", JOURNAL OF BIOCHEMISTRY & PHARMACOLOGY: OPEN ACCESS, 2(1): 1-4 (2013).
17. 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 Diacetonide – Experimental Set-Up Of A System For Photochemical Transformation Of Bioactive Substances"; ANTICANCER RESEARCH, 32(4):1291-7 (2012).

ANNEX 2

#### HEAD OF NATIONAL PROJECTS

1. Postdoctoral Research Project, PN-III-P1-1.1-PD-2016-1072, Generation and identification of antimicrobial species from medicines exposed to laser radiation in view of fighting multiple drug resistance acquired by bacteria (ANTLAS), May 2018-April 2020.

ANNEX 3

#### BOOK CHAPTERS

1. Pascu, M.L; Boni, M; **Tozar, T**; Smarandache, A; Stoicu, A; Andrei, I. R.; "Resonant Interaction of Laser Beams with Pendant Droplets", in Laser Optofluidics in Fighting Multiple Drug Resistance, M. L. Pascu ed, Bentham Science Publishers-Sharjah, UAE, 987-1-68108-499-2, 184-218 (2017).
2. Staicu, A; Smarandache, A; **Tozar, T**; Stoicu, A; Pirvulescu R; Pascu, M.L., "Interaction of Laser Beams with Medicine Solutions in Bulk", in Laser Optofluidics in Fighting Multiple Drug Resistance, M. L. Pascu ed, Bentham Science Publishers-Sharjah, UAE, 987-1-68108-499-2, 250-292 (2017)
3. **Tozar, T**; Stoicu, A; Nastasa, V; Popa, M; Smarandache, A; Costache, M; Chifiriuc, M.C; Pascu, M.L.; "Application of Laser Modified Medicines in Fighting Multiple Drug Resistance Acquired by Microorganisms", in Laser Optofluidics in Fighting Multiple Drug Resistance, M. L. Pascu ed, Bentham Science Publishers-Sharjah, UAE, 987-1-68108-499-2, 338-365 (2017)
4. Pirvulescu, R; **Tozar, T**; Stoicu, A; Pascu, M.L.; "Application of Optically Modified Medicines in Fighting Pseudotumours"; in Laser Optofluidics in Fighting Multiple Drug Resistance, M. L. Pascu ed, Bentham Science Publishers-Sharjah, UAE, 987-1-68108-499-2, 366-406 (2017)

5. Simon, A; Stoicu, A; **Tozar, T**; Andrei, I. R.; Simion, S; van Loon, J. J. W.A; Dowson, A; Pascu, M.L.; "Microvolumetric Droplets in Air in Hypergravity Conditions"; in *Laser Optofluidics in Fighting Multiple Drug Resistance*, M. L. Pascu ed, Bentham Science Publishers-Sharjah, UAE, 987-1-68108-499-2, 428-448 (2017)
6. Pascu, M. L.; Smarandache, A; **Tozar, T**; Andrei, I. R.; "Spectroscopy of Microdroplets: an Alternative to the Spectroscopy of Bulky Materials", in *Laser Optofluidics in Fighting Multiple Drug Resistance*, M. L. Pascu ed, Bentham Science Publishers-Sharjah, UAE, 987-1-68108-499-2, 471-480 (2017)
7. Pascu, M.L; Militaru, A; Boni, M; Nastasa, V; **Alexandru, T**; Staicu, A; Andrei, I.R.; "Trends in basic research on laser biomedicine", in *Laser Manual Medical technology*, Leonardo Longo, Officina Editoriale Oltrarno, 9788897986133, 1:139-182, 2014.

