



Europass Curriculum Vitae

Personal information

Surname(s) / First name(s) **NASTASA Viorel Vasile**
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E-mail viorel.nastasa@inflpr.ro
Nationality Romanian
Date of birth 28.12.1984
Gender Male

Desired employment / Occupational field

Work experience

Dates	December 2010 onwards
Occupation or position held	Researcher
Main activities and responsibilities	Tunable lasers and laser spectroscopy. Laser spectroscopy and optics of biomolecular systems. Development of new methods to fight resistance to treatment acquired by bacteria and tumors; nanophysics and nanomedicine methods (generation of nanodroplets containing modified medicines) included. Lasers and optics applications in pollution control. Physics of micro- and nano-droplets. Spectroscopy of droplets. Optofluidics.
Name and address of employer	National Institute for Laser, Plasma and Radiation Physics; Laser Department, 409 Atomistilor str., Magurele, Jud. Ilfov, 077125, Romania
Type of business or sector	Research and Education
Dates	September 2008 – December 2010
Occupation or position held	Research Assistant
Main activities and responsibilities	Active participation in the group projects
Name and address of employer	National Institute for Laser, Plasma and Radiation Physics; Laser Department, 409 Atomistilor str., com. Magurele, Jud. Ilfov, 077125, Romania
Type of business or sector	Research and Education
Dates	July 2007 – September 2008
Occupation or position held	Helpdesk Officer
Main activities and responsibilities	IT Support
Name and address of employer	ROMPETROL S.A.
Type of business or sector	IT

Education and training

Dates October 2009 -

Title of qualification awarded | Physicist
 Principal subjects/occupational skills covered | Biophysics
 Name and type of organisation providing education and training | - Faculty of Physics, University of Bucharest, Romania
 Level in national or international classification | PhD

Dates | October 2007 - February 2009

Title of qualification awarded | Physicist
 Principal subjects/occupational skills covered | Biophysics and Medical Physics
 Name and type of organisation providing education and training | - Faculty of Physics, University of Bucharest, Romania
 Level in national or international classification | Master

Dates | October 2003 – June 2007

Title of qualification awarded | Physicist
 Principal subjects/occupational skills covered | Biophysics
 Name and type of organisation providing education and training | Faculty of Physics Bucharest, University of Bucharest, Romania
 Level in national or international classification | Bachelor degree

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			
C2	Proficient user	C2	Proficient user	C2	Proficient user	C1	Proficient user	C2	Proficient user
C2	Basic user	C2	Basic user	C2	Basic user	C1	Basic user	C2	Basic user

Computer skills and competences | OS : Windows , Linux;
 Web design, Networking, MS Office, LabviewMatematica, Chemwind, Hyperchem, Origin,

Social skills and competences

Organisational skills and competences | - I organized and financed (raised funds whenever necessary) 5 scientific conferences having the number of participants – function of the conference - from 70 to 500.

Technical skills and competences | - Syntheses and coordination of national research programs in Romania.

Driving licence | Category B,

Additional information | Publications (see Annex 2)

- Annexes**
 ANNEX 1: MEMBERSHIP OF INTERNATIONAL SOCIETIES
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MEMBERSHIP OF INTERNATIONAL SOCIETIES

1. SPIE member since 2009
 - 2010 - President of Romanian Student Chapter of SPIE
 - 2011 - Vice President of Romanian Student Chapter of SPIE
2. Romanian Society for Physics
3. Romanian Society for Lasers in Medicine and Biology.

ANNEX 2

PUBLICATIONS

1.1 Papers (selection) published in reviews listed in the ISI:

1. Laser beams resonant interaction with micro-droplets which have a controlled content M. L. Pascu, I. R. Andrei, M. Ferrari, Angela Staicu, Adriana Smarandache, A. Mahamoud, **V. Nastasa**, L. Liggieri
2. Tunable lasers at the Laser Spectroscopy Group: short form history from the beginnings to date, M.L.Pascu, A.Pascu, A.Staicu, I.R.Andrei, **V. Nastasa**, Romanian Reports in Physics, vol.62, no. 3, 2010
3. Studies about the generation and characterisation of microdroplets with a controlled content, **V. Nastasa**, V. Pradines, I.R. Andrei, M. Boni, M. L. Pascu, R. Miller, JOAM- Rapid Communications vol. 4, No. 11,p.1916b -1919, 2010.
4. Study of the formation of micro and nano-droplets containing immiscible solutions, **V. Nastasa**, K. Samaras, I.R. Andrei, M.L. Pascu, T. Karapantsios, Colloids and Surfaces A: Physicochemical and Engineering Aspects. Vol. 382, p.246 – 250, 2011.
5. Direct Modification of Bioactive Phenothiazines by Exposure to Laser Radiation, Pascu, Mihail-Lucian; **Nastasa, Viorel**; Smarandache, Adriana; Militaru, Andra; Martins, Ana; Viveiros, Miguel; Boni, Mihai; R. Andrei, Ionut; Pascu, Alexandru; Staicu, Angela; Molnar, Joseph; Fanning, Seamus; Amaral, Leonard, : Recent Patents on Anti-Infective Drug Discovery, Volume 6, Number 2, pp. 147-157(11), May 2011.
6. Spectral properties of molecular solutions, M.L. Pascu, Adriana Smarandache, M. Boni, Jette Kristiansen, **V. Nastasa**, I. R. Andrei, Romanian Reports in Physics,vol 63, supplement November 2011.

1.2 Papers published in PROCEEDINGS of international scientific conferences (selection):

1. The generation of microdroplets as vectors to transport medicines to tissues, M.L.Pascu, I.R.Andrei, V.Pradines, **V. Nastasa**, R. Miller, Lasers in Medical Science, vol.24, Supplement1, S14, Nov.2009.
2. Generation of micro- and nano-droplets containing immiscible solutions in view of optical studies, **V. Nastasa**, M.L.Pascu, T. Karapantsios, Proceedings of SPIE Vol. 7758, 77580X, 2010.
3. Study of commercial grade Aetoxisclerol by optical means, in view of its use in varicose vein treatment, A. Smarandache, J. Moreno-Moraga, M. Trelles, **V. Nastasa**, M.L.Pascu, Advances in Laserology-Selected papers of Laer Florenec 2010, AIP Conf. Proc. 1364, 117 - 124, 2011. Doi: 10.1063/1.3626907.
4. M.L. Pascu, A. Smarandache, J. Kristiansen, A. Militaru, **V. Nastasa**, L. Amaral, Phenothiazines Molecular Modifications At Interaction With Laser Beams, Lasers Med Sci 26 , Suppl 1: S25, 2011
5. Laser Radiation Interaction With Fluorofores 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
6. Optical investigation of medicine solutions in micro-droplets form at interaction with laser radiation **V. Nastasa**, M. Boni, I.R. Andrei, A.Staicu, M.L. Pascu SPIE Optics and Photonics conference, august 2011 (SPIE proc)

1.3 Invited lectures at international conferences (selection):

1. M.L. Pascu, I.R. Andrei, C. Ticos, **V. Nastasa**, T. Beica, ' Laser beams interactions with microdroplets ', Joint Conference of the 7th MC & WG Meetings. COST ACTION P21 „The physics of droplets”, Bucharest, May 4-6 2009,,
2. M.L. Pascu, Adriana Smarandache, I.R. Andrei, **V. Nastasa**, C. Ticos, 'Microdroplets behaviour when exposed to laser radiation field ', Micro-to Nano-Photonics II- ROMOPTO 2009, Sibiu-Romania, 2009.
3. Mihail Lucian Pascu, Angela Staicu, **Viorel Nastasa**, Adriana Smarandache, Andra Militaru, Alexandru Pascu, Ionut Relu Andrei, Mihai Boni, Marieta Costache, Jean- Marie Pages, Jacques Barbe, Sandrine Alibert, Abdallah Mahamoud, Michele Ferrari, Silvia Rao, Libero Liggieri, Leonard Amaral, Laser and Optical Techniques Used to Modify Molecular Structures of Medicines, Progress in studies on ABC transport inhibition Symposium at Chemical Research Center, Hungarian Academy of Sciences, April 2010, Budapest, Hungary.
4. M.L. Pascu, Angela Staicu, **V. Nastasa**, Adriana Smarandache, Andra Militaru, A. Pascu, I.R. Andrei, M. Boni, A. Mahamoud, Sandrine Alibert, J.M. Pagès, L. Amaral, M. Ferrari, Silvia Rao, L. Liggieri, R. Miller, Laser Beam Interaction with Beads Containing Medicines Solutions, COST Action BM0701 – ATENS, July 2010, Bremen, Germany.
5. **V. Nastasa**, I. R. Andrei, Andra Militaru, M. L. Pascu, Interaction of micro-droplets with laser beams, COST P21 “Physics of droplets” WG Meeting, Borovets, Bulgaria, July 2010.
6. M.L.Pascu, L. Amaral, **V. Nastasa**, A. Militaru, A. Smarandache, Improvement of phenothiazines efficiency on MDR bacteria, after exposure to laser radiation, Laser Florence 2010, Florence Italy.