#### ANNEX 4

#### CONFERENCES:

1. Pascu, ML; Pivulescu, R; Andrei,IR; Boni, M; **Tozar, T**; Laser microspectroscopy in fighting multiple drug resistance, Laser Florance, Florence 2017, 9-11 November 2017 (invited)
2. **Tozar, T**; Andrei, IR; Pascu, ML; "Time stability of laser exposed phenothiazines aqueous solutions", Annual Scientific Conference University of Bucharest, Faculty of Physics 2017 Meeting, Măgurele, Romania, 23-24 June 2017
3. A. Simon, M. Boni, **T. Tozar**, M. Ferrari, M.L. Pascu; Foam generation and behaviour 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.
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", 1<sup>st</sup> Molecules Medicinal Chemistry Symposium, 8 September 2017, Barcelona, Spain (poster)
5. 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 Balvanos 2017, 25-28 July 2017, Covasna, Romania (poster)
6. 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 Balvanos 2017, 25-28 July 2017, Covasna, Romania (poster)
7. Simon, A; Stoicu, A; **Tozar, T**; Andrei, IR; Frunza, L; Zgura, I; Dowson, A; van Loon, JJWA; Pascu, ML; "Laser modified medicine droplets in terrestrial and hypergravity conditions: generation, behaviour and interaction with target surfaces of biomedical interest", IONS Balvanos 2017, 25-28 July 2017, Covasna, Romania (oral)
8. **Tozar, T**; Stoicu, A; Nastasa, V; Popa, M; Chifiriuc, C; Andrei, IR; Pascu, ML; "Inducing antibacterial properties in non-antibiotics by exposure to Uv laser radiation", IONS Balvanos 2017, 25-28 July 2017, Covasna, Romania (poster)
9. **Tozar T**; Stoicu A; Nastasa V; Popa M; Chifiriuc C; Andrei I R; Pascu ML; "Susceptibility of bacteria to photo-chemically generated agents from phenothiazine derivatives" ICPEPA, 29.08.2016-02.09.2016, Brasov, Romania, P43 (poster)
10. Staicu A; Pascu A; Smarandache A; **Alexandru T**; Pascu ML; "Photophysics of single wall carbon nanotubes covalently functionalised with porphyrin photosensitizers" ICPEPA, 29.08.2016-02.09.2016, Brasov, Romania, P68 (poster)
11. A. Dinache A; Smarandache A; **Alexandru T**; Pascu A; Nastasa V; Simon A; Enescu M; Khatyr A; Sima F; Pascu ML; Staicu A; "Photosensitized cleavage of some olefins as potential linkers to be used in drug delivery ", ICPEPA, 29.08.2016-02.09.2016, Brasov, Romania, P41 (poster)
12. Cherecheanu AP; **Tozar T**; Geamanu A; Iancu R; Duta S; Pivulescu RA; "Application of laser radiation exposed chlorpromazine for the treatment of pseudotumors induced in rabbit eyes" EVER 2016, 5-8.10.2016 Nisa, Franta- Acta Ophthalmologica, 94: S256, 2016
13. Cherecheanu AP; **Tozar T**; Geamanu A; Iancu R; Duta S; Pivulescu RA; "Application of laser radiation exposed chlorpromazine for the treatment of pseudotumors induced in rabbit eyes", 2016 Sinaia
14. Simon, A.; Stoicu, A.; **Tozar, T.**; van Loon, J. J.W.A.; Dowson, A.; Pascu, M.L.; "Laser treated Chlorpromazine in interaction with target surfaces of biomedical interest: revelation of results obtained within ESA's "Spin Your Thesis!" programme"; Annual Scientific Conference University of Bucharest, Faculty of Physics 2016 Meeting, 17 June 2016, Măgurele, Romania
15. Simon, A.; Stoicu, A.; **Tozar, T.**; Andrei, I.R.; Pascu, M.L.; "UV laser modified medicine solutions in interaction with target surfaces under hypergravity conditions"; International OSA Network of Students, 20-22 May 2016, Québec, Canada
16. **T. Tozar**, A. Stoicu V. Nastasa, M. Popa, I. R. Andrei, C. M. Chifiriuc, M.L. Pascu (2015), *Generation of photo-products with antimicrobial properties by exposing Phenothiazines to UV laser radiation*, 6th Congress of International PhotoTherapy Association, Nisa, Franta, 9-10 July 2015
17. **T. Tozar**, 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, Bucuresti, Romania, 12, 15- 16 May 2015