7. 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
8. Phenothiazines molecular modifications at interaction with laser beams M.L. Pascu, A.Smarandache, J.Kristiansen, A.Militaru, **V. Nastasa**, L. Amaral, , LASER FLORENCE 2100, Florence, 3-6 november 2011
9. Unresonant interaction of laser beams with microdroplets M. L. Pascu, I. R. Andrei, Adriana Smarandache, C. Ticos, **V. Nastasa**, , EOSOF 2011, 23-25 May 2011, Munich, Germany

1.4 Communications at international conferences (author, title of communication, conference, date, place)

1. *Studies about the generation and charactersation of microdroplets with a controlled content.* **V. Nastasa**, V. Pradines, M. L. Pascu, R. Miller Workshop Bubble and Drop Interfaces, Sept 23-25, 2009, Thesaloniki, Grece.
2. *Investigation of the fluorescent compounds solutions in microdroplets form at interaction with laser radiation.* I.R. Andrei, **V. Nastasa**, C. Ticos, M.L.Pascu Workshop Bubble and Drop Interfaces, Sept 23-25, 2009, Thesaloniki, Grece.
3. *Microdroplets behaviour when exposed to laser radiation field* – M.L. Pascu, Adriana Smarandache, I.R. Andrei, **V. Nastasa**, C. Ticos, Invited presentation Micro- to Nano-Photonics II- ROMOPTO 2009, 31 August-3 Septembrie 2009, Sibiu-Romania
4. I.R.Andrei, M.Ferrari, L.Liggieri, M.Dicu, **V. Nastasa**, M.L.Pascu, Characterization of microdroplets which contain solutions of medicines, Joint Conference of the 7th MC & WG Meetings. COST ACTION P21 „The physics of droplets”, Bucharest, May 4-6 2009.
5. *Laser beams interactions with microdroplets (invited)* M.L. Pascu, I.R. Andrei, C. Ticos, **V. Nastasa**, T. Beica Joint Conference of the 7th MC & WG Meetings. COST ACTION P21 „The physics of droplets”, May 4-6 2009, Bucharest
6. *The generation of microdroplets as vectors to transport medicines to tissues (invited)* M.L.Pascu, I.R.Andrei, V.Pradines, **V. Nastasa**, R. Miller Laser Florence 2009, 6-7 nov. 2009, Florenta, Italia Lasers in Medical Science, vol.24, Supplement1, Nov.2009, S14,
7. *Generation of micro and nano-droplets containing immiscible solutions in view of optical studies* **V. Nastasa**¹, Andra Militaru¹, T. Karapantsios², M. Ferrari³, K. Samaras², E. Dafnopatidou², I. R. Andrei¹, L.Ligieri³, V. Pradines⁴, R. Miller⁴, M. L. Pascu¹ Bran, Romania
8. Raman spectra measurements on droplets of water and DMSO M. Boni¹, **V. Nastasa**, I. Jecu, C. Lungu, A. Pascu, A. Staicu, M. L. Pascu
9. **V. Nastasa**, Andra Militaru, T. Karapantsios, M. Ferrari, K. Samaras, E. Dafnopatidou, I. R. Andrei, L.Ligieri, V. Pradines, R. Miller, M. L. Pascu, Generation of micro and nano-droplets containing immiscible solutions in view of optical studies/lectie invitata, International Student Workshop on Laser Applications 2010 (ISWLA10), Bran, Romania, May 25-28, 2010.
10. **V. Nastasa**, T. Karapantsios, K. Samaras, E. Dafnopatidou, M. L. Pascu, Studies on the generation of nano droplets of immiscible liquids, COST Action BM0701 – ATENS, July 2010, Bremen, Germany.
11. **V. Nastasa**, T. Karapantsios, K. Samaras, E. Dafnopatidou, M. L. Pascu, Studies on the generation of micro/nano droplets of oil in mixtures of Tween 80 surfactant and water, COST network P21 Physics of droplets - Borovets Bulgaria, July 2010.