18. **T. Tozar**, A. Stoicu, V. Nastasa, M. Popa, I. R. Andrei, C. M. Chifiriuc, 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 September 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, *Cytotoxicity assay of four Phenothiazines exposed to 266 nm laser radiation for application in biomedical fibers*, 11th International Conference "Micro- to Nano-Photonics IV- ROMOPTO 2015", Bucuresti, Romania, 1-4 September 2015 (poster)
20. R. A. Pivulescu, **T. Tozar**, M. Costache, C. Tucureanu, A. P. Cherecheanu, "Effects of chlorpromazine modified by exposure to laser radiation on rabbit eyes pseudotumoral tissues", The International Congress on Laser Medicine and Surgery 2015, 5-7 November 2015, Florence, Italy
21. A. Simon, A. Smarandache, **T. Tozar**, V. Nastasa, R. Pivulescu, M. L. Pascu, *Stability studies on promethazine unexposed and exposed to UV laser radiation*, SPIE Optics + Photonics, San Diego, USA, 9-13 August 2015
22. A. Simon, **T. Alexandru**, M. Boni, V. Damian, A. Stoicu, V. Dutschk, M. L. Pascu, *Biomedical applications of non-antibiotics exposed to uv laser radiation and their interaction with fabric surfaces*, "New frontiers in regenerative medicine and surgery. Interdisciplinarity, research and clinical applications" Congress, Bucuresti, Romania, 12, 15- 16 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", Bucuresti, Romania, 1-4 September 2015
24. 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, 31 March- 1 April 2015
25. 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*, 11th International Conference "Micro- to Nano-Photonics IV- ROMOPTO 2015", Bucuresti, Romania, 1-4 September 2015
26. P. Prepelita, V. Craciun, F. Garoi, M. Filipescu, **T. Tozar**, D. Cristea, *TCO thin films prepared by radio frequency magnetron sputtering and vacuum thermal evaporated techniques*, The 2015 E-MRS Spring Meeting, 11-15 May 2015, Lille, France.
27. A. Dinache, **T. Tozar**, M. Boni, A. Staicu, V. Nastasa, A. Stoicu, I.R. Andrei, V. Damian, E. Radu, M. Ferrari, M. L. Pascu, *Study of Vancomycin photoproducts, precursors of foam generation*, Smart and green interfaces- Conference 2015, Belgrade, Serbia, 31 March- 1 April 2015
28. M.L. Pascu, R. Pivulescu, **T. Tozar**, *Laser methods in fighting multiple drug resistance*, "New frontiers in regenerative medicine and surgery. Interdisciplinarity, research and clinical applications" ISRMS Congress, 12 & 15- 16 May 2015, Bucharest, Romania.
29. 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, 29-31 October 2015, Sofia, Bulgaria.
30. A. Simon, A. Stoicu, **T. Tozar**, M.L. Pascu, *Interaction of laser exposed Non-antibiotic solutions with target surfaces in hypergravity conditions: ESA "Spin Your Thesis!" campaign*, 1st Symposium on Space Educational Activities, 9-12 December 2015, Padova, Italy.
31. 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, 3-5 November 2015, London, UK.
32. 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*, 16th Annual Meeting of DGaO, 27 - 29 May 2015, Brno, Czech Republic.
33. **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, 19 iunie 2015, Magurele, Romania
34. 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, 19 iunie 2015, Magurele, Romania
35. A. Simon, T. Tozar, A. Stoicu, M. Boni, V. Damian, M.L. Pascu, *Biomedical applications of laser exposed medicines containing solutions in interaction with target surfaces: ESA "Spin Your Thesis!" programme*, Annual Scientific Conference of Faculty of Physics, 19 iunie 2015, Magurele, Romania
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38. 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, 19-23 May 2014, Bran, Romania.