12. **V. Nastasa**, T. Karapantsios, K. Samaras, E. Dafnopatidou, M. L. Pascu, Generation of micro and nano-droplets containing immiscible solutions and study of their properties in view of optical studies, SPIE Optics and Photonics conference, San Diego, SUA, August 2010.
13. A. Smarandache, **V. Nastasa**, M. Trelles, J. Moreno-Moraga, M.L.Pascu, Study of commercial grade Aetoxisclerol by optical means, in view of its use in varicose vein treatment, Laser Florence 2010, Florence Italy.
14. A. Militaru, A. Smarandache, **V. Nastasa**, A. Mahamoud, V. Damian, N. Popescu-Pogrion, S. Alibert, F. Vasiliu, J.M. Pages, M.L. Pascu, Stability characterization of quinazoline derivative BG1188 by optical methods, Laser Florence 2010, Florence Italy.
15. *“Molecular modifications of chlorpromazine prepared as solution in microdroplets form by exposure to laser radiation”***V. Nastasa**, Andra Militaru, M.L.Pascu, L.Amaral International Student Workshop on Laser Applications 2011, Bran, 31 Mai- 4 Iunie, 2011 ISBN 978-973-737-984-9
16. *“Studies of the spectral properties of Phenothiazines”*A. Smarandache, A. Militaru , **V. Nastasa**, J. Kristiansen and M.L. Pascu International Student Workshop on Laser Applications 2011, Bran, 31 Mai- 4 Iunie, 2011 ISBN 978-973-737-984-9
17. Optical investigation of medicine solutions in micro-droplets form at interaction with laser radiation **V. Nastasa**, M. Boni, I.R. Andrei, C.M. Ticos, M.L. Pascu SPIE Optics and Photonics conference, august 2011
18. Optical emission by micro- and nano- droplets, M. Boni, **V. Nastasa**, I.R. Andrei, G.V. Popescu, M.L. Pascu, International Student Workshop on Laser Applications 2011, Bran, 31 Mai- 4 Iunie, pg 20, 2011 ISBN 978-973-737-984-9
19. Fighting Multiple Drug Resistance of bacteria by treatment with Chlorpromazine modified by exposure to laser radiation, M.L. Pascu, **V. Nastasa**, A. Militaru, A. Staicu, A. Smarandache, S. Fanning, L. Amaral, EOSOF 2011, 24 -25May, Munchen,2011
20. Calorimetric measurements on microdroplets",Central and Eastern European Committee for Thermal Analysis and Calorimetry, M. Boni, **V. Nastasa**, I.R. Andrei, C.Lungu, M. L. Pascu,Craiova, Romania, 7- 10 september 2011
21. Studies of the spectral properties of Phenothiazines, A. Smarandache, A. Militaru, **V. Nastasa**, J. Kristiansen, M.L. Pascu, International Student Workshop on Laser Applications 2011, Bran, 31 Mai- 4 Iunie, pg 42 ,2011 ISBN 978-973-737-984-9
22. Comparison of the experimental techniques used to obtain foams out of medicines solutions, Smarandache Adriana, Nastasa V., Staicu A., Trelles M., Moreno-Moraga, J., Karapantsios, T., Pascu, M.L., ISWLA 2011, 30 May-3 June 2011, Bran, Romania

WORKING STAGES ABROAD

2009 Max Planck Institute for Colloids and Interfaces Berlin Germany
2010 Aristotle University of Thessaloniki Department of Chemistry Greece

ANNEX 4

HONORS AND AWARDS:

2007 – Travel Grant ICTP to attend the workshop on Biophysics in Trieste, Italy
2009 - Travel Grant ICTP to attend the workshop on Optofluidics in Trieste, Italy
2010 - Travel Grant SPIE to attend the international conference “Optics and Photonics” in San Diego, California, USA
2011 – Contingency Grant from Newport and SPIE to attend the international conference “Optics and Photonics” in San Diego, California, USA
2011 – Research Excellence Award offered by Newport and SPIE