39. 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, 19-23 May 2014, Bran, Romania.
40. 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, 19-23 May 2014, Bran, Romania.
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42. 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*, 20<sup>th</sup> International Symposium on Surfactants in Solution, 22-27 June 2014, Coimbra, Portugal.
43. A. Simon, **T. Alexandru**, M. Boni, V. Damian, V. Dutschk, M.L. Pascu, *Materials surfaces in interaction with phenothiazines solutions exposed to laser radiation*, in view of biomedical applications, Annual Scientific Conference of Faculty of Physics, 20 June 2014, Magurele, Romania.
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49. **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), 23-26.09.2014, Orastie, Romania. (poster)
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53. A. Stoicu, **T. Alexandru**, E. Radu, V. Nastasa, M.L. Pascu, *Chlorpromazine Vibrational Spectroscopy - A Computational Study*, International Student Conference on Photonics (ISCP 2014), 23-26.09.2014, Orastie, Romania.
54. 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), 23-26.09.2014, Orastie, Romania.
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57. A. Stoicu, **T. Alexandru**, E. Radu, V. Nastasa, M.L. Pascu, *Chlorpromazine Vibrational Spectroscopy – A Computational Study, Introduction to Gaussian: Theory and Practice*, 28 July– 1 August 2014, Ulm University, Ulm, Germany
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61. A. Simon, A. Smarandache, **T. Alexandru**, V. Nastasa, M. L. Pascu, *Studies about the stability of Promethazine hydrochloride exposed to 266 nm laser beam*, ISCP 2013, 20-24 May 2013, Bran, Romania.



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63. A. Simon, A. Smarandache, **T. Alexandru**, V. Nastasa, M.L.Pascu, *Stability studies of Promethazine hydrochloride exposed to 266 nm laser beam*, Annual Scientific Conference of Faculty of Physics, 21 June 2013, Magurele, Romania.
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66. **T. Alexandru**, *Biological evaluation of products formed from the irradiation of chlorpromazine with a 266 nm laser beam*, 7th and final management committee meeting of Cost action BM0701 – ATENS "Antibiotic transport and efflux: new strategies to combat bacterial resistance", 26-27 April 2012, Bucharest, Romania.
67. **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, 8-11 May 2012, Sinaia, Romania.
68. **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", 24-26 July, 2012, Bucharest, Romania.
69. M.L. Pascu, 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 tools to investigate Nitro-Oxidative stress", 24-26 July, 2012, Bucharest, Romania.
70. **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", 3-6 September, 2012, Bucharest, Romania.
71. A. Staicu, A. Pascu, M. Boni, **T. Alexandru**, M. Enescu, M.L. Pascu. *Spectroscopical studies of zinc phthalocyanine in binary solvent mixtures*, Intl. Conference "Micro-to Nano-Photonics III ROMOPTO 2012", 3-6 September 2012 Bucharest, Romania
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73. M.L. Pascu, A. Militaru, M. Boni, **T. Alexandru**, V. Nastasa, I. R. Andrei, *Laser methods used to fight multiple drug resistance to treatment*, 26<sup>th</sup> Congress Laser Medicine, 9-10 November 2012, Firenze, Italy.
74. A. 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, 21-23 November 2012, Lisbon, Portugal.

ANNEX 5

#### MEMBERSHIP OF NATIONAL AND INTERNATIONAL SOCIETIES

1. SPIE, member since 2012
2. The Optical Society (OSA) since 2015
3. European Network COST BM0701 "Antibiotic Transport and Efflux: New Strategies to combat bacterial resistance (ATENS)"
4. European Network COST BM1003 "Microbial cell surface determinants of virulence as targets for new therapeutics in Cystic Fibrosis"
5. European Network COST MP1106 "Smart and green interfaces - from single bubbles and drops to industrial, environmental and biomedical applications"
6. Romanian Society for Lasers in Medicine and Biology
7. Romanian Society for Microbiology